

Karlene French

From: Reppe, Thomas (MPCA) <Thomas.Reppe@state.mn.us>
Sent: Thursday, January 20, 2022 4:01 PM
To: Karlene French
Cc: Wolf, Matthias (MPCA); Zettler, Lee M (MDA); Kevin Eisen
Subject: RE: Canadian Pacific - McFarland-Dworsky Lease site soil gas sampling work plan for review

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Karlene,

Minnesota Pollution Control Agency (MPCA) staff have completed a review of the *Work Plan for CP Shoreham Yard McFarland-Dworsky Lease Site Soil Gas Investigation*, dated November 30, 2021 (Work Plan), prepared by Barr Engineering (Barr) on behalf of Canadian Pacific (CP). Based on the review, MPCA staff approve of the Work Plan and the proposed activities contingent on the incorporation of the following comments:

1. The Work Plan states that it was: "...prepared on behalf of Canadian Pacific, in response to an October 6, 2021 conference call... as well as a subsequent scope clarification discussion held on October 26, 2021." The referenced conference call between CP and the MPCA occurred on October 5, 2021, and the discussion between Barr and the MPCA to clarify the scope occurred on October 27, 2021.
2. Groundwater Data Evaluation: The Work Plan states that: "As discussed during the October 26, 2021 conference call, EPA's Vapor Intrusion Screening Levels (VISLs) are a more appropriate screening criteria than Health Risk Limits (HRLs) for assessing vapor intrusion risk, as VISLs are based on health risk associated with inhalation, whereas HRLs are based on health risks associated with ingestion. Correspondingly, the historical groundwater data were evaluated by comparing them to target groundwater concentrations based on EPA's VISLs..."

The opinion that EPA's VISLs are a more appropriate screening method than MDH HRLs for assessing vapor intrusion risk is noted. As previously communicated by the MPCA to CP via email correspondence on October 25, 2021, and as discussed between the MPCA and Barr on October 27, 2021, the MPCA does not generally apply the EPA's VISLs to determine locations to be targeted for soil vapor sampling, as is proposed in the Work Plan.

In accordance with the MPCA's *Vapor Investigation and Mitigation Decision Best Management Practices* (BMPs) (available at [c-rem3-06e](#)), vapor investigation activities are determined by evaluating soil vapor (soil gas and/or sub-slab) data collected at a site relative to MPCA's Intrusion Screening Values (ISVs) to define the vapor intrusion area of concern (VI AOC). If a known or potential source of vapor-forming contaminants is present at a site, including a shallow groundwater plume, the MPCA utilizes the MDH Health Risk Limits (HRLs) to determine locations to be targeted for soil vapor sampling. Specifically, the BMPs prescribe that soil vapor samples shall be collected within a 100-foot buffer zone from known or suspected vapor sources, including VOC-impacted groundwater.

All of the groundwater samples collected at the site and summarized in *Table 1, Shallow Groundwater Analytical Data*, with the exception of SB0083, either exceed or have a reporting limit that exceeds the MDH HRL (0.4 ug/L) for TCE. TCE was detected above the reporting limit and above the MDH HRL at the following locations: GP-1 through GP-5, GP-7, GP-9, MW01-04-T, MW201, MW202, CPR-SB0085, and CPR-SB0086. The groundwater results indicate a larger groundwater plume of TCE that exceeds the MDH HRL than displayed in Figures 3

through 5 of the Work Plan. Therefore, the 100-foot buffer should also be extended outward surrounding the identified groundwater plume, defining a larger area of potential vapor impacts and VI AOC. Based on this information, the locations of the proposed soil vapor samples are within the identified source area, and moving the locations outward may better evaluate the entire area of potential vapor impacts defined by the 100-foot buffer surrounding the identified groundwater plume.

3. Schedule: The Work Plan states that: "The two rounds will achieve the MPCA's required two-season sampling schedule (i.e., with one heating season sample and one non-heating season sample)." As stated in the MPCA's BMPs, two seasonal sampling events, conducted within 100 feet of known or potential vapor sources, are the minimum number of sampling events required to document that there is not a VI AOC at the site.
4. Reporting: The Work Plan states that: "Following receipt and data quality review of the analytical results from both sampling events, a summary letter report will be prepared for regulatory review and approval... Assuming no exceedances of the MPCA 33x ISVs for Industrial/Commercial land use, it is anticipated that CP will re-request the previously-submitted request for a No Further Action Letter with the existing Affidavit."

As indicated above in Comment 2, the locations of the proposed soil vapor samples are within the source area (i.e. the shallow groundwater plume that exceeds MDH HRLs) and are not located within the 100-foot buffer of the identified groundwater plume. If a result(s) from any of the sampling locations/events exceed the MPCA's 33x ISVs for Commercial/Industrial land use, then additional soil vapor samples must be collected beyond the currently proposed locations to delineate the full extent of soil vapor impacts and the VI AOC based on nearby receptors and their proximity to the site. If Residential land use is applicable to any identified receptor(s), then the MPCA's ISVs (and 33x ISVs) for Residential land use will be valid for evaluating and defining the VI AOC.

Please contact Matthias Wolf or myself if you have any questions regarding the MPCA's review and approval of the Work Plan.

Thank you,
Tom

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From: Kevin Eisen <KEisen@barr.com>
Sent: Tuesday, November 30, 2021 08:33
To: Reppe, Thomas (MPCA) <Thomas.Reppe@state.mn.us>; Zettler, Lee M (MDA) <lee.zettler@state.mn.us>
Cc: 'Karlene French' <Karlene_French@cpr.ca>; Kevin Eisen <KEisen@barr.com>
Subject: Canadian Pacific - McFarland-Dworsky Lease site soil gas sampling work plan for review

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Tom and Lee,

Please find attached a work plan submitted on behalf of Canadian Pacific for evaluation of soil gas at the above-referenced lease site.

Please let me know if you have any questions during your review.

Thanks,
Kevin

Kevin Eisen, PE

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