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.	MO-0134139
Owner:	Archer Daniels Midland
Address:	17700 South T Highway, Deerfield, MO 64741
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	ADM Deerfield
Facility Address:	17700 South T Highway, Deerfield, MO 64741
Legal Description:	See pages two and three
UTM Coordinates:	See pages two and three
Receiving Stream:	See pages two and three
First Classified Stream and ID:	See pages two and three
USGS Basin & Sub-watershed No.:	See pages two and three

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

FACILITY DESCRIPTION

See pages two and three for additional facility description. No certified operator required. ADM Deerfield facility is a soybean crushing mill, oil refinery and 50 MMGY biodiesel manufacturing facility 4 miles west of Deerfield, Missouri. Facility has three stormwater outfalls, one process wastewater outfall, in-stream monitoring and two no-discharge permitted features. The two no-discharge permitted features are pumped and hauled to Fort Scott, KS Wastewater Treatment Plant.

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.

May 1, 2013 — Effective Date
August 5, 2016 — Modification Date

Sara Parker Pauley — Sara Parker Pauley, Director, Department of Natural Resources

March 31, 2017 — Expiration Date

John Madras — John Madras, Director, Water Protection Program

FACILITY DESCRIPTION (continued)

Outfall #001 – Soybean Biodiesel Facility – SIC #2869 and #2075
Stormwater discharge only.
UTM Coordinates: X = 360978, Y= 4188863
Legal description: SW¼, NW¼, Sec. 9, T35N, R33W, Vernon County
Receiving Stream: Tributary to Grassy Run (U)
First Classified Stream and ID: Marmaton River (P) (1308)
USGS Basin & Sub-watershed No.: (10290104-0303)
Design flow based on 10 year 24 hour rain event is 1,108,424 gallons per day.
Actual Flow is dependent upon rainfall.

Outfall #002 – Soybean Biodiesel Facility – SIC #2869 and #2075
Stormwater discharge only.
UTM Coordinates: X = 361694, Y = 4188496
Legal description: NW¼, SE¼, Sec. 9, T35N, R33W, Vernon County
Receiving Stream: Tributary to Green Branch (U)
First Classified Stream and ID: Dry Wood Creek (P) (1314)
USGS Basin & Sub-watershed No.: (10290104-0211)
Design flow based on 10 year 24 hour rain event is 369,475 gallons per day.
Actual Flow is dependent upon rainfall

Outfall #003 – Soybean Biodiesel Facility - SIC #2869 and #2075
Combined industrial process wastewater from internal monitoring points #1, 2, 3, and 4 / single-cell non-contact wastewater settling pond / sludge retained in lagoon
UTM Coordinates: X = 361487, Y = 4188562
Legal description: NW¼, SE¼, Sec. 9, 35N, 33W, Vernon County
Receiving Stream: Tributary to Green Branch (U)
First Classified Stream and ID: Dry Wood Creek (P) (1314)
USGS Basin & Sub-watershed No.: (10290104-0211)
Design organic population equivalent is 748.
Design average daily flow is 74,880 gallons per day.
Design sludge production is 7.4 dry tons/year.

Permitted Feature #004 – Soybean Biodiesel Facility - SIC #2869 and #2075
2 earthen storage basins, Domestic wastewater removed by contract hauler to Ft. Scott, KS WWTP (KS0095923)
UTM Coordinates: X = 361330, Y = 4188518
Legal description: NE¼, SW¼, Sec. 9, T35N, R33W, Vernon County
Receiving Stream: Tributary to Green Branch (U)
First Classified Stream and ID: Dry Wood Creek (P) (1314)
USGS Basin & Sub-watershed No.: (10290104-0211)

Design Basis:

Design dry weather flows:	27,115 gpd
Design with 1-in-10 year flows:	31,320 gpd

Storage Capacity:

Storage volume (minimum to maximum water levels):	1,176,296 gallons
Design for Dry weather flows:	44 days
Design with 1-in 10 year flows:	38 days
Freeboard:	1.0 foot

FACILITY DESCRIPTION (continued)

Permitted Feature #005 – Soybean Biodiesel Facility – SIC #2869 and #2075
Stormwater discharge only.
UTM Coordinates: X = 361285, Y = 4188704
Legal description: NE ¼, SW¼, Sec. 9, T35N, 33W, Vernon County
Receiving Stream: Tributary to Green Branch (U)
First Classified Stream and ID: Dry Wood Creek (P) (1314)
USGS Basin & Sub-watershed No.: (10290104-0211)
Actual Flow is dependent upon rainfall

Permitted Feature #006- Soybean Biodiesel Facility - SIC #2869 and #2075
Earthen storage basin; Wastewater removed by contract hauler to Ft. Scott, KS WWTP (KS0095923)
UTM Coordinates: X = 361451, Y = 4188491
Legal description: NW¼, SE¼, Sec. 9, T35N, R33W, Vernon County
Receiving Stream: Tributary to Green Branch (U)
First Classified Stream and ID: Dry Wood Creek (P) (1314)
USGS Basin & Sub-watershed No.: (10290104-0211)

Design Basis:

Design dry weather flows:	8,219 gpd
Design with 1-in-10 year flows:	12,619 gpd

Storage Capacity:

Storage volume (minimum to maximum water levels):	4,641,363 gallons
Design for Dry weather flows:	565 days
Design with 1-in 10 year flows:	368 days
Freeboard:	1.0 foot

Internal Monitoring Point (IMP) 1-4: – **Removed in 2013 permit renewal**; flows routed to Outfall #003.

SM1: Instream Monitoring Point
Panama Street Stream Crossing
UTM Coordinates: X = 362058, Y = 4187944
Legal description: SE ¼ , SE ¼, SE ¼, Sec 9, T35N, R33W, Vernon County
Receiving Stream: Tributary to Dry Wood Creek (U)
First Classified Stream and ID: Dry Wood Creek (P) (1314)
USGS Basin & Sub-watershed No.: (10290104-0211)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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
Outfalls #001 and #002						
Flow	GPD	*		*	once/quarter**	24 hr. estimate
Chemical Oxygen Demand	mg/L	120		90	once/quarter**	grab
Total Suspended Solids	mg/L	100		50	once/quarter**	grab
pH	SU	***		***	once/quarter**	grab
Oil & Grease	mg/L	15		10	once/quarter**	grab
Benzene	µg/L	*		*	once/quarter**	grab
Toluene	µg/L	*		*	once/quarter**	grab
Ethylbenzene	µg/L	*		*	once/quarter**	grab
Xylene	µg/L	*		*	once/quarter**	grab
Total Methanol	mg/L	*		*	once/quarter**	grab
Hexane	mg/L	*		*	once/quarter**	grab
Total Petroleum Hydrocarbons (ORO, GRO, DRO)	mg/L	10		10	once/quarter**	grab
MONITORING REPORTS SHALL BE SUBMITTED **QUARTERLY;** THE NEXT REPORT IS DUE **JANUARY 28, 2015.** THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Whole Effluent Toxicity (WET) Test		% Survival	See Special Conditions		once/permit cycle	grab
MONITORING REPORTS SHALL BE SUBMITTED **ONCE PER PERMIT CYCLE IN THE THIRD YEAR**; THE FIRST REPORT IS DUE **JANUARY 28, 2017.**						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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 #003						
Flow	GPD	*		*	once/day	24 hr. total
Biochemical Oxygen Demand	mg/L	60		30	once/month	grab
Total Suspended Solids	mg/L	60		30	once/month	grab
pH	SU	***		***	once/month	grab
Total Residual Chlorine as Cl_2	µg/L	17		8	once/month	grab
(Note 1)		(130 ML)		(130 ML)		
Total Phosphorus as P	mg/L	*		*	once/month	grab
Oil & Grease	mg/L	15		10	once/month	grab
Sulfate plus Chloride	mg/L	1000		1000	once/month	grab
Chloride as Cl	mg/L	859		428	once/month	grab
Total Hardness as $CaCO_3$	mg/L	*		*	once/month	grab
Beryllium, Total Recoverable	µg/L	*		*	once/month	grab
Cadmium, Total Recoverable	µg/L	1.0		0.5	once/month	grab
Selenium, Total Recoverable	µg/L	*		*	once/month	grab
Temperature	°F	*		*	once/month	grab
Total Methanol	mg/L	*		*	once/month	grab
Hexane	mg/L	*		*	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED **MONTHLY**; THE NEXT REPORT IS DUE **NOVEMBER 28, 2014**. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

Whole Effluent Toxicity (WET) Test	% Survival	See Special Conditions	once/quarter	grab

MONITORING REPORTS SHALL BE SUBMITTED **QUARTERLY**; THE NEXT REPORT IS DUE **JANUARY 28, 2015.**

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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 #005						
Flow	GPD	*		*	once/quarter**	24 hr. estimate
Biochemical Oxygen Demand	mg/L	*		*	once/quarter**	grab
Total Suspended Solids	mg/L	*		*	once/quarter**	grab
pH	SU	***		***	once/quarter**	grab
Oil & Grease	mg/L	15		10	once/quarter**	grab
Benzene	µg/L	*		*	once/quarter**	grab
Toluene	µg/L	*		*	once/quarter**	grab
Ethylbenzene	µg/L	*		*	once/quarter**	grab
Xylene	µg/L	*		*	once/quarter**	grab
Methanol	mg/L	*		*	once/quarter**	grab
Hexane	mg/L	*		*	once/quarter**	grab
Total Petroleum Hydrocarbon (ORO, DRO, GRO)	mg/L	10		10	once/quarter**	grab

MONITORING REPORTS SHALL BE SUBMITTED **QUARTERLY**; THE NEXT REPORT IS DUE **JANUARY 28, 2015.** THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

Whole Effluent Toxicity (WET) Test	% Survival	See Special Conditions	once/permit cycle	grab

MONITORING REPORTS SHALL BE SUBMITTED **ONCE PER PERMIT CYCLE IN THE THIRD YEAR**; THE FIRST REPORT IS DUE **JANUARY 28, 2017.**

In-Stream Monitoring – Panama Street Stream Crossing

Total Suspended Solids	mg/L	*		*	once/month	grab
pH	SU	*		*	once/month	grab
Total Kjeldahl Nitrogen as N	mg/L	*		*	once/month	grab
Sulfates as SO_4	mg/L	*		*	once/month	grab
Chlorides as Cl	mg/L	*		*	once/month	grab
Total Methanol	mg/L	*		*	once/month	grab
Total Hardness as $CaCO_3$	mg/L	*		*	once/month	grab
Dissolved Oxygen	mg/L	*		*	once/month	grab
Beryllium, Total Recoverable	µg/L	*		*	once/month	grab
Cadmium, Total Recoverable	µg/L	*		*	once/month	grab
Selenium, Total Recoverable	µg/L	*		*	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED **MONTHLY**; THE NEXT REPORT IS DUE **NOVEMBER 28, 2014**. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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
Permitted Feature #004 and #006 (Note 2)						
Storage Basin Freeboard	inches	*		*	once/month	measured
Precipitation	inches	*		*	daily	24 hr. total

MONITORING REPORTS SHALL BE SUBMITTED **ANNUALLY**; THE NEXT REPORT IS DUE **JUNE 28, 2015**. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.

** All samples shall be collected from a discharge resulting from a precipitation event greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable precipitation event. See table below for quarterly sampling.

Minimum Sampling Requirements

Quarter	Months	Effluent Parameters	Report is Due
First	January, February, March	Sample at least once during any month of the quarter	April 28th
Second	April, May, June	Sample at least once during any month of the quarter	July 28th
Third	July, August, September	Sample at least once during any month of the quarter	October 28th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28th

*** pH is measured in pH units and is not to be averaged. The pH for all facilities is limited to the range of 6.5-9.0 pH units.

Note 1 - This permit contains a Total Residual Chlorine (TRC) limit.

(a) This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The department has determined the current acceptable ML for total residual chlorine to be 130 µg/L when using the DPD Colorimetric Method #4500 – CL G from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 130 µg/L will be considered violations of the permit and values less than the minimum quantification level of 130 µg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.

(b) Disinfection is required year-round unless the permit specifically states that "Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31." If your permit does not require disinfection during the non-recreational months, do not chlorinate in those months.

(c) Do not chemically dechlorinate **if it is not needed to meet the limits in your permit.**

(d) If no chlorine was used in a given sampling period, an actual analysis is not necessary. Simply report as "0 µg/L" TRC.

Note 2 – Wastewater shall be stored and pumped and hauled to the Fort Scott, KS Wastewater Treatment Plant so that there is no discharge from the storage basins. Storage basin freeboard shall be reported as water level in feet below the overflow level. See Special Conditions #19, #20, and #21.

B. STANDARD CONDITIONS.

In addition to specified conditions stated herein, this permit is subject to the attached Part I standard conditions dated October 1, 1980, respectively, and hereby incorporated as though fully set forth herein

C. SPECIAL CONDITIONS

1. 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.

2. All outfalls must be clearly marked in the field.

3. 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.

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

5. By January 28th of each year, the permittee shall submit an annual operational report. The report must include:
   (a) The amount of biodiesel produced, the amount of glycerin generated, and glycerin disposal methods.

6. 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.

C. SPECIAL CONDITIONS (continued)

7. The permittee shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must be prepared and implemented within 90 days of permit issuance. The SWPPP must be kept on-site and should not be sent to DNR unless specifically requested. The SWPPP must be reviewed and updated, if needed, every five (5) years or as site conditions change. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

   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.

   The SWPPP must include the following:
   a. A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter storm water. Minimum BMPs are listed in SPECIAL CONDITIONS #8.
   b. The SWPPP must include a schedule for monthly site inspections and brief written reports. The inspections must include observation and evaluation of BMP effectiveness. Deficiencies must be corrected within seven (7) days and the actions taken to correct the deficiencies shall be included with the written report, including photographs. Any corrective measure that necessitates major construction may also need a construction permit. Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to DNR personnel upon request.
   c. A provision for designating an individual to be responsible for environmental matters.
   d. A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of DNR.

8. Permittee shall adhere to the following minimum Best Management Practices:
   a. Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.
   b. Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
   c. Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMP's such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
   d. Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
   e. Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property. This could include the use of straw bales, silt fences, or sediment basins, if needed, to comply with effluent limits.

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

10. All paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) shall be stored so that these materials are not exposed to storm water. Spill prevention, control, and/or management shall be provided sufficient to prevent any spills of these pollutants from entering a water of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.

11. Collection facilities shall be provided on-site, and arrangement made for proper disposal of waste products, including but not limited to petroleum waste products and solvents.

12. Good housekeeping practices shall be maintained on the site to keep solid waste from entry into waters of the state.

13. All fueling facilities present on the site shall adhere to applicable federal and state regulations concerning underground storage, above ground storage, and dispensers, including spill prevention, control and counter measures.

C. SPECIAL CONDITIONS (continued)

14. All involved personnel shall be trained in material handling and storage, and housekeeping of areas having materials exposed to stormwater. Upon request, proof of training shall be submitted to the Department.

15. Before releasing water that has accumulated in secondary containment areas it must be examined for hydrocarbon odor and presence of sheen. When the presence of hydrocarbons is indicated, and at a minimum of once/quarter, this water must be tested for Total Petroleum Hydrocarbons (TPH). The suggested analytical method for testing TPH is non-Halogenated Organic by Gas Chromatography method 8015 (also known as OA1 and OA2). However, if the permittee so desires to use other approved testing methods (i.e. EPA 1664), they may do so. If the concentration for TPH exceeds 10 mg/L, the water shall be taken to a WWTP for treatment.

16. Substances, regulated by federal law under the Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), that are transported, stored, or used for maintenance, cleaning or repair, shall be managed according to RCRA and CERCLA.

17. All spills must be cleaned up within 24 hours or as soon as possible, and a written report of the incident supplied with the facility's Discharge Monitoring Report. The following spills must be reported to the department at the earliest practicable moment, but no greater than 24 hours after the spill occurs:
    (a) Any spill, of any material, that leaves the property of the facility;
    (b) Any spill, of any material outside of secondary containment and exposed to precipitation, greater than 25 gallons or equivalent volume of solid material.

18. Whole Effluent Toxicity (WET) tests shall be conducted as follows:

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT				
OUTFALL	AEC	FREQUENCY	SAMPLE TYPE	MONTH
003	100%	once/quarter	Grab	Any, but report by the 28th of the month following the quarter
001	100%	once/permit cycle	Grab	Any
002	100%	once/permit cycle	Grab	Any
005	100%	once/permit cycle	Grab	Any

Dilution Series						
100%	50%	25%	12.5%	6.25%	(Control) 100% upstream, if available	(Control) 100% Lab Water, also called synthetic water

(a) Test Schedule and Follow-Up Requirements

(1) Perform a MULTIPLE-dilution acute WET test in the months and at the frequency specified above. For tests which are successfully passed, submit test results using the Department's WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.

a. Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.

b. Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analysis performed upon any other effluent concentration.

c. All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.

(2) The WET test will be considered a failure if mortality observed in effluent concentrations equal to or less than the AEC is significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available, synthetic laboratory control water may be used.

C. SPECIAL CONDITIONS (continued)

(3) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.

(4) If the effluent fails the test for BOTH test species, a multiple dilution test shall be performed for BOTH test species within 30 calendar days and biweekly thereafter (for storm water, tests shall be performed on the next and subsequent storm water discharges as they occur, but not less than 7 days apart) until one of the following conditions are met: Note: Written request regarding single species multiple dilution accelerated testing will be address by THE WATER PROTECTION PROGRAM on a case by case basis.

(i) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.

(ii) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.

(5) Follow-up tests do not negate an initial failed test.

(6) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.

(7) Additionally, the following shall apply upon failure of the third follow up MULTIPLE DILUTION test The permittee should contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. If the permittee does not contact THE WATER PROTECTION PROGRAM upon the third follow up test failure, a toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of the automatic trigger or DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.

(8) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.

(9) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.

(10) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.

(11) Submit a concise summary in tabular format of all WET test results with the annual report.

(b) Test Conditions

(1) Test Type: Acute Static non-renewal

(2) All tests, including repeat tests for previous failures, shall include both test species listed below unless approved by the department on a case by case basis.

(3) Test species: Ceriodaphnia dubia and Pimephales promelas (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.

(4) Test period: 48 hours at the "Allowable Effluent Concentration" (AEC) specified above.

(5) Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.

(6) Tests will be run with 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent, and reconstituted water.

(7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.

(8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.

(9) Whole-effluent-toxicity test shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms

C. SPECIAL CONDITIONS (continued)

19. Permitted Feature 004: Emergency Discharge. Wastewater/sludge shall be stored and hauled to the Fort Scott Wastewater Treatment Plant, so that there is no discharge from the storage structure(s). **Discharge for any reason shall constitute a permit violation and shall be reported 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 following 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 Phosphorus	mg/L
Totkal Kjeldahl Nitrogen as N	mg/L
pH	SU
E. Coli	#/100mL

20. Permitted Feature 006: Emergency Discharge. Wastewater/sludge shall be stored and hauled to the Fort Scott Wastewater Treatment Plant, so that there is no discharge from the storage structure(s). **Discharge for any reason shall constitute a permit violation and shall be reported 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 following month after the cessation of the discharge. Permittee shall monitor for the following constituents:

Constituent	Units
Flow	MGD
Chemical Oxygen Demand$_5$	mg/L
Total Suspended Solids	mg/L
Total Phosphorus	mg/L
Totkal Kjeldahl Nitrogen as N	mg/L
pH	SU
Sulfates as SO4	mg/L
Chlorides as Cl	mg/L

21. Annual Report for No Discharge Basins, Permitted Features #004 and #006. An annual report is required in addition to other reporting requirements under Section A of this permit. The annual report shall be submitted by June 28 of each year. The report shall include, but is not limited to, a summary of the following:
    a. Record of maintenance and repairs during the year, average number of times per month the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year.
    b. The number of days the storage structure discharged during the year, the discharge flow, reason the discharge occurred and effluent analysis performed.
    c. Number of times and volume pumped and hauled to the Fort Scott Wastewater Treatment Plant.
    d. Narrative summary of any problems or deficiencies identified, corrective action taken and improvements planned.

Missouri Department of Natural Resources
Statement of Basis
MO-0134139
ADM-DEERFIELD

This Statement of Basis (Statement) gives pertinent information regarding modification(s) to the above listed operating permit. A Statement is not an enforceable part of a Missouri State Operating Permit.

Part I – Facility Information

Facility Type: IND Facility SIC Code(s): #2951, #2869 and #2075

ADM Deerfield is constructing a new earthen storage basin under CP0001669, which was issued August 22, 2014 and revised on August 5, 2016. The original construction permit had the new earthen storage basin being Permitted Feature #006, no-discharge wastewater storage pond. With the revision to the construction permit, the newly constructed storage basin will become the relocated Outfall #003 for process water discharge. An overflow discharge structure will be installed on the southeast side of the new storage basin and discharge will be conveyed via a discharge ditch to the existing Outfall #002. The existing Outfall #003 process water pond will become Permitted Feature #006, no-discharge wastewater storage pond. The existing overflow discharge structure located on the southeast side of the existing process water pond will be removed. Also as part of the construction, the two existing earthen basins will be connected together to provide more storage time, before pumping and hauling to Fort Scott, KS Wastewater Treatment Plant.

Permitted Feature #004
Permitted Feature #004 will have the sludge removed out of the current (north) holding basin; approximately 90 feet of piping will be added to connect it to the current small south sewage basin doubling the holding volume for domestic wastewater (sewage). ADM will pump water from the basin into tanker trucks for transport to the Fort Scott, Kansas wastewater treatment plant (KS0095923) for disposal, as necessary. Permitted Feature #004 was removed from monitoring previously and this permit reinstates monitoring for freeboard and for precipitation.

Design Basis:

Design dry weather flows:	27,115 gpd
Design with 1-in-10 year flows:	31,320 gpd

Storage Capacity:

Storage volume (minimum to maximum water levels):	1,176,296 gallons
Design for Dry weather flows:	44 days
Design with 1-in 10 year flows:	38 days
Freeboard:	1.0 foot

Permitted Feature #006
The existing industrial process water basin, Outfall #003, will become the wastewater earthen holding basin, Permitted Feature #006, and will be a no-discharge holding basin. ADM will pump water from the basin into tanker trucks for transport to the Fort Scott, Kansas wastewater treatment plant (KS0095923) for disposal, as necessary. A new PVC transport pipe will be connected to the existing pipe outside of the existing wastewater lagoon and will transport wastewater into the wastewater basin through the bottom of the basin.

Design Basis:

Design dry weather flows:	8,219 gpd
Design with 1-in-10 year flows:	12,619 gpd

Storage Capacity:

Storage volume (minimum to maximum water levels):	4,641,363 gallons
Design for Dry weather flows:	565 days
Design with 1-in 10 year flows:	368 days
Freeboard:	1.0 foot

If ADM Deerfield does not have the precipitation monitoring onsite, there is a real-time weather station in Lamar, MO, which is 35 miles to the southeast of Deerfield, http://agebb.missouri.edu/weather/realtime/lamar.asp. Nevada, MO municipal airport, which is 9 miles to the east of Deerfield or Fort Scott, KS municipal airport which is 18 miles to the west of Deerfield may have precipitation monitoring available.

Part II – Modification Rationale

The production rate was revised in this operating permit from a previous rate of 41.6 MMGY to 50 MMGY. The ADM biodiesel facility is currently permitted at 50 MMgal/yr production, authorized by the department's Air Conservation Commission permit to construct 072015-019. The production expansion of the biodiesel facility does not impact the design flow since there is no process wastewater stream associated with this expansion. It is also not related to the heat recovery system.

Outfall #003
Outfall #003 is a newly constructed storage basin with a design capacity of 1,452,395 gallons that will become the relocated basin for industrial process water discharge. An overflow discharge structure will be installed on the southeast side of the new storage basin and discharge will be conveyed via a discharge ditch to the existing Outfall #002.

Permitted Feature #004
Permitted Feature #004 is the domestic sewage waste. It has been pumped to the City of Ft. Scott. This permit modification establishes monitoring of the freeboard and precipitation to ensure that pumping and hauling is happening often enough to keep the lagoons from discharging. Under Construction Permit CP0001669, the two small earthen storage basins were connected. In the event the lagoon does discharge, the facility is required to monitor the following parameters:

Parameter	Units	Sampling Type
Flow	MGD	24 hr. estimate
Biochemical Oxygen Demand$_5$	mg/L	grab
Total Suspended Solids	mg/L	grab
Total Phosphorus	mg/L	grab
Totkal Kjeldahl Nitrogen as N	mg/L	grab
pH	SU	grab
E. Coli	#/100mL	grab

Permitted Feature #006
Permitted Feature #006 is the relocated no discharge wastewater holding basin. This permit modification establishes monitoring of the freeboard to ensure that pumping and hauling to Fort Scott, KS is happening often enough to keep the lagoon from discharging. In the event, the lagoon does discharge; the facility is required to monitor the following parameters:

Parameter	Units	Sampling Type
Flow	MGD	24 hr. estimate
Chemical Oxygen Demand$_5$	mg/L	grab
Total Suspended Solids	mg/L	grab
Total Phosphorus	mg/L	grab
Totkal Kjeldahl Nitrogen as N	mg/L	grab
pH	SU	grab
Sulfates as SO_4	mg/L	grab
Chlorides as Cl	mg/L	grab

- **Minimum Sampling and Reporting Frequency Requirements**. Sampling is monitoring only and once per day while discharging. Reporting frequency is that test results are due on the 28th day of the month after the cessation of the discharge

Part III – Administrative Requirements

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

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit. For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

☒ - The Public Notice period for this operating permit was from September 12, 2014 to October 13, 2014. Responses to the Public Notice of this operating permit warranted minor changes (See Appendix C).

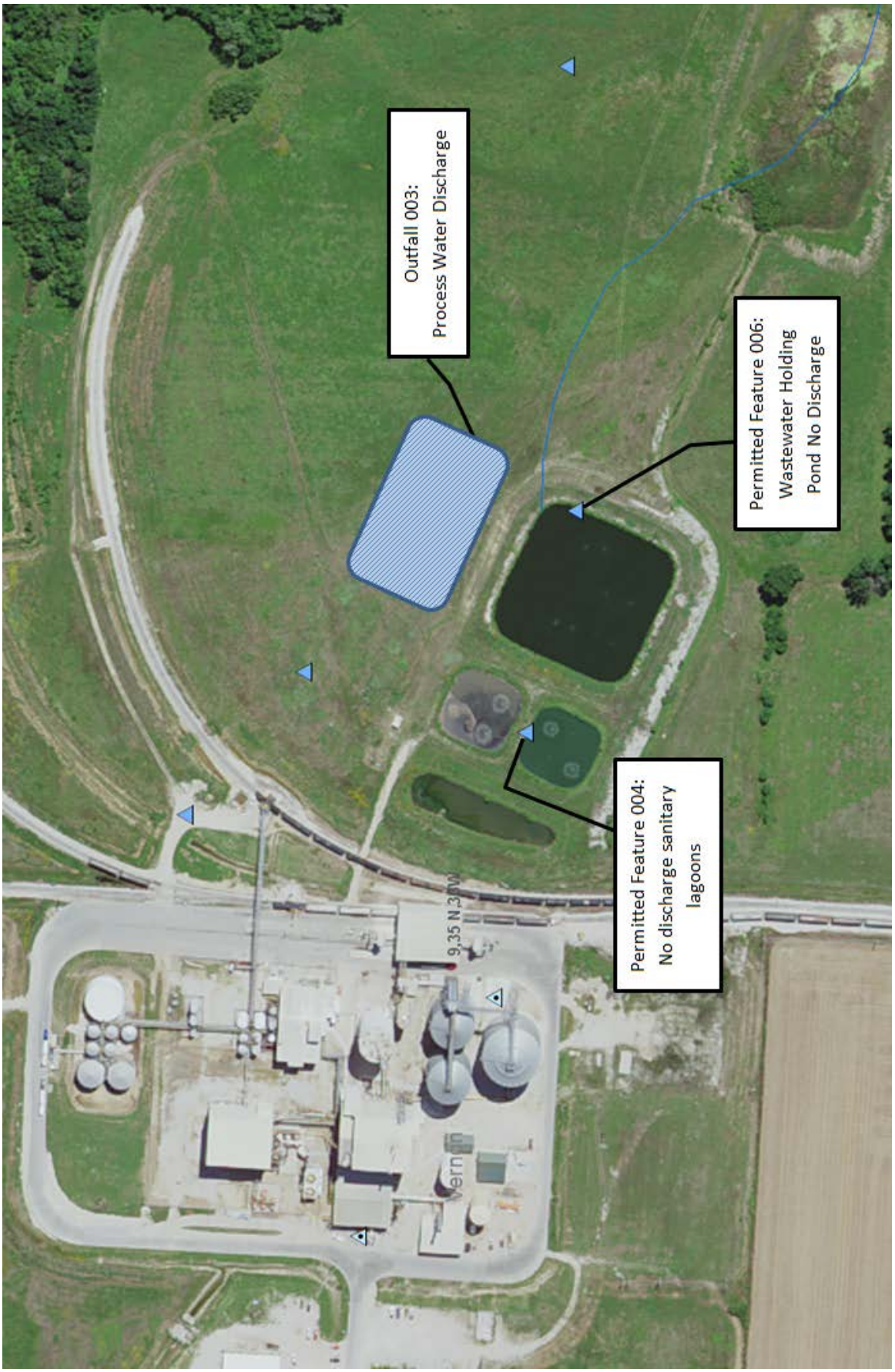
DATE OF STATEMENT OF BASIS: AUGUST 28, 2014

COMPLETED BY: LEASUE MEYERS, EI
ENGINEERING SECTION
WATER PROTECTION PROGRAM
leasue.meyers@dnr.mo.gov

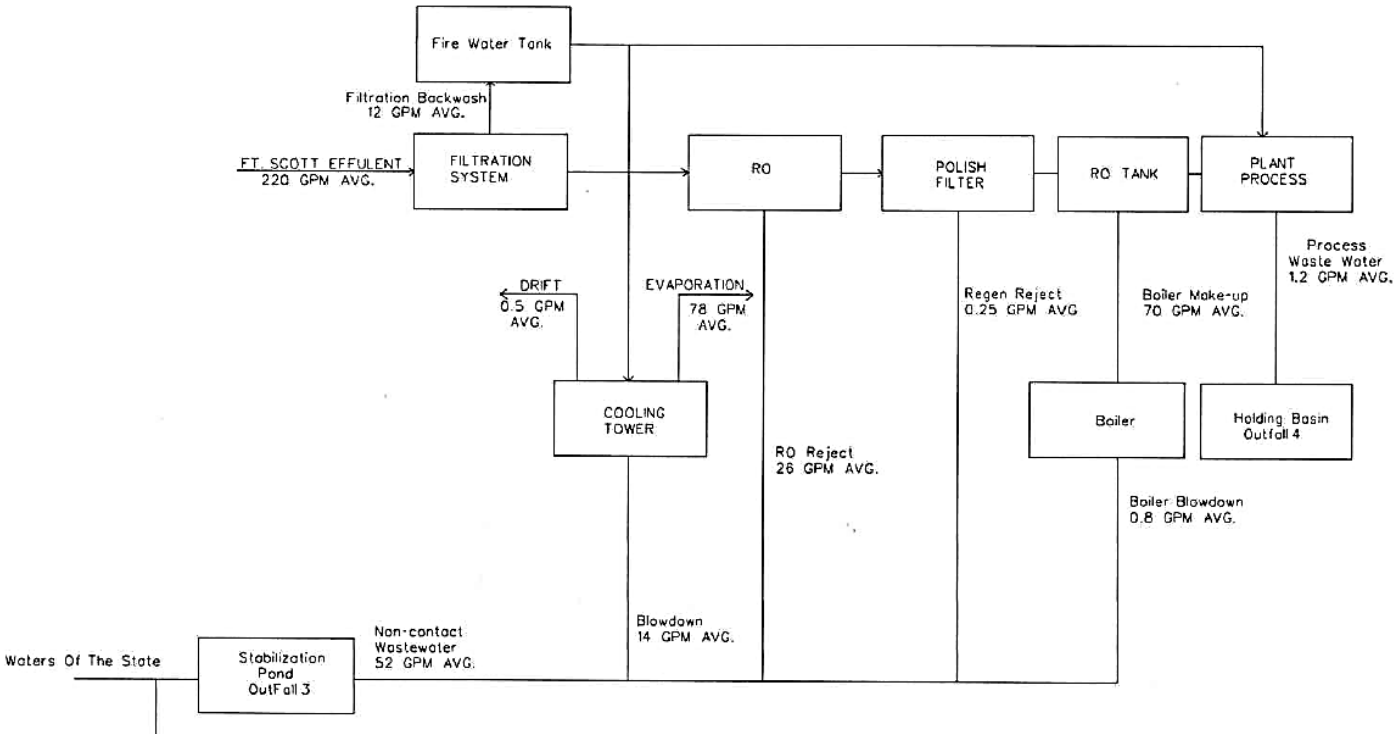
REVISED DATE: JULY 08, 2016

REVISED BY: CAILIE CARLILE, E.I.
ENGINEERING SECTION
WATER PROTECTION PROGRAM
cailie.carlile@dnr.mo.gov

APPENDIX A: FACILITY MAP



APPENDIX B: PROCESS FLOW DIAGRAM



APPENDIX C: COMMENTS RECEIVED DURING PUBLIC NOTICE

The operating permit was public noticed from September 12-October 13, 2014. The only comments received on the public notice were from the company and do not affect the previously issued construction permit or change any operating permit conditions.

COMMENT 1: The Process flow diagram in Appendix B was the older process flow diagram .

RESPONSE: The process flow diagram was replaced with the process flow diagram emailed on September 23, 2014.

COMMENT 2: The Operating permit and the construction permit references that the facility manufactures 30 MMGY of biodiesel, which is incorrect. The facility manufactures 41.6 MMGY of biodiesel.

RESPONSE: The operating permit was updated to include the correct manufacturing amount. The construction permit was not updated as the description in the construction permit was included for information only and not required. The Facility Description in the Operating Permit is the correct value at 41.6 MMGY.

NOTE: This value was later revised to 50 MMGY during an internal permit modification.

COMMENT 3: For each outfall, hexane is listed as a 'Section 313 water priority chemical'. It is our understanding that, although hexane is a Section 313 chemical, it is not a 'Section 313 water priority chemical'.

RESPONSE: The reference to Section 313 chemical in the Factsheet was deleted, as the results of the EPA inspection in 2012 was the basis for including hexane monitoring in the renewal in 2013.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL/MODIFICATION
OF
MO-0134139
ADM DEERFIELD

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: IND
Facility SIC Code(s): 2951

Facility Description:
ADM Deerfield facility is a soybean crushing mill, oil refinery and 50 MMGY biodiesel manufacturing facility 4 miles west of Deerfield, Missouri. This operating permit previously stated a 41.6 MMGY production rate, but was later expanded to 50 MMGY during a permit modification. The facility began operation in 2007 as Prairie Pride, Inc. but shut down in February 2010. The facility was purchased by ADM on May 5, 2011, who resumed production in July 2011 under a joint venture between ADM and Deerfield Energy, LLC. The plant is operated around the clock, ~360 days per year. The plant site covers 210 acres which is owned by (leased from) Vernon County.

Soybeans are received by truck or rail and processed through the prep area. The soybeans are crushed and the flakes are conveyed to the extraction building, where oil is extracted using hexane. The resultant crude oil is stored in a large tank and sent to the refinery where it is converted to degummed soybean oil. This oil is then sent to the biodiesel building through a continuous process using methanol and sodium methylate. Byproducts of crush, refining & biodiesel production processes are glycerin, soap stock; soy hull pellets and soy meal are sold and shipped out by truck and/or rail. Product biodiesel is stored in two large onsite tanks and loaded out by both truck and rail.

Water for plant processes is pumped 12 miles from Fort Scott, Kansas. The pipeline was constructed in 2008 because high chloride levels in the local groundwater caused exceedances of permit limits. This water, treated effluent from the Fort Scott WWTF, is softened and treated with bleach and microfiltration for use in the cooling towers. Water for the boilers is further treated by reverse osmosis (RO). The water is dechlorinated before the RO unit, using bisulfite. Rural water is used in restrooms only.

Wastewater from the microfiltration system backwash, cooling tower blowdown, boiler blowdown, and RO concentrate (reject) are combined in the large (~1 acre) lagoon east of the facility. Data from January 2012 showed the following contributions:
RO concentrate: ~56,736 gallons; Microfiltration system: 21,888 gallons; Cooling towers: 20,016 gallons; and Boiler blowdown: 1,872 gallons. The average and maximum total flows for January 2012 were 85,861 GPD and 174,005 GPD, respectively.

This lagoon has submerged bubble aerators. It discharges via Outfall #003. Outfall #003 is combined with stormwater runoff from the east side of the site at Outfall #002 on Green Branch, near the Kansas City Southern railroad line. ADM increased aeration capacity in this lagoon through installation of additional fine bubble diffusers and six surface spray aerators on July 12, 2015. At the time of the inspection, ADM was still in the process of expanding aeration capacity, and a temporary, portable diesel compressor was being used several hours a day to supplement the aeration in the lagoon.

"Contact" wastewater, including floor wash, water from the extraction and refinery skim pits and biodiesel beckon pits, and containment structures throughout the site are pumped to the irrigation pond, a smaller lined lagoon west of the big lagoon. This basin has 4 fountain-type aerators. The basin does not discharge; the level is maintained through evaporation and when necessary, wastewater is pumped out and hauled by tanker trucks to the Fort Scott WWTF for disposal. Just south of the irrigation pond is a similar non-discharging aerated lagoon used to treat sanitary wastewater from the plant.

Outfalls #001 and #002 discharge stormwater runoff from the west and east sides of the plant property, respectively. They have both been equipped with flow meters and telemetry since 2011. Runoff from the west side of the plant flows through a sedimentation basin before leaving the property. Outfall 3 is equipped with a flow meter, rain gauge and telemetry since 2011.

The land application part of the previous permit has been removed. Sludge will be hauled off by contract hauler.

Have any changes occurred at this facility or in the receiving water body that effects effluent limit derivation?
☒ - No.

Application Date: 07/24/2012
Expiration Date: 01/24/2013
Last Inspection: 7/17-18/2012 conducted by Peter M. Green of EPA Region VII

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	1.718	BMP	Stormwater	~0.55
002	0.573	BMP	Stormwater	~0.51
003	0	IND	Industrial waste holding basin	~0.65
005	0	BMP	Stormwater	~0.95

Receiving Water Body's Water Quality & Facility Performance History:
There appears to be no impairment on record for this waterbody.

Comments:
SIC 2869 Industrial Organic Chemicals, Not Elsewhere Classified
-Establishments primarily engaged in manufacturing industrial organic chemicals, not elsewhere classified. Important products of this industry include: (1) aliphatic and other acyclic organic chemicals, such as ethylene, butylene, and butadiene; acetic, chloroacetic, adipic, formic, oxalic, and tartaric acids and their metallic salts; chloral, formaldehyde, and methylamine; (2) solvents, such as amyl, butyl, and ethyl alcohols; methanol; amyl, butyl, and ethyl acetates; ethyl ether, ethylene glycol ether, and diethylene glycol ether; acetone, carbon disulfide and chlorinated solvents, such as carbon tetrachloride, perchloroethylene, and trichloroethylene; (3) polyhydric alcohols, such as ethylene glycol, sorbitol, pentaerythritol, synthetic glycerin; (4) synthetic perfume and flavoring materials, such as coumarin, methyl salicylate, saccharin, citral, citronellal, synthetic geraniol, ionone, terpineol, and synthetic vanillin; (5) rubber processing chemicals, such as accelerators and antioxidants, both cyclic and acyclic; (6) plasticizers, both cyclic and acyclic, such as esters of phosphoric acid, phthalic anhydride, adipic acid, lauric acid, oleic acid, sebacic acid, and stearic acid; (7) synthetic tanning agents, such as naphthalene sulfonic acid condensates; (8) chemical warfare gases; and (9) esters, amines, etc., of polyhydric alcohols and fatty and other acids.

SIC 2075 Soybean Oil Mills
-Establishments primarily engaged in manufacturing soybean oil, cake, and meal, and soybean protein isolates and concentrates, or in processing purchased soybean oil other than into edible cooking oils.

LIMITATION EXCEEDANCE: DMR Data from January 25, 2008 – September 24, 2012

PF No	MPED	Parameter Desc	Unit	Limit	*Stat Base Code*	DMR	Limit	*Stat Base Code*	DMR
001	12/31/2011	Chemical Oxygen Demand	mg/L	90	Monthly Avg.	156	120	Daily Max.	156
001	03/31/2010	Chemical Oxygen Demand	mg/L	90	Monthly Avg.	98.7	120	Daily Max.	98.7
001	06/30/2009	Chemical Oxygen Demand	mg/L	90	Monthly Avg.	134	90	Daily Max.	134
001	03/31/2010	Total Suspended Solids	mg/L	50	Monthly Avg.	57	100	Daily Max.	57
001	06/30/2009	Total Suspended Solids	mg/L	50	Monthly Avg.	690	100	Daily Max.	690
001	03/31/2008	Total Suspended Solids	mg/L	50	Monthly Avg.	1600	100	Daily Max.	1600
002	03/31/2008	Total Suspended Solids	mg/L	50	Monthly Avg.	290	100	Daily Max.	290
003	10/31/2009	Chloride (as Cl)	mg/L	428	Monthly Avg.	505	859	Daily Max.	505
003	06/30/2012	Chlorine, total residual	mg/L	0.13ML	Monthly Avg.	0.23	0.13ML	Daily Max.	0.23
003	12/31/2011	Chlorine, total residual	mg/L	0.13ML	Monthly Avg.	0.22	0.13ML	Daily Max.	0.22
003	02/28/2010	Chlorine, total residual	mg/L	0.008	Monthly Avg.	0.13	0.017	Daily Max.	0.13
003	10/31/2009	Total Suspended Solids	mg/L	30	Monthly Avg.	32	60	Daily Max.	32
004	08/31/2009	Chlorine, total residual	mg/L	0.008	Monthly Avg.	0.13	0.017	Daily Max.	0.13
004	07/31/2009	Chlorine, total residual	mg/L	0.008	Monthly Avg.	0.13	0.017	Daily Max.	0.13
004	10/31/2008	Chlorine, total residual	mg/L	0.008	Monthly Avg.	0.27	0.017	Daily Max.	0.27
004	09/30/2008	Chlorine, total residual	mg/L	0.008	Monthly Avg.	0.13	0.017	Daily Max.	0.13
004	07/31/2011	pH	SU	6.5	Minimum	9.6	9	Maximum	9.6
004	06/30/2011	pH	SU	6.5	Minimum	10.7	9	Maximum	10.7
004	10/31/2009	pH	SU	6.5	Minimum	6.4	9	Maximum	6.4

Letter of Warnings issued to the facility for:

Outfall #003's exceedance:
December 2011 – TRC of 0.22 mg/L (0.008 mg/L monthly average and 0.017 mg/L daily maximum limit) and COD

Outfall #001's exceedance:
December 2011 – COD of 156 mg/L

Outfall #003's exceedance:
October 2009 – TSS of 32 mg/L (30 mg/L limit)
October 2009 –Chloride of 505 mg/L (428 mg/L limit)

CHLORIDE MONITORING DATA BY LOCATION THAT EXCEEDED THE 428 mg/L LIMIT

10/31/2009	Chloride (as Cl)	End of Pipe	mg/L	428	Monthly Avg.	505	Daily Max.	505
01/31/2012	Chloride (as Cl)	Boiler Blowdown	mg/L	MONITORING	Monthly Avg.	477	Daily Max.	477
04/30/2012	Chloride (as Cl)	Boiler Blowdown	mg/L	MONITORING	Monthly Avg.	500	Daily Max.	500
03/31/2012	Chloride (as Cl)	Cooling Tower Blowdown	mg/L	MONITORING	Monthly Avg.	523	Daily Max.	523
07/31/2012	Chloride (as Cl)	Cooling Tower Blowdown	mg/L	MONITORING	Monthly Avg.	526	Daily Max.	526
08/31/2012	Chloride (as Cl)	Cooling Tower Blowdown	mg/L	MONITORING	Monthly Avg.	589	Daily Max.	589

Outfall #004 COD MONITORING DATA

PF No	MPED	Param Desc	Unit	Conc 2	Stat Base Code	DMR
004	01/31/2010	Chemical Oxygen Demand (COD)	mg/L	MONITORING	Daily Max.	182
004	07/31/2012	Chemical Oxygen Demand (COD)	mg/L	MONITORING	Daily Max.	256
004	02/28/2010	Chemical Oxygen Demand (COD)	mg/L	MONITORING	Daily Max.	296
004	10/31/2011	Chemical Oxygen Demand (COD)	mg/L	MONITORING	Daily Max.	398
004	05/31/2012	Chemical Oxygen Demand (COD)	mg/L	MONITORING	Daily Max.	437
004	12/31/2011	Chemical Oxygen Demand (COD)	mg/L	MONITORING	Daily Max.	644
004	08/31/2011	Chemical Oxygen Demand (COD)	mg/L	MONITORING	Daily Max.	644
004	02/29/2012	Chemical Oxygen Demand (COD)	mg/L	MONITORING	Daily Max.	784
004	01/31/2012	Chemical Oxygen Demand (COD)	mg/L	MONITORING	Daily Max.	883
004	09/30/2011	Chemical Oxygen Demand (COD)	mg/L	MONITORING	Daily Max.	1,040
004	07/31/2011	Chemical Oxygen Demand (COD)	mg/L	MONITORING	Daily Max.	1,040
004	06/30/2011	Chemical Oxygen Demand (COD)	mg/L	MONITORING	Daily Max.	1,040
004	11/30/2009	Chemical Oxygen Demand (COD)	mg/L	MONITORING	Daily Max.	1,170
004	10/31/2009	Chemical Oxygen Demand (COD)	mg/L	MONITORING	Daily Max.	6,980

STREAM MONITORING DATA FOR CHLORIDE, SULFATE, METHANOL, RADIUM 226 + 228, AND TSS

PF No	MPED	Param Desc	Unit	Conc 1	Stat Base Code	DMR
SM1	02/28/2010	Chloride (as Cl)	mg/L	MONITORING	Daily Max.	25.2
SM1	05/31/2011	Chloride (as Cl)	mg/L	MONITORING	Daily Max.	42.5
SM1	02/29/2012	Chloride (as Cl)	mg/L	MONITORING	Daily Max.	64
SM1	01/31/2010	Chloride (as Cl)	mg/L	MONITORING	Daily Max.	67.7
SM1	12/31/2011	Chloride (as Cl)	mg/L	MONITORING	Daily Max.	87.3
SM1	03/31/2012	Chloride (as Cl)	mg/L	MONITORING	Daily Max.	90.2
SM1	06/30/2011	Chloride (as Cl)	mg/L	MONITORING	Daily Max.	96.3
SM1	07/31/2011	Chloride (as Cl)	mg/L	MONITORING	Daily Max.	112
SM1	10/31/2009	Chloride (as Cl)	mg/L	MONITORING	Daily Max.	145
SM1	05/31/2012	Chloride (as Cl)	mg/L	MONITORING	Daily Max.	166
SM1	11/30/2009	Chloride (as Cl)	mg/L	MONITORING	Daily Max.	193
SM1	04/30/2012	Chloride (as Cl)	mg/L	MONITORING	Daily Max.	317
SM1	07/31/2012	Chloride (as Cl)	mg/L	MONITORING	Daily Max.	379
SM1	08/31/2012	Chloride (as Cl)	mg/L	MONITORING	Daily Max.	382
SM1	**06/30/2011**	**Sulfate, SO4 (as S)**	**mg/L**	**MONITORING**	**Daily Max.**	**126**
SM1	02/28/2010	Sulfate, SO4 (as S)	mg/L	MONITORING	Daily Max.	165
SM1	05/31/2012	Sulfate, SO4 (as S)	mg/L	MONITORING	Daily Max.	171
SM1	07/31/2011	Sulfate, SO4 (as S)	mg/L	MONITORING	Daily Max.	176
SM1	10/31/2009	Sulfate, SO4 (as S)	mg/L	MONITORING	Daily Max.	188
SM1	11/30/2009	Sulfate, SO4 (as S)	mg/L	MONITORING	Daily Max.	230
SM1	01/31/2010	Sulfate, SO4 (as S)	mg/L	MONITORING	Daily Max.	273
SM1	02/29/2012	Sulfate, SO4 (as S)	mg/L	MONITORING	Daily Max.	288
SM1	08/31/2012	Sulfate, SO4 (as S)	mg/L	MONITORING	Daily Max.	368
SM1	12/31/2011	Sulfate, SO4 (as S)	mg/L	MONITORING	Daily Max.	380
SM1	04/30/2012	Sulfate, SO4 (as S)	mg/L	MONITORING	Daily Max.	414
SM1	07/31/2012	Sulfate, SO4 (as S)	mg/L	MONITORING	Daily Max.	435
SM1	05/31/2011	Sulfate, SO4 (as S)	mg/L	MONITORING	Daily Max.	445
SM1	03/31/2012	Sulfate, SO4 (as S)	mg/L	MONITORING	Daily Max.	868

SM1	10/31/2009	Methanol, total	mg/L	MONITORING	Daily Max.	5.2
SM1	11/30/2009	Methanol, total	mg/L	MONITORING	Daily Max.	9.6

SM1	03/31/2012	Radium 226 + radium 228, total	pCi/L	MONITORING	Daily Max.	0.1039
SM1	02/28/2010	Radium 226 + radium 228, total	pCi/L	MONITORING	Daily Max.	0.138
SM1	04/30/2012	Radium 226 + radium 228, total	pCi/L	MONITORING	Daily Max.	0.594
SM1	01/31/2010	Radium 226 + radium 228, total	pCi/L	MONITORING	Daily Max.	0.6401
SM1	07/31/2012	Radium 226 + radium 228, total	pCi/L	MONITORING	Daily Max.	0.65
SM1	06/30/2011	Radium 226 + radium 228, total	pCi/L	MONITORING	Daily Max.	0.677
SM1	11/30/2009	Radium 226 + radium 228, total	pCi/L	MONITORING	Daily Max.	0.709
SM1	07/31/2011	Radium 226 + radium 228, total	pCi/L	MONITORING	Daily Max.	0.934
SM1	05/31/2011	Radium 226 + radium 228, total	pCi/L	MONITORING	Daily Max.	1.252
SM1	10/31/2009	Radium 226 + radium 228, total	pCi/L	MONITORING	Daily Max.	1.35
SM1	08/31/2012	Radium 226 + radium 228, total	pCi/L	MONITORING	Daily Max.	1.852
SM1	12/31/2011	Radium 226 + radium 228, total	pCi/L	MONITORING	Daily Max.	2.04
SM1	02/29/2012	Radium 226 + radium 228, total	pCi/L	MONITORING	Daily Max.	2.48
SM1	05/31/2012	Radium 226 + radium 228, total	pCi/L	MONITORING	Daily Max.	2.589

SM1	06/30/2011	Total Suspended Solids (TSS)	mg/L	MONITORING	Daily Max.	9
SM1	02/28/2010	Total Suspended Solids (TSS)	mg/L	MONITORING	Daily Max.	12
SM1	05/31/2011	Total Suspended Solids (TSS)	mg/L	MONITORING	Daily Max.	14
SM1	04/30/2012	Total Suspended Solids (TSS)	mg/L	MONITORING	Daily Max.	20
SM1	07/31/2011	Total Suspended Solids (TSS)	mg/L	MONITORING	Daily Max.	20
SM1	01/31/2010	Total Suspended Solids (TSS)	mg/L	MONITORING	Daily Max.	20
SM1	02/29/2012	Total Suspended Solids (TSS)	mg/L	MONITORING	Daily Max.	23
SM1	10/31/2009	Total Suspended Solids (TSS)	mg/L	MONITORING	Daily Max.	31
SM1	05/31/2012	Total Suspended Solids (TSS)	mg/L	MONITORING	Daily Max.	32
SM1	07/31/2012	Total Suspended Solids (TSS)	mg/L	MONITORING	Daily Max.	33
SM1	11/30/2009	Total Suspended Solids (TSS)	mg/L	MONITORING	Daily Max.	47

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.

☒ 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 the below listed 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*	12-DIGIT HUC**
Unnamed Tributary to Grassy Rum	U	-	General Criteria	10290104-0303
Marmaton River	P	1308	IRR, LWW, AQL, WBC-B	
Unnamed Tributary to Green Branch	U		General Criteria	10290104-0211
Dry Wood Creek	P	1314	LWW, AQL, WBC-B	

* - 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).
** - Hydrological Unit Code

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Unnamed Tributary to Grassy Rum (U)	0	0	0
Unnamed Tributary to Green Branch (U)	0	0	0

MIXING CONSIDERATIONS
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)].

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 does not discharge to a Losing Stream as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], or is an existing facility.

ANTI-BACKSLIDING:
A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(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 & SEWAGE SLUDGE:
Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address: http://dnr.mo.gov/env/wpp/pub/index.html, items WQ422 through WQ449.

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

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

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

PRETREATMENT PROGRAM:
The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR Part 403.3(q)].

Pretreatment programs are required at any POTW (or combination of POTW operated by the same authority) and/or municipality with a total design flow greater than 5.0 MGD and receiving industrial wastes that interfere with or pass through the treatment works or are otherwise subject to the pretreatment standards. Pretreatment programs can also be required at POTWs/municipals with a design flow less than 5.0 MGD if needed to prevent interference with operations or pass through.
Several special conditions pertaining to the permittee's pretreatment program may be included in the permit, and are as follows:

- Implementation and enforcement of the program,
- Annual pretreatment report submittal,
- Submittal of list of industrial users,
- Technical evaluation of need to establish local limitations, and
- Submittal of the results of the evaluation

☒ Not Applicable; The permittee, at this time, is not required to have a Pretreatment Program or does not have an approved pretreatment program.

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.

☒ Applicable; An RPA was 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 (BOD_5) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

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

SANITARY SEWER OVERFLOWS (SSO) AND INFLOW AND INFILTRATION (I&I):
Sanitary Sewer Overflows (SSOs) are defined as an untreated or partially treated sewage release are considered bypassing under state regulation [10 CSR 20-2.010(11)] and should not be confused with the federal definition of bypass. SSO's have a variety of causes including blockages, line breaks, and sewer defects that allow excess storm water and ground water to (1) enter and overload the collection system, and (2) overload the treatment facility. Additionally, SSO's can be also be caused by lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. SSOs also include overflows out of manholes and onto city streets, sidewalks, and other terrestrial locations.

Additionally, Missouri RSMo §644.026.1 mandates that the Department require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities.

☒ Not applicable; This facility is not required to develop or implement a program for maintenance and repair of the collection system; however, it is a violation of Missouri State Environmental Laws and Regulations to allow untreated wastewater to discharge to waters of the state.

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.

STORM WATER 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.

☒ Applicable; A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the Department with jurisdiction, incorporate erosion control practices specific to site conditions, and provide for maintenance and adherence to the plan.

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.

☒ Applicable; Wasteload allocations were 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.

☒ Applicable;The permittee is required to conduct WET test for this facility.

40 CFR 122.41(M) - BYPASSES:
The federal Clean Water Act (CWA), Section 402 prohibits wastewater dischargers from "bypassing" untreated or partially treated sewage (wastewater) beyond the headworks. A bypass is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-2.010(11) defines a bypass as the diversion of wastewater from any portion of wastewater treatment facility or sewer system to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process. Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri's Standard Conditions I, Section B, part 2.b. Additionally, Anticipated Bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

☒ Not Applicable;This facility does not bypass.

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

☒ Not Applicable; This facility does not discharge to a 303(d) listed stream.

Part V – Effluent Limits Determination

Basis for Effluent Limits

In general, the Clean Water Act (CWA) requires that the effluent limits for a particular pollutant be the more stringent of either technology-based limits or water quality-based limits. Technology-based limits are set according to the level of treatment that is achievable using available technology. A water quality-based effluent limit is designed to ensure that the water quality standards applicable to a waterbody are being met and may be more stringent than technology-based effluent limits.

How Water Quality-based Effluent Limits are derived

The first step in developing a water quality-based effluent limit is to develop a wasteload allocation (WLA) for the pollutant. A wasteload allocation is the concentration or loading of a pollutant that the permittee may discharge without causing or contributing to an exceedance of water quality standards in the receiving water.

In cases where a mixing zone is not authorized, either because the receiving water already exceeds the criterion, the receiving water flow is too low to provide dilution, or the State does not authorize one, the criterion becomes the WLA. Establishing the criterion as the wasteload allocation ensures that the permittee will not cause or contribute to an exceedance of the criterion. The following discussion details the specific water quality-based effluent limits in the draft permit.

Chronic WLA: Ce = ((design flow + 7Q10 MZ) WQ Criterion – (7Q10 MZ * background concentration upstream))/design flow
Ce = xx µg/L

Acute WLA: Ce = ((design flow + 7Q10 ZID) WQ Criterion – (7Q10 ZID * background concentration upstream))/design flow
Ce = xx µg/L

Ce = [((Qe + Qs) * C) – (Qs * Cs)] / Qe
Where:
Qe = volume of effluent discharge (design flow in cfs)
Qs = volume of receiving stream available for mixing (7Q10 of MZ in cfs for chronic; use ZID for acute)
Ce = concentration of a pollutant of concern in the effluent (effluent limit)
Cs = upstream concentration of pollutant of concern (background concentration)

Outfall #001

The plant was shut down during the period of March 2010 through April 2011; therefore "No Discharge" has been reported.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	*		*	NO	*
CHEMICAL OXYGEN DEMAND	MG/L	120		90	NO	120/90
TOTAL SUSPENDED SOLIDS	MG/L	100		50	NO	100/50
PH	SU	6.5-9.0		6.5-9.0	NO	6.5-9.0
OIL & GREASE	MG/L	15		10	NO	15/10
BENZENE	µG/L	*		*	NEW PARAMETER	
TOLUENE	µG/L	*		*	NEW PARAMETER	
ETHYLBENZENE	µG/L	*		*	NEW PARAMETER	
XYLENE	µG/L	*		*	NEW PARAMETER	
TOTAL METHANOL	MG/L	*		*	NO	*
HEXANE	MG/L	*		*	NEW PARAMETER	
TOTAL PETROLEUM HYDROCARBON	MG/L	10		10	NO	10/10
WET TEST	See Special Condition				NO	

* - Monitoring requirement only.

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow**. In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.

- **Chemical Oxygen Demand (COD).** This parameter has effluent limits of 120 mg/L daily maximum and 90 mg/L monthly average. SIC # 2075 is under Subsector U2 Fats & Oils Products and Sector C Chemicals and Allied Products of EPA's Multi-Sector General Permit benchmark for COD. The facility's 5-year DMR showed COD concentrations ranging from 39 mg/L - 156 mg/L.

- **Total Suspended Solids (TSS).** This parameter has effluent limits of 100 mg/L daily maximum and 50 mg/L monthly average. SIC # 2075 is under Subsector U2 Fats & Oils Products and Sector C Chemicals and Allied Products of EPA's Multi-Sector General Permit benchmark for TSS. The facility's 5-year DMR showed concentrations ranging 18 mg/L – 1,600 mg/L.

- **pH.** In accordance with [10 CSR 20-7.031(4)(E)], pH shall be maintained in the range from six and one-half to nine (6.5-9.0) standard units.

- **Oil & Grease**. Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum. The facility's 5-year DMR showed O&G concentrations ranging from 0.0 mg/L – 4.9 mg/L.

- **Total BTEX**. REMOVED. This parameter has been broken down into individual parameters: Benzene, Toluene, Ethylbenzene, and Xylene.

- **Benzene. M**onitoring requirement only. Benzene is a component of products derived from coal and petroleum and is found in gasoline and other fuels.

- **Toluene.** Monitoring requirement only. This parameter is added to gasoline, used to produce benzene, and used as a solvent.

- **Ethylbenzene.** Monitoring requirement only. This parameter is used as a solvent, as a constituent of asphalt and naphtha, and in fuels.

- **Xylene .** Monitoring requirement only. This parameter is used as a solvent and used in gasoline.

- **Methanol.** Monitoring requirement remains. Methanol is a gasoline additive. The facility's 5-year DMR showed concentrations ranging 0 mg/L – 9.9 mg/L.

- **Hexane.** Monitoring requirement only. The January 2012 EPA facility inspection included hexane as one of the significant material that can potentially be exposed to stormwater.

- **Total Petroleum Hydrocarbon**. TPH is a surrogate for pollutants of concern associated with fuel storage. Limits of 10 mg/L daily maximum and monthly average.

- **Color.** REMOVED. Parameter is already addressed by narrative Water Quality Condition #6.

- **WET Test.** Whole Effluent Toxicity test shall be conducted as follows:

Summary of Wet Testing for This Permit				
Outfall	A.E.C. %	Frequency	Sample Type	Month
001	100	once/permit cycle	grab	August

Outfall #002
The plant was shut down during the period of March 2010 through April 2011; therefore "No Discharge" has been reported.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	*		*	NO	*
CHEMICAL OXYGEN DEMAND	MG/L	120		90	NO	120/90
TOTAL SUSPENDED SOLIDS	MG/L	100		50	NO	100/50
PH	SU	6.5-9.0		6.5-9.0	NO	6.5-9.0
OIL & GREASE	MG/L	15		10	NO	15/10
BENZENE	µG/L	*		*	NEW PARAMETER	
TOLUENE	µG/L	*		*	NEW PARAMETER	
ETHYLBENZENE	µG/L	*		*	NEW PARAMETER	
XYLENE	µG/L	*		*	NEW PARAMETER	
METHANOL	MG/L	*		*	NO	*
HEXANE	MG/L	*		*	NEW PARAMETER	
TOTAL PETROLEUM HYDROCARBON	MG/L	10		10	NO	10/10
WET TEST	See Special Condition				NO	

* - Monitoring requirement only.

OUTFALL #002 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow**. In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.

- **Chemical Oxygen Demand (COD).** This parameter has effluent limits of 120 mg/L daily maximum and 90 mg/L monthly average. SIC # 2075 is under Subsector U2 Fats & Oils Products and Sector C Chemicals and Allied Products of EPA's Multi-Sector General Permit benchmark for COD. The facility's 5-year DMR showed concentrations ranging from 40 mg/L – 70.6 mg/L.

- **Total Suspended Solids (TSS).** This parameter has effluent limits of 100 mg/L daily maximum and 50 mg/L monthly average. SIC # 2075 is under Subsector U2 Fats & Oils Products and Sector C Chemicals and Allied Products of EPA's Multi-Sector General Permit benchmark for TSS. The facility's 5-year DMR showed concentrations ranging from 6.0 mg/L – 290 mg/L.

- **pH.** In accordance with [10 CSR 20-7.031(4)(E)], pH shall be maintained in the range from six and one-half to nine (6.5-9.0) standard units.

- **Oil & Grease**. Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum. The facility's 5-year DMR showed O&G concentrations ranging from 0.0 mg/L – 5.9 mg/L.

- **Total BTEX**. REMOVED. This parameter has been broken down into individual parameters: Benzene, Toluene, Ethylbenzene, and Xylene.

- **Benzene. M**onitoring requirement only. Benzene is a component of products derived from coal and petroleum and is found in gasoline and other fuels.

- **Toluene.** Monitoring requirement only. This parameter is added to gasoline, used to produce benzene, and used as a solvent.

- **Ethylbenzene.** Monitoring requirement only. This parameter is used as a solvent, as a constituent of asphalt and naphtha, and in fuels.

- **Xylene.** Monitoring requirement only. This parameter is used as a solvent and used in gasoline.

- **Methanol.** Monitoring requirement remains. Methanol is a gasoline additive. The facility's 5-year DMR showed concentrations ranging 0 mg/L – 9.9 mg/L.

- **Hexane.** Monitoring requirement only. The soybeans are crushed and the flakes are conveyed to the extraction building, where oil is extracted using hexane. The July 2012 EPA facility inspection report included hexane as one of the significant material that can potentially be exposed to stormwater.

- **Total Petroleum Hydrocarbon**. TPH is a surrogate for pollutants of concern associated with fuel storage. Limits of 10 mg/L daily maximum and monthly average.

- **Color.** REMOVED. Parameter is already addressed by Water Quality Condition #6.

- **WET Test.** Whole Effluent Toxicity test shall be conducted as follows:

Summary of Wet Testing for This Permit				
Outfall	A.E.C. %	Frequency	Sample Type	Month
002	100	once/permit cycle	grab	August

Outfall #003

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	*		*	NO	*
BIOCHEMICAL OXYGEN DEMAND$_5$	MG/L	60		30	NO	60/30
TOTAL SUSPENDED SOLIDS	MG/L	60		30	NO	60/30
PH	SU	6.5-9.0		6.5-9.0	NO	6.5-9.0
TOTAL RESIDUAL CHLORINE	µG/L	17 130 ML		8 130 ML	NO	17/8/ 130 ML
TOTAL PHOSPHORUS	MG/L	*		*	NO	*
OIL & GREASE	MG/L	15		10	NO	15/10
SULFATE PLUS CHLORIDE	MG/L	1000		1000	NO	1000
CHLORIDE AS CL	MG/L	859		428	NO	859/428
TOTAL HARDNESS AS CACO$_3$	MG/L	*		*	NEW PARAMETER	
BERYLLIUM, TOTAL RECOVERABLE	µG/L	*		*	NO	*
CADMIUM, TOTAL RECOVERABLE	µG/L	1.0		0.5	NO	1.0/0.5
SELENIUM, TOTAL RECOVERABLE	µG/L	*		*	NO	*
TEMPERATURE	°F	90		90	YES	32°C
TOTAL METHANOL	MG/L	*		*	NO	*
HEXANE	MG/L	*		*	NEW PARAMETER	
WET TEST	See Special Condition				NO	

OUTFALL #003 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow**. In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
- **Biochemical Oxygen Demand.** SIC # 2869 is subject to 40 CFR 414 Subparts G and H. The subpart is applicable to process wastewater discharges from SIC #2869. The federal ELG limits attainable by best practicable control technology (BPT) is 92 mg/L daily maximum and 34 mg/L monthly average (40 CFR §414.71). This parameter previously had effluent limits of 60 mg/L daily maximum and 30 mg/L monthly average. Based on the facility's 5-year DMR which showed concentrations ranging from 0 mg/L – 27 mg/L, the previous limitations are attainable by the facility therefore limits shall be retained based on best professional judgment (BPJ).

- **Total Suspended Solids (TSS).** SIC # 2869 is subject to 40 CFR 414 Subparts G and H. The subpart is applicable to process wastewater discharges from SIC #2869. The federal ELG limits attainable by best practicable control technology (BPT) is 159 mg/L daily maximum and 49 mg/L monthly average (40 CFR §414.71). This parameter previously had effluent limits of 60 mg/L daily maximum and 30 mg/L monthly average in which the basis cannot be verified by the permit writer. Based on the facility's 5-year DMR which showed concentrations ranging from 0 mg/L – 32 mg/L, the previous limitations are achievable by the facility therefore limits shall be retained based on best professional judgment (BPJ).

40 CFR § 414.70

Applicability; description of the bulk organic chemicals subcategory

*The provisions of this subpart are applicable to the process wastewater discharges resulting from the manufacture of the following SIC 2865 and **2869** bulk organic chemicals and bulk organic chemical groups.*

§ 414.71

Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT)

Except as provided in 40 CFR 125.30 through 125.32, and in 40 CFR 414.11(i) for point sources with production in two or more subcategories, any existing point source subject to this subpart must achieve discharges not exceeding the quantity (mass) determined by multiplying the process wastewater flow subject to this subpart times the concentration listed in the following table.

Effluent characteristics	BPT Effluent limitations 1	
	Maximum for any one day	Maximum for monthly average
BOD5	92	34
TSS	159	49
pH	(2)	(2)
1 All units except pH are milligrams per liter.		
2 Within the range of 6.0 to 9.0 at all times.		

- **pH.** In accordance with [10 CSR 20-7.031(4)(E)], pH shall be maintained in the range from six and one-half to nine (6.5-9.0) standard units which is more stringent than the federal ELG.

- **Total Residual Chlorine as Cl_2.** Warm-water Protection of Aquatic Life CCC = 10 µg/L, CMC = 19 µg/L [10 CSR 20-7.031, Table A]. Background TRC = 0.0 µg/L.

  Chronic WLA: C_e = 10 µg/L
  Acute WLA: C_e = 19 µg/L

  LTA_c = 10 µg/L (0.527) = 5.3 µg/L [CV = 0.6, 99th Percentile]
  LTA_a = 19 µg/L (0.321) = 6.1 µg/L [CV = 0.6, 99th Percentile]

  MDL = 5.3 µg/L (3.11) = 16.5 µg/L [CV = 0.6, 99th Percentile]
  AML = 5.3 µg/L (1.55) = 8.2 µg/L [CV = 0.6, 95th Percentile, n = 4]

  Total Residual Chlorine effluent limits of 17 µg/L daily maximum, 8 µg/L monthly average are recommended if chlorine is used as a disinfectant. This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The department has determined the current acceptable ML for Total Residual Chlorine to be 130 µg/L when using the DPD Colorimetric Method #4500 – CL G from Standard Methods for the Examination of Waters and Wastewater. If this facility obtains a Missouri State Operating Permit, then they shall conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 130 ML will be considered violations of the permit and values less than the minimum quantification level of 130 ML will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.

- **Total Phosphorus**. Monitoring requirement only. The facility's 5-year DMR which showed concentrations ranging from 0.15 mg/L – 1.2 mg/L

- **Oil & Grease**. Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum. The facility's 5-year DMR showed O&G concentrations ranging from 0.0 mg/L – 7.6 mg/L.

- **Chloride plus Sulfate.** Effluent limitation of 1000 mg/L daily maximum and monthly average retained from previous permit.

- **Chloride as Cl.** Effluent limitations of 859 mg/L daily maximum and 428 mg/L monthly retained from previous permit.

- **Total Hardness**. Monitoring requirement only.

- **Beryllium, Total Recoverable**. Monitoring requirement only. The facility's 5-year DMR for this parameter showed No Discharge, Below Detection Limit, or DMR non-receipt therefore an RPA could not be conducted at this time.

  Parameter justification from the previous modification: AquaTerra Environmental Solutions, Inc., as part of the WQRS request, submitted groundwater analysis for this facility. Minimum detectable limit, as established in the analysis was 5 µg/L. Missouri's Water Quality Standards establishes Warm-water Protection of Aquatic Life chronic criteria at 5 µg/L. An RPA will be conducted upon the renewal of this operating permit to determine if Beryllium, Total Recoverable has the potential to cause or contribute to violations of the Missouri Water Quality Standards.

- **Cadmium, Total Recoverable**. Monitoring requirement only. The facility's 5-year DMR for this parameter showed No Discharge, Below Detection Limit, or DMR non-receipt therefore an RPA could not be conducted at this time.

  Parameter justification from the previous modification: AquaTerra Environmental Solutions, Inc., as part of the WQRS request, submitted groundwater analysis for this facility. Minimum detectable limit, as established in the analysis, was 5 µg/L. Missouri's Water Quality Standards establishes Warm-water Protection of Aquatic Life chronic criteria at 0.5 µg/L. Therefore, Cadmium, Total Recoverable effluent limitations are applicable to this facility.

Effluent limitations for Cadmium, Total Recoverable was developed using methods and procedures outlined in EPA/505/2-90-001 and "The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion" (EPA 823-B-96-007). General warm-water fishery criteria apply and water hardness = 341 mg/L.

Due to the absence of contemporaneous effluent and in-stream data for Cadmium, Total Recoverable, dissolved Cadmium, and total suspended solids with which to calculate metals translators, partitioning between the dissolved and absorbed phases was assumed to be minimal (Section 5.7.3, EPA/505/2-90-001). Freshwater criteria conversion factors for dissolved Cadmium was used as the metals translator as recommended in guidance (Section 1.3, 1.5.3, and Table 1, EPA 823-B-96-007). If concurrent site-specific data for Cadmium, Total Recoverable, dissolved Cadmium, and total suspended solids are provided to the department, partitioning evaluations may be considered and site-specific translators developed.

METAL	CONVERSION FACTORS	
	ACUTE	CHRONIC
Cadmium	0.858	0.892

Conversion factors for Cd are hardness dependent. Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 341 mg/L and are as follows:

Conversion Factor $_{chronic}$ = 1.136672 – [ln(hardness)(0.041838)]
Conversion Factor $_{chronic}$ = 1.136672 – [ln(341)(0.041838)] = 0.892

Conversion Factor $_{acute}$ = 1.101672 – [ln(hardness)(0.041838)]
Conversion Factor $_{acute}$ = 1.101672 – [ln(341)(0.041838)] = 0.858

Hardness Dependent Metal Calculations:

WLA (chronic) = $e^{(0.7409*\ln(\text{hardness}) - 4.719948)} * (1.101672 - (\ln(\text{hardness})*0.041838))$
WLA (chronic) = $e^{(0.7409*\ln(341) - 4.719948)} * (1.101672 - (\ln(341)*0.041838))$ = 0.6 µg/L

WLA (acute) = $e^{(1.0166*\ln(\text{hardness}) - 3.062490)} * (1.136672 - (\ln(\text{hardness})*0.041838))$
WLA (acute) = $e^{(1.0166*\ln(341) - 3.062490)} * (1.136672 - (\ln(341)*0.041838))$ = 15.7 µg/L

WLA $_{chronic\ or\ acute}$ = WLA (chronic or acute) / Conversion Factor $_{chronic\ or\ acute}$
WLA $_{chronic}$ = 0.6 µg/L/0.892 = 0.7 µg/L
WLA $_{acute}$ = 15.7 µg/L/0.858 = 18.3 µg/L

LTA $_{chronic}$ = 0.7 µg/L (0.527) = 0.4 µg/L [CV = 0.6, 99th Percentile]
LTA $_{acute}$ = 18.3 µg/L (0.321) = 5.9 µ g/L [CV = 0.6, 99th Percentile]

MDL = 0.4 µg/L (3.11) = 1.2 µg/L [CV = 0.6, 99th Percentile]
AML = 0.4 µg/L (1.55) = 0.6 µg/L [CV = 0.6, 95th Percentile, n = 4]

Cadmium, Total Recoverable effluent limits of 1.2 µg/L daily maximum and 0.6 µg/L monthly average are applicable.

- **Selenium, Total Recoverable**. Monitoring requirement only. The facility's 5-year DMR for this parameter showed No Discharge, Below Detection Limit, or DMR non-receipt therefore an RPA could not be conducted at this time.

  Parameter justification from the previous modification: AquaTerra Environmental Solutions, Inc., as part of the WQRS request, submitted groundwater analysis for this facility. Minimum detectable limit, as established in the analysis, was 5 µg/L. Missouri's Water Quality Standards establishes Warm-water Protection of Aquatic Life chronic criteria at 5 µg/L. An RPA will be conducted upon the renewal of this operating permit to determine if Selenium, Total Recoverable has the potential to cause or contribute to violations of the Missouri Water Quality Standards.

- **Combined Radium 226 & 228**. Parameter removed. The facility no longer uses well water. An RPA was conducted for the DMR data available and found no reasonable potential to affect the water quality. Please see RPA table.

- **Total Petroleum Hydrocarbon**. TPH is a surrogate for pollutants of concern associated with fuel storage. Limits of 10 mg/L daily maximum and monthly average.

- **Temperature.** 10 CSR 20-7.031(4)(D) states that water contaminants shall not cause or contribute to stream temperature in excess of 90°F. Monitoring requirement only.

- **Total Methanol.** Monitoring requirement remains. Methanol is a gasoline additive. The facility's 5-year DMR showed No Discharge, Below Detection Limit, or DMR non-receipt.

- **Hexane.** Monitoring requirement only. The soybeans are crushed and the flakes are conveyed to the extraction building, where oil is extracted using hexane. The July 2012 EPA facility inspection report included hexane as one of the significant material that can potentially be exposed to stormwater.

- **WET Test.** Whole Effluent Toxicity test shall be conducted as follows:

Summary of Wet Testing for This Permit				
Outfall	A.E.C. %	Frequency	Sample Type	Month
003	100	once/permit cycle	grab	August

Outfall #005

This stormwater outfall has been added. Since Outfall #005 has basically the same significant materials that could potentially be in contact with stormwater, the parameters for this outfall are the same as Outfalls #001 and #002, both stormwater outfalls.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	*		*	NEW PARAMETER	
BIOCHEMICAL OXYGEN DEMAND	MG/L	*		*	NEW PARAMETER	
TOTAL SUSPENDED SOLIDS	MG/L	*		*	NEW PARAMETER	
PH	SU	6.5-9.0		6.5-9.0	NEW PARAMETER	
OIL & GREASE	MG/L	15		10	NEW PARAMETER	
BENZENE	µG/L	*		*	NEW PARAMETER	
TOLUENE	µG/L	*		*	NEW PARAMETER	
ETHYLBENZENE	µG/L	*		*	NEW PARAMETER	
XYLENE	µG/L	*		*	NEW PARAMETER	
TOTAL METHANOL	MG/L	*		*	NEW PARAMETER	
HEXANE	MG/L	*		*	NEW PARAMETER	
TOTAL PETROLEUM HYDROCARBON	MG/L	10		10	NEW PARAMETER	
WET TEST	See Special Condition				NEW PARAMETER	

* - Monitoring requirement only.

OUTFALL #005 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow**. In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.

- **Chemical Oxygen Demand.** SIC # 2075 is under Subsector U2 Fats & Oils Products and Sector C Chemicals and Allied Products of EPA's Multi-Sector General Permit benchmark for COD. The facility's expanded effluent testing showed COD concentration of 23.9 mg/L. Monitoring requirement only. Monitoring data will be used to evaluate performance for the next permit cycle.

- **Total Suspended Solids (TSS).** SIC # 2075 is under Subsector U2 Fats & Oils Products and Sector C Chemicals and Allied Products of EPA's Multi-Sector General Permit benchmark for TSS. The facility's expanded effluent testing showed non-detect for TSS. Monitoring requirement only. Monitoring data will be used to evaluate performance for the next permit cycle.

- **pH.** In accordance with [10 CSR 20-7.031(4)(E)], pH shall be maintained in the range from six and one-half to nine (6.5-9.0) standard units.

- **Oil & Grease**. Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum. The facility's 5-year DMR showed O&G concentrations ranging from 0.0 mg/L – 4.9 mg/L.

- **Benzene.** Monitoring requirement only. Benzene is a component of products derived from coal and petroleum and is found in gasoline and other fuels. Monitoring data will be used to evaluate performance for the next permit cycle.

- **Toluene.** Monitoring requirement only. This parameter is added to gasoline, used to produce benzene, and used as a solvent. Monitoring data will be used to evaluate performance for the next permit cycle.

- **Ethylbenzene.** Monitoring requirement only. This parameter is used as a solvent, as a constituent of asphalt and naphtha, and in fuels. Monitoring data will be used to evaluate performance for the next permit cycle.

- **Xylene (total).** Monitoring requirement only. This parameter is used as a solvent and used in gasoline. Monitoring data will be used to evaluate performance for the next permit cycle.

- **Total Methanol.** Monitoring requirement remains. Methanol is a gasoline additive. Monitoring data will be used to evaluate performance for the next permit cycle.

- **Hexane.** Monitoring requirement only. The soybeans are crushed and the flakes are conveyed to the extraction building, where oil is extracted using hexane. The July 2012 EPA facility inspection report included hexane as one of the significant material that can potentially be exposed to stormwater.

- **Total Petroleum Hydrocarbon**. TPH is a surrogate for pollutants of concern associated with fuel storage. Limits of 10 mg/L daily maximum and monthly average.

- **WET Test.** Whole Effluent Toxicity test shall be conducted as follows:

Summary of Wet Testing for This Permit				
Outfall	A.E.C. %	Frequency	Sample Type	Month
005	100	once/permit cycle	grab	Any

Part VI – Finding of Affordability

Pursuant to Section 644.145, RSMo, the Department is required to determine whether a permit or decision is affordable and makes a finding of affordability for certain permitting and enforcement decisions. This requirement applies to discharges from combined or separate sanitary sewer systems or publically-owned treatment works.

☒ Not Applicable;
The Department is not required to determine findings of affordability because the facility is not a **combined or separate sanitary sewer system for a publically-owned treatment works.**

Part VII – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PERMIT SYNCHRONIZATION:
The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the department to explore a watershed based permitting effort at some point in the future.

This permit will expire on **March 31, 2017** in order to meet the permit synchronization goals.

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 is tentatively scheduled to begin in December 2012.

DATE OF FACT SHEET: DECEMBER 13, 2012

COMPLETED BY:

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

PRE-PN COMMENTS:

Page 2 of 12 and page 5 of 12
Internal monitoring points 1-4 have not been removed. At the meeting we were under the assumption we agreed those testing requirements should not be needed due to the fact we test outfall 3 monthly where these inputs flow into.

Response:
Internal monitoring points 1-4 have been removed. Compliance point is at Outfall #003.

Page 9 of 12 – Special Conditions
5. (a) when they removed the land application summary requirement, after glycerin disposal methods should have a period and the "and" removed.

Response:
"and" has been removed.

Change Grassy Rum to Grassy Run.

Response:
Changed to Grassy Run.

Page 1 of fact sheet:
Soybeans are received by truck or rail and processed through the prep area. The soybeans are crushed and the flakes are conveyed to the extraction building, where oil is extracted using hexane. The resultant crude oil is stored in a large tank and sent to the refinery where it is converted to degummed soybean oil. This oil is then sent to the biodiesel building through a continuous process using methanol and sodium methylate. Byproducts of crush, refining & biodiesel production processes are glycerin, soapstock, soy hull pellets and soy meal are sold and shipped out by truck and/or rail. Product biodiesel is stored in two large onsite tanks and loaded out by both truck and rail.

"Contact" wastewater, including floor wash, water from the extraction and refinery skim pits and biodiesel beckon pit, and containment structures throughout the site are pumped to the irrigation pond, a smaller lined lagoon west of the big lagoon. This basin has 4 fountain-type aerators. The basin does not discharge; the level is maintained through evaporation and when necessary, wastewater is

Response:
Draft has been updated to the above language.

Page 2 of fact sheet:
Pumped out and hauled by tanker trucks to the Fort Scott WWTF for disposal. Just south of the irrigation pond is a similar non-discharging aerated lagoon used to treat sanitary wastewater from the plant.

Response:
Typographical error has been updated.

Outfalls #001 and #002 discharge stormwater runoff from the west and east sides of the plant property, respectively. They have both been equipped with flow meters, ~~rain gauges~~ and telemetry since 2011. Runoff from the west side of the plant flows through a sedimentation basin before leaving the property. Outfall 3 is equipped with a flow meter, rain gauge and telemetry since 2011.

Response:
Description has been updated.

Page 3 of fact sheet: Hope to get these monitoring points removed from the permit

Response:
Monitoring points have been removed.

Page 4 of fact sheet:
Letter of Warnings issued to the facility for:
Outfall #00~~4~~'s exceedance: should be outfall 3
December 2011 – TRC of 0.22 mg/L (0.008 mg/L monthly average and 0.017 mg/L daily maximum limit) ~~and COD~~

Outfall #001's exceedance:
December 2011 – COD of 156 mg/L

Response:
Fact Sheet has been updated.

Outfall #003 CHLORIDE MONITORING DATA BY LOCATION THAT EXCEEDED THE 428 mg/L LIMIT
These are from inputs, not outfall 3.

Response:
These monitoring points discharge to Outfall #003. "Outfall #003" has been removed leaving only "CHLORIDE MONITORING DATA BY LOCATION THAT EXCEEDED THE 428 mg/L LIMIT" as the table's description.

Page 5 of fact sheet:
Outfall #004 COD MONITORING—this outfall #4 has always been no discharge.

Response:
DMR showed COD Monitoring concentrations. The facility may need to contact the region to correct DMR.

Page 6 of fact sheet: I am not sure what "end of pipe" is???

Response:
"end of pipe" means effluent.

APPENDIX A: REASONABLE POTENTIAL ANALYSIS FOR PROCESS WASTEWATER, OUTFALL #003

Symbol	Analyte	CMC	RWC Acute	CCC	RWC Chronic	Reasonable Potential	n	CV
Cl	Chloride (boiler blowdown)	860	1250.55	230	1250.55	**YES**	16	0.60072
Cl	Chloride (cooling tower blowdown)	860	1298.36	230	1298.36	**YES**	17	0.518563
Cl	Chloride (effluent)	860	1263.01	230	1263.01	**YES**	17	0.614466
Cl	Chloride (filter backwash)	860	495.20	230	495.20	**YES**	17	0.691055
Cl	Chloride (reverse osmosis)	860	331.92	230	331.92	**YES**	17	0.423186
Ra	Radium 226 + 228 (pCi/L)	5	4.56	5	4.56	**NO**	16	0.833017
$Cl+SO_4$	Chloride + Sulfate	1000	1455.43	1000	1455.43	**YES**	17	0.389341
TRC	Total Residual Chlorine	0.13	0.38	0.13	0.38	**YES**	7	0.543846
	Parameters in mg/L							

Environmental Consultants
and Contractors

7311 W. 130th Street
Suite 100
Overland Park, KS 66213

913 681-0030
FAX 913 681-0012
www.scsengineers.com

SCS AQUATERRA

January 7, 2016
File No. 27215235.00

Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, Missouri 65102-0176
Attn: Amberly Schulz

Subject: Permit Modification Application Submittal
Archer Daniels Midland, Deerfield, Missouri
General Operating Permit MO-0134139

Dear MDNR:

On behalf of our client, Archer Daniels Midland, Deerfield, Missouri (ADM), SCS Aquaterra (SCS) is submitting this application for permit modification for the facility's Missouri State Operating General Permit. This application has been prepared based on correspondence with the Missouri Department of Natural Resources (MDNR) and appropriate application forms. The proposed modifications are as follows:

Modification 1:
ADM requests to modify the function of three ponds as follows:

- Convert the existing process water storage pond to an industrial wastewater holding pond.
- Convert the permitted industrial wastewater holding pond to a process water storage pond.
- Convert existing wastewater holding pond to a sanitary sewage storage pond.

These modifications are illustrated on Figure 1 of the attachments.

Modification 2:
ADM has a planned process change of installing a condensing heat recovery system (also referred to as a Condex system). This process change will result in a new industrial wastewater stream that will discharge into existing Outfall 003, but is not expected to violate the effluent limitation specified in the operating permit. The new system will result in a condensate wastewater stream with a relatively low pH and will be mixed with the higher pH of their blowdown wastewater. The resulting wastewater is anticipated to be neutralized and in compliance with effluent limitations. The attached application forms are completed with respect to the new wastewater stream that will be discharging into Outfall 003.

SCS understands that the review process for a permit modification typically may take up to 180 days, however, ADM would like to implement these modification as soon as possible. Due to the minor nature of the proposed modifications, we are requesting an expedited review period of

to the minor nature of the proposed modifications, we are requesting an expedited review period of 30 days. Should that time frame not be feasible, please notify ADM and SCS of an expected time frame.

If you have questions or concerns regarding this submittal, feel free to contact us at (913) 681-0030.

Sincerely,

Dillon Baird, P.E.
Project Engineer
SCS AQUATERRA

Nathan Hamm, P.E.
Vice President/Project Director
SCS AQUATERRA

Attachments: MDNR Form A – Application for Nondomestic Permit Under Missouri Clean Water Law

MDNR Form C – Application for Discharge Permit – Manufacturing, Commercial, Mining, Silviculture Operations, Process and Stormwater

Figure 1 – Proposed Site Layout

Figure 2 – Outfall Locations

Figure 3 – Process Flow Diagram

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
FORM A – APPLICATION FOR NONDOMESTIC PERMIT UNDER MISSOURI CLEAN WATER LAW

FOR AGENCY USE ONLY	
CHECK NUMBER 281842	
DATE RECEIVED 1-11-16	FEE SUBMITTED $100.00

Note ► PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1. This application is for:

- ☐ An operating permit for a new or unpermitted facility:
  Please indicate the original Construction Permit # _____
- ☐ An operating permit renewal:
  Please indicate the permit # MO- _____ Expiration Date _____
- ☑ An operating permit modification:
  Please indicate the permit # MO- 0134139 Modification Reason: Add Stream, Pond Re-purposing

1.1 Is the appropriate fee included with the application? (See instructions for appropriate fee) ☑ YES ☐ NO

2. FACILITY

NAME	TELEPHONE NUMBER WITH AREA CODE
Archer Daniel Midland (ADM) Deerfield	(417) 927-3400
	FAX

ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE
17700 South Highway T	Deerfield	MO	64741

3. OWNER

NAME	EMAIL ADDRESS	TELEPHONE NUMBER WITH AREA CODE
Same as above.		FAX

ADDRESS (MAILING)	CITY	STATE	ZIP CODE

3.1 Request review of draft permit prior to public notice? ■ YES ☐ NO

4. CONTINUING AUTHORITY

NAME	EMAIL ADDRESS	TELEPHONE NUMBER WITH AREA CODE
Same as above.		FAX

ADDRESS (MAILING)	CITY	STATE	ZIP CODE

5. OPERATOR

NAME	CERTIFICATE NUMBER	TELEPHONE NUMBER WITH AREA CODE
Same as above.		FAX

ADDRESS (MAILING)	CITY	STATE	ZIP CODE

6. FACILITY CONTACT

NAME	TITLE	TELEPHONE NUMBER WITH AREA CODE
John Baumgartner	Plant Manager	(417) 927-3400
	E-MAIL ADDRESS: john.baumgartner@adm.com	FAX

7. ADDITIONAL FACILITY INFORMATION

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

001 SW ¼ NW ¼ Sec 9 T 35N R 33W Vernon County
UTM Coordinates Easting (X): 360978 Northing (Y): 4188863
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

002 NW ¼ SE ¼ Sec 9 T 35N R 33W Vernon County
UTM Coordinates Easting (X): 361694 Northing (Y): 4188496

003 NE ¼ SW ¼ Sec 9 T 35N R 33W Vernon County
UTM Coordinates Easting (X): 361330 Northing (Y): 4188518

005 ~~004~~ NE ¼ SW ¼ Sec 9 T 35N R 33W Vernon County
UTM Coordinates Easting (X): 361285 Northing (Y): 4188704

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

001 – SIC 2075, 2869 and NAICS 311224
002 – SIC 2075, 2869 and NAICS 311224
003 – SIC 2075, 2869 and NAICS 311224
005 ~~004~~ – SIC 2075, 2869 and NAICS 311224

8. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION
(Complete all forms that are applicable.)

A.	Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? If yes, complete Form C or 2F. (2F is the U.S. EPA's Application for Storm Water Discharges Associate with Industrial Activity.)	YES ☑	NO ☐
B.	Is application for storm water discharges only? If yes, complete Form C or 2F.	YES ☐	NO ☑
C.	Is your facility considered a "Primary Industry" under EPA guidelines: If yes, complete Forms C or 2F and D.	YES ☐	NO ☑
D.	Is wastewater land applied? If yes, complete Form I.	YES ☐	NO ☑
E.	Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? If yes, complete Form R.	YES ☐	NO ☑

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

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

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

NAME			
Ronald Brown			
ADDRESS	CITY	STATE	ZIP CODE
PO Box 1229	Ft. Scott	KS	66701

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

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	TELEPHONE NUMBER WITH AREA CODE
John Baumgartner, Plant Manager	(417) 927-3400
SIGNATURE	DATE SIGNED
J M Gaylor	11/5/2016

MO 780-1479 (07-14)

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

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

HAVE YOU INCLUDED:

- ☑ Appropriate Fees?
- ☑ Map at 1" = 2000' scale?
- ☑ Signature?
- ☑ Form C or 2F, if applicable?
- ☐ Form D, if applicable?
- ☐ Form I (Irrigation), if applicable?
- ☐ Form R (Sludge), if applicable?
- ☐ Revised Nutrient Management Plan, if applicable?

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM C – APPLICATION FOR DISCHARGE PERMIT – MANUFACTURING, COMMERCIAL, MINING, SILVICULTURE OPERATIONS, PROCESS AND STORMWATER

FOR AGENCY USE ONLY	
CHECK NO.	
DATE RECEIVED	FEE SUBMITTED

NOTE: DO NOT ATTEMPT TO COMPLETE THIS FORM BEFORE READING THE ACCOMPANYING INSTRUCTIONS

1.00 NAME OF FACILITY

Archer Daniel Midland (ADM) Deerfield

1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER

MO-0134139

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

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

A. FIRST 2075 B. SECOND 2869

C. THIRD _____ D. FOURTH _____

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

OUTFALL NUMBER (LIST) _____ NE 1/4 _____ SW 1/4 SEC 9 T 35N R 33W Vernon COUNTY

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER

OUTFALL NUMBER (LIST)	RECEIVING WATER
003	Tributary to Green Branch

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS

Discharging new waste stream into existing Outfall 003.

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent and treatment units labeled to correspond to the more detailed descriptions in item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, public sewers and outfalls. If a water balance cannot by determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

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

1. OUTFALL NO.	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT	
(LIST)	A. OPERATION (LIST)	B. AVERAGE FLOW (INCLUDE UNITS) (MAXIMUM FLOW)	A. DESCRIPTION	B. LIST CODES FROM TABLE A
003	Non-contact wastewater	48.65 gpm	Neutralization	2-K

2.40 CONTINUED

C. EXCEPT FOR STORM RUNOFF, LEAKS OR SPILLS, ARE ANY OF THE DISCHARGES DESCRIBED IN ITEMS A OR B INTERMITTENT OR SEASONAL?

☐ **YES** *(COMPLETE THE FOLLOWING TABLE)* ☑ **NO** *(GO TO SECTION 2.50)*

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

2.50 MAXIMUM PRODUCTION

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

☐ **YES** *(COMPLETE B.)* ☑ **NO** *(GO TO SECTION 2.60)*

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

☐ **YES** *(COMPLETE c.)* ☑ **NO** *(GO TO SECTION 2.60)*

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

1. MAXIMUM QUANTITY			2. AFFECTED OUTFALLS *(list outfall numbers)*
A. QUANTITY PER DAY	B. UNITS OF MEASURE	C. OPERATION, PRODUCT, MATERIAL, ETC. *(specify)*	

2.60 IMPROVEMENTS

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

☐ **YES** *(COMPLETE THE FOLLOWING TABLE)* ☑ **NO** *(GO TO 3.00)*

1. IDENTIFICATION OF CONDITION AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
				A. REQUIRED	B. PROJECTED

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

☐ **MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED.**

3.00 INTAKE AND EFFLUENT CHARACTERISTICS

A. & B. SEE INSTRUCTIONS BEFORE PROCEEDING – COMPLETE ONE TABLE FOR EACH OUTFALL – ANNOTATE THE OUTFALL NUMBER IN THE SPACE PROVIDED.
NOTE: TABLE 1 IS INCLUDED ON SEPARATE SHEETS NUMBERED FROM PAGE 6 TO PAGE 7.

C. USE THE SPACE BELOW TO LIST ANY OF THE POLLUTANTS LISTED IN PART B OF THE INSTRUCTIONS, WHICH YOU KNOW OR HAVE REASON TO BELIEVE IS DISCHARGED OR MAY BE DISCHARGED FROM ANY OUTFALL. FOR EVERY POLLUTANT YOU LIST, BRIEFLY DESCRIBE THE REASONS YOU BELIEVE IT TO BE PRESENT AND REPORT ANY ANALYTICAL DATA IN YOUR POSSESSION.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
Lead	Natural Gas Combustion		
Total Residual Chlorine	Water Treatment		
Oil and Grease	Biodiesel Production		
Total Phosphorus	Meal Dust in the Air		
Sulfate	Water Treatment		
Beryllium	Natural Gas Combustion		
Cadmium	Natural Gas Combustion		
Selenium	Water Received from FT Scott		

3.10 BIOLOGICAL TOXICITY TESTING DATA

DO YOU HAVE ANY KNOWLEDGE OR REASON TO BELIEVE THAT ANY BIOLOGICAL TEST FOR ACUTE OR CHRONIC TOXICITY HAS BEEN MADE ON ANY OF YOUR DISCHARGES OR ON RECEIVING WATER IN RELATION TO YOUR DISCHARGE WITHIN THE LAST THREE YEARS?

☑ YES (IDENTIFY THE TEST(S) AND DESCRIBE THEIR PURPOSES BELOW.) ☐ NO (GO TO 3.20)

Whole Effluent Toxicity (WET) testing is performed quarterly at Outfall 003 for the purpose of analyzing acute/chronic toxicity.

3.20 CONTRACT ANALYSIS INFORMATION

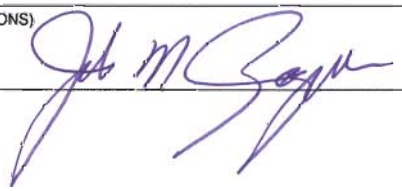
WERE ANY OF THE ANALYSES REPORTED PERFORMED BY A CONTRACT LABORATORY OR CONSULTING FIRM?

☑ **YES** *(LIST THE NAME, ADDRESS AND TELEPHONE NUMBER OF AND POLLUTANTS ANALYZED BY EACH SUCH LABORATORY OR FIRM BELOW.)* ☐ **NO** *(GO TO 3.30)*

A. NAME	B. ADDRESS	C. TELEPHONE *(area code and number)*	D. POLLUTANTS ANALYZED *(list)*
Pace Analytical Services Inc	4120 7 Hills Dr. Florissant, MO 63033	(314) 838-7223	Lead Oil and Grease Total Phosphorus Sulfate Beryllium Cadmium Selenium BOD COD TOC TSS Ammonia

3.30 CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS APPLICATION AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	TELEPHONE NUMBER WITH AREA CODE
John Baumgartner	(417) 927-3400
SIGNATURE (SEE INSTRUCTIONS) 	DATE SIGNED 1/5/2016

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet *(Use the same format)* instead of completing these pages.
SEE INSTRUCTIONS

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS

OUTFALL NO. 003

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

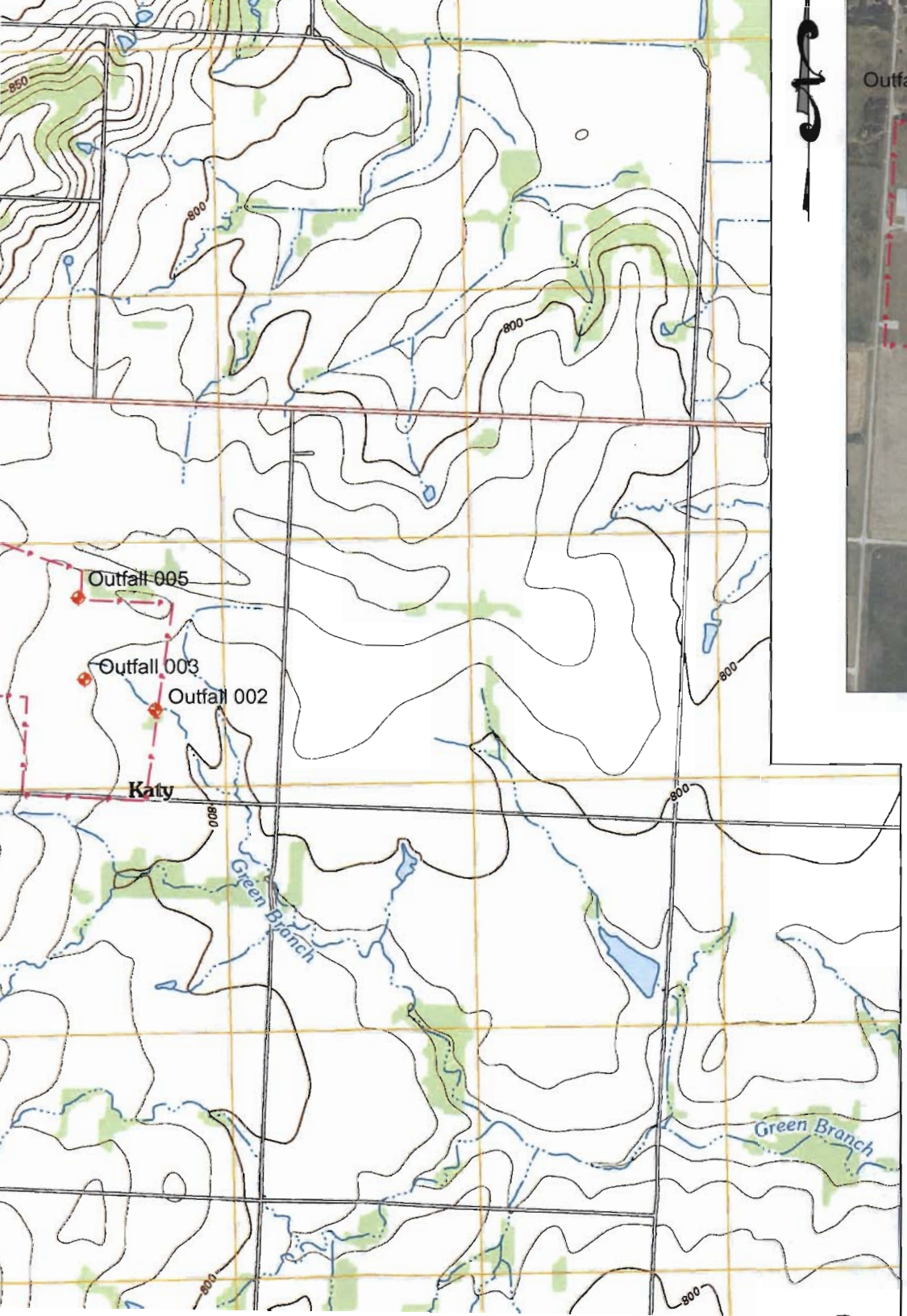
1. POLLUTANT	2. EFFLUENT							3. UNITS *(specify if blank)*		4. INTAKE *(optional)*		
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)	N/A	N/A	7.2 AVG	N/A	N/A	N/A	N/A	mg/L	N/A	N/A	N/A	N/A
B. Chemical Oxygen Demand (COD)	N/A	N/A	40.9	N/A	N/A	N/A	N/A	mg/L	N/A	N/A	N/A	N/A
C. Total organic Carbon (TOC)	N/A	N/A	11.4	N/A	N/A	N/A	N/A	mg/L	N/A	N/A	N/A	N/A
D. Total Suspended Solids (TSS)	N/A	N/A	34.75 AVG	N/A	N/A	N/A	N/A	mg/L	N/A	N/A	N/A	N/A
E. Ammonia *(as N)*	0.54	N/A	0.1	N/A	N/A	N/A	N/A	mg/L	N/A	N/A	N/A	N/A
F. Flow	VALUE 67547 GPM		VALUE 30,767 GPM		VALUE N/A		N/A	N/A	N/A	VALUE N/A		N/A
G. Temperature *(winter)*	VALUE 65		VALUE 63.3 GPM AVERAGE		VALUE N/A		N/A	°C		VALUE N/A		N/A
H. Temperature *(summer)*	VALUE 89.7		VALUE 89.7 AVERAGE		VALUE N/A		N/A	°C		VALUE N/A		N/A
I. pH	MINIMUM 8.49	MAXIMUM 8.75	MINIMUM N/A	MAXIMUM N/A			N/A	STANDARD UNITS				

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

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS														
A. Bromide (24959-67-9)		X												
B. Chlorine, Total Residual	X		0.12							micro-g/L				
C. Color		X												
D. Fecal Coliform		X												
E. Fluoride (16984-48-8)		X												
F. Nitrate - Nitrate *(as N)*		X												

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
G. Nitrogen, Total Organic *(as N)*		X												
H. Oil and Grease	X		5							mg/L				
I. Phosphorus *(as P)*, Total (7723-14-0)	X		0.69							mg/L				
J. Sulfate *(as SO^4)* (14808-79-8)	X		636							mg/L				
K. Sulfide *(as S)*		X												
L. Sulfite (as SO^3) (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum, Total (7429-90-5)		X												
O. Barium, Total (7440-39-3)		X												
P. Boron, Total (7440-42-8)		X												
Q. Cobalt, Total (7440-48-4)		X												
R. Iron, Total (7439-89-6)		X												
S. Magnesium, Total (7439-95-4)		X												
T. Molybdenum, Total (7439-98-7)		X												
U. Manganese, Total (7439-96-5)		X												
V. Tin, Total (7440-31-5)		X												
W. Titanium, Total (7440-32-6)		X												

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)		X												
2M. Arsenic, Total (7440-38-2)		X												
3M. Beryllium, Total (7440-41-7)	X		1							micro-g/L				
4M. Cadmium, Total (7440-43-9)	X		0.5							micro-g/L				
5M. Chromium III (16065-83-1)		X												
6M. Chromium VI (18540-29-9)		X												
7M. Copper, Total (7440-50-8)		X												
8M. Lead, Total (7439-92-1)	X		2.74							ppb				
9M. Mercury, Total (7439-97-6)		X												
10M. Nickel, Total (7440-02-0)		X												
11M. Selenium, Total (7782-49-2)	X		15							micro-g/L				
12M. Silver, Total (7440-22-4)		X												
13M. Thallium, Total (7440-28-0)		X												
14M. Zinc, Total (7440-66-6)		X												
15M. Cyanide, Amenable to Chlorination		X												
16M. Phenols, Total		X												
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												



1000 0 1000 2000

SCALE FEET

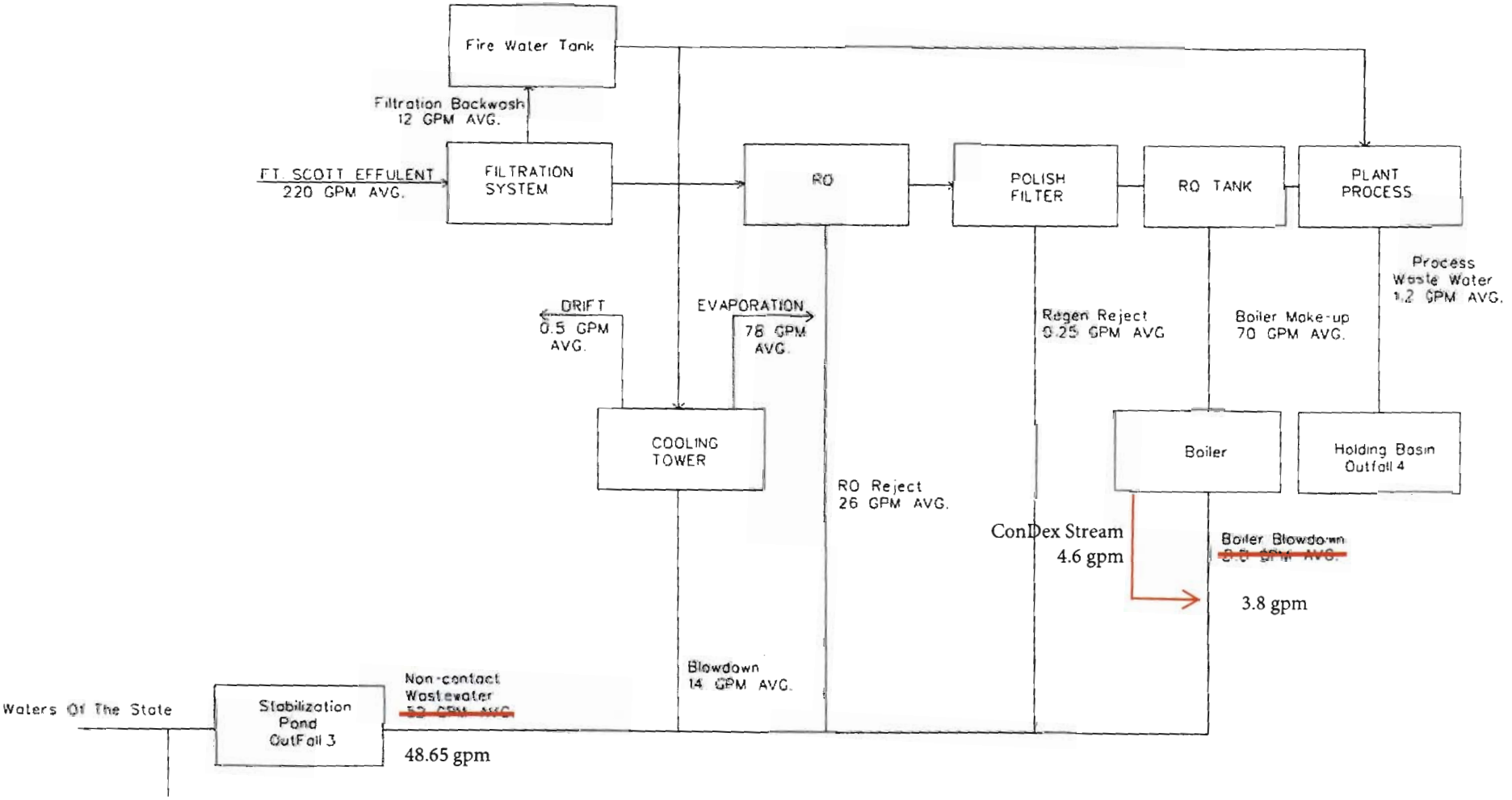
SCS AQUATERRA

7311 W. 130th St, Ste. 100
Overland Park, Kansas 66213
PH. (913) 681-0030 FAX. (913) 681-0012

EXISTING OUTFALL LOCATIONS

NOTES:

1. AERIAL IMAGERY RETRIEVED FROM THE NATIONAL AGRICULTURE IMAGERY PROGRAM, DATED 2013.



NOTE:

1. *PROCESS DIAGRAM PROVIDED BY ARCHER DANIELS MIDLAND.*

SCS AQUATERRA

7311 W. 130th St, Ste. 100
Overland Park, Kansas 66213
PH. (913) 681-0030 FAX. (913) 681-0012

PROCESS FLOW DIAGRAM
JANUARY 2016 PERMIT MODIFICATION

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
FORM A – APPLICATION FOR NONDOMESTIC PERMIT UNDER MISSOURI CLEAN WATER LAW

FOR AGENCY USE ONLY	
CHECK NUMBER 281842	
DATE RECEIVED 11-16	FEE SUBMITTED $700.00 $350.00

Note ► PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1. This application is for:
   - ☐ An operating permit for a new or unpermitted facility:
     Please indicate the original Construction Permit # _____
   - ☐ An operating permit renewal:
     Please indicate the permit # MO- _____ Expiration Date _____
   - ☑ An operating permit modification:
     Please indicate the permit # MO- 0134139 Modification Reason: Add Stream, Pond Re-purposing

1.1 Is the appropriate fee included with the application? (See instructions for appropriate fee) ☑ YES ☐ NO

2. FACILITY

NAME		TELEPHONE NUMBER WITH AREA CODE / FAX	
Archer Daniel Midland (ADM) Deerfield		(417) 927-3400	
ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE
17700 South Highway T	Deerfield	MO	64741

3. OWNER

NAME	EMAIL ADDRESS	TELEPHONE NUMBER WITH AREA CODE / FAX	
Same as above.			
ADDRESS (MAILING)	CITY	STATE	ZIP CODE

3.1 Request review of draft permit prior to public notice? ■ YES ☐ NO

4. CONTINUING AUTHORITY

NAME	EMAIL ADDRESS	TELEPHONE NUMBER WITH AREA CODE / FAX	
Same as above.			
ADDRESS (MAILING)	CITY	STATE	ZIP CODE

5. OPERATOR

NAME	CERTIFICATE NUMBER	TELEPHONE NUMBER WITH AREA CODE / FAX	
Same as above.			
ADDRESS (MAILING)	CITY	STATE	ZIP CODE

6. FACILITY CONTACT

NAME	TITLE	TELEPHONE NUMBER WITH AREA CODE
[redacted]	[redacted]	

$700 Applied towards Mod fee

SCS ENGINEERS
Environmental Consultants
3900 Kilroy Airport Way, Suite 100
Long Beach, CA 90806-6816
562 426-9544
FIN 54-0913440

MUFG UNION BANK, N.A.
445 Figueroa Street
Los Angeles, CA 90071
16-49
1226

281842
CHECK DATE
December 14, 2015

$350 Applied towards facilities Annual fee

PAY One Thousand Fifty and 00/100 Dollars

AMOUNT 1,050.00

TO MISSOURI DEPARTMENT OF NATURAL RESOURCES
PO Box 176
Jefferson City, MO 65102

TWO SIGNATURES REQUIRED OVER FIVE THOUSAND DOLLARS
VOID IF NOT CASHED IN 90 DAYS

Nada Harlow

[redacted]