

Memo



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To: Susan Morales and Donald Brown (USEPA)
From: Joel Hecker, LG (WA, OR, KY, IN, NC, SC), LHG (WA)
Cc: Mike Reid (City of Olympia), Nick Acklam (Ecology), Brandon Smith (Milestone), Troy Bussey (PIONEER)
Date: September 28, 2021
Subject: Minor Updates/Clarifications to the March 2021 RI Data Gaps Investigation Work Plan for Methane Soil Vapor Sampling at the Hardel Mutual Plywood Corporation Site
Olympia Washington USEPA Brownfield Assessment Grant (BF01J66201)

Methane soil vapor sampling will be conducted at the Hardel Mutual Plywood Corporation Site in accordance with the USEPA-approved March 2021 Remedial Investigation (RI) Data Gaps Investigation Work Plan. The purpose of this memo is to document the following minor updates/clarifications to the March 2021 RI Data Gaps Investigation Work Plan for methane soil vapor sampling:


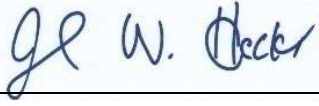
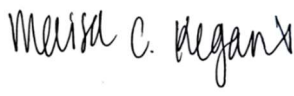
- The 20 previously proposed soil vapor probe (SVP) locations have been adjusted now that the redevelopment schematic design for the Site has been completed. In addition, another SVP location (SVP21) will be installed and sampled per the request of the Washington State Department of Ecology (Ecology). The updated SVP locations are shown on the enclosed figure.
- SVPs will be installed per Standard Operating Procedure 22 in the USEPA-approved Quality Assurance Project Plan (PIONEER 2020).
- Assuming the previously installed SVPs B10 and B11 are still in place and usable, methane soil vapor samples will be collected from B10 and B11 during the same sampling event as SVP1 through SVP21.
- At each SVP, methane and associated measurements will be collected during (1) the initial purging of at least three volumes of air, and (2) the subsequent purging after capping the SVP for at least four hours. In the initial purging, measurements will be obtained at the start of purging and at the end of purging. In the subsequent purging, measurements will be obtained at the start of purging and at the end of purging, which will be defined as 15 minutes of purging or a stable methane concentration with an increase/decrease of less than 1% over five consecutive minutes of purging.
- The enclosed PIONEER Methane Field Measurements Form will be used in the field to record data associated with methane soil vapor measurements during both the initial purging and the subsequent purging.
- The methane soil vapor sampling will be conducted near the end of the dry season as previously proposed. In addition, if methane soil vapor concentrations are less than 30% and pressure differentials are less than 500 Pascals in all or almost all SVPs, then another methane soil vapor sampling event will likely be conducted in spring or summer 2022 for confirmation purposes. If another event is conducted, it would be not be funded by the USEPA Brownfield Assessment Grant.

Enclosures

Figure 12 Mod: Summary of Methane Soil Gas Results and Proposed Sampling Locations
PIONEER Methane Field Measurements Form

Memo Approval

The Memo titled Minor Updates/Clarifications to the March 2021 RI Data Gaps Investigation Work Plan for Methane Soil Vapor Sampling at the Hardel Mutual Plywood Corporation Site has been approved by the following Project Team members:

Name and Role	Signature and Date
Susan Morales USEPA Project Manager	
Donald M. Brown USEPA Brownfields QA Reviewer	
Mike Reid City of Olympia Grantee Project Manager	 9/28/21
Joel Hecker, LG PIONEER Project Manager	 9/28/2021
Angela Noyan PIONEER QA Manager	 For Angela Noyan 9/28/2021

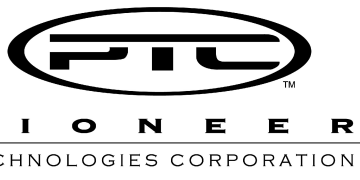
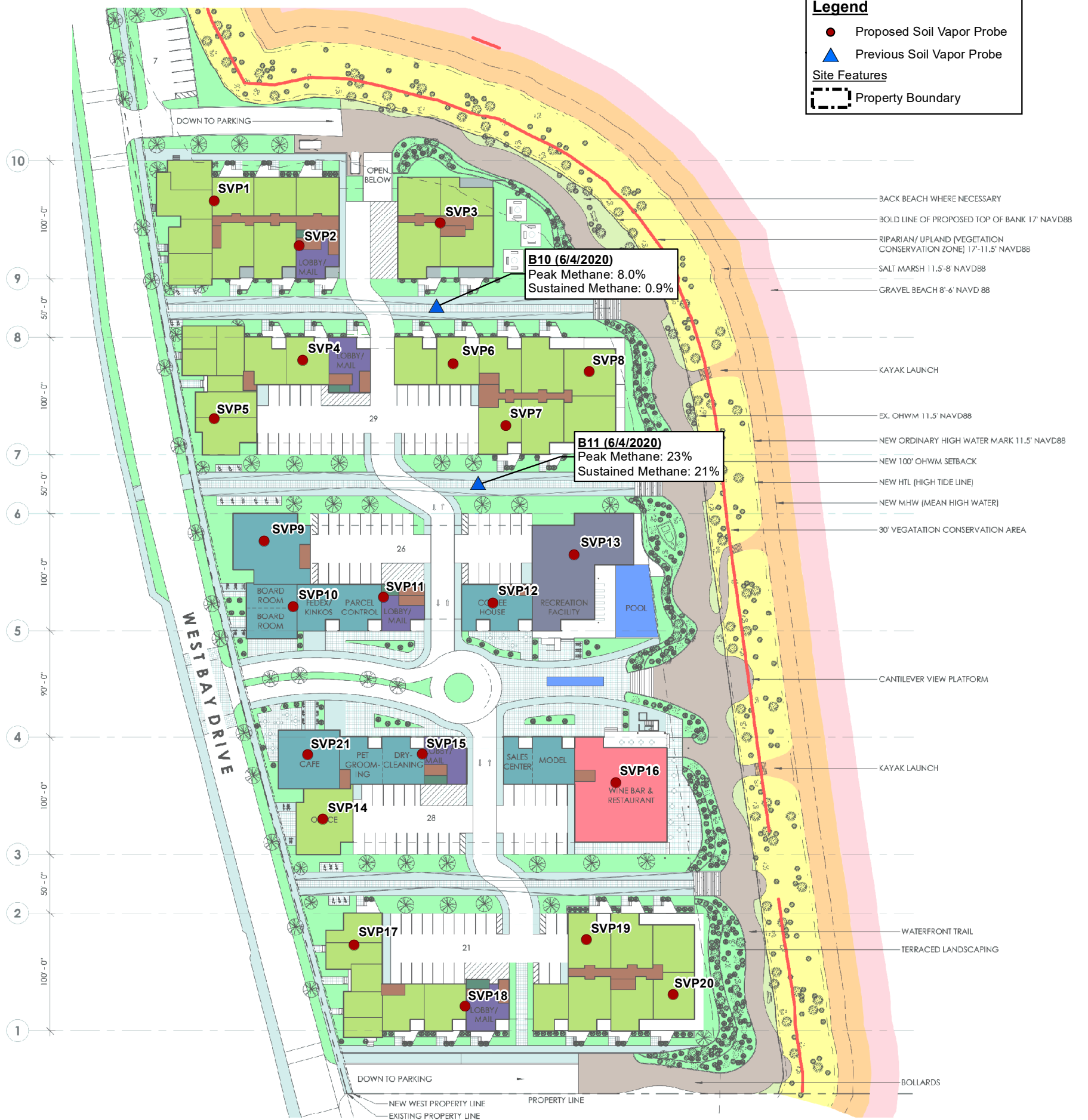


Legend

- Proposed Soil Vapor Probe
- ▲ Previous Soil Vapor Probe

Site Features

- ▭ Property Boundary



Summary of Methane Soil Gas Results and
Proposed Sampling Locations
Remedial Investigation Data Gap Report
Hardel Mutual Plywood Corporation Site

Figure 12 Mod

Methane Field Measurements Form



Site Name: _____

Instrument: _____

Sampler Name: _____

Barometric Pressure (inches Hg): _____

Date: _____

Pressure Differential Units for This Instrument
(e.g., inches Hg, inches H₂O): _____

Weather Conditions: _____

Temp (°F): _____

Samp_No	Start Time	Initial Conditions at Start of Purging					Final Conditions at End of Purging					Notes (e.g. did conditions stabilize?)
		Pressure Differential (Record Units!)	CH ₄ (%)	O ₂ (%)	CO ₂ (%)	Balance (%)	Pressure Differential (Record Units!)	CH ₄ (%)	O ₂ (%)	CO ₂ (%)	Balance (%)	

Notes: _____