

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-0112526

Owner: Jim Smith (BP Remediation Services Company)
Address: 201 Helios Way, 6th Floor Houston TX 77079-2678

Continuing Authority: Arcadis U.S., Inc.
Address: 2424 Harrodsburg Road, Suite 203, Lexington, KY 40503

Facility Name: Amoco, Chariton River Oil Spill Site
Facility Address: Highway F & Emerald Street, Ethel, MO 63549

Legal Description: See page 2
UTM Coordinates: See page 2

Receiving Stream: Little Turkey Creek (C)
First Classified Stream and ID: Little Turkey Creek (C) (3960)
USGS Basin & Sub-watershed No.: Painter Creek-Chariton River (10280202-0402)

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

FACILITY DESCRIPTION


See Page 2

This permit does not authorize discharges under the Missouri Clean Water Law; 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.

January 1, 2018 April 1, 2019
Effective Date Modification Date

December 31, 2021
Expiration Date


Edward B. Galbraith, Director, Division of Environmental Quality


Chris Wieberg, Director, Water Protection Program

FACILITY DESCRIPTION (CONTINUED)

Former oil spill remediation site. The remediation system has been deactivated and the groundwater treatment system has been removed from the site. Downstream and well monitoring is continued under the Revised Remedial Action Plan (RRAP) from September, 1991 and the 1993 Settlement Order, Case No. CV193-261CC (See Appendix A-Revised Remedial Action Plan, and Appendix B-Settlement Order for more information).

OUTFALL #001 – Remediated Groundwater, Discharge Not Authorized

Previously the location of discharges from the groundwater remediation system. Discharge from this outfall was discontinued in 2003. No further discharge is authorized from this outfall. No monitoring for this outfall is required as discharge is not authorized.

Legal Description: Sec.30, T59N, R16W, Macon County
UTM Coordinates: X = 523827, Y = 4415576

PERMITTED FEATURE #002 – Downstream Monitoring Point

Downstream monitoring point as assigned in RRAP agreement from 1991.

Legal Description: Sec. 32, T59N, R16W, Macon County
UTM Coordinates: X = 524629, Y = 4415187

PERMITTED FEATURE #003 – Upstream Monitoring Point

Upstream monitoring point as assigned in RRAP agreement from 1991. Samples are taken only for comparison to results at outfall #002 as outlined in the RRAP agreement.

Legal Description: Sec. 31, T59N, R16W, Macon County
UTM Coordinates: X = 522745, Y = 4415369

MW1- Monitoring Well #1

Groundwater monitoring well.

Legal Description: Sec. 30, T59N, R16W, Macon County
UTM Coordinates: X = 523550, Y = 4415574

RW-23 – Recovery Well #23

Groundwater monitoring well.

Legal Description: Sec. 30, T59N, R16W, Macon County
UTM Coordinates: X = 523551 Y = 4415574

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Permitted Feature #002, #003** Downstream and Upstream Monitoring		TABLE A-1 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				
The final effluent limitations shall become effective on January 1, 2018 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
EFFLUENT PARAMETERS	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
PHYSICAL						
Flow**	MGD	*		*	once/6 months φ	estimate
CONVENTIONAL						
pH Ω**	SU	6.0 to 9.0		-	once/6 months φ	grab
HYDROCARBONS						
Total BTEX**	µg/L	750		750	once/6 months φ	grab
Benzene**	µg/L	50		50	once/6 months φ	grab
Ethylbenzene**	µg/L	*		*	once/6 months φ	grab
Toluene**	µg/L	*		*	once/6 months φ	grab
Xylene**	µg/L	*		*	once/6 months φ	grab
Total Petroleum Hydrocarbons (DRO)**	mg/L	10	10	once/6 months φ	grab	
MONITORING REPORTS FOR OUTFALL #002 SHALL BE SUBMITTED <u>TWICE PER YEAR</u> ; THE FIRST REPORT IS DUE <u>JULY 28, 2018</u> . MONITORING REPORTS FOR OUTFALL #003 ARE UNSCHEDULED, AND SHALL BE SUBMITTED CONCURRENTLY WITH OUTFALL #002 IN MONITORING PERIODS WHERE SAMPLES ARE TESTED. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

MW-1 and RW-23 Monitoring and Recovery Wells		TABLE A-1 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on January 1, 2018 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
EFFLUENT PARAMETERS	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
HYDROCARBONS						
Total BTEX	µg/L	§		§	once/quarter∅	grab
Benzene	µg/L	§		§	once/quarter∅	grab
Ethylbenzene	µg/L	§		§	once/quarter∅	grab
Toluene	µg/L	§		§	once/quarter∅	grab
Total Xylenes	µg/L	§		§	once/quarter∅	grab
Total Petroleum Hydrocarbons (DRO)	mg/L	§		§	once/quarter∅	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>APRIL 28, 2018</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

See notes on page 4

Notes:

* Monitoring requirement only.

** The parameter limits for permitted feature #002 are net of the figures established at a sample point 1/8 to ¼ mile upstream of the spill site (permitted feature #003). Samples shall be taken at permitted feature #003 on the same frequency as, and within 24 hours of, those taken at permitted feature #002. As long as the samples from permitted feature #002 are below the above limitations on a gross basis, the upstream sample from permitted feature #003 need not be tested. If any of the above parameter limitations are not met on a gross basis, the upstream sample will be tested for any parameter exceeding the limit to determine if the parameter is within the limitation on a net basis. (This condition is established in the RRAP.)

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

§ These parameters are monitoring only; however, the following standards are required to meet the conditions of the established RRAP:

RRAP Groundwater Cleanup Standards	
Total BTEX	750 µg/L
Benzene	50 µg/L
Ethylbenzene	320 µg/L
Toluene	150 µg/L
Xylene	320 µg/L
Total Petroleum Hydrocarbons	10 mg/L

◇ Quarterly sampling

MINIMUM QUARTERLY SAMPLING REQUIREMENTS			
QUARTER	MONTHS	QUARTERLY EFFLUENT PARAMETERS	REPORT IS DUE
First	January, February, March	Sample at least once during any month of the quarter	April 28 th
Second	April, May, June	Sample at least once during any month of the quarter	July 28 th
Third	July, August, September	Sample at least once during any month of the quarter	October 28 th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 th

φ Twice yearly sampling schedule:

MINIMUM BI-ANNUAL SAMPLING REQUIREMENTS			
	MONTHS	WET TEST	REPORT IS DUE
First Half of Year	January, February, March, April, May, June	Sample at least once during any month of the half year	July 28 th
Second Half of Year	July, August, September, October, November, December	Sample at least once during any month of the half year	January 28 th

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 is subject to the terms of the attached Revised Remedial Action Plan agreement dated September 20, 1991, between Amoco Pipeline Company and Missouri Department of Natural Resources, and the 1993 Settlement Order, Case No. CV193-261CC, which are hereby incorporated as though fully set forth herein.
2. If the permittee chooses to sample groundwater monitoring wells not specifically required for monitoring under this permit, the analytical results of all such samples must be submitted to the department, via the eDMR system if enrolled, within 60 days of analysis.
3. Any well found to have a layer of light non-aqueous phase liquid (LNAPL) must be reported to the department via the eDMR system within 10 days of discovery. The location, well designator, approximate amount of LNAPL, and removal mechanism, if any, should be included in the report. This applies to all monitoring wells on the site, whether they are considered active under the RRAP or not.
4. A monitoring well that is abandoned as defined in 10 CSR 23-1.010(1) must be plugged. If a monitoring well has been determined to present a threat to groundwater, or determined to be in such a state of disrepair that the well cannot be used for its intended purpose, the Missouri Geological Survey may order that the well be permanently plugged.
 - (a) When plugging a monitoring well, the following minimum requirements shall be met:
 - i. All pumps, sampling equipment, debris, or other substances must be removed;
 - ii. All surface completion and permanent casing, riser pipe, and well screen must be removed from the borehole. If, when removing the casing, the borehole begins to collapse, grout must be simultaneously emplaced while the casing is removed to ensure a proper seal;
 - iii. The well must be filled from bottom to top with grout. 10 CSR 23-4.060(9) sets standards for grout types that may be used when plugging monitoring wells;
 - iv. If bentonite grout is used, after the grout is fully cured, check for settlement and top off if necessary. Fill with soil and compact the upper two feet (2') of hole or pave. The purpose of the compacted soil is to ensure that dehydration of the bentonite grout does not occur over time. If cement-slurry grout is used, fill the upper two feet (2') with soil or pave; and
 - v. A monitoring well that is less than twenty-four feet (24') in total depth may be completely excavated as opposed to being plugged with grout. If the remaining hole is ten feet (10') or more in depth, it must be filled with clean replacement material that is compactable to a permeability less than, or equal to, the minimum permeability of the encompassing native materials. A monitoring well installation contractor must be on site at all times during the excavation and filling operations.
 - (b) The plugging or complete excavation of a monitoring well must be reported on a registration report form supplied by the Missouri Geological Survey.
 - (c) Monitoring wells must be plugged by a non-restricted monitoring well installation contractor.
 - (d) Temporary monitoring wells ten feet (10') or greater must be plugged by removing any temporary pipe and filling the well from total depth to three feet (3') from the surface with approved grout, with the remainder of the well filled with compacted uncontaminated native material or grout.
5. The full implementation of this operating permit, which includes implementation of any applicable schedules of compliance, shall constitute compliance with all applicable federal and state statutes and regulations in accordance with §644.051.16, RSMo, and the CWA section 402(k); however, this permit may be reopened and modified, or alternatively revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), §304(b)(2), and §307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or controls any pollutant not limited in the permit.
6. All outfalls and permitted features must be clearly marked in the field.
7. Changes in Discharges of Toxic Pollutant

In addition to the reporting requirements under §122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

 - (a) That an activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile;
 - (3) Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;

C. SPECIAL CONDITIONS, CONTINUED

- (4) One milligram per liter (1 mg/L) for antimony;
 - (5) Five (5) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - (6) The notification level established by the department in accordance with 40 CFR 122.44(f).
 - (b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - (1) Five hundred micrograms per liter (500 µg/l);
 - (2) One milligram per liter (1 mg/l) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with §122.21(g)(7).
 - (4) The level established by the Director in accordance with §122.44(f).
8. Report as no-discharge when a discharge does not occur during the report period. For instream samples, report as “no flow” if no stream flow occurs during the reporting period.
9. Electronic Discharge Monitoring Report (eDMR) Submission System
 - (a) The permittee shall submit an eDMR Permit Holder and Certifier Registration form within **90 days** of the effective date of this permit. Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent limits and monitoring shall be submitted by the permittee via an electronic system to ensure a timely, complete, accurate, and nationally-consistent set of data. Visit <http://dnr.mo.gov/pubs/pub2474.pdf> to access the Facility Participation Package which contains the eDMR Permit Holder and Certifier Registration form.
Once the permittee is activated in the eDMR system:
 - (b) Programmatic Reporting Requirements. The following reports (if required by this permit) must be electronically submitted as an attachment to the eDMR system until such a time when the current or a new system is available to allow direct input of the data:
 - (1) Any additional report required by the permit excluding bypass reporting.
After such a system has been made available by the department, required data shall be directly input into the system by the next report due date.
 - (c) Other actions. The following shall be submitted electronically after such a system has been made available by the department:
 - (1) General Permit Applications/Notices of Intent to discharge (NOIs);
 - (2) Notices of Termination (NOTs);
 - (3) No Exposure Certifications (NOEs);
 - (4) Low Erosivity Waivers and Other Waivers from Stormwater Controls (LEWs); and
 - (5) Bypass reporting.
 - (d) Electronic Submissions. To access the eDMR system, use the following link in your web browser: <https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx>.
 - (e) Waivers from Electronic Reporting. The permittee must electronically submit compliance monitoring data and reports unless a waiver is granted by the department in compliance with 40 CFR Part 127. The permittee may obtain an electronic reporting waiver by first submitting an eDMR Waiver Request Form: <http://dnr.mo.gov/forms/780-2692-f.pdf>. The department will either approve or deny this electronic reporting waiver request within 120 calendar days. Only permittees with an approved waiver request may submit monitoring data and reports on paper to the Department for the period that the approved electronic reporting waiver is effective.
10. Reporting of Non-Detects
 - (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
 - (b) The permittee shall not report a sample result as “Non-Detect” without also reporting the detection limit of the test. Reporting as “Non-Detect” without also including the detection limit will be considered failure to report, which is a violation of this permit.
 - (c) The permittee shall report the “Non-Detect” result using the less than sign and the minimum detection limit (e.g. <10).
 - (d) Where the permit contains a Minimum Level (ML) and the permittee is granted authority in the permit to report zero in lieu of the < ML for a specified parameter (conventional, priority pollutants, metals, etc.), then zero (0) is to be reported for that parameter.
 - (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
 - (f) When calculating monthly averages, one-half of the minimum detection limit (MDL) should be used instead of a zero. Where all data are below the MDL, the “<MDL” shall be reported as indicated in item (c).

C. SPECIAL CONDITIONS, CONTINUED

11. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).
12. 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.
13. To protect the general criteria found at 10 CSR 20-7.031(4), before releasing water accumulated in secondary containment areas, it must be examined for hydrocarbon odor and presence of sheen. If the presence of odor or sheen is indicated, the water shall be treated using an appropriate method or disposed of in accordance with legally approved methods, such as being sent to a wastewater treatment facility. Following treatment, the water shall be tested for oil and grease, benzene, toluene, ethylbenzene, and xylene using 40 CFR part 136 methods. All pollutant levels must be below the most protective, applicable standards for the receiving stream, found in 10 CSR 20-7.031 Table A. Records of all testing and treatment of water accumulated in secondary containment shall be stored in the SWPPP to be available on demand to DNR and EPA personnel.
14. 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 and made available to the department upon request.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
STATEMENT OF BASIS
MO-0112526
AMOCO, CHARITON RIVER OIL SPILL SITE

This Statement of Basis (Statement) gives pertinent information regarding minor modification to the above listed operating permit without the need for a public comment process. A Statement is not an enforceable part of a Missouri State Operating Permit.

Part I – Facility Information

Facility Type: Industrial
Facility SIC Code(s): #4613, 9999
Facility Description: Former oil spill remediation site. The remediation system has been deactivated and the groundwater treatment system has been removed from the site. Downstream and well monitoring is continued under the Revised Remedial Action Plan (RRAP) from September, 1991 and the 1993 Settlement Order, Case No. CV193-261CC

Part II – Modification Rationale

This operating permit is hereby modified to reflect a change in ownership and continuing authority.

Continuing authority is changed to “Arcadis U.S., Inc.”. Continuing authority address is changed to “2424 Harrodsburg Road, Suite 203 Lexington Kentucky 40503”

The charter number for the continuing authority for this facility is F00452229; this number was verified by the permit writer on February 19, 2019 to be associated with the facility and precisely matches the continuing authority reported by the facility.

Owner name is changed to “Jim Smith (BP Remediation Services Company)”. Owner address is changed to “201 Helios Way, 6th Floor, Houston, TX 77079-2678”

No other changes were made at this time.

Part III – 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.

DATE OF FACT SHEET: FEBRUARY 27, 2019

COMPLETED BY:

SHAWN MASSEY, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - INDUSTRIAL WASTEWATER UNIT
(573) 751-1399
Shawn.massey@dnr.mo.gov

MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0112526
AMOCO, CHARITON RIVER OIL SPILL SITE

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

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

Part I. FACILITY INFORMATION

Facility Type:	Industrial
Facility SIC Code(s):	4613, 9999
Application Date:	07/06/2016
Expiration Date:	12/31/2016
Last Inspection:	01/29/2014 In Compliance

FACILITY DESCRIPTION:

On November 5, 1990 Amoco Pipeline Company experienced a failure of a crude oil transmission line on a private farm, spilling 110,000 gallons of crude oil, which left an estimated 10,000 cubic yards of contaminated surface soil and debris, contaminated groundwater, and soils at depth contaminated with crude oil residues. Amoco entered an agreement with the private landowners on July 22, 1991 to allow them to undertake a remedial action plan to clean up the contamination.

A Revised Remedial Action Plan (RRAP) was developed by Amoco and approved by the department in September of 1991 (See Appendix-Revised Remedial Action Plan for more information). The RRAP proposed on-site bioremediation of impacted surface soils and installation of a groundwater recovery and treatment system. Soil and groundwater cleanup standards for benzene, toluene, ethylbenzene, xylenes (BTEX), total BTEX and total petroleum hydrocarbons (TPH) were included in the RRAP. In December 1993, Amoco Pipeline Company (now BP), the Missouri Attorney General, and the Missouri Department of Natural Resources entered into a Settlement Order (Order) pertaining to the release of crude oil. The 1993 Order included the cleanup standards established in the RRAP. The RRAP, and subsequent revisions, is fully incorporated in this permit. The RRAP establishes cleanup levels which Amoco must achieve in the soil and groundwater to be released from the RRAP and WPP permit. Amoco/BP conducted surface soil (0 – 1.5' below ground surface) remediation and free product recovery, as well as soil, surface water, and groundwater investigation and monitoring at the site in accordance with the terms of the Order and RRAP for a number of years. Currently no remediation is occurring at the site. This permit no longer authorizes discharges from the groundwater remediation system. The number of monitoring wells was decreased over the years as each well reached the minimum of three years with no exceedances of the RRAP established limits. The number of quarterly monitored groundwater wells has been reduced to two at this time, MW-1 and RW-23.

The permit remains effective because it is currently the sole method to track compliance with the RRAP at the Department. The terms of the RRAP have not been met at this time, and therefore the site is ineligible for permit termination. While there seems to be ongoing natural attenuation of the oil contamination at this site, data submitted to the department indicates contamination is still present in measureable quantities that could present a risk to human health if an exposure pathway developed.

PERMITTED FEATURES TABLE:

OUTFALL	AVERAGE FLOW	DESIGN FLOW	TREATMENT LEVEL	EFFLUENT TYPE
#001	Sampling not required by this permit, no discharge is authorized.			
#002	n/a	n/a	none	instream monitoring
#003	n/a	n/a	none	instream monitoring

FACILITY PERFORMANCE HISTORY & COMMENTS:

The discharge monitoring reports were reviewed for the last five years. There were no instream exceedances noted at permitted feature #002.

The previous permit required the submission of a Site Investigation, which followed a work plan developed by Amoco and approved February 9, 2015 by the department. The permit writer reviewed the submitted site investigation and determined the site has not been cleaned up to levels compliant with the RRAP. This permit is to continue under the RRAP until the designated cleanup levels are reached. Alternatively, BP may choose to submit a proposal to the department to establish alternative cleanup standards or permit limits using the Missouri Risk-Based Corrective Action (MRBCA) process or other risk-based process.

At this time, the department has not received a formal request from Arcadis, URS or BP to establish alternative cleanup standards or permit limits, whether by utilizing a risk-based process such as MRBCA, or otherwise. Consequently, at this time the department has not considered or approved any changes to the original RRAP plan to incorporate new information, and this permit is continued.

Should BP intend to propose use of a risk-based process at the site for department approval, MRBCA guidance is available online at <https://dnr.mo.gov/env/hwp/departmentsmrbc.htm>.

RRAP Soil Cleanup Standards		RRAP Groundwater Cleanup Standards	
Total BTEX	5.5 mg/kg	Total BTEX	750 µg/L
Benzene	0.5 mg/kg	Benzene	50 µg/L
Ethylbenzene	2.0 mg/kg	Ethylbenzene	320 µg/L
Toluene	1.0 mg/kg	Toluene	150 µg/L
Xylene	2.0 mg/kg	Xylene	320 µg/L
Total Petroleum Hydrocarbons	100 mg/kg	Total Petroleum Hydrocarbons	10 mg/L

Approximately 10,000 yd³ of impacted surface soils were remediated in an on-site bioremediation area. The bioremediation area was decommissioned in 1996. A groundwater recovery and treatment system was installed in 1991 to remediate hydrocarbon-impacted groundwater and provide hydraulic control of shallow groundwater to minimize the potential for impact to Little Turkey Creek. The groundwater recovery and treatment system were de-activated, with department approval, in 2003. The groundwater treatment system and associated building were removed in 2014 in accordance with a department approved work plan. Groundwater monitoring has been ongoing at wells that do not meet the standards established in the RRAP. Once a well met the standards of the RRAP for three years, it was removed from the monitoring program. In 2012, the department denied a request to terminate the permit because not all of the standards in the RRAP had been met. The permit is required by the RRAP and is the sole tracking device for ensuring that the standards of the RRAP are achieved as required by the 1993 Order.

MW-1 and RW-23 continues to have intermittent exceedances of the RRAP standards for Benzene (50 µg/L) and TPH (10 mg/L).

MW-1				
Date	Parameter	Concentration	Parameter	Concentration
06/29/2015	Benzene	35.7 µg/L	TPH	2.9 mg/L
09/19/2016	Benzene	160 µg/L	TPH	5.6 mg/L
12/13/2016	Benzene	NS*	TPH	NS*

*Not sampled due to presence of light non-aqueous phase liquid (LNAPL)

RW-23				
Date	Parameter	Concentration	Parameter	Concentration
12/12/2014	Benzene	<1 µg/L	TPH	6.9
03/26/2015	Benzene	2.6 µg/L	TPH	5.9
06/29/2015	Benzene	2.5 µg/L	TPH	2.2
09/01/2015	Benzene	<1 µg/L	TPH	1.3
12/01/2015	Benzene	2.2 µg/L	TPH	6.4
03/23/2016	Benzene	<1 µg/L	TPH	5
06/14/2016	Benzene	<1 µg/L	TPH	10.6
09/19/2016	Benzene	<1 µg/L	TPH	8.7
12/13/2016	Benzene	<1 µg/L	TPH	8.2

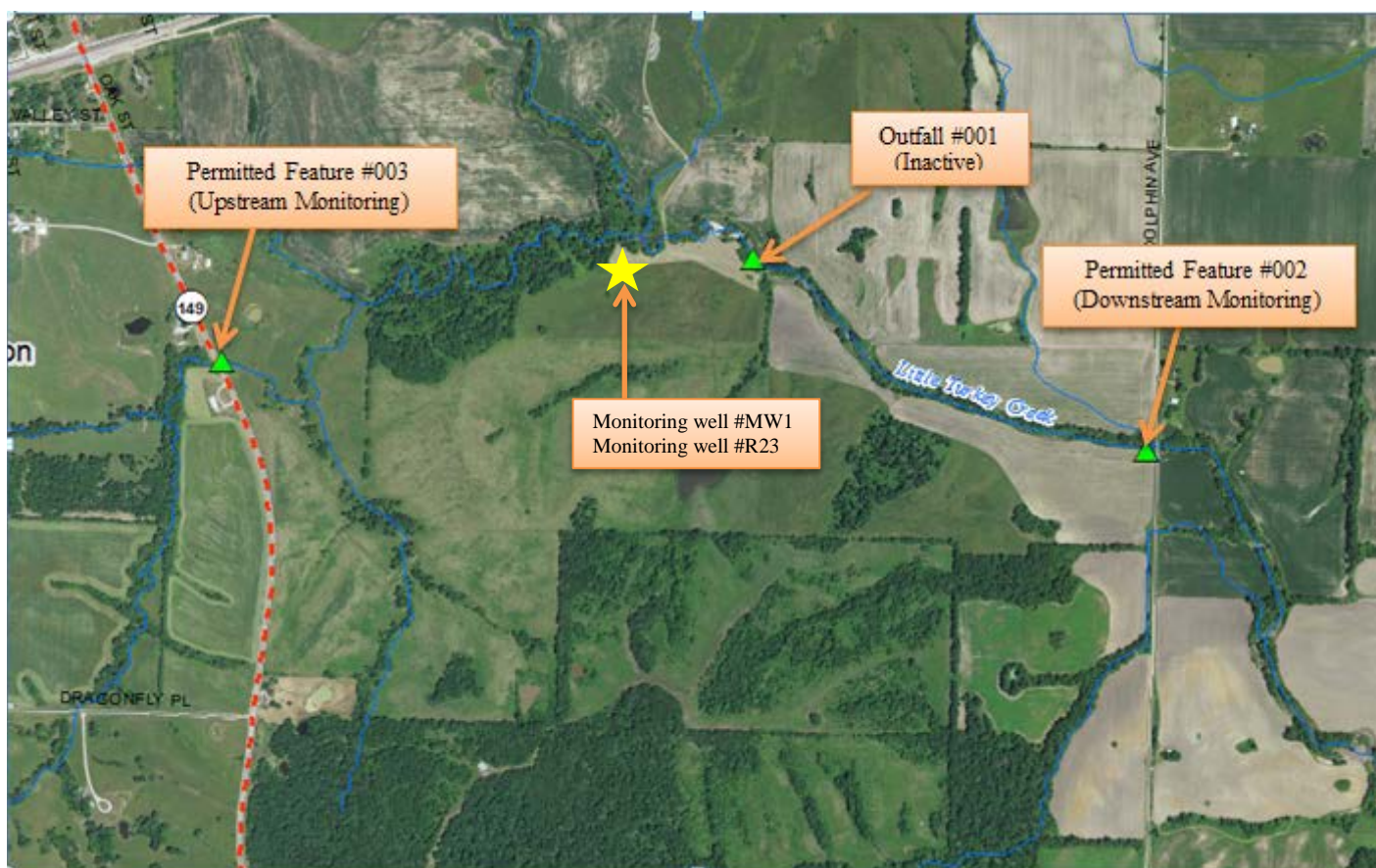
Additionally, soil sample analytical results from the 2015 Site Investigation show continued levels of pollutants in subsurface soils above the RRAP cleanup standards. Bolded values exceed the RRAP cleanup standards for soil. This table shows only those soil bores with exceedances noted. Bores #SB-16 and SB-23 showed no exceedances.

Sample Location	Sample Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH-ORO (mg/kg)	TPH-DRO (mg/kg)
Soil Cleanup Standards		0.5	1.0	2.0	2.0	5.5	100	100
SB-15	1.5-3.0	<0.0055	<0.0055	<0.0055	<0.011	<0.0275	316	231
	5.0-6.5	0.178	0.0145	0.116	0.182	0.491	1,250	3,660
	10.0-12.0	0.0073	<0.004	0.0129	0.0134	0.034	484	1,700
SB-17	1.5-3.0	<0.0054	<0.0054	<0.0054	<0.0107	<0.0276	<18.4	<18.4
	8.0-10.0	<0.005	<0.005	0.0121	<0.01	0.0121	256	795
	10.0-12.0	<0.0044	<0.0044	0.097	0.0989	0.196	271	769
SB-18	1.5-3.0	<0.0054	<0.0054	<0.0054	<0.0108	<0.027	175	146
	5.0-6.5	7.28	<0.21	6.32	24.6	38.20	1,030	3,150
	10.0-12.0	0.158	<0.005	0.0072	<0.01	0.165	461	1,460
SB-19	1.5-3.0	<0.0051	<0.0051	<0.0051	<0.0102	<0.0255	97.7	32
	5.0-6.5	1.04	<0.255	2.6	5.62	9.26	3,350	8,180
	10.0-12.0	<0.0048	<0.0048	<0.0048	<0.0095	<0.0239	83.5	237
SB-20	1.5-3.0	<0.0049	<0.0049	<0.0049	<0.0097	<0.0244	<18.1	<8.1
	5.0-6.5	5.93	<0.228	14.6	<0.455	20.53	3,430	11,500
	10.0-12.0	0.0066	<0.005	0.0135	<0.0101	0.0201	341	1,010
SB-21	1.5-3.0	<0.0048	<0.0048	<0.0048	<0.0095	<0.0239	312	367
	5.0-6.5	8.16	<0.239	13.4	30.9	52.5	3,310	9,830
	10.0-12.0	0.0097	<0.0046	0.0086	<0.0093	0.0183	221	692
SB-22	1.5-3.0	<0.005	<0.005	<0.005	<0.01	<0.025	248	154
	5.0-6.5	<0.272	<0.272	<0.272	<0.545	<1.361	4,060	10.6
	14.0-16.0	<0.005	<0.005	<0.005	<0.0099	<0.0249	<18.9	<18.9
SB-24	1.5-3.0	<0.0055	<0.0055	<0.0055	<0.011	<0.0275	<20	<20
	3.0-5.0	0.725	<0.248	1.46	12.9	15.09	2,360	7,030
	10.0-12.0	0.0177	<0.0044	<0.0044	<0.0087	0.0177	168	484
SB-25	1.5-3.0	<0.0054	<0.0054	<0.0054	<0.0108	<0.027	<17.4	<17.4
	8.0-10.0	<0.247	<0.247	<0.247	<0.494	<1.235	190	741
	10.0-12.0	<0.253	<0.253	<0.253	<0.506	<1.265	301	1,600
SB-26	1.5-3.0	2.99	<0.25	7.75	44.90	55.64	1,420	3,340
	3.0-5.0	2.66	<0.538	7.35	31.70	41.71	1,980	5,210
	10.0-12.0	0.452	<0.234	3.4	<0.468	3.85	481	1,250
SB-27	1.5-3.0	<0.0052	<0.0052	<0.0052	<0.0103	<0.0259	23.4	35.3
	10.0-12.0	3.71	<0.218	3.68	6.85	14.24	1,100	6,580
	12.0-14.0	2.73	<0.231	2.54	6.69	11.96	1,530	9,050
SB-28	1.5-3.0	<0.0049	<0.0049	<0.0049	<0.0097	<0.0244	412	451
	3.0-5.0	<0.25	<0.25	0.697	3.54	4.24	3,330	9,850
	8.0-10.0	<0.233	<0.233	<0.233	<0.466	<1.165	3,710	11,100
SB-29	1.5-3.0	<0.0053	<0.0053	<0.0053	<0.0105	<0.0264	1,750	1,790
	5.0-6.5	<0.226	<0.226	<0.226	<0.451	1.129	1,030	3,150
	10.0-12.0	<0.223	<0.223	<0.223	<0.445	1.114	1,460	4,700
	1.5-3.0	<0.0046	<0.0046	<0.0046	<0.0092	<0.023	1,930	1,840

Sample Location	Sample Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH-ORO (mg/kg)	TPH-DRO (mg/kg)
Soil Cleanup Standards		0.5	1.0	2.0	2.0	5.5	100	100
SB-30	3.0-5.0	<0.239	<0.239	1.57	1.09	2.66	1,880	5,920
	10.0-12.0	<0.206	<0.206	<0.206	<0.412	<1.03	626	2,710
SB-31	1.5-3.0	<0.0048	<0.0048	<0.0048	<0.0096	<0.024	547	441
	5.0-6.5	<0.527	<0.527	<0.527	<1.05	2.63	3,020	19,400
	10.0-12.0	<0.235	<0.235	<0.235	<0.470	<1.175	757	6,630
SB-32	1.5-3.0	11.8	<0.0047	<0.0047	<0.0094	11.8	406	366
	3.0-5.0	1.98	<0.273	2.04	14.8	18.82	1,300	4,390
	10.0-12.0	<0.232	<0.232	<0.232	<0.465	<1.161	423	2,280
SB-33	1.5-3.0	<0.0049	<0.0049	<0.0049	<0.0097	<0.0244	71.5	22.7
	8.0-10.0	<0.0048	<0.0048	<0.0048	<0.0097	<0.0241	69.3	142
	10.0-12.0	<0.0049	<0.0049	<0.0049	<0.0097	<0.0244	24.7	31.6
SB-34	1.5-3.0	<0.0052	<0.0052	<0.0052	<0.0104	<0.0260	590	951
	8.0-10.0	1.08	<0.257	7.27	7.34	15.69	1,870	10,600
	10.0-12.0	1.72	<0.234	8.21	5.58	15.51	824	5,590
SB-36	8.0-10.0	<0.23	<0.23	<0.23	<0.459	<1.149	1,070	4,530

FACILITY MAPS:

PERMITTED FEATURES



Part II. RECEIVING STREAM INFORMATION

RECEIVING WATER BODY'S WATER QUALITY:

The receiving stream Little Turkey Creek (C) has no concurrent water quality data available. No relevant water quality information was found.

303(D) LIST:

Section 303(d) of the federal Clean Water Act requires each state identify waters 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 impaired waters not addressed by normal water pollution control programs. <http://dnr.mo.gov/env/wpp/waterquality/303d/303d.htm>

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

TOTAL MAXIMUM DAILY LOAD (TMDL):

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

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

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

✓ As per Missouri's Effluent Regulations [10 CSR 20-7.015(1)(B)], the waters of the state are divided into 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. The following categories are applicable to this site:

Subsurface Water: ☒

All Other Waters: ☒

RECEIVING STREAMS TABLE:

PERMITTED FEATURE	WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	DISTANCE TO SEGMENT (MILES)	12-DIGIT HUC
#002	Little Turkey Creek	C	3960	HHP, IRR, LWW, SCR, WBC-B, WWH (AQL)	0.0	Painter Creek-Chariton River (10280202-0402)
MW-1 and RW-223	Groundwater	n/a	n/a	GRW	0.0	

n/a not applicable

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

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

Uses which may be found in the receiving streams table, above:

10 CSR 20-7.031(1)(C)1.:

AQL = Protection of aquatic life (Current narrative use(s) are defined to ensure the protection and propagation of fish shellfish and wildlife, which is further subcategorized as: WWH = Warm Water Habitat; CLH = Cool Water Habitat; CDH = Cold Water Habitat; EAH = Ephemeral Aquatic Habitat; MAH = Modified Aquatic Habitat; LAH = Limited Aquatic Habitat. This permit uses AQL effluent limitations in 10 CSR 20-7.031 Table A for all habitat designations unless otherwise specified.)

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

WBC = Whole Body Contact recreation where the entire body is capable of being submerged;

WBC-A = Whole body contact recreation supporting swimming uses and has public access;

WBC-B = Whole body contact recreation supporting 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 as it relates to the consumption of fish;

IRR = Irrigation for use on crops utilized for human or livestock consumption;

LWW = Livestock and wildlife watering (Current narrative use is defined as LWP = Livestock and Wildlife Protection);

DWS = Drinking Water Supply;

IND = Industrial water supply

10 CSR 20-7.031(1)(C)8-11.: Wetlands (10 CSR 20-7.031 Table A currently does not have corresponding habitat use criteria for these defined uses)

WSA = Storm- and flood-water storage and attenuation; **WHP** = Habitat for resident and migratory wildlife species;

WRC = Recreational, cultural, educational, scientific, and natural aesthetic values and uses; **WHC** = Hydrologic cycle maintenance.

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

RECEIVING STREAM MONITORING REQUIREMENTS:

Permitted Feature #002 is a downstream monitoring point which complies with the RRAP agreement, and is continued from the previous permit. Permitted Feature #003 is an upstream monitoring point which complies with the RRAP agreement. It is newly defined in this permit, although it was always required by the RRAP.

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:

Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(I)] require a reissued permit to be as stringent as the previous permit with some exceptions. Backsliding (a less stringent permit limitation) is only allowed under certain conditions.

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

ANTIDEGRADATION REVIEW:

For process water discharge with new, altered, or expanding discharges, the department is to document, by means of antidegradation review, if the use of a water body's available assimilative capacity is justified. In accordance with Missouri's water quality regulations for antidegradation [10 CSR 20-7.031(3)], degradation may be justified by documenting the socio-economic importance of a discharge after determining the necessity of the discharge. Facilities must submit the antidegradation review request to the department prior to establishing, altering, or expanding discharges. See <http://dnr.mo.gov/env/wpp/permits/antideg-implementation.htm>

- ✓ Not applicable; the facility has not submitted information proposing expanded or altered process water discharge; no further degradation proposed therefore no further review necessary.

For stormwater discharges with new, altered, or expanding discharges, the stormwater BMP chosen for the facility, through the antidegradation analysis performed by the facility, must be implemented and maintained at the facility. Failure to implement and maintain the chosen BMP alternative is a permit violation; see SWPPP.

- ✓ Not applicable; the facility does not have stormwater discharges

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 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 limitations of the permit.

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

BIOSOLIDS & SEWAGE SLUDGE:

Biosolids are solid materials resulting from domestic wastewater treatment meeting federal and state criteria for beneficial use (i.e. fertilizer). Sewage sludge is solid, semi-solid, 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 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: <http://extension.missouri.edu/main/DisplayCategory.aspx?C=74> (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. The permittee is, however, subject to a settlement order signed December 1993.

GROUNDWATER MONITORING:

Groundwater is a water of the state according to 10 CSR 20-7.015(1)11, and is subject to regulations at 10 CSR 20-7.015(7) and 10 CSR 20-7.031(6) and must be protected accordingly.

- ✓ This facility is monitoring the groundwater at the site under the RRAP agreement. See **FACILITY PERFORMANCE HISTORY & COMMENTS** in part I above.

INDUSTRIAL SLUDGE:

Industrial sludge is solid, semi-solid, 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; sludge is not generated at 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 causing or have the reasonable potential (RP) to cause (or contribute to) an in-stream excursion above narrative or numeric water quality standards. If the permit writer determines 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 [40 CFR Part 122.44(d)(1)(iii)].

- ✓ Not applicable; an RPA was not conducted for this facility. This facility does not discharge.

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>

TECHNOLOGY-BASED EFFLUENT LIMITATIONS (TBEL):

One of the major strategies of the Clean Water Act (CWA) in making "reasonable further progress toward the national goal of eliminating the discharge of all pollutants" is to require effluent limitations based on the capabilities of the technologies available to control those discharges. Technology-based effluent limitations (TBELs) aim to prevent pollution by requiring a minimum level of effluent quality attainable using demonstrated technologies for reducing discharges of pollutants or pollution into the waters of the United States. TBELs are developed independently of the potential impact of a discharge on the receiving water, which is addressed through water quality standards and water quality-based effluent limitations (WQBELs). The NPDES regulations at Title 40 of the Code of Federal Regulations (CFR) 125.3(a) require NPDES permit writers to develop technology-based treatment requirements, consistent with CWA § 301(b) and § 402(a)(1), represent the minimum level of control that must be imposed in a permit. The regulation also indicates that permit writers must include in permits additional or more stringent effluent limitations and conditions, including those necessary to protect water quality. Regardless of the technology chosen to be the basis for limitations, the facility is not required to install the technology, only to meet the established TBEL.

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

VARIANCE:

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 permit is not drafted under premise of a petition for variance.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010(78)], the WLA is the amount of pollutant each discharger is allowed to discharge into the receiving stream without endangering water quality. Two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs) are reviewed. If one limit does provide adequate protection for the receiving waters, then the other must be used.

- ✓ Not applicable; wasteload allocations were not calculated.

WLA MODELING:

Permittees may submit site specific studies to better determine the site specific wasteload allocations applied in permits.

✓ Not applicable; a WLA study was either not submitted or determined not applicable by department staff.

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 to determine discharges from the facility cause toxicity to aquatic life by itself, in combination with, or through synergistic responses, when mixed with receiving stream water.

✓ Not applicable; at this time, the permittee is not required to conduct WET testing for this facility.

Part IV. EFFLUENT LIMITS DETERMINATION

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

GENERAL CRITERIA CONSIDERATIONS:

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

- (A) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses.
- There is no discharge of wastewater at this site. The downstream monitoring point has not shown formation of putrescent, unsightly, or harmful bottom deposits. There is no reasonable potential (RP).
- (B) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses.
- There is RP for oil to be found at the downstream monitoring point, as determined by the RRAP. Limits are established in the RRAP and this permit to protect the receiving stream.
- (C) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses.
- For all outfalls, there is no RP for unsightly color or turbidity in sufficient amounts preventing full maintenance of beneficial uses because nothing disclosed by the permittee at renewal for these outfalls indicates unsightly color or turbidity will be present in sufficient amounts to impair beneficial uses.
 - For all outfalls, there is no RP for offensive odor in sufficient amounts preventing full maintenance of beneficial uses because nothing disclosed by the permittee at renewal for these outfalls indicates offensive odor will be present in sufficient amounts to impair beneficial uses.
- (D) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life.

- The permit writer considered specific toxic pollutants when writing this permit. The RRAP established effluent limitations considered protective of human health, animals, and aquatic life.
- (E) There shall be no significant human health hazard from incidental contact with the water.
- It is the permit writer's opinion that this criterion is the same as (D).
- (F) There shall be no acute toxicity to livestock or wildlife watering.
- It is the permit writer's opinion that this criterion is the same as (D).
- (G) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community.
- For all outfalls, there is no RP for physical changes that would impair the natural biological community because nothing disclosed by the permittee at renewal for these outfalls indicates physical changes that would impair the natural biological community.
 - For all outfalls, there is no RP for hydrologic changes that would impair the natural biological community because nothing disclosed by the permittee at renewal for these outfalls indicates hydrologic changes that would impair the natural biological community.
 - It has previously been established that any chemical changes are covered by the specific numeric effluent limitations established in the permit.
- (H) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
- There are no solid waste disposal activities or any operation that has reasonable potential to cause or contribute to the materials listed above being discharged through any outfall.

PERMITTED FEATURE #002 – DOWNSTREAM MONITORING

Upstream monitoring is required per the RRAP agreement if the limits are not met at the downstream monitoring location. The upstream values will be used to determine net discharge from the site. If the net amount is less than the required limit, the site is considered in compliance.

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	UNIT	BASIS FOR LIMITS	DAILY MAX	MONTHLY AVG	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL								
FLOW	MGD	6	*	*	SAME	ONCE/6 MONTHS	ONCE/6 MONTHS	24 Hr. Tot
CONVENTIONAL								
pH Ω	SU	8	6.0 TO 9.0	6.0 to 9.0	SAME	ONCE/6 MONTHS	ONCE/6 MONTHS	GRAB
OTHER								
TOTAL BTEX	µg/L	8	750	750	SAME	ONCE/6 MONTHS	ONCE/6 MONTHS	GRAB
BENZENE	µg/L	8	50	50	SAME	ONCE/6 MONTHS	ONCE/6 MONTHS	GRAB
ETHYLBENZENE	µg/L	8	*	*	SAME	ONCE/6 MONTHS	ONCE/6 MONTHS	GRAB
TOLUENE	µg/L	8	*	*	SAME	ONCE/6 MONTHS	ONCE/6 MONTHS	GRAB
XYLENE	µg/L	8	*	*	SAME	ONCE/6 MONTHS	ONCE/6 MONTHS	GRAB
TOTAL PETROLEUM HYDROCARBONS (DRO)	mg/L	8	10	10	SAME	ONCE/6 MONTHS	ONCE/6 MONTHS	GRAB

* Monitoring requirement only

Ω 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. RRAP |

MONITORING AND RECOVERY WELLS-MW-1, RW-23**EFFLUENT LIMITATIONS TABLE:**

PARAMETERS	UNIT	BASIS	DAILY MAXIMUM LIMIT	MONTHLY AVERAGE LIMIT	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
HYDROCARBONS								
TOTAL BTEX	MGD	8	§	§	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
BENZENE	µg/L	8	§	§	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
ETHYLBENZENE	µg/L	8	§	§	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
TOLUENE	µg/L	8	§	§	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
TOTAL XYLENES	µg/L	8	§	§	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
TOTAL PETROLEUM HYDROCARBONS (DRO)	µg/L	8	§	§	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB

§ These parameters are monitoring only; however, the RRAP includes standards for groundwater which must be met to be released from the RRAP agreement. (See Part I: Facility Information, above for more information about groundwater cleanup standards.)

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. RRAP |

DERIVATION AND DISCUSSION OF LIMITS:

All limits and monitoring are derived from the RRAP established in 1991, and are retained from the previous permit. The RRAP included limits for the discharging outfalls as well as the downstream monitoring point, soils, and monitoring wells which were incorporated in the 1993 Settlement Order as cleanup standards. See Part I. Facility Information for more information on the RRAP and the cleanup standards. The previous permit did not require reporting for the monitoring well information other than the twice yearly report laid out in the RRAP, with reports submitted to the Department's Northeast Regional Office. However, permitting is now centralized in the Jefferson City office, and permit writers there need ready access to the reports, ideally through the eDMR

system. Therefore, reporting required by this permit is quarterly rather than twice yearly to facilitate eDMR usage. Sampling requirements have not been altered from the terms of the RRAP. The electronically submitted data will facilitate easier permitting and easier access of data by all department employees.

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. Additionally, see Standard Conditions Part I and RRAP attached at the end of this permit and fully incorporated within.

ELECTRONIC DISCHARGE MONITORING REPORT (EDMR) SUBMISSION SYSTEM:

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

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

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

- ✓ The permittee/facility is not currently using the eDMR data reporting system. The permittee shall submit an eDMR Permit Holder and Certifier Registration form within **90 days** of the effective date of this permit.

SAMPLING FREQUENCY JUSTIFICATION:

Sampling and reporting frequency was generally retained from previous permit.

SAMPLING TYPE JUSTIFICATION:

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

SUFFICIENTLY SENSITIVE ANALYTICAL METHODS:

Please review Standard Conditions Part 1, section A, number 4. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 and/or 40 CFR 136 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 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 quantifies the pollutant below the level of the applicable water quality criterion 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 and or 40 CFR 136. These methods are also required for parameters listed as monitoring only, as the data collected may be used to determine if numeric limitations need to be established. A permittee is responsible for working with their contractors to ensure the analysis performed is sufficiently sensitive. 40 CFR 136 lists the approved methods accepted by the department. Table A at 10 CFR 20-7.031 shows water quality standards.

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 the end of the 4th quarter, 2021.*

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 11/03/2017 to 12/04/2017. No responses were received.

DATE OF FACT SHEET: 09/15/2017

COMPLETED BY:

AMBERLY SCHULZ, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - INDUSTRIAL UNIT
(573) 751-8049
Amberly.schulz@dnr.mo.gov

APPENDIX A—REVISED REMEDIAL ACTION PLAN, 1991

JOHN ASHCROFT
Governor

G. TRACY MEHAN III
Director



STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL QUALITY

P.O. Box 176
Jefferson City, MO 65102

Division of Energy
Division of Environmental Quality
Division of Geology and Land Survey
Division of Management Services
Division of Parks, Recreation,
and Historic Preservation

Northeast Regional Office
Date Received

SEP 23 '91

7.330 Amoco Spill

September 20, 1991

Ms. S. A. Medley
Director, Environmental Services
Amoco Pipeline Company
One Mid-America Plaza
Suite 300
Oakbrook Terrace, IL 60181

ADMU Q
APCU _____
PDWU SW
WMU SG
WPCU SG SW SW SW SW
Copies to: _____

RE: Revised Remedial Action Plan - Troutman Farm - Ethel, Missouri

Dear Ms. Medley:

This letter constitutes the Missouri Department of Natural Resources approval for the attempted bioremediation of contaminated soil and groundwater on the Calvin Troutman farm near Ethel, Macon County, Missouri. This approval is granted pursuant to Section 260.510 RSMo 1986, relating to the control and cleanup of hazardous material involved in a hazardous substance emergency.

On November 5, 1990 Amoco Pipeline Company experienced a catastrophic failure of a crude oil transmission line on the Troutman farm, which left an estimated 10,000 cubic yards of contaminated soil and debris stockpiled on site, contaminated groundwater under the spill site, and soils at depth contaminated with crude oil residues. On July 22, 1991 Amoco Pipeline Company and the landowners, Calvin and Charlene Troutman, entered into an agreement which under certain conditions and restrictions allowed Amoco Pipeline Company to undertake a Remedial Action Plan to clean up the contamination.

On August 15, 1991 Amoco Pipeline Company submitted a document entitled "Revised Remedial Action Plan - Chariton River Spill - Leak Site, Ethel, Missouri," prepared by Law Environmental, Incorporated. The department has reviewed this report and today approves the Revised Remedial Action Plan (RRAP), with the following conditions:



Printed on recycled paper.

Ms. Sandy A. Medley
Chariton River Site
Page 2

1. Soil Sampling

The RRAP and subsequent amendments do not sufficiently address the surface and subsurface soil sampling to demonstrate that Amoco's plan is progressing toward meeting the cleanup standards established by the department. The department, in the following paragraphs, outlines the required soil sampling for this project.

a. What Is To Be Sampled

The department's letter of April 19, 1991 outlined the parameters to be checked in the soil. They are total benzene, total toluene, total ethylbenzene, and total xylenes along with total BTEX and total Petroleum Hydrocarbon. The stratigraphy of the soil column shall be noted for each soil sample.

b. What Sampling Should Occur

There are 8.25 acres of land inside the bermed area on which the soil will be spread. On the area of active management in the 8.25 acres, one sample for every 5000 square feet will provide 40 sample points on the site. In the low area lying north of the berm and south of Turkey Creek, an additional 5 sample locations will be needed to collect similar soil samples from the soil layers. Three background samples near the fence uphill on the southeast side of the land farm should also be sampled, to determine the background concentrations of parameters. Additionally the soils under the north stockpile must be sampled at a minimum of five locations; those locations are to be established by MDNR.

Each of these sample locations shall be checked at depth. Sampling points shall be checked in the following layers at a minimum:

- 0 - 6 inches below the surface
- 6 -24 inches below the surface
- 24-48 inches below the surface
- and every 24 inches thereafter to the depth of 20 feet.

After the initial set of samples is taken, subsequent sampling events will adjust the location of samples below the surface based on previous results of samples and on the observation of the person taking the sample. Observation of contaminated or clean zones by the sampler are needed to adjust the location of samples, in the field.

Soil samples will be collected once every six months to determine the extent of contamination and the effectiveness of the remediation. These minimum sample location and depths should be supplemented with additional sampling points to increase understanding/clarity. After the initial round of sampling, the sampling points should be selected to provide more data around areas of contamination while reserving at least five samples for areas showing little or no contamination.

Ms. Sandy A. Medley
Chariton River Site
Page 3

c. How Samples Will Be Analyzed

The Environmental Protection Agency has published standard methods for analyzing soil and water samples:

SW-846 Test Methods of Evaluating Solid Waste; Physical/Chemical Methods

8020 Aromatic Volatile Organics (benzene, toluene, ethylbenzene, and xylenes)

9071A Oil and Grease Extraction Method for Sludge Samples

EPA 600/4-79-020 Methods for Chemical Analysis of Water and Wastes

418.1 Total Recoverable Petroleum Hydrocarbon
Modified by MDNR to handle soil samples by extracting a known weight of soil; sample results to be reported in grams of hydrocarbon per gram of soil; a minimum of 1 kg of soil is needed for analyses.

Sampling procedures are outlined in SW-846 Volume II. Samples for land treatment monitoring are found in Chapter Twelve. Standard procedures for collecting a surface soil sample and for handling equipment in the field shall be used. Periodically, soil samples shall be split with the Department of Natural Resources. Trip blanks and method blanks shall be collected, to assure the validity of samples. Ten percent of the analytical samples shall be quality assurance samples.

d. What Manner Sampling Will Be Reported

Within 60 days after samples are collected, Amoco shall report on the results of sampling and analyses, with copies of transmittal sheets, bench sheets, calculations for percent recovery of quality control samples, and tabulation of results by location of sample. Isopach illustrations of constituent concentrations in each layer shall be prepared and provided. Sampling locations will be determined and plotted, and the depth of each sample shall be noted. Soil stratigraphy shall be added to the data base and reported.

The goal of this sampling program is to provide data on the progress of remediation of the contaminated soils. Management of information will be needed to direct field activities and to indicate locations where samples should be taken. A data base of sampling results indexed to location (in three dimensions) and time will be needed to follow the progress of the remediation.

The soil clean up standards are established in units of mg/l. The department's Laboratory Services Program measures and reports total BTEX and total TPH from soil in terms of gram per gram (or mg/kg) of soil extracted. The department is modifying the standards to use units of mass/mass to assure comparability between MDNR and Amoco data.

Ms. Sandy A. Medley
Chariton River Site
Page 4

2. Ground Water Sampling

The following section will amend the Amoco plan by describing the ground water monitoring to be performed at the site.

a. What Is To Be Sampled

The department's letter of April 19, 1991 outlined the parameters to be checked in the ground water. They are total benzene, total toluene, total ethylbenzene, and total xylenes along with total BTEX and total Petroleum Hydrocarbon.

b. What Sampling Should Occur

There are currently 18 monitoring wells and 20 recovery wells at this site. Amoco shall take samples of water from all monitoring wells in the first and third quarter of each year and from all recovery wells in the second and fourth quarter of each year until all wells meet the cleanup standards established. After all wells have been shown to meet the remediation standards for two consecutive sampling periods (minimum of six months), the pumping from the recovery wells shall be discontinued. The sampling of all wells may continue for three consecutive years after the pumping has been discontinued. If contamination is found in the sampling, Amoco shall within 30 days, resample the well(s) showing contamination and all adjacent wells, to verify results, or explain why the previous sample was not representative of the groundwater. If contamination above cleanup standards is found, Amoco shall propose activities that may be necessary to show the remediation standards are met for two consecutive sampling periods (minimum six months). The three consecutive years of compliance shall start anew, after standards are met for two consecutive sampling periods. Each well shall be sampled separately and analyzed as an individual sample.

c. How Samples Will Be Analyzed

The Environmental Protection Agency has published standard methods for analyzing soil and water samples:

SW-846 Test Methods of Evaluating Solid Waste;Physical/Chemical Methods

8020 Aromatic Volatile Organics (benzene, toluene, ethylbenzene, and xylenes)

EPA 600/4-79-020 Methods for Chemical Analysis of Water and Wastes

413.1 Total Recoverable Oil and Grease (Gravimetric)

418.1 Total Recoverable Petroleum Hydrocarbon

Sampling procedures are outlined in SW-846 Volume II. Samples for land treatment monitoring are found in Chapter Twelve. Standard procedures for collecting a ground water sample and for handling equipment in the field shall be used. Periodically, and at the discretion of MDNR water samples shall be split with the Department of Natural Resources. Trip blanks and method blanks shall be collected, to assure the validity of samples. Ten percent of the analytical samples shall be quality assurance samples.

Ms. Sandy A. Medley
Chariton River Site
Page 5

d. What Manner Sampling Will Be Reported

Within 60 days after samples are collected, Amoco shall report on the results of sampling and analyses. Isopach illustrations of constituent concentrations shall be prepared and provided.

Amoco shall keep an operating log at the site. That log shall include copies of transmittal sheets, bench sheets, calculations for percent recovery of quality control samples, and tabulation of results by location of each water sample. Sampling locations will be determined and plotted, and the depth of each sample shall be noted.

The goal of this sampling program is to provide data on the progress of remediation of the contaminated groundwater. Management of information will be needed to direct field activities and to indicate locations where samples should be taken. A data base of sampling results indexed to location (in three dimensions) and time will be needed to follow the progress of the remediation.

3. Remedial Action Plan Modifications

Amoco shall give notice to the regional director, Northeast Regional Office, as soon as possible of any planned physical alterations or additions to the site.

The replacement of worn or broken parts need not be reported as long as replacement is with an equivalent component which does not adversely affect the designed operating procedures or performance of the remediation project.

Minor modification is a modification of biological processes by any optimization of the process such as addition of fertilizers at agricultural rates, or augmentation of specific species of indigenous microbes. Amoco shall note any minor modifications in the operating log.

Major modification are modifications of remediation that include the change from the biological process of land farming and remediation of ground water by pumping and treating for release to an alternate treatment process(es) or disposal. Major modification approvals become effective on the date they are signed by the regional director, Northeast Regional Office.

No informal advice, guidance, suggestions, or comments by the department regarding reports, plans, specifications, schedules, and any other writing submitted by Amoco will be construed as relieving Amoco of its obligations to obtain written formal approval, if and when required by the remediation plan approval.

4. Reports of Releases

Amoco shall report any releases which may endanger health or the environment, to the MDNR at 314-634-2436, within 24 hours from the time Amoco becomes aware of the circumstances. Included in this would be information concerning release of any material that may cause an endangerment to public drinking water supplies and any information of a release or discharge of a material, or a fire or

Ms. Sandy A. Medley
Chariton River Site
Page 6

explosion from the facility which could threaten the environment or human health outside the facility. The description of the occurrence and its cause shall include:

- a. Name, address and telephone number of the owner/operator;
- b. Name, address and telephone number of the facility;
- c. Date, time and type of incident;
- d. Name and quantity of material(s) involved;
- e. The extent of injuries, if any;
- f. An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
- g. Estimated quantity and disposition of recovered material that result from the incident.

A written submission to the department's Laboratory Services Program with a copy to the Northeast Regional Office, shall also be provided within five days of the time Amoco becomes aware of the circumstances.

5. Within one year after the date of RRAP approval, a detailed report on bioremediation of deep soils and proposals for enhancement is to be submitted to the department for review and approval.
6. Within 60 days of the date of approval of the RRAP, Amoco shall submit three copies of the operation and maintenance manual for this site. This manual is to provide the site manager and staff the information and procedures they are to use to operate and maintain the facility (wells, wastewater treatment, etc.).
7. Within 10 days of the date of approval, Amoco shall submit three copies of the schedule and outline of operations for this site. This schedule shall provide enough detail to allow the site manager time to acquire the necessary equipment and supplies to fulfill the remediation plan for the first four months, and for the department to know the sequence of operations at the site.
8. Amoco shall place all necessary appurtenances and shall spread the contaminated soils, that contain no free oil, in the bermed area as rapidly as possible. The department will be observing the placement of contaminated soil and shall reject any soil that displays any free liquid oil. MDNR will not approve material being placed on the bioremediation site that contains free crude oil. The term "free crude oil" means oil in the liquid phase which will separate by gravity from the mixture. Mixtures of oil and other materials will be evaluated visually and if it appears that oil could flow out of the mixture, under ambient conditions, it will be rejected for on-site bioremediation. Oil and mixtures rejected for on-site bioremediation shall be promptly removed from the Troutman Farm and disposed at an approved facility. Along with the visual criteria, material containing more than 18,000 ppm Total Petroleum Hydrocarbons (TPH) shall also be rejected.

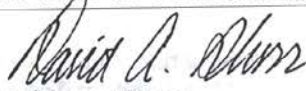
Ms. Sandy A. Medley
Chariton River Site
Page 7

9. Removal of the waste material in the three piles must be handled to minimize the co-mingling of highly contaminated soils or oil with other materials.
10. No later than October 1, 1995, Amoco shall provide a report showing the extent of contamination for surface soil. Amoco has agreed with the landowner to have surface soil on the site remediated (as of October 1, 1995) to the extent that the upper 18 inches of soil meet the clean up standards established by MDNR. Any of the material(s) not meeting that standard are then to be promptly removed from the Troutman farm.
11. All discharges of water from the site shall be in accordance with the NPDES permit, MO-0112526, which will be issued upon completion of construction of wastewater appurtenances.
12. Amoco shall abide by the attached Standard and General Conditions for Waste Disposal Sites (Attachment A).
13. ~~To be released from further remedial activities, Amoco must show that the clean up criteria for soil and groundwater has been met for three consecutive years on all portions of the site.~~ Additional monitoring wells and soil sample bore holes may be required to assure the site is adequately characterized.
14. The soil and groundwater cleanup standards for this project are Attachment B.
15. Restoration of the site, upon completion of cleanup activities, shall be in accordance with the Amoco-Landowner agreement of July 22, 1991 or subsequent amendments.

We look forward to working with Amoco and the landowner on the cleanup of this site. If I can be of further assistance, please feel free to contact me.

Very truly yours,

DIVISION OF ENVIRONMENTAL QUALITY


David A. Shorr
Director

DAS:cdf

c: Mr. & Mrs. Calvin Troutman
Mr. Ed Downey, Assistant Attorney General
Mr. David Collins, Attorney
Dr. Leon Heath, Ph.D.
Mr. D. M. Iwataki
Mr. John Young, Deputy Director, DEQ
Mr. Charles S. Decker, P.E., Regional Administrator, NERO
Mr. Bill Bullock, Amoco
Mr. Mitchell Weiss, Amoco
The Honorable Roger Kohl, Presiding Commissioner, Macon County

ATTACHMENT A Standard & General Conditions for Waste Disposal Sites

I. Standard Conditions for Closure

A. Duty to Comply

Amoco must comply with all conditions of the Agreement and with all applicable state laws and regulations, except to the extent and for the duration such noncompliance is authorized in an emergency condition. Any noncompliance, except under the terms of an emergency condition, constitutes a violation and is grounds for court action.

B. Duty to Mitigate

In the event of noncompliance with the Agreement, Amoco shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent adverse impacts on human health and/or the environment.

> E. Proper Operation and Maintenance

Amoco 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 Amoco to achieve compliance with the conditions of this Agreement. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training and adequate laboratory and process controls; including appropriate quality assurance procedures. This provision requires the operation of auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the Agreement.

F. Property Rights

The remediation plan approval does not convey any property rights of any sort, or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local law or regulations.

G. Duty to Provide Information

Amoco shall furnish to the Director, within a reasonable time, any relevant information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the remediation plan approval, or to determine compliance with the Agreement. Amoco shall also furnish to the Director, upon request, copies of records required to be kept by the remediation plan approval.

H. Access

Amoco shall provide access to Department employees, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter at reasonable times upon Amoco's premises where a regulated facility of activity is located or conducted, or where records must be kept under the conditions of the Agreement;
2. Have access to and copy at reasonable times any records that must be kept under the conditions of the Agreement;
3. Inspect a reasonable times any facilities, equipment, practices, or operations regulated or required under the Agreement; and
4. Sample or monitor at reasonable times for the purposes of assuring compliance of parameters at any location.

Law Enforcement

I. Monitoring and Records

1. Samples and measurements taken for the purpose of monitoring, or required for compliance shall be sufficient to yield data which are representative of the monitored activity.
2. Amoco shall retain records of all monitoring information including all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports and records required by this Agreement, and records of all data used to complete the remediation plan, for a period of at least three years from the date of remediation certification. This period may be extended by request of the Director at any time. Amoco shall maintain records from all groundwater monitoring wells and associated groundwater surface elevations, for the duration of remediation. The period for retention of these records is automatically extended during the course of any unresolved enforcement action regarding this facility.
3. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sample measurements;
 - c. The date(s) analyses were performed;
 - d. The individual(s) who perform the analyses;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.

J. Signatory Requirements

All applications for modifications, extensions, reports or information submitted to the Director pursuant to this Agreement shall be signed.

II. General Conditions

A. Design and Operation Facility

Amoco shall design, construct, maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of contaminant constituents to air, soil, groundwater, or surface water which could threaten human health or the environment. This includes adherence to operating conditions and procedures, and emergency shutdown procedures specified in the Remediation Plan and Operating Plan.

B. Required Notice

Before transferring operation of a facility during remediation, the operator must notify the Department and the new owner or operator. He must also notify the new owner or operator in writing of that the site is being used for soil remediation.

C. Security

Amoco shall comply with the security provisions, which include:

1. Amoco must prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the site. Any artificial or natural barrier which completely surrounds the site, and a means to control entry through gates or other entrances to the active portion of the facility, must be maintained at all times.
2. In addition, Amoco must post signs bearing the legend "Danger - Unauthorized Personnel Keep Out" at each entrance to the site and at other locations in sufficient numbers to be seen from any approach to this site. This legend must be written in English and must be legible from a distance of at least 25 feet.
3. Amoco will advise the Department of unauthorized entry occurred at the site which caused contaminants to be discharged, the nature of problems, if any, that resulted for this occurrence and corrective action taken by the facility to prevent future occurrences. This includes any tampering, destruction, or loss at the site, which caused release of contaminants.

D. General Inspection Requirements

1. Amoco must inspect the facility for malfunctions and deterioration, operator errors and discharges which may be causing, or may lead to, release of contaminants to the environment, or a threat to human health.
2. Amoco must remedy any observed deterioration or malfunction of equipment or structures on a schedule which ensures that the problem does not lead to an environmental or human

health, hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

3. Amoco must record inspections in an inspection log. The log shall be kept for at least three years after remediation certification. At a minimum these records must include the date and time of the inspection, the name of the inspector, a notation of the observation made, and the date and nature of any repairs or other remedial actions.

E. Training

1. Facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the remediation plan approval.
2. This program must be directed by a person trained in remediation plan procedures, and must include instruction which teaches facility personnel procedures relevant to the positions in which they are employed. New employees must not work in unsupervised positions until they have completed the training program.
3. Facility personnel must take part in an annual review of the initial training program.

F. Preparedness and Prevention

1. If there is ever just one employee on the premises while the facility is operating, he/she must have immediate access to a device, such as a telephone (immediately available at the scene of operation), air horn mounted on equipment, or a hand-held two-way radio capable of summoning external emergency assistance.
2. Arrangements with local authorities.

Amoco will attempt to make arrangements with local authorities to familiarize police, fire departments, and emergency response teams with the layout of the facility and associated hazards, places where facility personnel will normally be working, and entrances to the facility.

G. Recordkeeping and Reporting

1. Operating Record. Amoco must keep a written operating record at the facility. The following information must be recorded, as it becomes available, and maintained in the operating record until remediation of the facility:
 - a. Records and results of inspections.
 - b. Monitoring, testing, or analytical data.

- c. A complete copy of the final, approved remediation plan for the site, including all approved engineering plans.
2. Availability, retention, and disposition of records. All records, including plans, required by this remediation plan approval must be furnished upon request and made available at all reasonable times for inspection by MDNR employees. Records are to be retained for a minimum of three years. The retention period for all records required by this remediation plan approval is extended automatically during the course of any unresolved enforcement action pertaining to the environment regarding the facility or as requested by the Director. Amoco shall maintain at the facility the following documents and amendments, revisions, and modifications to these documents:
 - a. Personnel training documents and records;
 - b. Operating records; and
 - c. Inspection schedules.

H. Remediation Plan

1. A copy of the approved remediation Plan and all revisions to the Remediation Plan must be kept at the facility until remediation is completed and certified by Amoco.
2. The Remediation Plan may be amended at any time during the remediation of the site.

III. Notification

Unless otherwise specified, three copies of all reports, correspondence, approvals, disapprovals, notices or other submissions relating to or required under this Consent Agreement shall be in writing and shall be sent to the MDNR contact person, who is:

Mr. Charles S. Decker, PE
Regional Director
Missouri Department of Natural Resources
Northeast Regional Office
Highway 63 North
Macon, MO 63552

ATTACHMENT B

Soil & Groundwater Clean-up Standards

1. Soil Cleanup Standards

PARAMETERS	VALUE NOT TO BE EXCEEDED
Benzene	0.5 mg/l or ppm
Toluene	1.0 mg/l
Ethylbenzene	2.0 mg/l
Xylene	2.0 mg/l
Total BTEX	5.5 mg/l
Total Petroleum Hydrocarbons	100.0 mg/l

2. Groundwater Cleanup Standards

PARAMETERS	VALUE NOT TO BE EXCEEDED
Benzene	50 ug/l or ppb
Toluene	150 ug/l
Ethylbenzene	320 ug/l
Total Xylenes	320 ug/l
Total BTEX	750 ug/l
Total Petroleum Hydrocarbons	10 mg/l or ppm

3. NPDES Permit Limits

The following discharge points and limitations will be proposed in the permit which AMOCO shall apply for and MDNR will issue according to standard procedures, subject to modification due to review by the U.S. Environmental Protection Agency and the public commentary process.

Outfall 001

This outfall is comprised of the flow from AMOCO's groundwater treatment facility, including treated groundwater, stormwater, and related runoff from the affected property. The sampling point is at the hardpipe point of discharge into Little Turkey Creek which is located approximately 50 to 100 feet from the point where the Troutman east property boundary line intersects Turkey Creek.

PARAMETER LIMITATIONS

PARAMETERS	DAILY MAXIMUM	MONTHLY AVERAGE	SAMPLE TYPE	FREQUENCY
Benzene	50 ug/l	50 ug/l	grab	**
Toluene	*	*	grab	**
Ethylbenzene	*	*	grab	**
Xylene	*	*	grab	**
Total BTEX *	750 ug/l	750 ug/l	grab	**
Total Petroleum Hydrocarbons	10 ug/l	10 mg/l	grab	**
Total Suspended Solids	50 mg/l	30 mg/l	grab	**
pH	***	***	grab	**

ACUTE TOXICITY TEST

Daphnia	10% mortality over control	grab	****
Fathead	10% mortality over control	grab	****

* Total BTEX shall be measured as the sum of Benzene, Ethylbenzene, Toluene and Xylene.

** Sampling frequency shall be determined as follows:

For the first three months of the permit life, samples shall be collected once per week.

For the next 10 months, samples shall be collected once per month.

For the remaining life of the permit, samples shall be collected once per quarter for each quarter that has a discharge for the life of the permit.

*** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0 - 9.0.

**** Sampling frequency shall be determined as follows:

For the first three months of the permit life, samples shall be collected once per month.

If all of such testing is within the above limits, no further such testing will be required. If any of such first three months testing indicates toxicity in excess of the limits set forth above, AMOCO will perform toxicity testing quarterly until three successive quarters' sampling are within limits.

Outfall 002

This outfall is comprised of the combined flow from the groundwater treatment facility and runoff from the affected property, if any. The sample point shall be located in Little Turkey Creek, approximately 1/2 mile below Outfall 001.

Parameter limitations shall be the same as those stated for Outfall 001 above, except that the parameter for Total Suspended Solids shall be deleted and except that, for the first 30 days of operation under the permit, an interim parameter limitation of 15 mg/l of oil and grease shall be the only limitation in effect for Outfall 002.

Special Note:

The parameter limits stated above for Outfall 002 are net of the figures established as a sample point 1/8 to 1/4 mile upstream of the spill site. Samples shall be taken at the upstream point on the same frequency as those taken at Outfall 001. As long as the samples from Outfall 002 are within the above parameters on a gross basis, the upstream sample need not be tested. If any of the above parameters are not met on a gross basis, the upstream sample will be tested for any parameter exceeding the limit to determine if the parameter is within the limitation on a net basis.

APPENDIX B-SETTLEMENT ORDER, 1993

IN THE
CIRCUIT COURT OF MACON COUNTY
STATE OF MISSOURI

STATE OF MISSOURI, ex rel.
JEREMIAH W. (JAY) NIXON and
THE MISSOURI DEPARTMENT OF
NATURAL RESOURCES,

Plaintiff,

v.

AMOCO PIPELINE COMPANY

Defendant.



Case No.

CV 93-261CC

SETTLEMENT ORDER

I.

INTRODUCTION

A. Plaintiff, State of Missouri, filed a civil petition initiating this matter. The Petition alleges civil claims for relief under, inter alia, the Oil Pollution Act of 1990, the Missouri Clean Water Law, § 644.006, RSMo et seq., and § 260.500, RSMo et seq. The allegations of the petition arise out of a spill of crude oil on or about November 5 and 6, 1990, from the pipeline to Little Turkey Creek in Macon County, Missouri, which subsequently flowed into the Chariton River. The petition seeks recovery of damages, penalties, costs, and other relief as provided for in those statutes.

B. Defendant is Amoco Pipeline Company ("Amoco"), a corporation incorporated under the laws of the State of Maine. The pipeline in question is an approximately twelve inch (12") diameter pipeline, a section of which runs from LaPlata, Missouri to

Freeman, Missouri, through the State of Missouri. The pipeline is owned and operated by Amoco Pipeline Company.

II.

JURISDICTION AND VENUE

This court has jurisdiction over the parties and subject matter of this lawsuit and Settlement Agreement pursuant to § 33 U.S.C. § 2717(c), §§ 644.076, 644.096 and 260.530, RSMo 1986. Venue is proper in Macon County, inasmuch as the oil spill occurred in Macon County, Missouri.

III.

PARTIES BOUND

The provisions of this Settlement Order shall apply to and be binding upon the parties to this action, their agents, successors and assigns.

IV.

SETTLEMENT OF CLAIMS

A. In consideration for the release by the State of Missouri of its claims against Amoco relating to the spill, as described in paragraph IV.C hereof, Amoco agrees to pay the following sums:

1. Nine Hundred Thousand Dollars (\$900,000) to the Missouri Natural Resource Protection Fund ("NRPF") in settlement of all of the State of Missouri's claims for damages to natural resources, wildlife, fisheries, and forests on account of the spill; and

2. Fifty Thousand Dollars (\$50,000) to the County School Fund, Macon County, Missouri and Fifty Thousand Dollars

(\$50,000) to the County School Fund, Chariton County, Missouri, in settlement of all of the State of Missouri's claims for civil penalties assessable under the Missouri Clean Water Law and other state laws.

B. The sums identified in paragraph IV.A. above will be paid in the following manner:

1. Payments of One Hundred Fifty Thousand Dollars (\$150,000.00) shall be made by Amoco to the NRPF on or before each of the following dates: December 31, 1993, June 30, 1994, December 31, 1994, June 30, 1995, December 31, 1995, and June 30, 1996.

2. Payments of Eight Thousand Three Hundred Thirty-three Dollars and Thirty-three Cents (\$8,333.33) shall be made by Amoco to both the Macon and Chariton County School Funds on each of the following dates: December 31, 1993, June 30, 1994, December 31, 1994, June 30, 1995, December 31, 1995, and June 30, 1996.

3. Notwithstanding paragraphs IV.B.1. and IV.B.2. hereof, in the event this agreement is not fully executed and entered by a judge of competent jurisdiction by January 1, 1994, the payments described in paragraphs IV.B.1. and IV.B.2. will be made in six (6) equal biannual installments beginning on or before the last day of the months of June and December following the entry of this agreement (so long as entry takes place at least seven (7) days prior to such a date). Should entry take place less than seven (7) days prior to the end of June or December, said payments shall start on the subsequent biannual date.

C. Subject to the provisions of Section V hereof, the State of Missouri explicitly releases Amoco, its directors, officers, employees, and agents, as well as its parent, affiliate, and subsidiary companies, from all claims recited in the civil petition and all other claims, which the State of Missouri may lawfully assert, either administrative or judicial, now or in the future, including potential civil and criminal claims, causes of action, and requests for relief, whether or not specifically recited herein, arising from the crude oil spill on or about November 5 and 6, 1990, including but not limited to:

1. Any claims for declaratory or injunctive relief pursuant to Federal or State law;
2. Any claims for penalties, fines or imprisonment pursuant to §§ 309 and 311 of the Clean Water Act, 40 C.F.R. Part 114, and 33 U.S.C. §§ 407 and 411 of the Rivers and Harbors Act of 1899, or any other provisions of law to the extent that plaintiff has a cause of action under said laws;
3. Any claims for damages to natural resources, or for costs incurred by plaintiff in the assessment, restoration or replacement of natural resources damaged or destroyed or for the mitigation of any damage to public health or welfare under any statutory or common law theory, including claims under the Oil Pollution Act of 1990 and the Missouri Clean Water Law.
4. Any claims for civil or criminal penalties under State or federal law, including, but not limited to, the Missouri Clean Water Law, the Missouri Wildlife and Forestry Law,

Missouri Hazardous Waste Management Law and the Missouri Air Conservation Law;

5. Any claims for monetary restitution and/or damages or punitive damages under statute or common law;

6. Any claims for reimbursement of plaintiff's costs and expenses, except as expressly provided herein; and

7. Any claims for penalties, fines, imprisonment, injunctive relief, damages, costs, or expenses referred to in subparagraphs 1-6 above against parties not named in this proceeding.

D. By entering into this Settlement Order, Amoco in no way acknowledges that plaintiff has a right to bring this action or any of the actions listed in paragraphs IV.C. (1-7) or any other action relating to the release of crude oil on or about November 5 or 6, 1990, against Amoco or any other party.

E. Nothing in this Settlement Order is intended or shall be construed in any manner to be an admission by Amoco in any dispute, action, adjudication, or settlement, either administratively or judicially. Nothing in this Settlement Order is intended or shall be construed in any manner as a waiver by Amoco of any defenses it might have in any subsequent action by plaintiff, or of any rights of review and remedies it may have after termination of this Court's jurisdiction over this Settlement Order.

F. By entering into this Settlement Order, Amoco does not waive the right to contest that any costs and expenses incurred

by plaintiff, including costs and expenses reimbursed by Amoco hereunder, are not reasonable, necessary or legally recoverable.

V.

RESERVATION OF RIGHTS

Notwithstanding the provisions of paragraphs IV(C) hereof, nothing herein shall be construed to limit whatever rights the State of Missouri may have to pursue enforcement actions:

- A. Enforcing the terms of this Settlement Order, including payment obligations of Amoco;
- B. Conforming Amoco's activities with the State of Missouri's general criteria of water quality standards, Clean Water Commission Rules 10 CSR 20-7.031(3), with respect to crude oil and crude oil residues;
- C. Involving violations by Amoco of any law, state or federal, with respect to activities of Amoco other than those associated with the spill;
- D. Concerning soil remediation activities undertaken by Amoco at the spill site not specifically addressed by this Settlement Order ("Spill site" as used in this order shall mean all property depicted in Figure 14 of the "Remedial Action Plan - Chariton River Spill - Leak Site" dated March, 1991, and prepared by Law Environmental, Inc.);
- E. Claiming reimbursement of reasonable and necessary expenses incurred by the State of Missouri

in the oversight of Amoco's various remediation activities at said spill site; and

F. Enforcing, including injunctive relief and/or civil penalties, any permit or permit limitations contemplated under Attachment 1 hereof.

VI.

REIMBURSEMENT OF EXPENSES

Plaintiff has hired several private corporations as contractors to assist plaintiff in evaluating cleanup protocols, to provide field oversight and general oversight of the execution of the cleanup protocols by Amoco at the spill site and on the Little Turkey Creek and the Chariton River. Amoco agrees and is hereby ordered to pay such contractors directly for the reasonable, necessary, and legally recoverable costs incurred by such contractors as they relate to the above activities on the spill site, and on the Little Turkey Creek and Chariton River. Amoco does not agree and is not ordered to pay for any of the contractor's services which are outside the scope of the above activities. Amoco's payment obligations herein are limited to those costs incurred prior to the date on which this agreement is fully executed.

Plaintiff agrees to provide Amoco with contractor's invoices, as approved by plaintiff in accordance with the terms of the contracts between plaintiff and the respective contractor, on a monthly basis. Invoices will be mailed to:

Director, Environmental Services
AMOCO Pipeline Company
One Mid-America Plaza
Oakbrook Terrace, ILL 60181-4723

Plaintiff has hired contractors including MAECORP (for spill clean-up oversight) Fostaire Helicopter Services, Inc., (for transportation and aerial surveillance), TCT Incorporated and Rainbow Envirochem, Inc. (for analytical laboratory services). Amoco agrees to pay each such contractor for effort engaged in prior to the execution of this agreement as per the above terms.

Amoco reserves the right to inspect and audit all records associated with this project. Amoco will endeavor to pay invoices thirty (30) days from when the invoices are received by Amoco. If a dispute should arise as to whether any contractor cost is necessary, reasonable, or legally recoverable, any of the parties can employ the Dispute Resolution provision as outlined in Section IX and no disputed portions of any invoice will be due until the dispute is resolved.

VII.

REIMBURSEMENT OF STATE RESPONSE COSTS

A. The State of Missouri has incurred and will continue to incur costs and expenses, in addition to those set forth in Section VI, for purposes of monitoring cleanup and other appropriate response activities. Amoco agrees to reimburse plaintiff for all reasonable, necessary, and legally recoverable costs and expenses incurred by plaintiff since November 5, 1990, to the date of this Settlement Order as follows:

1. No later than one month following the full execution and entry into Court of this Settlement Order, plaintiff shall submit to Amoco at the address listed in Section VI all

invoices for any and all such unreimbursed costs incurred by plaintiff along with any and all reasonable documentation Amoco may require to verify whether such costs and expenses are reasonable, necessary and legally recoverable.

2. Amoco shall pay any and all such reasonable, necessary and legally recoverable costs and expenses within thirty (30) days from Amoco's receipt of the invoices and the information required in paragraph VII(A)(1).

3. If a dispute should arise as to whether any such costs or expenses are reasonable, necessary and legally recoverable, any of the parties may avail itself to the Dispute Resolution provisions contained in Section IX and no disputed portion of any such invoice will be due until such dispute is finally resolved.

B. Payment of any and all sums required under this section shall be by check made payable to the State of Missouri - Department of Natural Resources ("MDNR") or such other fund(s) as the Missouri Attorney General may direct upon notice to the court and Amoco, and submitted to the contact person listed for the plaintiff and at the address listed in Section VIII.

C. "Costs and expenses" for purposes of this Section includes any and all sums the plaintiff has paid or will pay, directly or indirectly, for salaries, equipment, benefits, overtime pay, travel expenses, materials and any other expenditures incurred in response to the oil spill on or about November 5 and 6, 1990.

VIII.

CLEAN-UP

Amoco agrees to remediate the crude oil contaminated soil at the spill site in accordance with methods to be agreed to by Amoco and MDNR and in accordance with the standards set forth in paragraph 1 of Attachment 1. Amoco shall remove crude oil from the affected waters of the State such that no surface or groundwater shall contain contaminants in concentrations greater than those listed in paragraph 2 of Attachment 1. It is understood that the terms of Attachment 1 are within the sole discretion of MDNR and may be revised for good cause at any time; provided that new terms shall not be stricter than those already stated. In addition, in the event that any new or existing groundwater source of drinking water for human consumption located in the area including the following, all in Macon County,

S ½	Sec. 28	T59N	R16W (West of the Chariton River)
S ½	Sec. 29	T59N	R16W
S ½ SE ¼	Sec. 30	T59N	R16W
E ½	Sec. 31	T59N	R16W
	Sec. 32	T59N	R16W
	Sec. 33	T59N	R16W (West of the Chariton River)

is found to contain benzene in excess of 5 ppb, Amoco agrees to provide a permanent replacement source of drinking water for human consumption or to take other action to ensure that no such water is used for human consumption. The replacement source must meet all public water supply safe drinking water standards set by MDNR by regulation for drinking water sources, whether private or public. The method of achieving this obligation is within the discretion of Amoco. Provided, however, that Amoco shall not be required to provide such safe drinking water to any

party whose water supply was not reasonably affected by the Amoco spill which is the subject matter of this lawsuit.

In connection with its treatment of groundwater, Amoco will be allowed to discharge the treated water to Little Turkey Creek pursuant to an NPDES permit in concentration levels up to those listed in said Attachment 1 or any revision thereof. If water samples establish contaminant concentrations greater than the Attachment 1 ceilings in the affected area, Amoco agrees to conduct additional remedial work and sampling consistent with methods approved by MDNR, so as to achieve the appropriate level.

All oil, sludges, and residues removed shall either be refined and used in accordance with normal industry practices or disposed of in a manner consistent with federal, state and local law. All areas affected by removal operation (i.e., ground disturbances due to equipment use, ruts, temporary dams, etc.) shall be returned to their pre-spill condition, unless otherwise consented to by the landowners and the State.

IX.

DISPUTE RESOLUTION

A. Any dispute which arises regarding compliance with the terms of this Settlement Order shall in the first instance be the subject of informal negotiations between the parties to the dispute. The period for informal negotiations shall not exceed thirty (30) days from the time the dispute arises, unless such time is extended by agreement of the parties. The dispute shall be considered to have arisen when one party notifies the other party in writing of the existence of a dispute.

B. In the event that the parties cannot resolve a dispute by informal negotiations, then the position advanced by state shall be considered binding unless, within thirty (30) days after the conclusion of the informal negotiation period, Amoco invokes the formal dispute resolution procedures of this Section by serving on the state a written statement of position on the matter in dispute, including, but not limited to, any factual data, analysis or opinions supporting that position and any supporting documentation relied upon by Amoco.

C. Within thirty (30) days after receipt of Amoco's statement of position submitted pursuant to the above paragraph, the state will serve on Amoco its statement of position, including, but not limited to, any factual data, analysis, or opinions supporting that position and all supporting documentation relied upon by the state in response to Amoco's statement of its position. Where appropriate, the parties may allow submission of supplemental statements of position by agreement of the parties to the dispute.

1. The Director of the Department of Natural Resources or his or her designee will issue a final administrative decision resolving the dispute based on the record described in Paragraphs B and C above. This decision shall be binding upon the parties subject only to the right to seek judicial review by this Court pursuant to Chapter 536 RSMo.

2. In proceedings regarding any dispute governed by this Section to appellant shall have the burden of demonstrating that the determination of the Director was contrary to the stan-

dards contained in § 536.140.2, RSMo. Judicial review of the Director's decision shall be on the administrative record as described above.

D. The invocation of formal dispute resolution procedures under this Section shall not of itself extend, postpone or affect in any way any obligation of the parties under this Settlement Order, except that payment of the State's costs with respect to the disputed matter shall be stayed pending resolution of the dispute as provided in paragraphs VI.C and VII.A.3.

X.

PRIOR NOTICE

Amoco shall give DNR three (3) working days notice prior to recommencing operations, decommissioning or any repressurization of the subject pipeline.

XI.

DESIGNATION OF CONTACT PERSON

All inquiries and correspondence relating to this Settlement Order and implementation of its terms, which is directed to any party to this Settlement Order shall be sent in writing to the following designated Contact Persons:

For the State of Missouri:

Jeremiah W. (Jay) Nixon
Attorney General
Attention: Joseph P. Bindbeutel
Office of Attorney General
P. O. Box 899
Jefferson City, MO 65102-0899

For Amoco:

Michael E. Rigney, Attorney
Amoco Corporation
P. O. Box 87703
200 E. Randolph Drive
Mail Code 2003
Chicago, IL 60601

XII.

TERMINATION OF SETTLEMENT ORDER

The jurisdiction of this Court over the matters addressed by this Settlement Order shall terminate by order of the Court or written agreement between the parties. In the event of termination by written agreement of the parties, the parties shall petition the court to terminate or modify this Settlement Order as appropriate.

AMOCO PIPELINE COMPANY

BY: *JCK* *DMC*

DATE: November 29, 1993

TITLE: Vice President

[SEAL]

JEREMIAH W. (JAY) NIXON
Attorney General

[Signature]

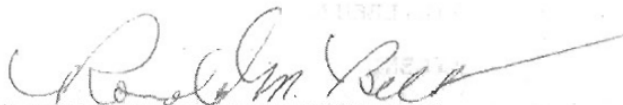
DATE: 11/30/93

MISSOURI DEPARTMENT OF
NATURAL RESOURCES

BY: *[Signature]*
DAVID A. SHORR
Director

DATE: 12/1/93

This Settlement Order is approved and entered this 11th day
of December, 1943. The parties are hereby ordered to
perform the terms hereof until this order is modified or termi-
nated.



CIRCUIT JUDGE

ATTACHMENT NO. 1
AMOCO PIPELINE SPILL CLEAN-UP

1. SOIL CLEAN-UP STANDARDS

<u>PARAMETERS</u>	<u>VALUE NOT TO BE EXCEEDED</u>
BENZENE	0.5 MG/L OR PPM
TOLUENE	1.0 MG/L
ETHYLBENZENE	2.0 MG/L
XYLENE	2.0 MG/L
TOTAL BTEX	5.5 MG/L
TOTAL PETROLEUM HYDROCARBONS	100.0 MG/L

2. GROUNDWATER CLEAN-UP STANDARDS

<u>PARAMETERS</u>	<u>VALUE NOT TO BE EXCEEDED</u>
BENZENE	50 UG/L OR PPB
TOLUENE	150 UG/L
ETHYLBENZENE	320 UG/L
TOTAL XYLENE	320 UG/L
TOTAL BTEX	750 UG/L
TOTAL PETROLEUM HYDROCARBONS	10 MG/L OR PPM

3. NPDES PERMIT LIMITS FOR THE AMOCO SPILL CLEAN-UP PROJECT

The following discharge points and limitations will be proposed in the permit which AMOCO shall apply for and DNR will issue according to standards procedures, subject to modification due to review by the U.S. Environmental Protection Agency and the public commentary process.

OUTFALL 001

This outfall is comprised of the flow from AMOCO's groundwater treatment facility, including treated groundwater, stormwater, and related run-off from the affected property. The sampling point is at the hardpipe point of discharge into Little Turkey Creek which is located approximately 50 to 100 feet from the point where the Troutmans' east property boundary line intersects Turkey Creek.

PARAMETER LIMITATIONS

PARAMETERS	DAILY MAXIMUM	MONTHLY AVERAGE	SAMPLE TYPE	FREQUENCY
BENZENE	50 UG/L	50 UG/L	GRAB	**
TOLUENE	*	*	GRAB	**
ETHYLBENZENE	*	*	GRAB	**
XYLENE	*	*	GRAB	**
TOTAL BTEX *	750 UG/L	750 UG/L	GRAB	**
TOTAL PETROLEUM HYDROCARBONS	10 MG/L	10 MG/L	GRAB	**
TOTAL SUSPENDED SOLIDS	50 MG/L	30 MG/L	GRAB	**
PH	***	***	GRAB	**

ACUTE TOXICITY TEST

DAPHNIA	10% MORTALITY OVER CONTROL	GRAB	****
FATHEAD	10% MORTALITY OVER CONTROL	GRAB	****

- * TOTAL BTEX SHALL BE MEASURED AS THE SUM OF BENZENE, ETHYLBENZENE, TOLUENE AND XYLENE.
- ** Sampling frequency shall be determined as follows:
For the first 3 months of the permit life, samples shall be collected once per week.
For the next 10 months, samples shall be collected once per month.
For the training life of the permit, samples shall be collected once per quarter for each quarter that has a discharge for the life of the permit.
- *** PH IS MEASURED IN PH UNITS AND IS NOT TO BE AVERAGED. THE PH IS LIMITED TO THE RANGE OF 6.0 - 9.0.
- **** Sampling frequency shall be determined as follows:
For the first 3 months of the permit life, samples shall be collected once per month.
If all of such testing is within the above limits, no further such testing will be required. If any of such first three month's testing indicates toxicity in excess of the limits set forth above, AMOCO will perform toxicity testing quarterly until three successive quarters' sampling are within limits.

OUTFALL 002

This outfall is comprised of the combined flow from the groundwater treatment facility and run-off from the affected property, if any. The sample point shall be located in Little Turkey Creek, approximately 1/2 mile below Outfall 001.

Parameter limitations shall be the same as those stated for Outfall 001 above, except that the parameter for Total Suspended Solids shall be deleted and except that, for the first 30 days

of operation under the permit, an interim parameter limitation of 15 mg/l of oil and grease shall be the only limitation in effect for Outfall 002.

Special Note:

The parameter limits stated above for Outfall 002 are net of the figures established at a sample point 1/8 to 1/4 mile upstream of the spill site. Samples shall be taken at the upstream point on the same frequency as, and within 24 hours of, those taken at Outfall 001. As long as the samples from Outfall 002 are within the above parameters on a gross basis, the upstream sample need not be tested. If any of the above parameters are not met on a gross basis, the upstream sample will be tested for any parameter exceeding the limit to determine if the parameter is within the limitation on a net basis.

3. SAMPLE POINTS

SAMPLE POINT 001

This sample point is described in the Special Note above.

SAMPLE POINT 002

This sample point is located in the Chariton River, 1/4 mile downstream of the confluence of Little Turkey Creek into the Chariton River.

Grab samples shall be taken on the same frequency as stated for Outfall 001 and 002 above.

Only the following parameters shall be tested:

BENZENE
TOLUENE
TOTAL PETROLEUM HYDROCARBONS

Readings shall be taken of each parameter and shall be recorded, but there is no limitation set as to any parameter. Amoco will not be in violation of the NPDES permit in regard to any sample taken from Sample Point 002.

4. SAMPLING FOR ALL OUTFALLS

No testing of samples shall begin until 30 days after Amoco's groundwater treatment system has commenced operations and is in a state of continuous operation for a successive thirty day period.

5. DURATION OF PERMIT

The initial time limit of the NPDES permit shall be five years from the date of approval, renewable for successive three year periods.



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;
 - 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.

31549

RECEIVED

JAN 16 2019



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

**APPLICATION FOR CHANGE OF NAME OR ADDRESS
FOR YOUR MISSOURI STATE OPERATING PERMIT**

FOR AGENCY USE ONLY

CHECK NUMBER 266579	APPLICATION ID NUMBER
DATE RECEIVED 1-16-19	FEE SUBMITTED \$100.00 SB

READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM

1. THIS APPLICATION IS FOR:

- ☐ Owner change of name and/or address
☒ Continuing Authority change of name and/or address
☐ Facility change of name and/or address

1.1 Is the appropriate fee included with the application? ☒ Yes ☐ No

2. PERMIT

PERMIT NUMBER
#MO- 0112526

COUNTY
Macon

3. ADDITIONAL INFORMATION

ANTICIPATED DATE OF NAME AND/OR ADDRESS CHANGE
January 11, 2019

4. INFORMATION TO CHANGE

PREVIOUS INFORMATION FOR OWNER

OWNER NAME
Atlantic Richfield Company (a BP affiliated company)

ADDRESS (MAILING)
26301 Curtiss Wright Parkway, Suite 100

CITY
Cleveland

STATE
OH

ZIP
44143

TELEPHONE NUMBER WITH AREA CODE
216-912-2914

REVISED INFORMATION FOR OWNER

OWNER NAME
Jim Smith (BP Remediation Management Services Company)

ADDRESS (MAILING)
201 Helios Way, 6th Floor

CITY
Houston

STATE
TX

ZIP
77079-2678

TELEPHONE NUMBER WITH AREA CODE
281-366-2000

PREVIOUS INFORMATION FOR CONTINUING AUTHORITY

CONTINUING AUTHORITY NAME
Arcadis on Behalf of (BP Pipeline (NA) inc)

ADDRESS (MAILING)
2464 Fortune Drive, Suite 170

CITY
Lexington

STATE
KY

ZIP
40509

TELEPHONE NUMBER WITH AREA CODE
859-287-0410

REVISED INFORMATION FOR CONTINUING AUTHORITY

CONTINUING AUTHORITY NAME
Arcadis on Behalf of (BP Pipeline (NA) inc)

ADDRESS (MAILING)
2424 Harrodsburg Road, Suite 203

CITY
Lexington

STATE
KY

ZIP
40503

TELEPHONE NUMBER WITH AREA CODE
859-287-0410

PREVIOUS INFORMATION FOR FACILITY

FACILITY NAME

ADDRESS (PHYSICAL LOCATION)

CITY

STATE

ZIP

TELEPHONE NUMBER WITH AREA CODE

REVISED INFORMATION FOR FACILITY

FACILITY NAME

ADDRESS (PHYSICAL LOCATION)

CITY

STATE

ZIP

TELEPHONE NUMBER WITH AREA CODE

5. FACILITY CONTACT

NAME
Jason Luckett

EMAIL
jason.luckett@arcadis.com

ADDRESS
2424 Harrodsburg Road Suite 203

TITLE
Project Manager

TELEPHONE NUMBER WITH AREA CODE
859-287-0410

CITY
Lexington

STATE
KY

ZIP
40503

6. CERTIFICATION

I certify 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.

NAME (TYPE OR PRINT)
Jason Luckett

SIGNATURE

OFFICIAL TITLE
Project Manager

TELEPHONE NUMBER WITH AREA CODE
859-287-0410

DATE SIGNED