

From: Neal, Conor
To: [Danko, Jeff](#)
Cc: [DuFresne, Kristin I - DNR](#)
Subject: EPA and WDNR comments - Pilot Dye Test Work Plan
Date: Tuesday, August 22, 2017 11:37:49 AM
Attachments: [EPA Ltr to Tyco Pilot Dye Test comments 08.22.2017.pdf](#)

Jeff,

Please find EPA and WDNR comments to the Pilot Dye Test Work Plan – Tyco Fire Products LP Facility attached. The Agencies will be available to discuss these comments if requested. Please provide a written response to comments to the Agencies at least a week before the scheduled implementation of the work plan.

Thank you,
Conor

Conor Neal

Geologist
Land & Chemicals Division
US EPA, Region 5, LU-MC-16J
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD

CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

LU-16J

August 22, 2017

VIA ELECTRONIC MAIL

Mr. Jeff Danko
Environmental Project Geologist
Tyco Fire Products, LP
1 Stanton Street
Marinette, WI 54143

Subject: EPA and WDNR comments
Pilot Dye Test Work Plan – Tyco Fire Products LP Facility
EPA RCRA Administrative Order Docket No. RCRA-05-2009-0007
EPA Facility ID WID 006 125 215

Dear Mr. Danko:

The US Environmental Protection Agency (EPA) and Wisconsin Department of Natural Resources (WDNR) have reviewed the *Pilot Dye Test Work Plan – Tyco Fire Products LP Facility* submitted August 14, 2017. The Agencies provide the following comments:

- 1. Section 1.0 Introduction, paragraph 2** - Tyco states "The full-scale barrier wall dye test is planned for summer 2018. The September 2017 timing for the pilot test also will be beneficial, as it will be under similar conditions as that proposed for the full-scale test when lower river flows are most common and will limit the amount of dye needed during the full-scale test." The EPA granted Tyco's request for extension for implementing the full-scale barrier wall dye test to May 1, 2018. If Tyco would like to extend the implementation for the full-scale barrier wall dye test, it must request to do so, and should consider that the Agencies will require the results of the full-scale barrier wall dye test to be submitted for review and approval prior to the 2018 5-year review.
- 2. Section 1.1 Background, paragraph 2** - Tyco states "the dye test was designed only to measure the effectiveness of representative portions of the barrier wall. However, the information obtained during the dye test will be regarded as being representative of the entire wall containment integrity." The heterogeneous nature of the subsurface (tie rods spaced approximately every 9 feet, utilities, surface mounds, and old wood piers and piles adjacent to the barrier wall) and the likelihood of needing to change injection locations in the field means it is difficult to assess whether the dye test will be representative of the entire wall's containment integrity. However, given the volume of dye required to assess the entire length of the wall, the EPA agrees that nine injection locations are sufficient for assessing the wall's containment integrity in the Main Plant containment cell.
- 3. Section 1.1 Background, paragraph 2** – Tyco states "The proposed full-scale barrier wall dye testing scheduled for August or September 2018 includes injecting Rhodamine WT dye into

groundwater at nine locations near the barrier wall in the Main Plant Area, accompanied by surface water sampling of the Menominee River..." Tyco should revise this paragraph to include the vertical profiling and grab sampling that was previously proposed and is mentioned in this document in Section 2.4.3.

4. **Section 1.1 Background, paragraph 3** - Tyco states "The proposed full-scale barrier wall dye testing scheduled for August or September 2018..." Again, the EPA granted Tyco's request for extension for implementing the full-scale barrier wall dye test to May 1, 2018. If Tyco would like to extend the implementation for the full-scale barrier wall dye test, it must request to do so.
5. **Section 1.2 Pilot Test Objectives** - Understanding the vertical dispersion of the dye is not included as an objective of the pilot test. Tyco should consider adding this component to the pilot test to better understand the dispersion and dilution of the dye if a leak occurs at deeper depths of the wall. Section 2.0 mentions two dye events at the first location, near the surface and river bottom. Tyco should indicate whether any vertical profiling will be conducted during these two dye events.
6. **Section 2.0 Field Methods, Bullet 6** - Will the fluorometers be positioned in the same location for the first two dye events, which will occur near the surface and river bottom at location 1?
7. **Section 2.0 Field Methods, paragraph 1 and Section 2.4.3 Surface Water Sampling** - Tyco should provide clarification of the surface water sampling protocol. Tyco states that the sampling scheme proposed for the full-scale barrier wall dye test will be followed for one of the three proposed pilot tests. The following questions should be addressed in this section:
 - a. Does this include vertical profiling with the YSI Sonde to determine locations for grab samples?
 - b. What is the grab sampling protocol for the other two pilot test locations?
 - c. Is Tyco proposing replacing the YSI Sonde technology with the Turner Designs Self-Contained Underwater Fluorescence Apparatus (SCUFA) during the full scale dye test?
8. **Section 2.0 Field Methods, bullet 4** – Turner Design's website states that as of December 1, 2008, they obsoleted the SCUFA and replaced it with the C3 Submersible Fluorometer. Tyco should consider using the C3 Submersible Fluorometer rather than the SCUFA during the pilot dye test.
9. **Section 3.1.3 Fluorometers** – Tyco plans to perform a second calibration of the fluorometers after the pilot test using dye and distilled water rather than river water and use both calibration curves to correct or adjust the observed dye concentrations. Tyco should specify how both curves will be used and if the calibration curve using river water will take precedence over the curve using distilled water

In the spirit of keeping on the schedule provided in Section 5, the Agencies will be available to discuss the comments above should Tyco request a meeting. Please contact me at (312) 886-7193 or via email at neal.conor@epa.gov to schedule a meeting. Please provide a written response to comments to the Agencies by September 11, 2017.

Sincerely,

A handwritten signature in blue ink, appearing to read 'C. Neal', is written over the word 'Sincerely,'.

Conor Neal, Geologist and Project Manager
Corrective Action Section 2
Remediation and Reuse Branch
Land and Chemicals Division
U.S. EPA, Region 5

Ecc: Kristin DuFresne, WDNR