



30 November 2021

via Electronic Mail

Ms. Mary Lou Helix
1102 Northridge Court
Concord, CA 94518

Ms. Lauren Mancuso
Union Pacific Railroad Company
1408 Middle Harbor Road
Oakland, CA 94607

Ms. Maureen Toms
Contra Costa County
C/O Department of Conservation and Development
30 Muir Road
Martinez, CA 94553

Subject: Work Authorization for Additional Required Tasks through January 2023
Hookston Station Site
Pleasant Hill, California

Dear Ms. Helix, Ms. Mancuso, and Ms. Toms:

ERM-West, Inc. (ERM) is pleased to provide this Work Authorization for additional environmental services at the Hookston Station site in Pleasant Hill, California (site) through the end of January 2023. ERM's previous work at this site has been performed on behalf of the Hookston Parties, which consist of Union Pacific Railroad Company (UPRR); Mary Lou Helix, Karen Hook, Debbie Hook, and Blake Pucell (together the Hookston Group); and Contra Costa County. The site is currently regulated under Regional Water Quality Control Board (RWQCB) Order No. R2-2007-0009, *Adoption of Final Site Cleanup Requirements and Rescission of Order Nos. R2-2003-0035 and R2-2004-0081*, dated 30 January 2007 (Order).

All tasks in this proposed scope of work are being conducted to satisfy the ongoing requirements of the Order, the RWQCB approved scope of work in *Colony Park Town House Vapor Intrusion Investigation Workplan*, dated 16 December 2016, recommendations made in the *Colony Park Town Houses Vapor Intrusion Interim Progress Report*, dated 2 July 2021, the *Mid-Plume High Resolution Site Characterization Results* document, dated 9 July 2021, and comments on the *Feasibility Study Addendum/Remedial Design and Implementation Plan*, dated 31 March 2021 issued by the RWQCB in an email dated 14 June 2021. This Work Authorization covers all currently known scopes of work to satisfy RWQCB requirements and does not include any additional elements that may be required by the RWQCB in the future. These tasks are estimated to be completed by January 2023.

This Work Authorization describes the following tasks to be performed by ERM:

- Task 1: Colony Park Town Houses Vapor Intrusion Investigation

- Task 2: Additional Mid-Plume Targeted Treatment Area Hydropunch Assessment
- Task 3: Update to Feasibility Study/Remedial Design and Implementation Plan
- Task 4: 2022 Annual Soil Vapor Monitoring and Reporting
- Task 5: 2022 Annual Indoor Air Sampling and Reporting
- Task 6: Project Management

The following sections provide a rationale for the proposed work; a brief description of the scope of work; and cost estimate for performing the tasks outlined above. Note, that there is no groundwater monitoring and sampling activities proposed in 2022, as the Self Monitoring Program (SMP) approved by RWQCB directs the Hookston Parties to conduct groundwater sampling on a biennial basis during odd years.

PROPOSED SCOPE OF WORK

A description of work to be performed under each task is provided below. All proposed work is required by the current Order.

Task 1 – Colony Park Town Houses Vapor Intrusion Investigation

This scope item satisfies the contingency sampling plan outlined in *Colony Park Town House Vapor Intrusion Investigation Workplan*, dated 16 December 2016 to perform subslab vapor and indoor air sampling in three of the Colony Park Town Houses. The performance of the contingency sampling plan is required based on the results of the initial vapor intrusion investigation results at the Colony Park Town House property, as presented in the *Colony Park Town Houses Vapor Intrusion Investigation Progress Report*, dated 2 July 2021. The scope of work includes the installation of a sub-slab vapor pin, and the collection of a sub-slab vapor sample, and two indoor air samples in each of the three town house buildings.

The following items will be performed as part of the scope of work:

- Fieldwork preparation activities will include:
 - Coordinate access with the property owners of the three Colony Park Town House buildings for advancement of soil vapor pins
 - Update the site Health and Safety Plan to include new project tasks and investigation procedures
 - Coordinate with subcontractors
- Performance of field investigation activities will include:
 - USA markout and subsurface utility clearance
 - Install soil vapor pins using a roto sonic drill
 - Collect sub-slab vapor samples and indoor air samples
- Review the field data collected during the site assessment, perform quality assurance/quality control (QA/QC) evaluation of laboratory reports, and tabulate field and analytical data

The results of the assessment activities will be summarized in a stand-alone report. ERM will provide a draft version of the report to the Hookston Parties for review, and comments/ revisions will be incorporated into the final submittal to the RWQCB.

Task 2 – Additional Mid-Plume Targeted Treatment Area Hydropunch Assessment

This scope item satisfies recommendations for additional grab groundwater sampling as described in the *Mid-Plume High Resolution Site Characterization Results* document, dated 9 July 2021. The previous scope of work was performed to refine the extent of the Mid-Plume Targeted Treatment Area, as initially outlined in the *Feasibility Study Addendum/Remedial Design and Implementation Plan*, dated 31 March 2021; however, the results of the investigation did not provide the full delineation of the targeted mid-plume treatment zone. The Hookston Parties approved ERM's recommendation to perform additional assessment in the targeted mid-plume treatment area during a conference call meeting held on 1 July 2021, and the recommendation was included in the *Mid-Plume High Resolution Site Characterization Results* document, submitted to the RWQCB on 9 July 2021. The proposed scope includes the advancement of three additional clusters of direct push soil borings for the collection of grab groundwater samples from the A1-, A2-, and B-Zones to refine our understanding of the distribution of dissolved-phase volatile organic compounds (VOCs) farther southeast than the previously-completed scope of work. These data will be use to refine the final extent of the Mid-Plume Targeted Treatment Area. The soil borings will be advanced to depths of up to 60 feet below ground surface.

The following items will be performed as part of the scope of work:

- Fieldwork preparation activities will include:
 - Coordinate access for advancement of soil borings in public right of way
 - Obtain soil boring permits from Contra Costa County
 - Update the site Health and Safety Plan to include new project tasks and investigation procedures
 - Coordinate with subcontractors
- Performance of field investigation activities will include:
 - USA markout and subsurface utility clearance
 - Advance soil borings with direct push tooling and collect grab groundwater samples
- Review the field data collected during the site assessment, perform quality assurance/quality control (QA/QC) evaluation of laboratory reports, and tabulate field and analytical data

The results of the assessment activities will be summarized in the revised *Feasibility Study Addendum/Remedial Design and Implementation Plan*. ERM will provide a draft version of the report to the Hookston Parties for review, and comments/ revisions will be incorporated into the final submittal to the RWQCB.

Task 3 – Update to Remedial Design and Implementation Plan

In an email dated 14 June 2021, RWQCB provided the following comments to the *Feasibility Study Addendum/Remedial Design and Implementation Plan*:

- Installation of a new monitoring well in the source area
- Provide time estimates to reach cleanup goals for the entire plume
- Include treatment of the B-Zone in the area downgradient of the permeable reactive barrier (PRB), depending on the results of the time estimate to reach cleanup goals evaluation
- Include all existing wells that exceed the cleanup goals in the performance monitoring program
- Provide a list of property owners within 500 feet of the plume boundary for public notification of the remedial strategy proposed in the *Feasibility Study Addendum/Remedial Design and Implementation Plan*

ERM will prepare an update to the *Feasibility Study Addendum/Remedial Design and Implementation Plan* to address the RWQCB comments presented above. This scope of this document includes the following elements:

- A review of recent and historical groundwater VOC data, placing the data into a database for statistical analysis and data visualization
- Trend analyses of existing wells to estimate cleanup timeframes under current conditions, and will provide estimated timeframes for the effects of the additional groundwater treatment to reach downgradient monitoring wells
- An evaluation of the benefits of supplemental B-Zone treatment in the PRB area, and the inclusion of a B-Zone treatment design if needed
- Redefining the performance monitoring program
- Revision to the Mid-Plume Treatment Area remedial design based on the results of the assessment activities presented above under Task 2
- Evaluation of potential source area remediation options

Additionally, ERM will review the list of property owners within a 500 foot radius of the plume boundary and assist RWQCB with the preparation and submission of a public notice regarding the final alternative remedial plan.

ERM will provide a draft version of the report to the Hookston Parties for review, and comments/ revisions will be incorporated into the final submittal to the RWQCB.

Task 4 – 2022 Annual Soil Vapor Sampling and Reporting

ERM will perform routine soil vapor sampling for the site during the Third Quarter 2022. ERM will subcontract Blaine Tech Services to sample 13 soil vapor wells. The samples will be analyzed for the presence of volatile organic compounds (VOC). Laboratory costs for sample analyses are included in this task, which includes 13 soil vapor samples and two quality assurance/quality control soil vapor samples. The results of the annual soil vapor sampling will be included in the Annual Monitoring

Status Report, which will be submitted to the RWQCB by 30 January 2023. A draft of the report will be submitted to the Hookston Parties for review as soon as it is available, but no later than a minimum of two weeks prior to submission to the RWQCB. The report will document soil vapor sampling, vapor intrusion prevention systems (VIPS) inspections, and other activities conducted during that time period. VIPS inspections are contracted directly with the Hookston Parties and are not included in this scope of work. Groundwater monitoring will not be performed in 2022 per the revisions to the SMP.

Task 5 – 2022 Annual Indoor Air Sampling and Reporting

ERM will perform annual indoor air sampling at selected properties within the Indoor Air Study Area during the Third Quarter 2022. After the completion of field activities, ERM will prepare a report that documents sampling activities, presents tabulated data, and evaluates indoor air concentration trends over time, following the existing template for prior reports as approved by the RWQCB. ERM will provide a draft version of the report to the Hookston Parties for review, and comments/revisions will be incorporated into the final submittal to the RWQCB. ERM will mail analytical results for each house sampled to the residence as required by the Order.

Task 6 – Project Management

This task will cover the management activities associated with the tasks to complete activities as presented in Tasks 1, 2, 3, 4, and 5. These activities include cost tracking; calls, meetings, and strategic support from ERM for regulatory agency interactions; and routine communications with the Hookston Parties through 31 January 2023.

Task 6a covers additional project management costs for tasks described in this Work Authorization that will be completed through the end of calendar year 2021 (Tasks 1, 2, and 3). Task 6b covers project management costs for routine annual tasks described in this Work Authorization that will be completed in calendar year 2022 through January 2023 and include a 3% annual labor escalation (Tasks 4 and 5).

ESTIMATED PROBABLE COST

The estimated probable cost to perform the proposed scope of work is \$210,233, as summarized in the tables included as [Appendix A](#). This budget is being proposed on a time-and-materials basis of hourly charges for ERM personnel, plus direct expenses. Only those costs incurred will be charged, and will not exceed the estimated cost without prior approval by the Hookston Parties. The estimated cost is an estimated maximum, which we fully expect will cover the services described herein, but no guarantee is made or implied. Our previous contract with the Hookston Parties has expired. This work will be performed in accordance with Consulting Services Agreement between the Hookston Parties and ERM dated 14 December 2021.

A cost summary by task is provided in the table below.

Task	Description	Total
1	Colony Park Town Houses Vapor Intrusion Investigation	\$37,277
2	Additional Mid-Plume Targeted Treatment Area Hydropunch Assessment	\$45,123

3	Update to Feasibility Study/Remedial Design and Implementation Plan	\$37,691
4	2022 Annual Soil Vapor Sampling and Reporting	\$20,801
5	2022 Annual Indoor Air Sampling and Reporting	\$23,714
6a	Project Management 2021	\$21,035
6b	Project Management 2022	\$24,592
Estimated Probable Cost		\$210,233

CLOSING AND SCHEDULE

ERM is prepared to start the scope of work outlines above immediately upon approval of this Work Authorization by the Hookston Parties. An estimated project schedule has been included as [Appendix B](#). This estimated schedule assumes approval of this CWA by Friday 17 December 2021; the dates listed in the estimated schedule will need to be adjusted based on the final approval date from the Hookston Parties.

AUTHORIZATION

If this Work Authorization is acceptable, please have an authorized representative sign in the space provided below and return a copy to ERM for our files. The above-referenced offer is valid for 90 days.

ERM-West, Inc.

Client Approval

UPRR Representative

Signature

Brian Bjorklund

Printed Name

Partner

Title

Date

Signature

Printed Name

Title

Date

Contra Costa County Representative

Signature

Printed Name

Title

Date

Helix Trust Representative

Signature

Printed Name

Title

Date

APPENDIX A COST ESTIMATE TABLES

APPENDIX B ESTIMATED PROJECT SCHEDULE