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NORTHWEST CORNER LANDFILL COVER

MATERIALS HANDLING PLAN

DENVER FEDERAL CENTER
LAKEWOOD, COLORADO

AUGUST 2013, REVISED MARCH 2017

PREPARED FOR
THE GENERAL SERVICES ADMINISTRATION
BUILDING 41, P.O. BOX 25546
DENVER, COLORADO 80225

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CONTRACT NO. GS-10F-0091M
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ACRONYMS

ACM  asbestos containing material
AMS  air monitoring specialist
BMP  Best Management Practices
CCR  Code of Colorado Regulations
CDPHE Colorado Department of Public Health and Environment
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
CFR  Code of Federal Regulations
CM  Corrective Measures
CMWP Corrective Measures Work Plan
DFC  Denver Federal Center
DOT  U.S. Department of Transportation
ECC  Environmental Chemical Corporation
EPA  U.S. Environmental Protection Agency
GPS  global positioning system
GSA  General Services Administration
HASP Health and Safety Plan
HMWMD Hazardous Materials and Waste Management Division
IA  investigation area
LCA  Landfill Cover Area
MELCA Maintain Existing Land Cover Area
mg/kg milligrams per kilogram
mph miles per hour
NIOSH National Institute for Occupational Safety and Health
NPDES National Pollutant Discharge Elimination System
PCBs polychlorinated biphenyls
PCM Phase Contrast Microscopy
PCS petroleum-contaminated soil
Plan Materials Management Plan
PPE personal protective equipment
RACS Regulated Asbestos Contaminated Soil
RCRA Resource Conservation and Recovery Act
RTD Regional Transportation District
SCMP Soil Characterization and Management Plan
SWPPP Storm Water Pollution Prevention Plan
TCLP Toxicity Characteristic Leaching Procedure
TEM Transmission electron microscopy
TSCA Toxic Substances Control Act
1.0 INTRODUCTION

This report presents the Materials Handling Plan (Plan) for any activity that results in the disturbance or excavation of soil and/or waste in the Northwest (NW) Corner Landfill Cover area of the Denver Federal Center (DFC) in Lakewood, Colorado (the site) (See Figure 1). This Plan has been prepared as an attachment to the Notice of Environmental Use Restriction that has been recorded to the deed for the site property. This plan will also be included as an attachment to the Corrective Action Plan application to be submitted to the Colorado Department of Public Health and Environment (CDPHE) by any future prospective purchaser of the site property.

The Plan provides handling procedures for all waste and potentially contaminated soil in the Northwest Corner Landfill Cover area. The Northwest Corner Landfill Cover area has been broken into two (2) areas known as the Landfill Cover Area (LCA) and the Maintain Existing Land Cover Area (MELCA), both of which have restrictions on soil handling as described by this Plan. The difference between LCA and MELCA is the LCA has landfill cap consisting of a geo-textile overlain by 12 inches of clean fill while the MELCA does not have an engineered cap. The contaminated soil and waste in the MELCA are covered by existing concrete sidewalks, road base topped with asphalt, or vegetation. Waste and subsurface soils in the LCA and MELCA will be handled per requirements of this Plan. Surface soils of the MELCA have been cleared of surface contamination (chemical and asbestos), but soils at depth may be contaminated.

The Plan covers future soil disturbing activities. In the event that the Plan needs to be modified to fit new conditions, all modification shall be submitted to CDPHE for review and approval prior to any on site soil disturbing activities.

1.1 Purpose and Objectives

The purpose of this Plan is to provide comprehensive, but flexible, procedures for managing the removal, relocation, and/or disposal of materials that could reasonably be expected to be encountered during future remediation and/or development of the site. If the goal is to remediate the site, or portions of the site, to completely remove all waste from the site, or a portion of the site, with the intent of receiving a residential/unrestricted use/no-further-action determination, then a separate plan for that activity must be submitted to CDPHE for review and approval prior to implementation. Please note that chemical and asbestos confirmation sampling will required.

This Plan was designed to provide procedures for the following activities:

- Surface water management
- Soil excavation
- Waste management
- Special waste handling
1.2 Site Description and History

The DFC is located approximately seven miles west of downtown Denver and the city of Lakewood, a Denver suburb, surrounded the property. The DFC is bounded by Kipling Street on the east, Sixth Avenue on the north, private property along South Union Boulevard on the west, and West Alameda Avenue on the south. The DFC land area is approximately 690 acres, or slightly more than one square mile. The property began as a ranch, which was acquired by the Federal Government in 1941. The Denver Ordnance Plant was constructed on the site. Under contract with the Federal Government, Remington Arms operated the DOP as a small-arms ammunition plant from 1941 through 1945. After the end of World War II, the DOP was converted to the DFC, a federal government facility, currently operated by the General Services Administration (GSA) and used by multiple federal agencies for a variety of uses, including laboratories, materials testing and storage, maintenance facilities, and offices.

The NW Corner Landfill Cover area is located near the southeastern corner of 6th Avenue and Union Boulevard (Figure 1). Based on landmarks present at the time this Plan was prepared, the site is bounded to the east and west by the Regional Transport District (RTD) Light Rail and to the north by 6th Avenue. To the south, the boundary is created by the south rim of the concrete storm water channel adjacent to Fourth Avenue. The natural topography of the area slopes primarily from northwest to southeast.
2.0 SURFACE WATER CONTROL

A permit for storm water discharges shall be obtained prior to initiating any future soil disturbing activities in the NW Corner Landfill Cover area whenever an acre or more is disturbed (including haul roads, laydown yards, and construction boundaries). The storm water discharge permit will be obtained from the U.S. Environmental Protection Agency (EPA) while the property is owned by the federal government and from CDPHE after the property is transferred from the federal government inventory. A Storm Water Pollution Prevention Plan (SWPPP) shall be developed in accordance with 33 USC 1342, National Pollution Discharge Elimination System (NPDES). The SWPPP shall be based on the use of Best Management Practices (BMPs) which may include as appropriate:

- Silt fences around the horizontal extent of excavations
- Earth berms to redirect storm water flow away from excavated areas
- Soil stabilization: surface roughening, temporary seeding, mulching
- Erosion control blankets on slopes during improvements to the banks drainage areas
- Detention basin in northeast portion of site (permanent, to remain after work is complete)
- Rock construction exit (layer of aggregate to reduce sediment attached to tires)
- Wash basin for trucks, with wash effluent stored in a lined detention pond

Storm water or leachate controls during waste removal shall be sized based on construction duration and the potential damage from exceeding certain storm events. Excavation perimeter control structures are meant to control storm water run-on into excavation areas during waste excavation operations. Storm water run-on from upstream sub-basins includes both sheet flow and channel flow. Sheet flow shall be directed to the northeast, in accordance with the SWPPP. To minimize the impact of run-on to excavation areas, diversion structures (berms and/or channels) may be used to route storm water away from the excavation areas.

Temporary sediment control structures may be built to control sediment during excavation activities. The structures shall be designed and constructed to maintain water quality without allowing surface water to pond on-site. Details pertaining to the construction of the temporary structures are to be included in the SWPPP.

Within the excavation, berms or other means shall be employed to reduce the amount of precipitation that could contact the waste or run-off from the waste faces to areas previously excavated. Run-off/run-on control features shall be constructed to limit storm water contact with exposed waste or excavation areas.
3.0 EXCAVATION BENEATH EXISTING COVERS

This section describes the general activities that must be conducted whenever the soil and/or waste beneath the existing cover of the LCA or MELCA is disturbed or excavated.

All of the soil and waste within the LCA and the MELCA is considered to be solid waste at a minimum. As a result, it is critical that any soil excavated from the LCA and/or MELCA be properly managed in accordance with this plan. CDPHE has determined that excavated soil and waste from within the footprint of the NW Corner Landfill Cover area may be reused on-site within the existing footprint of the NW Corner Landfill Cover as long as the reuse activity does not adversely affect human health or groundwater and it is properly covered after relocation. See Section 5.3 of the Northwest Corner Landfill Cover Operations and Maintenance Plan for requirements for replacement covers. If the excavated soil and/or waste cannot, or will not, be reused within the footprint of the NW Corner Landfill Cover, then it must be properly disposed off-site.

3.1 Development of a Waste Profile

All excavated soil and waste that is not reused on-site must be sent off-site to a disposal facility licensed to accept the waste. Based on previously collected data it is unlikely that any of the soil and waste within the LCA or MELCA will be classified as hazardous waste. However, proper characterization of the soil and waste, via collection and analysis of samples for the toxicity characteristic leaching procedure (TCLP), will be required before the receiving disposal facility will accept the waste.

Based on documented evidence, it is possible that the soil and waste within the LCA and MELCA will contain Regulated Asbestos Contaminated Soil (RACS), as defined in the Regulations Pertaining to Solid Waste Sites and Facilities, 6 CCR 1007-2, Part 1, Section 1.2. Therefore, all sampling of the soil and waste in the LCA and MELCA must be conducted by a Colorado Certified Asbestos Building Inspector (CABI) trained in accordance with, 6 CCR 1007-2, Part 1, Section 5.5.3(D).

Waste characterization sampling should occur prior to the start of excavation activities in order to get the data needed to develop a general waste profile that will likely apply to a majority of the soil encountered. Pre-development and approval of a solid waste profile will allow for the direct loading of most of the excavated material directly into the truck that will transport the material to the disposal facility, thus reducing the need for double handling of material.

The specific number of waste characterization samples and the specific list of analytes required will vary depending upon the needs of the selected disposal facility. However, one TCLP sample for the full suite of toxicity characteristic constituents per 400 cubic yards is generally acceptable.
3.2 Inspection and Characterization of Excavated Soil and Waste

All material excavated from within the LCA and the MELCA shall be visually inspected during excavation to determine whether it fits the general waste profile for the project. Due to the potential to encounter RACS in all of the soil within the limits of the LCA and MELCA, the visual inspection must be conducted by a Colorado CABI that meets the requirements prescribed in 6 CCR 1007-2, Part 1, Section 5.5.3(D).

The CABI will be specifically looking for the presence of stained soil, non-soil industrial, or residential waste and suspect RACS. The CABI shall designate excavated soil into one of three main categories. These are: 1) non-RACS and other solid waste that meets the general waste profile, 2) solid waste containing suspect, assumed, or confirmed RACS that otherwise meets the general solid waste profile, and 3) material that contains stains or stained soil, drums or containers, or industrial waste that will require additional characterization to determine proper disposal.

Solid waste that does not contain RACS and meets the general waste profile may be loaded directly into trucks for transport to the disposal facility as long as the waste is not rendered RACS when managed and loaded. If the CABI sees suspect asbestos-containing material (ACM) at any time during soil disturbing activities, all soil disturbances in the area will immediately stop until a sample can be collected and analyzed to determine if the material actually contains asbestos. If the suspect material is not ACM, then work may continue. If the material is confirmed to contain asbestos and the CABI, through a RACS Determination, designates the material RACS then all further excavation must be conducted in accordance with Section 5.0 of this MHP.

RACS Determinations are conducted in the field by a CABI, of the friability of ACM and the probability of non-friable ACM to release fibers based on the condition of the material and the forces expected to act on it during disturbance. The ACM shall be determined RACS if the planned disturbance includes augers, rotary style trenchers or drills, vehicle or equipment driving or tracking over the ACM, or any other mechanical disturbance that significantly damages the ACM.

The following grid locations have documented evidence that confirm the presence of non-visible asbestos fibers in soil generally beneath a layer of vegetative fill and geofabric. These areas must be managed as RACS, in accordance with Section 5.0 of this MHP, until sampling confirms adequate remediation through removal. Figure 2 depicts asbestos inspection results.

105-2 (western portion), 127-5, 128-2, 128-3, 130-3, 130-6, 131-3, 131-8, 155-1, 155-2, 155-3, 155-5, 155-7, 172-6, and 222-2 (at 4 – 5 feet below ground surface)

All stained soil, drums/containers or industrial waste will be placed into a lined roll-off dumpster or within a bermed, plastic-lined pad on the ground surface for further characterization, management and disposal shall be conducted in accordance with Section 4.0 of this plan.
3.3 Interim Closure of Work Areas

In accordance with 6 CCR 1007-2, Part 1, Section 5.5.7(F)(1)(b), in the event that excavation of waste and soil, containing RACS, is suspended for periods of time in excess of 12 hours, inactive work areas may be closed and covered with one or a combination of the following:

- Crusting agents (e.g., mag chloride)
- Anchored and secured Visqueen (polyethylene sheeting)
- Anchored and secured Geomembrane or Geofabric
- A minimum 3-inch loose lift thickness of soil appropriate for unrestricted use

If work is suspended in excess of 12 hours and a crusting agent is used to stabilize RACS, weekly inspection must be conducted and documented, and an inspection must be conducted no later than one calendar day following a storm event. Reapplication of the chemical stabilizer must be done as necessary to maintain its intended function of stabilization. If visqueen, geomembrane or geofabric is used it must be anchored and secured. These stabilizers require a daily inspection that’s documented and an inspection no later than twelve hours following a storm event. The sheeting, membrane or fabric must be repaired/replaced/secured as necessary to maintain stabilization.

3.4 Fugitive Dust for Non-Asbestos Activities

In accordance with 5 CCR 1001-1, Air Quality Commission Regulations, the air’s opacity shall be monitored to ensure that it does not exceed 20% at the site boundary. See Section 5 for dust control measures applicable during soil disturbing activities in asbestos areas.

Dust control practices that may be used to control air emissions and provide dust suppression at the site include the following:

- Cover inactive exposed faces of material with geomembrane, visqueen, or soil appropriate for unrestricted use
- Seal the exposed waste material by moisture conditioning and compacting
- Minimize the distance waste shall be pushed in connection with excavation and loading
- Minimize drop heights when dumping or transferring materials
- Treat surfaces with water spray, foam spray, hydro-mulch spray, or crusting agents.

A variety of control and monitoring methods are available. Material, equipment, and related items for monitoring and control shall be in place at the site prior to the start of excavation activities.
4.0 SPECIAL WASTE HANDLING

Visual characterization shall be utilized to identify special waste. The following subsections describe the categories of wastes that may be encountered at the site, define terms that are applicable for these waste materials, and summarize the associated regulatory requirements for each waste category. Unless noted, waste-related definitions provided herein are as described in 6 CCR 1007-2.

The following subsections provide definitions, waste occurrence, and regulatory requirements for special waste handling. Waste categories described herein have different requirements for packaging/handling, labeling, transportation, waste profiling, and/or disposal.

4.1 Petroleum Contaminated Soil

Petroleum-contaminated soil (PCS), based on analysis of total petroleum hydrocarbons, gasoline range organics, diesel range organics, and benzene, toluene, ethylbenzene, and total xylenes, were found during the Resource Conservation and Recovery Act (RCRA) Facility Investigation underlying North Avenue, and no petroleum storage tanks are known to have been placed or disposed of on the site. Nonetheless, if significant amounts of visually stained soil are encountered during soil disturbing activities or if potential PCS is encountered, based on visual observation of stained soils and/or olfactory or instrument detection of volatile organics, shall be handled similar to other excavated material.

4.1.1 Definition

Petroleum Contaminated Soil – Earthen material or artificial fill that has human or natural alteration of its physical, chemical, biological, or radiological integrity resulting from the introduction of crude oil, fraction or derivative thereof (such as gasoline, diesel, or motor oil), or an oil-based product (such as oil-based paint; CDPHE, 2003).

4.1.2 Waste Occurrence

PCS-contamination has not been determined to be present at the site.

4.2 Hazardous Waste

If visually encountered during excavation, suspect hazardous waste shall be characterized, a waste determination made, and the material transported off-site and disposed of at a licensed facility approved to accept the waste. At no time shall hazardous waste be reused or left onsite.

4.2.1 Definition

Hazardous Waste – A solid, a liquid, or a contained gaseous material that is no longer used or that no longer serves the purpose for which it was produced, and could pose dangers to human health and the environment after it is discarded.
4.2.2 Waste Occurrence

Although there is no specific evidence that hazardous wastes may have been disposed of at the site, there is a possibility of encountering hazardous waste. Historic data indicates that the facility was primarily used for the disposal of construction debris. The primary limitation with this description is that waste disposal occurred at the site prior to the definition of hazardous waste. As a result, both listed and characteristically hazardous waste may potentially be encountered during the removal of the waste from the site. Definitions of listed and characteristically hazardous waste are included below.

4.2.3 Regulatory Requirements

Solid wastes are considered non-hazardous unless they exhibit a hazardous “characteristic” (toxicity, reactivity, ignitability, or corrosivity), or have been specifically listed as hazardous waste by the EPA (known as a “listed waste”). Listed wastes are specific wastes or are mixtures or wastes derived from those listed wastes. These materials may be from nonspecific sources such as spent solvents or may be wastes from specific sources or wastes from discarded chemical products. It is very unlikely that listed hazardous waste will be encountered at this site.

If hazardous wastes are discovered at the site, these materials shall be packaged, manifested, characterized, transported, and disposed of in compliance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)/RCRA, Department of Transportation (DOT), and the Colorado Hazardous Waste Act regulations. Hazardous waste shipped from the site shall be packaged in accordance with DOT regulations 49 Code of Federal Regulations (CFR) Parts 173, 178, and 179, and 6 CCR 1007-3, Sections 262.30 through 262.33. Hazardous waste accumulation containers shall be labeled as “Hazardous Waste.” Regulations concerning hazardous waste containers are provided in 6 CCR 1007-3, Section 265 Subpart I. In accordance with 6 CCR 1007-3, Section 262, hazardous waste manifests shall note the EPA identification number of the generator, transporters of the waste, and the ultimate disposal facility. Regulations require generators to test the waste, or use process knowledge of the waste, to determine if the waste is restricted from land disposal and to certify that the wastes meet the treatment standards described in 6 CCR 1007-3, Section 268, Subpart D. RCRA-permitted hazardous waste disposal facilities located in the region include:

- **Clean Harbors Environmental Services, Inc.** Incinerator in Kimball, Nebraska (308-235-4012): This hazardous waste storage and treatment facility includes a thermal oxidation incinerator and an on-site incinerator ash monofill.
- **Lone Mountain Landfill** in Waynoka, Oklahoma (580-697-3500): This facility handles direct landfill disposal for solids (bulk and containerized) and provides solidification of waste liquid or waste containing free liquids prior to landfill disposal, as well as stabilization of metal constituents to meet applicable federal land disposal restrictions treatment standards.

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- **Clean Harbors Deer Trail, LLC**, (aka Highway 36 Landfill), Adams County, Colorado (970-386-2293): This hazardous waste treatment, storage, and disposal facility has container storage, tank storage, a treatment building, and seven double-lined disposal cells.

- **Arlington Hazardous Waste Facility**, 17629 Cedar Springs Lane, Arlington, Oregon 97812.

- **Kettleman Hills Hazardous Waste Facility**, 35251 Old Skyline Road, Kettleman City, California, 93239. Kettleman Hills offers the following hazardous waste disposal services; asbestos, drum management-liquids, drum management-solids, lab pack services, macroencapsulation, microencapsulation, PCB Landfill (TSCA), PCB transformer/electrical services, and stabilization.

If ash is observed during site activities, one representative sample shall be collected for analysis of dioxins/furans and the ash shall be delivered off-site for disposal at a licensed facility. Certain facility acceptance limits may apply. If any building material or construction debris is comingled or associated with the ash a representative sample must be collected by a CABI, in accordance with Appendix 5A of 6 CCR 1007-2, Part 1, Section 5.5, and analyzed by polarized light microscopy at an accredited laboratory. If the ash contains asbestos, manage as RACS in accordance with the following Section 5.0.

### 4.3 Polychlorinated Biphenyl Waste

If visually encountered, polychlorinated biphenyl (PCB)-containing waste (specifically, non-petroleum oily soils/materials) shall be sampled and delivered off-site for disposal at a licensed facility.

#### 4.3.1 Definitions

- **Light Ballasts** – Small metal box-shaped devices in fluorescent lamps that control the flow of electricity to the light tube. Fluorescent light ballasts manufactured until 1979 contained PCBs.

- **PCBs** – A fire resistant and thermally stable chemical often used as hydraulic and heat transfer fluid, commonly used in hydraulic systems and electrical capacitors (CDPHE, 1996).

#### 4.3.2 Waste Occurrence

Based on the above definition and the age of the wastes disposed at the site, light ballasts encountered shall be assumed to contain PCBs. In addition, liquid PCBs may be present in equipment such as old transformers, voltage regulators, condensers, and circuit breakers that could conceivably have been disposed of as construction/demolition debris.

#### 4.3.3 Regulatory Requirements

PCB-containing wastes are regulated by the EPA under TSCA. Leaking PCB ballasts are considered PCB waste and shall be properly packaged for transportation according to EPA and DOT regulations (CDPHE, 2002d). In accordance with EPA regulations, leaking PCB ballasts and other PCB-containing wastes shall be sent to a TSCA-permitted high temperature incinerator.
The reportable quantity of PCBs under CERCLA is one pound, which has been estimated by EPA to be equivalent to ten light ballasts. Liquids and solids (e.g., soils in contact with the leaking PCBs) containing PCBs greater than 50 parts per million shall be containerized, stored, transported, and disposed of in accordance with TSCA requirements. Permitted PCB disposal facilities in the region include the following:

- **Clean Harbors Environmental Services, Inc.** Incinerator in Kimball, Nebraska (308-235-4012): This hazardous waste storage and treatment facility includes a thermal oxidation incinerator that provides disposal services for PCB wastes, including transformers, capacitors, ballasts, and PCB liquids and solids.

- **Lone Mountain Landfill** in Waynoka, Oklahoma (580-697-3500): This facility handles PCB bulk product waste and PCB-contaminated soil and debris for direct landfill disposal.

### 4.4 Excavated Drums

If visually encountered during excavation, drums containing material shall be segregated, characterized, profiled, and disposed of off-site at a licensed facility.

#### 4.4.1 Definition

**Abandoned Drums and Containers** – Abandoned drums include drums or containers located in the landfill area within the scope of the proposed excavations.

#### 4.4.2 Waste Occurrence

Since there are no available records detailing what was disposed of at the site, it shall be assumed that drums and containers may be encountered during excavation of the waste.

#### 4.4.3 Regulatory Requirements

Waste within the drums shall be characterized to determine if the material can be recycled or if the material shall be disposed of as a solid or hazardous waste.

Drummed or containerized material shall be evaluated visually to determine if the contents of the drum can be determined from the drum label. Drums or containers without labels shall be tested to determine if the material within the drum is a characteristically hazardous or listed waste. When possible, the material shall be returned to the manufacturer or recycled.

Intact drums shall be placed in roll-off type containers. Transfer shall be conducted with conventional drum handling equipment. Drums or containers that have a potential to release their contents shall be inspected, documented, numbered, and placed in an overpack at the excavation face prior to transfer to the roll-off.

Material classified as hazardous waste shall be disposed of in accordance with Section 4.3. Soil contaminated by spillage from drums determined to contain hazardous waste, if any, shall be excavated and disposed of off-site. Regulatory-required confirmation samples shall be collected from the base of the excavation area to determine compliance with Cleanup Levels.
5.0 Soil Characterization and Management Plan

This plan presents the asbestos management procedures required by 6 CCR 1007-2 Section 5.5. This Soil Characterization and Management Plan (SCMP), identifies the Standard Operating Procedures (SOP) for initiating work at the site, to document safe work practices during soil disturbing activities, and reduction of the potential for asbestos fiber release from work areas. This Plan is prepared and shall be implemented in accordance with 6 CCR 1007-2, Part 1, Section 5.5.5 and is structured similarly.

5.1 Property Location

The NW Corner Landfill Cover area is located in the northwestern corner of the DFC (Figure 1). South of North Avenue, the south rim of the concrete storm water channel creates the south boundary of the area. The site is bounded to the east and west by the Regional Transport District (RTD) Light Rail and to the north by the DFC property line south of the 6th Avenue. The natural topography of area slopes primarily from northwest to southeast.

5.2 General Site Description

The site is the location of a landfill used intermittently since the 1940’s for disposal of miscellaneous debris, and soil from other locations on the DFC. Known and potential materials suspected of containing asbestos include boiler seal rope, asbestos-cement board, roofing materials, floor tile, and other building materials. RACS has been confirmed in surface and subsurface soil. The locations of known and assumed ACM on the ground surface and non-visible asbestos fibers in soil are shown on Figure 2.

As noted in Section 3.2 of this MHP, the following grid locations have documented evidence that confirm the presence of non-visible asbestos fibers in soil generally beneath a layer of vegetative fill and geofabric. The following grid areas must be managed as RACS until sampling confirms adequate remediation through removal.

105-2 (western portion), 127-5, 128-2, 128-3, 130-3, 130-6, 131-3, 131-6, 131-8, 155-1, 155-2, 155-3, 155-5, 155-7, 172-6, and 222-2 (at 4 – 5 feet below ground surface)

All other requirements for proper management of RACS and wastes will be triggered on a visual basis. If additional soil samples confirm non-visible asbestos fibers in soil, the area(s) in which the sample represents, contains documented evidence of RACS and that area must be managed as RACS until adequate removal occurs and soil sample(s) confirm the area free of asbestos contamination.

5.3 Proposed Soil Sampling or Soil Characterization

Surface and subsurface sampling for waste characterization purposes shall begin with identification of general health and safety hazards. Surface and subsurface asbestos sampling shall be conducted by a CABI, in accordance with Appendix 5A of 6 CCR 1007-2, Part 1, Section 5.5.
A copy of this MHP and Section 5.5 of 6 CCR 1007-2, Part 1 shall be available on site while soil is being disturbed.

Characterization includes continuous visual inspection to identify depth and extent of waste, debris, suspect ACM and fill during soil disturbing activities, and the collection of suspect ACM samples and soil samples for the purposes of determining asbestos content.

5.4 Training Requirements

Soil disturbing activities shall be conducted in the presence of a CABI. This CABI, as previously indicated, shall meet the requirements prescribed in Section 5.5.3(D) of the Solid Waste Regulations. All personnel within the established Regulated Work Area (RWA) must be trained in accordance with Section 5.5.3(A), 5.5.3(B), and 5.5.3(F) of the Solid Waste Regulations. A CABI shall be present at every ongoing soils disturbing work activity and shall be responsible for determining the waste types, engineering controls, and appropriate number of truck liners required for offsite transport of excavated materials. A site-specific health and safety plan shall be followed during this activity and shall include asbestos awareness training for onsite personnel, and other health and safety aspects. A copy of the health and safety plan shall be available on site.

5.5 Planned Soil-Disturbing Activities

Soil disturbing activities are digging, excavating, staging, loading, stockpiling, backfilling, compacting, grading, tilling, drilling, intrusive sampling and equipment or vehicle movement or any other mechanical activity, that when used, disturbs the surface and/or subsurface soil. Any disturbance or removal of debris and/or RACS is considered a soil disturbing activity. Therefore, hand removal of RACS (the non-visible asbestos fibers in soil, ash or debris, or the ACM plus twelve (12) inches of surrounding soil or material) is also considered a soil disturbing activity. Walking on or moving non-mechanized equipment (e.g., wheelbarrow, cart, etc.) across the surface does not constitute planned soil-disturbing activities; however, a CABI shall escort or conduct these activities to confirm that the proposed path is clear of visual ACM, in accordance with Section 5.9.3.2 below. Any equipment component(s), work attire or PPE that contact RACS shall be decontaminated before exiting the work area as described in Sections 5.9.4 and 5.9.4.2.

Prior to any soil disturbing activity involving RACS, a Regulated Work Area (RWA) shall be established. The RWA will be visually identifiable to all persons and will establish and fully define the extent of the work area(s) involving RACS disturbance. This boundary shall be demarcated with asbestos signage and controlled while soil disturbing activities involving RACS occur. All soil disturbing activities will cease if any person enters the work area and that does not meet the requirements in Section 5.5.3 of 6 CCR 1007-2, Part 1.

Any disturbance of RACS from the grid locations listed in Sections 3.2 and 5.2 of this MHP, and depicted in Figure 2, must adhere to the requirements in this SCMP. Since ACM may not be observed in those locations providing a visual trigger of contamination, protective and precautionary measures must be implemented to prevent the release or cross-contamination of the confirmed non-visible asbestos fibers in soil.
5.6 Excavations in Support of Site Development

Trucks and equipment shall be kept, to the extent feasible, off contaminated areas. Equipment and trucks leaving contaminated areas, and that contacted RACS, shall be decontaminated, as described in Section 5.9.4. Work shall be conducted in accordance with the following protocol.

5.6.1 ACM Inspections

Work areas shall be pre-inspected by the CABI prior to commencement of soil disturbing activities. During excavation, the CABI shall continuously conduct a visual inspection for asbestos material as soil disturbing activities occur. The CABI shall provide guidance to the personnel performing the excavations with regards to the level of emissions control (such as wetting) and waste management. CABI visual inspections for the purposes of clearance shall adhere to the requirements in Appendix 5A, Section 2.2(B)2) of the Solid Waste Regulations.

5.6.2 Wetting

Given the large areal extents of excavation likely associated with development of the site, pre-wetting is strongly recommended in the areas scheduled for excavation, for roughly 2-hours preceding excavation activities. Pre-wetting techniques could include three to four irrigation sprayers, root soakers, water hose operators, water trucks, etc. As the excavation progresses, pre-wetting techniques should be advanced to anticipated excavation areas. Pre-wetting is not necessary if soils are adequately wet. Application rate shall be monitored to prevent the potential of sheet wash occurring outside of the LCA and/or MECLA.

RACS and all materials containing RACS shall be adequately wet while being disturbed. Water shall be applied at low pressures in order to minimize dust and prevent visible emissions from leaving the work area boundary.

During excavation activities, hand-held and/or equipment-mounted water sprayers shall be used to suppress dust generation. Amending solution such as APSA 80 may be used to help with dust suppression. An amending solution, such as 50:50 mixture of polyoxyethylene ester or ether, or equivalent, must be used when friable ACM is being disturbed.

Water shall be applied to control dust without creating additional site hazards, such as run-off to surface water. Water mist shall be applied via hand-held or equipment-mounted sprayers or misters to prevent visible emissions during loading of waste for off-site disposal. Water shall be applied in quantities and at a pressure that does not cause splattering. Run-off water shall be constrained to the excavation areas. At no time shall inadequately wetted soil or waste be removed from the ground; the CABI shall notify the excavation personnel if soil or waste is inadequately wet, and the excavation personnel shall be responsible for applying additional water or amended water until the soil or waste is determined by the CABI to be adequately wet.

If inadequate wetting techniques occur and air monitoring results, see following Section 5.9.2, indicate the generation of airborne asbestos fibers, the wetting practices and other engineering controls and work practices shall be reviewed by the AMS, and with consultation from CDPHE, shall determine the changes to be made to provide protection of workers and possible off site hazards.
receptors. If air monitoring detects airborne asbestos fibers then Sections 5.5.7(E)(2)(f) and (g) of 6 CCR 1007-2, Part 1 shall be implemented.

5.7 Waste Segregation

Disposal of RACS shall be conducted in accordance with the requirements included in Section 5.5.8 of the Solid Waste Regulations (6 CCR 1007-2, Part 1). Waste disposal categorization does not diminish inspection requirements or exposure mitigation protocol.

a) RACS containing visible friable asbestos, or material contaminated by friable ACM, or non-friable ACM rendered friable by mechanical destruction or by weathering, shall be disposed in a leak tight container and as friable asbestos waste in accordance with the requirements of Section 5.5.8(A)(1) of the Solid Waste Regulations. RACS containing visible nonfriable ACM that has not been rendered friable, as well as soil or ash containing non-visible asbestos, shall be disposed of in a leak tight container and as nonfriable asbestos waste in accordance with Section 5.5.8(A)(2) of the Solid Waste Regulations. Non-asbestos and non-RACS (that is not rendered RACS through mechanical disturbances) solid waste may be disposed of off-site at a permitted subtitle D disposal facility. Solid waste excavation shall be conducted utilizing the engineering controls included below; however, truck lining and disposal as RACS is not necessary.

5.8 Waste Disposal

The following protocol shall be utilized to manage RACS, non-RACS and non-asbestos solid waste disposal.

5.8.1 Soil Piles

Excavated materials not directly loaded into haul trucks shall be placed onto plastic sheeting or onto areas of known contamination. The piles shall be covered with plastic sheeting to prevent fugitive dust or shall be kept adequately wet. If plastic sheeting is used, it shall be secured and weighted down or anchored on the edges. When the excavation has been backfilled with clean fill material or the excavated materials otherwise properly disposed, the used plastic shall be bagged and/or packaged for disposal as asbestos contaminated waste.

The requirements in Section 5.5.7(H) of the Solid Waste Regulations must be met to temporarily stage, stockpile, and store RACS onsite.

5.8.2 Open Excavations

Exposed and active excavation faces with identified RACS may remain open overnight but shall be covered by anchored and secured plastic sheeting, geofabric membrane or covered with clean soils, or encapsulant, to prevent wind-blown asbestos fibers from emanating from the excavation area. Excavation faces shall be inspected daily and after high wind events (gusts greater than 20 mph or sustained winds of 12 mph or greater) to evaluate whether the coverings are securely in place; the coverings/stabilization methods shall be immediately reapplied, replaced, or reconstructed, if necessary.
5.8.3 Remaining RACS

Where friable and non-friable asbestos is visible in the sidewall, or the base of an excavation and the vertical and/or horizontal extent of the excavation is complete, the asbestos shall be covered with geotextile or visqueen and backfilled with soil or fill suitable for unrestricted use. The amount of soil or fill to be backfilled on a horizontal surface is 18 inches and then that surface shall be vegetated; or 6 inches of soil or fill may be backfilled atop the geofabric and then concrete or asphalt is to be established. For vertical faces, the RACS shall be covered with geofabric and then soil or fill suitable for unrestricted use to grade or 6 inches, whichever is greater. Caution shall be exerted during backfilling to minimize the potential for causing asbestos fibers to become airborne. Where ACM is identified in the bottom of the excavation or sidewall, the material does not require to be “chased.” However, as noted in Section 1.1 above, if the goal is to remediate the site, or portions of the site, with the intent of receiving a residential/unrestricted use/no-further-action determination, then a separate plan for that activity must be submitted to CDPHE for review and approval prior to implementation. In this scenario, chasing the contamination, removing it all followed by chemical and asbestos confirmation sampling will most likely be required.

5.8.4 Asbestos Contaminated Waste and Regulated Asbestos Contaminated Soil

Removed RACS and disposable Personal Protective Equipment (PPE) and materials (booties, protective coveralls, plastic sheeting, latex gloves, etc.) shall be disposed of as asbestos contaminated waste at a licensed landfill. RACS shall be disposed of in accordance with 6 CCR 1007-2, Section 5.5.8 of the Solid Waste Regulations.

Friable asbestos waste (friable ACM greater than 1% per load or greater than 1 pound per load) shall be properly packaged before being sent off-site for disposal. It shall be tightly sealed in two 6-mil, leak-tight polyethylene bags or in a wrapping or other container deemed equivalent by CDPHE, Hazardous Materials Waste Management Division (HMWMD), in accordance with Section 5.5.8 of the Solid Waste Regulations. Typical wrappings include two layers of 6-mil plastic sheeting “burrito wrapping” the friable waste in a haul truck, sealed with spray adhesive and then tape, and lastly secured by mechanical means (e.g., zip-ties). The outermost layer of the packaging shall be labeled with a waste shipment manifest label that gives the name and address of the generator of the waste and either of the following statements in letters at least 0.5 inches tall:

CAUTION
Contains Asbestos
Avoid Opening or Breaking Container
Breathing Asbestos is Hazardous to Your Health

DANGER
Contains Asbestos Fibers
Avoid Creating Dust
Cancer and Lung Disease Hazard

RACS containing non-friable ACM and/or soil or ash containing non-visible asbestos shall be properly packaged before being sent off-site for disposal. It shall be tightly sealed in one 6-mil, leak-tight polyethylene bag or in a wrapping or other container deemed equivalent by the
HMWMD. Typical wrappings include one layer of 6-mil plastic sheeting “burrito wrapping” the non-friable waste in a haul truck, sealed with spray adhesive and then tape, and lastly secured by mechanical means (e.g., zip-ties). It shall be labeled with a waste shipment manifest label that gives the name and address of the generator of the waste and either of the statements used for friable asbestos waste above.

While the U.S. Department of Transportation (DOT) does not regulate transportation of non-friable asbestos waste, DOT does regulate friable asbestos waste that meets or exceeds the reportable quantity of one pound in a package. The proper shipping description for friable asbestos is: RQ Asbestos, 9, NA 2212, PG 1H. Non-bulk friable asbestos packages (e.g., bags, barrels, and boxes) shall be labeled with this description, while vehicles carrying non-bulk packages of friable or non-friable asbestos are not required to be marked. Bulk packages of friable asbestos shall be marked on two sides with the NA 2212 identification number. Vehicles carrying bulk packages of friable asbestos inside a lined roll-off box shall be marked on four sides of the roll-off box.

RACS shall be transported and disposed in a leak tight container in accordance with the requirements of Section 5.5.8 of the Solid Waste Regulations. Documentation stating that the soil originating from the site shall not be used a daily cover or sold as clean fill shall accompany each load of RACS removed from the site. Typically, the two disposal sites commonly used for RACS are Republic Services Foothills Landfill and the Denver Arapahoe Disposal Site.

5.9 Proposed Exposure Mitigation and Asbestos Fiber Control Measures

Air monitoring shall be conducted during mechanical soil disturbing activities that involve RACS. The air monitoring is described below.

5.9.1 Site Access Restrictions

In general, while material is disturbed beneath the LCA or MECLA clean fill, work or access onto the NW Corner Landfill Cover area should be avoided on windy days (sustained winds over 12 mph or gusts in excess of 20 mph). However, soil disturbing activities involving RACS must stop or not occur when wind gusts exceed 20 mph, winds are sustained over 12 mph (averaged over 10 minutes), winds interfere with ability of engineering controls to perform intended functions, or winds are creating visible emissions that leave the demarcated work boundary.

- “No Trespassing” signs shall be posted and “Do Not Enter” signs at approximately 150-foot intervals on the DFC side of the area.
- Each area that RACS disturbance is occurring shall be demarcated and identifiable to all persons. Smaller work areas may be grouped together to create one large work area.
- Labeling and asbestos warning signage shall be used along with authorized personnel only postings.
- Work areas that contain friable ACM shall be secured (fencing with locks/chains/etc.) and access regulated and controlled.

5.9.2 Air Monitoring Plan

Air monitoring shall consist of Equivalent Air Monitoring Collected on Personnel and Regulated Work Area (RWA) monitoring. The purpose of the RWA monitoring is to evaluate the
effectiveness of the engineering controls. During RACS disturbance a minimum of four samples shall be collected per day and analyzed in accordance with the protocol identified below. These four samples shall be positioned on the perimeter of the RWA in the four cardinal directions. Additional samples shall be collected for large perimeter RWAs (greater than 1 acre). RWAs greater than 1 acre shall require additional perimeter monitoring points be added at a rate of 1 additional sample every 200 linear feet or roughly ¼ acre.

5.9.2.1 Sampling Media

Air samples shall be collected by drawing air through a 25-millimeter mixed cellulose ester filter, 0.8 micron pore size, with an open-faced, long cowl using low-flow personal sampling pumps at approximately 2 liters per minute. The flow rate and the volume of air passed through the filter shall be determined based on the National Institute for Occupational Safety and Health (NIOSH) 7400 analytical method. Each pump shall be calibrated before and after the collection of each sample using a primary standard.

5.9.2.2 Sample Analysis

Sample analyses shall be performed by a microscopist and submitted for Phase Contrast Microscopy (PCM), analyzed according to NIOSH 7400 Method. The laboratory conducting this analysis shall successfully participate in the American Industrial Hygiene Association (AIHA) Proficiency Analytical Testing Program or individual(s) certified through the AIHA Asbestos Analysts Registry Program. Analyses of Transmission Electron Microscopy (TEM) air samples shall be submitted to a National Institute for Standards and Technology National Voluntary Laboratory Accreditation Program accredited laboratory using TEM according to Asbestos Hazard Emergency Response Act protocol.

5.9.2.3 Air Monitoring Collection

The following air monitoring procedures shall be used on-site:

a) Samples shall be collected continuously during soil disturbance operations and submitted the same day for PCM analysis. PCM samples shall be analyzed on a 2-hour turn-around, with verbal results as soon as practical after the start of the next business day. PCM results exceeding 0.01 fibers per centimeter (f/cc) shall be subsequently submitted for TEM analysis.

b) If the RACS disturbance includes friable ACM, 2 additional downwind floating samples will be collected. The AMS shall shift these samples as work progresses and wind directions change, maintaining the sampling locations downwind from RACS disturbance. The AMS shall document when and where samples are shifted and wind directions.

c) A minimum of 25% of the samples collected from each RWA shall be submitted for TEM analysis, per day, to evaluate engineering controls. These samples shall be analyzed by TEM during the first five days of each type of site activity. After 5 days of RACS disturbance with no asbestos detections by TEM analysis, the frequency of analysis by TEM may be reduced to once every 5 days. If asbestos fibers are detected via TEM analysis then you start over and analyze 25% of the total samples by TEM for the next 5 days.
d) Samples selected for TEM analysis shall have the highest PCM result based on fiber concentration. If all samples have a concentration of Below Detectable Limit (BDL), then the samples with the highest fiber counts shall be submitted for TEM.
e) TEM analysis shall be provided on a 24 hour turn around. Data shall be assessed to determine if adequate controls are in place. After five days of TEM sampling, the analytical results and engineering controls shall be evaluated for adequacy.
f) Each time the activity type changes, the 5 days of TEM sampling shall be reinitiated. An example of type of change would be excavation of the southern drainage area with friable ACM to excavation and movement of non-friable RACS in the northern portion of LCA.
g) CDPHE shall be immediately notified if TEM sample results show any concentration of asbestos fibers. If asbestos fibers are detected by TEM, soil disturbing activities shall be stopped and Sections 5.5.7(E)(2)(f) and 5.5.7(E)(2)(g) of the Solid Waste Regulations shall be implemented.
h) If laboratory reports indicate a “cannot be read (CBR)”, “not analyzed (NA)”, or “rejected” sample due to loose debris or uneven loading, the AMS shall implement Section 5.5.7(E)(2)(d) of the Solid Waste Regulations.

5.9.3 Emissions Control Plan

In addition to ensuring all RACS is adequately wet while being disturbed and adequately stabilized while inactive, the following actions shall be implemented:

5.9.3.1 Weather Conditions

Wind speed measurements shall be taken during soil disturbing activities at 30 minute intervals for a duration of 10 minutes so that a 10 minute average wind speed can be determined, or more frequently if winds are approaching threshold values. The time and wind speed shall be logged. Wind speed measurements shall be taken with a hand held instrument in close proximity to, and representative of, the work area in which the soil disturbing activities are taking place. Soil disturbance operations shall not be conducted if any of the following four conditions occur at the work area:

- Wind gusts reach or exceed 20 miles per hour (mph), or
- Sustained wind speeds reach or exceed 12 mph averaged over a 10-minute period, or
- Winds produce visible emissions that leave the RWA, or
- Wind impacts the ability of engineering controls to work as designed.

Resume Conditions - Soil disturbance activities may resume after the following four conditions have been met:

- Wind gust readings for a period of 10 minutes drop below 20 mph as determined by hand-held instruments, and
- Sustained wind speeds are below 12 mph averaged over a period of 10 minutes, and
- Winds are no longer producing visible emissions that leave the RWA, and
- Winds are not impacting the ability of engineering controls to work as designed.
5.9.3.2 Site Access and Vehicle Movement

Vehicles moving within the area covered by the engineered landfill cover shall be allowed to move around the site without concern for grid coding. However, only appropriate construction equipment and vehicles (e.g., excavators, graders, front-end loaders, compactors, dump trucks, etc.) should be allowed to drive within the exposed landfill area; other vehicles (e.g., pickup trucks, delivery vehicles, etc.) should be restricted to access roads, laydown areas, and other areas outside of the landfill area. Vehicles and equipment shall be required to drive in a slow and cautious manner to avoid visible emissions and shall be under the oversight of a CABI. If any component of construction vehicles or equipment come into contact with RACS, that component shall be decontaminated prior to exiting the RWA.

5.9.4 Decontamination Procedures

A decontamination facility shall be installed at the site for wet decontamination of equipment and vehicles leaving the site that have come into contact with RACS. The surface of the decontamination pad shall be 10-mil poly or stronger, the surface/barrier shall be durable and non-permeable. The decontamination pad shall contain all wet decontamination liquids and solids. If the pad tears or otherwise is not performing its intended function of providing a barrier to underlying soils and containing decontamination wastes it will be immediately repaired or replaced.

Procedures outlined in Section of 5.5.7(J) of the Solid Waste Regulations shall be adhered to if RACS is spilled.

5.9.4.1 Equipment Decontamination

Equipment decontamination shall be performed using the following procedures, which may be refined as necessary for individual applications. Modifications shall receive CDPHE approval prior to implementation.

a) Equipment that contacts RACS shall be decontaminated prior to leaving the RWA or when the equipment moves from a contaminated to a clean area. No tracking shall occur from the engineered cover areas to other areas unless the soils within the other areas are to be subsequently removed.

b) If the equipment operates entirely within a contaminated area or within the engineered soil cover areas, the entire piece of equipment shall be considered contaminated. When moving this equipment from the contaminated area or the engineered soil cover areas, it shall receive a full wet decontamination. The rinsate from the decontamination shall be collected, filtered to 5 microns, and either discharged to the sanitary sewer or used on RACS that shall later be excavated or covered.

c) If the equipment tracks require decontamination, the tracks will be wetted and personnel will use tools to remove the RACS. The machine shall roll forward onto a clean portion of the decontamination pad and the process repeated until the tracks are visually inspected and signed off by a CABI and/or AMS.

d) Final decontamination of portions of the heavy equipment potentially exposed to contamination shall be washed using potable water at the decontamination facility.
Special attention shall be given to removing soil or other site-related foreign materials on the equipment. The rinsate from the final decontamination procedure shall be collected, filtered to 5 microns, and either discharged to the sanitary sewer or used on RACS that shall later be excavated or covered.

e) Personnel shall wear the appropriate PPE during decontamination activities.

f) At the end of the project, the materials associated with the equipment decontamination area shall be removed and disposed of as ACM. The decontamination of the vehicles shall consist of having the tires and other parts that come into contact with RACS rinsed using a hand held wand or spray so that water runs off the part along with soils and potential asbestos fibers. If wands or sprays aren’t enough to remove all RACS than physical hand methods using tools will be implemented. Decontamination shall be conducted within the decontamination facility atop the decontamination pad.

g) Equipment and tools (e.g., decontamination equipment used, such as, wands, sprayers, picks, brushes, etc., and other tools, such as, wheelbarrows, shovels, etc.) shall be decontaminated with water prior to leaving the boundary of the site. PPE shall be discarded at the end of the work shift when personnel leave the site. The PPE shall be placed in properly labeled ACM 6-mil plastic bags for disposal at a licensed landfill permitted to accept this material.

5.9.4.2 Personnel Protective Equipment

The use of Personal Protective Equipment (PPE) will be used to prevent cross-contamination. Personnel will wear disposal booties or impermeable footwear, disposable gloves or impermeable gloves while working in the RWA. Disposable PPE will be discarded in appropriate containers prior to exiting the RWA or if the PPE is not performing its intended function. Disposable PPE shall be disposed of as asbestos contaminated wastes. Impermeable PPE will be decontaminated when workers exit the RWA. If RWAs contain friable ACM, disposable impermeable suits, or equivalent coveralls, will be donned by workers. All suits will be removed upon exiting the RWA and disposed of as asbestos contaminated waste.

In the event that work is in an area of identified RACS, appropriate respiratory protection shall be used by personnel potentially exposed to this material. At a minimum, this shall include the backhoe operator, the personnel spraying the working face, and others identified by the Site Health and Safety Officer.

5.10 Notification and Documentation

The CDPHE HMWMD shall be notified seven days in advance of project start-up. Additionally, changes to this Plan shall be submitted to, and approved by, the Division prior to implementation. Documentation, regarding RACS management, shall be created and maintained in accordance with Section 5.5.7(L) of the Solid Waste Regulations.
6.0 OPERATIONS PLAN

This section was developed in accordance with the requirements of 6 CCR 1007-2.

6.1 Waste Excavation

6.1.1 Solid Waste

Waste shall be excavated in accordance with this Plan. A CABI shall be present at each active excavation as described in Section 3.2. Wastes shipped off-site for disposal shall be profiled in accordance with the requirements of the disposal facility accepting the waste and in accordance with applicable laws. Waste shall be disposed of as RACS, non-asbestos solid waste, or hazardous or special waste if appropriate. The waste shall be excavated using tracked excavators, scrapers, front-end loaders, and/or other suitable equipment. The waste shall be placed into side or end-dump trucks for transport off site to an approved landfill. Each load of waste shall be manifested with bills of lading, nonhazardous waste manifests, or sequentially numbered truck tickets. If truck tickets are used to track loads of waste, one manifest or bill of lading shall include truck tickets to verify that the waste was delivered to the landfill. Inventory logs shall be used to track individual loads of waste leaving the site. Bucket scales on the excavator or loader may be used to minimize the potential for overloading the end-dump trucks and maximize efficiency of the equipment.

6.1.2 Waste Tires

Waste tires may be encountered during waste excavation. Waste tires shall be transported and disposed of in accordance with Section 10 of 6 CCR 1007-2. If tires are adjacent to RACS, they shall be decontaminated prior to disposal.

6.1.3 Nuisance Controls

The potential for fire or explosion to occur on-site shall be minimized by following applicable safety guidelines. Fire(s) or explosion(s) shall be extinguished using on-site materials and equipment, with assistance from the local fire department, if necessary. Equipment operators shall keep fire extinguishers on their machines to control small fires that do not require waste excavation and covering. The facility and/or fire department personnel shall use water, soil, or other suitable materials to extinguish the fire. Should a fire or explosion occur at the entrance of the facility or in a maintenance area, employees shall follow appropriate fire procedures.

6.1.4 Odor

Minimal odors are anticipated based on the type of activities being conducted at the site. These odors (if any) usually dissipate within a few hundred feet. Air quality shall be monitored at the site boundaries.
6.1.5 Vector(s)

The nature of the activities at the site makes the possibility of nuisance resulting from birds or other animals minimal. If necessary, the site shall operate bird and vector discouraging devices to control nuisances, or contract with a professional exterminator. Sonic bird repellers may be maintained/staged on-site and utilized as necessary to help discourage migratory scavenging birds. Prairie dogs shall be removed from the site prior to beginning work as specified in the CMWP for the site.

6.1.6 Dust Control during Non-ACM/RACS Activities

Facility personnel shall be responsible for controlling dust and particulate matter originating from winds, vehicular traffic, and operational equipment. During dry periods, the operator may have the option of using either chemical dust suppressants or water or both to minimize the amount of dust generated at the facility. Particulate monitors shall be placed at the site boundary to monitor for dust. This plan shall be modified as necessary for the site to address dust control. Operations shall be suspended during high wind events, defined as sustained winds of forty miles per hour (40 MPH) or greater, or gusts of fifty-five miles per hour (55 MPH) or greater, expected to persist for one hour or longer, as defined by the National Weather Service. When the conditions meet the shutdown requirements, the order for shutdown shall be executed. The site may reopen as criteria are met.

6.1.7 Blowing Debris

During periods of high winds, no waste shall be excavated or delivered off-site, and additional care shall be taken to control backfill operations. Unloading operations shall be suspended as soon as practicable. Blowing debris and other wastes shall not be allowed to accumulate.

6.1.8 Lights and Illegal Dumping

Although the excavation schedule has not been determined, it remains a potential that excavation activities may be conducted at night. Therefore, initial equipment and facilities may require lighting, including yard lights near the gates, staging, and excavation areas. Illegal dumping shall be prevented by properly maintaining and locking fencing and gates. Specific procedures shall be further evaluated if additional procedures are necessary.

6.2 Record Keeping

Records shall be maintained for the following items:

a) Waste Handling and Disposition
b) Type and loads of outgoing waste
c) Waste Characterization
d) Variations from approved operating procedures
e) Air monitoring data
f) Site meteorological monitoring data
g) Litter cleanup records
h) Dust monitoring at site perimeter
Permanent records shall be maintained on-site and shall include actual depth of excavation, as-built cross-sections, surveyed depths and horizontal extents of waste removal and placement, and surveyed final contours. A final report shall include the following information:

i. Summary of the amount of wastes transported off-site or reused, and

ii. Summary and description of activities during the construction period, which, at a minimum, should include:
   a) Excavation details of special or unique wastes
   b) Characterization procedures, results and disposition of waste
   c) Litter complaints and policing activities
   d) Fire or medical emergency calls
   e) Stoppages of operations by type (wind, equipment failure, etc.), and

iii. Performance review of drainage and erosion control plans, and

iv. Material deviations from this Plan and CDPHE approvals

In addition, copies of reports relating to fire or medical emergency calls shall be provided to the Jefferson County Health Department and the Fire Department.
7.0 REFERENCES


CDPHE, 2006. 5 CCR 1002-65. Regulation Controlling Discharges to Storm Sewers.


ERO. 2009 Final Corrective Measures Work Plan NRTD Expansion Areas (IA 7, IA 8, East IA 8, West IA 10N, North IA 11, IA 12N, and IA 17N July

FIGURES
FACMNACS: Friable ACM cleared, soil ND.
NFACMNACS>10<25: 10 to 25 pieces of non-friable ACM cleared, soil ND.
NFACMNACS<10: 1 to 10 pieces of non-friable ACM cleared, soil ND.
NACMNACSACS: No ACM, 10 point ACS sample ND, asbestos detected in 5 point borehole composite sample collected from 0-6".
NACMACS: No ACM, asbestos detected in soil.
FACMACS: Friable ACM and non-friable ACM cleared, asbestos detected in soil.
NFACMACS: Greater than 25 pieces of non-friable ACM, Not cleared, asbestos soil sample not collected.
NORTHWEST CORNER LANDFILL COVER

OPERATIONS AND MAINTENANCE PLAN

DENVER FEDERAL CENTER
LAKEWOOD, COLORADO

AUGUST, 2013, REVISED MARCH 2017

PREPARED FOR
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## ACRONYMS

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<thead>
<tr>
<th>Acronym</th>
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<tr>
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<tr>
<td>VL</td>
<td>Vegetative Layer</td>
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<td>VOC</td>
<td>Volatile organic compounds</td>
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1.0 INTRODUCTION

This Operations and Maintenance (O&M) Plan has been prepared for the Northwest (NW) Corner Landfill Cover area of the Denver Federal Center (DFC) in Lakewood, Colorado (the Site; Figure 1). The NW Corner Landfill Cover area is divided into two (2) sub-areas known as the Landfill Cover Area (LCA) and the Maintain Existing Land Cover Area (MELCA) as shown in Figure 1. This plan is also an attachment to the Notice of Environmental Use Restriction that has been recorded to the deed for the site property. This plan will also be included as an attachment to the Corrective Action Plan application to be submitted to the Colorado Department of Public Health and Environment (CDPHE) by any future prospective purchaser of the site property.

This O&M Plan has been prepared in accordance with the applicable portions of the Colorado Regulations Pertaining to Solid Waste Disposal Sites and Facilities (Solid Waste Regulations)(6 Colorado Code of Regulations [CCR] 1007-2).

Any change to this O&M plan requires CDPHE approval prior to implementation.

1.1 Purpose and Objective

The purpose of the O&M Plan is to describe the procedures that to be followed to maintain the effectiveness of the features of the LCA and MELCA that prevent people from contacting waste and contaminated soil. The objectives of this O&M Plan are to:

- Provide general information about the LCA and MELCA;
- Identify those aspects of the LCA and MELCA that require monitoring, reporting, and potential maintenance and the associated monitoring, reporting, and maintenance procedures;
- Identify design criteria and cover alternatives necessary to support future redevelopment of the site; and
- Meet the applicable post-closure care requirements set forth in Sections 2.6 and 3.6 of 6 CCR 1007-2.

1.2 Document Organization

The remainder of this O&M Plan is organized as follows:

- Section 2 describes the LCA and MELCA.
- Section 3 presents the administrative requirements relative to the O&M of the surface covers in the LCA and MELCA.
- Section 4 sets forth the necessary inspection and associated maintenance activities for the surface covers in the LCA and MELCA.
- Section 5 describes the design, waste management and review requirements for future construction.
Section 6 includes a list of references used to prepare this O&M Plan and that may be of use during the O&M period.
2.0 NORTHWEST CORNER LANDFILL COVER DESCRIPTION

This section summarizes the design of the LCA and MELCA areas of the NW Corner Landfill Cover and describes its key components.

The NW Corner Landfill Cover area extends across approximately 15.883 acres located near the southeastern corner of 6th Avenue and Union Boulevard (Figure 1). With respect to landmarks present at the time this O&M Plan was prepared, the site is bounded to the east and west by the Regional Transport District (RTD) Light Rail line and on the north by 6th Avenue. On the south, the south rim of the concrete storm water channel just south of Fourth Avenue creates the boundary. The natural topography of area slopes primarily from northwest to southeast. The legal description and survey map of the NW Corner Landfill Cover area is in Appendix A.

The NW Corner Landfill Cover area was used intermittently from the 1940’s for disposal of miscellaneous waste and unneeded fill soil from other locations on the DFC. The fill material included normal soil, weathered rock, railroad ballast and broken up concrete and asphalt from roadways. The waste materials included scrap metal, brick, regulated asbestos contaminated soil (RACS), bottles, laboratory waste, insulation, oily soil, oily waste, coal residue, cinder material, ash/burned material, and other materials consistent with a landfill/burn area. RACS has been confirmed in surface and subsurface soil.

The NW Corner Landfill Cover area was the subject of a corrective measure in 2014 under GSA Denver Federal Center Compliance Order on Consent Number 97-07-18-01 (Consent Order) (EPA Identification Number CO5670990105). The implementation of the corrective measure was overseen by the Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division (“the Division”). The purpose of the corrective measure was to mitigate the potential threats to human health and the environment due to the waste disposal activities and develop plans for ensuring the NW Corner Landfill Cover would remain effective in perpetuity. The NW Corner Landfill Cover consists of the LCA and the MELCA.

The LCA portion of the NW Corner Landfill Cover is an approximately 9.5 acre area north of North Avenue/Fourth Place where a new cover was installed to prevent human contact with landfill waste because a relocation of the DFC boundary fence resulted in the surface of the landfill becoming accessible to the public. The new cover consists of a marker bed made of a geofabric material beneath a nominally one-foot thick soil layer vegetated with grass. The vegetated soil cover must be adequately maintained to ensure continued protection of human health. The geofabric marker bed serves two purposes: (1) it provides an easy-to-see visible trigger that maintenance is required on the soil cover, and (2) it provides a visual warning to people who might be inadvertently digging in the area to stop and find out why the barrier is there before digging continues.
The MELCA portion of the NW Corner Landfill Cover is an approximately 6.3 acre area located just south of the LCA. The MELCA includes sidewalks, the pavement and center island of North Avenue/Fourth Place, the entire width of the concrete drainage channel to the south, and the area of well established vegetation just north and south of North Avenue/Fourth Place. Surface soil samples results provided data to demonstrate that the existing sod and landscaping materials in the MELCA were clean of chemical and asbestos contamination and safe for humans to contact.

Both the MELCA and the LCA require long term monitoring and maintenance as described in this O&M Plan to ensure continued protection of human health and the environment. Any disturbance of the soil and waste beneath the MELCA and LCA must follow special materials handling procedures as described in the Northwest Corner Landfill Cover Materials Handling Plan (MHP), which is a companion to this O&M Plan. Alternatively, these areas, or portion(s) thereof, could be remediated to meet residential/unrestricted use criteria. Any remediation would require both chemical and asbestos sampling to confirm the adequate removal or treatment of contamination. All remediation activities would need to be proposed in a plan and submitted to the Division for review and approval prior to implementation.

The NW Corner Landfill Cover is subject to a Notice of Environmental Use Restriction placed on the property by the Division with the permission of the federal government. The primary use restrictions include: no disturbance of the existing ground cover without following an approved plan for the repair of the ground cover to meet or exceed the previously existing conditions, and any excavation of the waste material beneath the existing landfill cover must be conducted in accordance with the Division approved MHP. The Notice of Environmental Use Restriction, placed in accordance with § 25-15-321.5 of the Colorado Hazardous Waste Act, will remain on the property in perpetuity unless a future owner conducts the remediation required to achieve residential/unrestricted use criteria for the property.
3.0 ADMINISTRATION

Administrative requirements for the O&M of the NW Corner Landfill Cover include: (1) maintaining responsible entity and site contact information through which official project-related communication shall take place, (2) inspection requirements, (3) regulatory reporting, and (4) amendment of this O&M Plan.

3.1 Responsible Entity and Site Contact

The entity responsible for the O&M of the NW Corner Landfill Cover is GSA. Their site contact for this project is:

John G Kleinschmidt, PG, RG  
DFC Environmental Program Manager  
Denver Federal Center, Region 8, PBS, GSA  
Building 41, Rm 240  
Denver, Colorado, 80225  
Cell: 303-868-0795  
Office: 303-236-2858  
john.kleinschmidt@gsa.gov

The site contact shall be responsible for implementing the requirements of this O&M Plan and shall be CDPHE’s official point of contact for project-related correspondence. In the event the site is sold, the new responsible entity will need to be identified. The site contact shall also be responsible for maintaining at least one copy of the complete O&M Plan, including appendices, at GSA’s office for reference.

The procedure set forth in Section 3.4 below shall be followed if the responsible entity, site contact, and/or the location of the reference documents are changed.

3.2 Inspections

Visual inspections of the LCA and MELCA are necessary to monitor design performance of the remedy and to check for visual evidence that the LCA and/or MELCA have been disturbed or is in poor condition. This section presents the minimum qualification requirements for inspectors, the frequency inspections are to be performed, and the documentation to be completed during or after the inspections.
3.2.1 Inspector Qualifications

Inspections may be performed by the responsible entity identified in Section 3.1, or a qualified consulting firm may be hired to perform the inspections on behalf of the responsible entity. The minimum qualification requirements for the person or persons performing the inspections are as follows:

- A Professional Engineer registered in the State of Colorado with a minimum five years of demonstrated experience in the design, construction, and/or inspection of landfill cover systems and their associated surface water control structures.

or:

- An inspector under the supervision of the Professional Engineer identified above with a minimum five years of demonstrated experience in the design, construction, and/or inspection of landfill cover systems and vegetated surface water control structures.

3.2.2 Frequencies

The inspection of the LCA and MELCA shall be performed as described in Section 4 at least twice per year. Inspections should be made on foot and should only be performed during daylight hours and in weather conditions where there is ample light and visibility to observe large areas from a given vantage point.

3.2.3 Field Inspection Report

The inspector shall complete an Inspection Report form concurrent with each inspection. Appendix B presents a sample form. The inspector shall record the Inspection Report Number, date and time, weather and field conditions, inspector name, findings of inspection and recommendations, and field action items (FAIs) assigned (see below). Applicable additional documentation such as hand sketches and photographs should be attached to the report.

In the “Findings of Inspection” section of the form, the inspector shall note method of inspection such as “walked perimeter of LCA cover and MELCA,” and pertinent observations made during the inspection. It shall be noted in the “Field Action Items Assigned” section if: (1) no action is required, (2) an item needs to be checked or monitored on future inspections, or (3) action is required. If action is required or future monitoring of a specific item is required, the FAI Log shall be filled out as described in Section 3.2.4, and the FAI number noted on the Field Inspection Form.

In the “Findings of Inspection” section of the form, the inspector will also specifically note whether or not there is an visual evidence that the existing ground cover has been disturbed. If disturbance is noted, the inspector shall confirm whether permission for the disturbance was obtained from CDPHE. Non-approved disturbances shall be reported to CDPHE within 30-calendar days.
3.2.4 Field Action Item Log

The FAI Log shall be used as means of tracking necessary monitoring, maintenance, or repair activities. Each needed activity identified in the Inspection Report shall be assigned an individual FAI number. The FAI Log shall contain the FAI number along with the date it was assigned, the corresponding Inspection Report Number that it was first identified, a description of the FAI, the date the FAI was performed or resolved, the Inspection Report Number that verified the FAI was satisfactorily performed, and the status of the FAI. A given FAI shall maintain an “open” status until a new inspection is performed and the FAI documented as being sufficiently addressed. In general, FAIs should be closed within one calendar quarter (i.e., 90 days or three months) of the Inspection Report date that identified the FAI. In some cases, it may not be feasible to close an FAI within 90 days. The rationale for FAIs requiring longer than 90 days to implement shall be presented in the annual O&M report discussed in Section 3.3. A sample FAI Log is provided in Appendix C.

3.3 Regulatory Reporting

Completed Inspection Reports, the FAI Log, and modifications to this O&M Plan shall be kept at the GSA office. Such documents generated during a given year shall be transmitted to CDPHE as part of an annual O&M report for the completed remedy. The annual O&M report shall be transmitted to CDPHE by the end of February (i.e., 60 days) following the end of each calendar year of O&M activities. The annual O&M report shall, at a minimum, contain:

- A discussion of the current site conditions, including photographs
- A brief summary of development activities during the prior year
- A brief summary of O&M activities performed during the prior year
- A discussion of modifications to the O&M plan made during the prior year
- The rationale for closed FAI that took longer than 90 days to close
- The status and rationale for open FAIs

3.4 Plan Modification

Changes in site conditions, project personnel, site redevelopment, and other factors shall necessitate the periodic modification of this O&M Plan. Whenever possible, CDPHE shall be notified of administrative or minor changes (e.g., changes to contact name or address, site access, etc.) in writing prior to their implementation. Significant modifications (e.g., inspection items or frequency, reporting requirements) to this plan must be approved by CDPHE prior to their implementation. This plan shall also be appended or modified, as appropriate, during the design process for the redevelopment of the site. Such modifications shall also be considered significant and approved by CDPHE prior to their implementation.
4.0 INSPECTION AND MAINTENANCE ACTIVITIES

This section describes anticipated maintenance activities and identifies potential deficiencies with common solutions.

4.1 Subsidence/Water Ponding

Because waste material and cover soils may undergo settlement, the LCA cover shall be monitored for signs of settlement. Subsidence is less likely to occur in the MELCA because the waste and landscaping has been in-place for a long period of time. The inspector shall walk the LCA cover surface and note areas of ponding water, surface depressions, cracking of the cover soil, asphalt, or curb, and other potential subsidence-related deficiencies. A FAI shall be assigned to areas where ponding is greater than 2-inches deep, or where, in the inspector’s opinion, a repair or maintenance activity is needed.

Additional soil shall be placed over settled areas to restore grades, and the area shall be revegetated as appropriate. The location of the settled area shall be measured using a global positioning system (GPS) and the coordinates shall be recorded in the maintenance log. Evidence of continued subsidence in a particular area of the final cover shall be evaluated during inspections, or more frequently, if required, to determine if the underlying layer requires repair.

4.2 Erosion or Aggradation

Excessive erosion has the potential to occur almost anywhere on the LCA and/or MELCA. Excessive erosion or aggradation (i.e., the buildup of sediment) has the potential to occur in the site’s drainage channels and discharge structures. The inspector shall inspect the LCA and MELCA cover surface and the length of each surface water drainage feature. The inspector shall note areas of erosion rills, displaced riprap or vegetation, significant sediment or debris build up, the visible undermining of structures due to the erosion of surrounding materials, and other potential erosion- or aggradation-related deficiency he/she may see.

A FAI shall be assigned to areas where erosion rills are greater than 2-inches deep, where aggradation or erosion is affecting the hydraulic or structural performance of the surface water control structures, where failure of a structure (e.g., storm water inlet structure) could occur, or anywhere else where, in the inspector’s opinion, a repair or maintenance activity is needed.

The cause of the excessive erosion or aggradation shall be investigated, and appropriate response actions shall be developed on a case-by-case basis.

4.3 Slope Instability

While there are few steep slopes in the LCA and MELCA, side slopes and the surface water drainage structures potentially may experience instability. The inspector shall inspect each drainage structure and note areas of soil slumping, soil cracking, the visible undermining of structures due to movement of surrounding materials, and other potential slope stability-related deficiency he/she may see.
A FAI shall be assigned to areas where visible slumping has occurred, where failure of a structure (e.g., pond outlet structure) could occur, or anywhere else where, in the inspector’s opinion, a repair or maintenance activity is needed.

The cause of the slope stability shall be investigated, and appropriate response actions shall be developed on a case-by-case basis.

4.4 Sparse or No Vegetation

Vegetation in both the LCA and MELCA shall be monitored for signs of stress and/or barren areas. The inspector shall note areas of bare soil, dead or dying vegetation, sparse vegetation, and other potential vegetation-related deficiency.

A FAI shall be assigned to areas where visible dying off or stressing of the vegetation has occurred or where, in the inspector’s opinion, a repair or maintenance activity is needed.

Areas where vegetation is disturbed, either by erosion or other means, shall be revegetated, as necessary.

4.5 Undesirable Vegetation

Vegetation in both the LCA and MELCA shall also be monitored for undesirable vegetation species. The inspector shall note areas of excessive invasive weed species, and other potential vegetation-related deficiency he/she may see.

A FAI shall be assigned to areas where excessive undesirable vegetation has occurred or where, in the inspector’s opinion, a repair or maintenance activity is needed. A vegetation expert may be required to repair persistent problem areas.

Undesirable vegetation shall be managed in accordance with standard weed management practices and local codes and ordinances.

4.6 Animal Burrows

Burrowing animals (i.e., prairie dogs) may dig holes through the vegetative cover of both the LCA and MELCA and thus create a pathway to expose underlying waste. The inspector shall walk both the LCA and MELCA and note the presence of burrows within the site boundaries.

A FAI shall be assigned to eliminate burrowing animals within the site limits and to backfill their burrows and, if necessary, revegetate the impacted area. If persistent attempts at colonization of the site are incurred, physical deterrents shall be installed. Such deterrents may include:

- Where practical, allow for grass to grow to a height of greater than 10 inches to create a visual barrier.
- Visual barriers installed around the cover perimeter such as fence screening, or earthen berms planted with tall grass or shrubs.
• Vertical barriers installed (i.e., subsurface walls) that prevent burrowing onto the property.

An animal control specialist may be required to remove the animals and to design/install physical deterrents. CDPHE shall be notified of planned deterrents prior to installation.

4.7 Vandalism

The site is assessable to the public such that vandalism may occur. Types of vandalism that could affect the hydraulic or structural performance of the LCA and MELCA and surface water controls include illegal dumping, cover degradation from off-road vehicles, and damage to outfall structures and vegetation.

A FAI shall be assigned to repair vandalism that affects the hydraulic or structural performance of the drainages and ponds.

Blockages shall be removed from flow paths. Damaged vegetation shall be replaced or regrown. Damaged structures shall be repaired or replaced.

4.8 Storm Water Area Drains

Stormwater drainage features in both the LCA and MELCA shall be inspected on foot for signs of collapse, blockage, proper flow direction, or general instability through observing changes in the surface topography.

A FAI shall be assigned to repair instability, restore proper flow directions, or replace damaged or unsafe structures.

Excessively eroded areas in the area drain structure shall be repaired with additional erosion control materials.
5.0 SITE REDEVELOPMENT REQUIREMENTS

There is no restriction on the type of development that may occur on the Northwest Corner Landfill Cover property. However, due to need to prevent human contact with the contaminated soil and waste that underlie the existing LCA and MELCA, future redevelopment activities must comply with this O&M Plan, the Northwest Corner Landfill Cover MHP, and the Notice of Environmental Use Restriction. In addition, design documents for future infrastructure and buildings to be installed/constructed within the NW Corner Landfill Cover area will be submitted to CDPHE for review and approval prior to implementation. The purpose of CDPHE’s review will be to ensure the proposed infrastructure and buildings will be adequately isolated from waste and contaminated soil to protect the health and safety of construction workers, utility workers and future inhabitants/tenants of the buildings.

This section of the O&M Plan provides requirements to be followed for future site development. Basically, no utilities or structures may be placed directly on the contaminated soil or waste.

5.1 Waste Removal Criteria

Almost any redevelopment of the NW Corner Landfill Cover property will require regrading, excavation or other disturbance of the contaminated soil and waste beneath the surface covers in the LCA and the MELCA. All of the waste and contaminated soil is classified as a solid waste (at a minimum). As a result, any disturbance or removal of the soil or waste beneath the LCA or MELCA must be conducted in accordance with the Northwest Corner Landfill Cover MHP. The Northwest Corner Landfill Cover MHP provides comprehensive, but flexible, procedures for managing, removing, relocating, and/or disposing of materials that could reasonably be expected to be encountered during future remediation and/or development of the site. If the goal is to remediate the site, or portions of the site, to completely remove all waste from the site, or a portion of the site, with the intent of receiving a residential/unrestricted use/no-further-action determination, then a separate plan for that activity must be submitted to CDPHE for review and approval prior to implementation. Please note that chemical and asbestos confirmation sampling will required.

CDPHE has determined that excavated soil and waste from within the footprint of the NW Corner Landfill Cover area may be reused within the existing footprint of the NW Corner Landfill Cover as long as the reuse activity does not adversely affect human health or groundwater and it is properly covered after relocation. Additionally, if the soil or waste to be reused onsite contains RACS then the requirements in Section 5.5.8(B) of the Solid Waste Regulations (6 CCR 1007-2, Part 1) must be met. No waste or contaminated soil shall be used as backfill over or adjacent to structures or utilities. Relocated waste and/or contaminated soil must be covered in accordance with Section 5.3 of this O&M Plan.

If the excavated soil and/or waste cannot, or will not, be reused within the footprint of the NW Corner Landfill Cover, then it must be properly disposed off-site.
5.2 **Groundwater/Surface Water Intrusion**

Groundwater and surface water intrusion may impact buildings and structures, storm water runoff, and landscaping and irrigation construction.

5.2.1 **Building/Structures/Utilities**

Structures shall be designed to convey precipitation away from the structures. Structures shall be equipped with eaves, gutters, down spouts, and other means as appropriate to prevent surface water infiltration into the ground to promote surface water flow away from the structures.

The waste and contaminated soil in the LCA and MELCA are not believed to be impacting groundwater. However, the shallow groundwater beneath the LCA and MELCA is contaminated with low levels of polyaromatic hydrocarbon (PAH) constituents believed to be associated with releases from unknown sources located upgradient of the property. Therefore, the Notice of Environmental Use Restrictions prohibits withdrawal of the shallow groundwater for any purpose. Construction dewatering is allowed as long as a construction dewatering permit is obtained from U.S. EPA or CDPHE. The party obtaining the construction dewatering permit must inform U.S. EPA or CDPHE that the groundwater to be withdrawn is contaminated.

5.2.2 **Storm Water Runoff**

Storm water runoff shall be conveyed off the NW Corner Landfill Cover via overland flow, curb and gutter, drainage swales, storm sewers, or other means approved by CDPHE. Surface flow structures above the cover shall be designed to be free-draining and to accommodate erosive forces. No ponding or holding of water directly on the cover surface shall be allowed unless specifically approved by CDPHE.

5.2.3 **Landscaping/Irrigation Construction**

Landscape vegetation and irrigation systems may be placed within the LCA cover provided they do not penetrate the geofabric marker layer. In the MELCA, there is no way to identify the transition from clean cover material to contaminated soil/waste. Therefore, clean fill material of adequate thickness shall be imported to create a vegetative layer for new landscape vegetation and space for irrigation systems in order to avoid disturbance/contact with of contaminated soil/waste. Landscaping and irrigation plans must be submitted to CDPHE for review and receive approval prior to implementation.

5.3 **Replacement Covers**

Work conducted to improve or develop the LCA or MELCA will likely require removal of all, or a portion of, the existing surface cover. Unless the work results in complete removal, residual waste/contaminated soil must be re-covered upon completion of work to ensure protection of human health. The three general types of repair/replacement covers discussed below are temporary, short term and permanent.
5.3.1 Temporary Cover(s)

As used here, the term “temporary” means less than 14 days. If the waste/contaminated soil exposed during construction activity in the LCA or MELCA does not have identified RACS, then there are no specific temporary cover requirements for excavations left open for less than two weeks. Areas that have identified RACS are depicted in Figure 2 of the MHP and additional areas may be discovered in the future while soil and waste are characterized during soil disturbing activities.

Exposed and active excavation faces that have known or identified RACS that are to remain open for a period of time ranging from overnight up to 14 days must be covered by one or a combination of the following:

- Crusting agents (e.g., mag chloride)
- anchored and secured visqueen (polyethylene or plastic sheeting)
- anchored and secured geomembrane or geofabric membrane
- a minimum of three- (3-) inch loose lift thickness of soil appropriate for unrestricted use

Temporary covers shall be inspected daily and after high wind events (gusts greater than 20 mph or sustained winds of 12 mph or greater) to evaluate whether the coverings are securely in place. The temporary cover materials shall be reapplied, replaced, or reconstructed, as necessary to maintain stabilization. Cover inspection results and response actions, if warranted, shall be recorded and maintained, reference Section 5.10 of the MHP.

5.3.2 Short-Term Covers

As used here the term “short-term” means less than one (1) year. An example of an area where use of a short-term cover is acceptable is the area surrounding a building that is under construction that has been rough graded in preparation for future landscaping, or parking lot that will not be finished until the building construction is nearly complete.

Short-term cover for waste or contaminated soil that does not have identified RACS shall consist of a geofabric marker bed and a minimum 12-inch thick soil layer of fill soil that meets residential/unrestricted use levels. Alternately, the short-term cover shall consist of a geofabric marker bed, 6 inches of fill soil that meets residential/unrestricted use levels and a layer of concrete or asphalt.

Areas that have identified RACS are depicted in Figure 2 of the MHP and additional areas may be discovered in the future while soil and waste are characterized during soil disturbing activities.
Short term covers for waste or contaminated soil that does have known or identified RACS shall consist of a geofabric marker bed and 18-inches of fill soil that meets residential/unrestricted use levels. Alternately, the short-term cover shall consist of a geofabric marker bed, 6 inches of fill soil that meets residential/unrestricted use levels and a layer of concrete or asphalt.

Proposals for alternate short-term covers will be submitted to CDPHE for review and approval before removing the original cover.

Short-term covers must be protected from damage due to vehicle and heavy equipment traffic. This can be accomplished by preventing access, or constructing a traffic load bearing layer on top of the soil portion of the short-term cover. In addition, frequent inspection, and maintenance as required, of the short-term covers is required to prevent contact with underlying waste/contaminated soil. Inspection results and response actions, if warranted, shall be recorded and maintained, reference Section 5.10 of the MHP.

Short-term covers will be tied-in to the existing surface covers in the LCA and MELCA such that no waste or contaminated soil is exposed. The simplest method for accomplishing this is to have the short-term cover overlap the existing cover by a minimum of three- (3-) feet in all locations where the covers intersect.

5.3.3 Permanent Cover

As used here the term “permanent” means greater than one year. If the cover in the LCA and/or MELCA has been removed and the new surface cover/development is expected to remain for greater than one year, then one of the following replacement covers will be constructed.

**Areas Where Permanent Ground Surface Will Be Unpaved With or Without Landscaping**

For locations that will remain unpaved and without a structure, the permanent cover shall meet the requirements of Section 3.5.3(A) or (B) of the Solid Waste Regulations. Since prevention of infiltration of precipitation and/or irrigation water is not a required, there are no specific permeability requirements for the 18-inch infiltration layer for a permanent soil cover. There are no specific requirements for the cover material used above the geomembrane of a composite permanent cover.

Proposals for alternate permanent covers as allowed under Section 3.5.3(C) of the Solid Waste Regulations will be submitted to CDPHE for review and approval before removing the original cover.

**Areas Where Permanent Ground Surface Will Be Paved With Asphalt or Concrete**

For locations that will have asphalt or concrete as the final surface, the six- (6-) inch erosion layer of a soil cover may be replaced by 6-inches of roadbase and then the asphalt or concrete pavement.
Areas Where Utilities, Buildings, or Structures Will Be Constructed

All underground utilities will be constructed in “clean” corridors. This will be accomplished by over excavating the corridor and covering the floor and sidewalls of the utility trench with a geofabric marker bed. The utility will be surrounded on the bottom and sides by a minimum of 24-inches of fill soil that meets residential/unrestricted use criteria. The clean fill soil will extend from the top of the utility to the ground surface such that utility workers will not encounter waste/contaminated soil when accessing the utility. Note that some utility companies may require wider clean corridors.

The bottom and sidewalls of buildings and other structures will be separated from waste/contaminated soil by a geofabric marker bed and a minimum of 24-inches of fill soil that meets residential/unrestricted use criteria. The design of buildings and structures to be placed over waste/contaminated soil should be reviewed by geotechnical and/or structural engineer with experience in redevelopment on landfills.

The requirement for a cover between waste/contaminated soil and structures does not apply to drilled or driven foundation piers/piles.

Permanent covers will be tied-in to the existing surface covers in the LCA and MELCA such that no waste or contaminated soil is exposed. The simplest method for accomplishing this is to have the short-term cover overlap the existing cover by a minimum of three (3) feet in all locations where the covers intersect.

5.4 Future Development Structures

The future development of the site may include roadways (existing or new), utilities, parking structures, buildings, and other features that may be integral components of a final cover. If so, detailed O&M requirements relative to the remedy for such structures shall be developed during the design process and appended to this plan. O&M of the future development structures shall, at a minimum, include:

- Inspecting paved surfaces for signs of cracking, subsidence, and general deterioration, in accordance with Section 4 of this plan; and

Monitoring building foundations, utilities and adjacent structures for signs of settlement or instability.
6.0 REFERENCES


FIGURES
Figure 1
Northwest (NW) Corner Landfill Cover

Legend

AreaName

- NW Corner Landfill Cover
- Maintain Existing Land Cover Area (MELCA)
- Landfill Cover Area (LCA)
- Parcel Boundary
- RTD Guideway Permanent Easement

Legend Items:

- LCA
- MELCA

Projection: Colorado State Plane, Central Zone
Horizontal Datum: North American, 1983 (NAD83)

Denver Federal Center, Lakewood, Colorado
General Services Administration

February 2017
Appendix A

Northwest Corner Landfill Cover Legal Description and Survey Map
EXHIBIT "A"
DATE: February 6, 2017

LEGAL DESCRIPTION

A tract or parcel of land containing 691,869 square feet (15.883 acres) more or less, being situated in the West One-Half (W 1/2) of Section 9 and in the East One-Half (E 1/2) of the East One-Half (E 1/2) of the Northeast Quarter (NE 1/4) of Section 8, Township 4 South, Range 69 West, of the Sixth Principal Meridian, City of Lakewood, County of Jefferson, State of Colorado, being more particularly described as follows: COMMENCING at the Northeast corner of said Section 8, from which the North One Quarter Corner of said Section 8 Bears S 89°46'09" W, a distance of 2619.92 feet; Thence S 00°05'28" E, along the east line of said Section 8, a distance of 290.00 feet to the South Right of Way of West 6th Avenue and the POINT OF BEGINNING;

1. Thence N 89°46'09" E, along said South Right of Way of West 6th Avenue, a distance of 50.02 feet;

2. Thence S 36°29'58" E, a distance of 127.36 feet to a northerly corner of the Denver Federal Center Landfill Cap description prepared on October 15, 2015 by Brian LeFebre, for and on behalf of Zylstra Baker Surveying, Inc.;

3. Thence S 37°28'29" E along the northerly line of said Landfill Cap, a distance of 79.52 feet;

4. Thence S 49°39'28" W, continuing along the northerly line of said Landfill Cap, a distance of 89.41 feet;

5. Thence S 87°28'10" E, continuing along the northerly line of said Landfill Cap, a distance of 55.86 feet;

6. Thence S 78°08'14" W, continuing along the northerly line of said Landfill Cap, a distance of 41.46 feet;

7. Thence S 72°03'46" E, continuing along the northerly line of said Landfill Cap, a distance of 63.30 feet,

8. Thence S 58°41'15" E, continuing along the northerly line of said Landfill Cap, a distance of 24.03 feet to the easterly line of said Landfill Cap;

9. Thence S 8°13'45" W continuing along the east line of said Landfill Cap, a distance of 146.51 feet;

10. Thence S 10°56'44" W continuing along the east line of said Landfill Cap, a distance of 48.90 feet;

11. Thence S 17°26'58" W, continuing along the east line of said Landfill Cap, a distance of 80.53 feet;

12. Thence S 55°48'23" W, continuing along the east line of said Landfill Cap, a distance of 37.75 feet to the southeast corner of said Landfill Cap;

13. Thence S 20°25'13" W, a distance of 183.40 feet to the south side of a concrete ditch;
14. Thence S 86°09'30" W, along the south side of a concrete ditch, a distance of 176.54 feet;
15. Thence S 89°25'22" W, continuing along the south side of a concrete ditch, a distance of 74.26 feet;
16. Thence S 89°10'04" W, continuing along the south side of a concrete ditch, a distance of 138.25 feet;
17. Thence S 89°09'41" W, continuing along the south side of a concrete ditch, a distance of 152.43 feet;
18. Thence S 89°12'51" W, continuing along the south side of a concrete ditch, a distance of 202.93 feet;
19. Thence S 78°58'11" W, continuing along the south side of a concrete ditch, a distance of 42.72 feet;
20. Thence S 78°23'08" W, continuing along the south side of a concrete ditch, a distance of 41.41 feet;
21. Thence S 59°04'40" W, continuing along the south side of a concrete ditch, a distance of 10.15 feet;
22. Thence S 80°57'08" W, continuing along the south side of a concrete ditch, a distance of 73.25 feet;
23. Thence S 88°20'44" W, continuing along the south side of a concrete ditch, a distance of 16.63 feet to the West line of the East One-Half (E 1/2) of the East One-Half (E 1/2) of the Northeast Quarter (NE 1/4) of said Section 8;
24. Thence N 00°00'21" W, along said West line, a distance of 712.75 feet to said South Right of Way of West 6th Avenue;
25. Thence along said South Right of Way the following 3 (three) courses:
26. Thence S 72°53'30" E, a distance of 60.00 feet;
27. Thence N 68°55'48" E, a distance of 238.60 feet;
28. Thence N 89°46'09" E, a distance of 374.38 feet, more or less, to the POINT OF BEGINNING.

The above described tract or parcel of land contains 691,869 square feet (15.883 acres), more or less.

Bearings are based on the North line of the North East Quarter of Section 8, Township 4 South, Range 69 West of the Sixth Principal Meridian as being N 89°46'09" E a distance of 2619.92 feet. The North Quarter Corner of Section 8 being a 31#4" Brass Cap in a Range Box Stamped Contra LTD, 1/4 Corner LS 5447 and the Northeast Section Corner being 2 1/2" Brass Cap in Range Box 1.8 feet below surface stamped appropriately. As shown on the Land Survey Plat of a portion of the Denver Federal Center prepared by URS Corporation dated 1/29/2015.

For and on Behalf of AECOM
Stan Vermilyea, P.L.S. #25381
6200 S. Quebec Street, Greenwood Village, Colorado 80111

Page 2 of 3
This exhibit does not represent a monumented survey. It is intended only to depict the attached legal description.
Appendix B

Northwest Corner Landfill Cover
Field Inspection Report
## NORTHWEST CORNER LANDFILL COVER O&M PLAN

### FIELD INSPECTION REPORT

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### Findings of Inspection and Recommendations

(attach sketches, maps, photos as appropriate)
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Inspector Signature: _____________________________
Appendix C

Northwest Corner Landfill Cover
Field Action Item Log
# Field Action Item Log

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Appendix D
Original Landfill Cover Area As-Built Information
DENVER FEDERAL CENTER
LANDFILL CAP GRADING REVISED

Horizontal Datum: North American Datum of 1983, 1992 Adjustment (NAD83/92)
Projection: Colorado State Plane Central Zone (US Survey Feet)
Horizontal Tolerance: 0.01'
Vertical Tolerance: 0.01'

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Dates of Field Surveys:
June 17, 24 and 26,
October 14 and 15, 2014, and January 6, 2014

ZBS Job No. 2014-0602
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Dates of Field Surveys:
- June 17, 24 and 26,
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Dates of Field Surveys:
June 17, 24 and 26,
October 14 and 15, 2014, and January 6, 2014
## DENVER FEDERAL CENTER
### LANDFILL CAP GRADING REVISED

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June 17, 24 and 26,
October 14 and 15, 2014, and January 6, 2014
## DENVER FEDERAL CENTER
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June 17, 24 and 26, October 14 and 15, 2014, and January 6, 2014

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DENVER FEDERAL CENTER LANDFILL CAP

LEGAL DESCRIPTION

A PARCEL OF LAND LOCATED IN THE NORTHEAST QUARTER OF SECTION 8 AND THE NORTHWEST QUARTER OF SECTION 9, TOWNSHIP 4 SOUTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF JEFFERSON, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTH QUARTER CORNER OF SAID SECTION 8; THENCE S66°47'28"E, A DISTANCE OF 2205.04 FEET TO THE POINT OF BEGINNING; THENCE ALONG THE FOLLOWING 41 COURSES:

1. THENCE N04°01'49"W A DISTANCE OF 127.26 FEET;
2. THENCE N12°40'54"W A DISTANCE OF 97.10 FEET;
3. THENCE N22°44'07"W A DISTANCE OF 49.72 FEET;
4. THENCE N03°02'57"W A DISTANCE OF 40.12 FEET;
5. THENCE N01°05'22"E A DISTANCE OF 90.87 FEET;
6. THENCE N14°44'22"E A DISTANCE OF 53.80 FEET;
7. THENCE N68°44'50"E A DISTANCE OF 99.97 FEET;
8. THENCE N77°29'37"E A DISTANCE OF 125.15 FEET;
9. THENCE N70°26'41"E A DISTANCE OF 92.86 FEET;
10. THENCE S87°43'30"E A DISTANCE OF 99.24 FEET;
11. THENCE N85°14'55"E A DISTANCE OF 110.05 FEET;
12. THENCE S79°50'10"E A DISTANCE OF 72.63 FEET;
13. THENCE S76°34'47"E A DISTANCE OF 117.75 FEET;
14. THENCE S68°22'57"E A DISTANCE OF 61.31 FEET;
15. THENCE S14°44'22"E A DISTANCE OF 53.80 FEET;
16. THENCE N49°39'28"E A DISTANCE OF 89.41 FEET;
17. THENCE S87°28'10"E A DISTANCE OF 55.86 FEET;
18. THENCE S78°08'14"E A DISTANCE OF 41.46 FEET;
19. THENCE S72°03'46"E A DISTANCE OF 63.30 FEET;
20. THENCE S58°41'15"E A DISTANCE OF 24.03 FEET;
21. THENCE S08°13'45"W A DISTANCE OF 146.51 FEET;
22. THENCE S10°56'44"W A DISTANCE OF 48.90 FEET;
23. THENCE S17°26'58"W A DISTANCE OF 80.53 FEET;
24. THENCE S55°48'23"W A DISTANCE OF 37.75 FEET;
25. THENCE N12°08'06"W A DISTANCE OF 97.93 FEET;
26. THENCE N85°24'54"W A DISTANCE OF 109.38 FEET;
27. THENCE N84°59'37"W A DISTANCE OF 141.27 FEET;
28. THENCE N84°20'21"W A DISTANCE OF 43.08 FEET;
29. THENCE N69°31'44"W A DISTANCE OF 15.05 FEET;
30. THENCE N37°26'22"W A DISTANCE OF 32.56 FEET;
31. THENCE S87°53'02"W A DISTANCE OF 179.75 FEET;
32. THENCE S88°47'14"W A DISTANCE OF 90.52 FEET;
33. THENCE S18°55'59"W A DISTANCE OF 44.16 FEET;
34. THENCE S83°46'17"W A DISTANCE OF 11.91 FEET;
35. THENCE S23°42'31"W A DISTANCE OF 34.03 FEET;
36. THENCE S02°41'24"E A DISTANCE OF 38.72 FEET;
37. THENCE S75°01'09"E A DISTANCE OF 13.01 FEET;
38. THENCE S07°52'06"E A DISTANCE OF 11.92 FEET;
39. THENCE N87°34'56"W A DISTANCE OF 104.87 FEET;
40. THENCE S89°19'34"W A DISTANCE OF 84.63 FEET;
41. THENCE S87°27'41"W A DISTANCE OF 30.12 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS 416,567 SQUARE FEET OR 9.563 ACRES, MORE OR LESS.


FOR AND ON BEHALF OF
ZYLSTRA BAKER SURVEYING, INC.
1510 WEST TUFTS AVENUE
ENGLEWOOD, CO 80110
PH: (303) 781-0700
FAX: (303) 781-4193
E-MAIL: mail@zbsinc.net
EXHIBIT

NE 1/4 SECTION 8 & NW 1/4 SECTION 9
T 4 S, R 69 W, 6TH P.M.
JEFFERSON COUNTY, COLORADO

POINT OF COMMENCEMENT
NORTH 1/4 CORNER SEC 8, T4S, R69W, 6TH P.M.
FOUND 3 1/4" BRASS CAP MARKED "CONTRA TTD
T4S R69W 1/4 S5 S8 LS 5447" IN RANGE BOX

SCALE: 1"=100'

CONTAINING
416,567 SQUARE FEET
OR 9.563 ACRES
MORE OR LESS

MATCH LINE – SEE SHEET 4 OF 5

CENTER CORNER SEC 8, T4S, R69W, 6TH P.M.
FOUND 3 1/4" BRASS CAP MARKED "CITY OF
LAKewood T4S R69W C1/4 1986 LS 14591"

S89°41'59"E
2635.56'

BRIAN L. LeFEBRE
PROFESSIONAL LAND SURVEYOR
COLORADO NO. 34579

ZYLSTRA BAKER SURVEYING INC.
1510 WEST TUFTS AVENUE ENGLEWOOD, CO 80110
PHONE (303) 781-0700

HUDSPETH AND ASSOCIATES, INC.
LANDFILL CAP
DENVER FEDERAL CENTER

SCALE: 1"=100' DR: FILLCAP.DWG
DRN. JRT DATE: 10/14/15 CHK. BLF
JOB NO. 2014-0602 SHEET 3 OF 5
EXHIBIT

NE 1/4 SECTION 8 & NW 1/4 SECTION 9
T 4 S, R 69 W, 6TH P.M.
JEFFERSON COUNTY, COLORADO

NOTES
1. NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT, MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.

2. THIS EXHIBIT DOES NOT REPRESENT A MONUMENTED SURVEY. IT IS INTENDED ONLY TO DEPICT THE ATTACHED DESCRIPTION.

WEST 1/4 CORNER SEC 8, T4S, R69W, 6TH P.M.
FOUND 2 1/2" ALUMINUM CAP MARKED "URS CORP T4S R69W S8 S9 1/4 2013 PLS 24313" IN RANGE BOX

CONTAINING 416,567 SQUARE FEET OR 9.563 ACRES MORE OR LESS

SEE LINE TABLE ON SHEET 5 OF 5

BRIAN L. LefEBRE
PROFESSIONAL LAND SURVEYOR
COLORADO NO. 34579

ZYLSTRA BAKER SURVEYING INC.
1510 WEST TUTS AVENUE
ENGLEWOOD, CO 80110
PHONE (303) 781-0700

HUDSPETH AND ASSOCIATES, INC.
LANDFILL CAP
DENVER FEDERAL CENTER

SCALE: 1"=100'
DR: FILLCAP.DWG
DRN. JRT / DATE: 10/15/15 CHK. BLF
JOB NO. 2014-0602 SHEET 4 OF 5
**EXHIBIT**

**NE 1/4 SECTION 8 & NW 1/4 SECTION 9**

**T 4 S, R 69 W, 6TH P.M.**

**JEFFERSON COUNTY, COLORADO**

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**BRIAN L. LEFEBRE**

**PROFESSIONAL LAND SURVEYOR**

**COLORADO NO. 34579**

---

**ZYLSTRA BAKER SURVEYING INC.**

1510 WEST TUFTS AVENUE  ENGLEWOOD, CO 80110

PHONE (303) 781-0700

**HUDSPETH AND ASSOCIATES, INC.**

**LANDFILL CAP**

**DENVER FEDERAL CENTER**

**SCALE:** 1"=100’  |  **DR:** FILLCAP.DWG

**DRN. JRT | DATE:** 10/15/15  **CHK. BLF**

**JOB NO. 2014-0602 | SHEET 5 OF 5**
This property is subject to a Notice of Environmental Use Restrictions imposed by the Colorado Department of Public Health and Environment pursuant to section 25-15-321.5 of the Colorado Revised Statutes

NOTICE OF ENVIRONMENTAL USE RESTRICTIONS

WHEREAS, the United States of America, acting through the General Services Administration ("GSA"), is the owner of certain property commonly referred to as the Northwest Corner Sale Area, located in the City of Lakewood, Jefferson County, State of Colorado, more particularly described in the legal description and survey map attached hereto as Attachment A, and incorporated herein by reference as though fully set forth (hereinafter referred to as "the Property"); and

WHEREAS, the Hazardous Materials and Waste Management Division of the Colorado Department of Public Health and the Environment (the "Department"), which is located at 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530, is authorized to approve Notices of Environmental Use Restriction (a/k/a "Restrictive Notices") pursuant to § 25-15-320(4)(a) of the Colorado Hazardous Waste Act, Colorado Revised Statutes (C.R.S) §§ 25-15-101, et seq. ("CHWA"); and

WHEREAS, for purposes of indexing in the County Clerk and Recorder's office Grantor-Grantee index only, United States of America shall be considered the Grantor, and the Department shall be considered the Grantee. Nothing in the preceding sentence shall be construed to create or transfer any right, title or interest in the Property; and

WHEREAS, pursuant to Compliance Order on Consent Number 97-07-18-01 (the "Compliance Order"), which the Department issued to GSA in 1997, the Property is the subject of enforcement and remedial action pursuant to the CHWA;

WHEREAS, the purpose of this Restrictive Notice is to ensure protection of human health and the environment by restricting certain uses of the Property. The use of groundwater beneath the entire Property is restricted as described in Paragraph 1.a of this covenant. In addition, for the portion of the Property hereinafter referred to as the "NW Corner Landfill Cover," depicted in Attachment B and described in Attachment C, the Restrictive Notice will ensure continued operation, maintenance and monitoring of the final corrective measures selected under the Compliance Order and as described in Paragraph Nos. 1.b and 1.c of this covenant; and

WHEREAS, GSA has requested that the Department approve this Restrictive Notice as provided in Article 15 of Title 25, C.R.S.
NOW, THEREFORE, the Department approves this Restrictive Notice pursuant to § 25-15-321.5 C.R.S. The Property as described in Attachment A shall hereinafter be subject to the following requirements set forth in paragraphs 1 through 12, below, which shall be binding on all parties now or subsequently having any right, title or interest in the Property, or any part thereof, and any persons using the land, as described herein. As used in this Restrictive Notice, the term OWNER means the then current record owner of the Property and, if any, any other person or entity otherwise legally authorized to make decisions regarding the transfer of the Property or placement of encumbrances on the Property, other than by the exercise of eminent domain.

1) Use restrictions.

a) Restriction on Use of Groundwater. No groundwater beneath the Property as described in Attachment A from the ground surface to a depth of 100 feet below ground surface may be withdrawn for any purpose, except as authorized in a remedial decision document or environmental sampling plan approved by the Department.

Nothing in the preceding shall prohibit the installation or use of monitoring or remedial wells as authorized in a remedial decision document or environmental sampling plan approved by the Department.

Nothing in the preceding shall prohibit groundwater extraction/management arising from construction dewatering which is conducted in compliance with applicable wastewater discharge regulations.

So long as the Property is owned by the federal government, the OWNER shall conduct construction dewatering in accordance with U.S. Environmental Protection Agency Clean Water Act National Pollutant Discharge Elimination System (NPDES) permit program requirements.

If the Property is not owned by the federal government, OWNER shall secure a Construction Dewatering Permit in accordance with the Colorado Water Quality Control Act (§ 25-8-101 et. seg. C.R.S) prior to any dewatering activities. Any person applying for a construction dewatering permit on the Property must notify the Department’s Water Quality Control Division that the groundwater is contaminated and that a restrictive notice has been imposed.

b) Protection of the Integrity of the Corrective Measures. No excavation, grazing, drilling, grading, digging, tilling or any other soil disturbing activity is permitted within the NW Corner Landfill Cover as depicted in Attachment B and described in Attachment C unless conducted in accordance with:

i) The most recent version of the Department-approved Northwest Corner Landfill Cover Materials Handling Plan (“NW Corner Landfill Cover MHP”), which is incorporated by reference as if set forth in full herein; or

ii) A remedial decision document or environmental sampling plan that has been approved by the Department.
c) Inspection and Maintenance of the Corrective Measure. The OWNER maintains an affirmative obligation to monitor and maintain the corrective measures in the NW Corner Landfill Cover as depicted in Attachment B and described in Attachment C in accordance with the most recent version of the Department-approved Northwest Corner Landfill Cover Operations and Maintenance Plan (NW Corner Landfill Cover O&M Plan), which is incorporated by reference as if set forth in full herein. Maintenance activities performed in accordance with the NW Corner Landfill Cover O&M Plan could result in encountering waste material. Waste material encountered during intrusive activities shall be managed and disposed of in accordance with the most recent Department-approved NW Corner Landfill Cover MHP.

Note: The most recent Department-approved versions of the NW Corner Landfill Cover O&M Plan and the NW Corner Landfill Cover MHP are on file at the Record Center for the Department’s Hazardous Materials and Waste Management Division. The Record Center is located at the address provided in Paragraph 12, and may be reached at 303-692-3331 or https://www.colorado.gov/pacific/cdphe/hmwmd-records-review.

2) Modifications. This Restrictive Notice shall remain in full force and effect unless modified or terminated in accordance with this paragraph and pursuant to § 25-15-321.5, C.R.S. or any successor statute. OWNER may request that the Department approve a modification or termination of the Restrictive Notice. The request shall contain information showing that the proposed modification or termination shall, if implemented, ensure protection of human health and the environment. The Department shall review any submitted information, and may request additional information. If the Department determines that the proposal to modify or terminate the Restrictive Notice will ensure protection of human health and the environment, it shall approve the proposal. No modification or termination of this Restrictive Notice shall be effective unless the Department has approved such modification or termination in writing. Information to support a request for modification or termination may include one or more of the following:

a) a proposal to perform additional remedial work;

b) new information regarding the risks posed by the residual contamination;

c) information demonstrating that residual contamination has diminished;

d) information demonstrating that an engineered feature or structure is no longer necessary;

e) information demonstrating that the proposed modification would not adversely impact the remedy and is protective of human health and the environment; and

f) other appropriate supporting information.

3) Conveyances. OWNER shall notify the Department at least fifteen (15) days prior to any conveyance of any interest in any or all of the Property. Within thirty (30) days after any such conveyance, OWNER shall provide the Department with the name, mailing address, and telephone number of the new OWNER.

4) Notice to Lessees. OWNER agrees to incorporate either in full or by reference the restrictions of this Restrictive Notice in any leases, licenses, or other instruments granting a right to use the Property.
5) **Notification for proposed construction and land use.** OWNER shall notify the Department simultaneously when submitting any application to a local government for a building permit or change in land use.

6) **Inspections.** The Department, including its authorized employees, agents, representatives and independent contractors, shall have the right of entry to the Property at reasonable times with prior notice for the purpose of determining compliance with the terms of this Restrictive Notice. Nothing in this Restrictive Notice shall impair any other authority the Department may otherwise have to enter and inspect the Property.

7) **Third Party Beneficiary.** The OWNER of the Property is a third party beneficiary with the right to enforce the provisions of this Restrictive Notice as provided in § 25-15-322, C.R.S.

8) **No Liability.** The Department does not acquire any liability under State law by virtue of approving this Restrictive Notice.

9) **Enforcement.** The Department may enforce the terms of this Restrictive Notice pursuant to § 25-15-322, C.R.S. OWNER may file suit in district court to enjoin actual or threatened violations of this Restrictive Notice.

10) **Owner’s Compliance Certification.** OWNER shall execute and return a certification form provided by the Department, on an annual basis, detailing OWNER’s compliance, and any lack of compliance, with the terms of this Restrictive Notice.

11) **Severability.** If any part of this Restrictive Notice shall be decreed to be invalid by any court of competent jurisdiction, all of the other provisions hereof shall not be affected thereby and shall remain in full force and effect.

12) **Notices.** Any document or communication required under this Restrictive Notice shall be sent or directed to:

    If to the Department:

    Hazardous Waste Corrective Action Unit Leader  
    Hazardous Materials and Waste Management Division  
    Colorado Department of Public Health and the Environment  
    4300 Cherry Creek Drive South  
    Denver, Colorado 80246-1530
If to GSA:

Regional Environmental Program Manager
Office of Facilities Management
United States General Services Administration
Public Building Service Region 8
Building 41, Rm 240
Denver, Colorado, 80225
This Notice of Environmental Use Restrictions is approved by the Colorado Department of Public Health and Environment this 12th day of April, 2017.

[Signature]
Acting Regional Administrator

The United States of America, acting by and through the Administrator of General Services has caused this instrument to be executed on this 13th day of April, 2017.

United States of America, acting by and through the Administrator of General Services

By: [Signature]

Title: Acting Regional Administrator

STATE OF Colorado

ss: COUNTY OF Jefferson

The foregoing instrument was acknowledged before me this 13th day of April, 2017, by Nicole Lopez on behalf of the United States of America, acting by and through the Administrator of General Services.

[Notary Seal]
Nicole Lopez
Notary Public

Address: PO Box 210105

My commission expires: Feb. 14th, 2021
Approved by the Colorado Department of Public Health and Environment this 12th day of April, 2017.

By: [Signature]

Title: Director, Hazardous Materials and Waste Management Division

STATE OF COLORADO

ss: COUNTY OF DENVER

The foregoing instrument was acknowledged before me this 12th day of APRIL, 2017 by [Signature] on behalf of the Colorado Department of Public Health and Environment.

Claudette M. Ferrus
Notary Public

4300 Cherry Creek Dr. S
Address

DENVER, CO 80246

My commission expires: October 21, 2019
ATTACHMENT "A"

to the

NOTICE OF ENVIRONMENTAL USE RESTRICTIONS

DATE: February 6, 2017

LEGAL DESCRIPTION OF THE NORTHWEST CORNER SALE AREA
PROPERTY DESCRIPTION

A Parcel of Land located in the West One-Half (W 1/2) of Section 8 and in the East One-Half (E 1/2) of the East One-Half (E 1/2) of the Northeast Quarter (NE 1/4) of Section 8, Township 4 South, Range 69 West, of the Sixth Principal Meridian, City of Lakewood, County of Jefferson, State of Colorado, being more particularly described as follows:

COMENCING at the Northeast corner of said Section 8, from which the North One Quarter Corner of said Section 8 bears S 89°46'09" W, a distance of 2619.92 feet; Thence S 00°05'26" E, along the east line of said Section 8, a distance of 290.00 feet to the South Right of Way of West 6th Avenue and the POINT OF BEGINNING;

Thence along said South Right of Way the following 3 (three) courses:

1. Thence N 89°46'09" E, a distance of 50.02 feet;
2. Thence N 81°10'58" E, a distance of 858.76 feet;
3. Thence N 89°14'11" E, a distance of 490.67 feet to a point of curvature
4. Thence along the arc of a curve to the right, having a radius of 390.00 feet, a central angle of 58°20'02", an arc length of 397.07 feet, (a chord which bears S 31°14'39" W, 380.14 feet);
5. Thence S 60°59'37" W, a distance of 403.57 feet to a point of curvature;
6. Thence along the arc of a curve to the left, having a radius of 213.00 feet, a central angle of 58°49'57", an arc length of 218.71 feet, (a chord which bears S 31°14'39" W, 209.23 feet);
7. Thence S 01°49'41" W, a distance of 269.32 feet to a point of curvature;
8. Thence along the arc of a curve to the right, having a radius of 562.93 feet, a central angle of 29°53'01", an arc length of 293.81 feet, (a chord which bears S 89°49'15" W, 290.29 feet);
9. Thence S 31°44'46" W, a distance of 168.45 feet to a point of curvature;
10. Thence along the arc of a curve to the left, having a radius of 493.00 feet, a central angle of 22°20'37", an arc length of 193.04 feet, (a chord which bears S 20°34'17" W, 191.81 feet);
11. Thence S 09°24'08" W, a distance of 620.97 feet to a point of curvature;
12. Thence along the arc of a curve to the left, having a radius of 1052.00 feet, a central angle of 09°22'40", an arc length of 164.49 feet, (a chord which bears S 04°39'14" W, 164.31 feet);
13. Thence S 00°01'46" E, a distance of 168.41 feet to the intersection with the easterly extension of the North line of Tract A as shown on the plot of Denver Federal Center Subdivision Filing No. 1, as recorded at Reception No. 2007018299 in the Office of the Jefferson County Clerk and Recorder;
14. Thence S 88°49'27" W, along said extension and along said North line, a distance of 56.85 feet to the Southeast corner of Lot 1, Block 1 of said Denver Federal Center Subdivision Filing No. 1;
15. Thence N 00°01'37" W, along the East line of said Lot 1, a distance of 642.06 feet to the Northeast corner of said Lot 1;
16. Thence S 89°58'23" W, along the North line of said Lot 1, a distance of 96.14 feet to the Northeast corner of said Lot 1, said point also being on the West line of the East One-Half (E 1/2) of the East One-Half (E 1/2) of the Northeast Quarter (NE 1/4) of said Section 8;
17. Thence S 00°00'21" W, along said West line, a distance of 1667.13 feet to said South Right of Way of West 6th Avenue;

Thence along said South Right of Way the following 3 (three) courses:

18. Thence S 72°53'30" E, a distance of 60.00 feet;
19. Thence N 68°55'48" E, a distance of 236.60 feet;
20. Thence N 89°46'09" E, a distance of 374.38 feet, more or less, to the POINT OF BEGINNING.

The above described Parcel of Land contains (59.04 acres), more or less.

BASIS OF BEARINGS

Bearings are based on the North line of the North East Quarter of Section 8, Township 4 South, Range 69 West of the Sixth Principal Meridian as being N 89°46'09" E, a distance of 2619.92 feet. The North Quarter Corner of Section 8 being a 3/4" Brass Cap in a Range Box Stamped Contrac Ltd. 1/4 Corner LS 3444 and the Northeast Section Corner being 2/2" Brass Cap in Range Box 1.8 feet below surface stumped appropriately.

NOTES

1. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY URS CORPORATION TO DETERMINE OWNERSHIP OR EASEMENTS OF RECORD FOR ALL INFORMATION REGARDING OWNERSHIP AND RIGHTS OF WAY TITLE OF RECORD URS RELIED UPON TITLE COMMITMENT ORDER NUMBER 054942005 PREPARED BY WESTCOR LAND TITLE INSURANCE COMPANY, EFFECTIVE DECEMBER 5, 2012.

2. THE PURPOSE OF THIS LAND SURVEY PLAT IS TO CREATE THE EASTERLY LINE OF THIS PROPERTY AS SHOWN. THAT LINE WAS DEVELOPED BY PARALLELING THE PRELIMINARY DESIGN OF ROUTT STREET TO OAK STREET NORTH OF 6TH AVENUE.

3. AT THE REQUEST OF THE OWNER AND CLIENT, THE UNITED STATES GOVERNMENT SERVICES ADMINISTRATION ONLY ENCROACHING FEATURES ALONG THE PROPERTY LINE ARE INDICATED AND EXISTING EASEMENTS HAVE NOT BEEN SHOWN HEREIN.

4. TOPOGRAPHIC FEATURES INSIDE THE IMMEDIATE BOUNDARY ARE SHOWN FOR GRAPHICAL PURPOSES ONLY, AND MAY OR MAY NOT REFLECT THE ACTUAL CONDITIONS.

5. THESE LANDS ARE SUBJECT TO THE DEVELOPMENT AGREEMENT WITH THE CITY OF LAKEMOED ORDINANCE 0-2007-28 AND RECORDED AT RECEPTION 200708229.

6. THE EAST QUARTER CORNER OF SECTION 8, WAS TIED PRIOR TO ITS DESTRUCTION AND RE-SET IN THE SAME POSITION AS INDICATED.

7. NOTICE: ACCORDING TO COLORADO STATE LAW, YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS OF THE DATE OF THE CERTIFICATION SHOWN HEREIN.

8. ALL DISTANCES SHOWN ARE U.S. SURVEY FEET.

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THIS SURVEY PERFORMED IN JANUARY 2013, AND UNDER MY DIRECT SUPERVISION IS A TRUE AND CORRECT SURVEY OF THE HEREIN DESCRIBED PROPERTY AND THAT TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, BELIEF AND OPINION, IT CORRECTLY SHOWS THE PROPERTY LINES OF THE LAND INDICATED HEREIN AND ALL IMPROVEMENTS IN SAID LAND ARE ENTIRELY WITHIN THE BOUNDARIES THEREOF, EXCEPT AS INDICATED, THAT THERE IS NO EVIDENCE OF IMPROVEMENTS OF ADJOINING PROPERTIES ENCROACHING INTO SAID PROPERTY EXCEPT AS INDICATED.

For and on Behalf of URS Corporation
Ronald E. Ih, PLS 24313
URS Center, 881 East Tufts Avenue
Denver, CO 80229
Ph (303)740-2600

GER
ATTACHMENT “B”
to the
NOTICE OF ENVIRONMENTAL USE RESTRICTION

SURVEY MAP OF NW CORNER LANDFILL COVER
ATTACHMENT “C”

to the

NOTICE OF ENVIRONMENTAL USE RESTRICTIONS

LEGAL DESCRIPTION OF THE NW LANDFILL COVER AREA
EXHIBIT "A"
DATE: February 6, 2017

LEGAL DESCRIPTION

A tract or parcel of land containing 691,869 square feet (15.883 acres) more or less, being situated in the West One-Half (W 1/2) of Section 9 and in the East One-Half (E 1/2) of the East One-Half (E 1/2) of the Northeast Quarter (NE 1/4) of Section 8, Township 4 South, Range 69 West, of the Sixth Principal Meridian, City of Lakewood, County of Jefferson, State of Colorado, being more particularly described as follows: COMMENCING at the Northeast corner of said Section 8, from which the North One Quarter Corner of said Section 8 Bears S 89°46'09" W, a distance of 2619.92 feet; Thence S 00°05'28" E, along the east line of said Section 8, a distance of 290.00 feet to the South Right of Way of West 6th Avenue and the POINT OF BEGINNING;

1. Thence N 89°46'09" E, along said South Right of Way of West 6th Avenue, a distance of 50.02 feet;

2. Thence S 36°29'58" E, a distance of 127.36 feet to a northerly corner of the Denver Federal Center Landfill Cap description prepared on October 15, 2015 by Brian LeFebre, for and on behalf of Zylstra Baker Surveying, Inc.;

3. Thence S 37°28'29" E along the northerly line of said Landfill Cap, a distance of 79.52 feet;

4. Thence S 49°39'28" E, continuing along the northerly line of said Landfill Cap, a distance of 89.41 feet;

5. Thence S 87°28'10" E, continuing along the northerly line of said Landfill Cap, a distance of 55.86 feet;

6. Thence S 78°08'14" E continuing along the northerly line of said Landfill Cap, a distance of 41.46 feet;

7. Thence S 72°03'46" E continuing along the northerly line of said Landfill Cap, a distance of 63.30 feet,

8. Thence S 58°41'15" E continuing along the northerly line of said Landfill Cap, a distance of 24.03 feet to the easterly line of said Landfill Cap;

9. Thence S 8°13'45" W continuing along the east line of said Landfill Cap, a distance of 146.51 feet;

10. Thence S 10°56'44" W continuing along the east line of said Landfill Cap, a distance of 48.90 feet;

11. Thence S 17°26'58" W, continuing along the east line of said Landfill Cap, a distance of 80.53 feet;

12. Thence S 55°48'23" W, continuing along the east line of said Landfill Cap, a distance of 37.75 feet to the southeast corner of said Landfill Cap;

13. Thence S 20°25'13" W, a distance of 183.40 feet to the south side of a concrete ditch;

Page 1 of 3
14. Thence S 86°09'30" W, along the south side of a concrete ditch, a distance of 176.54 feet;
15. Thence S 89°25'22" W, continuing along the south side of a concrete ditch, a distance of 74.26 feet;
16. Thence S 89°10'04" W, continuing along the south side of a concrete ditch, a distance of 138.25 feet;
17. Thence S 89°09'41" W, continuing along the south side of a concrete ditch, a distance of 152.43 feet;
18. Thence S 89°12'51" W, continuing along the south side of a concrete ditch, a distance of 202.93 feet;
19. Thence S 78°58'11" W, continuing along the south side of a concrete ditch, a distance of 42.72 feet;
20. Thence S 78°23'08" W, continuing along the south side of a concrete ditch, a distance of 41.41 feet;
21. Thence S 59°04'40" W, continuing along the south side of a concrete ditch, a distance of 10.15 feet;
22. Thence S 80°57'08" W, continuing along the south side of a concrete ditch, a distance of 73.25 feet;
23. Thence S 88°20'44" W, continuing along the south side of a concrete ditch, a distance of 16.63 feet to the West line of the East One-Half (E 1/2) of the East One-Half (E 1/2) of the Northeast Quarter (NE 1/4) of said Section 8;
24. Thence N 00°00'21" W, along said West line, a distance of 712.75 feet to said South Right of Way of West 6th Avenue;
25. Thence along said South Right of Way the following 3 (three) courses:
26. Thence S 72°53'30" E, a distance of 60.00 feet;
27. Thence N 68°55'48" E, a distance of 238.60 feet;
28. Thence N 89°46'09" E, a distance of 374.38 feet, more or less, to the POINT OF BEGINNING.

The above described tract or parcel of Land contains 691,869 square feet (15.883 acres), more or less.

Bearings are based on the North line of the North East Quarter of Section 8, Township 4 South, Range 69 West of the Sixth Principal Meridian as being N 89°46'09" E a distance of 2619.92 feet. The North Quarter Corner of Section 8 being a 31#4" Brass Cap In a Range Box Stamped Contra LTD, 1/4 Corner LS 5447 and the Northeast Section Corner being 2 1/2" Brass Cap in Range Box 1.8 feet below surface stamped appropriately. As shown on the Land Survey Plat of a portion of the Denver Federal Center prepared by URS Corporation dated 1/29/2015.

For and on Behalf of AECOM
Stan Vermilyea, P.L.S. #25381
6200 S. Quebec Street, Greenwood Village, Colorado 80111

Page 2 of 3
This exhibit does not represent a monumented survey. It is intended only to depict the attached legal description.
March 2, 2017

Mr. David Walker  
Colorado Department of Public Health and Environment  
4300 Cherry Creek Drive South  
Denver, Colorado 80246-1530

Re: Proposed Notice of Environmental Use Restriction for the Northwest Corner Sale Area of the Denver Federal Center

Dear Mr. Walker:

In your letter dated February 14, 2017, you requested that the City of Lakewood (“City”) review the attached proposed Notice of Environmental Use Restriction (“Notice”) for consistency with current zoning and the City’s future plans for the property. Based on the City’s reading of the Notice, the historical landfill on the property remains in place and any activity on the property that would disturb the existing “short-term soil and vegetation cover” over a portion of the landfill, or existing vegetation, roadways, and sidewalks, must comply with an existing Colorado Department of Public Health and Environment (“CDPHE”) approved operations and maintenance plan and materials handling plan or another CDPHE approved remedial decision document for the landfill. The City understands that the existing materials handling plan requires any landfill material encountered to be removed from any excavation footprint and building foundation and disposed of at facilities specified in the materials handling plan based on the nature of the waste encountered.

The City does not have authority to enforce its zoning code on federally owned real estate within the Federal Center. If the property is removed from federal ownership, the City zoning will be applicable. The property is located in the Mixed-use Core Transit Zone District. Any development consistent with the City’s zoning requirements for this property will require soil disturbance because all uses within this district, including landscaping for open space, will require surface and/or subsurface improvements. In addition, the City will require clean utility corridors along all potential City rights-of-way such as 4th Avenue.

As the title indicates, the Notice does restrict use. And, while it may not explicitly and directly prohibit the type of development that will be allowed under current City zoning and that is intended by the City, the Notice is required to ensure protection of human health and the environment because waste material on the property has not been removed. The obligation to

**Alternative formats of this document are available upon request**
characterize, remove, and dispose of this material during development of the property will add costs and probably time, may limit the number of qualified developers, and will affect the financial feasibility and timeliness of accomplishing Lakewood’s potential future plans for the property. To the extent of such effects, the use restriction is not consistent with future plans for the property.

Please do not hesitate to contact me with any questions.

Sincerely,

Travis Parker
Planning Director

Enclosure

cc: Mr. Jay Hutchison
    Mr. Lukas Staks, AGO
    Ms. Polly Jessen, Kaplan Kirsch & Rockwell

**Alternative formats of this document are available upon request**
February 14, 2017

Mr. Travis Parker  
Planning Director  
City of Lakewood Planning Department  
North Building  
489 South Allison Parkway  
Lakewood, CO 80226  


Dear Mr. Parker,

My name is David Walker and I am the Colorado Department of Public Health and Environment’s (CDPHE) project manager overseeing the remediation of soil and groundwater contamination at the Denver Federal Center (DFC) under the Colorado Hazardous Waste Act and Regulations. The DFC is owned by the United States Government and operated by the General Services Administration (GSA). As I believe you are aware, the federal government (through GSA) is planning to transfer ownership of a 59-Acre parcel of land in the far northwest corner of the DFC. The property to be transferred is located east of Union Boulevard and south of 6th Avenue, more or less within the loop created by the RTD light rail line as it runs through the DFC.

The first purpose of this correspondence is to inform you that GSA has requested that CDPHE place a Notice of Environmental Use Restriction (Restrictive Notice) on the property to be transferred that will restrict how current and future property owners conduct certain activities at the property. The second purpose of this correspondence is to request that you review the attached draft Restrictive Notice for the property in the northwest corner of the DFC and provide documentation as to whether the proposed use restrictions are consistent with current zoning and plans, and future plans for the property.

GSA has conducted numerous environmental investigations in the Northwest Corner Sale Area to be transferred including soil and groundwater sampling. The far northwestern portion of the area to be sold is known as the NW Corner Landfill Cover area. This area is known to have been used for burning and disposal of solid waste and chemicals from the 1940's through at least the 1970's. GSA has constructed a short-term soil and vegetation cover over a portion of the landfill area and is required to carefully maintain the existing vegetation, roadways and sidewalks that already covered the remaining contaminated soil. This work is all required by an enforceable agreement with CDPHE known as a Consent Order.
The groundwater beneath the entire property to be sold is known to be contaminated with low levels of hydrocarbon related chemicals. The CDPHE has determined that the source of this contamination was/is located to the west of the DFC and not from GSA activities at the DFC. As a result, CDPHE has not required GSA to remediate the groundwater contamination. Future owners of the property will also not be responsible for remediation of the groundwater. However, since the groundwater beneath the property is contaminated it should not be used for potable use.

In order to comply with federal CERCLA laws for transfer of federal property and to comply with the Colorado Hazardous Waste Act, Section 25-15-321 of the Colorado Revised Statutes, a Notice of Environmental Use Restriction (Restrictive Notice) must be recorded to the deed of the property before GSA may sell/transfer ownership of the property. The Restrictive Notice on the deed to the property provides CDPHE with the authority to enforce use restrictions and require the property owner to inspect and maintain the landfill covers in order to protect human health and the environment. The Restrictive Notice will also require GSA and future owners to follow approved plans when disturbing the landfill material to ensure protection of human health and proper management of waste.

GSA has provided CDPHE with a draft of Restrictive Notice for the property in the Northwest Corner Sale Area. CDPHE has worked with GSA to develop the draft language and restrictions. While the language may change slightly before the Restrictive Notice is finalized, I believe that the language for the actual restrictions in Paragraph 1 of the attached document will not change.

The following is a summary of the restrictions proposed in Paragraph 1 of the attached draft Restrictive Notice:

1. No withdrawal of the groundwater beneath the entire Northwest Corner Sale Area property from the ground surface to a depth of 100 feet is allowed unless approved by CDPHE or conducted in accordance with a construction dewatering permit issued by U.S. EPA or CDPHE.

2. No excavation, grazing, drilling digging or other soil disturbing activity is permitted within the NW Corner Landfill Cover Area (shown on Attachment B of the draft Restrictive Notice) unless it is conducted in accordance with a CDPHE Approved Materials Handling Plan.

3. The property owner is required to monitor and maintain the existing landfill covers in accordance with a CDPHE approved Operation and Maintenance Plan

One thing to note is that there is no restriction on the type of development that may occur in the Northwest Corner Sale Area property in general, or the NW Corner Landfill Cover property in particular. The Operation and Maintenance Plan for the landfill cover area includes specific requirements that must be followed when redeveloping the NW Corner Landfill area that will ensure protection of human health during and after construction. Basically, the party that develops the property with landfill material/contaminated soil has the option of removing all the contamination for off-site
disposal, or creating a barrier between residual contaminated soil and buildings, utilities and infrastructure constructed on the property. The methods to be used during redevelopment must be approved by CDPHE.

I would appreciate it if you could review the proposed use restrictions for consistency with current zoning for the property and the City of Lakewood's potential future plans for the property by the end of February 2017. Please let me know the outcome of your evaluation via email or regular mail. A copy of this correspondence and your reply will be placed in the Administrative Record for the project.

If you confirm that the proposed use restrictions are consistent with current and future plans for the property, CDPHE and GSA will move forward to finalize the Restrictive Notice and have it recorded with the Jefferson County Clerk and Recorders office.

The next step in the process includes providing a copy of the Restrictive Notice to all parties with a potential prior interest in the property (such as easements). Those parties have 30-days to provide comments to CDPHE regarding the proposed restrictions. The City of Lakewood may have an interest in the property in question due to a 1975 agreement with GSA regarding stormwater conveyances. Based on email from Mr. Jay Hutchison, the notice regarding the 30-day public comment period will be sent to you, Mr. Hutchison, Ms. Anne Heine, City Engineer, and Adrian Stanciu, Property Manager.

Please call me at (303) 692-3354 if you have any questions.

Sincerely,

David Walker

Hazardous Waste Corrective Action Unit
Hazardous Waste Program
Hazardous Materials and Waste Management Division

Ec: Jay Hutchison, City of Lakewood, CO
    Lukas Staks, Colorado AGO
This property is subject to a Notice of Environmental Use Restrictions imposed by the Colorado Department of Public Health and Environment pursuant to section 25-15-321.5 of the Colorado Revised Statutes

NOTICE OF ENVIRONMENTAL USE RESTRICTIONS

WHEREAS, the United States of America, acting through the General Services Administration ("GSA"), is the owner of certain property commonly referred to as the Northwest Corner Sale Area, located in the City of Lakewood, Jefferson County, State of Colorado, more particularly described in the legal description and survey map attached hereto as Attachment A, and incorporated herein by reference as though fully set forth (hereinafter referred to as "the Property"); and

WHEREAS, the Hazardous Materials and Waste Management Division of the Colorado Department of Public Health and the Environment (the "Department"), which is located at 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530, is authorized to approve Notices of Environmental Use Restriction (a/k/a "Restrictive Notices") pursuant to § 25-15-320(4)(a) of the Colorado Hazardous Waste Act, Colorado Revised Statutes (C.R.S) §§ 25-15-101, et seq. ("CHWA"); and

WHEREAS, for purposes of indexing in the County Clerk and Recorder’s office Grantor-Grantee index only, United States of America shall be considered the Grantor, and the Department shall be considered the Grantee. Nothing in the preceding sentence shall be construed to create or transfer any right, title or interest in the Property; and

WHEREAS, pursuant to Compliance Order on Consent Number 97-07-18-01 (the "Compliance Order"), which the Department issued to GSA in 1997, the Property is the subject of enforcement and remedial action pursuant to the CHWA;

WHEREAS, the purpose of this Restrictive Notice is to ensure protection of human health and the environment by restricting certain uses of the Property. The use of groundwater beneath the entire Property is restricted as described in Paragraph 1.a of this covenant. In addition, for the portion of the Property hereinafter referred to as the "NW Corner Landfill Cover," depicted in Attachment B and described in Attachment C, the Restrictive Notice will ensure continued operation, maintenance and monitoring of the final corrective measures selected under the Compliance Order and as described in Paragraph Nos. 1.b and 1.c of this covenant; and

WHEREAS, GSA has requested that the Department approve this Restrictive Notice as provided in Article 15 of Title 25, C.R.S.
NOW, THEREFORE, the Department approves this Restrictive Notice pursuant to § 25-15-321.5 C.R.S. The Property as described in Attachment A shall hereinafter be subject to the following requirements set forth in paragraphs 1 through 12, below, which shall be binding on all parties now or subsequently having any right, title or interest in the Property, or any part thereof, and any persons using the land, as described herein. As used in this Restrictive Notice, the term OWNER means the then current record owner of the Property and, if any, any other person or entity otherwise legally authorized to make decisions regarding the transfer of the Property or placement of encumbrances on the Property, other than by the exercise of eminent domain.

1) Use restrictions.

   a) Restriction on Use of Groundwater. No groundwater beneath the Property from the ground surface to a depth of 100 feet below ground surface may be withdrawn for any purpose, except as authorized in a remedial decision document or environmental sampling plan approved by the Department.

   Nothing in the preceding shall prohibit the installation or use of monitoring or remedial wells as authorized in a remedial decision document or environmental sampling plan approved by the Department.

   Nothing in the preceding shall prohibit groundwater extraction/management arising from construction dewatering which is conducted in compliance with applicable wastewater discharge regulations.

   So long as the Property is owned by the federal government, the OWNER shall conduct construction dewatering in accordance with U.S. Environmental Protection Agency Clean Water Act National Pollutant Discharge Elimination System (NPDES) permit program requirements.

   If the Property is not owned by the federal government, OWNER shall secure a Construction Dewatering Permit in accordance with the Colorado Water Quality Control Act (§ 25-8-101 et. seq. C.R.S) prior to any dewatering activities. Any person applying for a construction dewatering permit on the Property must notify the Department’s Water Quality Control Division that the groundwater is contaminated and that a restrictive notice has been imposed.

   b) Protection of the Integrity of the Corrective Measures. No excavation, grazing, drilling, grading, digging, tilling or any other soil disturbing activity is permitted within the NW Corner Landfill Cover unless conducted in accordance with:

   i) The most recent version of the Department-approved Northern RTD North half Expansion Areas Ia7, Ia8, West Ia10N, North Ia11, Ia12N, and Ia17N Materials Handling Plan ("Area 8 Landfill MHP"); or

   ii) A remedial decision document or environmental sampling plan that has been approved by the Department.

   The most recent Department-approved Area 8 Landfill MHP is incorporated by
reference as if set forth in full herein and is on file at the Department’s Hazardous Materials and Waste Management Division, Record Center.

c) Inspection and Maintenance of the Corrective Measure. The OWNER maintains an affirmative obligation to monitor and maintain the corrective measures in the NW Corner Landfill Cover in accordance with the most recent version of the Department-approved Northern RTD North half Expansion Areas Ia7, Ia8, West Ia10N, North Ia11, Ia12N, and Ia17N Operations and Maintenance Plan (Area 8 Landfill O&M Plan). Maintenance activities performed in accordance with the Area 8 Landfill O&M Plan could result in encountering waste material. Waste material encountered during intrusive activities shall be managed and disposed of in accordance with the most recent Department-approved Area 8 Landfill MHP. The most recent Department-approved version of the Area 8 Landfill O&M Plan is incorporated by reference as if set forth in full herein and is on file at the Department’s Hazardous Materials and Waste Management Division, Record Center and may be obtained from the Department at the address provided in Section 12 herein.

2) Modifications. This Restrictive Notice shall remain in full force and effect unless modified or terminated in accordance with this paragraph and pursuant to § 25-15-321.5, C.R.S. or any successor statute. OWNER may request that the Department approve a modification or termination of the Restrictive Notice. The request shall contain information showing that the proposed modification or termination shall, if implemented, ensure protection of human health and the environment. The Department shall review any submitted information, and may request additional information. If the Department determines that the proposal to modify or terminate the Restrictive Notice will ensure protection of human health and the environment, it shall approve the proposal. No modification or termination of this Restrictive Notice shall be effective unless the Department has approved such modification or termination in writing. Information to support a request for modification or termination may include one or more of the following:

a) a proposal to perform additional remedial work;
b) new information regarding the risks posed by the residual contamination;
c) information demonstrating that residual contamination has diminished;
d) information demonstrating that an engineered feature or structure is no longer necessary;
e) information demonstrating that the proposed modification would not adversely impact the remedy and is protective of human health and the environment; and
f) other appropriate supporting information.

3) Conveyances. OWNER shall notify the Department at least fifteen (15) days prior to any conveyance of any interest in any or all of the Property. Within thirty (30) days after any such conveyance, OWNER shall provide the Department with the name, mailing address, and telephone number of the new OWNER.

4) Notice to Lessees. OWNER agrees to incorporate either in full or by reference the restrictions of this Restrictive Notice in any leases, licenses, or other instruments granting a right to use the Property.
5) **Notification for proposed construction and land use.** OWNER shall notify the Department simultaneously when submitting any application to a local government for a building permit or change in land use.

6) **Inspections.** The Department, including its authorized employees, agents, representatives and independent contractors, shall have the right of entry to the Property at reasonable times with prior notice for the purpose of determining compliance with the terms of this Restrictive Notice. Nothing in this Restrictive Notice shall impair any other authority the Department may otherwise have to enter and inspect the Property.

7) **Third Party Beneficiary.** The OWNER of the Property is a third party beneficiary with the right to enforce the provisions of this Restrictive Notice as provided in § 25-15-322, C.R.S.

8) **No Liability.** The Department does not acquire any liability under State law by virtue of approving this Restrictive Notice.

9) **Enforcement.** The Department may enforce the terms of this Restrictive Notice pursuant to § 25-15-322, C.R.S. OWNER may file suit in district court to enjoin actual or threatened violations of this Restrictive Notice.

10) **Owner’s Compliance Certification.** OWNER shall execute and return a certification form provided by the Department, on an annual basis, detailing OWNER’s compliance, and any lack of compliance, with the terms of this Restrictive Notice.

11) **Severability.** If any part of this Restrictive Notice shall be decreed to be invalid by any court of competent jurisdiction, all of the other provisions hereof shall not be affected thereby and shall remain in full force and effect.

12) **Notices.** Any document or communication required under this Restrictive Notice shall be sent or directed to:

   If to the Department:

   Hazardous Waste Corrective Action Unit Leader  
   Hazardous Materials and Waste Management Division  
   Colorado Department of Public Health and the Environment  
   4300 Cherry Creek Drive South  
   Denver, Colorado 80246-1530

   If to GSA:

   Regional Environmental Program Manager  
   Office of Facilities Management  
   United States General Services Administration  
   Public Building Service Region 8  
   Building 41, Rm 240  
   Denver, Colorado, 80225
This Notice of Environmental Use Restrictions is approved by the Colorado Department of Public Health and Environment this ___ day of __________________, 2017.

The United States of America, acting by and through the Administrator of General Services has caused this instrument to be executed on this ___ day of __________________, 2017.

United States of America, acting by and through the Administrator of General Services

By:__________________________________________

Title:__________________________________________

STATE OF _____________________ )
ss: COUNTY OF _____________________ )

The foregoing instrument was acknowledged before me this ___ day of __________________, 2017, by____________________ on behalf of the United States of America, acting by and through the Administrator of General Services.

______________________________
Notary Public

______________________________
Address

My commission expires:______________________
Approved by the Colorado Department of Public Health and Environment this ___ day of ____________, 2017.

By: _________________________________

Title: Director, Hazardous Materials and Waste Management Division

STATE OF ____________________________

) ss: COUNTY OF ______________________

The foregoing instrument was acknowledged before me this ___ day of ____________, 2017 by __________________ on behalf of the Colorado Department of Public Health and Environment.

______________________________
Notary Public

______________________________
Address

My commission expires: ____________________
ATTACHMENT “A”

to the

NOTICE OF ENVIRONMENTAL USE RESTRICTIONS

DATE: February 6, 2017

LEGAL DESCRIPTION OF THE NORTHWEST CORNER SALE AREA
PROPERTY DESCRIPTION

A Parcel of Land located in the West One-Half (W 1/2) of Section 9 and in the East One-Half (E 1/2) of the East One-Half (E 1/2) of the Northeast Quarter (NE 1/4) of Section 8, Township 4 South, Range 69 East, in the Sixth Principal Meridian, City of Lakewood, County of Jefferson, State of Colorado, being more particularly described as follows:

BEGINNING at the Northeast corner of said Section 8, thence S 36° 43' 59" W, a distance of 2610.03 feet; thence E 0° 00' 00" N, along the east line of said Section 8, a distance of 290.00 feet to the South Right of Way of U.S. 6 Avenue and the POINT OF BEGINNING;

Thence along said South Right of Way the following (3) (three) courses:

1. Thence N 89° 46' 09" E, a distance of 50.02 feet;
2. Thence N 81° 05' 49" E, a distance of 858.76 feet;
3. Thence N 89° 14' 41" E, a distance of 450.87 feet to a point of curvature non-tangent with this course;
4. Thence along the arc of a curve to the right, having a radius of 360.00 feet, a central angle of 58° 20' 02", an arc length of 397.07 feet, (a chord which bears S 31° 43' 46" W, 280.14 feet);
5. Thence S 60° 39' 57" W, a distance of 402.57 feet to a point of curvature;
6. Thence along the arc of a curve to the left, having a radius of 213.00 feet, a central angle of 58° 49' 57", an arc length of 218.71 feet, (a chord which bears S 31° 14' 39" W, 209.23 feet);
7. Thence S 01° 49' 41" W, a distance of 269.32 feet to a point of curvature;
8. Thence along the arc of a curve to the right, having a radius of 562.93 feet, a central angle of 23° 53' 01", an arc length of 293.61 feet, (a chord which bears S 31° 44' 45" W, 264.30 feet);
9. Thence S 31° 44' 45" W, a distance of 168.45 feet to a point of curvature;
10. Thence along the arc of a curve to the left, having a radius of 495.00 feet, a central angle of 22° 20' 37", an arc length of 163.04 feet, (a chord which bears S 20° 34' 22" W, 191.81 feet);
11. Thence S 00° 24' 08" W, a distance of 620.07 feet to a point of curvature;
12. Thence along the arc of a curve to the left, having a radius of 1005.00 feet, a central angle of 08° 22' 40", an arc length of 164.48 feet, (a chord which bears S 04° 39' 34" W, 164.31 feet);
13. Thence S 00° 01' 46" E, a distance of 168.41 feet to the intersection with the easternly extension of the North line of Tract A as shown on the plat of Denver Federal Center Subdivision Filings No. 1, as recorded at Reception No. 200708250099 in the Office of the Jefferson County Clerk and Recorder;
14. Thence S 88° 49' 22" W, along said extension and along said North line, a distance of 56.83 feet to the Southeast corner of Lot 1, Block 1 of said Denver Federal Center Subdivision Filings No. 1;
15. Thence N 00° 01' 13" W, along the East line of said Lot 1, a distance of 642.06 feet to the Northeast corner of said Lot 1;
16. Thence S 09° 58' 23" W, along the North line of said Lot 1, a distance of 684.14 feet to the Northwest corner of said Lot 1, sold point also being on the West line of the East One-Half (E 1/2) of the East One-Half (E 1/2) of the Northeast Quarter (NE 1/4) of said Section 8;
17. Thence N 00° 03' 21" W, along said West line, a distance of 1867.13 feet to said South Right of Way of West 6th Avenue;

Thence along said South Right of Way the following (3) (three) courses:

18. Thence S 72° 33' 00" E, a distance of 60.00 feet;
19. Thence N 69° 59' 48" E, a distance of 238.60 feet;
20. Thence N 89° 46' 09" E, a distance of 374.38 feet, more or less, to the POINT OF BEGINNING.

The above described Parcel of Land contains (59,049 acres), more or less.

BASIS OFBearings are based on the North line of the North East Quarter of Section 6, Township 4, South, Range 69 West of the 5th Principal Meridian as being 59° 46' 09" E and the Northeast Section Corner being 21/2' Brass Cap in Range Box 1.8 feet below surface stamped appropriately.

NOTES

1. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY URS CORPORATION TO DETERMINE OWNERSHIP OR EASEMENTS OF RECORD. FOR ALL INFORMATION REGARDING OWNERSHIPS RIGHTS OF WAY TITLE OR RECORD, URS RELIED UPON TITLE COMMITMENT ORDER NUMBER 0534426015 PREPARED BY WESTERN LAND TITLE INSURANCE COMPANY, EFFECTIVE DECEMBER 5, 2012.
2. THE PURPOSE OF THIS LAND SURVEY PLAT IS TO CREATE THE EASTERLY LINE OF THIS PROPERTY AS SHOWN. THAT LINE WAS DEVELOPED BY PARALLELING THE PRELIMINARY DESIGN OF ROUHY STREET TO ROUHY STREET NORTH OF 6TH AVENUE.
3. AT THE REQUEST OF THE UNITED STATES DEPARTMENT OF JUSTICE, THE UNITED STATES GOVERNMENT SERVICES ADMINISTRATION, ONLY ENCRUSTING FEATURES ALONG THE PROPERTY LINE ARE INDICATED AND EXISTING EASEMENTS HAVE NOT BEEN SHOWN HEREIN.
4. TOPOGRAPHIC FEATURES INSIDE THE IMMEDIATE BOUNDARY ARE SHOWN FOR GRAPHICAL PURPOSES ONLY, AND MAY NOT REFLECT THE ACTUAL CONDITIONS.
6. THE EAST QUARTER CORNER OF SECTION 8, WAS TIED PRIOR TO ITS DESTRUCTION AND RE-SET IN THE SAME POSITION AS INDICATED.
7. NOTICE: ACCORDING TO COLORADO STATE LAW, YOU MUST CONGRUE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREIN.
8. ALL DISTANCES SHOWN ARE U.S. SURVEY FEET.

SURVEYOR'S CERTIFICATION

I hereby state to the United States General Services Administration that this survey performed in January, 2013, and under my direct supervision is a true and correct survey of the herein described property and that to the best of my professional knowledge, belief and opinion, the same correctly shows the property lines of the land described herein and all improvements in said land are exterior within the boundaries thereof, except as indicated, that there is no evidence of improvements of adjoining properties encroaching onto said property except as indicated.

For and on behalf of URS Corporation

Ronald E. De Pas 24134
URS Corporation
801 East Tennyson Avenue
Denver, CO 80220

Ph (303)770-2500
ATTACHMENT “B”

to the

NOTICE OF ENVIRONMENTAL USE RESTRICTION

SURVEY MAP OF NW CORNER LANDFILL COVER
NW Corner Landfill Cover

Legend

Area Name

- NW Corner Landfill Cover
- Maintain Existing Land Cover Area
- Landfill Cover Area (LCA)
- Parcel Boundary
- RTD Guideway Permanent Easement

Attachment "B"
Survey Map for the NW Corner Landfill Cover

URS
6101 East Tuff Avenue
Denver, CO 80222
(303) 844-2032

February 2017

Denver Federal Center, Lakewood, Colorado
General Services Administration
Projected: Colorado State Plane, Central Zone
Horizontal Datum: North American, 1983 (NAD83)
ATTACHMENT “C”

to the
NOTICE OF ENVIRONMENTAL USE RESTRICTIONS

LEGAL DESCRIPTION OF THE NW LANDFILL COVER AREA
EXHIBIT "A"
DATE: February 6, 2017

LEGAL DESCRIPTION

A tract or parcel of land containing 691,869 square feet (15.883 acres) more or less, being situated in the West One-Half (W 1/2) of Section 9 and in the East One-Half (E 1/2) of the East One-Half (E 1/2) of the Northeast Quarter (NE 1/4) of Section 8, Township 4 South, Range 69 West, of the Sixth Principal Meridian, City of Lakewood, County of Jefferson, State of Colorado, being more particularly described as follows:

COMMENCING at the Northeast corner of said Section 8, from which the North One Quarter Corner of said Section 8 Bears S 89°46'09" W, a distance of 2619.92 feet; Thence S 00°05'28" E, along the east line of said Section 8, a distance of 290.00 feet to the South Right of Way of West 6th Avenue and the POINT OF BEGINNING;

1. Thence N 89°46'09" E, along said South Right of Way of West 6th Avenue, a distance of 50.02 feet;

2. Thence S 36°29'58" E, a distance of 127.36 feet to a northerly corner of the Denver Federal Center Landfill Cap description prepared on October 15, 2015 by Brian LeFebre, for and on behalf of Zylstra Baker Surveying, Inc.;

3. Thence S 37°28'29"' E along the northerly line of said Landfill Cap, a distance of 79.52 feet;

4. Thence S 49°39'28"' E, continuing along the northerly line of said Landfill Cap, a distance of 89.41 feet;

5. Thence S 87°28'10"' E, continuing along the northerly line of said Landfill Cap, a distance of 55.86 feet;

6. Thence S 78°08'14"' E continuing along the northerly line of said Landfill Cap, a distance of 41.46 feet;

7. Thence S 72°03'46"' E continuing along the northerly line of said Landfill Cap, a distance of 63.30 feet,

8. Thence S 58°41'15"' E continuing along the northerly line of said Landfill Cap, a distance of 24.03 feet to the easterly line of said Landfill Cap;

9. Thence S 8°13'45"' W continuing along the east line of said Landfill Cap, a distance of 146.51 feet;

10. Thence S 10°56'44"' W continuing along the east line of said Landfill Cap, a distance of 48.90 feet;

11. Thence S 17°26'58"' W, continuing along the east line of said Landfill Cap, a distance of 80.53 feet;

12. Thence S 55°48'23"' W, continuing along the east line of said Landfill Cap, a distance of 37.75 feet to the southeast corner of said Landfill Cap;

13. Thence S 20°25'13"' W, a distance of 183.40 feet to the south side of a concrete ditch.
14. Thence S 86°09'30" W, along the south side of a concrete ditch, a distance of 176.54 feet;
15. Thence S 89°25'22" W, continuing along the south side of a concrete ditch, a distance of 74.26 feet;
16. Thence S 89°10'04" W, continuing along the south side of a concrete ditch, a distance of 138.25 feet;
17. Thence S 89°09'41" W, continuing along the south side of a concrete ditch, a distance of 152.43 feet;
18. Thence S 89°12'51" W, continuing along the south side of a concrete ditch, a distance of 202.93 feet;
19. Thence S 78°58'11" W, continuing along the south side of a concrete ditch, a distance of 42.72 feet;
20. Thence S 78°23'08" W, continuing along the south side of a concrete ditch, a distance of 41.41 feet;
21. Thence S 59°04'40" W, continuing along the south side of a concrete ditch, a distance of 10.15 feet;
22. Thence S 80°57'08" W, continuing along the south side of a concrete ditch, a distance of 73.25 feet;
23. Thence S 88°20'44" W, continuing along the south side of a concrete ditch, a distance of 16.63 feet to
   the West line of the East One-Half (E 1/2) of the East One-Half (E 1/2) of the Northeast Quarter (NE 1/4)
   of said Section 8;
24. Thence N 00°00'21" W, along said West line, a distance of 712.75 feet to said South Right of Way of
   West 6th Avenue;
25. Thence along said South Right of Way the following 3 (three) courses:
26. Thence S 72°53'30" E, a distance of 60.00 feet;
27. Thence N 68°55'48" E, a distance of 238.60 feet;
28. Thence N 89°46'09" E, a distance of 374.38 feet, more or less, to the POINT OF BEGINNING.

The above described tract or parcel of Land contains 691,869 square feet (15.883 acres), more or less.

Bearings are based on the North line of the North East Quarter of Section 8, Township 4 South, Range 69
West of the Sixth Principal Meridian as being N 89°46'09" E a distance of 2619.92 feet. The North Quarter
Corner of Section 8 being a 31#4" Brass Cap in a Range Box Stamped Contra LTD, 1/4 Corner
LS 5447 and the Northeast Section Corner being 2 1/2" Brass Cap in Range Box 1.8 feet below surface
stamped appropriately. As shown on the Land Survey Plat of a portion of the Denver Federal Center
prepared by URS Corporation dated 1/29/2015.

For and on Behalf of AECOM
Stan Vermilyea, P.L.S. #25381
6200 S. Quebec Street, Greenwood Village, Colorado 80111
Page 2 of 3
This exhibit does not represent a monumented survey. It is intended only to depict the attached legal description.
A tract or parcel of land containing 691,869 square feet (15.883 acres) more or less, being situated in the West One-Half (W 1/2) of Section 9 and in the East One-Half (E 1/2) of the East One-Half (E 1/2) of the Northeast Quarter (NE 1/4) of Section 8, Township 4 South, Range 69 West, of the Sixth Principal Meridian, City of Lakewood, County of Jefferson, State of Colorado, being more particularly described as follows:

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