



Staff Report

PLANNING DIVISION
COMMUNITY & ECONOMIC DEVELOPMENT

To: Salt Lake City Planning Commission
From: Daniel Echeverria, (801) 535-7165, daniel.echeverria@slcgov.com
Date: May 21, 2015
Re: PLNPCM2015-00139– Salt Lake Valley Landfill Height Increase

CONDITIONAL USE

PROPERTY ADDRESS: 6030 W California Avenue
PARCEL ID: 14-11-300-007
MASTER PLAN: Northwest Quadrant
ZONING DISTRICT: OS, Open Space; LO, Landfill Overlay

REQUEST: Debbie Lyons, representing the Salt Lake Valley Landfill, is requesting to increase the height limit for the Salt Lake Valley Landfill to 205 feet. The height limit increase is intended to extend the life of the existing landfill without expanding its footprint. Height limits for landfills are established by the Planning Commission through the Conditional Use process.

RECOMMENDATION: Based on the information and findings in this staff report, Planning Staff recommends that the Planning Commission approve the proposal.

The following motion is provided in support of the recommendation:

Based on the findings and analysis in the staff report, testimony, and discussion at the public hearing, I move that the Planning Commission approve the request for the proposed landfill height increase to 205' with the following conditions:

- 1. The applicant shall document that all approvals have been granted by all necessary county, state and federal agencies including the approval of a financial assurance plan sufficient to assure adequate closure, post closure care and corrective action of the facility and demonstration of compliance with the state of Utah division of solid and hazardous waste administrative rules.*
- 2. The applicant shall record an avigation easement against the property in compliance with the requirement from the Airports Department.*

ATTACHMENTS:

- [Vicinity Maps](#)
- [Photos](#)
- [Site Plan & Narrative](#)
- [Landfill Master Plan Excerpts](#)
- [Existing Conditions & Zoning Requirements](#)
- [Analysis of Standards](#)
- [Public Process & Comments](#)
- [Department Review Comments](#)
- [Potential Motions](#)

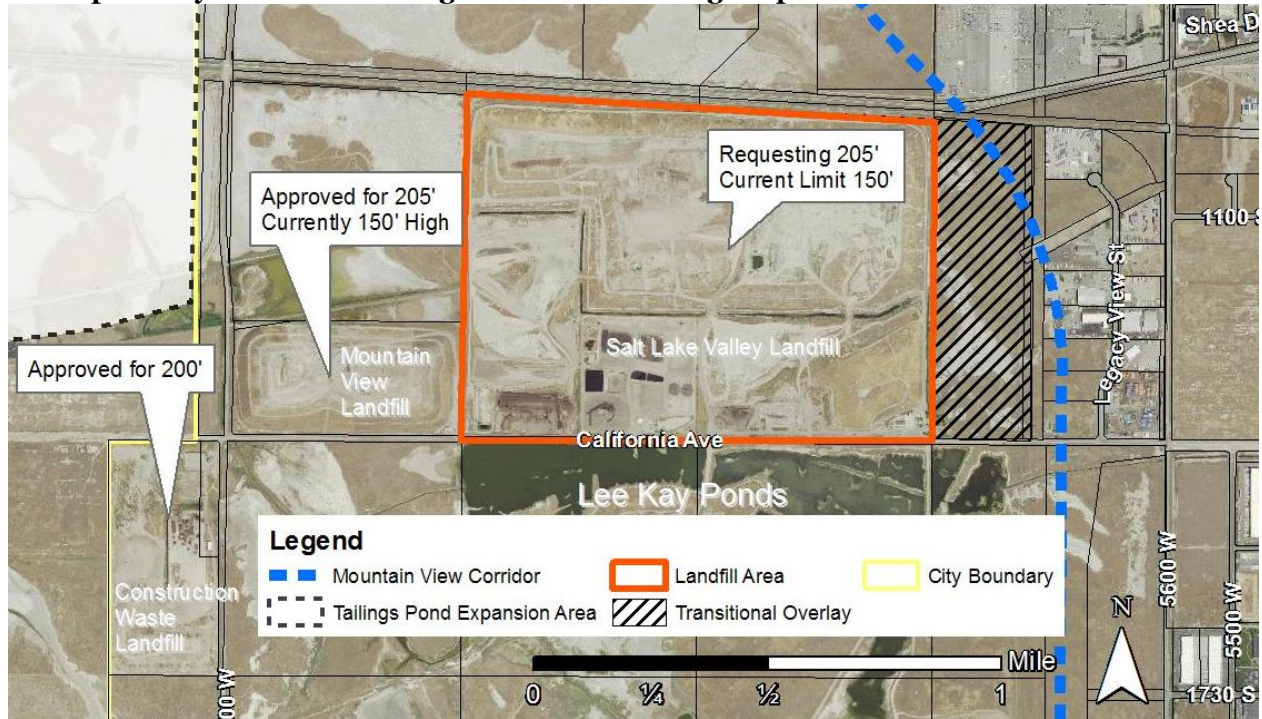
PROJECT DESCRIPTION:

This is a conditional use request for a height increase for the Salt Lake Valley Landfill, located at approximately 6030 W California Avenue (1400 South.) The landfill is currently limited to 150 feet in height. The applicant would like to increase the height limit for the landfill from 150 feet to 205 feet in height, an increase of 55 feet. There is no specific height limit for landfills in the Zoning Ordinance. The height limits for individual landfills are established by the Planning Commission through the Conditional Use process.

KEY ISSUES:

The key issues listed below have been identified through the analysis of the project, neighbor and community input, and department review comments.

1. Compatibility of Additional Height with Surrounding Properties



West of the Landfill

Two neighboring landfills to the west have also been approved for over 200 feet of height. These include the Mountain View Landfill, located directly adjacent to the west of the Salt Lake Valley Landfill and the construction waste landfill at 7213 W California Ave. These landfills have been approved for 205 feet and 200 feet of height respectively. The Salt Lake Valley Landfill is the only remaining portion of land within the Landfill Overlay zone that has not been approved for 200 feet of height or higher.

Additionally, the Kennecott Tailings Pond is expected to be expanded to approximately 7200 West, which is half a mile from the western edge of the Salt Lake Valley Landfill. According to the “[Notice of Intent](#)” filed with the Utah Department of Environment Quality, the final design height of the tailings pond is at an elevation of 4,462 feet, which is approximately 243 feet in height measured from the existing ground level elevation (4,219 feet) on 7200 West. This means the top of the Salt Lake Valley Landfill will ultimately be below the height of the Kennecott Tailings Pond. As shown on the above map, the portion of the tailings pond closest to the landfill is outside of City boundaries and not subject to City regulations. Part of the proposed tailings pond to the north will be within City boundaries but state law concerning mine expansion rights ([Utah Code § 17 41-5](#)) limits the regulatory authority the City will have over the expansion.

An additional piece of land between the Salt Lake Valley Landfill and 7200 West is owned by Kennecott and is zoned for light industrial uses. These types of uses are unlikely to be negatively impacted by the additional landfill height.

None of the current or potential uses to the west are expected to be negatively impacted by the additional landfill height as they are similar or the same as the landfill use.

East of the Landfill

To the east of the landfill is an area zoned “Transitional Overlay.” The transitional area is intended to buffer the uses in the Manufacturing zones to the east from the impacts of the landfill use. This area is also owned by the Salt Lake Valley Landfill, so there is unlikely to be any other development in this area that would be negatively impacted by the landfill height. Beyond the transitional area to the east there is a power transmission corridor which additionally buffers any land uses from the landfill. Beyond that power corridor, 1200 feet to the east of the landfill, are lots zoned for light industrial development. As an additional buffer, the Mountain View Corridor highway is planned to be located on the eastern edge of the Transitional Overlay area. The highway will create an additional barrier between other land uses and the landfill.

With the 1,200 foot wide Transitional Overlay zoning and planned highway, the nearby properties are expected to be adequately buffered from any impacts from the additional landfill height.

North of the Landfill

To the north of the landfill is a 250' wide rail corridor and beyond that area are a few vacant properties owned by Kennecott and Property Reserve Inc. These properties are zoned for industrial uses and such uses are unlikely to be negatively impacted by an additional 55 feet of landfill height.

South of the Landfill

To the south of the landfill are the Lee Kay Ponds, which provide wetlands for birds and fish. The ponds were originally created to mitigate the loss of wetlands when the landfill moved to its current location. The additional height for the landfill is not expected to have any negative impacts on these ponds.

General Compatibility Considerations

Overall, the landfill is surrounded by uses that are unlikely to be negatively affected by the additional height allowance and is buffered from nearby uses by off-site horizontal separation. The maximum height of the landfill itself will also be setback on-site so as to reduce the potential for any visual impacts. As shown in the east to west elevation plan in [Attachment C](#), the landfill mound will be set back 110 feet from all property lines and will then gradually rise over approximately 450 feet to a height of 150 feet. The landfill mound will then rise another 55 feet over the course of 2200 feet for a final height of 205 feet. In the case of the north to south elevation, the landfill will rise 150 feet over the course of approximately 350 feet and then rise to a height of 205 feet over the course of 1200 horizontal feet.

This gradual sloping of the landfill height reduces the potential for any significant visual impacts on surrounding properties. The landfill height is sufficiently setback from other properties by on and off-site horizontally buffering so as not to cause any negative impacts to the surrounding land uses. Further, an additional 55 feet of height is not expected to significantly increase or create any new detrimental impacts that would not be created by the existing 150 foot landfill.

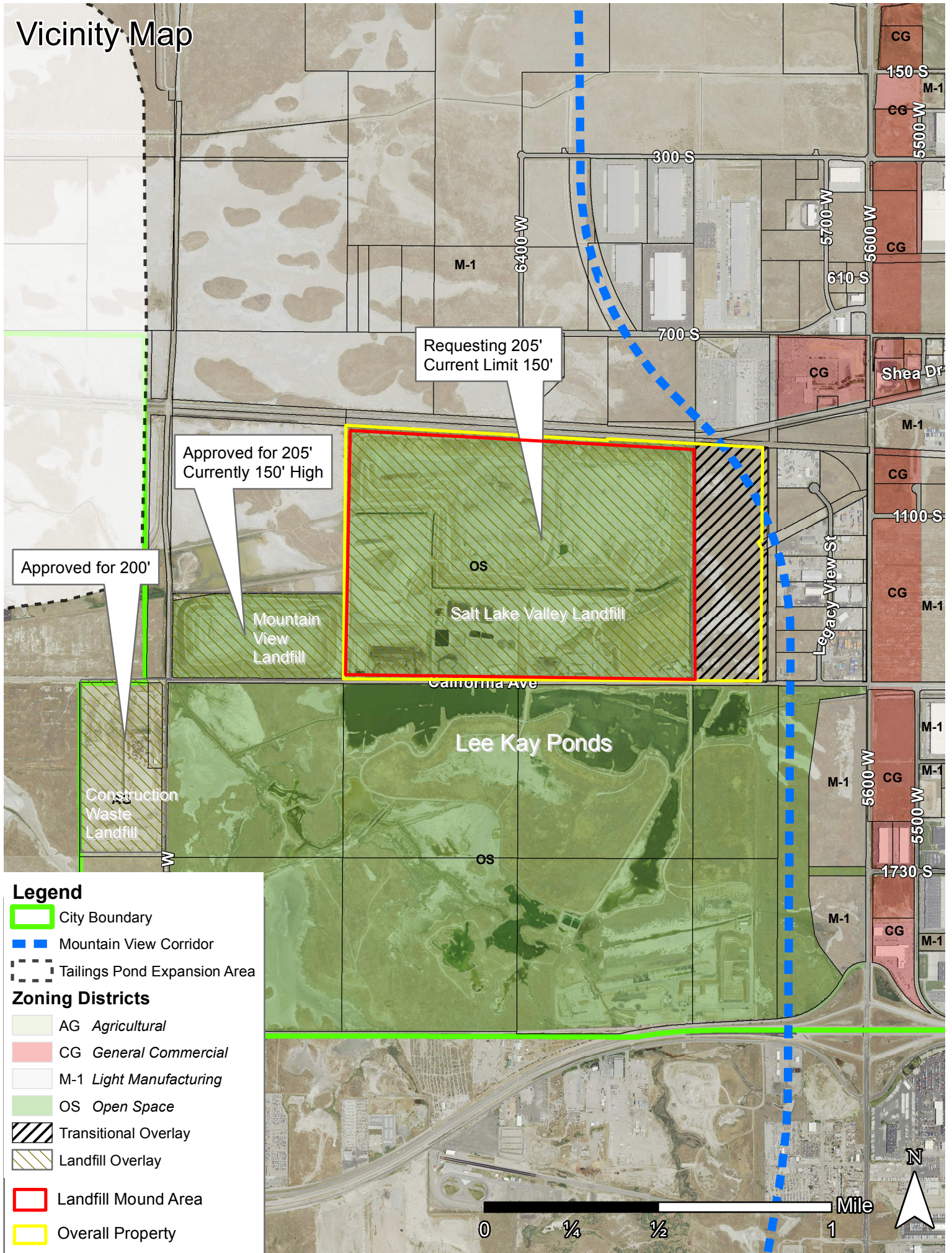
Strong odors occasionally emanate from the landfill property and travel a few miles into residential areas south of the landfill property. However, these odors are generally not related to the landfill itself and are caused by other uses on the landfill property, such as open air bio-solid waste processing activity on the west end of the property. These activities occur at ground level and the additional height allowed for the landfill will not increase this activity. Ultimately, these other uses will have to move to another location as the landfill mound will fill up the entirety of the property as shown on the proposed plans located in [Attachment C](#). The general waste going into the landfill does not sit exposed to open air for very long and is instead covered by soil, reducing the potential for odors. Details of odor and other potential nuisance control methods are located in the *Landfill Master Plan* excerpt in [Attachment D](#).

NEXT STEPS:

If the conditional use is approved, the applicant will be required to comply with all other department/division requirements and obtain all necessary building permits for the project. They will also be required to obtain all other state and federal approvals necessary for the landfill expansion and demonstrate that they have received those approvals before the Planning Division can give the final sign off on the additional height approval.

ATTACHMENT A: VICINITY MAPS

Vicinity Map



Requesting 205'
Current Limit 150'

Approved for 205'
Currently 150' High

Approved for 200'

Legend

- City Boundary
- Mountain View Corridor
- Tailings Pond Expansion Area

Zoning Districts

- AG *Agricultural*
- CG *General Commercial*
- M-1 *Light Manufacturing*
- OS *Open Space*
- Transitional Overlay
- Landfill Overlay
- Landfill Mound Area
- Overall Property



ATTACHMENT B: PHOTOS



View north into the landfill property from California Ave, showing existing landfill mounds



View north into the landfill property from California Ave, showing existing landfill mounds



Westward view along California Ave. An existing 150' tall landfill located west of the Salt Lake Valley landfill can be seen on the right. The Lee Kay Ponds can be seen on the left side of the street.



Close up view looking north from California Ave showing existing 150' tall landfill



View west toward the landfill from 5600 West. The east edge of the landfill can be seen on the horizon. The landfill currently rises to approximately 75 feet in height.

ATTACHMENT C: SITE PLAN & NARRATIVE

Conditional Use Permit Salt Lake City Planning

Salt Lake Valley Solid Waste Management Facility
6030 West California Avenue
Salt Lake City, UT 84104

March 2, 2015

Contact: Debbie Lyons, Salt Lake City Sustainability Division, 801-535-7795

Additional Information

1. Project Description

The Salt Lake Valley Landfill, a joint venture owned equally by Salt Lake City and Salt Lake County occupies 500 acres at 6030 West California Avenue, Salt Lake City, Utah. Salt Lake County staff manages the landfill and employs 40 full-time employees. The landfill accepts an average of 1,300 tons of municipal solid waste per day.

Salt Lake City manages construction and engineering, and has contracted with CH2MHill to provide regulatory assistance and update the facility's permits required by the State Division of Environmental Quality and Department of Air Quality.

The Salt Lake Valley Landfill is in process of updating its Master Plan and Post-Closure Plan and is requesting a Conditional Use approval from the Salt Lake City Planning Commission to increase the height of the landfill to 205 feet, which is the approved height of the Mountain View Landfill just west of the Salt Lake Valley Solid Waste Management Facility.

Allowing the additional height will significantly extend the life of the landfill and is a cost efficient use of the existing footprint of the landfill. The cost efficiency will benefit all users of the landfill, which include valley-wide residents, businesses and non-profit organizations.

2. Conditional Use Information

Operating/Delivery Hours: 7:00 AM to 5:00 PM, Monday through Saturday. Closed on Sundays, Thanksgiving, Christmas, and New Years Day.

Adjacent land uses (abutting and across the street properties):

North: Railroad right-of-way and railroad line

East: 80 acre Knorr Property buffer owned by SL County

South: California Avenue and Utah State Division of Wildlife Resources Property

West: Mountain View Landfill and vacant Kennecott property

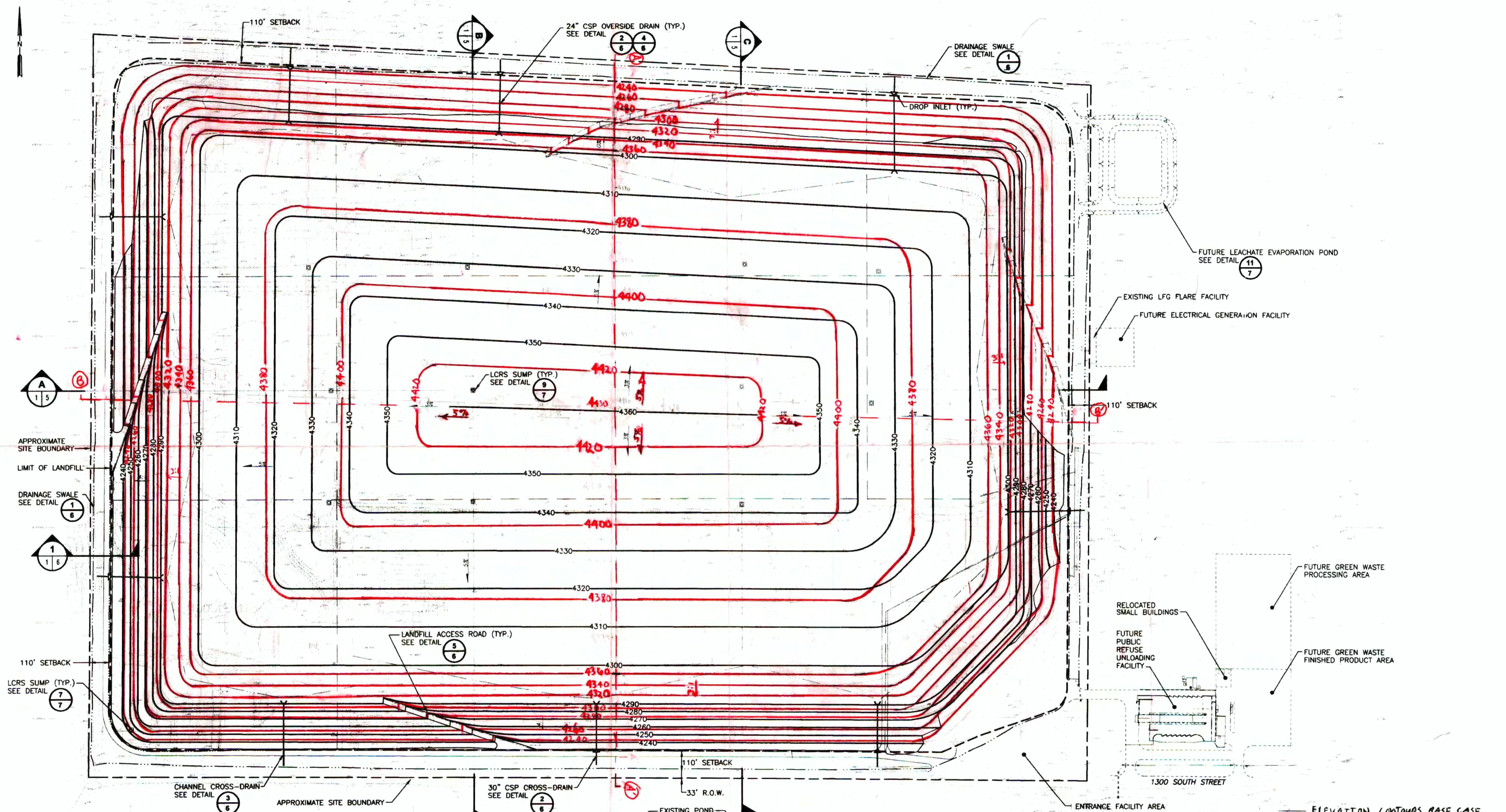
Number of employees during highest shift: 27

Number of seats provided: Not Applicable

Have you discussed the project with nearby property owners? What has been the response?

The Mountain View Landfill offered the attached letter of support for this Conditional Use Application. (See Item #6.)

4. Site Plan



APPROXIMATE SITE BOUNDARY
 LIMIT OF LANDFILL
 DRAINAGE SWALE SEE DETAIL (1/8)
 110' SETBACK
 LCRS SUMP (TYP.) SEE DETAIL (7/7)

FUTURE LEACHATE EVAPORATION POND SEE DETAIL (11/7)
 EXISTING LFG FLARE FACILITY
 FUTURE ELECTRICAL GENERATION FACILITY

FUTURE GREEN WASTE PROCESSING AREA
 RELOCATED SMALL BUILDINGS
 FUTURE PUBLIC REFUSE UNLOADING FACILITY
 FUTURE GREEN WASTE FINISHED PRODUCT AREA

1300 SOUTH STREET
 ENTRANCE FACILITY AREA

ELEVATION CONTOURS, BASE CASE
 CONTOUR INTERVAL = 10 FT
 ELEVATION CONTOURS, PROPOSED
 NEW MAXIMUM HEIGHT
 CONTOUR INTERVAL = 20 FT

1" = 1/2" 0"

SCALE IN FEET
 0 250 500



REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
DATE OF ISSUE	OCT 2005	DWN BY K. TROYER DES BY E. SAN AGUSTIN			CHK BY R. HALIGHEY APP BY G. BOWERS	

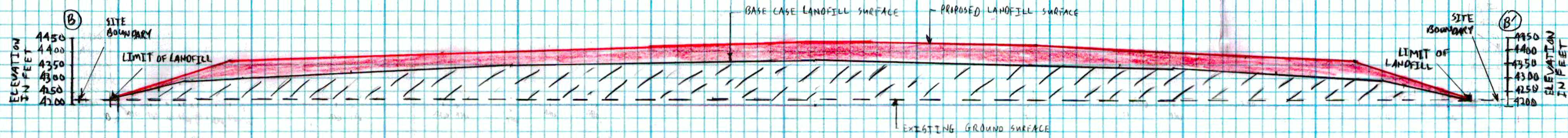
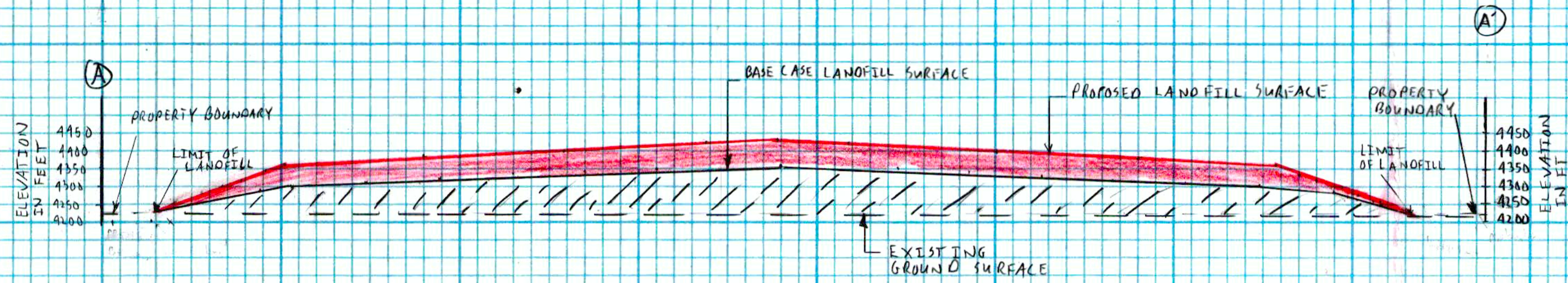
Shaw EMCON/OWT, Inc.
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SALT LAKE SOLID WASTE MANAGEMENT COUNCIL
 SALT LAKE VALLEY LANDFILL
 SALT LAKE CITY, UTAH
LANDFILL GRADING AND DRAINAGE PLAN

DRAWING NO. **1**
 PROJECT NO. 103408

Topographic base compiled using photogrammetric methods by Aero-Graphics dated April 23, 2004

5. Elevation Drawing



SCALE
1" = 250 FT.
NO VERT.
EXAGGERATION
250 FT

**6. Attachment: Letter of Support from Waste Management of Utah, Inc,
Owner and Operator of Mountain View Landfill**



WASTE MANAGEMENT OF UTAH

5500 South Quebec Street
Suite 250
Greenwood Village, CO 80111 303-
486-6000
303-797-1600

February 2, 2015

John Ioannou
6030 West California Avenue
Salt Lake City, UT

Re: SLC Conditional Use Permit Application - Landfill Height

Dear Mr. Ioannou,

The Mt. View Landfill at 6976 W. California, Salt Lake City, UT, owned and operated by Waste Management of Utah, Inc. is located west of the Salt Lake County Landfill. The Mt. View Landfill accepts construction and demolition debris and is not permitted to accept municipal solid waste.

On behalf of Waste Management of Utah, Inc. we are offering this letter of support for the referenced Conditional Use Permit Application for an expansion to the height limits of the landfill. Waste Management refers customers, who come to Mt. View landfill with municipal solid waste, to the Salt Lake County Landfill where they are permitted to accept the material.

Respectfully,

A handwritten signature in black ink, appearing to be 'B', followed by a horizontal line extending to the right.

Brad Kloos
District Manager

Cc: Doug Diemer, WM
Farid Abuchaibe, WM
Tom Hutchison, WM
Mark Franc, WM

ATTACHMENT D: LANDFILL MASTER PLAN EXCERPTS

MASTER PLAN
SALT LAKE VALLEY LANDFILL
SALT LAKE CITY, UTAH

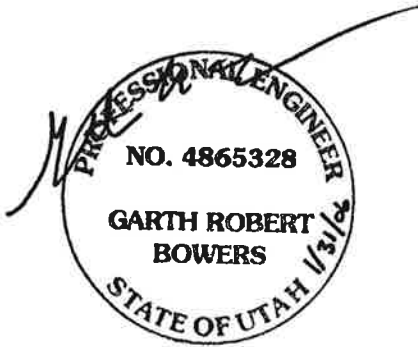
Prepared for
Salt Lake County
February 2006

Prepared by
EMCON/OWT, Inc.
2360 Bering Drive
San Jose, California 95131

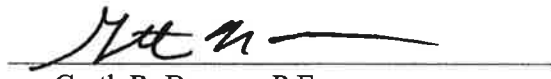
Project 103408

**Master Plan
Salt Lake Valley Landfill
Salt Lake County, Utah**

The material and data in this report were prepared under the supervision and direction of the undersigned.




Richard Haughey, P.E.
Senior Project Manager


Garth R. Bowers, P.E.
Mountain District Manager

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SUMMARY

The Salt Lake Valley Landfill is jointly owned by Salt Lake City Corporation and Salt Lake County. In general, Salt Lake County is responsible for planning and landfill operations and Salt Lake City Corporation provides engineering support services. The landfill is being operated consistent with a Master Plan (*Salt Lake Valley Landfill Master Plan, Salt Lake County, Utah*, EMCON Associates) that was prepared in 1991. This Master Plan has been prepared to update the 1991 Master Plan, address areas, such as landfill gas collection, not addressed in the 1991 Master Plan, and to guide development of the landfill consistent with the provisions of regulations, adopted by the Utah Department of Environmental Quality and by the Salt Lake Valley Health Department. The updated Master Plan is presented in three volumes. Volume 1 is the updated Master Plan. Volume 2 is the Closure and Postclosure Maintenance Plan. Volume 3 contains the appendices for both the updated Master Plan and the Closure and Postclosure Maintenance Plan. Additionally, a separate Landfill Gas Master Plan has been prepared to provide guidance in developing the landfill gas collection and control system for the landfill.

The landfill is located at 6030 West California Avenue, Salt Lake City, on an approximately 455-acre site. Currently, the permitted landfill footprint is approximately 367 acres. The updated Master Plan proposes to increase the landfill footprint to 406 acres by relocating the public unloading areas to the 90-acre County-owned parcel to the east of the landfill site. It is also proposed to increase the maximum final elevation, after settlement, from 4,340 feet to 4,360 feet. The landfill final grading plan includes a large topdeck area, suitable for a variety of uses after the landfill closes.

As part of the Master Plan, the existing and future waste generation, recycling, and disposal patterns for the communities served by the Salt Lake Valley Landfill were evaluated. As a result of this, future waste disposal quantities were estimated. However, with the development of two landfills in Tooele County, the waste quantity going to the Salt Lake Valley Landfill has decreased significantly. Accordingly, after discussions with County staff, it was determined that the predicted future waste disposal quantities should be reduced by 35 percent to reflect the waste going to the out-of-county landfills.

The estimated remaining fill capacity of the landfill is approximately 50.6 million cubic yards, which includes a 20 percent adjustment for overfilling. Based on the predicted future waste disposal quantities with a 35 percent reduction, the landfill is estimated to be capable of providing service to approximately 2052. The actual landfill life will be

dependent on the actual waste received at the landfill, which is influenced by factors such as landfills opening or closing, waste generation rates, recycling, and development activity.

The landfill will be developed in a series of modules. To date, Modules 1 through 7 have been constructed. Based on the projected waste disposal tonnage, Module 8 will be constructed in 2019. Prior to then, the existing leachate evaporation pond, located on Module 2, will have to be relocated to allow completion of landfilling in the Module 2 area. It is proposed to relocate the leachate evaporation pond to the County-owned parcel adjacent to the landfill site.

The landfill development plan includes a fill sequence plan. The fill sequence plan shows Module 8 as the next disposal module, followed by Modules 11, 10 and 9. This fill sequence allows the public unloading area to remain for as long as possible before being relocated. However, the composting area will need to be relocated by approximately 2026 to allow construction of Module 11.

The fill sequence plan provides for flexibility in how the landfill is filled. For example, the remaining capacity in Modules 6 and 7 includes remaining capacity in Modules 1, 2, 3, and 4. Filling could initially occur within the limits of Modules 6 and 7 until the grades reached the elevation of the surrounding modules; then Modules 1 through 7 could be filled as a single large module. However, for the purposes of the updated Master Plan, it was assumed the perimeter portion of Modules 1, 2, 3, and 4 would be filled to final grade before completing filling in Modules 6 and 7. This will allow final cover to be placed on the perimeter slopes. The closure schedule contained in the Closure and Postclosure Maintenance Plan is based on this fill sequence.

The updated Master Plan includes a financial plan for the landfill development and closure. The financial plan contains cost estimates for developing the remaining landfill disposal modules, relocating the leachate evaporation pond and public unloading facility, closing the landfill, and maintaining and monitoring the landfill after closure. A cash flow is also presented. Revenues in the cash flow are primarily based on the tipping fees collected and the projected waste disposal tonnage. Expenditures include operating costs, capital costs, and contributions to designated funds. Based on the cash flow, it will be necessary to institute regular tipping fee increases to ensure adequate funds for future landfill development and closure, and postclosure maintenance costs.

1 INTRODUCTION

A Master Plan (*Salt Lake Valley Landfill Master Plan, Salt Lake County, Utah*, November 1991, EMCON Associates) for the Salt Lake Valley Landfill (SLVL) was developed in 1991. Subsequently, *Implementation Plan, Salt Lake Valley Landfill, Salt Lake City Corporation* (EMCON, July 1995) was prepared to assist with developing the landfill in accordance with the 1991 Master Plan.

This Master Plan for the SLVL has been prepared by EMCON/OWT, Inc. to update the 1991 Master Plan, to address areas, such as landfill gas collection, not addressed in the 1991 Master Plan, and to guide the development of the landfill consistent with the provisions of regulations (Solid Waste Permitting and Management Rules, Utah Administrative Code R315-301), adopted by the Utah Department of Environmental Quality (DEQ) implementing Municipal Solid Waste Landfill Criteria (Subtitle D), adopted by the U.S. Environmental Protection Agency, and regulations (Health Regulation #1), adopted by the Salt Lake Valley Health Department.

1.1 Background

The SLVL is located approximately 9 miles west of the center of the City of Salt Lake (Figure 1). The landfill currently serves the disposal needs of approximately 70 percent of the businesses and residents of Salt Lake County. The landfill has been operating since 1979 under an agreement between Salt Lake City Corporation and Salt Lake County to jointly own and operate the facility. The City provides support engineering services for the landfill.

The existing landfill is comprised of four parcels; designated Parcels III, IV, V, and VI (see Figure 2). These parcels are located at 6030 West California Avenue. Parcel III was developed consistent with a master plan, which was prepared by EMCON in 1981. Parcel V was developed in accordance with plans prepared by the Salt Lake City Public Works Department. Parcels VI, VII and VIII have been developed consistent with the 1991 Master Plan.

The SLVL operates in accordance with Permit PT0010038, issued by the Salt Lake Valley Health Department, Solid Waste Permit 9429, issued by DEQ. Solid Waste Permit 9429 has an expiration date of March 31, 2005. A solid waste permit renewal application was filed with DEQ. By letter, dated April 15, 2005, DEQ acknowledged receipt of the permit renewal application and as allowed by DEQ regulations, authorized

the landfill to continue operating in accordance with Permit 9429 while the permit renewal application was being reviewed. Copies of both permits and DEQ's letter are contained in Appendix B.

1.2 Purpose of the Master Plan

The intent of this updated Master Plan is to provide guidance in the development of SLVL. The Master Plan addresses

- Site geology and hydrogeology
- Landfill design
- Soil requirements
- Landfill operations
- Landfill fill sequence
- Landfill gas control
- Leachate management
- Environmental monitoring
- Landfill closure and end-use
- Regulatory compliance

Master Plan drawings are presented in Appendix A.

It is not the intent of this Master Plan to provide detailed design for the various design elements. The Master Plan will provide the basis for the detailed design.

In conjunction with this Master Plan, a Closure and Postclosure Maintenance Plan has been prepared. The Closure and Postclosure Maintenance Plan is presented in Volume 2. Volume 3 contains appendices for both the Master Plan and the Closure and Postclosure Maintenance Plan. Additionally, a Landfill Gas Master Plan has been prepared to provide guidance in developing the landfill gas collection and control system for the landfill. The Landfill Gas Master Plan is presented as a separate document.

of waste and soil placement, and minimization of operation costs were evaluated in the development of the excavation and fill sequence plan. Tables 4 and 6 present the project soil needs and identify the earthwork requirements for each module.

The shallow groundwater at the site will require temporary dewatering of the excavation cells, as discussed in Appendix D, to allow the excavation to take place in the dry. Dewatering should take into account local hydrogeologic conditions and the construction schedule. Excavation contractors will be required to submit a construction dewatering plan for review before beginning excavation activities. The dewatering will continue until there is sufficient waste in place to offset hydraulic uplift of the liner system. During module construction, the contractor will be responsible for dewatering. When construction is completed, the County will assume responsibility for dewatering.

The landfill will be constructed sequentially as shown on the Fill Sequence Plan (Appendix A, Drawing 4). The Fill Sequence Plan was developed to enable filling the refuse fill areas to intermediate and final grades to minimize leachate production, module preparation, double handling of soils, and operating costs. The sequence shown should also maximize operational efficiency and flexibility. The Fill Sequence Plan may be modified in the future to accommodate changed site conditions, module construction schedule, or waste disposal requirements. The Fill Sequence Plan will not be modified without a thorough engineering review including access, drainage, and slope stability. Table 5 presents module service life based on the projected waste disposal quantities shown in Table 3. An anticipated schedule for developing future modules, based on the service life shown in Table 5, is presented in Table 7.

Construction documents, prepared for each excavation cell and fill module, will provide the detail necessary for excavation and preparation of the fill area including base liner and LCRS construction. Cell and module construction will not take place in the absence of these construction documents.

5.4 Nuisance Control and Health and Safety Factors

The following sections discuss health and safety measures to be implemented at the Salt Lake Valley Landfill in order to control potential nuisances. Nuisances include unsightliness, dust, odor, litter, rodents, flies, and noise. Fire control measures, unauthorized access, and personnel health and safety programs are also found in this section. Nuisance control and the provisions for health and safety at the SLVL are consistent with the requirements of the DEQ Subtitle D regulations and the Salt Lake Valley Health Regulations.

5.4.1 Unsightliness, Dust, and Odor

Unsightliness, dust, and odor will be controlled by (1) timely placement of daily, intermediate, and final cover over the refuse fill; (2) proper maintenance of haul roads (grading and watering); (3) application of fine water spray or dust palliative on soil covered work areas, soil excavation areas, and soil stockpile areas where conditions may result in fugitive dust; (4) application of water or planting of temporary vegetation on intermediate soil cover when conditions might create fugitive dust; and (5) planting and maintenance of vegetated cover on completed fill slopes. While the landfill is in operation, odors will be controlled by placing daily cover and intermediate soil cover over refuse fill. Upon completion, the final cover should effectively control odors.

5.4.2 Litter

The site operator will utilize the litter collection program currently in place at the site during landfilling activities in the lateral expansion area. The litter program is designed to minimize the impacts of litter on site and in the area surrounding the site, and consists of various activities designed to reduce windblown litter, as well as other site features and operations that inadvertently help to reduce windblown litter. Activities specifically designed to reduce amounts of windblown litter include minimizing the size of the active face to reduce the area of wastes exposed to wind, and erecting permanent and temporary litter fences downwind from the active face and adjusting their height and length to maximize their effectiveness in trapping windblown litter. Other measures, such as erecting used utility poles with fabric between the poles, may be employed to provide additional temporary litter control.

Features and operating techniques that reduce windblown litter include constructing perimeter fencing around the landfill site to back up the temporary litter fences, applying daily and intermediate cover, and compacting refuse layers at a maximum thickness of 2 to 4 feet to hold freshly deposited refuse to underlying landfill layers. Site and surrounding area inspections will be conducted routinely, and any windblown litter found will be collected.

5.4.3 Rodents and Flies

A properly operated landfill does not present health hazards because the sanitary landfill method does not create conditions that attract and allow the breeding of such potential disease vectors as rodents and flies. Timely placement and compaction of daily, intermediate, and final cover, or use of alternative daily cover (as is the case at the SLVL), on the refuse fill deprives birds of food, and rodents of both food and habitat. It also is effective in preventing the emergence of flies from eggs laid in household refuse before it is collected and brought to the site for disposal. Site personnel will inspect site areas weekly for any signs of vector or rodent activity. If such activity is observed, site

personnel will contact pest control specialists for professional advice and any services needed to ensure that a vector nuisance does not develop.

5.4.4 Noise

Noise levels of on site equipment will be controlled by properly maintaining mufflers.

5.4.5 Fire

Equipment operators and maintenance personnel will frequently remove debris and dust from undercarriages and engine compartments, check for and repair fuel and oil leaks, and provide portable fire extinguishers on landfill equipment to protect landfill equipment and vehicles from fire danger. The entrance facilities and maintenance buildings will be equipped with fire extinguishers for controlling minor fires and maintaining personnel safety.

In accordance with the DEQ Subtitle D regulations, open burning will not take place at the landfill site. Fire protection for the refuse fill will be provided by minimizing the size of the tipping face, and by preventing deposition of or removing burning material. Any fire that occurs on the landfill will be extinguished by trained landfill personnel using appropriate site equipment, stockpiled soil cover, and when necessary, a water truck or auxiliary fire truck. If additional fire fighting resources are needed, the Salt Lake City Fire Department will be summoned. Water will be supplied from the on site water well.

5.4.6 Unauthorized Access

Perimeter fences and a locking gate across the site entrance will provide security and prevent unauthorized entry to the site. The perimeter fencing will also clearly delineate site boundaries, as required by the DEQ Subtitle D regulations.

5.4.7 Health and Safety

Possible health hazards to site operating personnel will be minimized by the following measures:

- Training and directing all site personnel to identify potentially harmful wastes, including hazardous wastes that may be delivered to the site.
- Minimizing the time of exposure to wastes that may present health hazards to site personnel.
- Providing and maintaining on site first aid supplies and hygienic facilities.

- Training site personnel in safe operating procedures.
- Providing and using dust masks if conditions warrant respiratory protection.
- Regularly held safety meetings

Construction and maintenance of all weather roads to waste tipping areas, properly located directional and traffic signs, and site employees stationed at the tipping area to direct vehicles, are all measures that will be used to protect the safety of the public.

5.5 Site Operation and Maintenance Program

Surface drainage facilities, final vegetated soil cover areas, intermediate fill surfaces, and on site access roads will be observed routinely, and at least weekly during high intensity rainfall periods. Necessary repairs will be made promptly. Temporary berms, ditches, silt fences, straw mulch, or other erosion control measures will be used to prevent further erosion damage to soil covered areas until weather conditions permit the eroded soil to be replaced and reseeded.

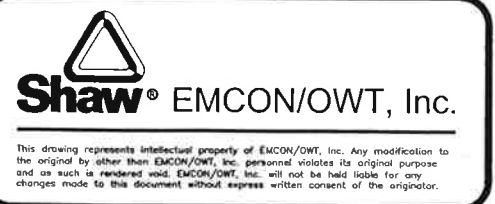
The perimeter access road, internal access roads, and wet weather aprons will be graded and repaired as necessary to maintain a relatively smooth surface and to prevent rainfall from ponding during wet weather.

The vegetative soil layer of the final cover will be seeded to establish vegetation after the final cover has been constructed. A regular maintenance program to preserve final cover integrity by providing for proper drainage of the fill surface and maintenance of the vegetative soil layer will be established for areas with final cover in place. The final cover maintenance program will maintain the proper functioning of the drainage systems, seal surface cracks caused by settlement or desiccation, and repair erosion damage that may have resulted from heavy rainfall. Such actions will be undertaken as part of routine site operations, and should minimize leachate generation from surface water infiltration, gas venting through cracks or eroded cover, and vectors that could be attracted by exposed refuse.




5.6 Hours of Site Operations

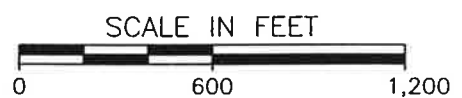
Currently, the site is currently open to the general public for solid waste disposal Monday through Saturday from 7:00 a.m. to 5:00 p.m., October 1 through March 31, and 7:00 a.m. to 6:00 p.m., April 1 through September 30. The site will be closed Christmas, New Years, Thanksgiving, and Sundays. The hours of operation may be modified in the future.

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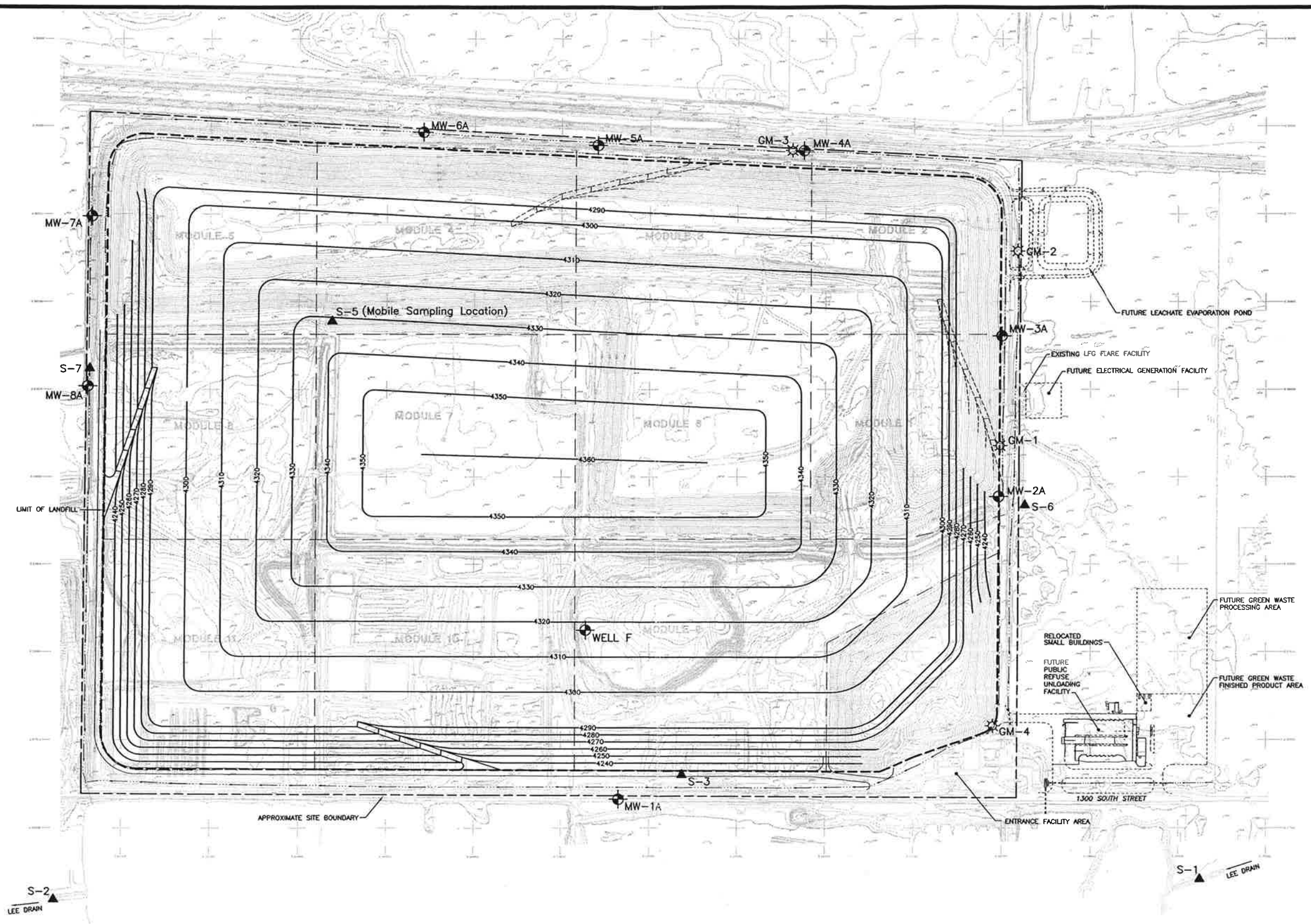
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- LEGEND**
-  GROUNDWATER MONITORING WELL
 -  SURFACE WATER SAMPLE LOCATION
 -  LANDFILL GAS MONITORING PROBE



DATE	OCT. 2005
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FIGURE 4
 SALT LAKE SOLID WASTE MANAGEMENT COUNCIL
 SALT LAKE VALLEY LANDFILL
 SALT LAKE CITY, UTAH
ENVIRONMENTAL MONITORING FACILITIES



CLOSURE AND POSTCLOSURE MAINTENANCE PLAN

**SALT LAKE VALLEY LANDFILL
SALT LAKE CITY, UTAH**

Prepared for

Salt Lake County

February 2006

Prepared by

EMCON/OWT, Inc.
2360 Bering Drive
San Jose, California 95131

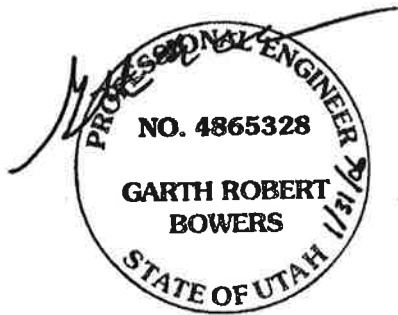
Project 103408


**Closure and Postclosure Maintenance Plan
Salt Lake Valley Landfill
Salt Lake County, Utah**

The material and data in this report were prepared under the supervision and direction of the undersigned.

EMCON/OWT, Inc.


Richard Haughey, P.E.
Senior Project Manager




Garth R. Bowers, P.E.
Mountain District Manager

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1 INTRODUCTION

1.1 Background

The Salt Lake Valley Landfill (SLVL) is located approximately 9 miles west of the center of the City of Salt Lake (Figure 1). The landfill has been operating since 1979 under an agreement between Salt Lake City Corporation and Salt Lake County to jointly own and operate the facility.

This report, *Closure and Postclosure Maintenance Plan, Salt Lake Valley Landfill, Salt Lake County, Utah* (CPMP), is prepared in conjunction with *Master Plan, Salt Lake Valley Landfill, Salt Lake City, Utah* (EMCON/OWT 2005), which contains guidance for developing the landfill in accordance with the Salt Lake Valley Health Department Regulation #1 and the Utah Department of Environmental Quality (UDEQ), Solid Waste Division Program requirements. The updated *Master Plan* is presented in Volume 1. For convenience, Volume 3 contains the appendices for both the *Closure and Postclosure Maintenance Plan* and the updated *Master Plan*. Additionally, EMCON/OWT has prepared *Landfill Gas Master Plan, Salt Lake Valley Landfill, Salt Lake City, Utah*, which is presented separately.

1.2 Report Submittal

This CPMP was prepared to update existing documents and for the continued development of the SLVL. This document (1) describes how the County will close and maintain the landfill consistent with current regulations, (2) allows the County to prepare an estimate of closure and postclosure maintenance costs for the landfill, and (3) enables the regulatory agencies to assess the reasonableness of the cost estimates.

Section 2 of this report presents the closure plan for the landfill, which identifies and describes tasks involved in closing the landfill in a manner consistent with applicable regulations and acceptable standards to protect public health and safety and the environment. The contents of the plan are consistent with the requirements of Health Regulation #1 and Utah Administrative Code Section R315-302-3 (UAC R315-302-3).

Section 3 of this report describes the tasks associated with implementing the postclosure maintenance activities. The contents of this portion of the report are consistent with the requirements of Health Regulation #1 and UAC R315-302-3.

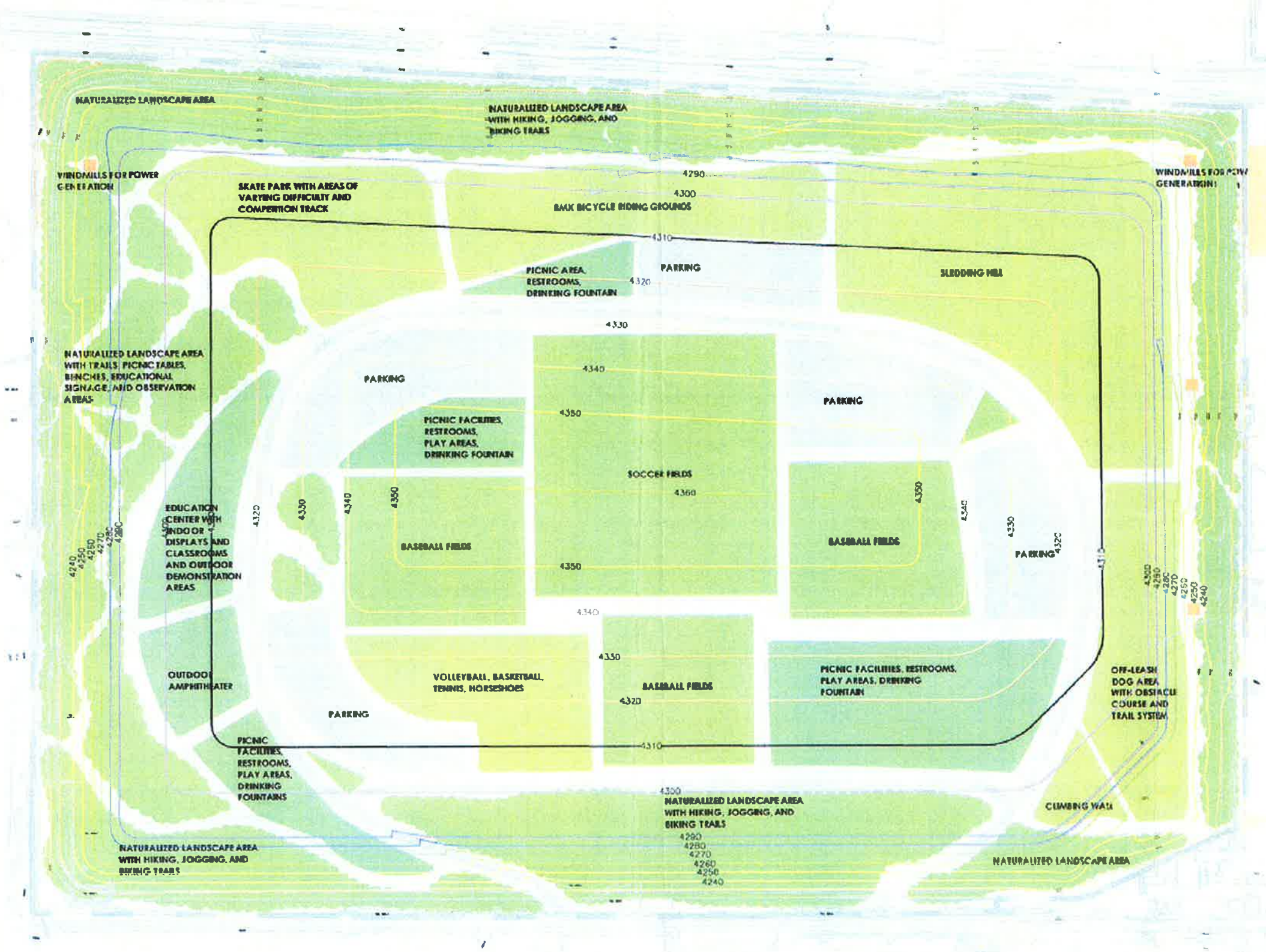
Section 4 describes the closure and postclosure maintenance cost estimates and funding mechanism consistent with the requirements of Health Regulation #1 and UAC R315-309.

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FIGURE 4
 SALT LAKE VALLEY SOLID WASTE MANAGEMENT COUNCIL
 SALT LAKE VALLEY LANDFILL
 SALT LAKE COUNTY, UTAH
CONCEPTUAL END USE PLAN

ATTACHMENT E: EXISTING CONDITIONS & ZONING REQUIREMENTS

CURRENT ZONING REQUIREMENTS

Regulation	Zone Regulation	Proposal	Complies?
Landfill Height	Height Regulated by the Planning Commission	205'	Conditional Use Approval Required
Front Yard Setback	Min. 30'	110'	Yes
Side Yard Setback	Min. 10'	110'	Yes
Rear Yard Setback	Min. 10'	110'	Yes
Landscape Yards/Buffers	As approved by the Planning Commission	Min. 30' Natural Vegetation	Yes, landscaping is at the discretion of the Planning Commission
Proximity to Residential and Institutional Zones	Min. 1,000 feet from such uses	~5 Miles	Yes
Minimum Lot Size	8 Acres	~537 Acres	Yes

ADJACENT LAND USE

The land use surrounding the site is:

- **East:** Vacant land, gas and power transmission corridor, and future Mountain View Highway Corridor
- **West:** Vacant land and landfill approved for 205' in height
- **North:** 200' wide rail corridor, vacant land, and portion of future Mountain View Highway Corridor
- **South:** Lee Kay Ponds (wetlands) and Lee Kay Public Shooting Range and dog training grounds

ADJACENT ZONING

The zoning surrounding the site is:

- **East:** Transitional Overlay and M-1, Light Manufacturing
- **West:** Landfill Overlay and M-1, Light Manufacturing
- **North:** M-1, Light Manufacturing
- **South:** Open Space

ATTACHMENT F: ANALYSIS OF STANDARDS

21A.54.080 Standards for Conditional Use

Approval Standards: A conditional use shall be approved unless the planning commission, or in the case of administrative conditional uses, the planning director or designee, concludes that the following standards cannot be met:

1. The use complies with applicable provisions of this title:

Analysis: The proposal is located in the Landfill Overlay zoning district. Landfills are a conditional use in the Landfill Overlay district and changes to an existing landfill require an additional conditional use process. Landfill height is regulated by the Planning Commission through the conditional use process and so the height increase is being processed as a conditional use.

As per section 21A.34.070.I, the application for a landfill shall also be accompanied by the following:

1. Plan for controlling and/or mitigating pests that may be attracted to the site;
2. An end use plan; and
3. A landscape plan indicating how the proposed landscaping will mitigate noise, dust, or other impacts on surrounding uses. If surrounding properties are undeveloped, the landscape plan shall address potential impacts on uses permitted within the applicable zoning districts for such undeveloped property.

In accordance with that provision, the landfill has a comprehensive master plan that includes plans for pest control and the end use of the property, including how the end use of the property will remain compatible with surrounding land uses. Excerpts of the master plan are included in [Attachment D](#). The current master plan is in the process of being updated and will be updated to reflect the additional height allowance if approved by the Planning Commission.

Regarding the landscaping, the applicant has submitted a site plan showing a 110' setback for the landfill mound from the property boundaries. As shown in the table in Attachment E, the setback and other aspects of the landfill comply with the general zoning regulations for landfills. As noted in the table, requiring landscaping in the front yard is at the discretion of the Planning Commission. As such, staff is recommending that that natural vegetation be allowed to continue to occupy the first 30' deep front yard area.

Besides a small segment at the entrance to the dump, there is no curb, gutter, or landscaped park strips along California Avenue next to the landfill. The area between the edge of the street and the property line is occupied by natural vegetation. Therefore any formal landscaping would be screened from public view by the existing natural vegetation in the right-of-way along the street and provide no public benefit.

Additionally, the Lee Kay Ponds across the street are used as natural open space for birds and other animal and the site consists of ponds and natural vegetation. The natural vegetation located along the front yard of the landfill site is similar to the natural vegetation located across the street at the Lee Kay Ponds. This site and use would not benefit from the addition of landscaping on the landfill site. Further, other uses on adjacent properties would also not benefit from additional landscaping along other property boundaries, due to the amount of horizontal separation between the landfill itself and developable industrial zoned land. Given these conditions, staff is not recommending any

other front yard landscaping or landscaping along any other property lines because the natural vegetation meets the intent of the landscape ordinance. The landscaping requirements allow natural vegetation in areas that are required to be landscaped.

The Landfill Overlay district regulations in section [21A.34.070.J](#) require landfills to obtain approval from all other necessary regulatory agencies before the Planning Division can sign off on the landfill conditional use approval. Some of the required regulatory approvals for the landfill cannot be obtained until the Planning Commission has approved the additional height. As such, documentation of those approvals will be required before the Planning Division can provide final sign off for the landfill height and is a condition of approval.

The property is located in the Airport Flight Path Protection Overlay. The overlay imposes height standards that limit development height near the airport. As discussed by the Airports department in Attachment G, the proposed height creates no observed impacts to airport operations. The applicant is required to record an aviation easement across the property if it has not already been created, and is a condition of approval.

Finding: The proposal will comply with the applicable provisions of the Salt Lake City Zoning Ordinance on the condition that regulatory agency approvals are documented and an aviation is recorded against the property.

2. The use is compatible, or with conditions of approval can be made compatible, with surrounding uses;

Analysis: The surrounding uses are discussed under issue 1 on page 2. Generally, the additional landfill height is not expected to cause any additional negative impacts on surrounding properties due to horizontal separation and buffering, and the surrounding properties' current and potential light industrial type uses.

Finding: The surrounding area generally consists of current and potential light industrial uses that would not be negatively impacted by the additional height allowed for the landfill. The additional height is also sufficiently set back so as to not have a substantial negative impact on surrounding uses. The height will be compatible with the surrounding uses.

3. The use is consistent with applicable adopted city planning policies, documents, and master plans; and

Analysis: The site is located in the Northwest Quadrant community area. There is no adopted master plan for the Northwest Quadrant community area. The zoning map, which was adopted in 1995, serves as the future land use map for the area.

The property is zoned Open Space and Landfill Overlay. The use of the property for a landfill complies with this zoning. The City Council adopted the "Landfill Overlay" regulations and thereby established a policy to allow landfills to be developed up to a height determined to be appropriate by the Planning Commission through the conditional use process. As such, the additional height is being processed through this conditional use petition.

Finding: The proposed additional height meets adopted city planning policies, documents, and master plans.

4. The anticipated detrimental effects of a proposed use can be mitigated by the imposition of reasonable conditions (refer to Detrimental Impacts Chart below for details).

21a.54.080B Detrimental Effects Determination

In analyzing the anticipated detrimental effects of a proposed use, the planning commission or administrative hearing officer shall determine compliance with each of the following:

Criteria	Finding	Rationale
1. This title specifically authorizes the use where it is located	Complies	The proposed landfill height is allowed as a conditional use by the zoning district in which it is located and is consistent with applicable land use policies.
2. The use is consistent with applicable policies set forth in adopted citywide, community, and small area master plans and future land use maps	Complies	The use is located in an area generally zoned for industrial uses. The zoning map serves as the future land use map for this area of the City. As such, the use is allowed by the applicable zoning and is consistent with the zoning map.
3. The use is well-suited to the character of the site, and adjacent uses as shown by an analysis of the intensity, size, and scale of the use compared to existing uses in the surrounding area	Complies	As discussed under the issues section on page 2, the surrounding land uses in the area are currently or potentially light industrial uses. These types of uses are unlikely to be negatively impacted by additional landfill height. Additionally, the site is horizontally buffered from surrounding properties further reducing the potential for negative impacts.
4. The mass, scale, style, design, and architectural detailing of the surrounding structures as they relate to the proposed have been considered	Complies	The surrounding land is zoned for industrial uses, with some Open Space zoned land to the south. Industrial uses are generally located in large buildings designed for functionality and do not generally include significant architectural detailing. These buildings generally have few windows and many are used for warehousing with few employees on site. As such, the additional height of the landfill is expected to be compatible with or have little to no impact on surrounding industrial type development.
5. Access points and driveways are designed to minimize grading of natural topography, direct vehicular traffic onto major streets, and not impede traffic flows	Complies	This is an existing landfill with existing access points located along California Avenue. California Avenue ends a few hundred feet after the landfill and the small amount of traffic on this street is generally landfill related. The additional height will not increase traffic flow to the landfill and so will not impede traffic flows on this street.
6. The internal circulation system is designed to mitigate adverse impacts on adjacent property from motorized, non-motorized, and pedestrian traffic	Complies	The landfill is not located adjacent to other uses that would be impacted by the internal circulation on the site.
7. The site is designed to enable access and circulation for pedestrian and bicycles	Complies	The landfill can accommodate pedestrian and bicycle access at its front entrance, however, the vehicle activity across the rest of the site makes it unsafe for pedestrians or bicyclists to have circulation across the majority of the site.
8. Access to the site does not unreasonably impact the service level of any abutting or adjacent street	Complies	The proposal will not increase traffic to the landfill and so will not impact the service level of abutting or adjacent streets.
9. The location and design of off-street parking complies with applicable standards of this code	Complies	The proposal will not require additional off-street parking.
10. Utility capacity is sufficient to support the use at normal service levels	Complies	The proposal will not require additional utility service.
11. The use is appropriately screened, buffered, or separated from adjoining dissimilar uses to mitigate potential use conflicts	Complies	As discussed under the issues section on page 2, the land use is sufficiently separated from adjoining dissimilar uses so as to mitigate potential use conflicts.
12. The use meets City sustainability plans, does not significantly impact the quality of surrounding air and water, encroach into a river or stream, or introduce any hazard or environmental damage to any adjacent property, including cigarette smoke	Complies	The landfill is subject to monitoring by environmental agencies, such as the Utah Department of Environmental Quality, and is maintained so as to not have an environmental impact on surrounding air or water. Water is regularly monitored and tested on and around the site. Some of the monitoring sites are shown in the Environmental Monitoring Facilities site plan in Attachment D . The proposal will not likely result in any environmental impacts

		with regard to the associated criteria.
13. The hours of operation and delivery of the use are compatible with surrounding uses	Complies	The landfill is located in an industrial area where any hours of operation or delivery will not have detrimental impacts on surrounding properties.
14. Signs and lighting are compatible with, and do not negatively impact surrounding uses	Complies	The landfill is located in an industrial area where signs and lighting will not negatively impact similarly industrial or heavy commercial surrounding uses. There are no residential uses nearby, so staff does not anticipate any detrimental effects from lighting.
15. The proposed use does not undermine preservation of historic resources and structures	Complies	The proposal is not associated with any historic resources or structures.

Finding: In analyzing the anticipated detrimental effects of the proposed use, Staff finds that the request complies with the criteria listed above.

Conditions Imposed

The Planning Commission, or planning director or designee in the case of administrative conditional uses, may impose any condition upon a proposed conditional use in order to address any of the factors listed in section 21A.54.080 of the zoning ordinance. The conditions may include:

1. Conditions on the scope of the use; its character, location, hours and methods of operation, architecture, signage, construction, landscaping, access, loading and parking, sanitation, drainage and utilities, fencing and screening, and setbacks; and
2. Conditions needed to mitigate any natural hazards; assure public safety; address environmental impacts; and mitigate dust, fumes, smoke, odor, noise, vibrations; chemicals, toxins, pathogens, gases, heat, light, and radiation.

Analysis: The landfill is located in an area of the City that is generally industrial and is buffered from surrounding uses by a transitional zoning overlay and other horizontal separation. The additional height allowance for the landfill will not result in or increase any detrimental impacts to the surrounding industrial development that is permitted in the area. The additional height does not result in new or increased natural hazards that do not already exist with a lower height landfill. Planning Staff does not anticipate any detrimental effects from the proposal that require the imposition of additional conditions.

Finding: The proposal meets this standard. Planning Staff does not expect any detrimental effects from the proposal that require additional conditions.

Additional Conditions for Landfills (21A.34.070.L)

In addition to the conditions stated above, and the standards for conditional uses outlined in section [21A.54.080](#) of this title the planning commission may impose conditions and limitation upon a conditional use concerning use, construction, character, location, landscaping, screening, parking, hours and days of operation and other matters that may be necessary or appropriate to prevent or minimize any adverse impact.

1. The planning commission may require that storage of materials in the transitional area be enclosed in a structure if proposed open storage or recycling of materials may have a material negative impact on a neighboring land use.
2. The planning commission shall specify such conditions in writing when approving the conditional use.
3. The violation of any conditions of approval shall constitute grounds for revocation of the conditional use approval.

Analysis: As discussed in the above “Conditions Imposed” section, staff does not anticipate any detrimental effects from the proposed additional 55 feet of height that require additional conditions to be imposed on the use.

Finding: Staff does not recommend any additional conditions of approval.

ATTACHMENT G: PUBLIC PROCESS AND COMMENTS

PUBLIC PROCESS AND INPUT

- The proposal was taken to a public open house on April 16th.
- Public hearing notice mailed on May 14th.
- Public hearing notice posted on property on May 14th.
- Public hearing notice posted on City and State websites on May 14th.
- Public hearing notice emailed to the Planning Division list serve on May 14th.

The following is a list of the public comments received for this project:

- Two City residents discussed the proposal with staff at the public open house and expressed their support for the proposal.

ATTACHMENT H: DEPARTMENT REVIEW COMMENT

The proposed conditional use was sent to the departments listed below for review and comment.

Public Utilities

They need to make sure that they update their DEQ permits and the Salt Lake City storm water discharge permits.

Staff Note: Documentation of compliance with all required regulatory agency approvals is a condition of approval.

Transportation

No issues.

Zoning

The plan provided for review does not address 21A.34.070 H. Required Yard and Buffer Requirement.

Staff Note: Please see the zoning standard review table in [attachment E](#).

Police

No comments.

Airports

Thank you for the notice regarding a conditional use application for a height increase for the existing Salt Lake Valley Landfill, located at approximately 6030 W California Avenue.. This address is in the Salt Lake City's airport influence zone "C" and is listed as a area exposed to moderate levels of aircraft noise and having specific height restrictions. Salt Lake City requires an avigation easement for new development in this zone. The owner or developer should contact me at the address or email below, to complete the avigation easement if one has not already been created. This project creates no observed impacts to airport operations.

Staff Note: Recording of the required avigation easement is a condition of approval.

ATTACHMENT I: POTENTIAL MOTIONS

Staff Recommendation:

Based on the findings and analysis in the staff report, testimony, and discussion at the public hearing, I move that the Planning Commission approve the request for the proposed landfill height increase to 205' with the following conditions:

- 1. The applicant shall document that all approvals have been granted by all necessary county, state and federal agencies including the approval of a financial assurance plan sufficient to assure adequate closure, post closure care and corrective action of the facility and demonstration of compliance with the state of Utah division of solid and hazardous waste administrative rules.*
- 2. The applicant shall record an avigation easement against the property in compliance with the requirement from the Airports Department.*

Not Consistent with Staff Recommendation:

Based on the testimony, plans presented and the following findings, I move that the Planning Commission deny the request for the proposed landfill height increase due to not complying with the following standards:

(The Planning Commission shall make findings on the applicable Conditional Use standards and specifically state which standard or standards are not being complied with. Please see [Attachment F](#) for applicable standards.)