

**Environmental
Resources
Management**

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19 April 2006

Ms. Mary Rose Cassa
California Regional Water Quality Control Board
San Francisco Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: Workplan for Passive Soil Vapor Survey
Walnut Creek Manor, Mayhew Center, and Cuff Property,
Pleasant Hill, California

Dear Ms. Cassa:

On behalf of Union Pacific Railroad Company (UPRR), ERM-West, Inc. (ERM) has prepared this *Workplan for Passive Soil Vapor Survey* for the Walnut Creek Manor, Mayhew Center, and Cuff Property, in Pleasant Hill, California (collectively, the "Vincent Road Properties").

BACKGROUND

In October-November 2001, a passive soil vapor survey was conducted for the Hookston Station remedial investigation as a screening tool to identify the approximate limits of soil and ground water impacted with volatile organic compounds (VOCs). During that investigation, elevated concentrations of tetrachloroethene (PCE) and associated breakdown products were found in soil vapor samples collected along Vincent Road. Subsequent investigation and monitoring activities have since identified PCE ground water concentrations as high as 7,200 micrograms per liter ($\mu\text{g}/\text{L}$) in monitoring wells installed in Vincent Road. Ground water monitoring data demonstrate that chemical impacts from this off-site (i.e., non-Hookston) source area have merged with the Hookston Station ground water impacts. The commingled ground water plume migrates further downgradient beneath a residential neighborhood.

In response to these findings, the Water Board requested that selected properties located upgradient from Hookston Station conduct soil and ground water investigations to evaluate the source of PCE and associated breakdown products. These properties include:

- Walnut Creek Manor, 81 Mayhew Way, Walnut Creek, California;
- Mayhew Center, 3301-3333 Vincent Road, Pleasant Hill, California;
and
- Cuff Property, 3343-3355 Vincent Road, Pleasant Hill, California.

Preliminary subsurface investigation activities have since been conducted at these sites by the respective property owners and have identified PCE in soil and ground water. Soil samples collected on the Walnut Creek Manor property and the Mayhew Center property contained PCE concentrations up to 6.6 milligrams per kilogram (mg/kg), which exceed the Water Board's Environmental Screening Level (ESL) for protection of ground water (through leaching concerns) of 0.70 mg/kg and the ESL for protection of human health of 0.24 mg/kg.¹ The PCE source area has not yet been identified, and the lateral and vertical extent of PCE soil and ground water impacts has not been fully delineated. The Water Board's efforts to require the owners of these various properties, which appear to be the potential source(s) of the PCE, have not to date been successful.

UPRR never owned or operated any of the Vincent Road Properties, and is not and could not be a suspected source of any of the chemicals at and emanating from those properties. Nevertheless, given the importance of collecting these data to support the Feasibility Study for the Hookston Station site, UPRR has prepared this workplan for and is prepared to advance the costs of conducting the next technical phase of work required to determine the source of PCE in these areas upgradient of Hookston Station. We believe that the next phase of work should be a pinpointed soil gas survey at each of the Vincent Road Properties, as described more fully below.

OBJECTIVES

Passive soil vapor surveys are useful screening tools for identifying the approximate limits and relative concentrations of VOCs in soil and

¹ *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, Table A-2, California Regional Water Quality Control Board, San Francisco Bay, Interim Final, February 2005.

ground water. The objective of the proposed passive soil vapor survey is to evaluate the lateral extent of PCE impacts at Walnut Creek Manor, Mayhew Center, and the Cuff Property, and to identify potential PCE source area(s). These data are necessary to complete the Feasibility Study that is currently being prepared for Hookston Station and may be used to guide future soil or ground water sampling in this area by the appropriate responsible party.

PROPOSED SAMPLING ACTIVITIES

ERM proposes to install approximately 60 passive soil vapor sampling modules (Gore-Sorbers®) at Walnut Creek Manor, Mayhew Center, and the Cuff Property. The proposed sampling locations are shown on Figures 1 and 2.

The modules will be installed at total depth of 3 feet below ground surface, and will remain in the subsurface for approximately 10 days. All passive soil vapor sampling activities will be conducted in accordance with the procedures outlined in ERM's *Standard Operating Procedure #1, Soil Vapor Sampling, Pleasant Hill, California* (December 2000), which was included as Appendix C in the *Phase I Remedial Investigation Field Sampling Plan, Hookston Station Site, Pleasant Hill California* (ERM, December 2000).

The sampling modules will be submitted to W.L. Gore & Associates of Elkton, Maryland, for analysis of selected VOCs by modified USEPA Method 8260. A report of the findings will be provided to the Water Board following receipt of the laboratory analyses.

CLOSING

If you have any questions regarding this status report, please call Brian Bjorklund at (925) 946-0455.

Sincerely,



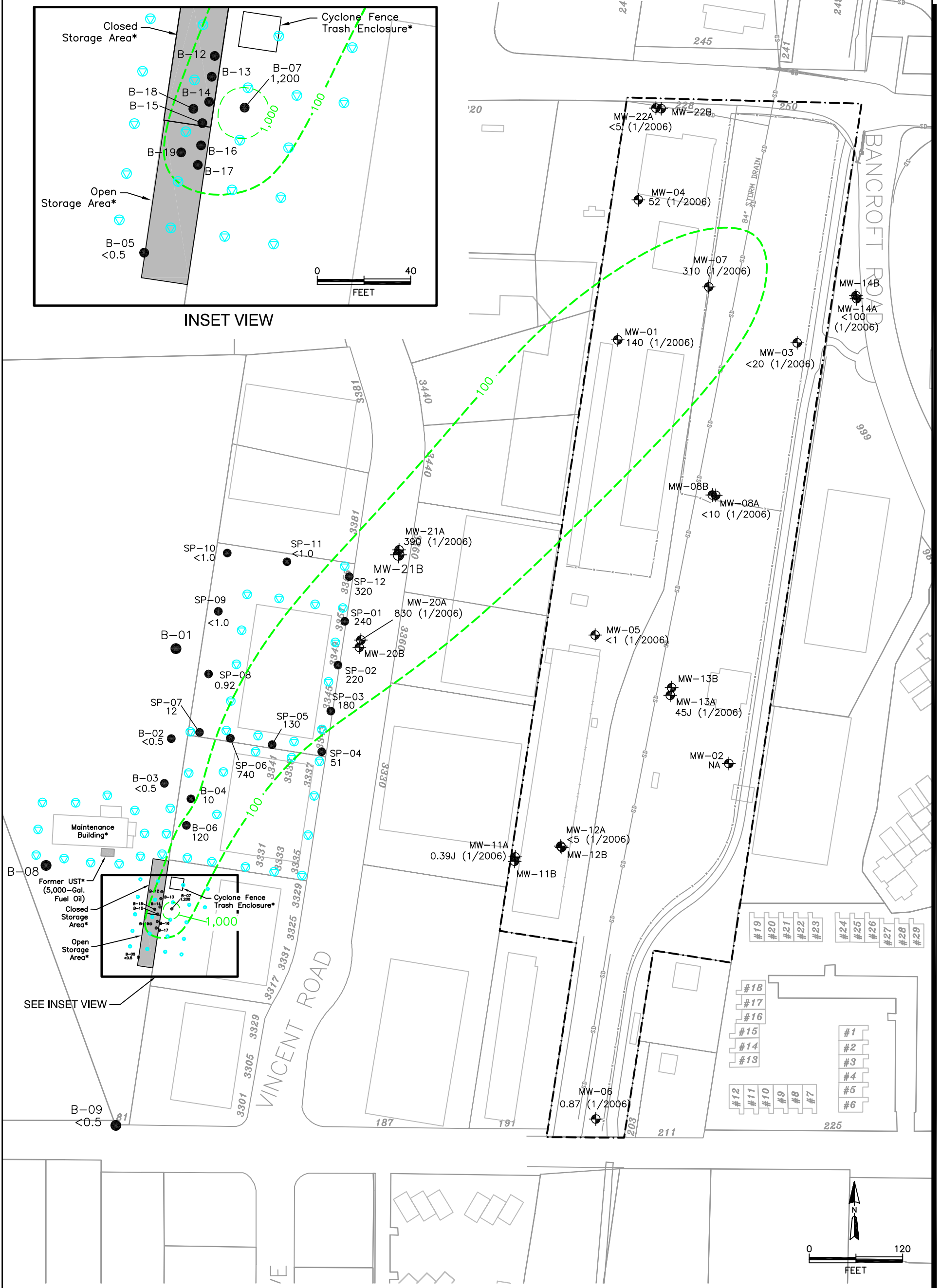
Brian Bjorklund, PG, CHG
Project Manager



Kimberly Lake, PG
Project Geologist

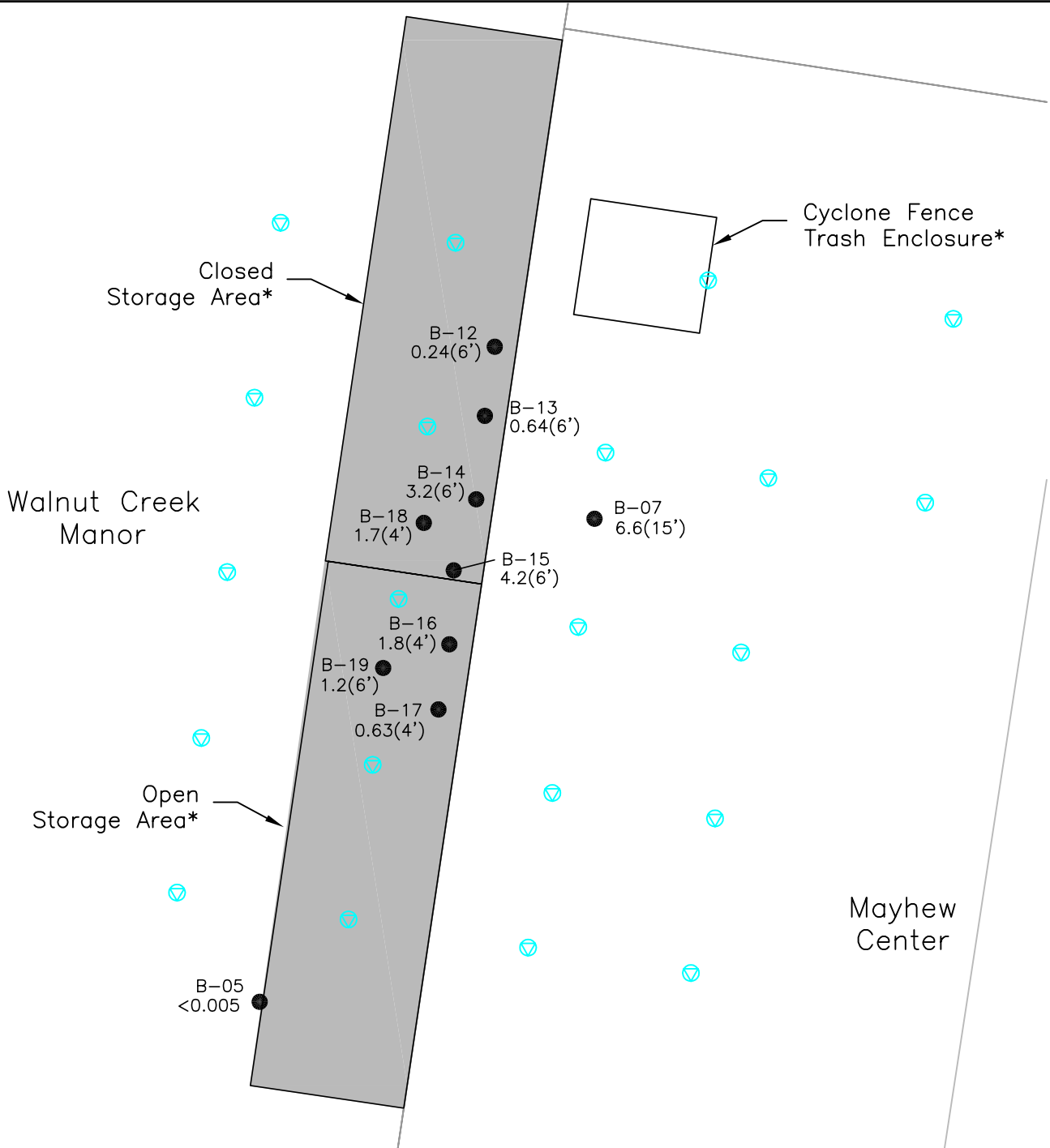
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enclosures

cc: Mr. Michael Grant, UPRR
Stephen Cuff, Cuff Property Management Company
Dean Dunnivan, Mayhew Center, LLP.
Milt Eberle, Walnut Creek Manor



LEGEND	
	Site Boundary
	Monitoring Well Location
	Soil Boring Sample Location, Data Collected by Walnut Creek Manor (4/2005) and Cuff Property (7/2004)
800	PCE in Ground Water Results (µg/L), A-Zone
NA	Not Analyzed
	PCE in Ground Water Contour, (µg/L), A-Zone
	Proposed Soil Vapor Sampling Location
*	Features Identified in Workplan to Conduct Additional Soil and Ground Water Investigation at Mayhew Center (SOMA, February 2006)

Figure 1
 Proposed Passive Soil Vapor Sampling Locations
 Hookston Station Project
 Pleasant Hill, California



LEGEND

- Monitoring Well Location
- Soil Boring Sample Location
- Proposed Soil Vapor Sampling Locations

6.6(15') PCE Soil Concentration, milligram per kilogram (mg/kg), Data Collected April and December 2005 by Walnut Creek Manor. Sample depth in feet below ground surface (bgs).

Note: Multiple soil samples collected at each boring, only the highest PCE results are posted at each location.

* Features Identified in Workplan to Conduct Additional Soil and Ground Water Investigation at Mayhew Center (SOMA, February 2006)

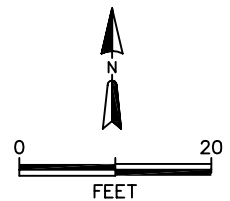


Figure 2
Walnut Creek Manor Investigation
PCE Soil Results
Houston Station Project
Pleasant Hill, California