

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



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.: MO0123552

Owner: Ajinomoto Windsor Inc.
Owner's Address: 7124 N. Marine Dr., Portland, OR 97203

Continuing Authority: Same as above
Continuing Authority's Address: Same as above

Facility Name: Windsor Foods
Facility Address: #3 Industrial Dr., Piedmont, MO 63957

Legal Description: SE ¼, SW ¼, Sec. 3, T28N, R3E, Wayne County
UTM Coordinates: X=703221, Y=4110877

Receiving Stream: McKenzie Creek (P)
First Classified Stream and ID: McKenzie Creek (P) (2786) **303(d)**
USGS Basin & Sub-watershed No.: (11010007-0601)

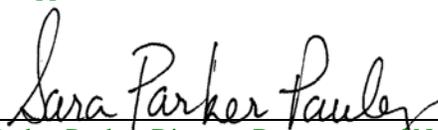
is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Outfall #001 – Industrial Wastewater - SIC #2038
Sludge-only facility for no-discharge (land application)/dissolved air flotation (DAF)/(pretreatment) wastewater is discharged to the City of Piedmont's Sanitary sewer system/sludge from the dissolved air flotation system is stored in two vented steel tanks with a total volume of 38,000 gallons until land applied/secondary containment is provided for these steel tanks.

This permit authorizes only 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 Sections 640.013, 621.250, and 644.051.6 of the Law.

July 12, 2011 June 16, 2015
Effective Date Revised Date


Sara Parker Pauley, Director, Department of Natural Resources

July 11, 2016
Expiration Date


John Madros, Director, Water Protection Program

FACILITY DESCRIPTION (continued)

Design population equivalent is 700.
Design flow of sludge from the sludge generating facility into the storage tanks is 700,362 gallons per year.
Actual flow is 1,640 gallons per day.
Design sludge production is 405 dry tons/year.
Actual sludge production is 344 dry tons/year.

Outfall #001 - Land Application System Design

Receiving Stream Watershed: a gaining stream setting.
Facility Type: No-discharge Sludge Only Facility and Land Application System.
Other: Sludge is hauled and land applied by a contract hauler.
Storage Capacity: Design storage for the sludge is 23 days at a generation rate of 1640 gallons/day.

Land Application:

Sludge Volume /year: 600,000 gallons; 344 dry tons/year
Application areas: 412 acres total available
Application rates/acre: 1.1 dry tons/application, 3.5 dry tons/year
Field slopes: less than 10 percent
Equipment type: tank truck
Vegetation: grass land

Outfall # 002: Stormwater

Legal Description: SW ¼, NW ¼, Sec. 19, T29N, R5E, Wayne County
UTM Coordinates: X=717373, Y=4117129
Receiving Stream: Rings Creek
First Classified Stream and ID: Rings Creek (P) 2939
USGS Basin & Sub-watershed No.: (08020202-0501)

Outfall # 003: Stormwater

Legal Description: SW ¼, NE ¼, Sec 19, T29N, R5E, Wayne County
UTM Coordinates: X=718333, Y=4117013
Receiving Stream: Rings Creek
First Classified Stream and ID: Rings Creek (P) 2939
USGS Basin & Sub-watershed No.: (08020202-0501)

Outfall # 004: Stormwater

Legal Description: SE ¼, NW ¼, Sec 19, T29N, R5E, Wayne County
UTM Coordinates: X=717818, Y=4117262
Receiving Stream: Rings Creek
First Classified Stream and ID: Rings Creek (P) 2939
USGS Basin & Sub-watershed No.: (08020202-0501)

Outfall # 005: Stormwater

Legal Description: SE ¼, NW ¼, Sec 19, T29N, R5E, Wayne County
UTM Coordinates: X=717905, Y=4117102
Receiving Stream: Rings Creek
First Classified Stream and ID: Rings Creek (P) 2939
USGS Basin & Sub-watershed No.: (08020202-0501)

Outfall # 006: Stormwater

Legal Description: SW ¼, SW ¼, Sec 29, T30N, R3E, Reynolds County
UTM Coordinates: X=699409, Y=4124288
Receiving Stream: Unnamed Tributary to Black River (U)
First Classified Stream and ID: Black River (P) 2732
USGS Basin & Sub-watershed No.: (11010007-0505)

FACILITY DESCRIPTION (continued)

Outfall # 007: Stormwater

Legal Description: Sec 9, T31N, R4E, Iron County
UTM Coordinates: X=711609, Y=4139835
Receiving Stream: Sulphur Creek (U)
First Classified Stream and ID: Sulphur Creek (C) 2920
USGS Basin & Sub-watershed No.: (08020202-0303)

Outfall # 008: Stormwater

Legal Description: Sec 9, T28N, R5E, Wayne County
UTM Coordinates: X=720539, Y=4110762
Receiving Stream: Wet Fork (C)
First Classified Stream and ID: Wet Fork (C) 2945
USGS Basin & Sub-watershed No.: (08020202-0503)

Outfall # 009: Stormwater

Legal Description: SE ¼, Sec 18, T28N, R5E, Wayne County
UTM Coordinates: X=718520, Y=4107966
Receiving Stream: Big Lake Creek (C)
First Classified Stream and ID: Big Lake Creek (C) 2946
USGS Basin & Sub-watershed No.: (08020202-0503)

Outfall # 010: Stormwater

Legal Description: SW ¼, Sec 36, T29N, R4E, Wayne County
UTM Coordinates: X=716095, Y=4113027
Receiving Stream: Unnamed Tributary to Big Lake Creek (U)
First Classified Stream and ID: Big Lake Creek (C) 2946
USGS Basin & Sub-watershed No.: (08020202-0503)

In Stream Monitoring # S01: Rings Creek at CR 383

Legal Description: SW ¼, NE ¼, Sec. 19, T29N, R5E, Wayne County
UTM Coordinates: X=718516, Y=4117330

In Stream Monitoring # S02: McMillan Hollow at CC

Legal Description: SW ¼, SW ¼, Sec. 29, T30N, R3E, Reynolds County
UTM Coordinates: X=699232, Y=4124357

In Stream Monitoring # S03: Sulphur Creek at C

Legal Description: SW ¼, SE ¼, Sec 9, T31N, R4E, Iron County
UTM Coordinates: X=711643, Y=4139769

In Stream Monitoring # S04: Big Lake Creek at CR 378

Legal Description: NE ¼, NW ¼, Sec. 9, T28N, R5E, Wayne County
UTM Coordinates: X=721215, Y=4110778

In Stream Monitoring # S05: Big Lake Creek at CR 372

Legal Description: NE ¼, NE ¼, Sec. 19, T28N, R5E, Wayne County
UTM Coordinates: X=718640, Y=4107547

In Stream Monitoring # S06: Big Lake Creek at CR 361

Legal Description: NE ¼, SW ¼, Sec 1, T28N, R4E, Wayne County
UTM Coordinates: X=716115, Y=4112399

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 4 of 14	
					PERMIT NUMBER MO0123552	
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 upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001 - Sludge Land Applied (Note 1)						
Chlorides	mg/kg	250			once/quarter	grab
Sodium Adsorption Ratio (SAR)	ratio	5			once/quarter	grab
Outfalls #002 – 010 - Stormwater Runoff (Notes 2 and 3)						
Biochemical Oxygen Demand ₅	mg/L	30			once/month	grab
Chemical Oxygen Demand	mg/L	*			once/month	Grab
Total Suspended Solids	mg/L	30			once/month	Grab
Total Kjeldahl Nitrogen as N	mg/L	*			once/month	Grab
Ammonia Nitrogen as N	mg/L	2.0			once/month	Grab
Nitrate/Nitrite as N	mg/L	3.0			once/month	Grab
Chlorides	mg/L	230			once/month	Grab
Oil and Grease	mg/L	10			once/month	Grab
Total Phosphorus as P	mg/L	*			once/month	Grab
E. Coli	#/100mL	*			once/month	Grab
pH Units	SU	***			once/month	Grab
Temperature (degrees)	°C	*			once/month	Grab
Total Boron	mg/L	*			once/month	Grab
#S1-S6 - Stream Monitoring						
Ammonia nitrogen as N	mg/L	*			once/month	grab
Nitrate nitrogen as N	mg/L	*			once/month	Grab
Dissolved Phosphorus as P	mg/L	*			once/month	Grab
Temperature (degrees)	°C	*			once/month	Grab
pH	SU	*			once/month	Grab
Dissolved Oxygen	mg/L	*			once/month	Grab
Total Suspended Solids	mg/L	*			once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE NEXT REPORT IS DUE <u>OCTOBER 28, 2013</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I and III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 & August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** See table below for quarterly sampling

Sample discharge at least once for the months of:	Report is due:
January, February, March (1 st Quarter)	April 28
April, May, June (2 nd Quarter)	July 28
July, August, September (3 rd Quarter)	October 28
October, November, December (4 th Quarter)	January 28

*** 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.

Note 1 - Sludge that is land applied shall be sampled at the storage basin or application vehicle.

Note 2 - Monitoring during the first hour after a discharge from a rainfall event greater than 0.2 inch in a 24 hour period. Storm water runoff samples shall be collected for each storm water discharge point and the sample from each outfall shall be tested separately.

Note 3 – Stormwater runoff sampling shall be conducted the month prior to sludge application at a given site and shall be conducted for at least three (3) months following sludge application at a given site.

C. SPECIAL CONDITIONS

1. Emergency Discharge. Outfall 001 may only discharge if rainfall exceeds the 1 in 10 year (Data taken from the Missouri Climate Atlas) or the 24 hour, 25 year (Data taken from NRCS Urban Hydrology for Small Watersheds) rainfall events. **Discharge for any other reason shall constitute a permit violation and shall be recorded in accordance with Standard Conditions, Part 1, Section B.2.b.** Monitoring shall take place once per day while discharging. Test results are due on the 28th day of the month after the cessation of the discharge. Permittee shall monitor for the following constituents:

Constituent	Units
Flow	MGD
Biochemical Oxygen Demand ₅	mg/L
Total Suspended Solids	mg/L
Total Ammonia Nitrogen	mg/L
Nitrate/Nitrite as N	mg/L
Temperature	°C
pH	Standard Units

2. This permit may be reopened and modified, or alternatively revoked and reissued, to:
 - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
 - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri’s Water Quality Standards.
 - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri’s list of waters of the state not fully achieving the state’s water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.
3. All outfalls must be clearly marked in the field.
4. Permittee will cease discharge by connection to a facility with an area-wide management plan per 10 CSR 20-6.010(3)(B) within 90 days of notice of its availability.

C. SPECIAL CONDITIONS (continued)

5. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge 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; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

6. Report as no-discharge when a discharge does not occur during the report period.

7. Water Quality Standards

- (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
- (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (1) 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;
 - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (5) There shall be no significant human health hazard from incidental contact with the water;
 - (6) There shall be no acute toxicity to livestock or wildlife watering;
 - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (8) 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.

8. The permittee shall comply with any applicable requirements listed in 10 CSR 20-8 and 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the department for review and, if deemed necessary, approval.

9. Land Application of Industrial Sludge (Outfall #002-007)

- 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. Land Application of Sludge. The term "sludge" used herein means sludge, biosolids, by-products and residuals from industrial waste sources. It does not include licensed fertilizer products.
- c. Permitted Sites. This permit authorizes land application of sludge to those sites that have been public noticed and listed in the permit facility description. Permittee requests for additional sites including non-owned property must follow permit modification procedures prior to land application. To request additional sites, the permittee shall submit a revised permit application Forms A and R; names and mailing addresses for the landowners and the adjacent property owners for each application site, topographic maps of each site and other pertinent information.

C. SPECIAL CONDITIONS (continued)

- d. Public Access Restrictions. Sludge that is applied to potential public access sites must meet the Class A pathogen stabilization criteria listed in 40 CFR 503 regulations such as composting, heat treatment, etc. Sludge that does not meet Class A requirements must be either: (a) applied to agricultural cropland sites; or (b) site must be fenced and posted to restrict public access for at least 12 months; or (c) sludge must be subsurface injected and site restricted for 30 days.
- e. No-Discharge Requirement. Sludge shall be stored and land applied during suitable conditions so that there is no-discharge of process wastes from the storage site or land application site. Uncontaminated storm water runoff from land application sites may be discharged when land application was conducted in accordance with permit requirements. In no case, shall the permittee cause violation of the Water Quality Standards rules for general criteria and specific criteria under 10 CSR 20-7.031.
- f. Technical Standards. Sludge storage, handling and land application systems shall be designed and operated in accordance with 10 CSR 20-8.020(15). Where minimum storage capacity is not provided, alternate sludge disposal shall be provided such as hauling to a landfill or other permitted treatment system. Hazardous waste regulated under the Missouri Hazardous Waste Law and regulations shall not be land applied under this permit.
- g. Sludge Characteristics. Sludge that meets the characteristics listed in the permit application Form R is authorized for land application. Only those pollutants listed in the permit application may be land applied. If new pollutants are identified or if the sludge characteristics or pollutant levels are found to be significantly higher than the permit application values, the department shall be notified within 30 days and a revised permit application submitted prior to any further sludge application.
- h. Sludge Monitoring.
Sample and test each storage structure separately. Each test shall be conducted on a composite sample consisting of at least seven sub-samples collected at representative locations of the sludge to be land applied.
- (1) Test once/day during land application for percent moisture or total suspended solids.
 - (2) Test once/100 dry tons for: organic nitrogen, ammonia nitrogen, nitrate nitrogen, total phosphorus, total potassium and percent moisture.
 - (3) Test once/500 dry tons for: total sodium, total calcium, total magnesium, Sodium Adsorption Ratio, total chlorides, oil & grease, C:N Ratio, pH, total solids, and E. coli. E coli shall be reported as organisms per gram of total solids using the Most Probable Number (MPN) method.
 - (4) Test once/1000 dry tons for: aluminum, arsenic, beryllium, boron, cadmium, chromium, beryllium, copper, fluoride, lead, manganese, mercury, molybdenum, nickel, selenium, silver, tin, zinc and total solids. Metals shall be tested as "total" metal and reported on dry weight basis.
 - (5) Test once/year for the same list of pollutants that are required for effluent testing under Section A of the permit excluding BOD, COD, THM and wet test.
 - (6) Test once/year for any other pollutants detected in the sludge as reported in permit application Form R.
 - (7) Testing under paragraphs (4) through (6) above, may be reduced to once/5 years for any pollutants that are not detected in the initial testing results.
- i. Soil Monitoring.
- (1) Composite soil samples shall be collected for all sites where land application has occurred within the last 12 months; or where land application will occur within the next 12 months.
 - (a) Nitrate nitrogen as N shall be tested twice per year in spring and fall. Soil samples shall be collected for the top 0-12 or 0-24 inches or more.
 - (b) Soil pH, percent organic matter, cation exchange capacity, exchangeable sodium percentage and available phosphorus as P (Bray P-1 test method) shall be sampled prior to land application and once every three (3) years thereafter, unless no additional land application has occurred at the site. Soil samples shall be collected for the surface 6 inches of soil (0-6 inch depth)
 - (2) Soil sampling shall be in accordance with University of Missouri (MU) publication G9110, Sampling Your Soil For Testing or other methods approved by the department.
 - (3) Soil testing methods shall be in accordance with North Dakota Agricultural Experiment Bulletin 499-Revised, Recommended Chemical Soil Test Procedures for the North Central Region or other test methods approved by the department. Soil textural classes shall be based on USDA Soil Taxonomy.
 - (4) The annual report shall include a summary of the soil test results for each field.

C. SPECIAL CONDITIONS (continued)

- j. Subsurface Injection Requirement. Subsurface Injection or immediate incorporation after surface application should be considered where feasible and practicable to reduce exposure to wash off by storm water runoff and to retain nutrients in the soil for crop requirements. Dissolved Air Flotation (DAF) sludge from meat and poultry slaughter and processing facilities or other similar sludge with high oil and grease content shall be subsurface injected or immediately incorporated.
- k. Saturated/Frozen Conditions. There shall be no land application during frozen, snow covered, or saturated soil conditions. There shall be no application on days when there is observation by operator of an imminent or impending rainfall event. An on-site visual investigation of the field's soil moisture condition, followed by testing of the soils, will be made to determine whether land application can occur. The visual and soil test procedures will be reviewed and approved by the department as part of the Operation and Maintenance (O&M) Manual.
- l. Slope and Runoff Restrictions.
- (1) Do not place sludge in a location where it is reasonably certain that pollutants will be transported into waters or the state during storm water runoff.
 - (2) All application sites shall have a Soil and Water Conservation Plan to minimize soil erosion and storm water runoff. The plan shall be developed in accordance with standards of the USDA, Natural Resources Conservation Service (NRCS). The plan shall be developed by a "certified" soil & water conservation planner and shall be included in the O&M Manual.
 - (3) Subsurface injection should be applied along the contour of the slope to minimize surfacing of liquids at the down gradient end of the injection trench.
 - (4) Sludge shall not be applied to slopes exceeding ten (10%) percent.
- m. Buffer Zones. There shall be no land application within 300 feet of any down gradient pond, lake, sinkhole, losing stream or water supply withdrawal and within 150 feet of dwelling. For surface application, there shall be no land application within 100 feet of gaining streams (Class P and C classified streams listed in Water Quality Standard rule under 10 CSR 20-7.031); 50 feet of wet weather gaining streams and tributaries (unclassified streams); or 50 feet of the property line. For subsurface injection, buffer zones may be reduced to 25 feet from gaining streams (classified and unclassified) and property lines.
- n. Application Equipment. The application system shall be operated so as to provide uniform distribution of wastes over the entire land application site. Land application shall occur only during daylight hours. The application system shall be capable of applying the annual design flow during an application period of less than 100 days or 800 hours per year. A list of application equipment and manufacturers specifications shall be included in the O&M Manual.
- o. Nutrient Management
Sludge that is land applied shall be applied at nutrient application rates for beneficial use in agricultural crop production.
- (1) Nitrogen. The permittee shall not exceed the plant available nitrogen management approach as listed in this permit.
 - (2) Phosphorus. When soil test phosphorus (P) levels are above 120 pounds per acre using Bray P-1 test method, the sludge shall be applied according to state NRCS guidelines and standards for phosphorus based on one of the following methods: Soil Test Phosphorus-Crop Removal Method, Soil Phosphorus Threshold Method or Phosphorus Index Method.
 - (3) The actual application rates for a given year or growing season must be adjusted based on the approved management approach and the actual sludge and soil testing results and crop requirement. If crop yields are less than predicted, the application rates and management practices must be evaluated and adjusted as appropriate.
 - (4) This permit will be modified to require a Nutrient Management Plan (NMP) after promulgation of applicable state and EPA rules and guidelines. The NMP will replace the current PAN and phosphorus methods.

C. SPECIAL CONDITIONS (continued)

p. Plant Available Nitrogen (PAN) Procedure

- (1) Wastewater, sludge and fertilizer nitrogen applications shall not exceed the crop nitrogen requirements based on realistic crop yield goals and the Plant Available Nitrogen (PAN) method. The application rate shall be calculated as follows:

$$\text{PAN} = \text{CNR} - \text{SRN} - \text{CFN}$$

WHERE: **CFN** = Commercial Fertilizer & other nitrogen sources applied in pounds N/acre.
CNR = Crop Nitrogen Requirement in pounds N/acre
PAN = Plant Available Nitrogen in wastewater and sludge expressed as annual pounds N/acre.
SRN = Soil Residual Nitrogen in pounds N/acre.

(2) Crop Nitrogen Requirements (CNR)

- (a) CNR shall be based on realistic crop yield goals based on actual on-site yields or county average yields listed in the county soil survey report. To predict the yield goal, use the on-site yields for the last ten years; throw out the highest and lowest yields; then average the remaining 8 years and add 10-20%.
- (b) Supplemental nitrogen may be added to row crops when determined necessary for proper plant growth based on testing of plant vegetation or soil nitrate testing during the growing season. Procedures will be reviewed and approved by the department as part of the Operation and Maintenance Manual.
- (c) If a crop is not harvested, the CNR rate shall not exceed 40 lbs/acre/year and grass vegetation must be maintained on the site.
- (d) For nutrient requirements of specific crops and yields, refer to reference publications listed in this permit.

- (3) Commercial Fertilizer Nitrogen (CFN) Planned or previous applications of nitrogen from commercial fertilizer, sludge, biosolids and manure must be evaluated to determine nitrogen availability from these sources. Part of the organic nitrogen applied in the previous 2 years will be available in this years growing season. This nitrogen contribution from other nitrogen sources is not included in the soil residual nitrogen (SRN) calculations and must be calculated separately using the PAN methods listed herein.

(4) Soil Residual Nitrogen (SRN)

- (a) For Annual Crops, the nitrogen availability from soil organic matter must be included based on soil CEC and crop season as follows:

$$\text{SRN in pound N/acre}^* = [\text{percent organic mater}] \times [\text{Soil Availability Factor}]$$

Soil Availability Factor				
by Soil CEC Ranges and Organic Matter				
<u>Growing Season</u>	<u>Organic Matter</u>	<u>CEC</u>	<u>CEC</u>	<u>CEC</u>
		<u>< 10</u>	<u>10-18</u>	<u>>18</u>
Summer	1%	40*	20	10
Winter	1%	20*	10	5

***Note:** If CEC is less than 10 and organic matter is 1.5% or greater, the total SRN is constant at 60 pounds nitrogen for summer and 30 pounds for winter.

- (b) For Perennial Crops the SRN is considered zero(0) for purposes of these calculations because the SRN has already been considered in the crop fertilization recommendations in the referenced publications.

C. SPECIAL CONDITIONS (continued)

(5) Plant Available Nitrogen (PAN) Factors for Industrial Sludge.

(a) PAN Factors for Surface Application:

- i. Sludge applied each year or once every 2 years:
PAN = [total kjeldahl nitrogen x 0.6] + [nitrate N x 0.9]
- ii. Sludge applied once every 3 years or less frequent:
PAN = [organic N x 0.4] + [ammonia N x 0.6] + [nitrate N x 0.9]

(b) PAN Factors for Subsurface Injection or immediate incorporation:

- i. Sludge applied each year or once every 2 years:
PAN = [organic N x 0.6] + [ammonia N x 0.9] + [nitrate N x 0.9]
- ii. Sludge applied once every 3 years or less frequent:
PAN = [organic N x 0.4] + [ammonia N x 0.9] + [nitrate N x 0.9]

(c) Sludge, biosolids and manure from sources other than the permittee must be included and should be calculated separately.

(d) The above factors for organic N are based on typical sludge production and storage conditions. If sludge receives additional treatment, use the following table:

<u>Sludge Treatment Methods</u>	Organic Nitrogen Availability Factor by Time Period			
	Year 1	Year 2	Year 3	Cumulative Year 3+
	1	2	3	Year 3+
Sludge storage	0.40	0.20	0.10	0.70
Lime Stabilized Sludge	0.40	0.20	0.10	0.70
Aerobic Sludge Digester	0.30	0.15	0.08	0.53
Anaerobic Sludge Digester	0.20	0.10	0.05	0.35
Wastewater treatment lagoon sludge (35 lbs BOD/acre loading and >15 years sludge retention)	0.20	0.10	0.05	0.35
Composted Sludge (Class A)	0.10	0.05	0.05	0.20

NOTES: Year 1 is the current year of waste application; year 2 is the previous year of waste application; and year 3 is waste application two years ago. Nitrogen availability for years 1, 2 and 3 must be added when waste is applied in consecutive years. The cumulative factor is used when waste is applied at about the same rate for 3 consecutive years or longer.

(e) Field Specific Availability Factors for Inorganic Nitrogen.

Average availability factors for inorganic nitrogen (ammonia and nitrate) are given in paragraph (a) and (b) above. You may also choose to use the field specific availability factors listed in the following tables. The approved factors for each field will be included in the O&M Manual.

Table A. Alternate Field Specific Availability Factors for Surface Application					
% of inorganic N (manure., precip.) available					
Soil Organic Matter %	Excessively well drained	Well drained	Moderately well drained	Somewhat poorly drained	Poorly drained
< 2	71	66	62	56	45
2-5	66	60	56	49	30
> 5	63	56	49	38	19

Adapted from USDA-NRCS, National Engineering Handbook, Part 651, Animal Waste Management Field Handbook (AWMFH), April 1992, Tables 11-6 & 11-8.

C. SPECIAL CONDITIONS (continued)

Table B. Alternate Field Specific Availability Factors for Sub-Surface Injection or Immediate Incorporation.					
% of inorganic N (manure., precip.) available					
Soil Organic Matter %	Excessively well drained	Well drained	Moderately well drained	Somewhat poorly drained	Poorly drained
< 2	89	84	78	70	57
2-5	84	76	70	62	38
> 5	80	70	62	48	24

Adapted from USDA-NRCS, National Engineering Handbook, Part 651, Animal Waste Management Field Handbook (AWMFH), April 1992, Tables 11-6 & 11-8.

(6) Primary reference publications used herein

- (a) National Engineering Handbook, Part 651, Agricultural Waste Management Field Book, USDA, Natural Resources Conservation Service (NRCS), April 1992 and current supplements.
- (b) Soil Test Interpretations and Recommendations Handbook, University of Missouri, Department of Agronomy, December, 1992.
- (c) Managing Nitrogen for Groundwater Quality and Farm Profitability, Soil Science Society of America, Inc., 1991.
- (d) Land Application of Sewage Sludge, EPA/831-B-93-002b, U.S. Environmental Protection Agency, December, 1994.

(7) Conversion Factors for laboratory testing results

[mg/L or mg/kg or ppm] x [conversion factor] = [pounds per Unit Volume]

<u>Unit Volume</u>	<u>Conversion Factors</u>
lbs/acre inch	0.226
lbs/1,000 gallons	0.0083
lbs/100 cubic feet	0.0062
lbs/ton (wet wt)	0.002

q. Other Pollutant Limitations and Loading Rates

- (1) Oil and grease application shall not exceed 0.5% of soil weight or 10,000 pounds oil/acre/year for subsurface injection or soil incorporation. For surface application to growing vegetation, the sludge shall not exceed 15% oil & grease content and shall not exceed 5,000 pounds oil/acre. Avoid heavy application of oil and grease within 30 days before planting of row crops. Oil and grease sludges with low nitrogen content, more than 20:1 Carbon to Nitrogen ratio, may require supplemental nitrogen application to provide proper decomposition of the oil content and prevent nitrogen deficiencies for the crop.
- (2) Metals content in the sludge shall not exceed the concentrations and cumulative loading limits listed in University of Missouri, Water Quality Guide number WQ-425. If metals exceed the concentrations in Table 2, the cumulative pounds per acre of that metal shall be reported in the annual report.
- (3) Soil content of sodium shall not exceed 10% Exchangeable Sodium Percentage.
- (4) Application of chlorides shall not exceed 500 pounds/acre/year. Chlorides are extremely mobile and will be leached into the soil with percolating water. Permittee shall not cause groundwater concentrations exceeding 250 mg/L of chlorides in subsurface waters of the state in accordance with the water quality standard rule under 10 CSR 20-7.031.
- (5) Application of boron shall not exceed a cumulative total of 600 pounds/acre.

C. SPECIAL CONDITIONS (continued)

- (5) Toxic organic chemicals shall not exceed background levels found in soils or concentrations listed in 40 CFR 268.40 unless alternate pollutant limits are listed in this permit. Consideration of alternate limits will be based on review of detailed environmental assessment submitted in accordance with 10 CSR 20-8.020(3)(D).

r. Operation and Maintenance Manual

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. Copies of the O&M Manual and subsequent revisions shall be submitted to the departments Water Pollution Control Program and Regional Office for review and approval. The O&M Manual shall be written as a detailed step by step guide to operators and managers on how to properly operate the land application program. It shall explain how to comply with permit requirements and include copies of example record keeping and report forms, site information sheets and other reference documents. Include a list of employee contacts and notification procedures for reporting and response to spills and other emergency conditions. It shall include a Soil & Water Conservation Plan, a Nutrient Management Plan and other pertinent information.

- s. Lagoon Closure Requirements. Prior to taking the lagoon out of service, a lagoon closure plan shall be submitted for department review and approval in accordance with 10 CSR 20-6.015(5). The lagoon must be closed within two years after ceasing to be used for wastewater treatment. All sludge shall be removed from the lagoon prior to lagoon closure.

t. Training and Performance Audits

The permittee shall provide an employee training program with at least annual refresher courses in proper land application practices and permit requirements. Annual "Performance Audits" of the land application program shall be conducted by an independent party and submitted to the department with the annual report.

u. Record Keeping & Reporting Requirements

- (1) 24-hour Reporting. Any unauthorized discharge from storage, treatment or land application system shall be reported to the department as soon as possible but always within 24 hours. Discharge is allowed only as described in the Effluent Limitations and Special Conditions sections of this permit.
- (2) Daily log sheets shall be prepared and kept on file at the permittee office location for each application site showing amounts of sludge applied per acre, dates of application, nutrients applied, crop yields and other information required by the permit.
- (3) Site Information Sheets. "Information Sheets" shall be prepared and updated each year for each application site giving the following information: land owners name, address, telephone number, acreage, designation of buffer zones around limiting features, nutrient content of biosolids, previous nutrients applied, and planned application rates for the year. A copy of the current "Information Sheet" shall be supplied to the landowner prior to land application.
- (4) Climatic Observations. Permittee shall collect and record on-site measurements at the sludge production site for daily, monthly and annual precipitation totals. Permittee shall record daily minimum and maximum air temperatures, time of the measurements and soil moisture conditions at the land application site during land application periods.
- (5) Storage Structure Observations. Sludge storage structures shall be checked visually at least once/month for structural integrity, visible leaks and measurement of liquid sludge depth. Liquid depth shall be measured and reported as feet below the top or overflow level of the structure. This paragraph does not apply to wastewater treatment lagoons with sludge retained in the lagoon.
- (6) Equipment Checks during Land Application. The application system and application site shall be visually inspected continuously during land application to check for equipment malfunctions and runoff from the application site.
- (7) All records and monitoring results shall be maintained for at least five years and shall be made available to the department upon request.

C. SPECIAL CONDITIONS (continued)

v. 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 for the previous growing season from October 1 through September 30 or an alternate 12 month period approved by the Department and listed in the Operation and Maintenance Manual. This report shall be submitted using report forms approved by the Department and shall include a summary of the monitoring and record keeping required by the Special Conditions and Standard Conditions of this permit. The report shall include, but is not limited to, a summary of the following:

- (1) Storage basin freeboard at the start and end of the application season, the number of days of land application for each month, the total gallons & dry tons applied, and the total acres used. The monthly and annual precipitation received at the facility.
- (2) A tabular summary of monitoring results including any testing conducted in addition to permit requirements.
- (3) Location map of application sites and number of acres in each field. A tabular summary for each field showing crops grown, crop yields per acre, total nutrients applied per acre from all sources, application rate in gallons/acre per day, gallons/acre/year and dry tons/acre/year.
- (4) The permittee shall certify that information was obtained from the land owner on all other nutrients applied to each site prior to land application of sludge under this permit.
- (5) Example PAN and phosphorus calculations, documentation for projected yield goals and table of crop nutrient removal rates.
- (6) Narrative summary of any problems or deficiencies identified, permit violations, corrective action taken and improvements planned. Include such items as over application of sludge or nutrients, lower yields than predicted, spills, runoff during land application, citizen complaints, odors, nuisance conditions, improper field storage, improper spreading practices, failure to follow buffer zones, etc.
- (7) Submit a report on employee training programs conducted and a copy of the Annual Performance Audit report.
- (8) Copies of site Information Sheets and certification that copies were supplied to each landowner for sites used during the reporting period.

D. RECEIVING WATER MONITORING CONDITIONS

1. In-stream samples should be taken at the location(s) specified on page 3 of this permit. In the event that a safe, accessible location is not present at this location, a suitable location can be negotiated with the department. Samples should be taken at least four feet from the bank or from the middle of the stream (whichever is less) and 6-inches below the surface. The upstream receiving water sample should be collected at a point upstream from any influence of the effluent, where the water is visibly flowing down stream.
2. Stream sampling shall be conducted the month prior to sludge application at a given site.
3. Stream sampling shall be conducted for at least three (3) months following sludge application at a given site.
4. When conducting in-stream monitoring, the permittee shall record observations that include: the time of day, weather conditions, unusual stream/lake characteristics (e.g., septic conditions, algae growth, etc.), the stream segment (e.g., riffle, pool or run) or the lake depth from where the sample was collected. These observations shall be submitted with the sample results.
5. Samples shall not be collected from areas with especially turbulent flow, still water or from the stream bank, unless these conditions are representative of the stream reach or no other areas are available for sample collection. Sampling should not be made when significant precipitation has occurred recently. The sampling event should be terminated and rescheduled if any of the following conditions occur:
 - If turbidity in the stream increases notably; or
 - If rainfall over the past two weeks exceeds 2.5 inches or exceeds 1 inch in the last 24 hours
6. Always use the correct sampling technique and handling procedure specified for the parameter of interest. Please refer to the latest edition of Standard Methods for the Examination of Water and Wastewater for further discussion of proper sampling techniques. All analyses must be conducted in accordance with an approved EPA method. Meters shall be calibrated immediately (within 1 hour) prior to the sampling event.

D. RECEIVING WATER MONITORING CONDITIONS (continuation)

7. To obtain accurate measurements, D.O., temperature and pH analyses should be performed on-site in the receiving stream where possible. However, due to high flow conditions, access, etc., it may be necessary to collect a sample in a bucket or other container. When this is necessary, care must be taken not to aerate the sample upon collection. If for any reason samples must be collected from an alternate site from the one listed in the permit, the permittee shall report the location with the sample results.
8. Dissolved oxygen measurements are to be taken during the period from one hour prior to sunrise to one and one-half hour after sunrise.
9. Please contact the department if you need additional instructions or assistance.

**Missouri Department of Natural Resources
 FACT SHEET
 FOR THE PURPOSE OF MODIFICATION
 OF
 MO0123552
 WINDSOR FOODS**

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 storm water 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.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)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 (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit.

This Factsheet is for an Industrial Facility .

Part I – Facility Information

Facility Type: Industrial
 Facility SIC Code(s): 2038

Facility Description:

Sludge-only facility for no-discharge (land application)/dissolved air flotation (DAF)/(pretreatment) wastewater is discharged to the City of Piedmont’s Sanitary sewer system/sludge from the dissolved air flotation system is stored in two vented steel tanks with a total volume of 38,000 gallons until land applied/secondary containment is provided for these steel tanks.

Have any changes occurred at this facility or in the receiving water body that effects effluent limit derivation?

- No.

Application Date: 07/23/2010
 Expiration Date: 12//8/2010
 Last Inspection: 09/08/2010 Non-Compliance

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.11	No Discharge	Industrial	0.2
002	N/A	Land Application	Stormwater Runoff	0
003	N/A	Land Application	Stormwater Runoff	0
004	N/A	Land Application	Stormwater Runoff	0
005	N/A	Land Application	Stormwater Runoff	0
006	N/A	Land Application	Stormwater Runoff	1.3
007	N/A	Land Application	Stormwater Runoff	0
008	N/A	Land Application	Stormwater Runoff	0
009	N/A	Land Application	Stormwater Runoff	0
010	N/A	Land Application	Stormwater Runoff	0

Receiving Water Body's Water Quality & Facility Performance History:
4 exceedances since the second quarter of 2009

Comments:

This permit has been modified (May 2013) to incorporate the following language:

Stream Monitoring (See 14 of 14 of the permit; #2 & 3)

- Stream sampling shall be conducted the month prior to sludge application at a given site.
- Stream sampling shall be conducted for at least three (3) months following sludge application at a given site.

Stormwater Runoff Monitoring (See Note 3 on Page 5 of 14 of the permit)

- Stormwater runoff sampling shall be conducted the month prior to sludge application at a given site and for at least three (3) months following sludge application at a given site.

The facility also requested to remove TSS monitoring from stormwater runoff sampling requirements as stormwater samples are collected from earthen ditches which contain soil and sediments. This request cannot be granted for the following reasons, based on the permit writer's best professional judgment (BPJ):

- TSS is one of the conventional pollutant that is evident in a stormwater runoff
- The facility has the option to collect stormwater samples at a different location that is representative of the stormwater discharge

Part II – Operator Certification Requirements

As per [10 CSR 20-6.010(8) Terms and Conditions of a Permit], permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions and regulations. Operators or supervisors of operations at regulated wastewater treatment facilities shall be certified in accordance with [10 CSR 20-9.020(2)] and any other applicable state law or regulation. As per [10 CSR 20-9.010(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Not Applicable;

This facility is not required to have a certified operator.

Part III – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

As per Missouri's Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into seven (7) 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.

All Other Waters [10 CSR 20-7.015(8)]:

10 CSR 20-7.031 Missouri Water Quality Standards, the Department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1st classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
McKenzie Creek	P	2786	AQL, LWW, WBC(B)	11010007	Ozark/ Black/ Current
Rings Creek	P	2939	AQL, LWW, WBC(A)	08020202	Ozark/ Upper St. Francis/ Castor
Unnamed Tributary to Black River	U	-	General	11010007	Ozark/ Black/ Current
Unnamed Tributary to Sulphur Creek	U	-	General	08020202	Ozark/ Upper St. Francis/ Castor
Wet Fork	C	2945	AQL, LWW, WBC(B)	08020202	Ozark/ Upper St. Francis/ Castor
Big Lake Creek	C	2946	AQL, LWW, WBC(B)	08020202	Ozark/ Upper St. Francis/ Castor
Unnamed Tributary to Big Lake Creek	U	-	General	08020202	Ozark/ Upper St. Francis/ Castor

* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery(CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND), Groundwater (GRW).

** - Ecological Drainage Unit

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
McKenzie Creek	.1	.1	1.0
Rings Creek	.1	.1	1.0
Unnamed Tributary to Black River	0	0	0
Unnamed Tributary to Sulphur Creek	0	0	0
Wet Fork	0	0	0
Big Lake Creek	0	0	0
Unnamed Tributary to Big Lake Cr.	0	0	0

MIXING CONSIDERATIONS TABLE:

Mixing Zone: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(a)].

Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(b)].

RECEIVING STREAM MONITORING REQUIREMENTS:

Sites S1-S6

PARAMETER(S)	SAMPLING FREQUENCY	SAMPLE TYPE	LOCATION
Nitrate nitrogen as N	Once/month	Grab	S1: Rings Creek at CR 383 S2: McMillan Hollow at CC S3: Sulphur Creek at C S4:Big Lake Creek at CR 378 S5: Big Lake Creek at CR 372 S6:Big Lake Creek at CR 361
Dissolved Oxygen mg/L	Once/month	Grab	
pH Units	Once/month	Grab	
Temperature (C)	Once/month	Grab	
Ammonia as N mg/L	Once/month	Grab	
Total Suspended Solids	Once/month	Grab	
Dissolved Phosphorus as P	Once/month	Grab	

Part IV – Rationale and Derivation of Effluent 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 an existing facility.

ANTI-BACKSLIDING:

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

- All limits in this operating permit are at least as protective as those previously established; therefore, backsliding does not apply.

ANTIDegradation:

In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)], 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.

- Renewal no degradation proposed and no further review necessary.

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:

As per [10 CSR 20-6.010(3)(B)], ...An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the Department.

BIOSOLIDS, SLUDGE, & SEWAGE SLUDGE:

Bio-solids are solid materials resulting from wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sludge is any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect. 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://dnr.mo.gov/env/wpp/pub/index.html>, items WQ422 through WQ449.

- Permittee land applies biosolids in accordance with Standard Conditions I and a Department approved biosolids management plan.

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.

REASONABLE POTENTIAL ANALYSIS (RPA):

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 that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

In accordance with [40 CFR Part 122.44(d)(iii)] if the permit writer determines that any give 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.

Not Applicable;
A RPA was not conducted for this facility.

REMOVAL EFFICIENCY:

Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD₅) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals. Please see the United States Environmental Protection Agency's (EPA) website for interpretation of percent removal requirements for National Pollutant Discharge Elimination System Permit Application Requirements for Publicly Owned Treatment Works and Other Treatment Works Treating Domestic Sewage at www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm.

Not Applicable;
Influent monitoring is not being required to determine percent removal.

SCHEDULE OF COMPLIANCE (SOC):

A schedule of remedial measures included in a permit, including 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.

Not Applicable;
This permit does not contain a SOC.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* 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 storm water 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 (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Storm Water 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.

Not Applicable;
At this time, the permittee is not required to develop and implement a SWPPP.

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 amount of pollutant each discharger is allowed by the Department to release into a given stream after the Department has determined total amount of pollutant that may be discharged into that stream without endangering its water quality.

Not Applicable;

Wasteload allocations were not calculated.

WLA MODELING:

There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

Not Applicable;

A WLA study was either not submitted or determined not applicable by Department staff.

WATER QUALITY STANDARDS:

Per [10 CSR 20-7.031(3)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

WHOLE EFFLUENT TOXICITY (WET) TEST:

A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

Not Applicable;

At this time, the permittee is not required to conduct WET test for this facility.

303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):

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.

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. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

Applicable;

McKenzie Creek is listed on the 2004-2006 Missouri 303(d) List for Low Dissolved Oxygen.

– This facility is considered to be a source of or has the potential to contribute to the above listed pollutant(s).

From the Permit-In-Lieu of TMDL for McKenzie Creek, February 2, 2009:

An added issue is a significant industrial user to the Piedmont WWTF, Windsor Foods, which discharges a high BOD load to the WWTF (historically from 936 to 81 10 mg/L). In the newly issued permit, this discharge is treated as a separate outfall (#002) and the industry must meet city-mandated limits, which are set by ordinance at 300 lbs/day or 360 mg/L at 0.1 MGD. The upgrades the city is planning for the WWTF are tied to this low BOD influent stream.

The land application of sludge authorized by this permit, is not considered to be a contributor to the impairment; the effluent discharge from Windsor Foods is addressed in the City of Piedmont's state operating permit.

Part V – Effluent Limits Determination

OUTFALL #001

Effluent limitations derived and established in the below Effluent 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.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
CHLORIDES	MG/KG	250			NO	
SODIUM ADSORPTION RATIO (SAR)	RATIO	5			NO	

- * - Monitoring requirement only.
- ** - For DO the Daily Maximum is a Daily Minimum and the Monthly Average is a Monthly Average Minimum.
- *** - # of colonies/100mL; the Monthly Average for *E. coli* is a geometric mean.
- **** - Parameter not previously established in previous state operating permit.

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Chlorides.** Retained from previous state operating permit.
- **Sodium Adsorption Ratio (SAR).** Retained from previous state operating permit.
- **Minimum Sampling and Reporting Frequency Requirements.** Sampling and reporting frequency requirements have been retained from previous state operating permit.

OUTFALL #002-010

Effluent limitations derived and established in the below Effluent 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.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
BOD ₅	MG/L	30			YES	WQS
COD	MG/L	*			YES	WQS
TOTAL SUSPENDED SOLIDS	MG/L	30			YES	WQS
TKN AS N	MG/L	*			YES	WQS
AMMONIA AS N	MG/L	2.0			NO	
NITRITE/NITRATE AS N	MG/L	3.0			NO	
CHLORIDES	MG/L	230			YES	WQS
OIL AND GREASE	MG/L	10			YES	WQS
TOTAL PHOSPHOROUS AS P	MG/L	*			YES	WQS
E. COLI	#/100 mL	*			YES	FECAL/WQS
PH	SU	6.5-9.0			YES	WQS
TEMPERATURE	C	*			YES	WQS
TOTAL BORON	MG/L	*			YES	WQS

- * - Monitoring requirement only.
- ** - For DO the Daily Maximum is a Daily Minimum and the Monthly Average is a Monthly Average Minimum.
- *** - # of colonies/100mL; the Monthly Average for *E. coli* is a geometric mean.
- **** - Parameter not previously established in previous state operating permit.
- WQS – Previous permit referenced Water Quality Standards; actual Water Quality Standards are now in the limitations, if applicable.

OUTFALL #002-010 – DERIVATION AND DISCUSSION OF LIMITS:

- **BOD₅**. Retained from previous state operating permit.
- **COD**. Retained from previous state operating permit.
- **Total Suspended Solids**. Retained from previous state operating permit.
- **TKN as N**. Retained from previous state operating permit.
- **Ammonia as N**. Retained from previous state operating permit.
- **Chlorides**. Retained from previous state operating permit.
- **Nitrite/Nitrate as N**. Retained from previous state operating permit.
- **E. Coli**. Retained from previous state operating permit.
- **Oil and Grease**. Retained from previous state operating permit.
- **pH**. Retained from previous state operating permit.
- **Total Phosphorous as P**. Retained from previous state operating permit.
- **Temperature**. Retained from previous state operating permit.
- **Total Boron**. Retained from previous state operating permit.
- **Minimum Sampling and Reporting Frequency Requirements**. Sampling and reporting frequency requirements have been retained from previous state operating permit.

Part VI – 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.

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 05/31/2013 – 07/01/2013. No comments were received.

DATE OF FACT SHEET: APRIL 4, 2011

COMPLETED BY:

TIM SOUTHARDS
ENVIRONMENTAL ENGINEER
MISSOURI DEPARTMENT OF NATURAL RESOURCES
SOUTHEAST REGIONAL OFFICE
(573)840-9750

REVISED DATE: MAY 13, 2013

COMPLETED BY:

JOY JOHNSON, ENVIRONMENTAL SPECIALIST III
NPDES PERMITS UNIT
WATER PROTECTION PROGRAM
joy.johnson@dnr.mo.gov

**STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION**

**Revised
October 1, 1980**

**PART I - GENERAL CONDITIONS
SECTION A - MONITORING AND REPORTING**

1. **Representative Sampling**
 - a. Samples and measurements taken as required herein shall be representative of the nature and volume, respectively, of the monitored discharge. All samples shall be taken at the outfall(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
 - b. Monitoring results shall be recorded and reported on forms provided by the Department, postmarked no later than the 28th day of the month following the completed reporting period. Signed copies of these, and all other reports required herein, shall be submitted to the respective Department Regional Office, the Regional Office address is indicated in the cover letter transmitting the permit.
2. **Schedule of Compliance**

No later than fourteen (14) calendar days following each date identified in the "Schedule of Compliance", the permittee shall submit to the respective Department Regional Office as required therein, either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements, or if there are no more scheduled requirements, when such noncompliance will be corrected. The Regional Office address is indicated in the cover letter transmitting the permit.
3. **Definitions**

Definitions as set forth in the Missouri Clean Water Law and Missouri Clean Water Commission Definition Regulation 10 CSR 20-2.010 shall apply to terms used herein.
4. **Test Procedures**

Test procedures for the analysis of pollutant shall be in accordance with the Missouri Clean Water Commission Effluent Regulation 10 CSR 20-7015.
5. **Recording of Results**
 - a. For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:
 - (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. 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 this permit 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 both.
 - c. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.
6. **Additional Monitoring by Permittee**

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Monitoring Report Form. Such increased frequency shall also be indicated.

7. **Records Retention**

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recording for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this 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.

SECTION B - MANAGEMENT REQUIREMENTS

1. **Change in Discharge**
 - a. All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant not authorized by this permit or any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.
 - b. Any facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants shall be reported by submission of a new NPDES application at least sixty (60) days before each such change, or, if they will not violate the effluent limitations specified in the permit, by notice to the Department at least thirty (30) days before such changes.
2. **Noncompliance Notification**
 - a. If, for any reason, the permittee does not comply with or will be unable to comply with any daily maximum effluent limitation specified in this permit, the permittee shall provide the Department with the following information, in writing within five (5) days of becoming aware of such conditions:
 - (i) a description of the discharge and cause of noncompliance, and
 - (ii) the period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.
 - b. Twenty-four hour reporting. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally with 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided with five (5) days of the time the permittee becomes aware of the circumstances. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
3. **Facilities Operation**

Permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions. Operators or supervisors of operations at publicly owned or publicly regulated wastewater treatment facilities shall be certified in accordance with 10 CSR 209.020(2) and any other applicable law or regulation. Operators of other wastewater treatment facilities, water contaminant source or point sources, shall, upon request by the Department, demonstrate that wastewater treatment equipment and facilities are effectively operated and maintained by competent personnel.
4. **Adverse Impact**

The permittee shall take all necessary steps to minimize any adverse impact to waters of the state resulting from noncompliance with any effluent limitations specified in this permit or set forth in the Missouri Clean Water Law and Regulations (hereinafter the Law and Regulations), including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

- a. Any bypass or shut down of a wastewater treatment facility and tributary sewer system or any part of such a facility and sewer system that results in a violation of permit limits or conditions is prohibited except:
 - (i) where unavoidable to prevent loss of life, personal injury, or severe property damages; and
 - (ii) where unavoidable excessive storm drainage or runoff would catastrophically damage any facilities or processes necessary for compliance with the effluent limitations and conditions of this permit;
 - (iii) where maintenance is necessary to ensure efficient operation and alternative measures have been taken to maintain effluent quality during the period of maintenance.
 - b. The permittee shall notify the Department in writing of all bypasses or shut down that result in a violation of permit limits or conditions. This section does not excuse any person from liability, unless such relief is otherwise provided by the statute.
6. **Removed Substances**
Solids, sludges, filter backwash, or any other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutants from entering waters of the state unless permitted by the Law, and a permanent record of the date and time, volume and methods of removal and disposal of such substances shall be maintained by the permittee.
 7. **Power Failures**
In order to maintain compliance with the effluent limitations and other provisions of this permit, the permittee shall either:
 - a. in accordance with the "Schedule of Compliance", provide an alternative power source sufficient to operate the wastewater control facilities; or,
 - b. if such alternative power source is not in existence, and no date for its implementation appears in the Compliance Schedule, halt or otherwise control production and all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.
 8. **Right of Entry**
For the purpose of inspecting, monitoring, or sampling the point source, water contaminant source, or wastewater treatment facility for compliance with the Clean Water Law and these regulations, authorized representatives of the Department, shall be allowed by the permittee, upon presentation of credentials and at reasonable times;
 - a. to enter upon permittee's premises in which a point source, water contaminant source, or wastewater treatment facility is located or in which any records are required to be kept under terms and conditions of the permit;
 - b. to have access to, or copy, any records required to be kept under terms and conditions of the permit;
 - c. to inspect any monitoring equipment or method required in the permit;
 - d. to inspect any collection, treatment, or discharge facility covered under the permit; and
 - e. to sample any wastewater at any point in the collection system or treatment process.
 9. **Permits Transferable**
 - a. Subject to Section (3) of 10 CSR 20-6.010 an operating permit may be transferred upon submission to the Department of an application to transfer signed by a new owner. Until such time as the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
 - b. The Department, within thirty (30) days of receipt of the application shall notify the new permittee of its intent to revoke and reissue or transfer the permit.
 10. **Availability of Reports**
Except for data determined to be confidential under Section 308 of the Act, and the Law and Missouri Clean Water Commission Regulation for Public Participation, Hearings and Notice to Governmental Agencies 10 CSR 20-6.020, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. As required by statute, effluent data shall not be considered confidential. Knowingly making any false statement on any such report shall be subject to the imposition of criminal penalties as provided in Section 204.076 of the Law.
 - 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) violation 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 and 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.
12. **Permit Modification - Less Stringent Requirements**
If any permit provisions are based on legal requirements which are lessened or removed, and should no other basis exist for such permit provisions, the permit shall be modified after notice and opportunity for a hearing.
 13. **Civil and Criminal Liability**
Except as authorized by statute and provided in permit conditions on "Bypassing" (Standard Condition B-5) and "Power Failures" (Standard Condition B-7) nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.
 14. **Oil and Hazardous Substance Liability**
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act, and the Law and Regulations. Oil and hazardous materials discharges must be reported in compliance with the requirements of the Federal Clean Water Act.
 15. **State Laws**
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state statute or regulations.
 16. **Property Rights**
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of or violation of federal, state or local laws or regulations.
 17. **Duty to Reapply**
If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit 180 days prior to expiration of this permit.
 18. **Toxic Pollutants**
If a toxic effluent standard, prohibition, or schedule of compliance is established, under Section 307(a) of the Federal Clean Water Act for a toxic pollutant in the discharge of permittee's facility and such standard is more stringent than the limitations in the permit, then the more stringent standard, prohibition, or schedule shall be incorporated into the permit as one of its conditions, upon notice to the permittee.
 19. **Signatory Requirement**
All reports, or information submitted to the Director shall be signed (see 40 CFR-122.6).
 20. **Rights Not Affected**
Nothing in this permit shall affect the permittee's right to appeal or seek a variance from applicable laws or regulations as allowed by law.
 21. **Severability**
The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

**STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
AUGUST 15, 1994**

PART III – SLUDGE & BIOSOLIDS FROM DOMESTIC WASTEWATER TREATMENT FACILITIES

SECTION A – GENERAL REQUIREMENTS

1. This permit pertains to sludge requirements under the Missouri Clean Water Law and regulation and incorporates applicable federal sludge disposal requirements under 40 CFR 503. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFS 503 until such time as Missouri is delegated the new EPA sludge program. EPA has reviewed and accepted these standard sludge conditions. EPA may choose to issue a separate sludge addendum to this permit or a separate federal sludge permit at their discretion to further address federal requirements.
2. These PART III Standard Conditions apply only to sludge and biosolids generated at domestic wastewater treatment facilities, including public owned treatment works (POTW) and privately owned facilities.
3. Sludge and Biosolids Use and Disposal Practices.
 - a. Permittee is authorized to operate the sludge and biosolids treatment, storage, use, and disposal facilities listed in the facility description of this permit.
 - b. Permittee shall not exceed the design sludge volume listed in the facility description and shall not use sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
 - c. Permittee is authorized to operate the storage, treatment or generating sites listed in the Facility Description section of this permit.
 - d. A separate operating permit is required for each operating location where sludge or biosolids are generated, stored, treated, or disposed, unless specifically exempted in this permit or in 10 CSR 20, Chapter 6 regulations. For land application, see section H, subsection 3 of these standard conditions.
4. Sludge Received From Other Facilities
 - a. Permittees may accept domestic wastewater sludge from other facilities including septic tank pumpings from residential sources as long as the design sludge volume is not exceeded and the treatment facility performance is not impaired.
 - b. The permittee shall obtain a signed statement from the sludge generator or hauler that certifies the type and source of the sludge.
 - c. Sludge received from out-of-state generators shall receive prior approval of the permitting authority and shall be listed in the facility description or special conditions section of the permit.
5. These permit requirements do not supersede nor remove liability for compliance with county and other local ordinances.
6. These permit requirements do not supersede nor remove liability for compliance with other environmental regulations such as odor emissions under the Missouri Air Pollution Control Law and regulations.
7. This permit may (after du process) be modified, or alternatively revoked and reissued, to comply with any applicable sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Act or under Chapter 644 RsMo.
8. In addition to the STANDARD CONDITIONS, the department may include sludge limitations in the special conditions portion or other sections of this permit.
9. Alternate Limits in Site Specific Permit.

Where deemed appropriate, the department may require an individual site specific permit in order to authorize alternate limitations:

 - a. An individual permit must be obtained for each operating location, including application sites.
 - b. To request a site specific permit, an individual permit application, permit fees, and supporting documents shall be submitted for each operating location. This shall include a detailed sludge/biosolids management plan or engineering report.
10. Exceptions to these Standard Conditions may be authorized on a case-by-case basis by the department, as follows:
 - a. The department will prepare a permit modification and follow permit public notice provisions as applicable under 10 CSR 20-6.020, 40 CFR 124.10, and 40 CFR 501.15(a)(2)(ix)(E). This includes notification of the owners of property located adjacent to each land application site, where appropriate.
 - b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR 503.
11. Compliance Period
Compliance shall be achieved as expeditiously as possible but no later than the compliance dates under 40 CFR 503.2.

SECTION B – DEFINITIONS

1. Biosolids means an organic fertilizer or soil amendment produced by the treatment of domestic wastewater sludge. Untreated sludge or sludge that does not conform to the pollutants and pathogen treatment requirements in this permit is not considered biosolids.
2. Biosolids land application facility is a facility where biosolids are spread onto the land at agronomic rates for production of food or fiber. The facility includes any structures necessary to store the biosolids until soil, weather, and crop conditions are favorable for land application.
3. Class A biosolids means a material that has met the Class A pathogen reduction requirements or equivalent treatment by a Process to Further Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
4. Class B biosolids means a material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
5. Domestic wastewater means wastewater originating from the sanitary conveniences of residences, commercial buildings, factories and institutions; or co-mingled sanitary and industrial wastewater processed by a public owned treatment works (POTW) or privately owned facility.
6. Mechanical treatment plants are wastewater treatment facilities that use mechanical devices to treat wastewater, including septic tanks, extended aeration, activated sludge, contact stabilization, trickling filters, rotating biological discs, and other similar facilities. It does not include un aerated wastewater treatment lagoons and constructed wetlands for wastewater treatment.
7. Operating location as defined in 10 CSR 20-2.010 is all contiguous lands owned, operated or controlled by one (1) person or by two (2) or more persons jointly or as tenants in common.
8. Plant Available Nitrogen (PAN) is the nitrogen that will be available to plants during the next growing season after biosolids application.
9. Sinkhole is a depression in the land surface into which surface water flows to join an underground drainage system.
10. Site Specific Permit is a permit that has alternate limits developed to address specific site conditions for each land application site or storage site.
11. Sludge is the solid, semisolid, or liquid residue removed during the treatment of wastewater. Sludge includes septage removed from septic tanks.
12. Sludge lagoon is an earthen basin that receives sludge that has been removed from a wastewater treatment facility. It does not include a wastewater treatment lagoon or sludge treatment units that are not a part of a mechanical wastewater treatment facility.
13. Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamp, marshes, bogs, and similar areas. Wetlands do not include constructed wetlands used for wastewater treatment.

SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

1. Sludge shall be routinely removed from the wastewater treatment facilities and handled according to the permit facility description and sludge conditions in this permit.
2. The permittee shall operate the facility so that there is no sludge loss into the discharged effluent in excess of permit limits, no sludge bypassing, and no discharge of sludge to waters of the state.
3. Mechanical treatment plants shall have separate sludge storage compartments in accordance with 10 CSR 20, Chapter 8. Failure to remove sludge from these storage compartments on the required design schedule is a violation of this permit.

SECTION D – SLUDGE DISPOSED AT OTHER TREATMENT FACILITY OR CONTRACT HAULER

1. This section applies to permittees that haul sludge to another treatment facility for disposal or use contract haulers to remove and dispose of sludge.
2. Permittees that use contract haulers are responsible for compliance with all the terms of this permit including final disposal, unless the hauler has a separate permit for sludge or biosolids disposal issued by the department; or the hauler transports the sludge to another permitted treatment facility.
3. The permittee shall require documentation from the contractor of the disposal methods used and permits obtained by the contractor.
4. Testing of sludge, other than total solids content, is not required if sludge is hauled to a municipal wastewater treatment facility or other permitted wastewater treatment facility.

SECTION E – WASTEWATER TREATMENT LAGOONS AND STORMWATER RETENTION BASINS

1. Sludge that is retained within a wastewater treatment lagoon is subject to sludge disposal requirements when the sludge is removed from the lagoon or when the lagoon ceases to receive and treat wastewater.
2. If sludge is removed during the year, an annual sludge report must be submitted.
3. Storm water retention basins or other earthen basins, which have been used as sludge storage for a mechanical treatment system is considered a sludge lagoon and must comply with Section G of this permit.

SECTION F – INCINERATION OF SLUDGE

1. Sludge incineration facilities shall comply with the requirements of 40 CFR 503 Subpart E; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Permittee may be authorized under the facility description of this permit to store incineration ash in lagoons or ash ponds. This permit does not authorize the disposal of incineration ash. Incineration ash shall be disposed in accordance with 10 CSR 80; or if the ash is determined to be hazardous waste, shall be disposed in accordance with 10 CSR 25.
3. In addition to normal sludge monitoring, incineration facilities shall report the following as part of the annual report, quantity of sludge incinerated, quantity of ash generated, quantity of ash stored; and ash use or disposal method, quantity, and location. Permittee shall also provide the name of the disposal facility and the applicable permit number.
4. Additional limitations, monitoring, and reporting requirements may be addressed in the Special Conditions sections of this permit.

SECTION G – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS

1. Surface disposal sites shall comply with the requirements in 40 CFR 503 Subpart C, and solid waste disposal regulations under 10 CSR 80.
2. Additional limitations, monitoring, and reporting requirements may be addressed in the Special Conditions section of this permit.
3. Effective February 19, 1995, a sludge lagoon that has been in use for more than two years without removal of accumulated sludge, or that has not been properly closed shall comply with one of the following options:
 - a. Permittee shall obtain a site specific permit to address surface disposal requirements under 40 CFR 503, ground water quality regulations under 10 CSR 20, Chapter 7 and 8, and solid waste management regulations under 10 CSR 80;
 - b. Permittee shall clean out the sludge lagoon to remove any sludge over two years old and shall continue to remove accumulated sludge at least every two years or an alternate schedule approved under 40 CFR 503.20(b). In order to avoid damage to the lagoon seal during cleaning, the permittee may leave a layer of sludge on the bottom of the lagoon, upon prior approval of the department; or
 - c. Permittee shall close the lagoon in accordance with Section 1.

SECTION H – LAND APPLICATION

1. The permittee shall not land apply sludge or biosolids unless land application is authorized in the Facility Description or special conditions section of the permit.
2. This permit replaces and terminates all previous sludge management plan approvals by the department for land application of sludge or biosolids.
3. Land application sites within a 20 mile radius of the wastewater treatment facility are authorized under this permit when biosolids are applied for beneficial use in accordance with these standard conditions unless a site specific permit is required under Section A, Subsection 9.
4. Biosolids shall not be applied unless authorized in this permit or exempted under 10 CSR 20, Chapter 6.
 - a. This permit does not authorize the land application of sludge except when sludge meets the definition of biosolids.
 - b. This permit authorizes “Class A or B” biosolids derived from domestic wastewater sludges to be land applied onto grass land, crop land, timber land or other similar agricultural or silviculture lands at rates suitable for beneficial use as organic fertilizer and soil conditioner.
5. Public Contact Sites.
Permittees who wish to apply Class A biosolids to public contact sites must obtain approval from the department. Applications for approval shall be in the form of an engineering report and shall address priority pollutants and dioxin concentrations. Authorization for land applications must be provided in the special conditions section of this permit or in a separate site-specific permit.

6. Agricultural and Silvicultural Sites.

In addition to specified conditions herein, this permit is subject to the attached Water Quality Guides numbers WQ 422 through 426 published by the University of Missouri, and hereby incorporated as though fully set forth herein. The guide topics are as follows:

WQ 422	Land Application of Septage
WQ 423	Monitoring Requirements for Biosolids Land Application
WQ 424	Biosolids Standards for Pathogens and Vectors
WQ 425	Biosolids Standards for Metals and Other Trace Substances
WQ 426	Best Management Practices for Biosolids Land Applications

SECTION I – CLOSURE REQUIREMENTS

1. This section applies to all wastewater treatment facilities (mechanical and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. It does not apply to land application sites.
2. Permittees who plan to cease operation must obtain department approval of a closure plan which addresses proper removal and disposal of all residues, including sludge, biosolids, and ash. Permittee must maintain this permit until the facility is properly closed per 10 CSR 20-6.010 and 10 CSR 20-6.015.
3. Residuals that are left in place during closure of a lagoon or earthen structure shall not exceed the agricultural loading rates as follows:
 - a. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section H of these standard conditions.
 - b. If a wastewater treatment lagoon has been in operation for 15 years or more, the sludge in the lagoon qualifies for Class B with respect to pathogens (see WQ 424, Table 3), and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B limitations. See WQ 423 and 424.
 - c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. See WQ 426 for calculation procedures. For a grass cover crop, the allowable PAN is 300 pounds/acre.
4. When closing a wastewater treatment lagoon with a design treatment capacity equal or less than 150 persons, the residuals are considered “septage” under the similar treatment works” definition. See WQ 422. Under the septage category, residuals may be left in place as follows:
 - a. Testing for metals or fecal coliform is not required.
 - b. If the wastewater treatment lagoon has been in use for less than 15 years, mix lime with the sludge at the rate of 50 pounds of hydrated lime per 1000 gallons (134 cubic feet) of sludge.
 - c. The amount of sludge that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. 100 dry tons/acre of sludge may be left in the basin without testing for nitrogen. If more than 100 dry tons/acre will be left in the lagoon, test for nitrogen and determine the PAN in accordance with WQ 426. Allowable PAN loading is 300 pounds/acre.
5. Residuals left within the lagoon shall be mixed with soil on at least a 1 to 1 ratio, the lagoon berms shall be demolished, and the site shall be graded and vegetated so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
6. Lagoon closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed five acres in accordance with 10 CSR 20-6.200.
7. If sludge exceeds agricultural loading rates under Section H or I, a landfill permit or solid waste disposal permit shall be obtained to authorize on-site sludge disposal under the Missouri Solid Waste Management Law and regulations per 10 CSR 80, and the permittee must comply with the surface disposal requirements under 40 CFR 503, Subpart C.

SECTION J – MONITORING FREQUENCY

1. At a minimum, sludge or biosolids shall be tested for volume and percent total solids on a frequency that will accurately represent sludge quantities produced and disposed.
2. Testing for land application is listed under Section H, Subsection 6 of these standard conditions (see WQ 423). Once per year is the minimum test frequency. Additional testing shall be performed for each 100 dry tons of sludge generated or stored during the year.
3. Additional testing may be required in the special conditions or other sections of the permit. Permittees receiving industrial wastewater may be required to conduct additional testing upon request from the department.
4. Monitoring requirements shall be performed in accordance with, “POTW Sludge Sampling and Analysis Guidance Document”, United States Environmental Protection Agency, August 1989, and subsequent revisions.

SECTION K – RECORD KEEPING AND REPORTING REQUIREMENTS

1. The permittee shall maintain records on file at the facility for at least five years for the items listed in these Standard Conditions and any additional items in the Special Conditions section of this permit. This shall include dates when the sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
2. Reporting Period
 - a. By January 28th of each year, an annual report shall be submitted for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and sludge or biosolids disposal facilities.
 - b. Permittees with wastewater treatment lagoons shall submit the above annual report only when sludge or biosolids are removed from the lagoon during the report period or when the lagoon is closed.
3. Report Forms. The annual report shall be submitted on report forms provided by the department or equivalent forms approved by the department.
4. Report shall be submitted as follows:
Major facilities (those serving 10,000 persons or 1 million gallons per day) shall report to both the department and EPA. Other facilities need to report only to the department. Reports shall be submitted to the addresses listed as follows:

DNR regional office listed in your permit
(See cover letter of permit)

EPA Region VII
Water Compliance Branch (WACM)
Sludge Coordinator
901 N 5th Street
Kansas City, KS 66101

5. Annual Report Contents. The annual report shall include the following:
 - a. Sludge/biosolids testing performed. Include a copy or summary of all test results, even if not required by this permit.
 - b. Sludge or Biosolids quantity shall be reported as dry tons for quantity generated by the wastewater treatment facility, the quantity stored on site at end of year, and the quantity used or disposed.
 - c. Gallons and % solids data used to calculate the dry ton amounts.
 - d. Description of any unusual operating conditions.
 - e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
 - (1) This must include the name, address and permit number for the hauler and the sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name and permit number of that facility.
 - (2) Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.
 - f. Contract Hauler Activities.
If contract hauler, provide a copy of a signed contract or billing receipts from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate sludge disposal or biosolids use permit.
 - g. Land Application Sites.
 - (1) Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as legal description for nearest ¼, ¼, Section, Township, Range, and County, or as latitude and longitude.
 - (2) If biosolids application exceeds 2 dry tons/acre/year, report biosolids nitrogen results. Plant Available Nitrogen (PAN) in pounds/acre, crop nitrogen requirement, available nitrogen in the soil prior to biosolids application, and PAN calculations for each site.
 - (3) If the “Low Metals” criteria is exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative loading which has been reached at each site.
 - (4) Report the method used for compliance with pathogen and vector attraction requirements.
 - (5) Report soil test results for pH, CEC, and phosphorus. If none was tested during the year, report the last date when tested and results.

REC ED

Copy
AP 20182

APR 20 2015

WATER PROTECTION PROGRAM



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM WATER POLLUTION BRANCH
(SEE MAP FOR APPROPRIATE REGIONAL OFFICE)
APPLICATION FOR TRANSFER OF OPERATING PERMIT

FOR AGENCY USE ONLY	
CHECK NO.	
No Payment received <i>dm</i>	
DATE RECEIVED	FEE SUBMITTED
4-9-15	0

dm
OR
Chatt
2123827
10000
5026115
JR

1-4 TO BE COMPLETED BY CURRENT PERMITTEE (PRESENT OWNER/SELLER). THE FOLLOWING ITEMS PRESENTLY APPLY TO THIS FACILITY: (SEE INSTRUCTIONS FOR APPROPRIATE FEE TO BE SUBMITTED WITH APPLICATION.)

1 FACILITY	
NAME	Windsor Foods Wastewater Treatment Plant
ADDRESS	# 3 Industrial Drive
CITY	Piedmont
STATE	MO
ZIP	63957
TELEPHONE NUMBER WITH AREA CODE	(573) 223-7722

2 CURRENT OWNER	
NAME	HM International, Inc. LLC
PHONE	542-249-3449 918-664-1914
E-MAIL	trains@hmintl.com
ADDRESS	12442 Technology Blvd. SB10 E Skelly Dr., Ste 165D
CITY	Arbuckle Tulsa
STATE	OK
ZIP	74135

3 CONTINUING AUTHORITY: (if same as owner, write same.)	
NAME	Same
ADDRESS	
CITY	
STATE	
ZIP	
TELEPHONE NUMBER WITH AREA CODE	

4 SIGNATURE	
I certify I am familiar with the information given above, that to the best of my knowledge and belief such information is true, complete and accurate, and until transfer approval I agree to continue to abide by the Missouri Clean Water Law and its implementing regulations, orders and decisions, subject to any legitimate appeal available under the Missouri Clean Water Law.	
NAME AND OFFICIAL TITLE (TYPE OR PRINT)	TAMARA RAINS VICE PRESIDENT
TELEPHONE NUMBER WITH AREA CODE	918-664-1914
SIGNATURE	<i>Tamara Rains</i>
DATE SIGNED	3/25/15

THE FOLLOWING ITEMS (6-10) WILL APPLY AFTER COMPLETION OF TRANSFER (SALE) AND ARE TO BE COMPLETED BY THE APPLICANT FOR TRANSFER OF OPERATING PERMIT (BUYER) OR AUTHORIZED AGENT.

6 FACILITY	
NAME	Windsor Foods Wastewater Treatment Plant
NPDES NUMBER	MO- 0123552
ADDRESS	# 3 Industrial Drive
CITY	Piedmont
STATE	MO
ZIP	63957
TELEPHONE NUMBER WITH AREA CODE	(573) 223-7722

7 FUTURE OWNER	
NAME	Allomoto Windsor, Inc.
ADDRESS	7124 N Marine Dr.
CITY	Portland
STATE	OR
ZIP	97203
TELEPHONE NUMBER WITH AREA CODE	(503) 734-1548

8 CONTINUING AUTHORITY: (if same as owner, write same.)	
NAME	Same
ADDRESS	
CITY	
STATE	
ZIP	
TELEPHONE NUMBER WITH AREA CODE	

9 FACILITY CONTACT	
NAME	Gary Cox
TITLE	Maintenance Manager
TELEPHONE NUMBER WITH AREA CODE	(573) 223-7722

10 ADDITIONAL INFORMATION	
ANTICIPATED EFFECTIVE DATE OF TRANSFER IN OWNERSHIP April 1, 2015	
ARE ANY CHANGES IN PRODUCTION, RAW MATERIALS OR IN THE QUANTITY OR QUALITY OF THE DISCHARGES FROM THIS FACILITY PLANNED OR ANTICIPATED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If yes, explain (if additional space is required, attach sheet)	

10.00 SIGNATURE	
I certify I am familiar with the information given above, that to the best of my knowledge and belief such information is true, complete and accurate, and upon transfer approval I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available under the Missouri Clean Water Law. Further, I certify I have read the existing permit and agree to abide by the terms and conditions once the transfer is complete.	
NAME AND OFFICIAL TITLE (TYPE OR PRINT)	Manuel Martinez, Chief Financial Officer
TELEPHONE NUMBER WITH AREA CODE	(909) 477-4831
SIGNATURE	<i>Manuel Martinez</i>
DATE SIGNED	3/20/2015

MC 786 (5/17) (10-15)

SE
Wayne

RECEIVED
APR 09 2015
By _____