STATEMENT OF WORK

I. Purpose

The purpose of this Statement of Work ("SOW") is to describe the general content of the Work the City and County of Denver ("Respondent") has agreed to perform pursuant to the Administrative Settlement Agreement and Order on Consent for Removal Action ("Agreement").

The Work entails design and implementation of the "environmental components" of a stormwater drainage feature to be constructed through a portion of Operable Unit 2 of the VB/I70 Superfund site. The stormwater drainage feature is part of a larger project that is intended to reduce flooding in the Montclair Drainage Basin area and address stormwater management needs associated with projects being developed by Regional Transportation District (RTD), Colorado Department of Transportation (CDOT), and Respondent.

The "environmental components" to be addressed by this Removal Action consist of: 1) management and handling of waste material encountered during construction of the stormwater drainage feature; 2) management and, if necessary treatment and/or disposal, of dewatering liquid during construction; and 3) design and construction of an impermeable barrier system to prevent any contaminants remaining within the boundaries of the stormwater drainage feature from adversely impacting stormwater retained within and conveyed by the stormwater drainage feature, as well as prevent stormwater infiltration into contaminated media remaining beneath or surrounding the feature.

The Respondent shall also define and implement environmental protection measures needed to protect human health, groundwater, surface water, air, and soils from potential impairment caused by construction of the stormwater drainage feature. This shall include: 1) preparation and implementation of a Removal Action Work Plan (RAWP) containing a Sampling and Analysis Plan (SAP), a Quality Assurance Project Plan (QAPP), a Materials Management Plan (MMP), a Health and Safety Plan (HASP), and Progress Reporting procedures; 2) a pre-Final inspection; and 3) preparation of a Construction Closeout Report. In addition, if requested by EPA, Respondent shall assist EPA with community relations. Details of these activities are discussed below.

II. Work to Be Performed

This SOW describes the activities that shall be completed to reduce risk to human health and the environment at the Site. The Work to be performed consists of:

1. Management of Waste Material

   Construction of the stormwater drainage feature will require the excavation and handling of a substantial volume of soil and solid waste material. Investigations have identified lead and arsenic in soils and subsurface soil as contaminants of concern for OU2. Additionally, municipal wastes were landfilled in this area and investigations have identified volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons

(PAHs), and potentially friable asbestos associated with those materials. Together, these contaminated soils and solid waste are the "waste material" that will need to be removed. It is expected that concentrations of most contaminants of concern in the waste material will be sufficiently low such that most of the material may be managed as a RCRA non-hazardous solid waste. Respondent is planning to dispose all RCRA non-hazardous material, including material containing friable asbestos, at the Denver Arapahoe Disposal Site (DADS) under disposal certificates issued by landfill operator. Respondent will manage RCRA hazardous material as hazardous waste and will treat and/or dispose of such material at a RCRA-licensed Subtitle C treatment, storage, or disposal facility (TSDF). Criteria and protocols for management and disposal of all material shall be incorporated into the Materials Management Plan.

2. Management of Contaminated Groundwater

Historic groundwater sampling has detected VOCs and metals above Colorado Basic Standards for Groundwater and Surface Water. As necessary, groundwater collected during construction dewatering will be treated prior to release to a receiving stream or transported offsite for treatment and disposal. Criteria and protocols for collection, treatment, and disposition of these liquids, as well as any other liquid that comes in contact with the waste material, including washout and decontamination liquids, shall be incorporated into the Materials Management Plan.

3. Barrier System Beneath the Stormwater Channel

Under all portion(s) of the stormwater drainage feature to be constructed as an open channel, Respondent shall design and construct a barrier system, including an impermeable liner, to prevent contact between the remaining contaminated media (i.e., waste material and contaminated groundwater left in place), and stormwater conveyed by the stormwater drainage feature . As appropriate, the barrier system shall also include foundation material beneath the liner and protective material above the liner to ensure liner stability and protection. Respondent shall also design the system to account for historical groundwater flow patterns beneath and adjacent to the liner.

Respondent shall submit the following design documents related to the barrier system for EPA and CDPHE review:

a. **Draft (50 percent) Design.** This submittal shall include the following:

- Design Criteria
- Results of additional field sampling and pre-design work
- Draft plans, drawings, and sketches
- Draft specifications
- Project delivery strategy
- Draft construction schedule

- Draft construction cost estimate

b. **Pre-Final (95 percent) Design.** This submittal shall refine and detail the Draft Design, with revisions addressing comments from EPA and CDPHE. Respondent shall include value engineering assessments. The submittal shall represent the best efforts at a complete design and include drawings, specifications, general conditions, a Basis of Design memorandum, an updated schedule, and an updated cost estimate.

c. **Final Design.** This submittal shall include the complete and final barrier system design. All of the items required for the Draft design submittal, as well as modifications resulting from review of the Draft and Pre-Final design shall be included. Drawings, specifications, and general conditions shall be ready for procurement and implementation.

Respondent shall submit two copies of each design package to EPA and CDPHE for review and comment, and respond to comments in a letter format.

4. Removal Action Work Plan (RAWP)

a. The RAWP shall describe the removal activities to be performed. The RAWPshall discuss:

- Site background;
- Project organization;
- Site characterization;
- Scope of removal action activities to include discussion of:
  - Staging area,
  - Mobilization plan,
  - Site preparation,
  - Excavation of waste material,
  - Treatment of waste material, if necessary, prior to disposal,
  - Disposal procedures,
  - Management of groundwater during removal activities,
  - Stormwater management during removal activities,
  - Dust control measures,
  - Personnel and equipment monitoring and decontamination procedures, and
  - Other activities required to implement the removal action;
- Institutional controls;
- Anticipated community relations activities;
- Schedule of project deliverables with associated submittal dates and proposed construction schedule.

b. Supporting deliverables to the RAWP shall include the following:

- Sampling and Analysis Plan (SAP) - The SAP shall be submitted in accordance with the National Contingency Plan (NCP), Section 300.415(b)(4)(ii) for removal actions. The SAP shall consist of two parts:

  - A Field Sampling Plan (FSP), which describes the number, type, and location of samples and the type of analyses; and

  - A Quality Assurance Project Plan (QAPP), which describes policy, organization, and functional activities and the data quality objectives and measures necessary to achieve adequate quality for use in planning and documenting the removal action.

- Materials Management Plan (MMP) -- Respondent shall submit an MMP describing: 1) the testing, management and disposal requirements for waste material; 2) requirements for management and treatment of and groundwater captured during construction dewatering operations; and 3) management of liquids and solids from design investigations, groundwater sampling, and equipment decontamination.

- Site Health and Safety Plan (HASP) -A Site HASP shall be developed in accordance with OSHA Standard 29 CFR Part 1910 and Part 1926.

c. Monthly Project Reporting. Monthly reports required pursuant to Section V of the Agreement shall contain pertinent new information specified in Superfund Removal Procedures, Removal Response Reporting: POLREP and OSC Reports (EPA, 1994). The monthly report shall include the following sections: Section I - Heading, Section II - Response Information, and Section III – Issues, Resolutions, and Planned Activities . Section I shall include date of report, site name, author of report, recipient of report, and number of report. Section II shall include a description of contaminated media removed pursuant to the Removal Action Work Plan and Materials Management Plan, such as actions completed, sampling results, volume and disposition of waste material removed during the reporting period and total to date, and volume and disposition of dewatering water removed during the reporting period and total to date. . Finally, Section III shall include a description of problems encountered during the reporting period, how they were resolved and if not resolved, recommendations for resolution, and activities planned for the next reporting period.

5. Implementation of the RAWP

Respondent shall implement the RAWP in accordance with the removal action

activities and work schedule presented in the RAWP. Responsibilities for implementing the supporting documents shall be as follows:

a. SAP and QAPP: Respondent shall implement these Plans directly.
b. MPP and HASP: Respondent shall inspect the site activities for compliance with these Plans.
c. Monthly Project Reporting: Respondent shall prepare the reports directly.

6. Pre-Final Inspection

Upon or near completion of key components of the removal action, and before the submittal of the Construction Completion Report, one or more pre-final inspection(s) by EPA and CDPHE shall be arranged by the Respondent. A list of check-points that can be inspected by EPA and CDPHE during removal action implementation shall be developed during design. Possible check points may consist of completion of waste material removal, completion of dewatering, completion of barrier system installation, among others. Respondent shall document any "punch-list" items resulting from these inspections and work to address the punch-list items to the satisfaction of EPA, in consultation with CDPHE. Documention of these partial completion inspections and resolution of punch-list items shall be incorporated into the Construction Completion Report, discussed below.

7. Construction Completion Report

Respondent shall prepare a Construction Completion Report that shall include the following chapters:

Section 1. Introduction: Include a brief description of the location, size, environmental setting, and operational history of the site. Describe the operations and waste management practices that contributed to contamination of the site. Describe the major findings and results of site investigation activities.

Section 2. Operable Unit Background: Summarize requirements specified in the ROD, ESD, and TCRA Memorandum for OU2. Include information on the cleanup goals, institutional controls, monitoring requirements, and other parameters applicable to the design, construction, operation, and performance of the removal action.

Section 3. Construction Activities: Provide a step-by-step summary description of the activities undertaken to construct the remedy (e.g., mobilization and site preparatory work; excavation, screening, handling, and disposition of waste material; construction, operation, and monitoring of the dewatering and water treatment system; construction of the barrier system; and site reclamation).

Record drawings shall be appended to the Report and any minor changes to the original design shall be discussed. .

Section 4. Chronology of Events: Include significant milestones and dates, such as, design submittal and approval; ROD amendments or ESDs; mobilization and construction of the remedy; significant operational events such as treatment system/application start-up, monitoring and sampling events, system modifications, operational down time, variances or non-compliance situations, and final shut-down or cessation of operations; final sampling and confirmation-of- performance results; required inspections; demobilization; and completion or startup of post- construction operation & maintenance activities. To the extent that any significant changes to the removal action required or were caused by an ESD, these changes and their impacts to the project schedule will be addressed in this section.

Section 5. Performance Standards and Construction Quality Control: Describe the overall performance of the technology in terms of comparison to cleanup goals. For non-hazardous waste material removed, include a summary of visual/ACM/or hazardous characteristics screening results, volumes, and shipping manifests. For hazardous wastes, include profiling results, volumes, and completed uniform hazardous waste manifests. For water treated and discharged under a Colorado Discharge Permit, include a comparison of effluent quality results to discharge limits. For waters shipped off-site to a RCRA TSDF, include water quality results, profiles, volumes, and shipping manifest.s

Section 6. Final Inspection and Certifications: Report the results of the various inspections to include the pre-Final inspection(s), and identify noted deficiencies. If implemented, summarize details of the institutional controls (e.g., the type of institutional control, who will maintain the control, who will enforce the control).

Section 7. Summary of Project Costs: Provide the actual final costs and applicable year for the project. If actual costs are not available, provide estimated costs.

Section 8. Observations and Lessons Learned: Provide site-specific observations and lessons learned from the project, highlighting successes and problems encountered and how resolved.

Section 9. Operable Unit Contact Information: Provide contact information (names, addresses, phone numbers, and contract/reference data) for the major design and remediation contractors, EPA oversight contractors, and the respective RPM and project managers for EPA, the State, and the PRPs, as

applicable.

Appendix A. Record Drawings
Appendix B. Cost and Performance Summary
Appendix C. Waste Manifests

Supplemental Appendices. Place for maps, schematics, references.

8. Community Relations

Respondent shall assist EPA, if requested, in performing the community relations activities specified in Section 300.415(n) of the NCP.

References

EPA, 1994 (June). Superfund Removal Procedures, Removal Response Reporting: POL.REP and OSC Reports. Office of Solid Waste and Emergency Response (OSWER) Directive 9360-3-03, United States Environmental Protection Agency, Washington, D.C. 20460

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