



October 14, 2019

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Subject: Technical Assistance Meeting Summary
Amoco Oil Terminal; BRRTS #02-16-000331
Amoco Oil Barge Dock- Manifold & AST Area; BRRTS #02-16-117873
Amoco Oil Barge Dock- OW Separator & Load Rack; BRRTS #02-16-297979
Winter & Maryland Streets, Superior, Wisconsin

Dear Mr. Coil:

The purpose of this letter is to summarize the discussions and outcome of a technical assistance meeting regarding the above referenced sites located in Superior, Wisconsin.

On April 8, 2019, the Antea Group (Antea), on behalf of BP Products North America Inc. (BP), requested that the Wisconsin Department of Natural Resources (DNR) formally review Site Investigation Reports (SIRs) and Remedial Action Options Reports (RAORs) submitted by Antea for the above referenced sites. A request was also made on April 8, 2019 to have a meeting with the DNR. The DNR received fees for providing assistance in accordance with Wisconsin Administrative Code § NR 749.04(1).

The meeting was held on September 16, 2016 in Eau Clair, Wisconsin. The following attended the meeting:

Wayne Hutchinson – Antea
Layne Kortbien – Antea
Jonathan Zimdars – Antea
Jim Smith – BP (via telephone)
Judy Fassbender – DNR
John Hunt – DNR
Chris Saari – DNR

The requests to review the SIRs and RAORs were fulfilled with the issuance of DNR correspondence dated June 27, 2019 for each of the requests. The DNR determined that the SIRs and RAORs were not in compliance with Wis. Admin. Code chs. NR 700-754 and therefore were not approved by the DNR. The meeting was held to provide assistance in moving the Sites

forward through the regulatory process of investigation and remediation and ultimate closure of the Sites.

The following are general items BP, Antea and the DNR discussed and/or agreed upon regarding all 3 Sites:

- The DNR expressed concern that these Sites have been worked on for up to 35 years without an approved SIR to date. BP indicated they were committed to continue working on these Sites with the goal of bring them into compliance with state statute and administrative code.
- In the future, site-specific reports will be submitted for each site individually.
- Future SIR submittals will include figures and tables describing the degree and extent of contamination in all media including light non-aqueous phase liquids (LNAPL). Site maps, areas of contamination maps and cross sections should be submitted in 24" x 36" format.
- Documents will be submitted to the DNR containing all boring logs, well construction reports and laser-induced fluorescence/cone penetrometer (LIF/CPT) boring logs for each site.
- The DNR has concerns regarding long term vapor migration and intrusion issues associated with the Sites, most specifically the Terminal Site. The DNR is considering applying continuing obligations regarding vapor intrusion to affected properties prior to site closure as allowed under Wisconsin Statute § 292.12.

The following are items specific to individual sites:

Amoco Oil Terminal 02-16-000331:

- The DNR recognizes the existing in-place pipelines extending from the former Terminal property northward to the Amoco Barge Dock property gate as a potential threat to health, safety and the environment. BP will provide a work plan detailing proposed actions to locate and remove and/or in-place abandonment of the pipelines.
- In addition to the pipeline location/abandonment, the work plan will include actions to investigate the degree and extent of contamination underlying the pipeline area. The DNR currently believes this area to be the most significant data gap in a complete definition of the degree and extent of contamination.
- The DNR believes the deep dissolved phase plume is not stable and is expanding. However, the DNR also indicated that installation of additional monitoring wells (downgradient beyond MW-41D) was not required to determine the degree and extent of contamination if continued monitoring results of MW-41D do not exhibit an order of magnitude rise in contaminant concentration in downgradient wells.
- The DNR believes the deep dissolved phase plume originates at the Terminal Site and is co-mingled with discharges from the Amoco Oil Barge Dock-Manifold & AST Area Site LNAPL plume located downgradient (north) of the Terminal. Antea believes the Manifold & AST Area Site LNAPL plume is stable and not discharging contaminants to the deep dissolved phase plume. Antea indicated they will provide the DNR with a

technical memo and/or work plan to support the stability of the Manifold & AST Area site LNAPL plume/co-mingling.

Amoco Oil Barge Dock- Manifold & AST Area:

- The DNR indicated a lack of soil/groundwater data on the east side of the Manifold & AST Area Site is the most significant data gap in the full definition of degree and extent of contamination. Antea indicated a work plan including several direct push borings with temporary wells in this area will be submitted to the DNR.
- As previously mentioned in the Terminal section of this correspondence, the DNR believes the deep dissolved phase plume originating at the Terminal site is co-mingling with discharges from the Manifold & AST Area LNAPL.

Amoco Oil Barge Dock-OW Separator & Load Rack:

- The DNR indicated a lack of data on the east side of the OW Separator & Load Rack Site is the most significant data gap in the full definition of degree and extent of contamination. Antea indicated a work plan including several direct push borings with temporary wells in this area will be submitted to the DNR.
- North of the OW Separator & Load Rack site is an area where a pipeline product seep was discovered and remediated in 2003. There is little to no information available for this discharge or from the former pipeline(s) removal. Antea indicated further information regarding the pipeline area and discharge will be provided.
- As part of the record search regarding the 2003 pipeline product seep the report *Underground Product Piping Removal Report* dated February 23, 2004 by Delta Environmental Consultants was reviewed. On Figure 4, *Oil Water Separator Area*, dated February 2, 2004 an effluent discharge pipe leading from the oil/water separator to the north is displayed. Please identify where that pipe discharged.

The following are items regarding the RAOR submittals for all sites:

- RAORs should not be submitted until SIRs have been approved by the DNR.
- Any remedial action evaluated in a RAOR should ultimately comply with Wis. Admin. Code § NR 722.07(3) with the goal that the environment will be restored within a reasonable period of time.

In summary the DNR anticipates the submittal of the following documents from BP/Antea:

- A compilation of all boring logs and well construction reports for each Site.
- A work plan regarding the existing in-place pipelines located between the Terminal property and the gate at the south end of the Barge Dock property. The work plan will include proposed activities to locate and remove/abandon the pipeline(s) and to investigate subsurface conditions in the area.
- A document or work plan regarding the co-mingling of the deep dissolved phase plume. This document is expected to provide evidence whether or not the Manifold & AST Area Site LNAPL is contributing to the deep dissolved phase plume. It should include a summary of LNAPL characteristics, recently obtained natural attenuation data, and propose future efforts.

- A document or work plan to provide additional information regarding the pipeline removal, especially were the product discharge area north of the OW Separator & Load Rack Site was discovered and remediated in 2003.

The DNR recognizes the great amount of investigative work and interim remedial actions conducted at the Sites. However, the DNR also recognizes the extreme nature of the degree and extent of contamination to soil and groundwater at the Site and the need for remedial actions. The DNR encourages BP to continue the efforts that will restore the environment at these Sites.

The DNR reminds BP that they are the “responsible party” under Wis. Admin. Code § NR 700.03(51) and must follow applicable law to address the discharge of a hazardous substance to the environment or other environmental pollution. Wisconsin Statutes (“Wis. Stats.”) ch. 292 and Wis. Admin. Code chs. NR 700 through NR 754 provide specific requirements for undertaking appropriate response actions to address contamination, including requirements for emergency and interim actions, public information, site investigations, remedy selection, design and operation of remedial action systems, and case closure.

If you have any questions, please feel free to contact me at (715) 623-4190 ext. 3115, by writing to the address at the top of this letter or by email to john.t.hunt@wisconsin.gov.

Sincerely,



John T. Hunt
Hydrogeologist - Remediation & Redevelopment Program
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CC: Jonathan Zimdars (Antea jonathan.zimdars@anteagroup.com)
Jim Smith – BP/Amoco