



<i>Environmental Guideline</i> Soil and Debris Management	
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<i>Version:</i>	2.0
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<i>Controlled Copy Location:</i>	Not applicable.

Activity Description
Soil and Debris Management – Many properties and Rights-of-Way (ROW) owned by the City and County of Denver (City) have been impacted by historical or continuing operations. Soil and debris management may be warranted for City projects that involve excavation or other disturbance soil in areas where contamination is suspected or discovered. If contamination is suspected, based on visual observation or field tests, soil or construction debris must be characterized for proper disposal or reuse. Clean soil is defined by the residential /unrestricted land use screening levels described in the City's "Soil Screening Levels and User's Guide," dated September 2005. In addition, clean soil has no visible asbestos or a reason to suspect that asbestos is present in the soil.

Potential Environmental Risks
The following environmental concerns are associated with this activity: <ul style="list-style-type: none"> • Air pollution & odors • Improper disposal of contaminated media • Future reuse of or contact with contaminated soil • Contamination of clean soils • Contamination of surface water • Contamination of groundwater
Potential consequences from performing the activity incorrectly: <ul style="list-style-type: none"> • Property damage, personal injury, damage to the environment. • Possible regulatory non-compliance, Notice of Violation and related financial & non-financial penalties. • Environmental Liability • Contractual non-performance

Critical Operating Requirements
<u>A. General Requirements</u>
Prohibited Activities <ul style="list-style-type: none"> • Backfilling excavated ROWs with contaminated soil. • Disturbing asbestos in soil without an approved plan. • Hauling excavated material to Denver Arapahoe Disposal Site (DADs) over unapproved routes. • Overloading vehicles destined for offsite disposal • Disposal of solid waste at facilities other than DADS • Deviation from Soils Management Plan or Asbestos Soils Management Plan without prior written approval by CCoD DEH

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Critical Operating Requirements	
A. General Requirements	
General Considerations	
<ul style="list-style-type: none"> • Follow Soils Management and Asbestos Soils Management Plans. • As possible, separate clean from contaminated materials to minimize the volume of material requiring remediation and/or disposal. • Properly characterize and dispose of wastes. • Materials visibly contaminated or having field instrumentation (i.e. PID, OVA, FID) readings above action levels will be excavated or otherwise placed in a temporary storage area. • Laboratory analyses may be required for proper characterization. 	
Training Requirements	
<ul style="list-style-type: none"> • Individuals that handle or manage wastes should receive site-specific training in accordance with all applicable State and Federal requirements. • All samplers must be adequately trained in the proper sampling procedures and the requirements of soil sampling and analysis included in the Soils Management and Asbestos Soils Management Plans. 	
Storage & Material Handling Requirements	
<ul style="list-style-type: none"> • Contaminated soils need to be manifested for transportation. • Construction debris and other non-manifest type waste must be documented with a trip ticket. • See also City's asbestos soil management guidelines 	
B. Planning Requirements	<i>Responsible: Environmental Specialist/Scientist</i>
B1. Identify City projects that may require soil and debris management oversight by DEH.	
B2. Ensure that the City's manager of the construction project understands if suspected contamination is present and is aware of documentation (profile) that is required for disposal at DADs prior to commencement of field activities.	
B3. Prepare necessary waste stream characterization and arrange for manifest delivery.	
B4. Construction demolition debris may contain asbestos-containing building materials (ACBM) and/or, lead-based paint (LBP). Demolition debris may be reused or recycled such as scrap metal recycling or machinery salvage therefore these types of materials may not be solid wastes and not subject to Executive Order 115.	
B5. Soil from third-party or other City properties must be certified as clean soil, as defined above, prior to transporting to a City owned property or facility.	
B6. If disposal is required for either soil or debris, the waste must go to DADS per Executive Order 115 subject to a determination that the waste meets Colorado solid waste and disposal facility requirements, e.g. non-PCB or non-RCRA hazardous waste. If soil is clean, it is not a solid waste and may be reused or moved to third party sites.	
B7. Have appropriate Personal Protective Equipment (PPE) available for individuals working with contaminated soil.	

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<u>C. Critical Tasks</u>	<i>Responsible: Environmental Specialist/Contractor</i>
C1. Coordinate with the Department of Environmental Health (DEH) prior to initiating subsurface activity in areas identified as contaminated.	
C2. Properly secure waste/stockpile for storage prior to disposal (i.e. cover with plastic and protect storm water runoff).	
C3. Dispose of waste according to applicable state and federal requirements.	
C4. Dispose of waste at DADS, where applicable	
C5. Distribute/collect manifests on site	
C6. Use PPE where appropriate	

<u>D. Emergency Response</u>	<i>Responsible: Environmental Specialist/Scientist</i>
D1. If a spill occurs, refer to Environmental Guideline Spill Response. <ul style="list-style-type: none"> • Call 311 immediately (during normal business hours) or at 303-206-0001 after normal business hours for all spills. 	
D2. Manage waste/stockpiles to minimize property damage and eliminate imminent risk to human health and the environment.	

<u>E. Inspection & Maintenance Requirements</u>	<i>Responsible: Environmental Specialist/Scientist</i>
E1. Document all activities performed or observed.	
E2. Inspect waste storage areas/soil stockpiles periodically for correct materials management.	

<i>Expected Records / Outputs</i>	
<u>Record / Output</u>	<u>Instructions</u>
Chain of Custody forms	<ul style="list-style-type: none"> • Chain of Custody forms are provided by the contract laboratory.
Electronic and hard copies of analytical data	<ul style="list-style-type: none"> • Electronic and hard copies of analytical data are provided by the analytical laboratories. • Electronic and hard copies of analytical data are to be field in the water files and kept in accordance with the DEH records retention policy.

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Expected Records / Outputs	
Reports/Profile	<ul style="list-style-type: none"> • Reports authorized by the City are provided in both electronic and hard copy. • Other reports, which are provided by outside parties, may be either electronic and/or hard copy.
Manifests and trip tickets	<ul style="list-style-type: none"> • Hard copy from landfill or recycle facility.

References
<p><u>Phone Numbers</u></p> <ul style="list-style-type: none"> • 311 (for Spill Reporting during normal business hours)3-1-1 • DEH DEQ Emergency Response (after normal business hours)(303) 206-0001 • DEH (about DEH’s Site Assessment & Remediation services) 311 • Alice Nightengale-Luhan (DEQ Environmental Quality [EQ] Supervisor)(720) 865-5431 • Dave Erickson (DEH EQ)(720) 865-5433
<p><u>Guidance Materials (list not limited to the following)</u></p> <ul style="list-style-type: none"> • City’s Soil Screening Levels and User’s Guide dated September 2005 and filed under City Clerk File Number 06-083-A • Information Regarding the Management of Petroleum Contaminated Soil, CDPHE, Third Edition, October 2003 • DOT Labeling and Placard Guidance
<p><u>Training Materials (list not limited to the following)</u></p> <ul style="list-style-type: none"> • Operating procedures training (On-the-Job) • Site specific training materials for handling contaminated materials
<p><u>Related Environmental Guidelines (list not limited to the following)</u></p> <ul style="list-style-type: none"> • Spill Response • General Waste Management • Groundwater Management • Asbestos/Lead-based Paint Management • Spill Response • General Waste Management

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References

Applicable Regulations (list not limited to the following)

- 40 CFR 239-299 Resource Conservation and Recovery Act (RCRA)
- 40 CFR Parts 300-399 Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- 40 CFR Parts 300-399 Superfund Amendments and Reauthorization Act (SARA)
- 40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance
- 40 CFR 312 Standards and Practices for All Appropriate Inquiries; Final Rule
- 6 CCR 1007-2, Part 1 State Solid Waste Sites and Facilities
- 6 CCR 1007-3, Part 261 State RCRA Regulations
- DRMC 19-1 to 19-29 Excavations

Other Documents

- CCoD Executive Order 115
- City's Soils Management Plan
- City's Asbestos Soils Management Plan
- Denver Radium Site Management Plans for OU-3 and OU-7

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