



July 28, 2017

Mr. Randy Coil
BP Products North America, Inc.
201 Helios Way – Helios Plaza 6.370A
Houston, TX 77079

Subject: **Closure Not Recommended**
Amoco Oil Terminal Site
2904 Winter Street
Superior, Wisconsin 54880
DNR BRRTS Activity # 02-16-000331

Dear Mr. Coil:

On March 2, 2017, the Wisconsin Department of Natural Resources (WDNR) Northern Region Closure Committee (Closure Committee) reviewed a request for closure, dated January 24, 2017, of the case described above. The January 24, 2017 Closure Request documents were submitted to the WDNR on your behalf by Antea USA, Inc. (Antea). The Closure Committee reviews environmental remediation cases for compliance with state and federal laws to maintain consistency in the closure of these cases. As discussed with Antea on March 23, 2017 and June 20, 2017, the closure committee has not recommended closure because additional requirements must be met. The purpose of this letter is to inform you of remaining requirements for obtaining closure. We request that within 60 days of this letter, you provide us with your written response regarding the necessary work and a schedule for completion of this work.

As noted above, additional site work is necessary in order to meet the requirements for site closure including, but not limited to:

- Additional investigation is necessary to define the degree and extent of groundwater contamination as required by ch. NR 716 Wis. Admin. Code.
- Additional vapor assessment is necessary as required by ch. NR 716 Wis. Admin. Code.
- Additional assessment of shallow surface soil contamination as required by ch. NR 716 Wis. Admin. Code.
- A Remedial Action Options Analysis that fulfills the requirements of ch NR 722 Wis. Adm. Code is needed to evaluate options for the remaining mass of petroleum contamination on the site.

Need to Define the Degree and Extent of Contamination

Additional investigation is needed in order to define the degree and extent of contamination. The groundwater contamination, particularly with regard to vertical extent, has not been fully defined north of Winter Street. It should be noted the January 24, 2017 closure documents do not depict any vertical extent of groundwater contamination associated with the releases at the Amoco Oil Terminal site. However,

piezometer MW-30(D) displays a benzene concentration from October 6, 2016 exceeding the NR 140 Wis. Adm. Code Enforcement Standard. Any future closure request should include documentation of the horizontal and vertical extent of groundwater contamination if any remains at the time of request.

Need to Complete a Vapor Investigation

In the *Progress Report for Calendar Year 2012* dated May 17, 2013, Antea reported an accumulation of methane between the water table and the clay confining unit at the northeast portion of the Terminal site. Over the years monitoring has indicated methane concentrations in excess of the lower explosive limit and upper explosive limit. Antea has conducted sub-slab monitoring of petroleum vapors at an on-site building however methane was not included in the monitoring. Vapor intrusion of petroleum vapors or methane may be a significant issue at this site, please document all source control, monitoring and mitigation actions taken.

Need to Conduct further Assessment of Soil Contamination

On August 18, 2003, during construction activities on Winter Street, the Superior Fire Department responded to an emergency call at the site. Petroleum saturated soil within the street right-of-way was ignited by excavation activities and a sustained fire occurred. The fire was located near the intersection of Winter Street and Maryland Avenue at the apparent location of the Amoco pipeline corridor leading from the Terminal property to the former Amoco barge dock property. The Fire Department extinguished the blaze and stayed on site wetting down the work area until further fires did not occur. This area has apparently never been investigated or remediated and the pipelines are still in-place. Further investigation of this health and safety risk is required as is determining the degree and extent of all contamination associated with the site.

Need to Evaluate Remedial Action Alternatives

The WDNR acknowledges the remediation activities conducted to date have removed a significant volume of contaminant mass from the Amoco Oil Terminal site. However, a large mass of contaminants remain in place at the site including in the Winter St. right-of-way. A detailed Remedial Action Options Report in compliance with the requirements of NR 722 Wis. Adm. Code is required. Additional remedial action may be necessary to comply with the remedial action requirements of NR 722 Wis. Adm. Code in order to comply with the closure criteria set forth in NR 726 Wis. Adm. Code.

Need to Conduct Additional Groundwater Monitoring

Continued groundwater monitoring is needed in order to establish compliance with the closure criteria of NR 726 Wis. Adm. Code. If monitored natural attenuation is to be used as a remedial action, you need to determine whether there is a stable or receding plume. Guidance regarding natural attenuation can be found in WDNR publication RR614, *Guidance on Natural Attenuation for Petroleum Releases*.

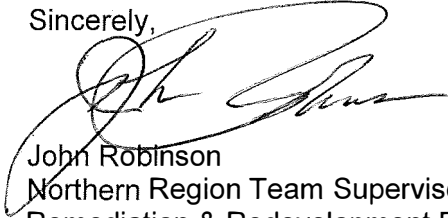
A complete closure request should be re-submitted once all the above requirements have been satisfied, together with any required documentation, to let the Department know that applicable requirements have been met. Case closure can be considered once all the above requirements have been satisfied.

Within 60 days of the date of this letter, please respond in writing with a schedule of your plans to meet these requirements. Until requirements have been met, your site will remain "open" and you will also need to continue to submit the semi-

annual progress reports, as required by s. NR 700.11, Wis. Adm. Code. You will also be responsible for any operation and maintenance activities required under s. NR 724.13, Wis. Adm. Code.

We appreciate your efforts to restore the environment at this site. If you have any questions regarding this letter, please contact either John Hunt at (715) 392-3126 or me at (715) 359-8932.

Sincerely,



John Robinson
Northern Region Team Supervisor
Remediation & Redevelopment Program

cc: Mr. Jonathan Zimdars, Antea
Judy Fassbender, WDNR Madison
John Hunt, WDNR Superior
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Hallet Dock Company, Mike McCoshen, P.O. Box 16447, Duluth, MN 55816
City of Superior, Jason Serck, Planning & Development, 1316 North 14th Street Superior, WI 54880
Lake City Towing, Chad Thompson, 2904 Winter Street, Superior, WI 54880
Boyer Ford Trucks Inc., Mark Olson, 2601 Broadway Road NE, Minneapolis, MN 55402
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