



State of Ohio Environmental Protection Agency

Northwest District Office

347 North Dunbridge Road
Bowling Green, OH 43402-9398

TELE: (419) 352-8461 FAX: (419) 352-8468
www.epa.state.oh.us

Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director

October 27, 2008

Mr. Michael Darr
BP Products North America Inc.
4850 East 49th Street
Cuyahoga Heights, Ohio 44125

RECEIVED
OHIO EPA
OCT 31 2008
DIV. OF HAZARDOUS
WASTE MGT.

Re: **Hazardous Waste Permit Modification
Class 1A Approval
BP Products North America
OHD005057542/03-48-0411**

Dear Mr. Darr:

On September 11, 2008, Ohio EPA received a request for a Class 1A (Class 1 requiring prior approval) hazardous waste permit modification (tracking number - 080911-1A-1) from BP Products North America Inc (BPNA). With this letter, Ohio EPA approves the above referenced Class 1A modification submitted pursuant to Ohio Administrative Code (OAC) Rule 3745-50-51.

The following modification has been made to your May 23, 2002, Ohio Hazardous Waste Facility Installation and Operation Permit. Also, the records of Ohio EPA have been changed accordingly:

- Construction Completion Reports were approved on March 20, 2008 for Land Treatment Unit (LTU) 2 and April 4, 2008 for LTU 3. LTUs 2 and 3 do not require groundwater monitoring. Therefore, ground water monitoring wells associated with LTUs 2 and 3 (also referenced as SWMU 17 and 36) have been removed from the permit.
- Revision #6 of BP's Uppermost Aquifer Ground-Water Detection Monitoring Plan dated September 9, 2008 has been incorporated into the permit.
- Permit Conditions F.1, F.2, F.3 and F.7 have been modified accordingly.

Enclosed is a copy of the modified permit terms and conditions. This has been included to ensure that all involved parties have written confirmation of the changes*.

If you have any questions concerning this action, please contact Wendy Miller at (419)373-3114.

Sincerely,

Shannon M. Nabors
District Chief

*Also, in accordance with Ohio Administrative Code Rule 3745-50-51(D)(1)(a)(ii), BP Products North America shall send a notice within 90 days of an approved Class 1A Modification to all persons on the Agency mailing list. An updated mailing list can be obtained by contacting Dave Sholtis at (614) 644-2917, or by e-mail at dave.sholtis@epa.state.oh.us.

/cs
Enclosures

pc: Dave Sholtis, Assistant Chief, DWHM, CO w/enclosure
NWDO BP Products North America Permit File Copy w/enclosure
Gary Deutschman, DHWM, NWDO w/enclosure
Wendy Miller, DHWM, NWDO w/enclosure
BP Toledo Permit, Document Library, DHWM, NWDO enclosure only

ec: Dawn Pleiman, DHWM, NWDO
Gary Deutschman, DHWM, NWDO
Colleen Weaver, DHWM, NWDO

MODULE F – GROUND WATER DETECTION MONITORING

F.1. Module Highlights

This module addresses the uppermost aquifer ground water detection monitoring program associated with the surface impoundment, North Stormwater Pond, also known as North Pond, which is a hazardous waste management unit (HWMU) at the BP Oil Company – Toledo, Ohio Refinery. The HWMU is denoted as a discrete waste management area. The HWMU has been monitored under the Interim Status regulations OAC Rule 3745-65-90 through 94 and Consent Agreement and Final Order signed by the Administrator of Region V, US EPA on July 10, 1985.

The Permittee's ground water monitoring system consists of two monitoring wells which are screened in the Bedrock Zone, which is comprised of Silurian Age Lockport Formation Dolomite. This zone is considered to be the uppermost aquifer. The monitoring wells include one background well¹, M-15 and one downgradient well, M-17.

F.2. Well Location, Installation and Construction OAC Rule 3745-54-97

The Permittee shall install and maintain a ground water monitoring system as specified below: [OAC Rule 3745-54-97]

- (a) The Permittee shall install and maintain, as part of a Ground Water Detection Monitoring System complying with OAC Rule 3745-54-97(A) and (B), the ground water monitoring wells on the map in Figure 4 presented in the document entitled "Uppermost Aquifer Ground-Water Detection Monitoring Plan, BP Products North America, Inc., Toledo, Ohio Refinery", Eagon & Associates, Inc., September 9, 2008 (which shall also be known as the UAGWDMP throughout the rest of this permit) and in conformance with the following list:

Background Wells ¹	Point of Compliance Wells
M-15	M-17
¹ – The flow direction of ground water in the bedrock is controlled by the on-site pumping of process wells. Flow in the area of the HWMU is in a south to southwest direction during the pumping season (generally April to September; sometimes continuing through November). During this period, the background monitoring well M-15 is upgradient. A determination of flow direction in the bedrock is not possible during non-pumping months as the water levels vary only slightly throughout the aquifer.	

The ground water monitoring system must: yield samples in upgradient wells that represent the quality of the background ground water unaffected by leakage from any regulated unit(s), and in downgradient wells, yield samples that represent the quality of water passing the point of compliance. The number and location of monitoring wells must be sufficient to identify and define all logical release pathways to the uppermost aquifer from the regulated units based on site-specific hydrogeologic characterization. Piezometers used to evaluate ground water flow conditions in accordance with OAC Rule 3745-54-97(F) and 3745-54-98(E) also are shown on Figure 4 of the UAGWDMG.

- (b) The Permittee shall maintain the monitoring wells and piezometers identified in Permit Condition F.2(a), in accordance with the detailed plans and specifications presented in the UAGWDMP. This document is hereby incorporated into the approved permit application.
- (c) The Permittee shall remove or replace any monitoring well or piezometer identified in Permit Condition F.2(a) in accordance with the Appendix to OAC rule 3745-50-51 permit modification process. Each change must be accompanied by a revised map as specified on Figure 4 of the UAGWDMP for Permit Condition F.2(a).
- (d) All wells removed or replaced in accordance with Permit Condition F.2(c), or other wells (investigation monitoring wells, unused ground water program wells, or piezometers) not referenced in this permit that are removed or replaced, shall be plugged and abandoned in accordance with the document entitled "State of Ohio Technical Guidance for Sealing Unused Wells" (State Coordinating Committee on Ground Water, 1996). Well plugging and abandonment methods, certification and justification shall be submitted to

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the Director within thirty (30) days from the date the wells are removed from the monitoring program. Within 30 days of completion of the installation of any new monitoring well(s), the Permittee will record (with as-built drawings) the total depth of the well(s), the surveyed elevation of the top of the well casing, ground-surface and/or apron elevation, and the protective casing elevation.

- (e) Whenever any of the wells specified in Permit Condition F.2(a) are replaced for any reason, the Permittee must demonstrate to Ohio EPA that the ground water quality at the replacement well meets the criteria in Permit Condition F.2(a) within a two year period of the date of replacement using means appropriate to the reason for replacement.

F.3. Indicator Parameters and Monitoring Constituents
 OAC Rule 3745-54-98

- (a) The Permittee shall monitor all wells listed in Permit Condition F.2(a) for the following parameters and constituents: [OAC Rule 3745-54-98(A)]

Parameter or Constituent	Established Background Concentrations; Milligrams per liter (mg/l)
Antimony	SL
Arsenic	SL
Barium	SL
Beryllium	SL
Cadmium	SL
Chromium	SL
Cobalt	SL
Lead	SL
Mercury	SL
Nickel	SL
Selenium	SL
Vanadium	SL

Parameter or Constituent	Established Background Concentrations; Milligrams per liter (mg/l)
Benzene	0.001
Carbon Disulfide	0.001
Chlorobenzene	0.001
Chloroform	0.001
1,2-Dichloroethane	0.001
1,4-Dioxane	0.010
Ethyl benzene	0.001
Ethylene dibromide	0.00003
Methylethyl ketone (2-butanone)	0.010
Styrene	0.001
Toluene	0.001
Xylene	0.001
Benzo(a)pyrene ¹	0.0002
1-Methyl naphthalene ¹	0.010
naphthalene ¹	0.010
Phenanthrene ¹	0.010
Pyrene ¹	0.010
<p>SL – Statistical Limit listed in UAGWDMP Appendix C.</p> <p>¹ – Samples will only be collected and analyzed for these semivolatile organic compounds (SVOCs) on an annual basis.</p> <p>The background concentrations. The listed established background concentrations for the VOCs and SVOCs are the anticipated reporting limits [equivalent to practical quantitation limits (PQLs)] for these compounds based on U.S. EPA methods 8260B, 8011, 8270C and 8270C SIM method detection limits (MDLs).</p> <p>All Background Concentrations shall be below Maximum Contaminant Levels (MCLs).</p>	

In addition to the indicator parameters listed above, the Permittee shall sample annually for the parameters listed in Table 6 of the UAGWDMP. If

life of a regulated unit, including the closure period (and post-closure care period for land disposal units which do not clean close). [OAC Rule 3745-54-98(D)]

The Permittee shall express the ground water quality at each monitoring well in a form necessary for the determination of statistically significant increases. [OAC Rules 3745-54-98(C) and 3745-54-99(C)(2)]

- (c) The Permittee shall determine the ground water flow rate and direction in the uppermost aquifer at least annually. [OAC Rule 3745-54-98(E)]
- (d) The Permittee shall determine whether there are any statistically significant increases over the background values for all parameters identified in Permit Condition F.3(a), each time ground water quality is determined at the compliance point. In determining whether such increases have occurred, the Permittee must compare the ground water quality at each monitoring well specified in Permit Condition F.2(a) to the background ground water quality specified in Permit Condition F.3(a), in accordance with the statistical procedures specified in Permit Condition F.6. [OAC Rule 3745-54-98(F)]
- (e) The Permittee shall sample annually for the semi-volatile organic compounds listed in Table 6, presented in the UAGWDMP and add semi-volatile organic compounds from Table 6 to the list of indicator parameters as presented in Condition F.3(a), if required per the procedure described in condition F.3(a).
- (f) The Permittee shall perform the evaluations described in Permit Condition F.7(d) within ninety (90) days after completion of sampling. [OAC Rule 3745-54-98(F)(2)]
- (g) The Permittee shall comply with the revised UAGWDMP dated September 9, 2008 (Revision 6).

F.8. Record Keeping and Reporting
OAC Rule 3745-54-97(J)

Operating Record

OAC Rule 3745-54-73(B)(5&6), OAC Rule 3745-54-97(J), & OAC Rule 3745-54-98(C)

- (a) Ohio EPA may request a copy of the full QA/QC report for a particular