MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No. MO-0112500

Owner: DARRCO, L.L.C.
Address: 3801 East Sunshine, Springfield, MO  65809

Continuing Authority: IsoNova Technologies LLC
Address: P.O. Box 96, Verona, MO  65769

Facility Name: IsoNova Technologies LLC
Facility Address: 18184 Hwy. P, Verona, MO  65769

Legal Description: See Page 2-4
UTM Coordinates: See Page 2-4

Receiving Stream: See Page 2-4
First Classified Stream and ID: See Page 2-4
USGS Basin & Sub-watershed No.: See Page 2-4

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Facility type is a no-discharge wastewater storage and land application system. No Certified Operator Required.
All Permitted Features – SIC code #2015

This permit authorizes only land application of wastewater and stormwater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

November 1, 2018
Effective Date

Edward B. Galbraith, Director, Division of Environmental Quality

September 30, 2022
Expiration Date

Chris Wieberg, Director, Water Protection Program
**FACILITY DESCRIPTION (CONTINUED)**

The facility produces inedible egg product for pet food. Plant wash down wastewater flows to an underground concrete storage tank underdrain. Wastewater from air scrubber overflow is stored in a concrete storage basin. Overflow from the underground concrete storage tank flows to the concrete storage basin. Wastewater is removed and land applied by contract hauler on company owned on non-owned fields. Company owned fields which are included in this permit. Sludge is removed by contract hauler. During periods of inclement weather wastewater is hauled to Springfield WWTF or removed by a permitted contract hauler.

Design flow is 32,900 gallons per day (1-in-10 year design including net rainfall minus evaporation). Average design flow is 32900 gallons per day (dry weather flows).

**Permitted Feature #001** – Eliminated.

**Outfall #002** – Aerated process wastewater concrete storage basin
Legal Description: SW ¼, Sec. 28, T27N, R26W, Lawrence County
UTM Coordinates: X = 429975, Y = 4096918
Receiving Stream: Tributary to Spring River, Losing
First Classified Stream and ID: 100K Extent-Remaining Streams (C) (3960)
USGS Basin & Sub-watershed No.: (11070207-0104)

**Permitted Feature #003** – Concrete storage tank underdrain
Legal Description: SW ¼, SW ¼, Sec. 28, T27N, R26W, Lawrence County
UTM Coordinates: X = 430024, Y = 4096927
Receiving Stream: Tributary to Spring River, Losing
First Classified Stream and ID: 100K Extent-Remaining Streams (C) (3960)
USGS Basin & Sub-watershed No.: (11070207-0104)

Maximum operating level (ft. below spillway): 1 ft.
Minimum operating level (ft. below spillway): 11 ft.
Storage volume (minimum to maximum water levels): gallons
Storage Capacity (in Days):

**Permitted Feature #004** – Eliminated. This outfall is now permitted under MO-0136760 as Outfall #001.

**Permitted Feature #005** – Eliminated. This outfall is now permitted under MO-0136760 as Outfall #002.

**Permitted Feature #006** – Eliminated. This outfall is now permitted under MO-0136760 as Outfall #003.

**Permitted Feature #007** – Storm water runoff
Legal Description: SW ¼, Sec. 28, T27N, R26W, Lawrence County
UTM Coordinates: X = 429969, Y = 4096902
Receiving Stream: Tributary to Spring River, Losing
First Classified Stream and ID: 100K Extent-Remaining Streams (C) (3960)
USGS Basin & Sub-watershed No.: (11070207-0104)

**Permitted Feature #008** – Storm water runoff
Legal Description: SW ¼, Sec. 28, T27N, R26W, Lawrence County
UTM Coordinates: X = 429966, Y = 4096819
Receiving Stream: Tributary to Spring River, Losing
First Classified Stream and ID: 100K Extent-Remaining Streams (C) (3960)
USGS Basin & Sub-watershed No.: (11070207-0104)

**Land Application:**
Irrigation Volume/year: 12,008,500 gallons at design loading (including 1-in-10 year flows)
Irrigation areas: 177 owned acres
Application rates: 0.5 inch/hour; 1.0 inches/week; 24 inches/year
Field slopes: less than 20 percent
Equipment type: Pump truck
Vegetation: Cool season grass hay and pasture.
Application rate is based on: Plant Available Nitrogen.
Permitted Feature #009 – Land application field Hwy P North #1, 18 acres.
Legal Description: NW ¼, SW ¼, Sec. 28, T27N, R26W, Lawrence County
UTM Coordinates: X = 429938, Y = 4097270
Receiving Stream: Tributary to Spring River, Losing
First Classified Stream and ID: 100K Extent-Remaining Streams (C) (3960)
USGS Basin & Sub-watershed No.: (11070207-0104)

Permitted Feature #010 – Eliminated. This outfall is now permitted under MO-0136760 as Outfall #004.

Permitted Feature #011 – Land application field Hwy P North #2, 5 acres.
Legal Description: SW ¼, NW ¼, Sec. 28, T27N, R26W, Lawrence County
UTM Coordinates: X = 430132, Y = 4097620
Receiving Stream: Tributary to Spring River, Losing
First Classified Stream and ID: 100K Extent-Remaining Streams (C) (3960)
USGS Basin & Sub-watershed No.: (11070207-0104)

Permitted Feature #012 – Land application field Hwy P North #3, 16 acres.
Legal Description: SE ¼, SW ¼, Sec. 28, T27N, R26W, Lawrence County
UTM Coordinates: X = 430338, Y = 4096948
Receiving Stream: Tributary to Spring River, Losing
First Classified Stream and ID: 100K Extent-Remaining Streams (C) (3960)
USGS Basin & Sub-watershed No.: (11070207-0104)

Permitted Feature #013 – Land application field Hwy P North #4, 8 acres.
Legal Description: SE ¼, SW ¼, Sec. 28, T27N, R26W, Lawrence County
UTM Coordinates: X = 430543, Y = 4096925
Receiving Stream: Tributary to Spring River, Losing
First Classified Stream and ID: 100K Extent-Remaining Streams (C) (3960)
USGS Basin & Sub-watershed No.: (11070207-0104)

Permitted Feature #014 – Land application field Hwy P North #5, 3 acres.
Legal Description: NE ¼, SW ¼, Sec. 28, T27N, R26W, Lawrence County
UTM Coordinates: X = 430271, Y = 4097403
Receiving Stream: Tributary to Spring River, Losing
First Classified Stream and ID: 100K Extent-Remaining Streams (C) (3960)
USGS Basin & Sub-watershed No.: (11070207-0104)

Permitted Feature #015 – Land application field Hwy P North #6, 14 acres.
Legal Description: SE ¼, NW ¼, Sec. 28, T27N, R26W, Lawrence County
UTM Coordinates: X = 430432, Y = 4097620
Receiving Stream: Tributary to Spring River, Losing
First Classified Stream and ID: 100K Extent-Remaining Streams (C) (3960)
USGS Basin & Sub-watershed No.: (11070207-0104)

Permitted Feature #016 – Land application field Hwy P North #7, 50 acres.
Legal Description: W ½, NW ¼, Sec. 33, T27N, R26W, Lawrence County
UTM Coordinates: X = 429977, Y = 4096320
Receiving Stream: Tributary to Spring River, Losing
First Classified Stream and ID: 100K Extent-Remaining Streams (C) (3960)
USGS Basin & Sub-watershed No.: (11070207-0104)

Permitted Feature #017 – Land application field Hwy P North #8, 50 acres.
Legal Description: E ½, SW ¼, Sec. 33, T27N, R26W, Lawrence County
UTM Coordinates: X = 430343, Y = 4095482
Receiving Stream: Tributary to Spring River, Losing
First Classified Stream and ID: 100K Extent-Remaining Streams (C) (3960)
USGS Basin & Sub-watershed No.: (11070207-0104)
Permitted Feature #018– Land application field P West A, 16 acres.
Legal Description: SE ¾, SE ¼, Sec. 29, T27N, R26W, Lawrence County
UTM Coordinates: X = 429688, Y = 4096865
Receiving Stream: Tributary to Spring River, Losing
First Classified Stream and ID: 100K Extent-Remaining Streams (C) (3960)
USGS Basin & Sub-watershed No.: (11070207-0104)

Permitted Feature #019– Land application field P West B, 15 acres.
Legal Description: NE ¼, NE ¼, Sec. 32, T27N, R26W, Lawrence County
UTM Coordinates: X = 429710, Y = 4096531
Receiving Stream: Tributary to Spring River, Losing
First Classified Stream and ID: 100K Extent-Remaining Streams (C) (3960)
USGS Basin & Sub-watershed No.: (11070207-0104)

### A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

**PERMITTED FEATURE #002**

<table>
<thead>
<tr>
<th>STORAGE BASINS</th>
<th>EFFLUENT PARAMETERS</th>
<th>UNITS</th>
<th>FINAL EFFLUENT LIMITATIONS</th>
<th>MONITORING REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Freeboard Φ</td>
<td>Feet</td>
<td>*</td>
<td>Monthly Average</td>
</tr>
<tr>
<td></td>
<td>Precipitation</td>
<td>Inches</td>
<td>*</td>
<td>Monthly Average</td>
</tr>
</tbody>
</table>

**WASTEWATER (¥, Ψ)**

<table>
<thead>
<tr>
<th></th>
<th>Effluent Parameters</th>
<th>Units</th>
<th>Final Effluent Limitations</th>
<th>Monitoring Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrate Nitrogen as N</td>
<td>mg/L</td>
<td>*</td>
<td></td>
<td>monthly</td>
</tr>
<tr>
<td>Nitrogen, Total Kjeldahl</td>
<td>mg/L</td>
<td>*</td>
<td></td>
<td>quarterly</td>
</tr>
<tr>
<td>Total Phosphorous as P</td>
<td>mg/L</td>
<td>*</td>
<td></td>
<td>quarterly</td>
</tr>
</tbody>
</table>

**MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE DECEMBER 28, 2018. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.**

**PERMITTED FEATURE #009, #011- #019**

<table>
<thead>
<tr>
<th>EFLUENT PARAMETERS</th>
<th>UNITS</th>
<th>FINAL EFFLUENT LIMITATIONS</th>
<th>MONITORING REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Area</td>
<td>Acres</td>
<td>*</td>
<td>once/month measured</td>
</tr>
<tr>
<td>Application Rate</td>
<td>Inches/Acre</td>
<td>*</td>
<td>once/month measured</td>
</tr>
<tr>
<td>Irrigation Period</td>
<td>Hours</td>
<td>*</td>
<td>once/month measured</td>
</tr>
<tr>
<td>Volume Irrigated</td>
<td>Gallons</td>
<td>*</td>
<td>once/month measured</td>
</tr>
</tbody>
</table>

**MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE JANUARY 28, 2019.**

**WASTEWATER APPLICATION Δ**

<table>
<thead>
<tr>
<th>Effluent Parameters</th>
<th>Units</th>
<th>Final Effluent Limitations</th>
<th>Monitoring Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Area</td>
<td>Acres</td>
<td>*</td>
<td>once/day measured</td>
</tr>
<tr>
<td>Application Rate</td>
<td>Inches/Acre</td>
<td>*</td>
<td>once/day measured</td>
</tr>
<tr>
<td>Irrigation Period</td>
<td>Hours</td>
<td>*</td>
<td>once/day measured</td>
</tr>
<tr>
<td>Volume Irrigated</td>
<td>Gallons</td>
<td>*</td>
<td>once/day measured</td>
</tr>
</tbody>
</table>

**MONITORING REPORTS SHALL BE SUBMITTED MONTHLY FOR PERMITTED FEATURES WHEN LAND APPLICATION OCCURS, REPORTS ARE DUE BY THE 28TH OF THE FOLLOWING MONTH.**
A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on \textbf{November 1, 2018} and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

<table>
<thead>
<tr>
<th>EFFLUENT PARAMETERS</th>
<th>UNITS</th>
<th>FINAL LIMITATIONS</th>
<th>BENCHMARKS</th>
<th>MONITORING REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>DAILY MAXIMUM</td>
<td>MONTHLY AVERAGE</td>
<td>MEASUREMENT FREQUENCY</td>
</tr>
<tr>
<td>PHYSICAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flow</td>
<td>MGD</td>
<td>*</td>
<td></td>
<td>once/quarter ◊</td>
</tr>
<tr>
<td>Precipitation</td>
<td>inches</td>
<td>*</td>
<td></td>
<td>once/quarter ◊</td>
</tr>
<tr>
<td>CONVENTIONAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biochemical Oxygen Demand$_5$</td>
<td>mg/L</td>
<td>**</td>
<td>30</td>
<td>once/quarter ◊</td>
</tr>
<tr>
<td>Oil &amp; Grease</td>
<td>mg/L</td>
<td>**</td>
<td>15</td>
<td>once/quarter ◊</td>
</tr>
<tr>
<td>pH</td>
<td>SU</td>
<td>Ω</td>
<td>100</td>
<td>once/quarter ◊</td>
</tr>
<tr>
<td>Total Suspended Solids</td>
<td>mg/L</td>
<td>**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NUTRIENTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ammonia as N</td>
<td>mg/L</td>
<td>**</td>
<td>12.1</td>
<td>once/quarter ◊</td>
</tr>
<tr>
<td>Nitrate as NO$_3$</td>
<td>mg/L</td>
<td>**</td>
<td>10</td>
<td>once/quarter ◊</td>
</tr>
</tbody>
</table>

\textbf{MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE JANUARY 28, 2019.}

* Monitoring requirement only

** Monitoring requirement with associated benchmark. See Special Conditions #8 through #12

Ω pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.

Φ Storage Basin freeboard shall be reported as Storage Basin water level in feet below the overflow level.

Ψ Report as “No Application” when land application does not occur during the report period.

Ψ Wastewater that is land applied shall be sampled at the irrigation pump, wet well, or application equipment prior to land application.

Χ Reporting is only required for permitted features where land application occurred during the month. If no land application occurs at a permitted feature, no reporting is required. These are unscheduled parameters.

Θ All samples shall be collected from a discharge resulting from a precipitation event greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable precipitation event. If a discharge does not occur within the reporting period, report as no discharge. The total amount of precipitation should be noted from the event from which the samples were collected.

◊ See table below for quarterly sampling

\textbf{MINIMUM QUARTERLY SAMPLING REQUIREMENTS}

<table>
<thead>
<tr>
<th>QUARTER</th>
<th>MONTHS</th>
<th>EFFLUENT PARAMETERS</th>
<th>REPORT IS DUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>January, February, March</td>
<td>Sample at least once during any month of the quarter</td>
<td>April 28$^{th}$</td>
</tr>
<tr>
<td>Second</td>
<td>April, May, June</td>
<td>Sample at least once during any month of the quarter</td>
<td>July 28$^{th}$</td>
</tr>
<tr>
<td>Third</td>
<td>July, August, September</td>
<td>Sample at least once during any month of the quarter</td>
<td>October 28$^{th}$</td>
</tr>
<tr>
<td>Fourth</td>
<td>October, November, December</td>
<td>Sample at least once during any month of the quarter</td>
<td>January 28$^{th}$</td>
</tr>
</tbody>
</table>

C. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Part I standard conditions dated August 1, 2014 and hereby incorporated as though fully set forth herein.
D. SPECIAL CONDITIONS

1. This permit does not authorize the discharge of wastewater or sludge, except during emergency discharge conditions. Other materials, chemicals and substances not considered wastewater or sludge being treated and disposed of by the land application system are not authorized to be discharged regardless of weather conditions.

2. Emergency and Unauthorized Discharges.
   (a) Monitoring. Any emergency or unauthorized discharge shall be monitored for the parameters in the table below at least once during the discharge event. Additional monitoring may be required by the Department on a case-by-case basis. The facility shall submit test results, along with the number of days the storage basin(s) has discharged during the month via the Electronic Discharge Monitoring Report (eDMR) Submission System by the 28th day of the month after the discharge ceases. Permittee shall monitor for the following constituents:

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effluent Flow</td>
<td>MGD</td>
</tr>
<tr>
<td>Biochemical Oxygen Demand</td>
<td>mg/L</td>
</tr>
<tr>
<td>Total Suspended Solids</td>
<td>mg/L</td>
</tr>
<tr>
<td>Ammonia as N</td>
<td>mg/L</td>
</tr>
<tr>
<td>pH – Units</td>
<td>SU</td>
</tr>
<tr>
<td>Oil &amp; Grease</td>
<td>mg/L</td>
</tr>
<tr>
<td>E. coli*</td>
<td>#/100mL</td>
</tr>
</tbody>
</table>

*Sampling for E. coli is only required during the recreational months of April – October.

(b) Emergency Discharges. An emergency discharge from wastewater storage structures may only occur if rainfall exceeds the 10-year 365-day rainfall event (chronic) or the 25-year 24-hour rainfall event (catastrophic). The facility shall make all reasonable attempts to return the water level in the lagoon to below the maximum operating level. Design Storm Maps and Tables can be found at [http://ag3.agebb.missouri.edu/design_storm/](http://ag3.agebb.missouri.edu/design_storm/).

(c) Unauthorized Discharges. Discharge for any other reason than what is stated in 1(b) of this Special Condition shall constitute a permit violation and shall be reported in accordance with Standard Conditions Part 1 Section B.2. Unauthorized discharges are to be reported to the Southwest Regional Office during normal business hours or the Environmental Emergency Response spill-line at 573-634-2436 outside of normal business hours.

   (a) Discharge Monitoring Reporting Requirements. The permittee must electronically submit compliance monitoring data via the eDMR system. In regards to Standard Conditions Part I, Section B, #7, the eDMR system is currently the only Department approved reporting method for this permit.
   (b) Programmatic Reporting Requirements. The following reports (if required by this permit) must be electronically submitted as an attachment to the eDMR system until such a time when the current or a new system is available to allow direct input of the data:
      (1) Collection System Maintenance Annual Reports;
      (2) Wastewater Irrigation Annual Reports;
      (3) Any additional report required by the permit excluding bypass reporting.
      After such a system has been made available by the department, required data shall be directly input into the system by the next report due date.
   (c) Other actions. The following shall be submitted electronically after such a system has been made available by the department:
      (1) General Permit Applications/Notices of Intent to discharge (NOIs);
      (2) Notices of Termination (NOTs);
      (3) No Exposure Certifications (NOEs);
      (4) Low Erosivity Waivers and Other Waivers from Stormwater Controls (LEWs); and
      (5) Bypass reporting, See Special Condition #XX for 24-hr. bypass reporting requirements.
   (d) Electronic Submissions. To access the eDMR system, use the following link in your web browser: [https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx](https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx).
   (e) Waivers from Electronic Reporting. The permittee must electronically submit compliance monitoring data and reports unless a waiver is granted by the department in compliance with 40 CFR Part 127. The permittee may obtain an electronic reporting waiver by first submitting an eDMR Waiver Request Form: [http://dnr.mo.gov/forms/780-2692-f.pdf](http://dnr.mo.gov/forms/780-2692-f.pdf). The department will either approve or deny this electronic reporting waiver request within 120 calendar days. Only permittees with an approved
D. SPECIAL CONDITIONS (CONTINUED)

waiver request may submit monitoring data and reports on paper to the Department for the period that the approved electronic reporting waiver is effective.

4. Reporting of Non-Detects:
   (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
   (b) The permittee shall not report a sample result as “Non-Detect” without also reporting the detection limit of the test. Reporting as “Non-Detect” without also including the detection limit will be considered failure to report, which is a violation of this permit.
   (c) The permittee shall report the “Non-Detect” result using the less than sign and the minimum detection limit (e.g. <10).
   (d) Where the permit contains a Minimum Level (ML) and the permittee is granted authority in the permit to report zero in lieu of the < ML for a specified parameter (conventional, priority pollutants, metals, etc.), then zero (0) is to be reported for that parameter.
   (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
   (f) When calculating monthly averages, one-half of the minimum detection limit (MDL) should be used instead of a zero. Where all data are below the MDL, the “<MDL” shall be reported as indicated in item (C).

5. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).

6. Hazardous waste regulated under the Missouri Hazardous Waste Law and regulations shall not be land applied under this permit.

7. Release of a hazardous substance must be reported to the department in accordance with 10 CSR 24-3.010. A record of each reportable spill shall be retained with the permit and made available to the department upon request.

8. The purpose of the Stormwater Pollution Prevention Plan (SWPPP) and the Best Management Practices (BMPs) listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective actions means the facility took steps to eliminate the deficiency.

9. The facility’s SIC code(s) or description is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2) hence shall implement a SWPPP which must be prepared and implemented upon permit issuance. The SWPPP must be kept on-site and should not be sent to the Department unless specifically requested. The SWPPP must be reviewed and updated every five years or as site conditions change (see Part III: Antidegradation Analysis and SWPPP sections in the fact sheet). The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in: Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators, (EPA 833-B-09-002) published by the EPA in February 2009 (www.epa.gov/npdes/pubs/industrial_swppp_guide.pdf). The SWPPP must include:
   (a) A listing of specific contaminants and their control measures (or BMPs) and a narrative explaining how BMPs are implemented to control and minimize the amount of contaminants potentially entering stormwater.
   (b) The SWPPP must include a schedule for once per month site inspections and brief written reports. The inspection report must include precipitation information for the entire period since last inspection, as well as observations and evaluations of BMP effectiveness. Throughout coverage under this permit, the facility must perform ongoing SWPPP review and revision to incorporate any site condition changes.
   (1) Operational deficiencies must be corrected within seven (7) calendar days.
   (2) Minor structural deficiencies must be corrected within fourteen (14) calendar days.
   (3) Major structural deficiencies must be reported to the regional office within seven (7) days of discovery. The initial report shall consist of the deficiency noted, the proposed remedies, the interim or temporary remedies (including the general timing of the placement of the interim measures), and an estimate of the timeframe needed to wholly complete the repairs or construction. The permittee will work with the regional office to determine the best course of action, including but not limited to temporary structures to control stormwater runoff. The facility shall correct the major structural deficiency as soon as reasonably achievable.
   (4) All actions taken to correct the deficiencies shall be included with the written report, including photographs.
   (5) Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to Department and EPA personnel upon request.
   (c) A provision for designating an individual to be responsible for environmental matters.
   (d) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of the Department.

10. This permit stipulates pollutant benchmarks applicable to your discharge. The benchmarks do not constitute direct numeric effluent limitations; therefore, a benchmark exceedance alone is not a permit violation. Benchmark monitoring and visual inspections shall be used to determine the overall effectiveness of SWPPP and to assist you in knowing when additional
D. SPECIAL CONDITIONS (CONTINUED)

corrective action may be necessary to protect water quality. If a sample exceeds a benchmark concentration you must review your SWPPP and your BMPs to determine what improvements or additional controls are needed to reduce that pollutant in your stormwater discharge(s).

Any time a benchmark exceedance occurs a Corrective Action Report (CAR) must be completed. A CAR is a document that records the efforts undertaken by the facility to improve BMPs to meet benchmarks in future samples. CARs must be retained with the SWPPP and available to the Department upon request. If the efforts taken by the facility are not sufficient and subsequent exceedances of a benchmark occur, the facility must contact the Department if a benchmark value cannot be achieved. Failure to take corrective action to address a benchmark exceedance and failure to make measureable progress towards achieving the benchmarks is a permit violation.

11. The purpose of the Best Management Practices listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective actions means the facility took steps to eliminate the deficiency.

12. Permittee shall adhere to the following minimum BMPs:
(a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.
(b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
(c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
(d) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
(e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property. This could include the use of straw bales, silt fences, or sediment basins, if needed, to comply with effluent limits.
(f) Prevent pesticide spills or discharges from any point source by complying with the requirements of Federal Insecticide, Fungicide and Rodenticide Act, as amended (7 U.S.C. 136 et seq.) and the use of such pesticides shall be in a manner consistent with its label.

13. Changes in Discharges of Toxic Pollutant
In addition to the reporting requirements under §122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:
(a) That an activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
   (1) One hundred micrograms per liter (100 µg/L);
   (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile;
   (3) Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
   (4) One milligram per liter (1 mg/L) for antimony;
   (5) Five (5) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
   (6) The notification level established by the Department in accordance with 40 CFR 122.44(f).
(b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
   (1) Five hundred micrograms per liter (500 µg/l);
   (2) One milligram per liter (1 mg/l) for antimony;
   (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with §122.21(g)(7).
   (4) The level established by the Director in accordance with §122.44(f).

14. The full implementation of this operating permit, which includes implementation of any applicable schedules of compliance, shall constitute compliance with all applicable federal and state statutes and regulations in accordance with §644.051.16, RSMo, and the CWA section 402(k); however, this permit may be reopened and modified, or alternatively revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), §304(b)(2), and
D. SPECIAL CONDITIONS (CONTINUED)

§307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or controls any pollutant not limited in the permit.

15. All permitted features, including emergency outfalls, must be clearly marked in the field. The permitted features and land application fields shall also be marked on the aerial or topographic site map included with the Operation and Maintenance manual.

16. The permittee shall develop, maintain and implement an Operation and Maintenance (O&M) Manual that includes all necessary items to ensure the operation and integrity of the waste handling and land application systems, including key operating procedures, an aerial or topographic site map with the permitted features, land application fields, and irrigation buffer zones marked, and a brief summary of the operation of the facility. The O&M Manual shall be made available to the operator and available to the department upon request. The O&M Manual shall be reviewed and updated at least every five years.

17. An all-weather access road shall be provided to the treatment facility.

E. LAND APPLICATION CONDITIONS

1. Storage Basin.
   (a) The berms of the storage basin(s) shall be mowed and kept free of any deep-rooted vegetation, animal dens, or other potential sources of damage to the berms.
   (b) The facility shall ensure that adequate provisions are provided to prevent surface water intrusion into the storage basin(s) and to divert stormwater runoff around the storage basin(s) and protect embankments from erosion.
   (c) The minimum and maximum operating water levels for the storage basin(s) shall be clearly marked. Each storage basin shall be operated so that the maximum water elevation does not exceed upper operating level except due to exceedances of the 1-in-10 year or 25-year, 24-hour storm events. Storage basins shall be lowered to the minimum operating level prior to November 30 each year. Storage basins shall be inspected monthly for structural integrity and leaks.

2. Land Application Fields.
   (a) This special condition does not apply to fertilizer products that are exempted under the Missouri Clean Water Law and regulations, 10 CSR 20-6.015(3)(B)8.
   (b) If land application sites listed in this permit are also included as land application sites in another permit, wastewater and sludge applications from other sources shall be included in the application rates. Records of the amount and application rate of wastewater or sludge from other sources must be kept.
   (c) Public Access Restrictions. This permit does not authorize application of wastewater to public use areas.
   (d) Grazing and harvesting deferment. Grazing of animals or harvesting of forage crops should be deferred for up to 30 days following wastewater irrigation depending upon ambient air temperature and sunlight conditions. The following deferments shall be considered:
      (1) During the period from May 1 to October 30 of each year, the minimum deferment from grazing or forage harvesting shall be fourteen (14) days;
      (2) During the period from November 1 to April 30 of each year, the minimum deferment from grazing or forage harvesting shall be thirty (30) days;
      (3) Grazing of sewage irrigated land is generally not recommended for lactating dairy animals unless there has been a much longer deferment period. The recommendations of the State Milk Board shall be followed; and
      (4) Deferment may not be required for irrigation water that has been disinfected so that the water contains less than four hundred (400) fecal coliform organisms per one hundred milliliters (100 ml).
   (e) No land application shall occur when the soil is frozen, snow covered, or saturated. There shall be no application during a precipitation event or if a precipitation event that is likely to create runoff is forecasted to occur within 24 hours of a planned application.
   (f) Land application shall occur only during daylight hours.
   (g) Land application fields shall be checked daily during land application for runoff. Sites that utilize spray irrigation shall monitor for the drifting of spray across property lines.
   (h) Setback distances from sensitive features. There shall be no land application within:
      (1) 300 feet of any well, sinkhole, losing stream, wetland, or cave entrance, water supply impoundment or stream intake;
      (2) 150 feet of an occupied residence, public building, or public use area;
      (3) 50 feet of gaining perennial or intermittent stream, public or privately owned pond or lake;
      (4) 50 feet of property line or public road.
   (i) Wastewater application on slopes exceeding 10%, the hourly application rate shall not exceed one-half (1/2) the design sustained permeability and in no case shall exceed one-half (1/2) inch per hour.
E. LAND APPLICATION CONDITIONS (CONTINUED)

(j) Wastewater land applications shall not exceed agronomic rates to ensure agricultural use of nutrients and prevent contamination of surface and groundwater. The agronomic rate is the amount of wastewater applied to a field to meet the fertilizer recommendation.

3. Nitrogen Loading Rate. Land application to fields listed in this permit shall use the following protocols to determine the amount of wastewater to be applied.
(a) The fertilizer recommendation shall be based on the following:
   (1) The nutrient recommendation (nitrogen or phosphorus) for each crop. Recommendations can be found in University of Missouri Extension Guide WQ430 Crop/Nutrient Considerations for Biosolids or from publications by other land grant universities in adjoining states,
   (2) Realistic yield goal for each crop. Yield goals should be based on actual crop yield records from multiple years for each field. Good judgment should be used to counteract unusually high or low yields. If a field’s yield history is not available the USDA county wide average or other approved source may be used, and
(b) Wastewater applications shall be conducted according to Plant Available Nitrogen (PAN) based application and be adjusted annually using the current wastewater nutrient analysis and the following:
   (1) For non-legume crops, the nitrogen fertilizer recommendation shall be adjusted to account for nitrogen credits from a preceding legume crop and residual nitrogen from the previous year’s application. Nitrogen removal rates can be found in WQ430.
   (2) For legume crops, the nitrogen removal capacity of the legume crops should be based on the estimated nitrogen content of the harvested crop as defined in WQ430 and a realistic yield goal. The estimated nitrogen content of the crop must be adjusted using nitrogen credits for residual nitrogen fertilizer from the previous year’s application.

\[
PAN = [\text{Ammonia Nitrogen} \times \text{volatilization factor}] + [\text{Organic Nitrogen} \times 0.2] + [\text{Nitrate Nitrogen}]
\]

*Volatilization factor is 0.7 for surface application and 1 for subsurface application.

4. Record Keeping
(a) A daily land application log shall be prepared and kept on file at the permittee office location for each application site showing dates of application, weather condition (sunny, overcast, raining, below freezing etc…), soil moisture condition, application method.
(b) A record of monthly visual storage structure inspections shall be maintained.
(c) A record of land application equipment inspections and calibrations as well as land application field inspections shall be maintained.
(d) A record of all PAN calculations.
(e) All records and monitoring results shall be maintained for at least five years and shall be made available to the department upon request.

5. Annual Report on Land Application. An annual report is required in addition to other reporting requirements under Section A of this permit. The annual report shall be submitted by January 28 of each year. The report shall include, but is not limited to, a summary of the following:
(a) Record of maintenance and repairs during the year, average number of times per month the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year.
(b) The number of days the storage structure discharged during the year, the discharge flow, reason the discharge occurred and effluent analysis performed.
(c) A summary for each field used for land application showing number of acres used number of days application occurred, crop grown and yield, and total amount of wastewater and/or sludge applied (gal. or tons/acre).
(d) For fields where the total nitrogen application exceeds 150 lbs./acre, submit PAN calculations to document that the applied nitrogen will be utilized.
(e) Narrative summary of any problems or deficiencies identified, corrective action taken and improvements planned.
MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0112500
ISO NOVA TECHNOLOGIES LLC

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of stormwater from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified for less.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)(A)2.] a factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (MSOP or operating permit) listed below. A factsheet is not an enforceable part of an operating permit.

This Factsheet is for Industrial Land Application activity.

Part I

FACILITY INFORMATION

Facility Type: Industrial
Facility SIC Code(s): 2015
Application Date: 03/31/2017
Expiration Date: 09/30/2017
Last Inspection: 07/09/2015 in compliance

FACILITY DESCRIPTION:
The facility produces inedible egg product for pet food. Plant wash down wastewater flows to an underground concrete storage tank underdrain. Wastewater from air scrubber overflow is stored in a concrete storage basin. Overflow from the underground concrete storage tank flows to the concrete storage basin. Wastewater is removed and land applied by contract hauler on company owned or non-owned fields. Company owned fields are included in this permit. Sludge is removed by contract hauler. During periods of inclement weather wastewater is hauled to Springfield WWTF.

PERMITTED FEATURE(S) TABLE:

<table>
<thead>
<tr>
<th>PERMITTED FEATURE</th>
<th>TREATMENT LEVEL</th>
<th>EFFLUENT TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>#002, #009, #011-#019</td>
<td>Land Application</td>
<td>Industrial wastewater/sludge</td>
</tr>
<tr>
<td>#003, #007, #008</td>
<td>BMP</td>
<td>Industrial wastewater/sludge</td>
</tr>
</tbody>
</table>

FACILITY PERFORMANCE HISTORY & COMMENTS:
The electronic discharge monitoring reports were reviewed for the last permit cycle. No violations were noted.

Part II

RECEIVING STREAM INFORMATION

RECEIVING WATER BODY’S WATER QUALITY:
The receiving stream has no concurrent water quality data available.

303(d) LIST:
Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock
and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs. [http://dnr.mo.gov/env/wpp/waterquality/303d/303d.htm]

✔ Not applicable; this facility does not discharge to an impaired segment of a 303(d) listed stream.

**TOTAL MAXIMUM DAILY LOAD (TMDL):**
A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected; hence, the purpose of a TMDL is to determine the pollutant loading a specific waterbody can assimilate without exceeding water quality standards. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan or TMDL may be developed. The TMDL shall include the WLA calculation. [http://dnr.mo.gov/env/wpp/tmdl/]

✔ Not applicable; this facility is not associated with a TMDL.

**APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:**
✔ As per Missouri’s Effluent Regulations [10 CSR 20-7.015(1)(B)], the waters of the state are divided into the following seven categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall’s Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

- Missouri or Mississippi River:
- Lake or Reservoir:
- Losing:
- Metropolitan No-Discharge:
- Special Stream:
- Subsurface Water:
- All Other Waters:

**RECEIVING STREAMS TABLE:**

<table>
<thead>
<tr>
<th>OUTFALL</th>
<th>WATERBODY NAME</th>
<th>CLASS</th>
<th>WBID</th>
<th>DESIGNATED USES*</th>
<th>DISTANCE TO SEGMENT (MILES)</th>
<th>12-DIGIT HUC</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>Tributary to Spring River (losing)</td>
<td>n/a</td>
<td>N/A</td>
<td>General Criteria</td>
<td></td>
<td>11070207-0104</td>
</tr>
<tr>
<td>All</td>
<td>100K Extent-Remaining Streams</td>
<td>C</td>
<td>3960</td>
<td>HHP, IRR, LWW, SCR, WBC-B, WWH (AQL)</td>
<td>0.02-0.25</td>
<td></td>
</tr>
</tbody>
</table>

n/a = not applicable

* Waterbody ID: Missouri Use Designation Dataset 8-20-13 MUDD V1.0 data can be found as an ArcGIS shapefile on MSDIS at [http://msdis.missouri.edu/pub/Inland_Water_Resources/MO_2014_WQS_Stream_Classifications_and_Use_shp.zip](http://msdis.missouri.edu/pub/Inland_Water_Resources/MO_2014_WQS_Stream_Classifications_and_Use_shp.zip)

As per 10 CSR 20-7.031 Missouri Water Quality Standards, the department defines the Clean Water Commission’s water quality objectives in terms of “water uses to be maintained and the criteria to protect those uses.” The receiving stream and 1st classified receiving stream’s beneficial water uses to be maintained are in the receiving stream table in accordance with [10 CSR 20-7.031(1)(C)].

Uses which may be found in the receiving streams table, above:
10 CSR 20-7.031(1)(C)(1): AQL = Protection of aquatic life (Current narrative use(s) are defined to ensure the protection and propagation of fish shellfish and wildlife, which is further subcategorized as: WWH = Warm Water Habitat; CLH = Cool Water Habitat; CDH = Cold Water Habitat; EAH = Ephemeral Aquatic Habitat; MAH = Modified Aquatic Habitat; LAH = Limited Aquatic Habitat. This permit uses AQL effluent limitations in 10 CSR 20-7.031 Table A for all habitat designations unless otherwise specified.)
10 CSR 20-7.031(1)(C)(2): Recreation in and on the water
WBC = Whole Body Contact recreation where the entire body is capable of being submerged;
WBC-A = Whole body contact recreation that supports swimming uses and has public access;
WBC-B = Whole body contact recreation that supports swimming;
SCR = Secondary Contact Recreation (like fishing, wading, and boating).
10 CSR 20-7.031(1)(C)(3) to 7.:
HHP (formerly IHF) = Human Health Protection as it relates to the consumption of fish;
IRR = Irrigation for use on crops utilized for human or livestock consumption;
LWW = Livestock and wildlife watering (Current narrative use is defined as LWP = Livestock and Wildlife Protection);
DWS = Drinking Water Supply;
IND = Industrial water supply
10 CSR 20-7.031(1)(C)(8-11): Wetlands (10 CSR 20-7.031 Table A currently does not have corresponding habitat use criteria for these defined uses)
WSA = Storm- and flood-water storage and attenuation; WHP = Habitat for resident and migratory wildlife species;
WRC = Recreational, cultural, educational, scientific, and natural aesthetic values and uses; WHC = Hydrologic cycle maintenance.
10 CSR 20-7.031(6): GRW = Groundwater

**RECEIVING STREAM MONITORING REQUIREMENTS:**
No receiving water monitoring requirements are recommended at this time.
Part III  RATIONALE & DERIVATION OF LIMITATIONS & PERMIT CONDITIONS

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:
As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

✓ Not Applicable; The facility is a no-discharge system that does not discharge to a Losing Stream as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(O)], or is an existing facility.

ANTI-BACKSLIDING:
A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(l)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

✓ The Department determined technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b). Fecal Coliform monitoring for land applied wastewater is only required for public access sites. This facility is not authorized to land apply at public access sites, therefore, Fecal Coliform monitoring was removed.

ANTIDEGRADATION:
In accordance with Missouri’s Water Quality Standard [10 CSR 20-7.031(3)], the Department is to document by means of Antidegradation Review that the use of a water body’s available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

✓ Not Applicable; No degradation proposed and no further review necessary. This is a no-discharge system and antidegradation does not apply.

BIOSOLIDS & SEWAGE SLUDGE:
Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address: http://extension.missouri.edu/main/DisplayCategory.aspx?C=74, items WQ422 through WQ449.

✓ Not applicable; this condition is not applicable to the permittee for this facility.

COMPLIANCE AND ENFORCEMENT:
Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

✓ Not Applicable; The permittee/facility is not currently under Water Protection Program enforcement action.

EFFLUENT LIMITATION GUIDELINE:
Effluent Limitation Guidelines, or ELGs, are found at 40 CFR 400-499. These are limitations established by the EPA based on the SIC code and the type of work a facility is conducting. Most ELGs are for process wastewater and some address stormwater. All are technology based limitations which must be met by the applicable facility at all times.

✓ The facility does not have an associated ELG.

GROUNDWATER MONITORING:
Groundwater is a water of the state according to 10 CSR 20-7.015(11), and is subject to regulations at 10 CSR 20-7.015(7) and 10 CSR 20-7.031(6) and must be protected accordingly.

✓ This facility is not required to monitor groundwater for the water protection program.

REASONABLE POTENTIAL (RP):
Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are (or may be) discharged at a level causing or have the reasonable potential to cause (or contribute to) an in-stream excursion above narrative or numeric water quality standards. Per 10 CSR 20-7.031(4), general criteria shall be applicable to all waters of the state at all times; however, acute toxicity criteria may be exceeded by permit in zones of initial dilution, and chronic toxicity criteria may be exceeded by permit in mixing zones. If the permit writer determines any given pollutant has the reasonable potential to cause or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant [40 CFR Part 122.44(d)(1)(iii)].

✓ Not applicable; an RPA was not conducted for this facility. This permit establishes permit limits for stormwater. The Department has determined stormwater is not a continuous discharge and is therefore not necessarily dependent on mathematical RPAs. However, the permit writer completed an RPD, a reasonable potential determination, using best professional judgment for all of
the appropriate parameters in this permit. An RPD consists of reviewing application data and/or discharge monitoring data for the last five years and comparing those data to narrative or numeric water quality criteria.

**INDUSTRIAL SLUDGE:**
Industrial sludge is solids, semi-solids, or liquid residue generated during the treatment of industrial process wastewater in a treatment works; including but not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment process; scum and solids filtered from water supplies and backwashed; and a material derived from industrial sludge.

- Not applicable; this condition is not applicable to the permittee for this facility.

**NO-DISCHARGE LAND APPLICATION:**
Land application of wastewater or sludge shall comply with the all applicable no-discharge requirements listed in 10 CSR 20-6.015 and all facility operations and maintenance requirements listed in 10 CSR 20-8.020(15). These requirements ensure appropriate operation of the no-discharge land application systems and prevent unauthorized and illicit discharges to waters of the state. Land applications by a contract hauler on fields that the permittee has a spreading agreement on are not required to be in this permit. A spreading agreement does not constitute the field being rented or leased by the permittee as they do not have any control over management of the field.

- Applicable; This permit authorizes operation of a no-discharge land application system to treat wastewater or sludge.

**LAND APPLICATION RATES:**
In accordance with 10 CSR 20-8.020(15), wastewater and sludge must be land applied at either hydraulic loading rates, nitrogen loading rates, or trace elements loading rates.

### Conversion Factors for laboratory testing results: \[ \text{[mg/L or mg/kg or ppm]} \times \text{[conversion factor]} = \text{[pounds per Unit Volume]} \]

<table>
<thead>
<tr>
<th>Unit Volume</th>
<th>Conversion Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>lbs./acre inch</td>
<td>0.226</td>
</tr>
<tr>
<td>lbs./1,000 gallons</td>
<td>0.0083</td>
</tr>
<tr>
<td>lbs./100 cubic feet</td>
<td>0.0062</td>
</tr>
<tr>
<td>lbs/ton (wet weight)</td>
<td>0.002</td>
</tr>
</tbody>
</table>

- Applicable; Nitrogen Loading Rates – this considers overall nutrient management of the land application system. The fertilizer recommendation is the amount of nutrients required for a crop to produce the expected yield. The agronomic rate is the amount of wastewater and/or sludge applied to a field to supply the amount of nutrients to meet the fertilizer recommendation. For more information on nutrient management, PAN calculations, and land application best management practices, consult the following University of Missouri Extension Guides:

  Nitrogen based applications are when the amount of wastewater applied is based on the nitrogen fertilizer recommendation for the planned crop. Phosphorous based applications are when the amount of wastewater applied is based on the phosphorous fertilizer recommendation for the planned crop.

  Fertilizer recommendations can also be obtained by using one of the following tools:
  

**SCHEDULE OF COMPLIANCE (SOC):**
Per 644.051.4 RSMo, a permit may be issued with a Schedule of Compliance (SOC) to provide time for a facility to come into compliance with new state or federal effluent regulations, water quality standards, or other requirements. Such a schedule is not allowed if the facility is already in compliance with the new requirement, or if prohibited by other statute or regulation. A SOC includes an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. See also Section 502(17) of the Clean Water Act, and 40 CFR §122.2. For new effluent limitations, the permit includes interim monitoring for the specific parameter to demonstrate the facility is not already in compliance with the new requirement. Per 40 CFR §122.47(a)(1) and 10 CSR 20-7.031(10), compliance must occur as soon as possible. If the permit provides a schedule for meeting new water quality based effluent limits, a SOC must include an enforceable, final effluent limitation in the permit even if the SOC extends beyond the life of the permit.

A SOC is not allowed:
- For effluent limitations based on technology-based standards established in accordance with federal regulations, if the deadline for compliance established in federal regulations has passed. 40 CFR §125.3.
- For a newly constructed facility in most cases. Newly constructed facilities must meet applicable effluent limitations when discharge begins, because the facility has installed the appropriate control technology as specified in a permit or
antidegradation review. A SOC is allowed for a new water quality based effluent limit that was not included in a previously
public noticed permit or antidegradation review, which may occur if a regulation changes during construction.
• To develop a TMDL, UAA, or other study associated with development of a site specific criterion. A facility is not
prohibited from conducting these activities, but a SOC may not be granted for conducting these activities.

In order to provide guidance to Permit Writers in developing SOCs, and attain a greater level of consistency, on October 25, 2012
the department issued a policy on development of SOCs. This policy provides guidance to Permit Writers on the standard
time frames for schedules for common activities, and guidance on factors that may modify the length of the schedule such as
an affordability analysis.

✓ Not applicable; this permit does not contain a SOC.

**SPILL REPORTING:**

Per 10 CSR 24-3.010, any emergency involving a hazardous substance must be reported to the department’s 24 hour Environmental
Emergency Response hotline at (573) 634-2436 at the earliest practicable moment after discovery. The department may require the
submittal of a written report detailing measures taken to clean up a spill. These reporting requirements apply whether or not the spill
results in chemicals or materials leaving the permitted property or reaching waters of the state. This requirement is in addition to the
Noncompliance Reporting requirement found in Standard Conditions Part I.

**STORMWATER PERMITTING:**

A standard mass-balance equation cannot be calculated for stormwater from this facility because the stormwater flow and flow in the
receiving stream cannot be determined for conditions on any given day. The amount of stormwater discharged from the facility will
vary based on previous rainfall, soil saturation, humidity, detention time, BMPs, surface permeability, etc. Flow in the receiving
stream will vary based on climatic conditions, size of watershed, amount of surfaces with reduced permeability (houses, parking lots,
and the like) in the watershed, hydrogeology, topography, etc. Decreased permeability increases the flash of the stream.

It is likely sufficient rainfall to cause a discharge for four continuous days from a facility will also cause some significant amount of
flow in the receiving stream. Chronic WQSs are based on a four-day exposure (except ammonia, which is based on a thirty day
exposure). In the event a discharge does occur from this facility for four continuous days, some amount of flow will occur in the
receiving stream. This flow will dilute stormwater discharges from a facility. For these reasons, most industrial stormwater facilities
have limited potential to cause a violation of chronic water quality standards in the receiving stream.

Sufficient rainfall to cause a discharge for one hour or more from a facility would not necessarily cause significant flow in a receiving
stream. Acute WQSs are based on a one hour of exposure, and must be protected at all times in unclassified streams, and within
mixing zones of class P streams [10 CSR 20-7.031(4) and (5)(4)(B.)]. Therefore, industrial stormwater facilities with toxic
contaminants do have the potential to cause a violation of acute WQSs if those toxic contaminants occur in sufficient amounts.

It is due to the items stated above staff are unable to perform statistical Reasonable Potential Analysis (RPA). However, staff will use
their best professional judgment in determining if a facility has a potential to violate Missouri’s Water Quality Standards.

**STORMWATER POLLUTION PREVENTION PLAN (SWPPP):**

In accordance with 40 CFR 122.44(k), Best Management Practices (BMPs) must be used to control or abate the discharge of
pollutants when: 1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous
substances from ancillary industrial activities; 2) Authorized under section 402(p) of the CWA for the control of stormwater
discharges; 3) Numeric effluent limitations are infeasible; or 4) the practices are reasonably necessary to achieve effluent limitations
and standards or to carry out the purposes and intent of the CWA. In accordance with the EPA’s Developing Your Stormwater
Pollution Prevention Plan, A Guide for Industrial Operators, (Document number EPA 833-B-09-002) [published by the United States
Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of
pollution entering waters of the state from a permitted facility. BMPs may take the form of a process, activity, or physical structure.
Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to 1) identify sources of
pollution or contamination, and 2) select and carry out actions which prevent or control the pollution of storm water discharges.

A SWPPP must be prepared by the permittee if the SIC code is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2). A SWPPP
may be required of other facilities where stormwater has been identified as necessitating better management. The purpose of a SWPPP
is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate stream
pollution from stormwater runoff. Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of
pollutants being discharged during storm events. The following paragraph outlines the general steps the permittee should take to
determine which BMPs will work to achieve the benchmark values or limits in the permit. This section is not intended to be all
encompassing or restrict the use of any physical BMP or operational and maintenance procedure assisting in pollution control.
Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit.
Areas which should be included in the SWPPP are identified in 40 CFR 122.26(b)(14). Once the potential sources of stormwater pollution have been identified, a plan should be formulated to best control the amount of pollutant being released and discharged by each activity or source. This should include, but is not limited to, minimizing exposure to stormwater, good housekeeping measures, proper facility and equipment maintenance, spill prevention and response, vehicle traffic control, and proper materials handling. Once a plan has been developed the facility will employ the control measures determined to be adequate to achieve the benchmark values discussed above. The facility will conduct monitoring and inspections of the BMPs to ensure they are working properly and re-evaluate any BMP not achieving compliance with permitting requirements. For example, if sample results from an outfall show values of TSS above the benchmark value, the BMP being employed is deficient in controlling stormwater pollution. Corrective action should be taken to repair, improve, or replace the failing BMP. This internal evaluation is required at least once per month but should be continued more frequently if BMPs continue to fail. If failures do occur, continue this trial and error process until appropriate BMPs have been established.

For new, altered, or expanded stormwater discharges, the SWPPP shall identify reasonable and effective BMPs while accounting for environmental impacts of varying control methods. The antidegradation analysis must document why no discharge or no exposure options are not feasible. The selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of antidegradation [10 CSR 20-7.031(3)]. For further guidance, consult the antidegradation implementation procedure (http://dnr.mo.gov/env/wpp/docs/AIP050212.pdf).

Alternative Analysis (AA) evaluation of the BMPs is a structured evaluation of BMPs that are reasonable and cost effective. The AA evaluation should include practices that are designed to be: 1) non-degrading; 2) less degrading; or 3) degrading water quality. The glossary of AIP defines these three terms. The chosen BMP will be the most reasonable and effective management strategy while ensuring the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The AA evaluation must demonstrate why “no discharge” or “no exposure” is not a feasible alternative at the facility. This structured analysis of BMPs serves as the antidegradation review, fulfilling the requirements of 10 CSR 20-7.031(3) Water Quality Standards and Antidegradation Implementation Procedure (AIP), Section II.B.

If parameter-specific numeric exceedances continue to occur and the permittee feels there are no practicable or cost-effective BMPs which will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the permittee can submit a request to re-evaluate the benchmark values. This request needs to include 1) a detailed explanation of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values; 2) financial data of the company and documentation of cost associated with BMPs for review and 3) the SWPPP, which should contain adequate documentation of BMPs employed, failed BMPs, corrective actions, and all other required information. This will allow the Department to conduct a cost analysis on control measures and actions taken by the facility to determine cost-effectiveness of BMPs. The request shall be submitted in the form of an operating permit modification; the application is found at: http://dnr.mo.gov/forms/index.html.

**TECHNOLOGY-BASED EFFLUENT LIMITATIONS (TBEL):**

One of the major strategies of the Clean Water Act (CWA) in making “reasonable further progress toward the national goal of eliminating the discharge of all pollutants” is to require effluent limitations based on the capabilities of the technologies available to control those discharges. Technology-based effluent limitations (TBELs) aim to prevent pollution by requiring a minimum level of effluent quality attainable using demonstrated technologies for reducing discharges of pollutants or pollution into the waters of the United States. TBELs are developed independently of the potential impact of a discharge on the receiving water, which is addressed through water quality standards and water quality-based effluent limitations (WQBELs).

Not applicable; this facility does not discharge process wastewater therefore is not subject to TBEL POC analysis.

**VARIANCE:**

As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

Not applicable; this operating permit is not drafted under premises of a petition for variance.

**WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:**

As per [10 CSR 20-2.010(78)], the WLA is the amount of pollutant each discharger is allowed to discharge into the receiving stream without endangering water quality. Two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs) are reviewed. If one limit does not provide adequate protection for the receiving waters, then the other must be used.
WLA MODELING:
Permittees may submit site specific studies to better determine the site specific wasteload allocations applied in permits.
✔ Not applicable; a WLA study was either not submitted or determined not applicable by Department staff.

Part IV PERMIT LIMITS & MONITORING DETERMINATION
Effluent limitations derived and established for this permit are based on current operations of the facility. Effluent means both process water and stormwater. Any flow through the outfall is considered a discharge and must be sampled and reported as provided below.
Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

GENERAL CRITERIA CONSIDERATIONS:
In accordance with 40 CFR 122.44(d)(1), effluent limitations shall be placed into permits for pollutants which have been determined to cause, have the reasonable potential to cause, or to contribute to an excursion above any State water quality standard, including State narrative criteria for water quality. The rule further states pollutants which have been determined to cause, have the reasonable potential to cause, or contribute to an excursion above a narrative criterion within an applicable State water quality standard, the permit shall contain a numeric effluent limitation to protect that narrative criterion. The previous permit included the narrative criteria as specific prohibitions placed upon the discharge. These prohibitions were included in the permit absent any discussion of the discharge’s reasonable potential to cause or contribute to an excursion of the criterion. In order to comply with this regulation, the permit writer has completed a reasonable potential determination on whether the discharge has reasonable potential to cause, or contribute to an excursion of the general criteria listed in 10 CSR 20-7.031(4). These specific requirements are listed below followed by derivation and discussion (the lettering matches that of the rule itself, under 10 CSR 20-7.031(4)). In instances where reasonable potential exists, the permit includes numeric limitations to address the reasonable potential. In instances where reasonable potential does not exist the permit includes monitoring of the discharges potential to impact the receiving stream’s narrative criteria. Finally, all of the previous permit narrative criteria prohibitions have been removed from the permit given they are addressed by numeric limits where reasonable potential exists. It should also be noted that Section 644.076.1, RSMo as well as Section D – Administrative Requirements of Standard Conditions Part I of this permit state that it shall be unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri that is in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law or any standard, rule, or regulation promulgated by the commission.

(A) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses.
  • For all outfalls, there is no RP for putrescent bottom deposits preventing full maintenance of beneficial uses because nothing disclosed by the permittee at renewal for these outfalls indicates putrescent wastewater would be discharged from the facility.

(B) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses.
  • For all outfalls, there is no RP for oil in sufficient amounts to be unsightly preventing full maintenance of beneficial uses because nothing disclosed by the permittee at renewal or during prior sampling for DMR requirements for these outfalls indicates oil will be present in sufficient amounts to impair beneficial uses.
  • For all outfalls, there is no RP for scum and floating debris in sufficient amounts to be unsightly preventing full maintenance of beneficial uses because nothing disclosed by the permittee at renewal for these outfalls indicates scum and floating debris will be present in sufficient amounts to impair beneficial uses.

(C) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses.
  • For all outfalls, there is no RP for unsightly color or turbidity in sufficient amounts preventing full maintenance of beneficial uses because nothing disclosed by the permittee at renewal for these outfalls indicates unsightly color or turbidity will be present in sufficient amounts to impair beneficial uses.
  • For all outfalls, there is no RP for offensive odor in sufficient amounts preventing full maintenance of beneficial uses because nothing disclosed by the permittee at renewal for these outfalls indicates offensive odor will be present in sufficient amounts to impair beneficial uses.

(D) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life.
  • The permit writer considered specific toxic pollutants when writing this permit. Numeric effluent limitations are included for those pollutants that could be discharged in toxic amounts. These effluent limitations are protective of human health, animals, and aquatic life.

(E) There shall be no significant human health hazard from incidental contact with the water.
  • It is the permit writer’s opinion that this criterion is the same as (D).
There shall be no acute toxicity to livestock or wildlife watering.

- It is the permit writer’s opinion that this criterion is the same as (D).

Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community.

- For all outfalls, there is no RP for physical changes that would impair the natural biological community because nothing disclosed by the permittee at renewal for these outfalls indicates physical changes that would impair the natural biological community.

- For all outfalls, there is RP for chemical changes that would impair the natural biological community because DMR data and sampling for permit renewal show RP for aluminum and ammonia therefore limits are imposed for these parameters; limitations on WET testing provide protection for any synergistic effects discharged pollutants may incur.

- For all outfalls, there is no RP for hydrologic changes that would impair the natural biological community because nothing disclosed by the permittee at renewal for these outfalls indicates physical changes that would impair the natural biological community.

Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

- There are no solid waste disposal activities or any operation that has reasonable potential to cause or contribute to the materials listed above being discharged through any outfall.

**PERMITTED FEATURE #002 – Storage Basins/Lagoons**

Limitations derived and established in the below Storage Basin Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

<table>
<thead>
<tr>
<th>STORAGE BASIN LIMITATIONS TABLE</th>
<th>PARAMETERS</th>
<th>UNIT</th>
<th>DAILY MAX</th>
<th>PREVIOUS PERMIT LIMITS</th>
<th>MINIMUM SAMPLING FREQUENCY</th>
<th>MINIMUM REPORTING FREQUENCY</th>
<th>SAMPLE TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>STORAGE BASIN FREEBOARD</td>
<td>Feet</td>
<td>*</td>
<td>same</td>
<td>once/month</td>
<td>once/month</td>
<td>measured</td>
<td></td>
</tr>
<tr>
<td>PRECIPITATION</td>
<td>Inches</td>
<td>*</td>
<td>same</td>
<td>once/month</td>
<td>once/month</td>
<td>measured</td>
<td></td>
</tr>
</tbody>
</table>

**PERMITTED FEATURE #002 – DERIVATION AND DISCUSSION OF LIMITS:**

**STORAGE BASIN:**

- **Freeboard**
  Monitoring requirement only. In order to determine compliance with 10 CSR 20-8.020(15)(F)2., monitoring of freeboard in the storage basin is required.

- **Precipitation**
  Monitoring requirement only. In order to determine compliance with 10 CSR 20-8.020(15)(F)2., monitoring of freeboard in the storage basin is required. Additionally, precipitation monitoring allows the permittee to operate the land application activity to prevent over application during saturated conditions that may result in a discharge.

**WASTEWATER:**

- **Nitrate Nitrogen as N**
  Monitoring requirement only. In accordance with 10 CSR 20-8.020(15)(F)7., if wastewater land applied exceeds 10 mg/L of nitrate nitrogen as N, then the permittee must utilize nitrogen loading rates and develop a nutrient management plan to plant appropriate crop for nutrient uptake.
Nitrogen, Total Kjeldahl
Monitoring requirement only. In accordance with 10 CSR 20-8.020(15)(F)7., if wastewater land applied exceeds 150 lbs/acre/year or total nitrogen, then the permittee must utilize nitrogen loading rates and develop a nutrient management plan to plant appropriate crop for nutrient uptake.

Phosphorous, Total
Monitoring requirement only. In accordance with 10 CSR 20-8.020(15)(F)7., monitoring for Total Phosphorous is included to determine nutrient loading rates on the land application fields.

PERMITTED FEATURE #003, #007, #008 - Stormwater

<table>
<thead>
<tr>
<th>PARAMETERS</th>
<th>UNIT</th>
<th>DAILY MAXIMUM LIMIT</th>
<th>BENCHMARK</th>
<th>PREVIOUS PERMIT LIMITS</th>
<th>MINIMUM SAMPLING FREQUENCY</th>
<th>MINIMUM REPORTING FREQUENCY</th>
<th>SAMPLE TYPE</th>
</tr>
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<tbody>
<tr>
<td><strong>PHYSICAL</strong></td>
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</tr>
<tr>
<td>Flow</td>
<td>MGD</td>
<td>*</td>
<td></td>
<td>SAME</td>
<td>ONE/QUARTER</td>
<td>ONCE/QUARTER</td>
<td>24 HR. ESTIMATE</td>
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<tr>
<td>Precipitation</td>
<td>inches</td>
<td>*</td>
<td></td>
<td>SAME</td>
<td>ONE/QUARTER</td>
<td>ONE/QUARTER</td>
<td>ONCE/QUARTER</td>
</tr>
<tr>
<td><strong>CONVENTIONAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biochemical Oxygen Demand 5</td>
<td>mg/L</td>
<td>**</td>
<td>30</td>
<td>SAME</td>
<td>ONE/QUARTER</td>
<td>ONE/QUARTER</td>
<td>GRAB</td>
</tr>
<tr>
<td>Oil &amp; Grease</td>
<td>mg/L</td>
<td>**</td>
<td>15</td>
<td>SAME</td>
<td>ONE/QUARTER</td>
<td>ONE/QUARTER</td>
<td>GRAB</td>
</tr>
<tr>
<td>pH†</td>
<td>SU</td>
<td></td>
<td>6.5 TO 9.0</td>
<td>SAME</td>
<td>ONE/QUARTER</td>
<td>ONE/QUARTER</td>
<td>GRAB</td>
</tr>
<tr>
<td>Total Suspended Solids</td>
<td>mg/L</td>
<td>**</td>
<td>100</td>
<td>SAME</td>
<td>ONE/QUARTER</td>
<td>ONE/QUARTER</td>
<td>GRAB</td>
</tr>
<tr>
<td><strong>NUTRIENTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ammonia as N</td>
<td>mg/L</td>
<td>**</td>
<td>12.1</td>
<td>SAME</td>
<td>ONE/QUARTER</td>
<td>ONE/QUARTER</td>
<td>GRAB</td>
</tr>
<tr>
<td>Nitrate as NO₃</td>
<td>mg/L</td>
<td>**</td>
<td>10</td>
<td>SAME</td>
<td>ONE/QUARTER</td>
<td>ONE/QUARTER</td>
<td>GRAB</td>
</tr>
</tbody>
</table>

* Monitoring requirement only
** Monitoring with associated benchmark
† Report the minimum and maximum pH values; pH is not to be averaged.

**DERIVATION AND DISCUSSION OF LIMITS: #003, #007, #008 - Stormwater**

**PHYSICAL:**

Flow
In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification. The facility will report the total flow in millions of gallons per day (MGD).

Precipitation
Stormwater Only: Monitoring only requirement; measuring the amount of precipitation [(10 CSR 20-6.200(2)(C)1.E(VI)] during an event is necessary to ensure adequate stormwater management exists at the site. Knowing the amount of potential stormwater runoff can provide the permittee a better understanding of specific control measure that should be employed to ensure protection of water quality. The facility will provide the 24 hour accumulation value of precipitation from the day of sampling the other parameters. It is not necessary to report all days of precipitation during the quarter because of the readily available on-line data.

**CONVENTIONAL:**

Biochemical Oxygen Demand (BOD₅)
Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream’s water quality. Effluent limitations have been retained from previous state operating permit, please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the Receiving Stream Information.

Oil & Grease
Conventional pollutant, in accordance with 10 CSR 20-7.031 Table A: Criteria for Designated Uses; 10 mg/L monthly average (chronic standard). The daily maximum was calculated using the Technical Support Document for Water Quality-Based Toxics
Control (EPA/505/2-90-001). Section 5.4.2 indicates the waste load allocation can be set to the chronic standard. When the chronic standard is multiplied by 1.5, the daily maximum can be calculated. Hence, $10 \times 1.5 = 15$ mg/L for the daily maximum.

**pH**

6.5 to 9.0 SU. The Water Quality Standard at 10 CSR 20-7.031(5)(E) states water contaminants shall not cause pH to be outside the range of 6.5 to 9.0 standard pH units.

**Total Suspended Solids (TSS)**

Stormwater: There is no water quality standard for TSS; however, sediment discharges can negatively impact aquatic life habitat. TSS is also a valuable indicator parameter. TSS monitoring allows the permittee to identify increases in TSS that may indicate uncontrolled materials leaving the site. Increased suspended solids in runoff can lead to decreased available oxygen for aquatic life and an increase of surface water temperatures in a receiving stream. Suspended solids can also be carriers of toxins, which can adsorb to the suspended particles; therefore, total suspended solids are a valuable indicator parameter for other pollution. A benchmark value will be implemented for this parameter. The benchmark value will be set at 100 mg/L. This value is achievable through proper operational and maintenance of BMPs and falls within the range of values implemented in other permits having similar industrial activities.

**NUTRIENTS:**

- **Nitrate as NO₃**
  Protection of Drinking Water Supply and Ground Water Chronic Criteria = 10 mg/L

- **Ammonia as N**
  Protection of Aquatic Life Acute Criteria = 12.1 mg/L

**PERMITTED FEATURE #009, #011- #019–Land Application Fields**

Limitations derived and established in the below Land Application Field Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

**Storage Basin Limitations Table:**

<table>
<thead>
<tr>
<th>PARAMETERS</th>
<th>UNIT</th>
<th>DAILY MAX</th>
<th>PREVIOUS PERMIT LIMITS</th>
<th>MINIMUM SAMPLING FREQUENCY</th>
<th>MINIMUM REPORTING FREQUENCY</th>
<th>SAMPLE TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WASTEWATER APPLICATION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application Area</td>
<td>Acres</td>
<td>*</td>
<td>same</td>
<td>once/day</td>
<td>once/month</td>
<td>measured</td>
</tr>
<tr>
<td>Application Rate</td>
<td>Inches/Acre</td>
<td>*</td>
<td>same</td>
<td>once/day</td>
<td>once/month</td>
<td>measured</td>
</tr>
<tr>
<td>Irrigation Period</td>
<td>Hours</td>
<td>*</td>
<td>same</td>
<td>once/day</td>
<td>once/month</td>
<td>measured</td>
</tr>
<tr>
<td>Volume Irrigated</td>
<td>Gallons</td>
<td>*</td>
<td>same</td>
<td>once/day</td>
<td>once/month</td>
<td>measured</td>
</tr>
</tbody>
</table>

* - Monitoring requirement only

**PERMITTED FEATURE 009, #011- #019–DERIVATION AND DISCUSSION OF LIMITS:**

**WASTEWATER APPLICATION:**

**Application Area**

Monitoring requirement only. In order to determine compliance with 10 CSR 20-6.015 and 10 CSR 20-8.020(15), monitoring of application activity is required. Monitoring the area will allow the permittee to ensure compliance with setback distances and are prevents illicit discharges to waterbodies.

**Application Rate**

Monitoring requirement only. In order to determine compliance with 10 CSR 20-6.015 and 10 CSR 20-8.020(15), monitoring of application activity is required. Monitoring the rate will allow the permittee to ensure appropriate permeability and plant uptake is occurring and will prevent soil saturation that may result in runoff and illicit discharges to waterbodies. This will also prevent sludge buildup that may clog soils, which likewise will cause runoff and illicit discharges of wastewater to waterbodies.
Irrigation Period
Monitoring requirement only. In order to determine compliance with 10 CSR 20-6.015 and 10 CSR 20-8.020(15), monitoring of application activity is required. Monitoring the irrigation period will also ensure that soils do not get saturated and result in runoff and illicit discharges to waterbodies.

Volume Irrigated
Monitoring requirement only. In order to determine compliance with 10 CSR 20-6.015 and 10 CSR 20-8.020(15), monitoring of application activity is required. Monitoring the volume irrigated will allow the permittee to ensure over application does not occur and that hydraulic loading is maintained within design levels. This will also help prevent runoff and illicit discharges due to soil saturation. This will also prevent sludge buildup that may clog soils, which likewise will cause runoff and illicit discharges of wastewater to waterbodies.

Part V  SAMPLING & REPORTING REQUIREMENTS

Refer to each outfall's derivation and discussion of limits section to review individual sampling and reporting frequencies and sampling type.

Electronic Discharge Monitoring Report (eDMR) Submission System:
The U.S. Environmental Protection Agency (EPA) promulgated a final rule on October 22, 2015, to modernize Clean Water Act reporting for municipalities, industries, and other facilities by converting to an electronic data reporting system. This final rule requires regulated entities and state and federal regulators to use information technology to electronically report data required by the National Pollutant Discharge Elimination System (NPDES) permit program instead of filing paper reports. To comply with the federal rule, the Department is requiring all permittees to begin submitting discharge monitoring data and reports online.

Per 40 CFR 127.15 and 127.24, permitted facilities may request a temporary waiver for up to 5 years or a permanent waiver from electronic reporting from the Department. To obtain an electronic reporting waiver, a permittee must first submit an eDMR Waiver Request Form: [http://dnr.mo.gov/forms/780-2692-f.pdf](http://dnr.mo.gov/forms/780-2692-f.pdf). A request must be made for each facility. If more than one facility is owned or operated by a single entity, then the entity must submit a separate request for each facility based on its specific circumstances. An approved waiver is non-transferable.

The Department must review and notify the facility within 120 calendar days of receipt if the waiver request has been approved or rejected [40 CFR 124.27(a)]. During the Department review period as well as after a waiver is granted, the facility must continue submitting a hard-copy of any reports required by their permit. The Department will enter data submitted in hard-copy from those facilities allowed to do so and electronically submit the data to the EPA on behalf of the facility.

- The permittee/facility is currently using the eDMR data reporting system.

Sampling Frequency Justification:
Sampling and reporting frequency was generally retained from previous permit. 40 CFR 122.45(d)(1) indicates all continuous discharges shall be permitted with daily maximum and monthly average limits. Sampling frequency for stormwater-only outfalls is typically quarterly even though BMP inspection occurs monthly. The facility may sample more frequently if additional data is required to determine if best management operations and technology are performing as expected.

Sampling Type Justification:
The sampling type was continued from the previous permit. The sampling types are representative of the discharges, and are protective of water quality. Discharges with altering effluent should have composite sampling; discharges with uniform effluent can have grab samples. Grab samples are usually appropriate for stormwater. Parameters which must have grab sampling are: pH, ammonia, E. coli, total residual chlorine, free available chlorine, hexavalent chromium, dissolved oxygen, total phosphorus, and volatile organic samples.

Administrative Requirements
On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.
PERMIT SYNCHRONIZATION:
The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. [http://dnr.mo.gov/env/wpp/cpp/docs/watershed-based-management.pdf](http://dnr.mo.gov/env/wpp/cpp/docs/watershed-based-management.pdf). This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the Department to explore a watershed based permitting effort at some point in the future. Renewal applications must continue to be submitted within 180 days of expiration, however, in instances where effluent data from the previous renewal is less than three years old, that data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit.

✓ This permit will maintain synchronization by expiring third quarter of 2022.

PUBLIC NOTICE:
The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

✓ The Public Notice period for this operating permit was from August 31, 2018 to October 1, 2018. No responses received.

DATE OF FACT SHEET: OCTOBER 5, 2018

COMPLETED BY:

GREG CALDWELL ENVIRONMENTAL SCIENTIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION – INDUSTRIAL PERMITS UNIT
(573) 526-1426
greg.caldwell@dnr.mo.gov
These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

1. Sampling Requirements.
   a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
   b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.

2. Monitoring Requirements.
   a. Records of monitoring information shall include:
      i. The date, exact place, and time of sampling or measurements;
      ii. The individual(s) who performed the sampling or measurements;
      iii. The date(s) analyses were performed;
      iv. The individual(s) who performed the analyses;
      v. The analytical techniques or methods used; and
      vi. The results of such analyses.
   b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.

3. Sample and Monitoring Calculations. Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.

4. Test Procedures. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is "sufficiently sensitive" when: 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility's discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.

5. Record Retention. Except for records of monitoring information required by the permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

6. Illegal Activities.
   a. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two (2) years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four (4) years, or both.
   b. The Missouri Clean Water Law provides that any person or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than six (6) months, or by both. Second and successive convictions for violation under this paragraph by any person shall be punished by a fine of not more than $50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

Section B – Reporting Requirements

1. Planned Changes.
   a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
      i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
      ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42;
      iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported in the permit application process or not reported pursuant to an approved land application plan;
      iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.

   a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office outside of normal business hours or the Environmental Emergency Response hotline at 573-634-2436 during normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
Section C – Bypass/Upset Requirements

b. The following shall be included as information which must be reported within 24 hours under this paragraph:
   i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
   ii. Any upset which exceeds any effluent limitation in the permit.
   iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
   c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.

3. Anticipated Noncompliance. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.

4. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.

5. Other Noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.

6. Other Information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

7. Discharge Monitoring Reports.
   a. Monitoring results shall be reported at the intervals specified in the permit.
   b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
   c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.

Section C – Bypass/Upset Requirements

1. Definitions.
   b. Severe Property Damage: 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.
   c. Upset: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2. Bypass Requirements.
   a. 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 paragraphs 2. b. and 2. c. of this section.

   b. Notice.
      i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
      ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).

   c. Prohibition of bypass.
      i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, 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 back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
         3. The permittee submitted notices as required under paragraph 2. b. of this section.
      ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.

3. Upset Requirements.
   a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
   b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
      i. An upset occurred and that the permittee can identify the cause(s) of the upset;
      ii. The permitted facility was at the time being properly operated; and
      iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
   c. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
   d. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

Section D – Administrative Requirements

1. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
   a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
   b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement
imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.

d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, or other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed $10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than $50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

2. Duty to Reapply.
   a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
   b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
   c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

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

4. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the permittee to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.

6. Permit Actions.
   a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
      i. Violations of any terms or conditions of this permit or the law;
      ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
      iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
      iv. Any reason set forth in the Law or Regulations.
   b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. Permit Transfer.
   a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
   b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
   c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.

8. Toxic Pollutants. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

9. Property Rights. This permit does not convey any property rights of any sort, or any exclusive privilege.
10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
   a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
   c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
   d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.

12. **Closure of Treatment Facilities.**
   a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
   b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.

13. **Signatory Requirement.**
   a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
   b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
   c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.

14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.
March 29, 2017

Department of Natural Resources  
Water Protection Program  
1101 Riverside Drive  
Jefferson City, MO 65101

To Whom It May Concern,

Enclosed you will find completed application Forms A, C and I along with applicable information in order to renew the NPDES permit for IsoNova Technologies LLC – MO 0112500.

IsoNova would like to request that the following items be evaluated and considered in order to modify our existing permit.

1. IsoNova’s current permit states that Permitted Feature #008 has UTM coordinates: X = 429966, Y = 4096819. Stormwater samples for this permitted feature are taken from the southernmost concrete discharge channel which has UTM coordinates: X = 429954, Y = 4096796. Please modify the permit to list the correct coordinates for the correct permitted feature sampling location.

2. IsoNova has two different wastewater streams: 1) Rich Waste and 2) Lagoon. Our current permit lists Outfall #002 – aerated process wastewater/ concrete storage basin, which covers our lagoon water that is land-applied. IsoNova would like to propose that Permitted Feature #020 be added to the permit which would cover land-applied rich wastewater/concrete storage basin.

3. Should Outfall #002 in the current permit be listed as an outfall or a permitted feature?

Form C, Table I does request information on Intake and Effluent Characteristics for our stormwater outfalls. At this time, IsoNova does not have COD and Total Organic Carbon results for the current Permitted Features #007 & #008 in our permit. IsoNova does plan to test for those parameters when the 2nd quarter discharge monitoring samples are pulled for those outfalls. A revised Intake and Effluent Characteristic table will be submitted once those results are obtained.

If you have any questions or need any other information, I would be glad to be of assistance.

Sincerely,

[Signature]

Dan Bowers – Environmental Manager  
Cc: Toby Powley – Manager Corporate Engineering
### Note
PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1. This application is for:

- [ ] An operating permit for a new or unpermitted facility:
  Please indicate the original Construction Permit # ________________
- [ ] An operating permit renewal:
  Please indicate the permit # MO-0112500 Expiration Date September 30, 2017
- [ ] An operating permit modification:
  Please indicate the permit # MO- ________________ Modification Reason: ________________

1.1 Is the appropriate fee included with the application? (See instructions for appropriate fee)  [ ] YES  [ ] NA  [ ] NO

### 2. FACILITY

**NAME**
IsoNova Technologies LLC

**ADDRESS (PHYSICAL)**
18184 Highway P
Verona

**TELEPHONE NUMBER WITH AREA CODE**
(417) 498-2221

**FAX**
(417) 498-6788

**EMAIL ADDRESS**

**CITY**
Verona

**STATE**
MO

**ZIP CODE**
65769

### 3. OWNER

**NAME**
DARRCO, LLC.

**ADDRESS (MAILING)**
3801 East, Sunshine
Springfield

**TELEPHONE NUMBER WITH AREA CODE**

**FAX**

**EMAIL ADDRESS**

**CITY**
Springfield

**STATE**
MO

**ZIP CODE**
65809

3.1 Request review of draft permit prior to public notice?  [ ] YES  [ ] NO

### 4. CONTINUING AUTHORITY

**NAME**
IsoNova Technologies LLC

**ADDRESS (MAILING)**
PO Box 96
Verona

**TELEPHONE NUMBER WITH AREA CODE**
(417) 498-2221

**FAX**
(417) 498-6788

**EMAIL ADDRESS**

**CITY**
Verona

**STATE**
MO

**ZIP CODE**
65769

### 5. OPERATOR

**NAME**
Daniel Bowers

**CERTIFICATE NUMBER**

**ADDRESS (MAILING)**
PO Box 96
Verona

**TELEPHONE NUMBER WITH AREA CODE**
(417) 498-2221

**FAX**
(417) 498-6788

**EMAIL ADDRESS**
dbowers@isonovaltech.com

**CITY**
Verona

**STATE**
MO

**ZIP CODE**
65769

### 6. FACILITY CONTACT

**NAME**
Daniel Bowers

**TITLE**
Production/Maint./Enviro. Manager

**ADDRESS (MAILING)**
PO Box 96
Verona

**TELEPHONE NUMBER WITH AREA CODE**
(417) 498-2221

**FAX**
(417) 498-6788

**EMAIL ADDRESS**
dbowers@isonovaltech.com

**CITY**
Verona

**STATE**
MO

**ZIP CODE**
65769

### 7. ADDITIONAL FACILITY INFORMATION

7.1 Legal Description of Outfalls. (Attach additional sheets if necessary.)

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For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

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<td>004 ____________¼ ____________¼ Sec T ____________ R ____________ County</td>
<td>________________</td>
</tr>
</tbody>
</table>

7.2 Primary Standard Industrial Classification (SIC) and Facility North American Industrial Classification System (NAICS) Codes.

<table>
<thead>
<tr>
<th>SIC</th>
<th>NAICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>2015 311111</td>
</tr>
<tr>
<td>002</td>
<td>________</td>
</tr>
<tr>
<td>003</td>
<td>________</td>
</tr>
<tr>
<td>004</td>
<td>________</td>
</tr>
</tbody>
</table>

MO 790-1479 (09-16)
8. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION
(Complete all forms that are applicable.)

A. Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility?
   Yes ☑ No ☐
   If yes, complete Form C or 2F.
   (2F is the U.S. EPA's Application for Storm Water Discharges Associated with Industrial Activity.)

B. Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility?
   Yes ☑ No ☐
   If yes, complete Form C or 2F.

C. Is your facility considered a 'Primary Industry' under EPA guidelines?
   Yes ☑ No ☐
   If yes, complete Forms C or 2F and D.

D. Is wastewater land applied?
   Yes ☑ No ☐
   If yes, complete Form I.

E. Is sludge, biosolids, ash or residuals generated, treated, stored or land applied?
   Yes ☑ No ☐
   If yes, complete Form R.

F. If you are a Class IA CAFO, please disregard part D and E of this section. However, please attach any revision to your Nutrient Management Plan.

F. Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.

9. ELECTRONIC DISCHARGE MONITORING REPORT (eDMR) SUBMISSION SYSTEM
Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent limits and monitoring shall be submitted by the permittee via an electronic system to ensure timely, complete, accurate, and nationally consistent set of data. One of the following must be checked in order for this application to be considered complete. Please visit http://dnr.mo.gov/env/wpp/edmr.htm to access the Facility Participation Package.

☑ - You have completed and submitted with this permit application the required documentation to participate in the eDMR system.
☐ - You have previously submitted the required documentation to participate in the eDMR system and/or you are currently using the eDMR system.
☐ - You have submitted a written request for a waiver from electronic reporting. See instructions for further information regarding waivers.

10. DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary. See Instructions.
(PLEASE SHOW LOCATION ON MAP. SEE 8.D ABOVE)

NAME
Vivian E. Conrad

ADDRESS
17837 Highway P

CITY
Verona

STATE
MO

ZIP CODE
65769

11. I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law to the Missouri Clean Water Commission.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)
Bradley R. Friend
VP of Operations

TELEPHONE NUMBER WITH AREA CODE
(417) 888-5270

DATE SIGNED
3-24-17

BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETED AND ADDITIONAL FORMS, IF APPLICABLE, ARE INCLUDED.

Submittal of an incomplete application may result in the application being returned.

HAVE YOU INCLUDED:

☐ Appropriate Fees?
☐ Map at 1" = 2000' scale?
☐ Signature?
☐ Form C or 2F, if applicable?
☐ Revised Nutrient Management Plan, if applicable?
**FORM A - ATTACHMENTS TO APPLICATION**

Form A - Section 7.1

<table>
<thead>
<tr>
<th>Permitted Feature</th>
<th>1/4</th>
<th>1/4</th>
<th>SEC</th>
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**PART A. PERMIT HOLDER INFORMATION**

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<th>FACILITY NAME</th>
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<tr>
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<td>IsoNova Technologies LLC.</td>
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<tbody>
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<td>Verona</td>
<td>MO</td>
<td>65769</td>
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**PERMIT HOLDER ACCOUNT ACTION**

- [ ] New Application
- [ ] Revised Permit Holder or Account Information
- [ ] Request for Reactivation

**PART B. USER ACCOUNT INFORMATION**

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<th>ACCOUNT ACTION</th>
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<tbody>
<tr>
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<td>Bowers</td>
<td>Daniel</td>
<td>J</td>
<td>Production/Maintenance/Environmental Manager</td>
<td>IsoNova Technologies LLC.</td>
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<tr>
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<td>Preparer</td>
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<tr>
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<tr>
<td><a href="mailto:dbowers@isonovatech.com">dbowers@isonovatech.com</a></td>
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<tbody>
<tr>
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<td>Viewer</td>
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<td>Dani</td>
<td>L</td>
<td>Quality / Safety Manager</td>
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</thead>
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<td>M</td>
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<table>
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<th>ADDRESS</th>
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<tbody>
<tr>
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<td>MO</td>
<td>65769</td>
</tr>
</tbody>
</table>

(MO 780-2204 (01-17))
PART C. PERMIT HOLDER REGISTRATION

I request the above identified permit holder be registered for electronic reporting and request any department initiated minor permit revisions (where no fee is required) that may be necessary to allow use of the department’s eDMR system. As the permit holder, I agree the authorized representatives will follow permit requirements and the procedures for the electronic submission of DMR forms, as described in the permit holder participation package.

Please establish or revise the above user accounts in accordance with the information provided for each identified account. The person(s) identified as certifier(s) are hereby designated as the authorized representatives for all reporting purposes. I understand each person to receive a certifier account on the eDMR system must complete Part D and must sign in the presence of a Notary Public.

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

PERMIT HOLDER NAME (TYPE OR PRINT)  Bradley R. Friend
OFFICIAL TITLE (TYPE OR PRINT)  VP of Operations

PART D. CERTIFIER REGISTRATION

The permit holder and certifier intend to have the submission of eDMRs be the functional equivalent of the paper submissions required by a permit issued in accordance with the Missouri Clean Water Law, Chapter 644, RSMo and/or the Clean Water Act, 33 U.S.C. § 1251, et seq. The certifier will use a validly issued PIN as a signature when submitting eDMRs. The permit holder and certifier agree not to contest the validity of eDMRs submitted under an authorized PIN based on the fact such submissions were completed electronically. The permit holder and certifier further agree the provisions of the Uniform Electronic Transactions Act, Sections 432.200 through 432.295, RSMo, shall apply, except as otherwise stated herein or within the permit holder participation package.

The permit holder and certifier agree:

1. Any eDMR submitted under the PIN specific to the certifier shall be considered a "writing" or "in writing;" and any such records shall be deemed for all purposes:
   a. To have been "signed" by the certifier.
   b. To constitute an "original" when printed from electronic files or records.
2. Electronic DMRs constitute admissible evidence in any judicial or administrative proceeding.

An electronically submitted DMR will not satisfy a reporting requirement until it has been received and accepted by the department. If an electronically submitted DMR is rejected, the permit holder shall take the necessary steps to properly resubmit such DMR within 24 hours of the notice of rejection.

MO 780-2204 (01-17)
By signing below, the permit holder and certifier agree with the terms and conditions of Part D.

Certifier (must sign in the presence of Notary)

Notary Public 1*

LORNA D. KLEINE
Notary Public - Notary Seal
State of Missouri, Lawrence County
Commission # 12414735
My Commission Expires Apr 21, 2020

Notary Public 2*

ERIN L. STRAIT
My Commission Expires
August 5, 2018
Greene County
Commission #1462935

* Notary public 1 is for use if both the permit holder and the certifier both sign in the presence of the same notary; however, if the notary so desires they may sign and stamp both locations.
If the certifier and the permit holder do not sign at the same time, then notary 1 is specific to the certifier and notary 2 is specific to the permit holder.
In cases when the certifier and the permit holder are not in the same location, the certifier must complete the application to the best of their ability (including signature and notary public 1) and send the document to the permit holder to be completed (including signature and notary public 2).

MO 780-2204 (01-17)
**1.00 NAME OF FACILITY**  
IsoNova Technologies LLC

**1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER**  
MO-0112500

**1.20 THIS IS A NEW FACILITY AND WAS CONSTRUCTED UNDER MISSOURI CONSTRUCTION PERMIT NUMBER (COMPLETE ONLY IF THIS FACILITY DOES NOT HAVE AN OPERATING PERMIT).**

**2.00 LIST THE STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES APPLICABLE TO YOUR FACILITY (FOUR DIGIT CODE)**

<table>
<thead>
<tr>
<th>A. FIRST</th>
<th>B. SECOND</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
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</table>

<table>
<thead>
<tr>
<th>C. THIRD</th>
<th>D. FOURTH</th>
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</thead>
<tbody>
<tr>
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</tbody>
</table>

**2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION:**

OUTFALL NUMBER (LIST) 1/4 1/4 SEC T R (See attachment for all) COUNTY

**2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER**

<table>
<thead>
<tr>
<th>OUTFALL NUMBER (LIST)</th>
<th>RECEIVING WATER</th>
</tr>
</thead>
<tbody>
<tr>
<td>See attachment</td>
<td>See attachment</td>
</tr>
</tbody>
</table>

**2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS**

IsoNova Technologies LLC produces spray-dried inedible egg product as an ingredient for the pet food industry. Wastewater is generated from 2 sources. 1. Plant wash down water containing 1% or less egg solids. 2. Water from overflow of the air scrubbers. Plant wash down water is collected in an underground concrete storage tank. The water is hauled by vacuum truck to IsoNova Tech. approved land application sites. Water generated in the air scrubber has been injected with enzymes to enhance bacteria growth. This water is collected in a concrete above ground lagoon until being spread with a vacuum truck on IsoNova Tech. approved land application sites. The lagoon is monitored regularly measuring temperature, level, and dissolved oxygen. During inclement weather, wastewater from the underground storage tank is hauled to the City of Springfield Southwest treatment facility as IsoNova Tech. is permitted to discharge there. If IsoNova Tech. is not able to haul to City of Springfield, then wastewater from the underground storage tank overflows into the lagoon. During times when wastewater from underground storage tank overflows into lagoon, extra enzymes may be added to ensure proper bacteria growth.
Section 2.10 and 2.20

<table>
<thead>
<tr>
<th>Permitted Feature</th>
<th>1/4</th>
<th>1/4</th>
<th>SEC</th>
<th>T</th>
<th>R</th>
<th>County</th>
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<td>26W</td>
<td>Lawrence</td>
<td>Spring River</td>
</tr>
</tbody>
</table>
A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent and treatment units labeled to correspond to the more detailed descriptions in item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, public sewers and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of 1. All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water and storm water runoff. 2. The average flow contributed by each operation. 3. The treatment received by the wastewater. Continue on additional sheets if necessary.

<table>
<thead>
<tr>
<th>1. OUTFALL NO.</th>
<th>2. OPERATION(S) CONTRIBUTING FLOW</th>
<th>3. TREATMENT</th>
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<tbody>
<tr>
<td></td>
<td>A. OPERATION (LIST)</td>
<td>B. AVERAGE FLOW (INCLUDE UNITS) (MAXIMUM FLOW)</td>
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<tr>
<td>003</td>
<td>Lagoon UnderdrainStormwater</td>
<td>No discharge last 2 years</td>
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<tr>
<td>007</td>
<td>Storm Water run off</td>
<td>0.2666592 MGD</td>
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<tr>
<td>008</td>
<td>Storm Water run off</td>
<td>0.3118608 MGD</td>
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</table>
C. EXCEPT FOR STORM RUNOFF, LEAKS OR SPILLS, ARE ANY OF THE DISCHARGES DESCRIBED IN ITEMS A OR B INTERMITTENT OR SEASONAL?

- [ ] YES (COMPLETE THE FOLLOWING TABLE)
- [x] NO (GO TO SECTION 2.50)

<table>
<thead>
<tr>
<th>1. OUTFALL NUMBER (list)</th>
<th>2. OPERATION(S) CONTRIBUTING FLOW (list)</th>
<th>3. FREQUENCY</th>
<th>4. FLOW</th>
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<tr>
<td></td>
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<td>A. DAYS PER WEEK (average)</td>
<td>B. MONTHS PER YEAR (average)</td>
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<tr>
<td></td>
<td></td>
<td>A. FLOW RATE (in mgd)</td>
<td>B. TOTAL VOLUME (specify with units)</td>
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<tr>
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<td></td>
<td>1. LONG TERM AVERAGE</td>
<td>2. MAXIMUM DAILY</td>
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<tr>
<td></td>
<td></td>
<td>C. DURATION (in days)</td>
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</table>

DYES (COMPLETE THE FOLLOWING TABLE)

- [ ] NO (GO TO SECTION 2.50)

4. FLOW

2.50 MAXIMUM PRODUCTION

A. DOES AN EFFLUENT GUIDELINE LIMITATION PROMULGATED BY EPA UNDER SECTION 304 OF THE CLEAN WATER ACT APPLY TO YOUR FACILITY?

- [x] YES (COMPLETE B.)
- [ ] NO (GO TO SECTION 2.60)

B. ARE THE LIMITATIONS IN THE APPLICABLE EFFLUENT GUIDELINES EXPRESSED IN TERMS OF PRODUCTION (OF OTHER MEASURE OF OPERATION)?

- [ ] YES (COMPLETE C.)
- [x] NO (GO TO SECTION 2.60)

C. IF YOU ANSWERED "YES" TO B. LIST THE QUANTITY THAT REPRESENTS AN ACTUAL MEASUREMENT OF YOUR MAXIMUM LEVEL OF PRODUCTION, EXPRESSED IN THE TERMS AND UNITS USED IN THE APPLICABLE EFFLUENT GUIDELINE AND INDICATE THE AFFECTED OUTFALLS.

1. MAXIMUM QUANTITY

<table>
<thead>
<tr>
<th>A. QUANTITY PER DAY</th>
<th>B. UNITS OF MEASURE</th>
<th>C. OPERATION, PRODUCT, MATERIAL, ETC. (specify)</th>
<th>2. AFFECTED OUTFALLS (list outfall numbers)</th>
</tr>
</thead>
</table>

2.60 IMPROVEMENTS

A. ARE YOU NOW REQUIRED BY ANY FEDERAL, STATE OR LOCAL AUTHORITY TO MEET, ANY IMPLEMENTATION SCHEDULE FOR THE CONSTRUCTION, UPGRADING OR OPERATION OF WASTEWATER TREATMENT EQUIPMENT OR PRACTICES OR ANY OTHER ENVIRONMENTAL PROGRAMS THAT MAY AFFECT THE DISCHARGES DESCRIBED IN THIS APPLICATION? THIS INCLUDES, BUT IS NOT LIMITED TO, PERMIT CONDITIONS, ADMINISTRATIVE OR ENFORCEMENT ORDERS, ENFORCEMENT COMPLIANCE SCHEDULE LETTERS, STIPULATIONS, COURT ORDERS AND GRANT OR LOAN CONDITIONS.

- [ ] YES (COMPLETE THE FOLLOWING TABLE)
- [x] NO (GO TO 3.00)

1. IDENTIFICATION OF CONDITION AGREEMENT, ETC.

2. AFFECTED OUTFALLS

3. BRIEF DESCRIPTION OF PROJECT

4. FINAL COMPLIANCE DATE

A. REQUIRED    B. PROJECTED

B. OPTIONAL: YOU MAY ATTACH ADDITIONAL SHEETS DESCRIBING ANY ADDITIONAL WATER POLLUTION CONTROL PROGRAMS (OR OTHER ENVIRONMENTAL PROJECTS WHICH MAY AFFECT YOUR DISCHARGES) YOU NOW HAVE UNDER WAY OR WHICH YOU PLAN. INDICATE WHETHER EACH PROGRAM IS NOW UNDER WAY OR PLANNED, AND INDICATE YOUR ACTUAL OR PLANNED SCHEDULES FOR CONSTRUCTION.

- [ ] MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED.
### Intake and Effluent Characteristics

**A. & B. See Instructions Before Proceeding – Complete One Table for Each Outfall – Annotate the Outfall Number in the Space Provided.**

*Note: Table 1 is included on separate sheets numbered from Page 6 to Page 7.*

**C. Use the space below to list any of the pollutants listed in part B of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NA for all Outfalls</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.10 BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on receiving water in relation to your discharge within the last three years?

☐ YES (Identify the test(s) and describe their purposes below.)  ☑ NO (Go to 3.20)

3.20 CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported performed by a contract laboratory or consulting firm?

☑ YES (List the name, address and telephone number of and pollutants analyzed by each such laboratory or firm below.)  ☐ NO (Go to 3.30)

<table>
<thead>
<tr>
<th>A. NAME</th>
<th>B. ADDRESS</th>
<th>C. TELEPHONE (area code and number)</th>
<th>D. POLLUTANTS ANALYZED (list)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDC Laboratories, Inc.</td>
<td>1805 W. Sunset</td>
<td>417-864-7081</td>
<td>BOD</td>
</tr>
<tr>
<td></td>
<td>Springfield, MO 65807</td>
<td></td>
<td>TSS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Nitrate/Nitrite</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Oil and Grease</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ammonia as N</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total Organic Carbon</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>COD</td>
</tr>
</tbody>
</table>

3.30 CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)  TELEPHONE NUMBER WITH AREA CODE
Bradley R. Friend  (417) 888-5270

SIGNATURE (SEE INSTRUCTIONS)  DATE SIGNED

3-24-17
### INTAKE AND EFFLUENT CHARACTERISTICS

**PART A** - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

<table>
<thead>
<tr>
<th>1. POLLUTANT</th>
<th>2. EFFLUENT</th>
<th>3. UNITS (specify if blank)</th>
<th>4. INTAKE (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A. MAXIMUM DAILY VALUE</td>
<td>B. MAXIMUM 30 DAY VALUE (if available)</td>
<td>C. LONG TERM AVERG. VALUE (if available)</td>
</tr>
<tr>
<td>A. Biochemical Oxygen Demand (BOD)</td>
<td>(1) CONCENTRATION (2) MASS</td>
<td>(1) CONCENTRATION (2) MASS</td>
<td>(1) CONCENTRATION (2) MASS</td>
</tr>
<tr>
<td>B. Chemical Oxygen Demand (COD)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Total organic Carbon (TOC)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Total Suspended Solids (TSS)</td>
<td>Quarterly</td>
<td>14 mg/l</td>
<td></td>
</tr>
<tr>
<td>E. Ammonia (as N)</td>
<td>Quarterly</td>
<td>0.11 mg/l</td>
<td></td>
</tr>
<tr>
<td>F. Flow</td>
<td>VALUE</td>
<td>VALUE</td>
<td>VALUE</td>
</tr>
<tr>
<td>G. Temperature (winter)</td>
<td>VALUE</td>
<td>VALUE</td>
<td>VALUE</td>
</tr>
<tr>
<td>H. Temperature (summer)</td>
<td>VALUE</td>
<td>VALUE</td>
<td>VALUE</td>
</tr>
<tr>
<td>I. pH</td>
<td>MINIMUM 6.53</td>
<td>MAXIMUM 6.53</td>
<td>STANDARD UNITS</td>
</tr>
</tbody>
</table>

**PART B** - **MARK "X"** in column 2A for each pollutant you know or have reason to believe is present. **MARK "X"** in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

<table>
<thead>
<tr>
<th>1. POLLUTANT AND CAS NUMBER (if available)</th>
<th>2. MARK &quot;X&quot;</th>
<th>3. EFFLUENT</th>
<th>4. UNITS</th>
<th>5. INTAKE (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Bromide (24959-67-9)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Chlorine, Total Residual</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Color</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Fecal Coliform</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Fluoride (16884-48-8)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. Nitrate - Nitrate (as N)</td>
<td>X</td>
<td></td>
<td>Qtrly. 0.15 mg/l</td>
<td></td>
</tr>
<tr>
<td>1. POLLUTANT AND CAS NUMBER (if available)</td>
<td>2. MARK &quot;X&quot;</td>
<td>3. EFFLUENT</td>
<td>4. UNITS</td>
<td>5. INTAKE (optional)</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>-------------</td>
<td>-------------</td>
<td>----------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td>A. BELIEVED PRESENT</td>
<td>B. BELIEVED ABSENT</td>
<td>A. MAXIMUM DAILY VALUE</td>
<td>B. MAXIMUM 30 DAY VALUE</td>
</tr>
<tr>
<td>G. Nitrogen, Total Organic (as N)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H. Oil and Grease</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. Phosphorus (as P), Total (7723-14-0)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Sulfate (as SO₄) (14628-79-8)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K. Sulfide (as S)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L. Sulfite (as SO₃) (14265-45-3)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M. Surfactants</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N. Aluminum, Total (7429-90-5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O. Barium, Total (7440-39-3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P. Boron, Total (7440-42-8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q. Cobalt, Total (7440-48-4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R. Iron, Total (7439-89-6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S. Magnesium, Total (7439-62-4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T. Molybdenum, Total (7439-98-7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U. Manganese, Total (7439-96-5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V. Tin, Total (7440-31-5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W. Titanium, Total (7440-32-9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Marked "X" indicates that the pollutant is present in the effluent. Units are typically measured in mg/l or ppm. Some pollutants are monitored annually, while others are measured quarterly. The concentrations and mass analyses are indicated as (1) Concentration or (2) Mass. The reference number (MO 780-1514 (06-13)) indicates the source or document reference.
<table>
<thead>
<tr>
<th>1. POLLUTANT AND CAS NUMBER (if available)</th>
<th>2. MARK &quot;X&quot;</th>
<th>3. EFFLUENT</th>
<th>4. UNITS</th>
<th>5. INTAKE (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. RELIEVED PRESENT</td>
<td>B. RELIEVED ABSENT</td>
<td>A. MAXIMUM DAILY VALUE</td>
<td>B. MAXIMUM 30 DAY VALUE (if available)</td>
<td>C. LONG TERM AVG. VALUE (if available)</td>
</tr>
<tr>
<td>METALS, AND TOTAL PHENOLS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1M. Antimony, Total (7440-36-9)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2M. Arsenic, Total (7440-38-2)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3M. Beryllium, Total (7440-41-7)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4M. Cadmium, Total (7440-43-9)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5M. Chromium III (16065-83-1)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6M. Chromium VI (16540-29-9)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7M. Copper, Total (7440-50-8)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6M. Lead, Total (7439-92-1)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9M. Mercury, Total (7439-97-6)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10M. Nickel, Total (7440-02-0)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11M. Selenium, Total (7782-49-2)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12M. Silver, Total (7440-22-4)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13M. Thallium, Total (7440-28-9)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14M. Zinc, Total (7440-66-6)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15M. Cyanide, Amenable to Chlorination</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16M. Phenols, Total</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RADIOACTIVITY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Alpha Total</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Beta Total</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Radium Total</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) Radium 226 Total</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**INTAKE AND EFFLUENT CHARACTERISTICS**

**PART A**

You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

<table>
<thead>
<tr>
<th>1. POLLUTANT</th>
<th>2. EFFLUENT</th>
<th>3. UNITS (specify if blank)</th>
<th>4. INTAKE (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A. MAXIMUM DAILY VALUE</td>
<td>B. MAXIMUM 30 DAY VALUE (if available)</td>
<td>C. LONG TERM AVERAGE VALUE (if available)</td>
</tr>
<tr>
<td>A. Biochemical Oxygen Demand (BOD)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Chemical Oxygen Demand (COD)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Total organic Carbon (TOC)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Total Suspended Solids (TSS)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Ammonia (as N)</td>
<td>Quarterly 11 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. Flow</td>
<td>Quarterly 0.11 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G. Temperature (winter)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H. Temperature (summer)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. pH</td>
<td>6.52</td>
<td>6.52</td>
<td></td>
</tr>
</tbody>
</table>

**PART B**

Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

<table>
<thead>
<tr>
<th>1. POLLUTANT AND CAS NUMBER (if available)</th>
<th>2. MARK &quot;X&quot;</th>
<th>3. EFFLUENT</th>
<th>4. UNITS</th>
<th>5. INTAKE (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Bromide (24959-67-9)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Chlorine, Total Residual</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. Color</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Fecal Coliform</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. Fluoride (16984-48-8)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. Nitrate - Nitrate (as N)</td>
<td>X</td>
<td>Qtrly. 0.21 mg/l</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Bromide (24959-67-9)</td>
<td>X</td>
</tr>
<tr>
<td>B. Chlorine, Total Residual</td>
<td>X</td>
</tr>
<tr>
<td>C. Color</td>
<td>X</td>
</tr>
<tr>
<td>D. Fecal Coliform</td>
<td>X</td>
</tr>
<tr>
<td>E. Fluoride (16984-48-8)</td>
<td>X</td>
</tr>
<tr>
<td>F. Nitrate - Nitrate (as N)</td>
<td>X</td>
</tr>
</tbody>
</table>

**MO 750-1514 (06-13)**
<table>
<thead>
<tr>
<th>1. POLLUTANT AND GAS NUMBER (# available)</th>
<th>2. MARK “X”</th>
<th>3. EFFLUENT</th>
<th>4. UNITS</th>
<th>5. INTAKE (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. BELIEVED PRESENT</td>
<td>B. BELIEVED ABSENT</td>
<td>A. MAXIMUM DAILY VALUE</td>
<td>B. MAXIMUM 30 DAY VALUE</td>
<td>C. LONG TERM AVRG. VALUE</td>
</tr>
<tr>
<td>G. Nitrogen, Total Organic (as N)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H. Oil and Grease</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. Phosphorus (as P), Total (7723-14-6)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. Sulfate (as SO₄²⁻) (14608-79-8)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K. Sulfide (as S)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L. Sulfite (as SO₃⁻) (14265-45-3)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M. Surfactants</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N. Aluminum, Total (7429-90-5)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O. Barium, Total (7440-39-3)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P. Boron, Total (7440-42-8)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q. Cobalt, Total (7440-48-4)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R. Iron, Total (7439-89-8)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S. Magnesium, Total (7439-85-4)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T. Molybdenum, Total (7439-98-7)</td>
<td>X</td>
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## Radioactivity

| Alpha Total | X |
| Beta Total | X |
| Radium Total | X |
| Radium 226 Total | X |
## 1. FACILITY INFORMATION

1.1 Facility Name  
IsoNova Technologies LLC

1.2 Permit Number  
MO-0112500

1.3 Type of wastewater to be irrigated:  
- [ ] Domestic  
- [ ] Municipal  
- [ ] State/National Park  
- [ ] Seasonal business  
- [ ] Municipal with Pretreatment Program or Significant Industrial Users  
- [x] Other (explain) Industrial

SIC Codes (list all that apply, in order of importance):  
- 2015

1.4 Months when the business or enterprise will operate or generate wastewater:  
- [x] 12 months per year  
- [ ] Part of year (list Months): __

1.5 This system is designed for:  
- [x] No-discharge  
- [ ] Partial irrigation when feasible and discharge rest of time.  
- [ ] Irrigation during recreation season (April – October) and discharge during November – March.  
- [ ] Other (explain) __

1.6 List the Facility outfalls which will be applicable to the irrigation system.  
Outfall Numbers: 002 + Proposed 020.

## 2. STORAGE BASINS

2.1 Number of storage basins: 2

Type of basin:  
- [x] Concrete  
- [ ] Steel  
- [ ] Fiberglass  
- [ ] Earthen  
- [ ] Earthen with membrane liner

## 3. LAND APPLICATION SYSTEM

3.1 Number of irrigation sites  
See attached for Total Acres __________

Location:  
- __¼, __¼, __¼, Sec __, T __, R __, County __, Acres __

Location:  
- __¼, __¼, __¼, Sec __, T __, R __, County __, Acres __

Attach pages as needed.

3.2 Attach a site map showing topography, storage basins, irrigation sites, property boundary, streams, wells, roads, dwellings, and other pertinent features.  
See attached irrigation site maps.

3.3 Type of vegetation:  
- [x] Grass hay  
- [x] Pasture  
- [ ] Timber  
- [x] Row crops  
- [ ] Other (describe) 

3.4 Wastewater flow (dry weather) gallons/day:  

Average annual: 44,000  
Seasonal _______  
Off-season _______

Months of seasonal flow: _______
### 3. LAND APPLICATION SYSTEM (continued)

#### 3.5 Land Application rate per acre (design flow including 1 in 10 year stormwater flows):

- **Design:**
  - inches/year: 24
  - inches/hour: __
  - inches/day: __
  - inches/week: __

- **Actual:**
  - inches/year: 2
  - inches/hour: __
  - inches/day: __
  - inches/week: __

**Total Irrigation per year (gallons):**

- **Design:** 8,000,000
- **Actual:** 14,116,800

**Actual months used for Irrigation (check all that apply):**
- [ ] Jan
- [ ] Feb
- [ ] Mar
- [ ] Apr
- [ ] May
- [ ] Jun
- [ ] Jul
- [ ] Aug
- [ ] Sep
- [ ] Oct
- [ ] Nov
- [ ] Dec

#### 3.6 Land Application Rate is based on:
- [ ] Nutrient Management Plan (N&P)
- [ ] Hydraulic Loading
- [ ] Other (describe): ____________________________________________________________________________

#### 3.7 Equipment type:
- [ ] Sprinklers
- [ ] Gated pipe
- [ ] Center pivot
- [ ] Traveling gun
- [ ] Other (describe): Pump Truck

**Equipment Flow Capacity:** _______ Gallons per hour  _______ Total hours of operation per year

#### 3.8 Public Use Areas. Public access shall not be allowed to public use area irrigation sites when application is occurring. Method of Public Access Restriction:
- [ ] Site is Fenced
- [ ] Wastewater disinfection prior to irrigation
- [ ] Site is not for public use
- [ ] Other (describe): ____________________________________________________________________________

#### 3.9 Separation distance (in feet) from the outside edge of the wetted irrigation area to nearby down gradient features:
- [ ] 100 Permanent flowing stream
- [ ] 300 Losing Stream
- [ ] 300 Intermittent (wet weather) stream
- [ ] 100 Lake or pond
- [ ] 50 Property boundary
- [ ] 150 Dwellings
- [ ] 300 Water supply well
- [ ] Other (describe): ____________________________________________________________________________

#### 3.10 The facility must develop and retain an Operation and Maintenance (O&M) Plan for the irrigation system.

**Date of O&M Plan:** 3/22/17

---

### 4. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment.

**OWNER OR AUTHORIZED REPRESENTATIVE**

Bradley R. Friend  
VP of Operations

**EMAIL ADDRESS**

bfriend@isnovatech.com

**TELEPHONE NUMBER WITH AREA CODE**

(417) 888-5270

**SIGNATURE**

[Signature]

**DATE SIGNED**

3-24-17

780-1686 (08/14)
### FORM I - ATTACHMENTS TO APPLICATION

**Section 3.10**

**Number of Land Application Sites:** 49  
**Total Acres:** 1333

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Sanders T28N * R26W * Sec. 25

Legend

Public Land Survey Lines
Section Boundary
Land Grant Boundary
Township Boundary
State Boundary
Artificial Boundary
2010 Aerial Photos (NAIP)
2010 Aerial Photos (NAIP)

Locator Map

Map prepared by:
http://cares.missouri.edu,
5/6/2014

http://ims.missouri.edu/maproom/_carescommon/html/mapoutput.asp?
5/6/2014
Mark Jones

ROAD CLASSIFICATION

Primary highway, hard surface
Secondary highway, hard surface
Light-duty road, improved surface
Unimproved surface

MT. VE
SE/4 STOTTS
N370C

AMS 7258 II