

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-0135763

Owner: Wyeth Holdings LLC
Address: c/o Pfizer 100 Route 206N; Peapack, NJ 079775

Continuing Authority: Wyeth Holdings LLC
Address: c/o Pfizer 100 Route 206N; Peapack, NJ 079775

Facility Name: Wyeth Holdings LLC, Groundwater Treatment system
Address: 3150 Hwy JJ, Palmyra, MO 63461

Legal Description: NE¼, NE¼, Sec. 15, T58N, R5W, Marion County
Latitude/Longitude: X= 633759; Y= 4409854

Receiving Stream: Tributary to Mississippi River (8-20-13 MUDD V 1.0)
First Classified Stream and ID: Tributary to Mississippi River (8-20-13 MUDD V 1.0) (C) (3960)
USGS Basin & Sub-watershed No.: (07110004-0304)

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

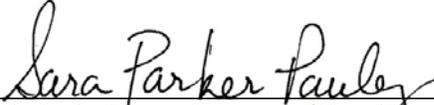
FACILITY DESCRIPTION

Outfall #001 – SIC #9512 (NAICS 924120) - Groundwater Treatment System
Air Stripping to remove volatile organic compounds from groundwater.
Certified Operator is not required.
Design flow is 0.216 MGD
Average flow is 0.118 MGD.

This permit authorizes only wastewater 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.

December 1, 2015

Effective Date


Sara Parker Pauley, Director, Department of Natural Resources

September 30, 2018

Expiration Date


John Madras, Director, Water Protection Program

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

EFFLUENT PARAMETERS	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
PHYSICAL Flow						
CONVENTIONAL	MGD	*		*	once/month	24 hr. estimate
pH (Note A)						
VOLATILE ORGANICS	SU	6.5 to 9.0		6.5 to 9.0	once/month	grab
1,2-Dichloroethane (1,2-DCA)						
Chlorobenzene (MCB)	µg/L	105		70	once/month	grab
1,1,2-Trichloroethane	µg/L	150		100	once/month	grab
Vinyl Chloride	µg/L	1.5		1.0	once/month	grab
Tetrachloroethylene	µg/L	1.5		1.0	once/month	grab
Trichloroethylene	µg/L	1.6		0.8	once/month	grab
Benzene	µg/L	1.5		1.0	once/month	grab
	µg/L	1.5		1.0	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE <u>JANUARY 28, 2016</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Chronic Whole Effluent Toxicity	TU _c	*			once/ year	grab
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE <u>JANUARY 28, 2017</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

* Monitoring requirement only.

Note A The facility will report the minimum and maximum values. pH is not to be averaged.

B. STANDARD CONDITIONS

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

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.

C. SPECIAL CONDITIONS (CONTINUED)

3. Report as no-discharge when a discharge does not occur during the report period
4. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).
5. Water Quality Standards
 - (a) To the extent required by law, 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.
6. Changes in Discharges of Toxic Substances

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

 - 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 by the Director in accordance with 40 CFR 122.44(f).

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.
7. Reporting of Non-Detects
 - (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
 - (b) The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non-Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
 - (c) The permittee shall report the "Non-Detect" result using the less than sign and the minimum detection limit (e.g. <10).
 - (d) The permittee shall use one-half (½) of the detection limit for the non-detect result when calculating and reporting monthly averages.
 - (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
8. Any pesticide discharge from any point source shall comply with the requirements of Federal Insecticide, Fungicide and Rodenticide Act, as amended (7 U.S.C. 136 ET. SEQ.) and the use of such pesticides shall be in a manner consistent with its label.

C. SPECIAL CONDITIONS (CONTINUED)

9. Permittee shall adhere to the following minimum Best Management Practices (BMPs):
- (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of stormwater 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 stormwater or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of stormwater 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.
10. BMPs(continued)
- (e) Ensure that adequate provisions are provided to prevent surface water intrusion into the storage basin, to divert stormwater runoff around the storage basin, and to protect embankments from erosion.
11. Before releasing water that has accumulated in secondary containment areas it must be examined for hydrocarbon odor and presence of a sheen. On-site remediation may take place prior to testing. If the presence of hydrocarbons is indicated, this water must be tested for Total Petroleum Hydrocarbons (TPH). The analytical method for testing TPH must comply with EPA approved testing methods listed in 40 CFR 136 and the water must be tested prior to release to ensure compliance with water quality standards. If the concentration for TPH exceeds 10mg/L, the water shall be taken to a WWTP for treatment.
12. Release of a hazardous substance must be reported to the department in accordance with 10 CSR 24-3.010. A record of each reportable spill shall be retained with onsite and made available to the department upon request.

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

SUMMARY OF CHRONIC WET TESTING FOR THIS PERMIT					
OUTFALL	AEC	Chronic Toxic Unit (TU _c)	FREQUENCY	SAMPLE TYPE	MONTH
#001	100%	*	once/year	grab	any

*Monitoring only

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

- (a) Freshwater Species and Test Methods
 - (1) Species and short-term test methods for estimating the chronic toxicity of NPDES effluents are found in the most recent edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013; Table IA, 40 CFR Part 136). The permittee shall concurrently conduct 7-day, static, renewal toxicity tests with the following vertebrate species:
 - The fathead minnow, *Pimephales promelas* (Survival and Growth Test Method 1000.0).
 And the following invertebrate species:
 - The daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0).
 - (2) Chemical and physical analysis of an upstream control sample 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. Where upstream receiving water is not available, synthetic laboratory control water may be used.
 - (3) Test conditions must meet all test acceptability criteria required by the EPA Method used in the analysis.
 - (4) 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.
 - (5) All chemical analyses shall be performed and results shall be recorded in the appropriate field of the report form. The parameters for chemical analysis include, but are not limited to Temperature (°C), pH (SU), Conductivity (µMohs), Benzene, 1,2-Dichloroethane, Chlorobenzene, 1,1,2-Trichloroethane, Vinyl Chloride, Tetrachloroethylene, Trichloroethylene, Total Alkalinity (mg/L), and Total Hardness (mg/L).
- (b) Reporting of Chronic Toxicity Monitoring Results

C. SPECIAL CONDITIONS (CONTINUED)

- (1) WET test results shall be submitted to the Northeast Regional Office, or by eDMR, with the permittee's Discharge Monitoring Reports by January 28, 2017. The submittal shall include:
 - i. A full laboratory report for all toxicity testing.
 - ii. Copies of chain-of-custody forms.
 - iii. The WET form provided by the Department upon permit issuance.
 - (2) The report must include a quantification of chronic toxic units ($TU_c = 100/IC_{25}$) reported according to the *Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* chapter on report preparation and test review. The 25 percent Inhibition Effect Concentration (IC_{25}) is the toxic or effluent concentration that would cause 25 percent reduction in mean young per female or in growth for the test populations.
- (c) Permit Reopener for Chronic Toxicity
- In accordance with 40 CFR Parts 122 and 124, this permit may be modified to include effluent limitations or permit conditions to address chronic toxicity in the effluent or receiving waterbody, as a result of the discharge; or to implement new, revised, or newly interpreted water quality standards applicable to chronic toxicity.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL & MODIFICATION OF
MO-0135763
WYETH HOLDINGS LLC**

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

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

Part I. FACILITY INFORMATION

Facility Type: Industrial- Groundwater Remediation
Facility SIC Code(s): 9512
Facility NAICS Code: 924120
Application Date: 06/24/2014
Expiration Date: 12/31/2014

FACILITY DESCRIPTION:

The proposed design flow was 0.216 MGD. The groundwater extraction and air stripping system was designed to remove 99% of the concentrations of all volatile organic compounds (VOCs). Air stripping is a process of pumping air bubbles into VOC impacted water and subsequently releasing the VOCs into the atmosphere. From the Antidegradation report, "The air stripper to be used in the groundwater extraction system is a low-profile or tray air stripper. Tray air strippers have a number of trays that are set horizontally. Water is cascaded over the trays to maximize air-water contact. As the water descends, air is forced up through perforations in the trays, stripping off the volatile compounds. A sump at the bottom of the tower or tray stripper collects the treated water."

Over the last five years of operations, Wyeth has modified its stripper system by placing the strippers in series to increase removal efficiencies. Wyeth installed and eventually removed two granular activated carbon vessels downstream of the air strippers in attempts to improve removal efficiencies, dosing of the influent with sequestrant to minimize biological and mineral precipitation of iron, and re-piping the air strippers to increase the air flow through the stripper. Wyeth injects ozone into the process to reduce the impacts of biofouling on the air stripper due to the concentrations of iron and other naturally occurring parameters in the groundwater

The remediation and clean-up of the historic chemical spill is part of a RCRA corrective action, which is regulated by MDNR Hazardous Waste Program, permit number-MOD0226075. The site is located on the flood plain of the Mississippi River approximately eight miles upstream from Hannibal, Missouri and is an active agricultural chemical production facility.

PERMITTED FEATURES TABLE:

OUTFALL	AVERAGE FLOW (MGD)	DESIGN FLOW (MGD)	TREATMENT LEVEL	EFFLUENT TYPE
#001	0.118	0.219	Air Stripping	Groundwater Remediation

FACILITY PERFORMANCE HISTORY & COMMENTS:

The 2015 revision to the Antidegradation Review is after 5 years of operation, 1,2-DCA and MCB is highly variable in the influent and the air stripping technology has been challenged in consistently meeting the previous best professional judgment limit and the proposed revised effluent limit is based on the historical manufacturer’s performance. With the proposed change in the effluent limit for 1, 2-DCA from 2.7 µg/L to 70 µg/L, this effluent limit is still more protective than the human health water quality standard of 99 µg/L. The increase in MCB effluent limit is from 1.0 µg/L to 100 µg/L, which is more protective than the 21,000 µg/L human health water quality standard.

The influent into the air stripper of 1,2-DCA has been highly variable with concentrations ranging from 50 µg/L to 675 µg/L. Wyeth is expecting that the concentrations of 1,2-DCA will increase to 3,000 µg/L with the installation of two new wells. MCB influent concentrations have varied from 9.7 µg/L to 2,090 µg/L.

FACILITY MAP:



Part II. RECEIVING STREAM INFORMATION

RECEIVING WATER BODY’S WATER QUALITY:

The Tributary to the Mississippi River (C) (3960) is now classified whereas it was not classified in the previous permit, as EPA has approved the Department’s new stream classifications.

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

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

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

Classes [10 CSR 20-7.031(1)(F)1. to 8.] of water bodies which may be found in the receiving streams table below are:

Lakes: L1 = drinking supply lakes; L2 = major reservoirs; L3 = other

Streams: P = permanent streams; P1 = standing water of P streams; C = may cease flow in droughts but maintains permanent pools; E = ephemeral; W = natural wetlands

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

Uses which may be found in the following receiving streams table:

10 CSR 20-7.031(1)(C)1.: Protection and propagation of fish, shellfish, and wildlife (formerly AQL; this permit uses AQL effluent limitations in 10 CSR 20-7.031 Table A for all habitat temperature designations unless otherwise specified) WWH = Warm Water Habitat; CLH = Cool Water Habitat; CDH = Cold Water Habitat; EAH = Ephemeral Aquatic Habitat; MAH = Modified Aquatic Habitat; LAH = Limited Aquatic Habitat

10 CSR 20-7.031(1)(C)2.: Recreation in and on the water

WBC = Whole Body Contact; WBC-A = public swimming; WBC-B = swimming, SCR = Secondary Contact Recreation (like fishing, wading, and boating)

10 CSR 20-7.031(1)(C)3. to 7.: HHP (formerly HHF) = Human Health Protection (fish consumption); IRR = irrigation; LWP (formerly LWW) = Livestock And Wildlife Protection; DWS = Drinking Water Supply; IND = industrial water supply

10 CSR 20-7.031(6): GRW = Groundwater

- ✓ As per Missouri's stormwater regulations [10 CSR 20.6.200(6)(B)2.] and federal regulations [40 CFR 122.26(b)(14)], the department shall establish limits necessary to protect waters of the state. Effluent limitations or benchmarks for stormwater are established using best professional judgment based on the category, impairments, technology available, and designated uses of the receiving stream.

RECEIVING STREAMS TABLE:

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES	DISTANCE TO CLASSIFIED SEGMENT	12-DIGIT HUC
#001	Tributary to Mississippi River	C	3960	IRR, LWW, SCR, WWH	0	07110004-0304

n/a = not applicable

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

MIXING CONSIDERATIONS:

Mixing Zone: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(a)].

Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(b)].

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements are recommended at this time.

Part III. 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.

- ✓ Limitations in this operating permit for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.
 - ✓ Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.
 - The previous permit effluent limits were based on Antidegradation Review best professional judgment of expected concentration in the groundwater wells and the expected performance of the air stripping equipment in removing the volatile organics from the water.
- ✓ The Department determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).
 - This permit changes WET test requirements for the facility from a pass/fail requirement to monitoring only for toxic units. This change reflects modifications to Missouri's Effluent Regulation found at 10 CSR 20-7.015. 40 CFR 122.44(d)(1)(ii) requires the department to establish effluent limitations that control all parameters which have the reasonable potential to cause or contribute to an excursion above any state water quality standard, including state narrative criteria. The previous permit imposed a pass/fail limitation without collecting sufficient data to make a reasonable potential determination. Furthermore, the method of reporting associated with the pass/fail limitation prevented the department from gathering the data necessary to make a finding of reasonable potential. Implementation of the toxic unit monitoring requirement will allow the department to implement numeric acute criteria in accordance with water quality standards established under §303 of the CWA.
- ✓ The permittee has installed the treatment facilities required to meet the effluent limitations in the previous permit and has properly operated and maintained the facilities but has nevertheless been unable to achieve the previous effluent limitations, in which case the limitations in the reviewed, reissued, or modified permit may reflect the level of pollutant control actually achieved (but shall not be less stringent than required by effluent guidelines in effect at the time of permit renewal, reissuance, or modification). Wyeth has modified its stripper system by placing the strippers in series to increase removal efficiencies.
 - Wyeth installed and eventually removed two granular activated carbon vessels downstream of the air strippers in attempts to improve removal efficiencies, dosing of the influent with sequestrant to minimize biological and mineral precipitation of iron, and re-piping the air strippers to increase the air flow through the stripper. Wyeth injects ozone into the process to reduce the impacts of biofouling on the air stripper due to the concentrations of iron and other naturally occurring parameters in the groundwater. Even with the modifications and improvements made, coupled with the variability of the groundwater concentration, Wyeth cannot consistently operate at the designed capacity which impacts the ability to achieve the previous effluent limits for 1,2-DCA and chlorobenzene.

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; change in effluent limits from previous Antidegradation Review. Wyeth cannot consistently operate at the designed capacity which impacts the ability to achieve the previous effluent limits for 1,2-DCA and chlorobenzene (MCB) due to the variability of the groundwater concentrations and the performance of the air strippers See Appendix A: Antidegradation Analysis for the 2015 Review and discussion of changing 1,2-DCA and chlorobenzene effluent limits.

BENCHMARKS:

When a permitted feature or outfall consists of only stormwater, a benchmark may be implemented at the discretion of the permit writer. Benchmarks require the facility to monitor, and if necessary, replace and update stormwater control measures. Benchmark concentrations are not effluent limitations. A benchmark is a technology-based threshold. A benchmark exceedance, therefore, is not a permit violation; however, failure to take corrective action is a violation of the permit. Benchmark monitoring data is used to determine the overall effectiveness of control measures and to assist the permittee in knowing when additional corrective actions may be necessary to comply with the technology based effluent limitations (TBEL).

Because of the fleeting nature of stormwater discharges, the department, under the direction of EPA guidance, has determined monthly averages are capricious measures of stormwater discharges. The *Technical Support Document for Water Quality Based Toxics Control* (EPA/505/2-90-001; 1991) Section 3.1 indicates most procedures within the document apply only to water quality based approaches, not end-of-pipe technology-based controls. Hence, stormwater outfalls will only contain a maximum daily limit (MDL), benchmark, or monitoring requirement determined by the site specific conditions including the receiving water's current quality. While inspection of the stormwater BMPs occur monthly, facilities with no compliance issues are usually expected to sample stormwater quarterly.

Numeric benchmark values are based on other stormwater permits including the Environmental Protection Agency's (EPA's) *Multi-Sector General Permit For Stormwater Discharges Associated With Industrial Activity* (MSGP) or water quality standards. Because precipitation events are sudden and momentary, benchmarks based on state or federal standards or recommendations use the Criteria Maximum Concentration (CMC) value, or acute standard. The CMC is the estimate of the highest concentration of a material in surface water to which an aquatic community can be exposed briefly without resulting in an unacceptable effect. The CMC for aquatic life is intended to be protective of the vast majority of the aquatic communities in the United States.

✓ Not applicable; this facility does not have any permitted stormwater outfalls.

BIOSOLIDS & SEWAGE SLUDGE:

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

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

COMPLIANCE AND ENFORCEMENT:

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

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

GROUNDWATER MONITORING:

Groundwater is a water of the state according to 10 CSR 20-7.015(7) and 10 CSR 20-7.031(6) and must be protected accordingly.

✓ This facility is monitoring the groundwater at the site. The department's Hazardous Waste Program Cleanup section is overseeing the groundwater remediation at the site. At this time, the Water Protection Program is not requiring reporting of the data to this branch. Groundwater which is removed is treated and discharged through outfall #001.

INDUSTRIAL SLUDGE:

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

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

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)(1)(iii)] if the permit writer determines that any give pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

✓ Not applicable; a RPA was not conducted for this facility. In reviewing the previous 5 years of discharge monitoring data, the facility reported no discharge a number of times.

SCHEDULE OF COMPLIANCE (SOC):

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, effluent limits, 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. SOC's are allowed under 40 CFR 122.47 providing certain conditions are met.

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

SPILL REPORTING:

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

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

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

The purpose of a SWPPP is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate pollution of stormwater runoff. Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged with during storm events. The following paragraph outlines the general steps the permittee should take to determine which BMPs will work to achieve the benchmark values discussed in Part V above. This section is not intended to be all encompassing or restrict the use of any physical BMP or operational and maintenance procedure that will assist in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit. Additional information can be found in 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].

Areas which should be included in the SWPPP are identified in 40 CFR 122.26(b)(14). Once the potential sources of stormwater pollution have been identified, a plan should be formulated to best control the amount of pollutant being released and discharged by each activity or source. This should include, but is not limited to, minimizing exposure to stormwater, good housekeeping measures, proper facility and equipment maintenance, spill prevention and response, vehicle traffic control, and proper materials handling. Once a plan has been developed the facility will employ the control measures that have been determined to be adequate to achieve the benchmark values discussed above. The facility will conduct monitoring and inspections of the BMPs to ensure they are working properly and re-evaluate any BMP not achieving compliance with permitting requirements. For example, if sample results from an outfall show values of TSS above the benchmark value, the BMP being employed is deficient in controlling stormwater pollution. Corrective action should be taken to repair, improve, or replace the failing BMP. This internal evaluation is required at least once per month but should be continued more frequently if BMPs continue to fail. If failures do occur, continue this trial and error process until appropriate BMPs have been established.

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

✓ Not applicable; at this time, the permittee is not required to develop and implement a SWPPP.

303(D) LIST:

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

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

TOTAL MAXIMUM DAILY LOAD (TMDL):

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

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

VARIANCE:

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

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

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010(78)], the WLA is the amount of pollutant each discharger is allowed to 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 where relevant using water quality criteria or water quality model results and by applying the dilution equation below:

$$C = \frac{(C_s \times Q_s) + (C_e \times Q_e)}{(Q_e + Q_s)} \quad \text{(EPA/505/2-90-001, Section 4.5.5)}$$

Where C = downstream concentration
C_s = upstream concentration
Q_s = upstream flow
C_e = effluent concentration
Q_e = effluent flow

- Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).
- Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's *Technical Support Document For Water Quality-based Toxics Control* or TSD EPA/505/2-90-001; March 1991.
- Number of Samples "n": In accordance with the TSD for water quality-based permitting, effluent quality is determined by the underlying distribution of daily values, which is determined by the Long Term Average (LTA) associated with a particular Wasteload Allocation (WLA) and by the Coefficient of Variation (CV) of the effluent concentrations. Increasing or decreasing the monitoring frequency does not affect this underlying distribution or treatment performance which should be, at a minimum, targeted to comply with the values dictated by the WLA. Therefore, it is recommended that the actual planned frequency of monitoring normally be used to determine the value of "n" for calculating the AML. However, in situations where monitoring frequency is once per month or less, a higher value for "n" must be assumed for AML derivation purposes. Thus, the statistical procedure being employed using an assumed number of samples is "n = 4" at a minimum. For Total Ammonia as Nitrogen, "n = 30" is used.

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(4)], 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; under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures that the provisions in the 10 CSR 20-6.010(8)(A)7. and the Water Quality Standards 10 CSR 20-7.031(4)(D),(F),(G),(I)2.A & B are being met. Under [10 CSR 20-6.010(8)(A)4], the department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §§644.051.3 requires the Department to set permit conditions that comply with the MCWL and CWA; 644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits, pretreatment, etc...); and 644.051.5 is the basic authority to require testing conditions. WET test will be required by ALL facilities meeting the following criteria:

- Facility is a designated a Major
- Facility continuously or routinely exceeds its design flow
- Facility that exceeds its design population equivalent (PE) for BOD₅ whether or not its design flow is being exceeded
- Facility (whether primarily domestic or industrial) that alters its production process throughout the year
- Facility handles large quantities of toxic substances, or substances that are toxic in large amounts
- Facility has Water Quality-Based Effluent Limitations for toxic substances (other than NH₃)
- Facility is a municipality with a Design Flow ≥ 22,500 GPD

Part IV. EFFLUENT LIMITS DETERMINATION

OUTFALL #001 – MAIN FACILITY OUTFALL

Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit. Daily maximums and monthly averages are required under 40 CFR 122.45(d)(1) for continuous discharges not from a POTW.

EFFLUENT LIMITATIONS TABLE:

PARAMETERS OUTFALL #001	UNIT	BASIS FOR LIMITS	DAILY MAX	MONTHLY AVG	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL								
FLOW	MGD	1	*	*	SAME	ONCE/MONTH	ONCE/MONTH	24 HR. ESTIMATE
CONVENTIONAL								
pH †	SU	1, 3	6.5 TO 9.0	6.5 to 9.0	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
VOLATILE ORGANICS								
1,2-DICHLOROETHANE	µg/L	1,3,4, 6	105	70	4.1/2.7	ONCE/MONTH	ONCE/MONTH	GRAB
CHLOROBENZENE	µg/L	1,3,4, 6	150	100	1.5/1.0	ONCE/MONTH	ONCE/MONTH	GRAB
1,1,2-TRICHLOROETHANE	µg/L	1, 3,4, 6	1.5	1.0	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
VINYL CHLORIDE	µg/L	1,3, 4, 6	1.5	1.0	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
TETRACHLOROETHYLENE	µg/L	1, 3,4, 6	1.6	0.8	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
TRICHLOROETHYLENE	µg/L	1,3,4, 6	1.5	1.0	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
BENZENE	µg/L	1,3, 4, 6	1.5	1.0	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
OTHER								
CHRONIC WET TEST	TUc	8	*		PASS/FAIL	ONCE/YEAR	ONCE/YEAR	GRAB

* - Monitoring requirement only

† The facility will report the minimum and maximum pH values; pH is not to be averaged.

Basis for Limitations Codes:

- | | |
|--|-----------------------------------|
| 1. State or Federal Regulation/Law | 5. Water Quality Model |
| 2. Water Quality Standard (includes RPA) | 6. Best Professional Judgment |
| 3. Water Quality Based Effluent Limits | 7. TMDL or Permit in lieu of TMDL |
| 4. Antidegradation Review/Policy | 8. WET Test Policy |

DERIVATION AND DISCUSSION OF LIMITS:

PHYSICAL:

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

CONVENTIONAL:

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

VOLATILE ORGANICS:

- **1,2-Dichloroethane.** The influent into the air stripper of 1,2-DCA has been highly variable with concentrations ranging from 50 µg/L to 675 µg/L. Wyeth is expecting that the influent concentrations of 1,2-DCA will increase to 3,000 µg/L with the installation of two new wells. The 2009 Antidegradation Review, the removal efficiencies and effluent limits were based on the modeling of one air stripper at optimum conditions. The increase in the effluent limits for 1,2-DCA is based on installation of the best technology available, best professional judgment, and manufacturer's recommendation. The proposed effluent limits of an average monthly limit of 70 µg/L and 105 µg/L daily maximum is more protective than water quality standards. See Appendix A for additional information
- **Chlorobenzene or Monochlorobenzene (MCB).** The influent into the air stripper of MCB has been highly variable with concentrations ranging from 9.7 µg/L to 2,090 µg/L. The 2009 Antidegradation Review, the removal efficiencies and effluent limits were based on the modeling of one air stripper at optimum conditions. The increase in the effluent limits for MCB is based on installation of the best technology available, best professional judgment, and manufacturer's recommendation. The proposed effluent limits of an average monthly limit of 100 µg/L and 150 µg/L daily maximum is more protective than water quality standards. See Appendix A for additional information.
- **1,1,2-Trichloroethane.** Previous effluent limits have been evaluated and determined to be protective. Previous effluent limits were determined based on 2009 Antidegradation Review. Effluent limits are retained. Therefore, the average monthly (AML) = 1 µg/L and maximum daily (MDL) = 1.5 µg/L.
- **Vinyl Chloride.** Previous effluent limits have been evaluated and determined to be protective. Previous effluent limits were determined based on 2009 Antidegradation Review. Therefore, the average monthly (AML) = 1 µg/L and maximum daily (MDL) = 1.5 µg/L.
- **Tetrachloroethylene.** Previous effluent limits have been evaluated and determined to be protective. Previous effluent limits were determined based on 2009 Antidegradation Review. Effluent limits are retained. Therefore, the average monthly (AML) = 0.8 µg/L and maximum daily (MDL) = 1.6 µg/L.
- **Trichloroethylene.** Previous effluent limits have been evaluated and determined to be protective. Previous effluent limits were determined based on 2009 Antidegradation Review. Effluent limits are retained. Therefore, the average monthly (AML) = 1 µg/L and maximum daily (MDL) = 1.5 µg/L.
- **Benzene.** Previous effluent limits have been evaluated and determined to be protective. Previous effluent limits were determined based on 2009 Antidegradation Review. Effluent limits are retained. Therefore, the average monthly (AML) = 1 µg/L and maximum daily (MDL) = 1.5 µg/L.

- **WET Test, Chronic.** Monitoring requirement only; monitoring is required to determine if reasonable potential exists for this facility's discharge to exceed water quality standards. WET Testing schedules and intervals are established in accordance with the Department's Permit Manual; Section 5.2 *Effluent Limits/ WET Testing for Compliance Bio-monitoring*. It is recommended that WET testing be conducted during the period of lowest stream flow. **Chronic Whole Effluent Toxicity**
 - **No less than Once/Year:**
 - Discharges with pollutants that pose a strong probability of causing chronic toxicity, such as pesticides or certain other chemicals.
 - Industrial dischargers with toxic parameters in the discharge; that may alter production processes; or facilities which handle large quantities of toxic substances or substances that are toxic in large amounts shall conduct chronic WET test at a frequency once per year.

Chronic Allowable Effluent Concentrations (AECs) for facilities that discharge to Class C, Class P (with default Mixing Considerations), or Lakes [10 CSR 20-7.031(4)(A)4.B.(IV)(b)] are 100%, 50%, 25%, 12.5%, & 6.25%.

Part V. SAMPLING AND REPORTING REQUIREMENTS:

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

ELECTRONIC DISCHARGE MONITORING REPORTING:

Due to upcoming federal regulations, all facilities will need to begin submitting their discharge monitoring reports electronically, called the eDMR system. To begin the process, please visit <http://dnr.mo.gov/env/wpp/edmr.htm>. This process is expected to save time, lessen paperwork, and reduce operating costs for both the facilities and the water protection program. Additional information may also be found at <http://dnr.mo.gov/pubs/pub2474.pdf>.

SAMPLING FREQUENCY & TYPE JUSTIFICATION:

Sampling and reporting frequency was generally retained from previous permit. The sampling types are representative of the discharges, and is protective of water quality.

Part VI. ADMINISTRATIVE REQUIREMENTS

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

PERMIT SYNCHRONIZATION:

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. <http://dnr.mo.gov/env/wpp/cpp/docs/watershed-based-management.pdf>. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the department to explore a watershed based permitting effort at some point in the future. Renewal applications must continue to be submitted within 180 days of expiration, however, in instances where effluent data from the previous renewal is less than three years old, that data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit. ***This permit will become synchronized by expiring end of 3rd quarter, 2018.***

PUBLIC NOTICE:

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. <http://dnr.mo.gov/env/wpp/permits/pn/index.html> 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 October 2, 2015 to November 2, 2015. No responses received.

DATE OF FACT SHEET: JULY 28, 2015

COMPLETED BY:

LEASUE MEYERS, EI
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
leasue.meyers@dnr.mo.gov

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

www.dnr.mo.gov

JUN 05 2015

Mr. Thomas Donohue
Senior Manager
Pfizer/Wyeth Holdings, LLC
100 Route 206 North
Peapack, NJ 07977

Re: Antidegradation Review for Wyeth Holdings, LLC, MO-0135763

Dear Mr. Donohue:

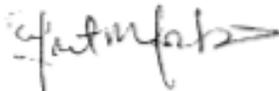
In accordance with the *Missouri Antidegradation Rule and Implementation Procedure (AIP)*, your proposed discharge is subject to an Antidegradation Review. The enclosed *Water Quality and Antidegradation Review (WQAR)* summarizes this preliminary determination based upon your Antidegradation Request dated April 17, 2015 and the renewal application for Wyeth Holding, LLC dated June 26, 2014 which proposed revision of effluent limits for 1,2-DCA and MCB.

Based on the Missouri Department of Natural Resources (department) initial review, preliminary determination is that the applicant-supplied antidegradation review documentation satisfies the requirements of the AIP. This WQAR/preliminary determination may be appealed within 30 days of this letter in accordance with the AIP Section II.F.4. Following the department's public notice of a draft Missouri State Operating Permit, the department will review any public notice comments received. If significant comments are made, the project may require another public notice. If no comments are received or comments are resolved without another public notice, this determination will be considered final.

If you should have questions, please contact Leasue Meyers by telephone at (573) 751-7906, by e-mail at leasue.meyers@dnr.mo.gov, or by mail at the Missouri Department of Natural Resources, Water Protection Program, PO Box 176, Jefferson City, Missouri 65102-0176.

Sincerely,

WATER PROTECTION PROGRAM



Refaat Mefrakis, P.E., Chief
Engineering Section

RM:lmn

Enclosure

c: Mr. Brian Wight, PE, URS Corporation
Northeast Regional Office



Missouri Department of Natural Resources
Water Protection Program
Water Pollution Control Branch
Engineering Section

Antidegradation Review Revision

FACILITY INFORMATION

FACILITY NAME: Wyeth Holding, LLC, Interim Groundwater Treatment System PERMIT #: MO0135763

COUNTY: Marion UTM COORDINATES: X= 633759; Y= 4409854

12-DIGIT HUC: 07110004-0304 LEGAL DESCRIPTION: SE¼ SE¼ Sec. 15, T58N, R5W

EDU*: Central Plains/Cuivre/Salt ECOREGION: Upper Mississippi Alluvial Plain

* Ecological Drainage Unit

OUTFALL CHARACTERISTICS

OUTFALL	DESIGN FLOW (MGD)	TREATMENT TYPE	EFFLUENT TYPE
001	0.216	Air stripping	Remediated Groundwater

RECEIVING WATERBODY INFORMATION

WATERBODY NAME: Tributary to Mississippi River (8-20-13 MUDD V 1.0) CLASS: C

PROJECT INFORMATION

DESCRIPTION: ARCADIS prepared, on behalf of Wyeth Holdings Company, the *Wyeth Holdings Corporation Groundwater Treatment System Antidegradation Report* dated April 2009. The remediation and clean-up of the historic chemical spill is part of a RCRA corrective action, which is regulated by the Department's Hazardous Waste Program, MOD0226075. The site is located on the flood plain of the Mississippi River approximately eight miles upstream from Hannibal, Missouri and is an active agricultural chemical production facility.

The groundwater extraction and air stripping system is designed to remove 99% of the concentrations of volatile organic compounds (VOCs). Air stripping is a process of pumping air bubbles into VOC polluted water and subsequently releasing the VOCs into the atmosphere. Air stripping is a function of the VOC's Henry's Law Constant. Those VOCs with relatively high Henry's Law constants can be easily stripped from water.

The 2015 revision to the Antidegradation Review is after 5 years of operation, 1,2-DCA and MCB is highly variable in the influent and the air stripping technology cannot consistently meet the previous best professional judgment limit and the proposed revised effluent limit is based on the historical manufacturer's performance.

PROPOSAL: According to the renewal operating permit application submitted June 26, 2014 and the follow up letters submitted by Wyeth Holding, LLC and their contractor, URS on March 4, 2015 and April 17, 2015; operational changes have been made and the manufacturer has revised the performance of the air stripper in regards to removal.

With the proposed change in the effluent limit for 1, 2-DCA from 2.7 µg/L to 70 µg/L, this effluent limit is still more protective than the human health water quality standard of 99 µg/L. The increase in MCB effluent limit from 1.0 µg/L to 100 µg/L, which is more protective than the 21,000 µg/L human health water quality standard.

DISCUSSION: The influent into the air stripper of 1,2-DCA has been highly variable with concentrations ranging from 50 µg/L to 675 µg/L. Wyeth is expecting that the concentrations of 1,2-DCA will increase to 3,000 µg/L with the installation of two new wells. MCB influent concentrations have varied from 9.7 µg/L to 2,090 µg/L.

The 2009 Antidegradation Review, the removal efficiencies and effluent limits were based on the modeling of one air stripper at 75 gpm at optimum conditions. The increase in the effluent limits for MCB and 1,2-DCA is based on installation of the best technology available, best professional judgment, and manufacturer's recommendation.

From the 2009 Antidegradation Review, the minimally-degrading effluent limit for 1,2-DCA was 212 µg/L and for MCB was 2122 µg/L. The proposed effluent limits of 70 µg/L for 1,2-DCA and 100 µg/L for MCB are more protective than the Water Quality Standards in 10 CSR 20-7.031 and the minimally-degrading effluent limits. The table below provides the new average monthly (AML) effluent limit and the maximum daily (MDL) effluent limit. To get the maximum daily effluent limit, the AML was multiplied by 1.5 per EPA's Technical Support Document, Section 5.4.2.

Parameter	Units	MDL	AML
1,2-DCA	µg/L	105	70
MCB	µg/L	150	100

Wyeth has modified its stripper system by placing the strippers in series to increase removal efficiencies. Wyeth installed and eventually removed two granular activated carbon vessels downstream of the air strippers in attempts to improve removal efficiencies, dosing of the influent with sequestrant to minimize biological and mineral precipitation of iron, and re-piping the air strippers to increase the air flow through the stripper. Wyeth injects ozone into the process to reduce the impacts of biofouling on the air stripper due to the concentrations of iron, arsenic, and other naturally occurring parameters in the groundwater.

DETERMINATION: The proposed change in effluent limits are subject to the Antidegradation Review; however the proposed effluent limits are more protective than the water quality standards. The Anti-backsliding provisions are met as the facility has installed, properly operated, and maintained the treatment plant but is still unable to meet the previously permitted effluent limits.

Wyeth Holding, LLC. groundwater treatment facility will result in minimal degradation of the segment identified in the Mississippi River. Per the requirements of the AIP, the effluent limits in this review were developed to be protective of beneficial uses and to retain the remaining assimilative capacity. MDNR has determined that the submitted review is sufficient and meets the requirements of the AIP. No further analysis is needed for this discharge.

Reviewer: Leasue Meyers, EI
Date: June 01, 2015
Unit Chief: John Rustige, P.E.



STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
 - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
2. **Monitoring Requirements.**
 - a. Records of monitoring information shall include:
 - i. The date, exact place, and time of sampling or measurements;
 - ii. The individual(s) who performed the sampling or measurements;
 - iii. The date(s) analyses were performed;
 - iv. The individual(s) who performed the analyses;
 - v. The analytical techniques or methods used; and
 - vi. The results of such analyses.
 - b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.
3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.
4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is “sufficiently sensitive” when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.
5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee’s sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

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

Section B – Reporting Requirements

1. **Planned Changes.**
 - a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
 - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
 - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1);
 - iii. The alteration or addition results in a significant change in the permittee’s sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
 - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **Non-compliance Reporting.**
 - a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.



STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
 - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
 - ii. Any upset which exceeds any effluent limitation in the permit.
 - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
 - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.
 4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.
 5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
 6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
 7. **Discharge Monitoring Reports.**
 - a. Monitoring results shall be reported at the intervals specified in the permit.
 - b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
 - c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.
- b. Notice.
 - i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
 - ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
 - c. Prohibition of bypass.
 - i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
 1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 3. The permittee submitted notices as required under paragraph 2. b. of this section.
 - ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.
3. **Upset Requirements.**
 - a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
 - b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - ii. The permitted facility was at the time being properly operated; and
 - iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
 - iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
 - c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

Section C – Bypass/Upset Requirements

1. **Definitions.**
 - a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending.
 - b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
 - c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. **Bypass Requirements.**
 - a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.

Section D – Administrative Requirements

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
 - a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
 - b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement



STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
- a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- c. A permittee with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
- a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
- i. Violations of any terms or conditions of this permit or the law;
- ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
- iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- iv. Any reason set forth in the Law or Regulations.
- b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
7. **Permit Transfer.**
- a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
- c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.



STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
 - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
 - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
 - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
 - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
 - c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.



RECEIVED

JUN 25 2014

June 25, 2014
16170731.00100

WATER PROTECTION PROGRAM

Missouri Department of Natural Resources
Water Protection Program/Permitting
PO Box 176
Jefferson City, Missouri 65102

**Subject: NPDES Operating Permit Renewal
Missouri State Operating Permit MO-0135763
Wyeth Holdings LLC**

Dear Sir or Madam:

On behalf of Wyeth LLC, this letter transmits Form A-Application for Operating Permit and Form C-Application for Discharge Permit-Manufacturing for renewal of the Missouri State Operating Permit MO-0135763. The permit is associated with Wyeth Holdings LLC Interim Groundwater Treatment System (IGTS) at the former American Cyanamid Chemical (ACC) Facility located in Palmyra, Missouri.

In 2007, the United States Environmental Protection Agency (USEPA) approved the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Report (ARCADIS, 2005) and the Phase II RFI Report (ARCADIS, 2006) and directed Wyeth (now Wyeth Holdings, LLC) to prepare a Corrective Measures Study (CMS) Work Plan in accordance with Section III of the Facility's RCRA Hazardous and Solid Waste Amendments (HSWA) Permit. The primary chemicals of concern (COCs) addressed by the IGTS are 1,2-dichloroethane (1,2-DCA) and monochlorobenzene (MCB). Construction of the system began in November 2009. Operation of the IGTS began in July 2010.

The IGTS is operated pursuant to the Hazardous Waste Management Facility Permit (Permit # MOD0226075) issued by the Missouri Department of Natural Resources (MDNR) and the HSWA Permit issued by the USEPA on April 25, 1990, to ACC. The USEPA is currently the lead agency for the groundwater remediation.

The IGTS was designed and installed by ARCADIS in July 2010 for establishment of hydraulic control and remediation of MCB and 1,2-DCA. The IGTS consists of three groundwater recovery wells (RW-1, RW-2, RW-3) with target flow rates of 40-60 gallons per minute (gpm) each, underground piping, and a building housing treatment equipment. The IGTS operation design included metering extracted groundwater at the treatment building and removal of volatile organic compounds from the groundwater by air stripping using two QED EZ-Tray Model 24.6 air strippers (AS-1 and AS-2) operating in parallel (total design flow rate of 150 gpm). Treated groundwater is discharged at Outfall 001. The receiving stream is an unnamed ditch that eventually discharges to the Mississippi River. The use of recovery wells and air stripping

URS Corporation
12120 Shamrock Plaza
Suite 300
Omaha, NE 68154
Tel: 402.334.8181
Fax: 402.334.1984
www.urscorp.com

treatment is an efficient way to hydraulically control and remediate the MCB and 1,2-DCA plume.

Upon initial startup the IGTS encountered frequent shutdowns (approximately every 6 weeks) due to fouling of the air stripper trays, which reduced the reliability of the IGTS for effective COC removal. The air strippers were then switched to operate in series. Sequestrant was also introduced to the influent stream in an attempt to control the iron and bio-fouling. The dosage of sequestrant was increased with minimal success. The average influent iron concentration was (and remains) about 10-20 mg/L, however the upper limit for which use of an iron sequestrant is typically recommended is about 5 mg/L. Manifestation of iron fouling of the air stripper includes biological oxidation and precipitation of ferrous iron, mineral (abiotic) oxidation and precipitation of ferric iron, and mineral deposition of dark brown iron oxides onto hard surfaces of the air strippers. The system has not operated at a sustained design rate of 150 gallons per minute since start-up of the system.

The original permit limits (daily maximum/monthly average of 4.1/2.7 µg/L 1,2-DCA and 1.5/1.0 µg/L MCB) were established based on modeled COC removal by one air stripper (99.91% removal of 1,2-DCA, operating at optimum conditions) at a flow rate of 75 gpm. Based on the current QED Stripper Model calculation, the current air strippers in series will treat a maximum influent 1,2-DCA concentration at 675 µg/L (under optimum conditions) and meet the monthly average discharge limit of 2.7 µg/L. The influent concentrations from recovery wells RW-1, RW-2, and RW-3 during 2013 for 1,2-DCA varied from 50 micrograms per liter (µg/L) to 532 µg/L with MCB concentrations varying from 9.7 µg/L to 2,090 µg/L. Wyeth Holdings LLC is requesting a review and increase of the discharge limits for 1,2-DCA and MCB.

The Clean Water Act establishes express statutory language prohibiting the backsliding of effluent limitations. However, there are specific exceptions to the general prohibition against establishment of less stringent effluent limitations. These exceptions include: A) There have been material and substantial alternations or additions to the permitted facility which justify this relaxation, B) New information (other than revised regulations, guidance, or test methods) is available that was not available at the time of permit issuance which would have justified a less stringent effluent limitation, C) Technical mistakes or mistaken interpretations of the law were made in issuing the permit under Section 402(a)(1)(b), D) Good cause exists due to events beyond the permittee's control (e.g., acts of God) and for which there is no reasonably available remedy E) The permit has been modified under 40 CFR 122.62, or a variance has been granted. F) The permittee has installed and properly operated and maintained required treatment facilities but still has been unable to meet the permit limitations (relaxation may only be allowed to the treatment levels actually achieved).

Since start-up of the IGTS in July 2010, the system has yet to operate at the designed capacity of 150 gpm. The system has undergone multiple reconfigurations of the treatment stream in order to meet the permit limits. These reconfigurations included re-piping of the IGTS so that the air

strippers operate in series (original design was to operate in parallel), installation (and eventual removal) of two granular activated carbon vessels downstream of the air strippers, dosing of the influent with sequestrant to minimize biological and mineral precipitation of iron, dosing of the influent stream with ozone to minimize biological precipitation of iron, and re-piping of the air stripper intakes to increase air flow to the air strippers. The system has been properly operated and maintained, but the IGTS has been unable to consistently operate at the designed 150 gpm capacity which impacts the ability to meet the current permit limits.

A review of Federal and State rules and laws that regulate the discharge of 1,2-DCA and MCB indicate that the current permit discharge limits of 4.1 µg/L and 1.5 µg/L, respectively may be overly conservative. In accordance with Missouri 10-CSR-20-7, as long as the effluent is not discharged into a drinking water source zone as defined by the State of Missouri, the discharge limits can target Human Health Protection and Fish Consumption discharge criteria. In that category, the discharge limit for 1,2-DCA is 99 µg/L and the MCB discharge limit is 21,000 µg/L according to Table A of Missouri 10-CSR-20-7.

Wyeth Holdings LLC is requesting an increase of the discharge limits for 1,2-DCA and MCB with renewal of the permit. The revised discharge limits would target the Human Health Protection and Fish Consumption discharge criteria of 99 µg/L for 1,2-DCA and the Drinking Water Standard of 100 µg/L for MCB. Although a discharge limit of 21,000 µg/L for MCB may be permissible, a more appropriate limit of 100 µg/L is requested based on the 2013 influent concentrations which varied from 9.7 µg/L to 2090 µg/L. We would like to discuss the discharge limits in a meeting with MDNR once you have had a chance to review this application.

Please call me at 402.952.2557 if you have any questions regarding this letter.

Sincerely,
URS Corporation



Brian K. Wight, P.E.

Project Manager

I:\Pfizer, Hannibal\4.0 Deliverables\4.4 NPDES Monthly Report\NPDES Renewal\Revised NPDES Cover 060914.doc

RECEIVED



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH
FORM A – APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT
 UNDER MISSOURI CLEAN WATER LAW

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED
7/29/14	100

AP 8803

WATER PROTECTION PROGRAM

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

1. This application is for:

- An operating permit and antidegradation review public notice
- A construction permit following an appropriate operating permit and antidegradation review public notice
- A construction permit and concurrent operating permit and antidegradation review public notice
- A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required)
- An operating permit for a new or unpermitted facility Construction Permit # _____
- An operating permit renewal: permit # MO- 0135763 Expiration Date 12/31/14
- An operating permit modification: permit # MO- _____ Reason: _____

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

2. FACILITY

NAME Wyeth Holdings LLC, Interim Groundwater Treatment System		TELEPHONE WITH AREA CODE (908) 901-7395	
ADDRESS (PHYSICAL) 3150 Highway JJ		CITY Palmyra	STATE ZIP CODE MO 63461

3. OWNER

NAME Wyeth Holdings LLC		E-MAIL ADDRESS N/A	TELEPHONE WITH AREA CODE (908) 901-7395
ADDRESS (MAILING) 100 Route 206 North		CITY Peapack	STATE ZIP CODE NJ 07977

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

4. CONTINUING AUTHORITY

NAME Wyeth Holdings LLC		TELEPHONE WITH AREA CODE (908) 901-7395	
ADDRESS (MAILING) 100 Route 206 North		CITY Peapack	STATE ZIP CODE NJ 07977

5. OPERATOR

NAME Rich Hart		CERTIFICATE NUMBER N/A	TELEPHONE WITH AREA CODE (314) 429-0100
ADDRESS (MAILING) 1001 Highlands Plaza Drive West, Suite 300		CITY St. Louis	FAX (314) 429-0462 STATE ZIP CODE MO 63110-1337

6. FACILITY CONTACT

NAME Tom Donohue		TITLE Senior Manager	TELEPHONE WITH AREA CODE (908) 901-7395
			FAX

7. ADDITIONAL FACILITY INFORMATION

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

001 SW ¼ NE ¼ Sec 15 T 58N R 5W Mario County
 UTM Coordinates Easting (X): _____ Northing (Y): _____
 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

002 _____ ¼ _____ ¼ Sec _____ T _____ R _____ County
 UTM Coordinates Easting (X): _____ Northing (Y): _____

003 _____ ¼ _____ ¼ Sec _____ T _____ R _____ County
 UTM Coordinates Easting (X): _____ Northing (Y): _____

004 _____ ¼ _____ ¼ Sec _____ T _____ R _____ County
 UTM Coordinates Easting (X): _____ Northing (Y): _____

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

001 – SIC 9512 and NAICS 924120 002 – SIC _____ and NAICS _____
 003 – SIC _____ and NAICS _____ 004 – SIC _____ and NAICS _____

11
1.01

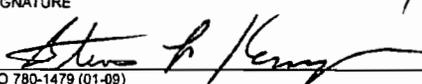
8. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION (Complete all forms that are applicable.)			
A.	Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? If yes, complete Form C (unless storm water only, then complete U.S. Environmental Protection Agency Form 2F per Item C below)	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
B.	Is your facility considered a "Primary Industry" under EPA guidelines. If yes, complete Forms C and D.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
C.	Is application for storm water discharges only? If yes, complete EPA Form 2F.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
D.	Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.		
E.	Is wastewater land applied? If yes, complete Form I.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
F.	Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? If yes, complete Form R.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>

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

NAME
None, permitted facility only

ADDRESS	CITY	STATE	ZIP CODE
N/A	N/A	N/A	N/A

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 WITH AREA CODE
Vice President - Wyeth Holdings LLC	908-901-6558
SIGNATURE	DATE SIGNED
	6/25/14

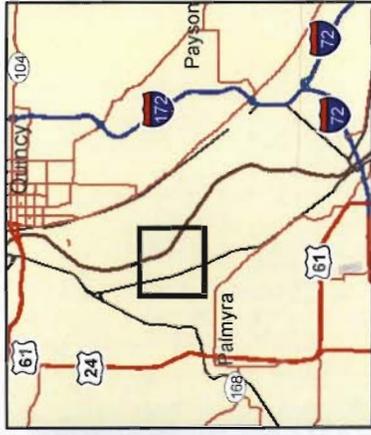
MO 780-1479 (01-09)

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.

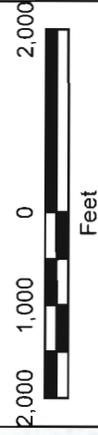
HAVE YOU INCLUDED:

- Appropriate Fees?
- Map at 1" = 2000' scale?
- Signature?
- Form C, if applicable?
- Form D, if applicable?
- Form 2F, if applicable?
- Form I (Irrigation), if applicable?
- Form R (Sludge), if applicable?



Legend

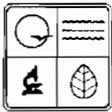
- Outfall
- ◆ Recovery Well



FORMER ACC
Hannibal, Missouri

Drawn By: DPG	Date: 4/22/2014	Project No: 16170731	Figure
Checked By: KM	Revised: 0		

RECEIVED



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

Wyeth Holdings LLC, Interim Groundwater Treatment System

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

MO-0135763

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).

N/A

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

A. FIRST 9512 Groundwater treatment System B. SECOND _____
C. THIRD _____ D. FOURTH _____

2.1 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION

OUTFALL NUMBER (LIST) SW 1/4 NW 1/4 SEC. 15 T. 58N R. 5W Marion COUNTY

2.2 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER

OUTFALL NUMBER (LIST) RECEIVING WATER
001 Unnamed ditch to the Mississippi River

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS

groundwater -----> RW 1 -----|
groundwater -----> RW 2 -----> Combined Influent -----> Air Stripper 1 -----> Air Stripper 2 -----> Outfall 001
groundwater -----> RW 3 -----|

Groundwater is extracted by three Recovery Wells (RW).
The combined influent goes through two air strippers (in series).
The treated groundwater is discharged into Outfall 001.

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 <i>(list)</i>	2. OPERATION(S) CONTRIBUTING FLOW <i>(list)</i>	3. FREQUENCY		4. FLOW				C. DURATION <i>(in days)</i>
		A. DAYS PER WEEK <i>(specify average)</i>	B. MONTHS PER YEAR <i>(specify average)</i>	A. FLOW RATE <i>(in mgd)</i>		B. TOTAL VOLUME <i>(specify with units)</i>		
				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 <i>(list outfall numbers)</i>
A. QUANTITY PER DAY	B. UNITS OF MEASURE	C. OPERATION, PRODUCT, MATERIAL, ETC. <i>(specify)</i>	

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.

3.10 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 WITH IN THE LAST THREE YEARS?

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

Acute NPDES Whole Effluent Toxicity (WET) Test

A WET test is a quantifiable method of determining if 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.

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.	9608 Loiret Boulevard Lenexa, KS 66219	913.599.5665	1,2-Dichloroethane, chlorobenzene, 1,1,2-Trichloroethane, Vinyl Chloride, Tetrachloroethene, Trichloroethene, Benzene
Aqua-Tox, Inc.	4880 Robb Street, Suite 8 Wheat Ridge, CO 80033	303.621.4880	Acute NPDES WET Test

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

Vice President - Wyeth Holdings LLC

908-901-6558

SIGNATURE (SEE INSTRUCTIONS)

DATE SIGNED

Steven P. Kern

6/25/14

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

OUTFALL NO

INTAKE AND EFFLUENT CHARACTERISTICS

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

1. POLLUTANT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	3. UNITS (specify if blank)		4. INTAKE (optional)		B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		A. CONCENTRATION	B. MASS	(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)	N/A											
B. Chemical Oxygen Demand (COD)	N/A											
C. Total organic Carbon (TOC)	N/A											
D. Total Suspended Solids (TSS)	N/A											
E. Ammonia (as N)	N/A											
F. Flow	VALUE 0.15		VALUE 0.09		VALUE 0.216		1	MGD		VALUE		
G. Temperature (winter)	VALUE N/A		VALUE		VALUE			°C		VALUE		
H. Temperature (summer)	VALUE N/A		VALUE		VALUE			°C		VALUE		
I. pH	MINIMUM 7.5	MAXIMUM 8.8	MINIMUM	MAXIMUM			1	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 (1) CONCENTRATION	(2) MASS	B. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	C. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	B. NO. OF ANALYSES
A. Bromide (24959-67-9)		X											
B. Chlorine, Total Residual		X											
C. Color		X											
D. Fecal Coliform		X											
E. Fluoride (16984-48-8)		X											
F. Nitrate - Nitrate (as N)		X											

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

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 (if available)		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	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												
I. Phosphorus (as P), Total (7723-14-0)		X												
J. Sulfate (as SO ₄) (14808-79-8)		X												
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 <i>(if available)</i>	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE <i>(if available)</i>		C. LONG TERM AVRG. VALUE <i>(if available)</i>		D. NO. OF ANALYSES	A. CONCENTRATION	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												
4M. Cadmium, Total (7440-43-9)		X												
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												
9M. Mercury, Total (7439-97-6)		X												
10M. Nickel, Total (7440-02-0)		X												
11M. Selenium, Total (7782-49-2)		X												
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												

