

SUNSHINE CANYON LANDFILL

January 4, 2017

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Subject: Report to the Joint Sunshine Canyon Landfill Technical Advisory Committee
SCL TAC Meeting Date - January 18, 2107

Dear Ms. Webber and Mr. Sanabria:

This report provides an update of items requested to be included in the report to the Joint Sunshine Canyon Landfill Technical Advisory Committee (TAC) for the meeting to be held on January 18, 2017.

1.0 Cell Development

1.1 Cell CC-4, Part 1

The Design Report for Cell CC-4, Parts 1 – 5 was submitted to the LARWQCB on December 16, 2015. By letter dated April 26, 2016, approval for the construction of Cell CC-4 was received (Attachment A).

Excavation and preparation of the subgrade for Cell CC-4, Part 1 took place from July – September, 2016. Liner construction commenced in October 2016 and will be completed mid-January 2017. The Construction Quality Assurance (CQA) report will be submitted to the Los Angeles Regional Water Quality Control Board for approval prior to the start of waste disposal activities in the cell. CC-4, Part 1, is an 8-acre cell that will provide 5.3M CY of disposal capacity.

2.0 Fill Sequence, Soil Usage, Stockpile/Borrow Areas and Disposal on County Top Deck

2.1 Fill Sequence

Throughout calendar year 2016, fill operations have been conducted in Cell CC-3A, Part 2, Cell CC-3B and areas on the County deck. As noted previously, fill operations commenced in Cell CC-3B, Part 1A on March 8, 2016. Disposal

operations will continue in these areas until Cell CC-4 Part 1 has been approved for disposal operations.

2.2 Soil Usage

As reported in previous TAC reports, based on daily soil tracking, approximately 30% of the site's consumed airspace was taken up by soil used for daily cover. This volume was directly related to the requirement from the LA County Department of Public Works (DPW) to place nine (9) inches of compacted soil cover at the end of each working day that could not be removed prior to the next day's operations. This requirement was followed from the end of September 2010 until October 2015 when the alternative daily cover (ADC) pilot study using a geosynthetic panel product (EnviroCover) was implemented. Approval to conduct the pilot study was obtained from the LEA and the Los Angeles County Department of Public Works (DPW) on November 26, 2014 and October 27, 2015, respectively (Attachment B). A report summarizing the results of the pilot study from October 12, 2015 to August 31, 2016 was submitted to the LEA and DPW on September 30, 2016.

Interim approval to continue the pilot study for a period of one year was received from the LEA via email dated October 11, 2016. By letter dated November 2, 2016 (Attachment C), the LEA approved the continued implementation of the ADC pilot project for an additional 12 months, e.g. to October 12, 2017. DPW granted approval for the continued use of the ADC for a period of 5 months, e.g. until March 27, 2017 by letter dated October 26, 2016 (Attachment C).

Based on soil usage logs, approximately 20.5% of site soil is now used for daily cover and projects requiring soil.

2.3 Stockpile/Borrow Areas

Placement and subsequent removal of stockpile material is an operational activity that occurs over the life of the landfill. There are three stockpile areas on site that have been designated for such purpose. These stockpile areas are shown on the figure included in Attachment D.

3.0 Landfill Gas Collection and Control System

Significant improvements to the site's landfill gas collection and control system (GCCS) have been on-going since August 2011. These improvements include the installation of vertical and horizontal gas collection wells, the installation of two new, state of the art flare systems, and a robust monitoring and operations and maintenance program. A summary of these activities is provided in the following sections.

3.1 Completed Improvements

Improvements to the site's landfill gas collection system include the installation of the following:

- 622 vertical gas extraction wells;
- 222 horizontal/ horizontal collector/ perimeter gas extraction wells;
- 18,500 linear feet of 36-inch and 24-inch perimeter header piping;
- Over 75,000 linear feet of horizontal collectors in the waste mass;
- 3,000 linear feet of perimeter liner collectors;
- Over 30,000 linear feet of lateral piping and slope collectors;

In addition, two new flare stations have been constructed and placed into operation as follows:

- Flare 9 was constructed and placed into operation in August 2012. Flare 9 is a state-of-the-art, Zink Ultra Low Emission (ZULE) flare capable of controlling 5,000 standard cubic feet per minute (scfm) of landfill gas;
- Flare 10, which is also a 5,000 scfm ZULE flare, was constructed and placed into operation in August 2013. Operation of Flare 10 commenced on August 15, 2013, which was within 90 days of permit issuance. The initial startup sequence was completed and the initial source performance test was conducted in September 2013;
- The temporary flare, which became operational in February 2012, was permanently taken out of service on August 21, 2013;
- Flare 8 was decommissioned and was physically removed in May 2015;
- As of October 27, 2016, Republic Services was notified that the Permit to Construct for Flare 11 has been tentatively approved by the SCAQMD, pending the 30-day public comment period and the 45-day review period for the U.S EPA.

3.2 GCCS Current Work and Planned Upgrades

The following activities have recently been completed or are currently in progress on the site's GCCS:

- 15,150 linear feet of horizontal collector piping was installed in 2016;

- 18 horizontal and slope collector gas extraction wells were installed in 2016;
- 33 vertical gas extraction wells were installed in 2016;
- 3,250 linear feet of 12" header, 1,600 linear feet of 18" header was installed during 2016;
- 54 new liquid extraction pumps were installed in vertical gas wells by the end of 2016;
- Approximately 55 additional liquid extraction pumps will be installed into vertical gas extraction wells during January 2017;
- 5 vertical gas extraction wells will be completed during January 2017; Approximately 55 vertical gas wells will be installed during 2017;
- Approximately 3,000 linear feet of horizontal collector piping will be installed in Cell CC-4 Part 1 during 2017;
- Approximately 3,000 linear feet of floor collectors will be installed in Cell CC-4 Part 1 in April/May 2017;
- Approximately 2,000 linear feet of 18" header will be installed along the front face of Cell CC-3B during 2017;

3.3 Landfill Gas Monitoring

3.3.1 Wellhead Monitoring

Monitoring of the site's landfill gas collection system is conducted in accordance with Federal NSPS (New Source Performance Standards) which require readings of pressure, temperature and oxygen be taken on a monthly basis from each monitoring point. Beginning in March 2011, SCL contracted with Brian A. Stirrat (BAS) and Associates to conduct weekly monitoring of the site's gas collection wells. The frequency was reduced to bi-monthly monitoring in July 2011 after system improvements had been made. This bi-monthly monitoring schedule has remained in effect.

3.3.2 Surface Emission Monitoring

Monthly surface emission monitoring (SEM) is conducted in accordance with SCAQMD Rule 1150.1 requirements. SEM monitoring consists of instantaneous and integrated monitoring conducted over an approved grid system established over the site. Each grid is 50,000 square feet or approximately 1.2 acres. The

following is a summary of the results of the instantaneous and integrated SEM conducted for the third quarter of 2016 (July, August and September 2016):

- Instantaneous SEM monitoring: the City side of the landfill had 42 locations over total of 541 grids monitored showing surface emissions over 500 ppm Total Organic Carbon (TOC); the County side of the landfill had 29 locations over a total of 419 grids that had surface emissions over 500 ppm TOC. These locations were repaired and re-monitored in accordance with SCAQMD Rule 1150.1. Each of the locations passed either the first or second 10-day re-check as allowed by Rule 1150.1;
- Integrated SEM monitoring: the City side of the landfill had 14 grids out of a total of 535 grids monitored that showed results over 25 ppm TOC. The County side of the landfill had 7 grids out of a total of 418 grids that showed results over 25 ppm TOC. The grids were repaired and re-monitored in accordance with Rule 1150.1. Each of the grids passed either the first or second 10-day re-check as allowed by Rule 1150.1.

3.4 Perimeter Probe Monitoring

Rule 1150.1 monitoring requires monthly monitoring of the site's perimeter probes. There were no probes that exceeded the regulatory threshold of 5% methane (%CH₄) during the first, second or third quarters of 2016.

4.0 Development of Gas-to-Energy Facility (City/County)

Sunshine Gas Producers, L.L.C. (SGP) is the owner and operator of the turbine power plant. The power plant began commercial power generation on September 1, 2014 and currently places approximately 18.5 MW of renewable energy on the grid. The plant consists of five (5) Solar Mercury turbines rated at 4.6 MW each. Significant milestones related to this project include the following:

- Air permit issued to DTE Biomass Energy in April 2012;
- Building permit received from LA County in June 2013;
- SCE began construction of their substation in August 2013; construction was completed in November 2013;

- Four new 66kV line poles were installed in October 2013 and stringing of the line was completed in December 2013;
- Commercial operations of the power plant began on September 1, 2014.

5.0 Groundwater Monitoring (City/County)

The groundwater monitoring program approved by the LA RWQCB for Sunshine Canyon Landfill is based on quarterly and semi-annual monitoring of 18 groundwater monitoring wells. Samples are analyzed by an EPA-approved analytical laboratory for more than 100 individual potential contaminants as specified by the approved monitoring program. Statistical analyses are used to identify any trends or changes in concentrations of constituents that could indicate a potential release from the site. In addition to the groundwater wells, samples are collected from sub-drains and lysimeters. Reports of sampling and monitoring activities, including all analytical results, are submitted to the LA RWQCB on a semiannual and annual basis.

5.1 Summary of Results of First Semi-Annual Groundwater Monitoring Period of 2016

During the first semiannual 2016 monitoring period, environmental monitoring was conducted on a quarterly basis during March (first quarter) and June (second quarter). The results were generally similar to past monitoring event results, as most analyte/well pairs were previously in tracking mode. Only vinyl chloride at well MW-14 was confirmed at concentrations that exceed the WQPS during the first quarter monitoring; the concentration of vinyl chloride at well MW-14 did not exceed the WQPS during the second quarter monitoring.

During the first semiannual 2016 monitoring period, several VOCs were detected in the first and second quarter samples collected from Subdrain N and Combined Subdrains. These findings are consistent with historical results, and as a result, the liquids collected at the subdrains are conveyed to the water treatment system prior to reuse.

Lysimeters LY-6 and LY-7 are sampled on a quarterly basis, lysimeter LY-6 was dry during both sampling events. The pump in lysimeter LY-7 was inoperable during the second quarter 2016 monitoring period therefore this location could not be sampled. The first quarter 2016 sample from lysimeter LY-7 contained six VOCs at quantifiable concentrations. The types of concentrations of detected VOCs were similar to historical results for this monitoring point.

6.0 Leachate Collection and Treatment System (City/County)

Leachate is collected in the leachate collection system installed beneath the City and County portions of the site. Leachate is collected in a gravel-packed riser sump at the low point of each area, and pumped via extraction pumps to the influent tank at the leachate treatment facility (LTF). The site produces about 10,000 – 15,000 gallons per day (gpd) of leachate.

LTF Process Description

The LTF treatment system consists of filters and granular activated carbon (GAC) vessels. The leachate first passes through the bag filter units, to remove suspended matter from the leachate and protect the GAC media from clogging which could reduce the treatment capacity and performance.

The filtered leachate then undergoes treatment in three GAC vessels, which are configured in series. The second and third GAC vessels serve as polishing units, ensuring effective removal of low level VOCs. The effluent routinely meets the WDR limits for VOCs.

The treated effluent from the third GAC vessel is routed to the effluent tank where it is conveyed by gravity to the gray water tank at the gray water treatment system. The treated effluent is blended with other site waters. The treated effluent from the gray water system is then pumped to two storage tanks; one 265,000 gallon tank and one 100,000 gallon tank. These tanks are used for temporary storage prior to the treated effluent being used on-site for dust control and irrigation. The gray water used onsite routinely meets the WDR limits, and is in compliance with the site's WDRs. Approximately 120,000 -150,000 gpd is processed in the gray water treatment system and re-used on site for dust control.

6.1 Upgrades to Aboveground Collection System

A comprehensive upgrade to the aboveground liquid collection/discharge system for the removal of liquids from vertical gas collection wells affected by liquids is currently in progress. This upgrade includes the purchase and installation of a new air compressor and the design and installation of the piping system to connect the liquid extraction pumps to the discharge system. This upgrade to the collection system will increase the system capacity to allow the collection of an estimated 300,000 to 400,000 gallons of liquid per month. Completion of this work will be in late January 2017.

7.0 Surface Water Management System, Including Drainage and Erosion Control (City/County)

Management of surface water from the site and the substantial upland non-landfill area that drains to it is a major part of the site's environmental compliance and operational programs.

Functions of the surface water management system include the following:

- Prevent or minimize erosion from the landfill surface;
- Prevent discharge of sediments from the site in excess of regulatory standards;
- Maintain peak stormwater discharges at levels no greater than the pre-landfill condition of the site; and,
- Manage the 100-year, 24 hour storm as required by Title 27 of the California Code of Regulations (CCR).

The surface water management system at Sunshine Canyon has been designed according to requirements of CCR Title 27 and the County of Los Angeles. Its major components were evaluated in the Joint Technical Document for the City/County Landfill, and determined to be in conformance with all requirements.

7.1 Existing Stormwater Management System

The existing surface water management system at Sunshine Canyon consists of three subsystems of drainage controls:

- Permanent Perimeter Drainage System;
- Interim Interior Drainage System; and
- Temporary Erosion and Sediment Control Measures

Elements of each system are described below. Elements of permanent drainage facilities at the site as well as some interim facilities such as concrete drainage channels, are shown on the figure included in Attachment E.

7.1.1 Permanent Perimeter Drainage System

The perimeter drainage system is comprised of the major permanent control systems for the landfill. It intercepts all run-on of surface water from non-landfill areas and diverts it away from the landfill area, and manages runoff from landfill areas where refuse elevations are above the site perimeter drainage elevations. Existing elements of the perimeter system include the following, all of which have been designed to handle the peak discharge from a 100-year, 24-hour storm:

- Sedimentation Basin D, located at the far north end of the County area, which receives run-on from the native canyons north of the landfill area;
- Sedimentation Basin B, located on the east side of the County area, which receives runoff from the native East Canyon area and from portions of the landfill area. Basin B is concrete-lined and has a discharge structure designed to level out peak discharges of stormwater;
- Sedimentation Basin A, located on the west side of the County area, which receives run-on from slope and canyon areas west of the landfill area, and runoff from portions of the landfill area on the County side. Basin A is lined with concrete;
- East Perimeter Drainage Channel is currently completed from Basin D to the Terminal Basin. The final phase of this channel improvement was completed in September 2012;
- Terminal Sedimentation Basin, located near the site entrance at San Fernando Road. All surface water discharge from the site passes through this concrete-lined basin, which is designed to manage the peak flow from the 100-year storm and discharge no greater flow than the pre-landfill condition of the site.
- West Perimeter Drainage Channel is currently completed from Basin D to Basin A. It presently discharges to the interim interior drainage system, as described in the following section. When completed, the West Perimeter Drainage Channel will collect all drainage from the west side of the Closed City Landfill and discharge directly to the Terminal Basin. Approval of the Revised West Drainage Channel Master Plan was received from the LARWQB by letter dated October 24, 2016 (Attachment F). Comments on the West Drainage Channel Master Plan were received from DPW on June 15, 2016 (Attachment F). These comments will be addressed in the first or second quarter of 2017.

7.1.2 Interim Interior Drainage System

Until all areas of the City/County Landfill have been developed and filled to elevations above the site perimeter, run-off from areas of the site interior must be managed in a system of basins and channels discharging through the center of the site to the Terminal Basin. At present, this includes the entire west side of the Closed City Landfill, currently areas of Cells CC-1, CC-2 and CC-3, and most of Cell A. The interim interior

system is modified on an annual basis to accommodate ongoing construction activity. System elements in place include the following:

- Significant improvements have been completed on the interim drainage channel running from Basin A to the scalehouse area. The initial segment of the asphalt and concrete-lined channel conveying discharge from Basin A along access roads to a point approximately 700 feet below the entrance to the Administration area remains as is; improvements to the remainder of this channel have been made as follows:
 - Installation of approximately 2,100 linear feet of trapezoidal channel to replace plastic-lined channels; this channel has been completed with concrete and asphalt.
 - Installation of an additional 1,200 linear feet of trapezoidal channel along the temporary Phase 1 By-Pass Road alignment; this channel is completed with concrete and asphalt;
 - Installation of a box culvert to direct discharge from the trapezoidal channel along the temporary Phase 1 By-Pass Road to a channel that discharges to the Terminal Basin.
- The drainage system for the Closed City Landfill features one large shallow sedimentation basin and a series of semi-permanent and temporary channels that collect runoff and convey it to the primary interior drainage channel described above. In the future, this system will discharge to the West Perimeter Drainage Channel.

7.1.3 Temporary Erosion and Sediment Control Measures

Temporary erosion control systems are installed on an annual basis in advance of the rainy season. A drainage plan is prepared annually which includes a variety of measures that not only reduce soil erosion but also reduce peak flows by slowing down and leveling discharges from the site. These measures include the following:

- Removal of deposited silt in site basins and drainage channels;
- Removal of deposited silt in Terminal Basin;
- Removal of rock filter around risers in Terminal Basin and replacement with new rock filter;
- Removal of old filter material around risers in Terminal Basin and replacement with new filter material;
- Grading benches to promote positive drainage;
- Removal of vegetation from pipes and inlets;
- Installation of temporary geosynthetic downdrain channels and chutes where required on the active fill area slopes;
- Installation of a geosynthetic-lined stormwater retention basin;

- Installation of a grated road crossing on paved entry road to separate runoff flows from vehicle traffic;
- Installation of gabion check dams in the concrete-lined channel adjacent to the haul road from the scalehouse area to the concrete box channel and also along the fire road on City South;
- Installation of a gabion check dam in the Terminal Basin;
- Installation of Filtrexx compost rolls along the toe of the slopes of City South and toe of the slope of Cell CC-3B adjacent to the haul road;
- Installation of erosion control blankets on the finished slopes south of Cell CC-3B;
- Construction of an earthen berm and sediment basin south of active fill area CC-3B and two concrete-lined channels to manage stormwater flow from this basin to the Terminal Basin;
- Grading of the finished slope for future Flare 11 including the installation of straw wattles, jute matting and hydroseeding.

Temporary erosion and sediment control measures are installed by October 1st each year. After each rain event, erosion and sediment control measures are inspected and evaluated, and repairs are made as needed prior to the next rain event.

8.0 Current Odor Control Mitigation Measures (City/County)

Odor control mitigation measures continue to be implemented as follows:

- SCL has worked with one major customer whose wastestream has been identified as odorous to delay the receipt of their containers until after 9 AM. This practice went into effect on February 1, 2012 continued until mid-August 2012 when it was agreed that these trucks could enter the site at 8:30 AM due to routing of these loads. This practice remains in effect;
- Procedures for the handling and management of odorous loads at Republic-operated transfer stations have been developed and the Operations Supervisors at the transfer stations have been trained on these procedures. These procedures involve identifying odoriferous loads at the transfer stations and notifying SCL personnel when these loads are coming into the site so they can be properly managed. The procedures also call for not accepting the loads if they are deemed too odorous to be handled at SCL. These procedures remain in effect;
- The procedures for the management of odorous loads at the site have been developed and the site scale house operators have been trained on these procedures. The procedures include identifying loads that register a '4' on SCAQMD's odor classification scale and notifying the site supervisor on duty so the load can be immediately taken to the working face, deposited and covered with a layer of soil. As indicated previously, loads are not accepted if they are

deemed too odorous to be handled at SCL. These procedures have remained in effect;

- The procedures for the minimization of odors and emissions during installation and trenching of vertical wells and horizontal collectors remain in effect. These procedures are being followed by all SCL contractors when they are performing work that involves the installation of wells and/or trenching for the installation of horizontal collectors;
- The four DustBoss systems remain in use;
- Operation of vapor odor control systems;
- Operation of a misting system on the wind fences that are placed at the working face. The misting system is operated every morning from 6 AM to 10 AM.

Additional odor mitigation measures have been implemented as follows:

- Purchase and operation of seven (7) odor mitigation units (Buffalo Monsoons). These units use water mixed with neutralizer and are placed at the working face to create a misting effect;
- Installation of an additional 2,500 linear feet of new vapor system piping and controls.

8.1 SCAQMD Stipulated Order for Abatement

On December 15, 2016, a Stipulated Order for Abatement (Order) (Case 3448-14) was approved by the SCAQMD Hearing Board. As of the date of this report, the Order has not been signed by SCAQMD or Republic Services, however, the effective date of the Order is December 15, 2016. The Order requires Republic Services to implement programs and processes for the purpose of mitigating conditions contributing to the alleged odor nuisance. The following presents a brief summary of each of the conditions contained in the Order.

Condition 1: Requires the submittal of a Traffic Mitigation Program that establishes a program to address unnecessary truck trips and reduce queuing of trucks outside the Facility potentially resulting from the change in operational hours.

Status: The Traffic Mitigation Program was submitted to the Los Angeles City Department of Transportation, SCAQMD, LEA and DPW on December 30, 2016.

Condition 2: Prohibits the unloading/dumping of transfer trailer loads from all Republic transfer stations and from all third parties, including the City of Los Angeles Bureau of Sanitation, from occurring any earlier than 9:00 AM during weekdays and Saturdays.

Status: Effective December 19, 2016, all Republic Services, City of Los Angeles and other third-party transfer trailers were prohibited from coming to the landfill before 9:00 AM weekdays and Saturdays.

Condition 2.a: Requires Republic Services to provide funding for an independent third party odor monitor at and near Van Gogh Charter School during the hours of 6:00 AM to 9:00 AM. This third party monitor will report directly to the District.

Status: A vendor has been contacted to provide a proposal for conducting the third party odor monitoring at and near Van Gogh Charter School during the hours of 6:00 AM to 9:00 AM. It is expected this monitoring will begin by February 15, 2017.

Condition 3: Requires the implementation of the Food Waste Diversion Program proposed by Republic Services for the purposes of increasing the diversion of Food Waste and organic materials from disposal at Sunshine Canyon Landfill. In addition, the Food Recovery Program proposed by Republic Services will be implemented.

Status: Republic is working with the organization Food Finders to implement the food waste diversion requirement of this condition.

Condition 4: Requires the continued use of the Alternative Daily Cover (ADC) in lieu of using nine inches of daily compacted soil cover.

Status: Approval for the continued use of the ADC has been obtained from the LEA and DPW (Section 2.2). Republic will continue to use the ADC in accordance with the approved protocols.

Condition 5: Requires the implementation of the intermediate cover enhancement pilot program as directed by the SCL LEA.

Status: Approval for the implementation of the intermediate cover enhancement pilot program (ICE) was received from the LEA on May 16, 2016. Approval from DPW was received on

December 20, 2016. These approval letters are included in Attachment G. The ICE project is planned to be implemented in January 2017, pending weather.

- Condition 6: Requires conducting the intermediate cover program in a manner “to be harmonized and consistent” with all local land use requirements including the requirements of Condition 44A of the County’s CUP, the IMP and the City of Los Angeles “Q” conditions.

Status: DPW’s approval includes a condition that as part of the ICE project, the impact to the growth of vegetation must be studied and evaluated. This evaluation will be conducted throughout the ICE project period.

- Condition 7: Requires the submittal of monthly Rule 1150.1 surface emission monitoring results for the grids that are included in the intermediate cover enhancement pilot program.

Status: Monthly Rule 1150.1 surface emission monitoring results will be submitted to SCAQMD for the grids included in the ICE project. This reporting will commence as soon as the ICE project has been implemented.

- Condition 8: Requires the placement of additional soil cover on a minimum of at least twenty (20) intermediate cover areas (grids) that have exceeded 25 ppm (methane) for integrated surface emission monitoring at least once during the last three (3) quarters.

Status: Implementation of this work is scheduled for January – February 2017.

- Condition 9: Requires a proposal to be submitted for additional methods/procedures for upgrading and improving the additional areas of the landfill that have intermediate cover.

Status: This proposal is currently being developed with a scheduled submittal date of March 13, 2017.

- Condition 10: Requires expanding the application of the intermediate cover upgrades to additional surface emission monitoring grids if data or other performance metrics demonstrate cover performance improvements.

Status: This proposal is currently being developed with a scheduled submittal date of March 13, 2017.

Condition 11: Requires dewatering of wells impacted by liquids, submittal of monthly reports, submittal of a methodology and monitoring procedure to determine the level of dewatering within each impacted well.

Status: Dewatering of gas wells impacted by liquids has been on-going. The methodology and monitoring procedure to determine the level of dewatering within each impacted well has been submitted to SCAQMD.

Condition 12: Requires integrity testing of all vertical gas wells to evaluate the performance of each gas well.

Status: Integrity testing of all vertical gas wells began in early December 2016. The completion of this testing including the reporting is scheduled for March 2017.

Condition 13: Requires maintaining records related to compliance with Condition 12.

Status: Maintenance of records related to the well integrity testing is on-going.

Condition 14: Requires submittal of a proposal for additional best management practices to supplement existing best management practices intended to control and treat fresh trash odors. The proposal is to be submitted to the District within sixty (60) days of the issuance of the Order.

Status: This proposal is currently being developed with a scheduled submittal date of February 13, 2017.

Condition 15: Requires submittal of an updated Odorous Load Management Plan within thirty (30) days of the receipt of the SCL-LEA's finding and recommendations of programs for best management practices for odor mitigation at transfer stations.

Status: The LEA's findings and recommendations for best management practices for odor mitigation at transfer stations has not been received as of the date of this report.

Condition 16: Requires an assessment of the feasibility of installing physical barriers and or dust/odor containment structures within ninety (90) days of the issuance of the Order.

Status: This proposal is currently being developed with a scheduled submittal date of March 13, 2017.

8.2 Los Angeles County Department of Regional Planning NOV issued October 25, 2016

On October 25, 2016, the Los Angeles County Department of Regional Planning (DRP) issued a violation for alleged non-compliance with required requests by DPW under Condition 45.N of Conditional Use Permit (CUP) 00-194 (Code Case RPZPE2016002500)(Attachment H). This violation was issued based on a referral from DPW based on DPW's assessment of multiple submittals from Republic Services that DPW deemed "non-responsive".

By letter dated November 1, 2016, Republic Services responded to the NOV and detailed the responses provided to DPW and reiterated Republic's commitment to work with DPW to provide the requested information. Republic's November 1st response is also included in Attachment H. At a meeting held on November 28th with DPW and Republic personnel as well as Republic consultants, each item requested by DPW was discussed as well as the status of each submittal. A copy of the November 28th meeting notes is also included in Attachment H.

9.0 Revegetation Plans and Recent Hydroseeding Efforts on Temporary Slopes and Stockpiles (City/County)

A quarterly vegetation report is submitted which provides discussions on the vegetation efforts and any hydroseeding activities conducted during the quarter. The vegetation report for the first, second and third quarters of 2016 were submitted on April 27, 2016, August 2, 2016 and November 7, 2016, respectively.

Hydroseeding activities were conducted in November 2016.

10.0 Venturan Coastal Sage Mitigation Plan (City's M.4.4.1 (60) &(61))

As reported in previous TAC reports, a landscape architecture and planning contractor, Architerra Design Group (Architerra), was hired to design and develop a habitat restoration and landscape improvement plan for the City South C Trial Plot. This project is intended to be a pilot or demonstration project to determine the most effective course of action for re-vegetation of the closed deck and slopes area on the City South area of the site. Work on this project began in the first quarter of 2013 with construction/planting

activities completed in May of 2013. Weekly activities have been conducted in the pilot project area since that time consisting of maintenance, selective pruning and repairs to the irrigation system when needed.

An assessment of the site's sage mitigation areas, including the pilot project area, is conducted by a qualified biologist on a quarterly basis and is included in the quarterly vegetation reports. The quarterly monitoring consists of an overall assessment of the site's sage mitigation areas (City and County mitigation areas) as well as a sampling and assessment of the pilot project area in accordance with the procedure presented in the First Quarter Vegetation Report entitled "*Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill*".

Many positive observations have been noted over the course of the pilot project including the following:

- October 2016 marked the end of the first year since the irrigation system was shut off. From October 2015 – October 2016, there was a reduction of rapid growth within the Saltbush community and limited weed establishment;
- Some new seedlings of Coyote Bush have been observed in the bioswale area;
- Many of the Coastal Sage Scrub (CSS) species have emerged from the canopy of the Saltbush and are benefiting from the selective pruning. Many plants are flourishing with new growth and bloom due to the selective pruning which has helped these plants expand their growth;
- The drainage swales appear to have the most biodiversity of plant species and continue to expand outward helping to fill in more of the deck areas;
- Ants were observed at the east of the trial site;
- Overall, the trial site appears healthy with blooming CSS natives and new seedlings emerging from the winter's rain. The site continues to fill in on cover density and is expanding in biodiversity of species and quantities of CSS plants;
- Numerous wildlife species have been observed in the pilot area including spotted towhee, California towhee, black phoebe, western kingbird, sage sparrow, song sparrow, northern mocking bird, Anna's humming bird, and California quail;
- There is evidence of small mammals including rodent burrows rabbit scat, and deer tracks, and reptiles including side-blotched lizard, western whiptail, and Western fence lizard. There have been observations of Mule Deer in the trial site area.

10.1 Proposed Phase 2 Coastal Sage Scrub Pilot Mitigation Project

On August 15, 2016, a proposal for a second phase of the Venturan Coastal Sage Scrub (CSS) mitigation was submitted to the TAC. This proposal presented two options to be considered for the Phase 2 CSS mitigation. A figure showing the locations of the two options is provided in Attachment I.

10.1.1 Option #1 – Deck B

This option would be implemented on Deck B of City South. This option includes approximately 9.5 acres with the majority of the area being relatively flat although there are some shallow slopes along the edges. The area contains established CSS which would be protected during the construction of the area.

10.1.2 Option #2 – Deck A Slopes

This option includes approximately 3 acres of 2:1 slope area location just north of the on-site nursery. There are isolated pockets of CSS vegetation within this area which would be protected during the construction of the area.

Option #1, Deck B, has been selected to be implemented during 2017.

10.2 Revegetation of County Sage Slope

Sage slope is currently being prepared. This report will present the results of previous revegetation activities, soil sampling results and other relevant information pertinent to providing a recommendation with respect to the revegetation of the County Sage slope.

11.0 Chatsworth Mitigation (City Q.C.9)

The ordinance amending Section 12.04 of the Los Angeles Municipal Code has not been finalized as of the date of this report. Comments on the draft Ordinance were received from the Army Corps of Engineers (ACOE) on April 17, 2015 and forwarded to the City the same day. A conference call was held on July 7, 2016 to discuss the status of the draft Ordinance. Based on that call, Republic Services proceeded with work to develop an Addendum to the Mitigated Negative Declaration (MND) as a supporting document to the Ordinance. As of the date of this report, the following work has been done on the MND:

- Contractors for the three areas of the MND that require updating (per ACOE) were selected:
 - Biological Resources – Mike Zander and Associates (Zander)
 - Cultural Resources – John Minch and Associates (JMA)
 - Air Quality – TetraTech
- Zander and JMA conducted their field surveys on November 17th and 18th;
- On November 29th, JMA informed Republic Services personnel that a Native American consultation is recommended. Julie Van Wagner (LA Department of Water and Power (DWP)) was notified on December 2nd, however due to the

holidays, a discussion regarding the consultation has not been conducted with DPW personnel.

As of the date of this report, the Addendum to the MND has not been finalized. It is expected this document will be finalized during the first quarter of 2017, however, this is dependent on the schedule to conduct the Native American consultation.

12.0 Status of Alternative Fuels Vehicles (City/County)

SCL continues to fuel the E-85 vehicles with Ethanol 85 approximately once a week at a fueling station located at 12881 Encinitas Avenue, Sylmar. Currently the site owns and operates eleven vehicles that use E-85 fuel.

In 2009, six Tier 3 engines were fitted with additional Diesel Particulate Filters (DPFs) to help reduce emissions. In 2014, one (1) unit was retrofitted with an LPG engine to reduce emissions; one (1) unit was retrofitted with an LPG engine in 2015; one (1) unit currently uses ultra-low sulfur diesel fuel. All other DPFs have been eliminated due to fire hazards or problems associated with the Electronic Control Module (ECM). According to SCL's research, there have been no advancements in technology for alternative fuel for heavy machinery.

13.0 Backup Generator (City/County)

As reported in previous TAC reports, SCL is in compliance with CUP Condition 83. Generators needed to provide power to the landfill gas flaring system have been identified and secured by a contractual arrangement with Quinn Power Systems.

The transfer switches for Flares 1, 3, 9 and 10 have been installed. One generator has been purchased and is currently staged on-site, however, a permit for this generator has not been received. The permit applications were submitted to the SCAQMD on March 25, 2013.

14.0 Soil Importation

On July 28, 2015, Republic Services submitted a request to LA County DPW for approval to import clean soil that will be made available from the Los Angeles County's Devil's Gate Reservoir Sediment Removal and Management Project located in Pasadena, California. By letter dated May 4, 2016, DPW approved the importation of this material to Sunshine Canyon Landfill (Attachment J).

By email dated September 12, 2016, Mr. Ken Zimmer (Senior Civil Engineer, Water Conservation Planning, LA County Department of Public Works) informed Republic Services personnel there would be a delay in the Devil's Gate Reservoir Sediment Removal Project and stated the LA County Flood Control District would plan on sending a portion or all of the material from the Pacoima Spreading Grounds to Sunshine Canyon Landfill.

15.0 Current and Planned Projects Outside the Disposal Area

Two projects require work to be conducted outside the site's current grading limit:

- SCE Power Pole Relocation Project;
- Future Cell CC-4 Stability Buttress

Grading for a portion of the SCE Power Pole Relocation Project started in March 2016 and was completed in early July 2016. Grading for the CC-4 stability buttress is planned for 2018. As part of the approvals for these projects, a Revised Exhibit "A" ("A-2") is required to be submitted and the revised grading limits approved by the Los Angeles County Department of Public Works (DPW) and the Los Angeles County Department of Regional Planning. The Revised Exhibit A application was submitted to DPW and Regional Planning on November 16th and November 21st, respectively. As of the date of this report, no comments have been received regarding the application.

The following sections present summaries of the two projects.

15.1 SCE Power Pole Relocation Project

This project started in March 2016 and was completed in July 2016. Approximately 4,200 feet of the 66kV subtransmission line running through the center of the landfill was removed and relocated around the perimeter of the County portion of the site. The completion of this project ensured that this high voltage subtransmission line will not interfere with landfill operations and also ensures compliance with the subtransmission line clearance requirements found in Commission General Order (GO) 95. The decision granting SCE a permit to construct the project was issued by the California Public Utilities Commission (CPUC) on April 2, 2014.

As part of the approval for this project, a Revised Exhibit A is required to be submitted. The revised Exhibit A Application including a proposed Survey Monument Plan was submitted to the Los Angeles County Department of Regional Planning and DPW on April 28, 2016.

15.2 Future Cell CC-4 Stability Buttress

CC-4 will be constructed in the southwest portion of the site along the southwestern boundary of Phases I and II-B and west of CC-2 and CC-3A Part 1. An earthen stability buttress is being proposed in order to construct the west slope of the CC-4 liner unit (Future Cell CC-4, Part 3). The rationale for the design of the proposed stability buttress is included in the Design Report for CC-4 which has been submitted to the LARWQB. By letter dated April 26, 2016, the LARWQCB approved the design report for Cell CC-4, Parts 1-5 (Attachment A).

Comments on the CC-4 stability buttress were received from DPW in letters dated October 19, 2015 and January 13, 2016 and also discussed during meetings held with DPW personnel on December 13, 2015 and March 1, 2016. DPW comments pertain to the proposed analysis that indicated the slope stability factors of safety (FS) for temporary construction slopes could be less than the County's minimum standard of 1.25. Based on these comments, an addendum report was submitted to DPW on April 6, 2016 detailing the mitigation recommendations and supporting analysis to substantiate that the proposed Cell CC-4 development grading will meet or exceed DPW's minimum slope stability FS criteria for temporary slopes (e.g. 1.25). Additional comments were received from DPW on June 15, 2016; an additional geotechnical report was submitted to DPW on July 11, 2016 and responses to comments from DPW's Building and Safety and Water Resources Divisions were submitted on August 11, 2016.

Additional comments were received from DPW on October 25, 2016. Responses to these comments were submitted to DPW on November 17, 2016. As of the date of this report, no further comments have been received from DPW regarding the CC-4 Stability Buttress.

16.0 Current Monitoring Activities

The following monitoring activities were conducted throughout 2016:

- Construction Monitoring - Grading for SCE Power Pole Relocation Project and CC-4 Part 1 Subgrade Excavation:
Scope: Archaeological and paleontological monitoring, Tree Survey
Consultant: John Minch and Associates (JMA)
- Third Party Mitigation Monitoring
Scope: Third-party Mitigation Monitoring
Consultant: UltraSystems
- Surface Emission Monitoring
Scope: Monitoring required by SCAQMD Rule 1150.1 (Surface Emission Monitoring, Perimeter Probe Monitoring, etc.)
Consultant: RES Environmental
- Biological Monitoring
Scope: Coastal Sage, Oak Tree and Big Cone Fir Mitigation Monitoring
Consultant: John Minch and Associates (JMA)
- Ambient Air Monitoring
Scope: Third-party Ambient Air Monitoring
Consultant: Sonoma Technology, Inc. (STI)

- Gas Well Monitoring

Scope: NSPS Monitoring
Consultant: TetraTech/Brian A. Stirrat and Associates (TetraTech-BAS)

Please note that off-site odor monitoring conducted in nearby neighborhoods is conducted by Republic Services' employees.

17.0 Status on Work Plan for Intermediate Cover Sampling and Soil Testing

Soil sampling for the Intermediate Cover Sampling and Soil Testing project was conducted by a third-party in March 2016. Soil samples were collected from 30 locations at the landfill in accordance with American Society for Testing and Materials (ASTM) D1587 – Standard Practice for Thin-Walled Tube Sampling of Fine-Grained Soils for Geotechnical Purposes. The results of the soil testing were submitted to the LEA on May 16, 2016. A copy of the report is provided in Attachment K.

18.0 Response to Third Party Mitigation Monitor Observations

UltraSystems provides the third party mitigation monitoring as required by Q Condition C.12.c. UltraSystems personnel perform monitoring visits in order to observe operational site activities and determine compliance status with conditions and/or mitigation measures. After each site visit, UltraSystems and Republic personnel meet to discuss the findings and observations.

UltraSystems personnel have noted two specific items after the majority of their site visits: (1) Debris deposited along the site of roads, and (2) the condition of the block retaining wall on San Fernando Road.

Debris Deposited Along the Site of Roads

UltraSystems personnel inform Republic personnel of the nature of debris (e.g. mattresses, construction debris, etc.), and the location(s) when it is observed during their site visits. If the debris is within 1.5 miles of the landfill, Republic operations staff is notified and the debris is picked up and taken back to the landfill for disposal. This is in accordance with the facility's neighborhood survey plan as required by CUP Condition 48. A copy of the plan is included in Attachment L. If the debris is outside of the 1.5 miles of the landfill, the appropriate agency is notified (e.g. the Los Angeles City Bureau of Sanitation) of the location so the material can be picked up for proper disposal.

Retaining Wall Along San Fernando Road

The block retaining wall along San Fernando Road was constructed in 2006. UltraSystems personnel have informed Republic that there has been movement of the blocks likely due to the accumulation of dirt and small rocks behind the wall. UltraSystems has recommended the integrity of the wall be evaluated and repairs made to the wall to prevent a potential failure.

Republic personnel have contacted a consultant who has evaluated the portion of the block wall impacted by dirt and rocks. There is an approximately 150 foot section of the wall that is impacted. It is planned to have the dirt and rocks cleaned out in the first quarter of 2017, however this may be impacted by The Gas Company's pipeline project that is currently underway in San Fernando Road. Due to the Gas Company's work, a lane closure remains in effect which has impacted the flow of traffic directly in front of the landfill entrance. Because the removal of the dirt and rocks behind the block wall will require a lane closure permit from the City of Los Angeles, this work will not be started until the Gas Company has completed the portion of their project directly in front of the entrance to the landfill to avoid any additional impacts to traffic on this busy road. Once the dirt and rocks have been removed, the entire wall will be inspected to determine if any additional work is required.

19.0 Recent Landfill Activities and Planned Activities for Next Six Months

Recent activities conducted at the landfill are discussed in previous sections and include the following:

- Installation of new vertical gas wells and associated piping (23 wells installed in April – May 2016);
- Installation of horizontal collectors in Cell CC-3A;
- Installation of floor collectors in Cell CC-3B, Part 1A;
- Continued implementation of ADC Pilot Project;
- Continued maintenance of City South Coastal Sage Mitigation Area;
- Grading activities for the pads and access roads for the SCE power pole relocation project. Completion of the installation new power poles (by SCE) and removal of the 66kV transmission line that bisected the landfill;
- Completion of the grading activities for the pad for future Flare 11;
- Excavation of subgrade for Cell CC-4 Part 1 and liner activities;
- Upgrade to aboveground leachate collection system.

Planned activities for the first and second quarters of 2017 include:

- Activities to respond to SCAQMD Abatement Order conditions – please refer to Section 8.1;
- Installation of Flare 11;

- Implementation of the Intermediate Cover Enhancement (ICE) Project;
- Continued implementation of the ADC pilot project;
- Planning activities for the Phase 2 Coastal Sage Scrub Pilot Mitigation Project;
- Continued maintenance of City South Coastal Sage Mitigation Project area;
- Continued implementation of the ADC pilot project.

Please do not hesitate to contact me at (818) 362-2072 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Rob Sherman". The signature is fluid and cursive, with a long horizontal stroke at the end.

Rob Sherman
General Manager
Sunshine Canyon Landfill

Cc: Ly Lam, City Planning
Nick Hendricks, City Planning
Maria Masis, LA County Regional Planning
Martins Aiyetiwa, County of Los Angeles, Department of Public Works
David Thompson, SCL-LEA Program Lead
Maurice Pantoja, SCL-LEA

ATTACHMENT A

Los Angeles Regional Water Quality Control Board

April 26, 2016

Ms. Patti Costa, Environmental Manager
Sunshine Canyon Landfill
14747 San Fernando Road
Sylmar, CA 91342

APPROVAL OF PHASE CC-4, PARTS 1 – 5, DESIGN REPORT, SUNSHINE CANYON CITY/COUNTY LANDFILL, SYLMAR, CALIFORNIA (ORDER NO. R4-2008-0088, FILE NO. 58-076)

Dear Ms. Costa:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), has received from you a document titled *Design Report, Phase CC-4, Parts 1 – 5, Sunshine Canyon Landfill* (Design Report) that was prepared by Geo-Logic Associates for Republic Services (Discharger), dated September 2015, and submitted to the State Water Resources Control Board GeoTracker System on December 16, 2015. The Report was submitted for the construction of Phase CC-4 liner system at the Sunshine Canyon City/County Landfill (Landfill), which is regulated under waste discharge requirements (WDRs) included in Order No. R4-2008-0088 adopted by this Regional Board on October 2, 2008. The Design Report provides the design and construction information of an approximate 55-acre area within the permitted footprint of the Landfill, including liner and leachate collection systems, subdrain system, grading plans, and slope stability analyses.

Regional Board staff has reviewed the Design Report and found that the proposed liner system design meets the requirements of the WDRs and standards described in California Code of Regulations, title 27, section 20310 et. al. The Design Report is therefore approved. During the proposed landfill construction, if any revision of the Design Report is necessary, the Discharger must submit an amendment to the Design Report, at least 90 days prior to the construction involved the revision, to the Regional Board for the review and approval of Regional Board staff.

In accordance with Requirement D.9 of the WDRs, prior to the start of construction of any containment structure, a geologic map of the final excavation grade shall be prepared for review, approval, and confirmation in the field by Regional Board staff. A final construction quality assurance (CQA) report, including drawings documenting “as-built” conditions, shall be submitted within 60 days after the completion of each part or subpart of liner construction.

A public notice letter regarding this approval was sent to interested parties on March 15, 2016, to meet General Provision No. M.22. of the WDRs, which states: “*During oversight of this Order, wherever the Executive Officer is authorized to grant any approval under a particular provision of this Order, the Executive Officer is directed to assess if there is controversy associated with the decision following public notice and, if so, bring the decision to the Regional Board for approval.*” The deadline for submitting comments regarding this matter was April 14, 2016. During the period, we received an email from Mr. David Nugyen of the County of Los Angeles Department of Public Works (DPW) (copy attached) that provides comments regarding the

Design Report. The email requested that the Regional Board's approval of the Design Report be in conjunction with the approvals and clearances of the DPW on grading and drainage design of the proposed liner construction. In accordance with Requirement M.3. of the WDRs¹, approval of the Design Report by the Regional Board does not release you from the responsibility of complying with any other laws and regulations that may be enforced by the DPW or other regulatory agencies.

If you have any questions or need additional information, please call Dr. Wen Yang, Chief of Landfill Disposal Unit, at (213) 620-2253.

Sincerely,


Samuel Unger, P.E.
Executive Officer

Enclosure

Cc: Leslie Graves, Division of Water Quality, State Water Resources Control Board
Michael Wochnick, California Department of Resources Recycling and Recovery,
Sacramento
Gerardo Villalobos, Los Angeles County, DPH, Baldwin Park
Martin Aiyitiwa, Los Angeles County Department of Public Works, Alhambra
David Thompson, City of Los Angeles, Environmental Affairs Department
Ted Kowalczyk, South Coast Air Quality Management District, Diamond Bar
Richard Slade, Upper Los Angeles River Area Watermaster
Mitchell Englander, Councilmember, 12th District, City of Los Angeles
Wayde Hunter, North Valley Coalition, Granada Hills
Wayne Aller, Knollwood Property Owners Association, Granada Hills
Becky Bendickson, Granada Hills North Neighborhood Council
Kim Thompson, Granada Hill North Neighborhood Council
Wayne Adelstein, North Valley Regional Chamber of Commerce
Ralph Kroy, LA City Sunshine Canyon Landfill Community Advisory Committee

¹ Requirement M.3. of the WDRs states: "These requirements do not exempt the Discharger from compliance with any other current or future law that may be applicable. They do not legalize this waste management facility, and they leave unaffected any further restraints on the disposal of wastes at this waste management facility that may be contained in other statutes."

Yang, Wen@Waterboards

From: Dave Nguyen <DNGUYEN@dpw.lacounty.gov>
Sent: Wednesday, April 13, 2016 6:11 PM
To: Yang, Wen@Waterboards
Cc: Martins Aiyetiwa; Gabriel Esparza; Karlo Manalo; Nam Doan
Subject: Sunshine Canyon City-Cnty Landfill_Public Notice, File No. 58-076_2016-03-15 - Comments from Los Angeles County Department of Public Works
Attachments: Sunshine Cyn City-Cnty Landfill_Public Notice, File No. 58-076_2016-03-15.pdf

Good afternoon Wen,

We appreciated the opportunity to review the Liner Design Report provided as part of the Water Board's Public Notice dated March 15, 2016, for Phase CC-4, Parts 1-5 (attached). Based on our review, we have the following comment:

Since the Sunshine Canyon Landfill Operator, Republic Services, also submitted grading plans and slope stability analysis reports for the construction of Cell CC-4 to the Department of Public Works for review and approval, to ensure the operator also acquire necessary approval of these items from the regulatory agencies, we respectfully request the Water Board to include this clauses (or similar) in the Water Board's approval letter: **"Republic Services is required to obtain necessary approvals and clearances relating to grading and drainage design of Cell CC- 4 that may be required by the Los Angeles County Department of Public Works and other regulatory agencies."**

Please let us know if you have any questions.

Thank you,

David Nguyen
Civil Engineer
County of Los Angeles Department of Public Works
Environmental Programs Division
(626) 458-5189

ATTACHMENT B

SUNSHINE CANYON LANDFILL



LOCAL ENFORCEMENT AGENCY

14747 San Fernando Road
Sylmar, California 91343

November 26, 2014

Mr. Rob Sherman, General Manager
Republic Services
Sunshine Canyon Landfill
14747 San Fernando Road
Sylmar, CA 91342

Subject: Sunshine Canyon City/County Landfill (SWIS # 19-AA-2000)
LEA Approval of ADC Pilot Project

Dear Mr. Sherman,

On November 5, 2014, the Sunshine Canyon Landfill Local Enforcement Agency (LEA) received a proposal to conduct an alternative daily cover (ADC) pilot project at Sunshine Canyon Landfill (Landfill) using a geosynthetic panel product. The proposal was submitted in response to the recommendations of the Interagency Task Force to help control odor generation at the landfill by increasing the efficiency of the landfill gas collection system and leachate control system. The pilot project as proposed is scheduled to run for a period of one year which will allow the ADC to be evaluated under different season conditions.

The LEA has reviewed the proposed ADC pilot project and has determined that it meets the Alternative Daily Cover requirements pursuant to California Code of Regulations, Title 27 Section 20690, the Landfill's solid waste facility permit (SWFP) and CalRecycle's ADC Guidelines. The LEA has determined that the pilot project is one of the preapproved ADC materials specified in Title 27, and is consistent with the Interagency Task Force recommendations.

The LEA's approval is contingent on the following conditions:

- The geosynthetic cover area must be either covered with new waste or a full soil cover within 24 hours of product placement.
- The geosynthetic cover is non-reusable and once deployed shall not be removed from the working face.
- Any damage to the geosynthetic cover that occurs during deployment will be repaired prior to the end of that day's operations.
- At the end of the pilot project, a report shall be submitted to the LEA within 30 days documenting the observations, results and recommendations on the use of the geosynthetic cover at Sunshine Canyon Landfill.
- The LEA must be notified at least 7 days prior to the start of the pilot project.

The LEA reserves the right to suspend, modify or revoke this approval if problems are observed with the use of the geosynthetic cover. This approval is only for areas of the pilot project under the jurisdiction of the LEA. The operator is required to obtain all of the other necessary approvals and clearances that may be required by the other regulatory agencies that have jurisdiction over the site.

If you have any questions regarding the LEA approval, I can be contacted at (626) 430-5550 or

Sincerely,



Gerry Villalobos
SCL LEA Program Manager

cc: David Thompson, SCL LEA
Sue Markie, CalRecycle
Patti Costa, Republic Services
Emiko Thompson, L.A. County Dept. of Public Works
Maria Masis, L.A. County Dept. of Regional Planning
Ly Lam, City of L.A. Planning Dept.
Mohsen Nazemi, SCAQMD
Wayde Hunter, SCL CAC



GAIL FARBER, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
<http://dpw.lacounty.gov>

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE

REFER TO FILE: **EP-5**

October 27, 2015

Mr. Rob Sherman, General Manager
Sunshine Canyon Landfill
Republic Services, Inc.
14747 San Fernando Road
Sylmar, CA 91342-1021

Dear Mr. Sherman:

SUNSHINE CANYON CITY/COUNTY LANDFILL PROPOSED ALTERNATIVE DAILY COVER PILOT PROJECT UTILIZING GEOSYNTHETIC PANEL PRODUCT

Republic Services (Republic) submitted a letter dated April 13, 2015, which included a project proposal dated November 2014, to the Department of Public Works requesting to conduct a 1-year pilot project using Environmental Products, Inc.'s (EPI's), Extended Enviro™ cover as an alternative daily cover (ADC) in lieu of the 9 inches of soil currently being used on-site for daily cover. Subsequently, Republic submitted two more revised project proposals with the latest submittal on August 20, 2015 (Report). The revisions were made to address Public Works' requests to further clarify the proposal's performance measurements, emergency response measures, and public outreach requirements.

Based on Public Works' evaluation of the Report dated August 20, 2015, and consistent with the adopted environmental documentation for the Sunshine Canyon City/County Landfill (Landfill), Public Works hereby modifies the additional corrective measures that it imposed in accordance with Condition 45N of the Conditional Use Permit (CUP) No. 000-194-(5) as set forth in letters dated October 22, 2014, and February 26, 2015, to permit Republic to implement its proposed ADC pilot project for a period of 1 year from the implementation date, subject to the "Conditions of Approval" specified in this letter.

Mr. Rob Sherman
October 27, 2015
Page 2

This letter addresses only Republic's request for a modification of the additional corrective measures imposed by Public Works in accordance with Condition 45N of the CUP, and does not address any other approvals that may be required by any other agencies in order for Republic to implement the proposed ADC pilot project.

In a letter dated October 5, 2015, the Sunshine Canyon Landfill Joint City/County Technical Advisory Committee (TAC) stated that it endorses the ADC pilot project. On October 8, 2015, Republic notified Public Works that, on the basis of the TAC's letter, it planned to move forward with the pilot project commencing October 12, 2015.

To the extent that Republic considered the TAC's October 5, 2015, letter to effectuate a modification of Public Works' 9-inch cover requirement to allow for the use of the ADC, Republic misconstrued the TAC's letter and its advisory role. It is important that Republic understand that it is required to comply with the County's CUP.

Objectives of the Pilot Project

The objectives of this ADC 1-year pilot project as stated in the Report are as follows:

- Determine if the geosynthetic panel product material meets the performance requirements of Title 27, Section 20690 to meet the requirements for controlling blowing litter, vectors, fires, odor and scavenging.
- Determine if the geosynthetic panel product material is as effective for controlling odors as 9 inches of compacted soil as a daily soil cover material.

An evaluation of the effectiveness of the geosynthetic panel product will be conducted throughout the 1-year term of the pilot period, as well as at the conclusion of this 1-year period. Information collected during the pilot period will be used to determine (1) whether the project objectives have been met, (2) if it results in improvement in the landfill gas collection and management system, and (3) if it leads to potential reduction in odor nuisance and complaints from the surrounding community.

California Environmental Quality Act Compliance

In December 1999, the City of Los Angeles adopted a Final Subsequent Environmental Impact Report (FSEIR) and a General Plan Amendment and Zone Change (GPA/ZC) allowing Browning-Ferris Industries, now Republic, to operate and maintain a separate City Landfill and eventually a joint City/County Landfill. In 2007, the County approved an addendum to the FSEIR in connection with its approval of the CUP.

The FSEIR calls for the application of 6 inches of daily cover or the use of an approved alternative daily cover. We note that the Sunshine Canyon Landfill Local Enforcement Agency has approved the use of the proposed ADC. In addition, Mitigation Measure No. 7.06 of the Mitigation Monitoring and Reporting Summary (MMRS) adopted by the County, provides that if an odor problem develops, appropriate control measures shall be implemented, which include the application of daily cover material or more frequent application of cover material to seal the landfill surface, or adjustments to the wells, equipment and operation of the landfill gas collection and recovery system.

Among the odor control measures contained in the Mitigation Reporting and Monitoring Program (MRMP) adopted by the City, mitigation measure no. 33 provides that when an odor problem develops, appropriate control measures shall be implemented, which include the application of additional dirt daily cover material, or more frequent application of the cover material to seal the landfill surface, or adjustments to the wells, equipment and operation of the landfill gas collection and recovery system.

As discussed in further detail in this letter, with the conditions spelled out in this letter, the proposed ADC is an appropriate measure for controlling odors in conjunction with other corrective measures that are set forth in our letters dated September 27, 2010; October 22, 2014; and February 26, 2015. It is our determination that the ADC Pilot Project as described in this letter is within the scope of the project that is the subject of the FSEIR. Therefore, Public Works is approving the ADC pilot project, subject to the following conditions:

General Conditions of Approval

1. Effective Area – These requirements apply to all areas within the "Limits of Fill" of Exhibit "A-2" as defined in the combined "City/County Project" pursuant to the Los Angeles County CUP.
2. Duration of Pilot Project – 1 year from the date of this letter.
3. Termination – Public Works may terminate the approval of the pilot project at any time, including but not limited to the following causes, as determined by Public Works in its sole discretion:
 - a. Republic has failed to comply with any of the requirements specified herein, including the *Evaluation Standards and Program Requirements*, *Reporting Requirements*, and *Additional Requirements*, as specified.

- b. Problems arise with the use of the ADC material that cannot be corrected.
- c. The use of the ADC material does not meet the objectives of the pilot project as stated in this letter and in the Report.

If, at any time during the term of this pilot project, Public Works terminates the approval of the pilot project, Republic shall revert back to using 9 inches of soil as daily cover at the Landfill unless Public Works approves another form of daily cover in accordance with Condition 45N, in order to promote best gas management practices at the site and to protect public health and safety.

Evaluation Standards and Program Requirements:

- 4. ADC Material Specifications – The ADC material to be used for the implementation of this project shall be limited to a non-reusable, geosynthetic Extended Enviro™ cover with a thickness of 1.75 millimeters, as stated in the proposal. Any proposed change to this ADC material will require prior approval from Public Works.
- 5. Equipment Specifications – The Extended Enviro™ cover shall only be deployed using EPI's Extended Enviro™ Cover System Deployer Model 800 (Deployer). Any proposed change to this equipment will require prior approval from Public Works.
- 6. Soil Usage – Soil to be used as daily cover at the end of operation on Saturdays, or as ballast material during ADC application or as intermediate daily cover, must be free of sulfate (SO_4) prior to its usage, or at a level acceptable to Public Works. Prior testing of the soil must be performed to ensure that sulfate is not present in the soil at a level not acceptable to Public Works. Test results must be provided to Public Works for approval. However, every source of soil material must be tested and approved prior to its use at the site.
- 7. ADC Material Procedures – The ADC material shall only be applied as described in the following restrictions:
 - a. The ADC material shall be applied at the end of each operating day or at more frequent intervals (except Saturday) and shall be left in place at the start of the following day's operations.

- i. No removal of this ADC material shall be conducted after it is applied at the Working Face.
 - ii. The ADC material will be placed over the entire deck of the operating day's Working Face.
 - iii. The maximum exposure time for the ADC material shall not exceed 5 days.
 - iv. The ADC material shall not be placed on any outside slopes or slopes that will not be part of the operating day's Working Face for longer than 180 days.
 - v. The ADC material shall not be used for intermediate or final cover.
 - b. Six inches of soil shall be used for daily cover at the close of operations on Saturdays and shall remain in place on Monday mornings.
 - i. No "peeling back" of the soil cover shall be conducted after it is applied at the Working Face.
 - ii. Only soil may be used as cover on the outside and temporary slopes.
 - c. The ADC material will be used on one lift per day.
 - d. The maximum size of the Working Face deck area shall be no larger than 3 acres.
8. Material Placement – The ADC material shall be placed as detailed in the Report as follows:
- a. General Placement Procedure
 - i. The Deployer is loaded with a roll of the Extended Enviro™ cover and on-site ballast material.
 - ii. The Deployer is positioned on the outside edge of the cover area to deploy the first panel of the ADC material. The outside edge shall be positioned at a minimum of 5 feet from the outside of the waste material.
 - iii. During the application process, the ADC material is unrolled from the Deployer while ballast material is simultaneously discharged at a controlled rate to securely anchor the ADC material onto the Working Face.
 - iv. On successive adjacent runs to deploy the ADC material. The material is placed so that it overlaps by not less than 10 percent, thus forming a compression-type seal creating a continuous closure and impermeable barrier between the waste and the environment.

- b. Placement During Windy Conditions – During high-wind conditions, the following operational measures shall be implemented and maintained:
 - i. Wind direction and speed must be established to better determine how the ADC material will be deployed.
 - ii. Upon determination of the wind direction, the ADC material will be placed parallel to the wind direction to minimize the potential uplifting of the material.
 - iii. Additional overlap of the ADC material can be applied, provided that natural tearing and puncturing of the overlapped material as a result of the heavy equipment operating on top of previously covered trash is maintained.
- c. Placement During Rainy/Stormy Conditions – During rainy/stormy conditions, the following operational measures shall be implemented and maintained:
 - i. Intactness of the ballast material shall be maintained to ensure that the ballast material is not washed away by water runoff.
 - ii. No ponding on the surface of the ADC material shall occur. If ponding occurs, appropriate measures shall be taken to resolve this issue.
 - iii. Placement of the ADC material on the working face shall be appropriately deployed to prevent stormwater run-off underneath the ADC material and to inhibit continuous contact of stormwater on the disposed solid waste.

If conditions such as high-winds or heavy rains prevent compliance with these restrictions and prevent the ADC material from functioning properly, the operator shall cover the Working Face with 9 inches of soil, which shall be kept in place at the beginning of the next operating day. No "peeling back" of the soil cover shall be conducted after it is applied at the Working Face.

Reporting Requirements:

- 9. Performance Requirements – In order to determine the effectiveness of the ADC material, the ADC material shall be evaluated in accordance with the performance requirements and standards set forth in CCR Title 27, Section 20690 and 20695, respectively. Evaluation of performance criteria shall be conducted as follows:
 - a. Vector
 - i. Threshold values for vector populations shall be established prior to commencement of the ADC pilot project; therefore, provide these to us within

14 days from the date of this letter. Based on these threshold values, daily inspection of vector populations shall be recorded in accordance with the recording requirements specified in CCR Title 27, Section 20690(a)(1)(D).

- ii. Any vector infestation shall be recorded in the Monthly Reporting Requirements stipulated herein, and controlled immediately upon observation. If infestation cannot be controlled, the use of the ADC material shall be ceased and be replaced with 9 inches of soil as daily cover.
- b. Fire
- i. Any burning material, or any solid waste that has the potential to cause fire, shall not be disposed of at the Working Face and shall not be covered with the ADC material. Procedures on handling such materials or solid waste shall be subject to the requirements specified in CCR Title 27, Section 20695(b).
 - ii. Any fire incidents, or relocation of any burning material or any solid waste that has the potential to cause fire, shall be recorded in the Monthly Reporting Requirements stipulated herein.
- c. Litter
- i. The operator shall control windblown litter from the operating day's Working Face.
 - ii. If wind conditions are too extreme for the ADC material to remain intact once applied and all operational adjustments as described in Condition 6 have been proven to be ineffective, the operator shall cease the application of the ADC material and replace it with 9 inches of soil for cover until such time as conditions permit the use of the ADC material.
- d. Scavenging
- i. No scavenging activities shall be allowed.
 - ii. Any scavenging activities shall be reported to the operations manager and appropriate action must be taken.
- e. Odor
- i. Daily observation of the Working Face area for any potential odor sources before, during, and after the placement of the ADC material shall be conducted.

- ii. Current odor management program as stipulated in the Final Odor Plan of Action dated June 15, 2012, shall continue to be implemented.
 - iii. If odor sources have been found within the Working Face area, appropriate odor control measures shall be implemented. If odor persists, Republic may be required to discontinue the use of the ADC material and return to using 9 inches of soil for daily cover in accordance with the conditions concerning "Termination" under the "General Conditions of Approval" of this letter.
 - iv. Any potential odor sources from the Working Face shall be recorded in the Monthly Reporting Requirements, and shall include, but not be limited to, the approximate location of the source, time and/or period of the duration of odor, weather condition, and odor control measures taken.
- f. In addition to the above performance criteria, Republic shall also establish a base line for two areas of the site: (1) where 9 inches of soil cover has been applied, and (2) where the ADC material is applied. The following observations shall be made on both areas in order to measure the performance of the pilot project in comparison to the use of 9 inches of soil cover.
- i. Surface Gas Emissions – Republic shall monitor for any surface gas exceedances, in accordance with the South Coast Air Quality Management District Rule 1150.1.
 - ii. Landfill Gas Collection and Recovery System – Republic shall locate wells impacted by fluid build-ups, indicate the amount of fluid that is pumped-out from the well, and record the vacuum pressure before and after fluid is pumped-out.
 - iii. Leachate Collection and Recovery System – Republic shall record the amount of leachate that is collected from the sump.
 - iv. Public Works reserves the right to add additional criteria that it determines are necessary to evaluate the performance of the ADC at the site.

10. Environmental Monitoring

- a. In addition to implementing the Landfill's current odor management program, which includes on-and-off site odor monitoring, Republic shall also examine the ADC material at the end of each operating day after the Working Face has been completely covered with the ADC material. Any tears, punctures, or unusual observations of the ADC material during its application and/or prior to placing new trash on top of the previous day's application of the ADC material, shall be documented and included in the Monthly Reporting Requirements.
- b. Weather data shall also be collected on a daily basis and reported in the Monthly Reporting Requirements. Weather data shall include but not be limited to ambient temperature, humidity conditions, wind and speed direction, and rainfall.
- c. Daily observations of vectors, blown litter, fire, and any indication of scavenging shall also be included.

11. Monthly Reporting Requirements – Republic shall provide a monthly report to Public Works summarizing all monitoring observations and maintenance issues of the ADC pilot project, including but not limited to any tears, punctures, or unusual observations related to the application of the ADC material; any immediate odors detected at the vicinity of the Working Face during and after the application of the ADC material; and any unusual occurrences at the Working Face, such as, fire, vectors, blowing litter, and scavenging. A copy of the daily logs from the monitoring requirements specified in Republic's proposal and on this letter must also be provided in the monthly report as specified herein.

12. Additional Requirements

- a. Republic shall within 30 days of the date of this letter implement all requirements that were previously required by Public Works in the letters dated October 22, 2014, and February 26, 2015, pursuant to Condition 45N of the CUP except to the extent modified by this letter.
- b. Republic shall cooperate with Public Works in hiring an independent consultant to determine, evaluate, and make recommendations regarding the quality and permeability of soil used for daily and intermediate cover materials at the site.

13. Data Analysis – At the conclusion of this ADC pilot project, Republic shall submit a detailed report documenting all of the observations, monitoring data and results, and recommendations for continued use of the ADC material as an ADC for Sunshine Canyon Landfill. Such Data Analysis and Evaluation Report must also include all documentation establishing whether the project's stated objectives have been met.

Conclusions and Results of the ADC Pilot Project:

At the conclusion of the ADC pilot project, Public Works will evaluate the Data Analysis and Evaluation Report to determine if the project objectives have been met and will consider whether continued modification/elimination of the 9-inch daily soil cover requirement to allow the use of the ADC will protect public health and safety within the meaning of Condition 45N of the CUP. If the project objectives are met, Public Works, in consultation with the Departments of Regional Planning and Public Health, may modify or eliminate the requirement specifying the use of 9 inches of daily soil cover and allow the continued use of the ADC material on a more permanent basis.

All documents and reports required by this letter shall be submitted to the following address:

County of Los Angeles
Department of Public Works
Environmental Programs Division
P.O. Box 1460
Alhambra, California 91802-1460
Attention Martins Aiyetiwa, Landfills Section

Mr. Rob Sherman
October 27, 2015
Page 11

If you have any questions, please contact Mr. Martins Aiyetiwa at (626) 458-3553, Monday through Thursday, 7 a.m. to 5:30 p.m.

Very truly yours,



GAIL FARBER
Director of Public Works



RICHARD J. BRUCKNER
Director of Regional Planning

KM:jl

P:\Sec\HOA_1264552_1 Sunshine ADC Pilot Program

cc: Department of Regional Planning (Maria Masis, Jon Sanabria, Dennis Slavin)
Los Angeles County Solid Waste Management Committee/Integrated Waste
Management Task Force
South Coast Air Quality Management District (Mohsen Nazemi, Ed Pupka)
Sunshine Canyon Landfill – Local Enforcement Agency (Dave Thompson,
Gerardo Villalobos)
Sunshine Canyon Landfill – Community Advisory Committee (Becky Bendikson,
Wayde Hunter)
City of Los Angeles Planning Department (Nicholas Hendricks, Ly Lam,
Lisa Webber)
North Valley Coalition of Concerned Citizens (Wayde Hunter)
Granada Hills North Neighborhood Council

ATTACHMENT C

SUNSHINE CANYON LANDFILL



LOCAL ENFORCEMENT AGENCY

14747 San Fernando Road
Sylmar, California 91324

November 2, 2016

Mr. Rob Sherman
General Manager
Sunshine Canyon Landfill
14747 San Fernando Rd.
Sylmar, CA 91342

SUBJECT: Sunshine Canyon Landfill (SWIS No. 19-AA-2000)
LEA Approval For The Continuation of the Geosynthetic ADC Pilot Project

Dear Mr. Sherman,

On November 5, 2014, the Sunshine Canyon Landfill Local Enforcement Agency (SCL LEA) received a proposal to conduct an alternative daily cover (ADC) pilot project at Sunshine Canyon Landfill (landfill) using a geosynthetic panel product. The proposal was submitted to help control odor generation at the landfill by increasing the efficiency of the landfill gas collection system and leachate control system. On November 26, 2014, the SCL LEA approved the pilot project to operate for a one year period to fully evaluate the ADC for controlling "fresh trash odors" as well as long-term effects on the control of "landfill gas odors". The LEA was notified by Republic Services that the pilot project began on October 12, 2015.

As a condition of approval the ADC pilot project was to be monitored on a daily basis by the landfill operator pursuant to the approved ADC Performance Evaluation Procedures. At the conclusion of the ADC pilot project, the landfill operator was required to submit to the SCL LEA and ADC Evaluation Report.

On October 12, 2016, the one-year pilot project came to a conclusion and Republic Services submitted to the SCL LEA an Evaluation Report on the performance of the geosynthetic panel ADC that was utilized at the landfill. The Evaluation Report found that the geosynthetic panel ADC performed as well or better than the daily soil cover in controlling for vectors, fires, odors, blowing litter, and scavenging without presenting a threat to human health and the environment. However, the effect of the ADC on the landfill gas collection system and the leachate collection system could not be evaluated at this time due to the current filling of Cell CC-3B Part 1A. The impact of the ADC and the trash to trash interface on these systems cannot be fully evaluated until after March 2017 when this cell has been completed and the vertical landfill gas collection wells have been

Gerardo Villalobos, REHS
SCL LEA Program Manager
Office: (626) 430-5550
Email: gvillalobos@ph.lacounty.org
For reply: 5050 Commerce Dr. Baldwin Park, CA 91706

installed. Initial results from the small sampling of collection wells that were installed in the City portion of the landfill were the ADC was utilized over areas with the 9" daily cover showed that no liquids were present in the waste columns.

The SCL LEA conducted an independent evaluation of the ADC pilot project. Our preliminary determination is that the geosynthetic panel ADC is having a positive impact on the landfill operations within the limited sampling that is available. The SCL LEA has determined that during the Project period the ADC met the standards for daily cover pursuant to California Code of Regulations, Title 27 Section 20690.

The SCL LEA would propose extending the ADC pilot project for an additional year so that the ADC's effects on the landfill gas control system and leachate control system in Cell CC-3B Part 1A could be fully evaluated. Therefore, the LEA approves the continued implementation of the Project period for an additional 12 months. Continued implementation will require that all procedures associated with the project shall continue during the evaluation period which will run through October 12, 2017. At the end of this period, the SCL LEA shall evaluate the Project's performance to determine if continued use of the ADC will be approved. The SCL LEA reserves the right to modify/amend the current procedures and suspend or revoke this approval should we determine that the use of the ADC is not meeting the performance standards or fails to protect public health and safety and the environment.

Please do not hesitate to contact me should you need to speak to me.

Sincerely,



Gerry Villalobos, Program Manager
SCL LEA

Cc: David Thompson, SCL LEA
Martins Aiyetiwa, L. A. County Dept. of Public Works



GAIL FARBER, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
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ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE

REFER TO FILE: **EP-5**

October 26, 2016

Mr. Rob Sherman, General Manager
Sunshine Canyon Landfill
Republic Services, Inc.
14747 San Fernando Road
Sylmar, CA 91342-1021

Dear Mr. Sherman:

SUNSHINE CANYON CITY/COUNTY LANDFILL EXTENSION OF APPROVAL FOR THE ALTERNATIVE DAILY COVER PILOT PROJECT UTILIZING GEOSYNTHETIC PANEL PRODUCT

On September 30, 2016, Republic Services submitted a report entitled "Evaluation of Alternative Daily Cover Using Geosynthetic Panel Product", which presents the performance results and findings of the 1-year ADC Pilot Project as related to Title 27 Section 20690 and the performance metrics outlined in the SCL-LEA's document entitled "Republic Services Alternative Daily Cover Pilot Program Evaluation Protocols and Performance Metrics" (V1.04).

Public Works is in the process of evaluating the submitted report and will be determining if the project objectives have been met as stated in Public Works approval letter dated October 27, 2015 and will consider whether continued modification/elimination of the 9-inch daily soil cover requirement to allow the use of the ADC, will protect public health and safety within the meaning of Condition 45N of the CUP. In the meantime, Republic Services is permitted to continue to implement the ADC Pilot Project, along with all conditions as prescribed in Public Works' approval letter of October 27, 2015, for another 5 months until March 27, 2017.

Upon the conclusion of Public Works' evaluation of the project, if the project objectives are met, Public Works, in consultation with the Departments of Regional Planning and Public Health, may modify or eliminate the requirement specifying the use of 9 inches of

Mr. Rob Sherman
October 26, 2016
Page 2

daily soil cover and allow the continued use of the ADC material on a more permanent basis.

If you have any questions, please contact Mr. Martins Aiyetiwa at (626) 458-3553, Monday through Thursday, 7 a.m. to 5:30 p.m.

Very truly yours,

GAIL FARBER
Director of Public Works



MARTIN AIYETIWA
Senior Civil Engineer
Environmental Programs Division

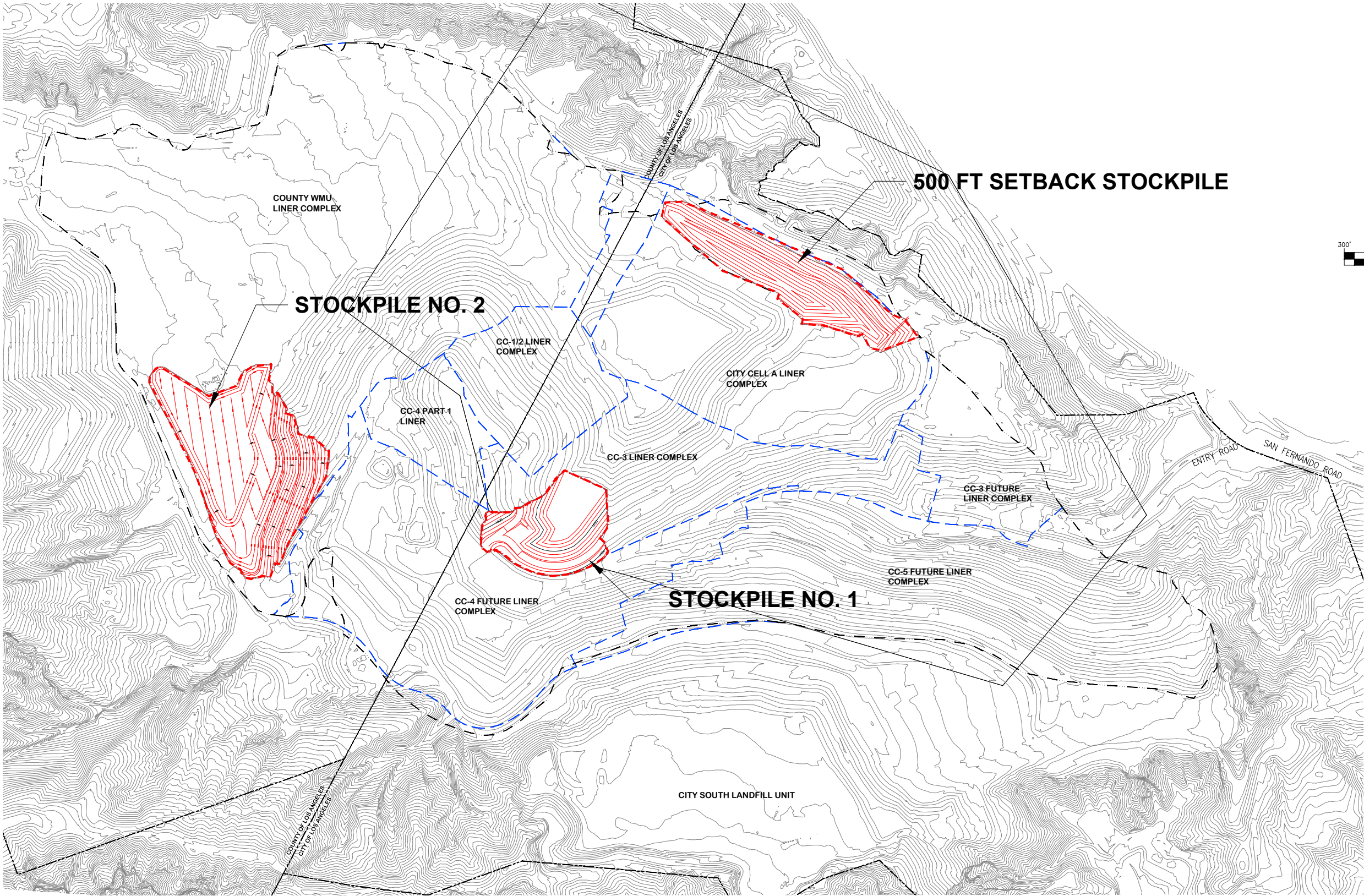
DP:jl

P:\Sec\Sunshine ADC Pilot Program extension.doc

cc: Department of Regional Planning (Dennis Slavin, Jon Sanabria, Maria Masis)
Los Angeles County Solid Waste Management Committee/Integrated Waste
Management Task Force
South Coast Air Quality Management District (Laki Tisopulo, Cher Snyder,
Amir Dejakhsh)
Sunshine Canyon Landfill – Local Enforcement Agency (Dave Thompson,
Gerardo Villalobos)
Sunshine Canyon Landfill – Community Advisory Committee (Becky
Bendikson, Wayde Hunter)
City of Los Angeles Planning Department (Lisa Webber, Ly Lam,
Nicholas Hendricks)
North Valley Coalition of Concerned Citizens (Wayde Hunter)
Granada Hills North Neighborhood Council

ATTACHMENT D

C:\Users\jgo-user\Documents\Republic Services\Sunshine Canyon Maps and Exhibits\SCL - Stockpile Locations for 2016 123016.dwg Dec 30, 2016 -- 8:12am By: jgo-user



NOTE:
BACKGROUND TOPOGRAPHIC MAPPING BY
COOPER AERIAL SURVEYS DATED FEBRUARY
24, 2016 UPDATED WITH MONTHLY GROUND
SURVEYS THROUGH DECEMBER 2016

LEGEND

- WASTE MANAGEMENT UNIT BOUNDARY
- PERMITTED LIMITS OF REFUSE PER 2006 JTD
- LIMITS OF STOCKPILE

This drawing has not been published but rather has been prepared by Geo-Logic Associates, Inc. for use by the client named in the title block, solely in respect of the construction operation, and maintenance of the facility named in the title block. Geo-Logic Associates, Inc. shall not be liable for the use of this drawing on any other facility or for any other purpose.

DRAWING STATUS

ORIGINAL DRAWING SIZE IS 22" X 34"

REV. NO.	DATE	DESCRIPTION	APPROVED BY
REV1	00	00	00
REV2	DATE2	DESCRIPTION2	DRAWN2
REV3	DATE3	DESCRIPTION3	DRAWN3
REV4	DATE4	DESCRIPTION4	DRAWN4
REV5	DATE5	DESCRIPTION5	DRAWN5
REV6	DATE6	DESCRIPTION6	DRAWN6

DATE OF ISSUE: DEC_2016
DESIGNED BY: R_JOHNSON
DRAWN BY: C_BARRETT
CHECKED BY: R_JOHNSON
APPROVED BY: R_JOHNSON



Geo-Logic
ASSOCIATES

250 W. FIRST STREET
SUITE 228
CLAREMONT, CA 91711
(909) 626-2282
www.geo-logic.com



SUNSHINE CANYON LANDFILL
SYLMAR, CALIFORNIA
OPERATIONS PLANS

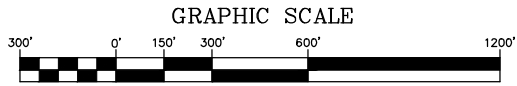
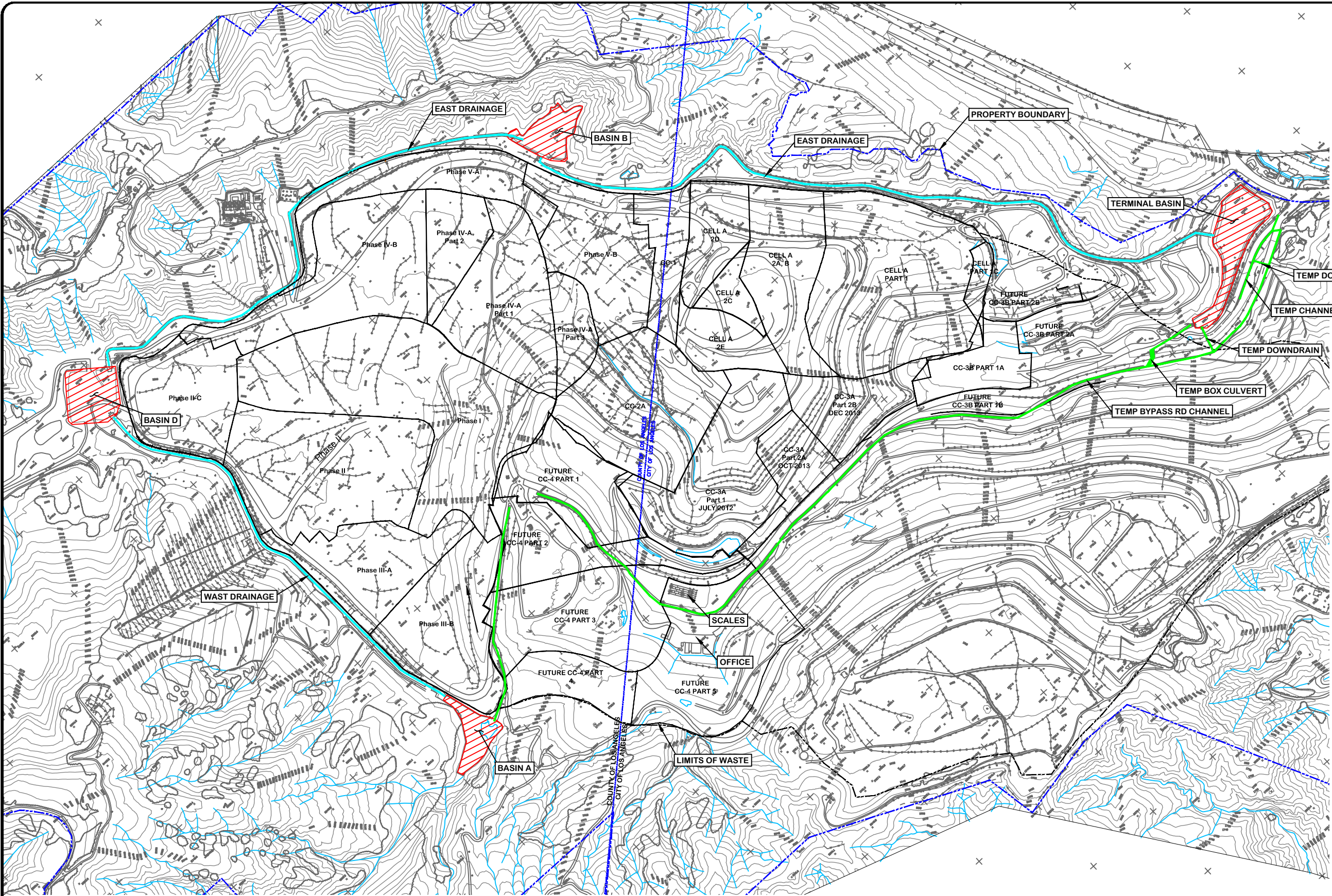
STOCKPILE LOCATIONS IN 2016

DWG NO.

1

PROJECT NO.
2016.0023

ATTACHMENT E



LEGEND

- 1500 EXISTING 25 FT CONTOUR
- PROPERTY BOUNDARY
- EXISTING APPROVED LINERS
- LIMIT OF FUTURE WASTE FILL
- PERMANENT DRAINAGE CHANNEL
- TEMPORARY DRAINAGE CHANNEL
- SEDIMENTATION BASIN

This drawing has not been published but rather has been prepared by Geo-Logic Associates, Inc. for use by the client named in the title block, solely in respect of the construction operation, and maintenance of the facility named in the title block. Geo-Logic Associates, Inc. shall not be liable for the use of this drawing on any other facility or for any other purpose.

FOR REVIEW ONLY
EXISTING TOPOGRAPHY PREPARED BY COOPER AERIAL SURVEYS DATED FEBRUARY 24, 2016

REV. NO.	DATE	DESCRIPTION	APPROVED BY
REV1	DATE1	DESCRIPTION1	DRAWN1
REV2	DATE2	DESCRIPTION2	DRAWN2
REV3	DATE3	DESCRIPTION3	DRAWN3
REV4	DATE4	DESCRIPTION4	DRAWN4
REV5	DATE5	DESCRIPTION5	DRAWN5
REV6	DATE6	DESCRIPTION6	DRAWN6

DATE OF ISSUE: MAY 2016
DESIGNED BY: C. BARRETT
DRAWN BY: C. BARRETT
CHECKED BY: C. BARRETT
APPROVED BY: C. BARRETT



2777 E. GUAISTI ROAD
SUITE 1
ONTARIO, CA 91761
(909) 626-2282
www.geo-logic.com



SUNSHINE CANYON LANDFILL
SYLMAR, CALIFORNIA
TAC REPORT
SITE DRAINAGE COMPONENTS

DWG NO. 1
PROJECT NO. 2015.0028

ATTACHMENT F

Los Angeles Regional Water Quality Control Board

October 24, 2016

Ms. Patti Costa, Environmental Manager
Sunshine Canyon Landfill
14747 San Fernando Road
Sylmar, CA 91342

APPROVAL OF REVISED WEST DRAINAGE CHANNEL MASTER PLAN - SUNSHINE CANYON LANDFILL, SYLMAR, CALIFORNIA (FILE NO. 58-076, ORDER NO. R4-2008-0088, GEOTRACKER GLOBAL ID NO. L10006014618)

Dear Ms. Costa:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), is in receipt of your letter dated April 27, 2016, transmitting a revised *Surface Water Drainage Analysis, West Drainage Channel Master Plan, Sunshine Canyon Landfill* (Revised Plan), dated January 7, 2015, that was submitted to the State Water Resources Control Board Geotracker data system on April 27, 2016. The Revised Plan provides updated analysis and design details for the construction of the West Drainage Channel at the Sunshine Canyon City/County Landfill (Landfill), which is owned and operated by Republic Services (Discharger) and regulated under waste discharge requirements (WDRs) included in Order No. R4-2008-0088 adopted by this Regional Board on October 2, 2008.

The initial plan was submitted to the Regional Board on March 28, 2014. In a letter dated July 1, 2014 (copy attached), Regional Board staff provided comments that, among others, expressed concerns about potential damages that may be caused by differential settlements of the closed City Landfill No. 1, over which part of the drainage channel will be constructed. In addition, the letter included comments from the Los Angeles County Department of Public Works (LACDPW) on the technical aspects of the plan.

Regional Board staff have reviewed the Revised Plan and has determined that comments included in our July 1, 2014, letter have been adequately addressed. Specifically, the Revised Plan proposes to use Geocell-reinforced concrete with a geogrid reinforcement layer in the foundation of the channel in areas underlain by the closed landfill unit. We concur that such a design is expected to be able to offset the effects of potential differential settlements of the existing waste mass. The Revised Plan is therefore approved. In accordance with Section K (Provisions for Drainage and Erosion Control) of the WDRs, all drainage structures at the Landfill shall be protected and maintained continuously to ensure their effectiveness. The Discharger is responsible to inspect, repair, and replace the drainage channel if damages occur during the active life and post-closure period of the Landfill.

Please note that approval of the Revised Plan by the Regional Board staff is in conjunction with its approval and clearance by other regulatory agencies, including the LADPW. In accordance

with Requirement M.3. of the WDRs¹, approval of the Revised Plan by the Regional Board does not release the Discharger from the responsibility of complying with any other laws and regulations that may be enforced by other regulatory agencies.

A public notice regarding this approval was sent to known interested parties on September 12, 2016, to meet General Provision No. M.22. of the WDRs, which states: "*During oversight of this Order, wherever the Executive Officer is authorized to grant any approval under a particular provision of this Order, the Executive Officer is directed to assess if there is controversy associated with the decision following public notice and, if so, bring the decision to the Regional Board for approval.*" The deadline for submitting comments regarding this matter was October 12, 2016. We received no comments regarding this matter during the period.

If you have any questions, please contact Dr. Wen Yang, Chief of the Land Disposal Unit, at (213) 620-2253 or wyang@waterboards.ca.gov.

Sincerely,


Samuel Unger, P.E.
Executive Officer

Enclosure

Mailing List:

Leslie Graves, State Water Resources Control Board (Leslie.Graves@Waterboards.ca.gov)
Michael Wochnick, CalRecycle (Michael.Wochnick@CalRecycle.ca.gov)
Gerardo Villalobos, Sunshine Canyon Landfill LEA (gvillalobos@ph.lacounty.gov)
David Thompson, Sunshine Canyon Landfill LEA (david.thompson@lacity.org)
Martin Aiyitiwa, Los Angeles County Department of Public Works (MAIYET@dpw.lacounty.gov)
Mohsen Nazemi, South Coast Air Quality Management District (MNazemi1@aqmd.gov)
Richard Slade, Upper Los Angeles River Area Watermaster (ularawatermaster@rcslade.com)
Mitchell Englander, Councilmember, 12th District, City of LA
(councilmember.Englander@lacity.org)
Ly Lam, City of Los Angeles Department of City Planning (ly.t.lam@lacity.org)
Dave Nguyen, Los Angeles County Department of Public Works
(DNGUYEN@dpw.lacounty.gov)
Wayde Hunter, North Valley Coalition, Granada Hills (WHunter01@aol.com)
Wayne Aller, Knollwood Property Owners Association, Granada Hills
(waynealler07@hotmail.com)
Becky Bendickson, Granada Hills North Neighborhood Council (bebend99@gmail.com)
Kim Thompson, Granada Hill North Neighborhood Council (kimthompson@socal.rr.com)

¹ Requirement M.3. of the WDRs states: "*These requirements do not exempt the Discharger from compliance with any other current or future law that may be applicable. They do not legalize this waste management facility, and they leave unaffected any further restraints on the disposal of wastes at this waste management facility that may be contained in other statutes.*"

Patti Costa
Sunshine Canyon Landfill

- 3 -

Wayne Adelstein, North Valley Regional Chamber of Commerce (wayne@nvrcc.com)
Ralph Kroy, LA City Sunshine Canyon Landfill Community Advisory Committee
(REKroy@aol.com)
Robert Sherman, Republic Services (RSherman@republicservices.com)
Patti Costa, Republic Services (PCosta@republicservices.com)

Los Angeles Regional Water Quality Control Board

July 1, 2014

Ms. Patti Costa, Environmental Manager
Sunshine Canyon Landfill
14747 San Fernando Road
Sylmar, CA 91342

COMMENTS ON WEST DRAINAGE CHANNEL MASTER PLAN - SUNSHINE CANYON LANDFILL, SYLMAR, CALIFORNIA (FILE NO. 58-076, ORDER NO. R4-2008-0088, WQID NO. 4B190329001)

Dear Ms. Costa:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), has received from you a report titled *Surface Water Drainage Analysis, West Drainage Channel Master Plan, Sunshine Canyon Landfill, Los Angeles County, California* (Plan), dated March 2014, prepared by GeoLogic Associates, and submitted to the Regional Board on March 28, 2014.

The Sunshine Canyon (Landfill) is a Class III municipal solid waste landfill that is owned and operated by Republic Services Company and regulated under waste discharge requirements (WDRs) included in Order No. R4-2008-0088 adopted by the Regional Board on October 2, 2008. In a letter dated August 29, 2013, the Regional Board staff approved a design report for the Phase CC-3B liner construction at the Landfill, with the condition that a detailed design plan for the West Drainage Channel, a permanent storm drain that will be constructed concurrently with the proposed Phase CC-3B liner system, be submitted for the approval of Regional Board staff. The Plan was submitted to meet this condition. Meanwhile, the Plan was also submitted to the Los Angeles County Department of Public Works (LACDPW) for its review.

Regional Board staff has reviewed the Plan and consulted with staff of the LACDPW on the technical aspects of the proposed design. The LACDPW provided its comments on the Plan with a letter addressed to you dated June 16, 2014 (copy attached). The Regional Board staff concurs with those comments in the LACDPW letter and has additional comments on the Plan as follows:

1. A significant portion of the proposed drainage channel will be constructed on top of the City Landfill Unit 1, which has been closed since 1971. A major concern is that differential settlement within the waste mass of the closed landfill could cause serious damage to the proposed concrete channel once it is constructed. Although the Plan proposes a cross section for the portion of the drainage channel over the waste mass (Drawing No. C12) that is different from the cross section for the portion of the channel over native soil (Drawing No. C11), it does not include a discussion to demonstrate that such a design will be adequate to prevent significant damages to the channel that may be caused by differential settlement.

2. Attachment C of the Plan includes drawings of maps, cross sections, and detailed layout of the proposed drainage channel. However, there is no discussion in the Plan to illustrate the purpose of each drawing. Many features and symbols in those drawings are not adequately labeled or referenced. This makes the drawing hard to following and in some cases, not legible. For example, Drawing No. C10 presents two cross sections (Section A-A' and Section B-B'), but there is not a map showing where those cross sections are located and no explanation on the purpose of such cross sections is found in the Plan.
3. Section 5 and Attachment H of the Plan discuss an alternative outfall alignment for the proposed West Drainage Channel. Since the alternative layout involves an extension of the proposed channel line and the excavation of wastes that have been disposed of at the closed City Landfill, a revised design plan must be reviewed and approved by the Regional Board and other regulatory agencies with jurisdiction over the landfill, if the drainage channel is constructed following the alternative outfall alignment.
4. Section D.1. of the WDRs requires that *"All containment structures and erosion and drainage control systems at the Landfill shall be designed and constructed under direct supervision of a California-registered civil engineer or certified engineering geologist, and shall be certified by the individual as meeting the prescriptive standards and/or performance goals of 27 CCR."* Such a certification is not included in the Plan.

Please address the above comments and the comments provided by the LACDPW in its letter dated June 16, 2014, and submit a revised design plan for the project. Construction of the proposed drainage channel shall not be started until a design plan and final construction plans for the project are approved by the Regional Board staff.

If you have any questions, please contact Dr. Wen Yang, Chief of the Land Disposal Unit, at (213) 620-2253 or wyang@waterboards.ca.gov.

Sincerely,


Samuel Unger, P.E.
Executive Officer

Enclosure: Letter from Los Angeles County Department of Public Works, dated June 16, 2014

cc: Emiko Thompson, Los Angeles County Department of Public Works
Gerardo Villalobos, Sunshine Canyon Landfill LEA
David Thompson, Sunshine Canyon Landfill LEA
Eugene Tseng, City of Los Angeles, Environmental Affairs Department
Wayde Hunter, North Valley Coalition, Granada Hills



GAIL FARBER, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

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<http://dpw.lacounty.gov>

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

June 16, 2014

IN REPLY PLEASE
REFER TO FILE

EP-5

Ms. Patti K. Costa
Environmental Manager
Sunshine Canyon Landfill
14747 San Fernando Road
Sylmar, CA 91342-1021

Dear Ms. Costa:

WEST DRAINAGE CHANNEL MASTER PLAN SURFACE WATER DRAINAGE ANALYSIS REPORT SUNSHINE CANYON CITY/COUNTY LANDFILL

We reviewed your Surface Water Drainage Analysis report for the West Drainage Channel Master Plan dated March 2014 pursuant to Condition No. 38 of the Sunshine Canyon City/County Landfill Conditional Use Permit No. 00-194-(5) and have the following comments:

- The Drainage Map, Figure 1, provided under Attachment D shall include adequate topography, clarity, and resolution to depict watershed delineation. Each subarea shall be clearly labeled, and subarea collection points shall be shown. The Time of Concentration path from the most remote point of the subarea to the outlet of the subarea shall also be clearly identified. Elevations at the top and at the outlet point of each subarea shall be shown. The paths through which surface flows from the subareas are conveyed to the proposed West Drainage Channel shall also be shown. All drawings including any details, as well as any attachments must be clearly legible in order to facilitate proper review.
- The final outlet from the downdrain/impact basin area into the Terminal Basin is not clearly depicted in any of the design plans or drainage plans. This information shall be provided in the resubmittal which shall include details for the connection of the West Drainage Channel to the Terminal Basin. Details should include but not be limited to alignment profile and cross sections.

- Subarea SA1 is greater than 40 acres and should be further divided to meet Public Works' hydrology standards. The optimum size for a subarea in the County approved Modified Rational Method model is 40 acres. However, smaller subareas are acceptable.
- Section 3.0 – "Surface Water Drainage Analysis," references the Santa Clara River Watershed. However, the receiving drainage system for the Sunshine Canyon Landfill's watershed is Bull Creek, a tributary to the Los Angeles River which is part of the Los Angeles River Watershed. Accordingly, all drainage run-off analyses shall utilize parameters including fire factors, debris production rates, and peak bulk factors, attributable to the Los Angeles River Watershed, rather than the Santa Clara River Watershed.
- The assumption made in Section 4.0 – "Control Structure Sizing," regarding the non-additive nature of runoff flows generated by the surrounding tributary areas to the Western Drainage Channel cannot be claimed. Some flows will be additive to the 480 cubic feet per second peak outflow rate from Basin A. In order to identify the peak flow rate conveyed within the channel and the down drain, hydrographs from Basin A and each subarea tributary to the West Drainage Channel must be routed together along the reaches of the West Drainage Channel to the Terminal Basin. The resulting peak outflow rate into the Terminal Basin shall be reevaluated to determine the cumulative flow routing effects due to various factors such as channel storage and timing.
- The current hydrologic analysis for the West Drainage Channel is not based on the topography at the point of the landfill's built-out condition. At build-out a substantial area, shown as the area highlighted in red on the enclosed Drainage Map, will become tributary to the West Drainage Channel. Also, not included in the hydrologic analysis is the contribution from the immediate area south of the trapezoidal channel shown as the area highlighted in yellow on the enclosed Drainage Map. Both of these areas shall be included in the hydrologic analysis.
- Under Attachment C, some of the "Alignment Profile" drawings did not reference the correct "Details" drawings. Detailed call-outs on drawings should be labeled correctly with appropriate symbols (as shown in Drawing No. G01) to ensure that all "Alignment Profile" and "Details" drawings are referenced appropriately.

Ms. Patti Costa
June 16, 2014
Page 3

Please address these comments and resubmit a revised West Drainage Master Plan for further review. If you have any questions, please contact Ms. Emiko Thompson at (626) 458-3521, Monday to Thursday, 7 a.m. to 5:30 p.m.

Very truly yours,

GAIL FARBER
Director of Public Works

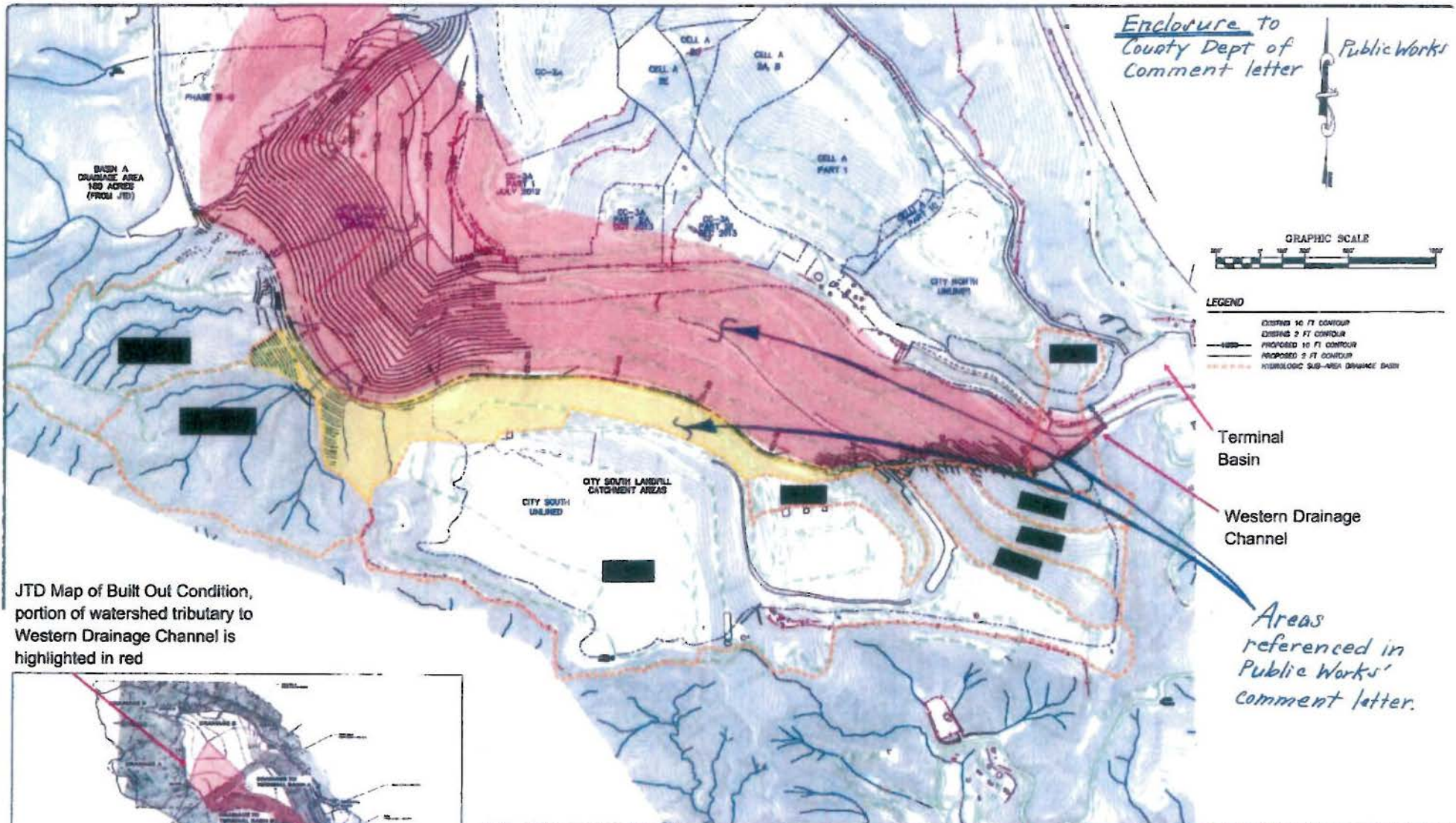


PAT PROANO
Assistant Deputy Director
Environmental Programs Division

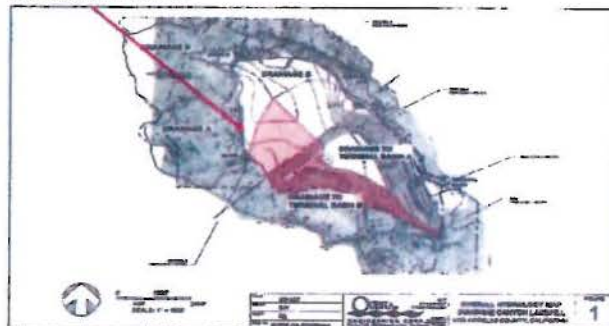
KM:dy
P:\Sec Western Drainage Master Plan

Enc.

cc: Regional Water Quality Control Board, Los Angeles Region (Wen Yang)
Sunshine Canyon Landfill Local Enforcement Agency (Gerry Villalobos)
Department of Regional Planning (Maria Masis)
City of Los Angeles Department of City Planning (Ly Lam)



JTD Map of Built Out Condition, portion of watershed tributary to Western Drainage Channel is highlighted in red



<p>REVISION</p> <p>1</p>	<p>Geo-Logic ASSOCIATES</p>	<p>REPUBLIC SERVICES</p>	<p>SUNSHINE CANYON LANDFILL</p> <p>WESTERN DRAINAGE MASTER PLAN</p> <p>SYLMAR, CALIFORNIA</p> <p>DRAINAGE MAP</p>	<p>FIGURE 1</p> <p>PROJECT NO. 2014-004</p>
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2. In respect of the above-stated description, City of Los Angeles project.

ISSUED FOR REVIEW



GAIL FARBER, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
<http://dpw.lacounty.gov>

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

June 15, 2016

IN REPLY PLEASE

REFER TO FILE: **EP-5**

Mr. Rob Sherman, General Manager
Sunshine Canyon Landfill
Republic Services, Inc.
14747 San Fernando Road
Sylmar, CA 91342-1021

**SUNSHINE CANYON CITY/COUNTY LANDFILL
CONDITIONAL USE PERMIT NO. 00-194-(5)
COMMENTS ON THE REVISED WEST DRAINAGE CHANNEL MASTER PLAN**

Dear Mr. Sherman:

We have reviewed the following documents submitted by Republic Services, Inc. (Republic) to the Los Angeles County Department of Public Works (Public Works) for the revised West Drainage Channel Master Plan Project:

- Private Drain No. XXXX – Sunshine Canyon Landfill West Drainage, submitted by Republic to Public Works on December 10, 2015; and
- Surface Water Drainage Analysis – West Drainage Master Plan, submitted by Republic to the Los Angeles Regional Water Quality Control Board on January 9, 2015.

Based on our review, the following are our comments:

General Design

Please see enclosed plans containing comments on the Revised WDC Master Plan.

Geotechnical and Materials

The Surface Water Drainage Analysis for the Landfill's WDC Master Plan appears to conceptually meet the proposed development needs. However, in order for the design to be accepted as permanent, it will be necessary to meet all minimum County standards and those standards set forth in the California Code of Regulations, Title 27, Section 21750; Conditional Use Permit No. 00-194-(5) Condition No. 38; and applicable portions of the 2014 County of Los Angeles Building Code.

The following comments must be addressed prior to recommendation of the proposed West Drainage Private Drain for approval by Public Works.

1. Provide a geotechnical map that complies with the provisions of the County of Los Angeles Department of Public Works *Manual for Preparation of Geotechnical Reports*. The geotechnical map shall be based on the proposed improvement plans.

As outlined in the Department of Public Works Manual for Preparation of Geotechnical Reports, the geotechnical map must show the following:

- a. The aerial distribution of geologic materials with sufficient lateral extent beyond the property limits to determine the potential adverse effects on existing landfill operations and off-site properties, as appropriate, with sufficient geologic symbols to depict clearly site geology.
 - b. Existing landfill cell limits; landslides and their limits; all geotechnical cross-sections, including those utilized for slope stability analyses; springs and seeps (discharge rate should be noted); subdrains; limits of shear keys, keyway excavations, and buttress fills; geotechnical hazard setback lines/planes; exploratory excavations and borings locations, including those not removed by grading; and any areas of over-excavation and replacement.
2. All relevant subsurface data and associated logs (soil borings, groundwater wells, borings with inclinometers, gas monitoring wells, etc.) referenced on the geotechnical map must be provided in the report.
 3. Natural and manmade slopes with slope gradients steeper than 2:1 (horizontal:vertical) (h:v) or where geologic structure may adversely affect slopes with shallower slope gradients shall be analyzed for slope stability with respect to the proposed improvements.
 4. Geotechnical cross-sections shall include all relevant subsurface explorations; illustrate geologic contacts; indicate true and apparent dips of bedding and other discontinuities, such as joints, fractures, faults, etc.; potentiometric surface; seeps; and all other relevant geologic details.
 5. Appropriate bedding plane and joint/fracture shear strengths representative of site-specific geologic materials shall be represented in the stability analyses, as appropriate. Provide supporting data for all material strengths utilized in slope stability analyses.

Note: Shear strength values provided in Table No. 20 of the JTD may be used only in seismic slope stability analyses. They are not appropriate for use in static slope stability analyses.

6. Provide static, seismic, and surficial slope stability analyses for all conditions that may impact or alter (i.e. horizontal and/or vertical displacement) the drainage paths of the channel alignment.
7. For each stability analysis presented, a corresponding detailed geotechnical cross-section shall be provided that shows the distribution of geologic materials. The critical failure plane and the various shear strength parameters used in the appropriate segments of each failure plane shall be shown on the analyses. If factors of safety are below County minimum standards then mitigation measures shall be presented.
8. Stability analyses shall investigate the various slope stabilities that may be affected by the proposed development. Methods of analyses (i.e. circular, translational or block, non-circular, etc.), the limit equilibrium methods (i.e. Ordinary Method of Slices, Modified Bishop Method, Morgenstern-Price based General Limit Equilibrium, etc.), and their related analyzed slip surfaces shall be comprehensive and determine the critical failure plane and factor of safety.
9. The Surface Water Drainage Analysis for Sunshine Canyon Landfill West Drainage Channel Master Plan document acknowledged a potential for settlement to occur over those portions of the proposed private drain alignment that traverse existing waste areas.
 - a. Provide specific numerical values for the potential total static and seismically induced settlements. All settlement values shall be supported by appropriate data and analyses. Provide mitigation recommendations for all areas where values exceed County settlement policies.
 - b. Provide specific distances over which the differential settlement may occur. Refer to the aforementioned Department of Public Works Manual for Preparation of Geotechnical Reports for County standards.
 - c. Recommended mitigation measures shall be made part of the plans.

Note: All mitigation measures on the plans shall be constructed.

10. Address the flow gradient for the proposed West Drainage Private Drain that may experience settlement (even tolerable differential settlement). Provide specific recommendations for preventing areas to create ponding within the private drain. Any section that exceeds permitted flow levels within the channel shall include protective slope improvements to prevent concentrated slope erosion and potentially exposure of buried waste. Provide recommended mitigation measures and details on the plans as necessary.
11. Provide chemical test results (sulfate, chloride, resistivity, etc.) for the on-site soils to address the presence of chemicals deleterious to construction materials and utility lines. The chemical tests must be in accordance with California Test Methods, Department of Transportation, or equivalent. Aqueous solution tests, such as EPA Tests or similar methods, are not acceptable for determination of resistivity. Resistivity tests must be performed on soils in a saturated condition. Recommend mitigation as necessary.
12. In accordance with Section 111 of the County of Los Angeles Building Code, the geotechnical consultant(s) shall make a finding regarding the safety of the site of the proposed work against hazard from landslide, settlement, or slippage and a finding regarding the effect that the proposed building or grading construction will have on the geotechnical stability of the area outside of the proposed work. The finding must be substantiated by appropriate data and analyses and be included in the geotechnical report.
13. Include details for fill placed over existing terrain steeper than 5:1 gradient and a keying and benching detail with all dimensions as determined by a Soils Engineer in the Design Report and plans.
14. Submit plans for verification of compliance with County codes and policies. Plans (scaled at 1-inch \leq 40-feet) shall include, at a minimum, the following, where applicable:
 - a. Existing and proposed grades;
 - b. Slope gradients;
 - c. Subdrain systems;
 - d. Removal and recompaction depths and limits;
 - e. Location of existing and proposed channels and related drainage features;
 - f. Grading sequences (e.g. ABC slot-cutting or removal of landslide driving force before removing supporting toe, etc.); and

- g. All standard general geotechnical notes and fill notes regarding fill compaction and density testing requirements.

Additional drainage and grading requirements of the Department of Public Works can be accessed at <http://dpw.lacounty.gov/bsd/publications>, typical grading requirements are provided on the Grading Review Sheet (see [http://dpw.lacounty.gov/bsd/lib/fp/Drainage and Grading/Plan Check Documents/Grading Review Sheet \(12-23-15\).pdf](http://dpw.lacounty.gov/bsd/lib/fp/Drainage%20and%20Grading/Plan%20Check%20Documents/Grading%20Review%20Sheet%20(12-23-15).pdf)). All applicable grading and drainage requirements shall be incorporated into the plans.

15. All geotechnical reports submitted for review must include an electronic copy of the report on a Compact Disk in Adobe® Portable Document Format (PDF). The electronic version shall include an electronically generated representation of the licensee's seal, signature, and date of signing.

Review Exclusions

The following list of items are beyond the scope of this geotechnical review and are assumed to be addressed by others agencies, such as the Regional Water Quality Control Board, except for when those design items potentially affected slope stability analyses of interim and final slope gradients that may have potential health and safety issues or adverse effects to off-site properties:

- Surficial stability of final cover slopes shallower than 2:1 (h:v);
- Potential deformation of final cover under static and seismic loading;
- Design and evaluation of base liner section, alternate liner section, and slope liner section;
- Protective layer (operation layer);
- Landfill gas collection system;
- Leachate collection and removal system.

Water Resources

The following comments on the Private Drain No. XXXX – Sunshine Canyon Landfill West Drainage Plans:

1. **DWG No. 02.** Within the Hydraulic Element table, double-check whether Line C should be from Sta 71+00 to 76+47.46, instead of from 71+00 to 75+47.46.
2. **DWG No. 03.** The interim flow of 700 cubic feet per second (cfs) does not appear in the hydrology of the West Drainage Channel. Please discuss the interim flow of 700 cfs, its source, timing, and impact to the receiving drain

Mr. Rob Sherman, General Manager
June 15, 2016
Page 6

"Line A." Without further context, it appears the incoming flows to Line A consist of 700 cfs from Line E and 1,245 cfs from Line B while the capacity of Line A is 1266 cfs.

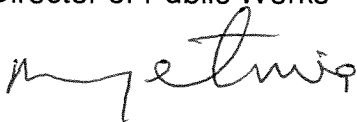
3. **DWG No. 06.** Pertaining to the upper chart, the capacity of 724 cfs should be depicted downstream from Sta 37+00.
4. **DWG No. 06.** Pertaining to the upper chart, double check whether the capacity should be shown as $Q = 764$ cfs, instead of $Q = 760$ cfs.
5. **DWG No. 10.** Pertaining to Line F, the pipe should be able to pass the burned flow rate of 86 cfs instead of 81 cfs. Pertaining to Line E: the pipe should be able to pass the burned flow rate of 60 cfs instead of 56 cfs.
6. **DWG No. 11.** Pertaining to Debris Basin No. 2, there appears to be duplicate labeling of the concrete channel.

Final review of this Project is contingent upon the approval of Cell CC-4 Development Project and/or any future projects or grading that may alter the design and analysis of the WDC Master Plan.

If you have any questions, please contact Mr. Martins Aiyetiwa at (626) 458-3553, Monday to Thursday, 7 a.m. to 5:30 p.m.

Very truly yours,

GAIL FARBER
Director of Public Works



MARTIN AIYETIWA
Senior Civil Engineer
Environmental Programs Division

KM:jl
P:\Sec\PW Comments to SCL West Drainage.doc

Enc.

ATTACHMENT G



GAIL FARBER, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

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IN REPLY PLEASE

REFER TO FILE: **EP-5**

December 20, 2016

Mr. Rob Sherman, General Manager
Sunshine Canyon Landfill
Republic Services, Inc.
14747 San Fernando Road
Sylmar, CA 91342-1021

Dear Mr. Sherman:

SUNSHINE CANYON CITY/COUNTY LANDFILL PROPOSED INTERMEDIATE COVER ENHANCEMENT (ICE) DEMONSTRATION PROJECT

We have reviewed your request to conduct a 6-month demonstration project for the use of Posi-Shell® to enhance intermediate cover areas at the Sunshine Canyon Landfill. The request is contained in your submittal dated August 11, 2016, as Attachment D entitled:

- Revised Proposal for a Demonstration Project for Intermediate Cover Options, Sunshine Canyon Landfill.

The objective of the demonstration project is to determine if the Posi-Shell® spray-on mixture is effective as intermediate cover material in controlling landfill gas surface emission, odor, and leachate leaking from the intermediate slope areas. The Work Plan also stated that this demonstration project is a requirement of Condition 5 of the Stipulated Agreement between Republic Services and the Sunshine Canyon Landfill – Local Enforcement Agency, which seeks to improve performance of the intermediate cover at the landfill.

Based on Public Works' evaluation of the submitted work plan, and consistent with authority granted under Condition 45 (N) of the Landfill's Conditional Use Permit No. 00-194-(5), Public Works hereby approve Republic's request to conduct the

proposed ICE demonstration project for a period of six months from the implementation date subject to the following "Conditions of Approval":

General Conditions of Approval

1. Duration of Pilot Project – six months from the implementation date.
2. Termination – The Director of Public Works may terminate the approval of the pilot project at any time, including but not limited to the following causes, at the Director's sole discretion:
 - a. Republic has failed to comply with any of the requirements specified herein, including the *Evaluation Standards and Program Requirements, Reporting Requirements* and *Additional Requirements*, as specified.
 - b. Problems arise with the use of the Posi-Shell[®] that cannot be corrected.
 - c. The use of the Posi-Shell[®] material does not satisfy the objectives of the pilot project as stated in this letter and in the Report.

If at any time during the term of this demonstration project, the Director of Public Works terminates the approval of the demonstration project, Republic shall revert back to complying with all conditions and requirements pertaining to intermediate cover as stipulated in the CUP.

Specific Conditions of Approval

3. Demonstration Areas – This demonstration project shall be limited to grids M11, L12, L13, O10, O9, N10, and N9 (map attached) and shall be implemented as follow:
 - a. Posi-Shell[®] with the Portland cement additive shall be used to cover grids, M11, L12, L13, and O10. Grids M11, L12, and L13 will have Portland cement added to the mixture and deployed at two square feet per gallon. Grid O10 will have Portland cement added to the mixture and deployed at the normal application thickness of four square feet per gallon.
 - b. Application of additional six inches of compacted soil will be added to the existing intermediate cover on grids N10, N9, and O9. For comparison purposes, this will be conducted concurrently with the Posi-Shell[®] demonstration project.

4. Republic shall study and report on the impact that this demonstration project has on the growth of vegetation on the intermediate slopes.
5. If the use of Posi-Shell[®] application is to be proposed or recommended for a more permanent basis, Republic shall submit a detailed plan for Public Works' review and approval on how the plan will satisfy CUP's Condition 44.A and approved CEQA mitigation requirement's that require all slopes inactive for 180 days or longer be planted with interim vegetation.
6. Republic shall ensure that the demonstration project will not inhibit the site's ability to maintain proper erosion controls and odor control during the demonstration period.

Monitoring Requirement

7. Republic shall perform all required South Coast Air Quality Management District Rule 1150.1 surface emission monitoring at the landfill on a monthly basis. For the demonstration project, Republic shall perform the following:
 - a. Establish a base line of instantaneous and integrated surface emission on grid M11, L12, L13, O10, O9, N10, and N9.
 - b. Record instantaneous and integrated surface emission on grid M11, L12, L13, O10, O9, N10, and N9.
 - c. Conduct daily visual inspections on these above grids for any cracks, erosion control issues, and damages.
 - d. Keep a weekly log on the effect of weather and operational activities that impacted the demonstration grids.

Reporting Requirement

8. Republic shall provide a monthly report of records and logs of 7b, 7c, and 7d to Public Works summarizing all monitoring observations and maintenance issues of the demonstration project; any immediate odors detected at the vicinity of the demonstration grids.

Data Analysis

9. At the conclusion of this demonstration project, Republic shall submit a detailed report documenting all of the observations, monitoring data and results, and recommendations regarding use of Posi-Shell® at the Sunshine Canyon Landfill. Such Data Analysis and Evaluation Report must also include all documentation establishing whether the project's objectives as stated herein have been met.

Public Works reserves the right to add additional monitoring and reporting requirement that it determines are necessary to evaluate the performance of the ICE Demonstration Project at the site.

Conclusions and Results of the Demonstration Project:

At the conclusion of the Demonstration Project, the Director of Public Works will evaluate the Data Analysis and Evaluation Report to determine if the project objectives have been met and will consider whether the use of Posi-Shell® had enhanced the intermediate cover at the site. If the project's objectives are met, the Director of Public Works, in consultation with the Director of Regional Planning, may approve the use of Posi-Shell® on the intermediate cover on a more permanent basis.

All documents and reports required by this letter shall be submitted to the following address:

County of Los Angeles
Department of Public Works
Environmental Programs Division
P.O. Box 1460
Alhambra, CA 91802-1460
Attention: Martins Aiyetiwa, Landfills Section

This letter addresses only Republic's request for an approval of the work plan to conduct a site specific demonstration project and does not address any other approvals that may be required by any other agency in order for Republic to implement the proposed demonstration pilot project. Republic is required to obtain necessary approvals and clearances relating to this project that may be required by other regulatory agencies. Additionally, this approval does not release Republic from

Mr. Rob Sherman
December 20, 2016
Page 5

mitigation requirements as prescribed in Public Works' March 30 and July 14, 2016, odor nuisance letters.

If you have any questions, please contact me at (626) 458-3553, Monday through Thursday, 7 a.m. to 5:30 p.m.

Very truly yours,

GAIL FARBER
Director of Public Works



MARTINS AIYETIWA
Senior Civil Engineer
Environmental Programs Division

MA:jl

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cc: Department of Regional Planning (Dennis Slavin, Jon Sanabria, Maria Masis)
City of Los Angeles Planning Department (Lisa Webber, Ly Lam, Nicholas Hendricks)
South Coast Air Quality Management District (Laki Tsopulo, Cher Snyder, Amir Dejbakhsh)
Sunshine Canyon Landfill – Local Enforcement Agency (Dave Thompson, Maurice Pantoja)
Sunshine Canyon Landfill – Community Advisory Committee (Wayde Hunter)
Granada Hills North Neighborhood Council
Los Angeles County Solid Waste Management Committee/Integrated Waste Management Task Force



14747 San Fernando Road
Sylmar, California 91343

May 16, 2016

Mr. Rob Sherman, General Manager
Republic Services
Sunshine Canyon Landfill
14747 San Fernando Road
Sylmar, CA 91342

Subject: Sunshine Canyon City/County Landfill (SWIS # 19-AA-2000)
LEA Approval of Intermediate Cover Enhancement Project

Dear Mr. Sherman,

On April 1, 2016, the Sunshine Canyon Landfill Local Enforcement Agency (LEA) received a revised proposal for the Intermediate Cover Enhancement Project (Project) at the Sunshine Canyon Landfill (Landfill). The proposal was submitted as part of the Stipulated Agreement to address landfill gas and leachate issues related to the Landfill. The Project as proposed is scheduled to run for a period of six months which will allow for the evaluation of several operational approaches to improve the performance of the intermediate cover.

The LEA has reviewed the revised proposal and has determined that it meets the intent of the Project.

In addition to the summary report that will be provided after the conclusion of the Project, the LEA requests the following:

- Submit to the LEA results of the monthly surface emission monitoring for grids L12, L13, M11, N9, N10, O9 and O10 within 30 days for each of the six months of the Project period.
- The LEA shall reserve the right to expand on the types of other intermediate cover enhancements during the Project period to include, but not limited to the:
 - Application of a vegetative layer on a grid to be selected by the LEA.
 - Increase in the number of grids to receive intermediate cover enhancements.
- The LEA must be notified at least 7 days prior to the start of the Project.
- Project activities commence no later than the week of June 5, 2016

The LEA reserves the right to suspend, modify or revoke this approval if problems are observed during the six month Pilot period. This approval is only for areas of the pilot project under the jurisdiction of the LEA. Note that the LEA will be separately recommending additional operational measures for addressing the fresh trash odors at the working face.

If you have any questions regarding the LEA approval, I can be contacted at (626) 430-5550 or at gvillalobos@ph.lacounty.gov.

Sincerely,



Gerry Villalobos
SCL LEA Program Manager

cc: David Thompson, SCL LEA