

Appendix L

Current-Use Engineering Controls Inspection/Maintenance/Repair Plan

CURRENT-USE ENGINEERING CONTROLS INSPECTION/MAINTENANCE/REPAIR PLAN FORREST STREET AND FORREST STREET PROPERTIES

I. Introduction

The purpose of this plan is to provide guidance for the implementation and reporting of site inspections, maintenance, and repair to be conducted for the interior and exterior engineering controls associated with the current-use remediation areas identified in the *Final Remedial Action Work Plan for Current Use of Forrest Street and Forrest Street Properties (Soil)*, hereinafter referred to as the RAWP.

This document also establishes a communication protocol between the property owner/tenant and PPG in the event an inaccessible area becomes accessible (or vice versa), intrusive work by the property owner/tenant is proposed within the footprint of the engineering controls, or potentially impacted areas are identified by the property owner/tenant. The communication protocol is provided in **Section X.** of this document.

The inspections will be conducted on a monthly basis for the first six months following installation of the engineering controls and on quarterly basis thereafter. The typical sequence of events for the engineering control inspections and reporting will be as follows: arrange access to the inspection properties, schedule the inspections, conduct the inspections, perform follow up actions as necessary, and prepare post-inspection reports for review and final submission. The following sections describe the process in more detail.

II. Inspection Access, Personnel, and Scheduling

PPG is responsible for ensuring that an access agreement has been secured with the property owner. The AECOM Team Lead (Steve Surman) will identify the personnel for each inspection team and will select the appropriate dates and times for the inspection based upon site access, inspection crew availability, and oversight personnel availability. The AECOM Team Lead is responsible for scheduling inspections with the property owner's representative. A listing of the inspection personnel and their contact information is provided in **Table 1.**

Invitations for the inspections are sent in the form of a meeting request to inspection team personnel, as appropriate. For all of the sites, the meeting invitations will be sent by the AECOM Team Lead. Refer to **Table 2** for a current listing of the sites/properties that will be inspected, addresses, primary site/property contacts, inspection team entities, and the inspection frequency and schedules. The AECOM Team Lead will review and update **Table 2**, as needed, as part of the reporting process described below.

III. Engineering Controls

The type, details, and extent of the engineering controls for the current-use remediation areas are provided in the RAWP; these details should be reviewed prior to each inspection and copies of the associated figures should be taken into the field.

IV. Baseline Engineering Control Inspection

Upon approval of the RAWP and implementation of the engineering controls, a baseline inspection of the current-use remediation areas will be conducted and documented. The results of the baseline site inspection will set the basis for the future site inspections. The baseline inspection will include:

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- Coordination with property owner/tenants to minimize obstructions to the engineering controls;
- Inspection of the entire interior and exterior engineering controls; and
- Identification of areas that are inaccessible for routine inspections in the foreseeable future. Inaccessible areas are those that have objects blocking the view of surface areas, such as carpeting, paneling, flooring, tiles, machinery, equipment, or tanks.

Upon completion of the baseline inspection, a summary report will be prepared that includes, at a minimum:

- Date the baseline inspection was conducted;
- Description of the engineering controls inspection;
- Findings;
- Identification of the engineering controls inspected;
- Identification of inaccessible areas;
- Condition of engineering controls; and
- Observed deficiencies of the engineering controls.

Additionally, the baseline inspection summary report shall include a figure that identifies the name, type, and location of the engineering controls inspected.

V. Engineering Controls Inspection Procedures

Below are the procedures to be followed during the monthly and quarterly inspections of the engineering controls. In situations where site-specific issues may dictate the need for alternative procedures, the inspection personnel will apply professional judgment. The AECOM Team Lead will undertake the following activities:

1. Prepare the following inspection equipment:

- Engineering controls inspection figures;
- Field book;
- Pen(s);
- Camera;
- LED flashlight (bright white light [e.g., 100 lumens or more]);
- Safety vest;
- Steel toe boots;
- Safety glasses with clear lenses (as appropriate);
- Hard hat (as appropriate);
- Sampling equipment, including laboratory sample containers; and
- Materials for typical temporary engineering control repairs and for cordoning off areas (e.g., hammer drill, epoxy, buckets, paint brushes, plastic sheeting, plywood, duct tape, cones, caution tape, folding caution signs, etc.).

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2. Arrive on site, meet with the other inspection personnel, and undertake the following activities:
 - Conduct a Tailgate Health & Safety (H&S) Briefing;
 - Discuss and get team agreement on inspection approach (areas to be inspected and sequence of inspection); and
 - Meet with the property owner or tenant, if applicable.
3. Using the baseline inspection results, conduct a full inspection of the accessible areas (i.e., physically and/or visually accessible) of both the interior and exterior engineering controls; look for areas exhibiting potential hexavalent chromium impacts (e.g., yellow or greenish blooming/crystallization, staining, visible Chromate Chemical Production Waste [CCPW]) and/or engineering control damage.
4. Record field notes, observations, and measurements; prepare site figures; and log photographs of engineering controls or areas in need of repair in the field book. Note areas inspected, as well as areas that were not accessible or could not be inspected and include the reason why, (e.g., time constraints, access issues, etc.).
5. Document whether inaccessible areas remain inaccessible.
6. Document any temporary repairs and/or permanent engineering controls that have been implemented since last inspection.
7. Institute temporary measures (i.e., cover or barrier) to minimize the potential for exposure and limit inadvertent contact and access to potentially impacted areas until samples can be collected or permanent engineering controls can be installed.
8. Indicate additional actions that may be necessary and the estimated timeframes to complete the actions.

VI. Sampling

Areas noted during the inspection as having potential hexavalent chromium impacts may be sampled to confirm the impacts. Sampling will be completed as soon as is reasonably practical. During each engineering controls inspection, AECOM will be prepared to collect samples via hammer drill or sample trowel, if required.

Laboratory analysis of the samples will include hexavalent chromium, Eh and pH, and will be conducted with an expedited turn-around time. AECOM will validate laboratory data within five business days of receipt of the final data packages. Upon receipt, the validated data will be distributed to the inspection team via email. Validated data will be detailed in the inspection reports.

If sampling cannot be completed prior to leaving the site, temporary measures will be instituted for the areas of potential impacts such as a temporary cover (e.g., plastic sheeting) or barrier (e.g., cones, caution tape, etc.) until the areas can be sampled. In certain circumstances, especially for areas where heavy forklift traffic is present, it may be beneficial to combine the installation of a temporary cover along with a barrier to demarcate the cover. Sampling equipment and epoxy will be available during the inspections so that samples may be taken, and epoxy may be applied immediately, if feasible.

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VII. Temporary Engineering Control Installation, Maintenance, and Repair

On the day of each engineering controls inspection, PPG and AECOM will be prepared, at a minimum, with the equipment and materials listed in Item #1 under **Section V.**, "Engineering Controls Inspection Procedures," to immediately cover or cordon off potentially impacted areas in need of an engineering control or existing engineering controls requiring repair until these areas are sampled or until a temporary engineering control is installed. Equipment and materials used to install temporary engineering controls may include, but are not limited to, the following: epoxy, plastic sheeting, plywood, duct tape, cones, caution tape, asphalt cold patch, folding caution signs, stone/gravel, or other barriers. During the inspection, if existing engineering controls are observed to be in need of repair or new engineering controls are to be installed to address potentially impacted areas, temporary repairs will be immediately performed in these areas. If circumstances indicate the need for additional time to implement temporary repairs or the installation of a new temporary engineering control, AECOM or PPG will notify the New Jersey Department of Environmental Protection (NJDEP) or Weston within a maximum of two business days to agree on the timing of the temporary repairs/installation. AECOM will have two representatives attend each inspection in order to expedite sampling and temporary repair/installation, if needed. If the temporary repair cannot be completed prior to leaving the site, measures will be immediately instituted for the areas of potential impacts such as a temporary cover (e.g., plastic sheeting) or barrier (e.g., cones, caution tape, etc.) until the temporary repair can be implemented. Temporary engineering controls will remain in place until more permanent engineering controls can be installed.

VIII. Permanent Engineering Control Installation

As discussed above, temporary engineering controls will remain in place until permanent engineering controls can be installed. The timing of the permanent engineering control may vary depending on the type, location, and size of the permanent engineering control needed. Proper notification of the property owner/tenant will be made in advance of the implementation of the permanent engineering controls.

The equipment and materials necessary to implement the permanent engineering controls include, but are not limited to:

- Hot-mix asphalt;
- Geosynthetic cementitious composite mat;
- Concrete;
- Masonry/concrete block;
- Epoxy;
- High-density polyethylene liner (40-mil); and
- Dri-Core[®] or equivalent subflooring.

The as-built permanent engineering controls will be communicated to the AECOM Team Lead so that the type, location, and extent of the permanent engineering control can be recorded on a figure for the next inspection.

IX. Reporting

Inspection reports will include a description of the field inspection, findings, summary table of samples and analytical results, and a figure illustrating the locations of new and existing engineering controls. The format of the reports will be consistent with past inspection reports. Additionally, laboratory data reports

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and data validation reports will be provided as attachments. Only final validated data will be reported. As mentioned earlier, the AECOM Team Lead will review and update **Table 2**, as needed, and provide the updated **Table 2** and this plan to the inspection team for the next inspection.

Note that the reports sent to the property owners/tenants will not include the laboratory data packages and validation reports, unless requested. The cover letter will note that laboratory data packages and validation reports are available upon request.

A summary of reporting timelines, if samples are collected, is presented in **Table 3**.

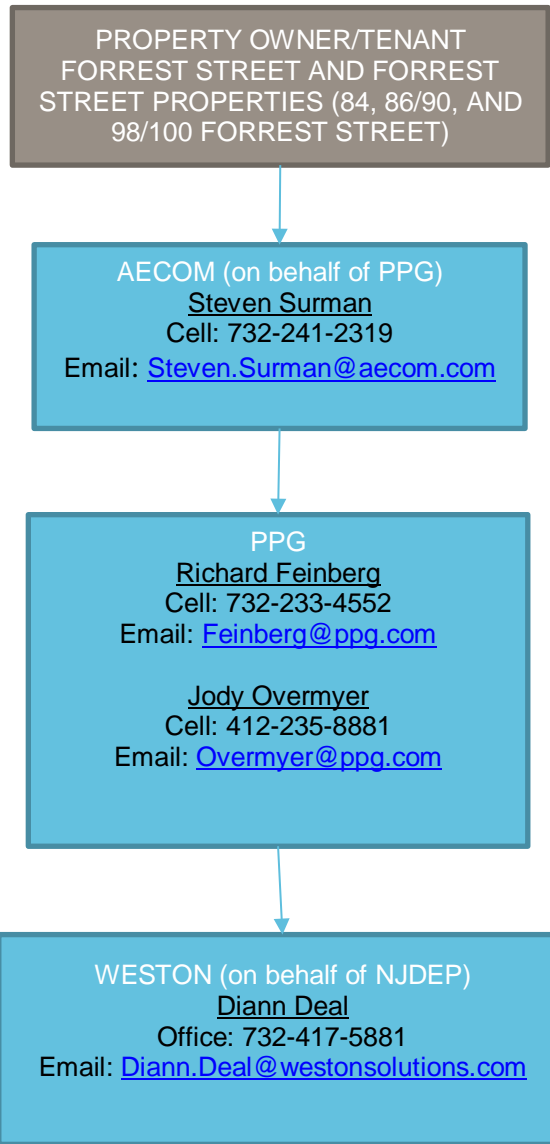
X. Communication Protocol

The following flowchart establishes a communication protocol between the property owner/tenant, PPG team, and NJDEP for the following events:

- An inaccessible area within the footprint of the engineering controls becomes accessible (or vice versa);
- Intrusive work by the property owner/tenant is proposed within the footprint of the engineering controls; and/or
- Potentially impacted areas are identified by the property owner/tenant that are not addressed by a temporary or permanent engineering control.

The communication will be conducted via both email and telephone. Refer to the contact information below.

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Table 1 – Engineering Controls Inspection Personnel

Inspection Personnel	Contact Information
Christine De Ambrogio (AECOM)	Cell: 732-259-9401 Email: Christine.DeAmbrogio@aecom.com
Diann Deal (Weston)	Office: 732-417-5881 Email: Diann.Deal@westonsolutions.com

In addition to inspection personnel, the following personnel will be made aware of the inspection schedule and may attend, as needed:

- The JCO Site Administrator;
- Steven Surman (AECOM);
- Richard Feinberg (PPG);
- Jody Overmyer (PPG);
- Prabal Amin (Weston); and
- Dave Doyle (NJDEP).

Table 2 – Site Information and Inspection Frequency

Site Number or Name and Address	Site Contacts – Access Requests	Inspection Team Entities	Inspection Frequency	Inspection Schedule
Forrest Street Properties (84, 86/90, 98/100, and 108 Forrest Street), and Forrest Street Jersey City, NJ	PPG to contact owner	Weston, AECOM	Single Occurrence (Baseline Inspection)	Following approval of the RAWP and implementation of engineering controls
Forrest Street Properties (84, 86/90, 98/100, and 108 Forrest Street), and Forrest Street Jersey City, NJ	PPG to contact owner	Weston, AECOM	Monthly	Following baseline inspection for 6 months
Forrest Street Properties (84, 86/90, 98/100, and 108 Forrest Street), and Forrest Street Jersey City, NJ	PPG to contact owner	Weston, AECOM	Quarterly	Following completion of monthly inspections

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Table 3 – Reporting Timelines for Inspections

Information to be Reported	If Samples are Collected	If No Samples are Collected
Validated analytical results to inspection team	Within 1 week of receipt of results from lab	N/A
Draft versions of the inspection report to inspection team	Within 1 week of data validation	Within 2 weeks of inspection
Weston's review/comments of draft inspection report to AECOM	Within 1 week of receipt of draft inspection report	Within 2 weeks of receipt of draft inspection report
Final inspection report to inspection team	Within 1 week of the receipt of Weston's comments	Within 2 weeks of the receipt of Weston's comments

Notes:

N/A – not applicable