

# SUNSHINE CANYON LANDFILL



A REPUBLIC SERVICES COMPANY

May 10, 2011

Michael LoGrande  
City of Los Angeles  
John Sanabria  
County of Los Angeles  
Department of City Planning  
200 N. Spring Street  
Los Angeles, CA 90012

Subject: Report to the Joint Sunshine Canyon Landfill Technical Advisory Committee

Dear Mr. LoGrande and Mr. Sanabria:

In anticipation of the May 11, 2011 TAC meeting, Sunshine Canyon Landfill (SCL) is respectively providing you with a status report regarding items of interest specified by City/County Planning since the last TAC meeting of December 10, 2010.

## Landfill Gas Monitoring and Methane Gas Control:

The landfill gas monitoring program at SCL is accomplished by monthly monitoring of the site's 38 perimeter gas probes and quarterly surface emission monitoring. This data is used to verify the landfill gas extraction system is operating optimally. The data is reported on a quarterly basis to the South Coast Air Quality Management District (SCAQMD) in accordance with the requirements of Rule 1150.1 and the full reports are included in the Annual Report to the TAC.

As reported at the last TAC meeting, a total of 50 vertical landfill gas extraction wells were installed in June and July 2010 and an additional 13 were installed in November and December 2011. The purpose of these wells is to replace existing wells that were either damaged and/or no longer functioning as intended, and also to provide vacuum to areas of the site where additional coverage was needed to control surface emissions.

The following information was provided to the SCL LEA in response to their March 15, 2011 letter requesting information regarding the site's gas collection system:

SCL experienced a soil landslide in the central portion of the future landfill footprint of the site on January 12, 2011 which affected the area immediately surrounding the former County scalehouse facility. Environmental components of the LFG collection system in the area of the slide were inspected immediately following this event and found to be operational. Routine monthly gas well monitoring for the month of January 2011 was conducted the previous week on the County portion of the site.

Quarterly Surface emission monitoring in accordance with the site's approved 1150.1 Surface Emission Monitoring Plan, was conducted on the County side of the site on February 4, 2011 by our independent third party contractor. This monitoring identified twelve locations on the County side of the landfill with instantaneous results exceeding the regulatory detection limit of 500 ppmv (measured as methane). Site personnel were notified immediately, the locations were repaired, and the subsequent 10-day re-monitoring on February 14th showed all of the locations were below the 500 ppmv threshold. In accordance with NSPS and Rule 1150.1 requirements for 30-day re-checks, these areas were monitored on March 3, 2011. The monitoring again verified the concentrations of methane at each of the twelve locations were well below the regulatory limit of 500 ppmv. This monitoring data, as well as all information required by Rule 1150.1 is submitted to SCAQMD 45 days after the end of each quarter.

In mid-February, the following circumstances occurred:

1. On February 23<sup>rd</sup> during the routine February monthly landfill gas wellfield monitoring event, a group of twenty-nine wells on the southern portion of the County were monitored and found to have positive pressure. After our third party gas design consultant and gas construction contractor evaluated the area on February 24<sup>th</sup>, several damaged and pinched lateral and jumper lines as well as a 12" header line which had been displaced by construction activities were identified. Upon completion of the investigation on February 24<sup>th</sup>, it was also determined a 12" connection to an 18" main header line pulled away as a result of the soil movement on January 12. The 12" line was capped immediately after the landslide to prevent oxygen intrusion. It should be noted the routine monitoring conducted in this area of the site was conducted prior to the soil landslide, therefore there is no monitoring data available that is indicative of the issues identified after the system assessment was performed.
2. A group of seven wells in the southwest portion of the County were monitored on February 26th and found to have positive pressure. This area of the site was heavily trafficked by construction equipment in January and February. Investigation in this area found a 6-inch jumper line connecting this group of wells had been damaged by the heavy equipment. This line was repaired and the wells brought back under vacuum. Monitoring performed on this group of wells on March 1, verify these wells maintained vacuum after the repair.
3. Fifteen gas wells located on the wet weather deck area of the County were off-line in January and February 2011 due to active fill operations. Historically, gas well piping (lateral, jumper and header lines) have been located above-grade on the County portion of the site to make them accessible for repair and visual inspections. The wells on the wet weather deck were off-line to ensure gas lines were out of the way of operations equipment and truck traffic.

In response to these occurrences, the site took the following actions as described in the response to the March 15, 2011 LEA letter:

Sunshine Canyon has a multi-year contract with a 3<sup>rd</sup> party construction contractor for installation and repair of landfill gas collection systems. This contractor was scheduled to be onsite in mid- to late-March for routine landfill gas system expansion activities. In response to reports from the facility neighbors and the SCAQMD inspector about landfill gas odor complaints in the evening hours, the facility requested this 3<sup>rd</sup> party contractor mobilize to the facility early, on February 24 with five full-time gas field construction

workers. Beginning February 24, the contractor has been working to evaluate and upgrade the system in the areas of cell construction and working face activities. As of March 18, the contractor completed all the repairs identified to bring all the gas wells under vacuum. In addition, as part of the proposed annual construction project, larger header lines have been installed to provide additional vacuum to gas wells, along with other overall system improvements. The contractor are scheduled to remain on-site to address specific areas resulting from the engineering reviews of monitoring data.

Please note that during the months of January and February 2011, the three combustion devices (flare stations) at the facility were operational. There were some periodic shutdowns due to low stack temperatures and other reasons. Typically, any repairs were made to the affected flare station within a few hours of a single combustion device shutdown. At no time did the GCCS in its entirety go offline.

#### Status on Groundwater Monitoring:

The most recent groundwater monitoring data is reported in the February 2011 Groundwater and Waste Disposal Monitoring Report. Exceedences of site water quality protection standards (WQPS) were again noted for 1,4-dioxane in samples collected from three downgradient monitoring wells and for MTBE and cis-1,2-DCE in one downgradient monitoring well. The facility continues to address these detections of 1,4-dioxane and low level VOCs in monitoring wells through quarterly monitoring and continuous pumping of water collected on the up-gradient side of the cutoff wall as required by the site's Corrective Action Program (CAP) contained in the CAP Waste Discharge Requirements (WDRs) Order No. R4-2007-0023. The unlined closed City Landfill (Unit 1) is the likely source of these compounds.

Based on the results of the analyses conducted in the third and fourth quarters of 2010, it appears the continuous pumping of the cutoff wall system is gradually reducing the concentration of 1,4-dioxane in two downgradient groundwater monitoring wells (MW-1 and MW-5). Concentrations of 1,4-dioxane in these wells were reported at 10-13 ug/L during the second half of 2010 and at 4.7 – 8.8 ug/L during the first quarter of 2011.

Semi-annual groundwater monitoring reports submitted to the Regional Water Quality Control Board are available online at [www.sunshinecanyonlandfill.com](http://www.sunshinecanyonlandfill.com) under the Required Reports heading in the Regulatory/Environmental section of the website. It will also be included in the Annual Report to the TAC. These reports are also accessible on the site's website.

#### Alternative Fuel Vehicles and Ethanol Gas Usage and Fuel Dispensing Station:

SCL continues to fuel the E-85 vehicles with Ethanol 85 on average, every week at a fueling station located at 11699 San Vicente Blvd., Los Angeles, California. Currently the site owns and operates thirteen vehicles that use E-85 fuel.

According to SCL's research, there have been no advancements in technology for alternative fuel heavy machinery. No alternative fuel light-duty vehicles or heavy machinery have been purchased since the last update.

### Status on Re-vegetation Areas:

SCL continues to vegetate both interim and permanent slopes. Updates on all revegetation efforts are provided quarterly in a report that includes maps and descriptions of the type of work done each quarter.

At the present time the only permanent slopes are City and County Sage mitigation areas. The County sage slope is in its third year of maintenance and monitoring, and all the County Sage Slope test plots and salt-tolerant potted plants studies concluded in December 2010. SCL is working with Dr. Ted St. John at AECOM to finalize a planting design plan based on the results of the studies. The City Sage project continues to be monitored and maintained while the site waits for the proper approvals for importing soil onto the compacted areas. Once approvals have been obtained, the site will initiate technical work on City Sage immediately. The first weed abatement event for 2011 occurred during the first quarter of 2011 and a second event is anticipated during the third quarter.

Several semi-permanent slopes also exist onsite, known as the Phase V area. These are cut slopes that may ultimately be changed as the landfill height increases. However, since the slopes will be long-term in nature, they have been treated with a sage based seed mix and erosions control measures such as jute matting and horizontal straw waddles to encourage growth on the very steep cut slopes.

In December 2010, a contractor hired to begin tree removals on the City-side of the landfill was found removing trees in another location and was immediately asked to leave the site. After a thorough tree count and survey was conducted, it was found that 11 Big Cone Firs and 22 Oaks had been unintentionally removed. SCL anticipates planting to mitigate for these trees to begin in the fall of 2011.

### Relocation of Leachate and Condensate Treatment Plants and Leachate Management:

As reported in the previous TAC Report, the discharge of condensate and leachate to the City sewer system was terminated in March 2010 due to a break in the sewer line in a section crossing private property south of SCL. A temporary system was installed near the front gate of the site to treat leachate with activated carbon. Condensate was collected in a storage tank and taken off-site from April through June until an on-site treatment system could be installed. In late June 2010, SCL installed a temporary condensate treatment system under permit from SCAQMD to process condensate for on-site recycling. The temporary system was re-located to an area near the City scalehouse in November 2010. All site liquids continue to be processed on-site for recycling. The following actions are presently being implemented for the treatment of leachate and condensate:

- Leachate is being treated on-site using an activated carbon system under the new SCAQMD permit issued in December 2010. The treated leachate is used for on-site dust control and irrigation water;
- The permanent leachate treatment facility (LTF) near the front gate has been completed and is fully operational;
- The temporary condensate treatment facility has been operating under an approved SCAQMD permit and has successfully been meeting the water recycling limits since it

became operational in late June 2010. The permit to operate the permanent condensate treatment facility was issued by SCAQMD on December 10, 2010.

- The new condensate treatment facility is planned to be installed and operational by July 2011. Treated condensate is also used for on-site dust control and irrigation water.

#### Status on the Chatsworth Reservoir Wetland and Riparian Mitigation Program:

The Response to Comments document following up on the public review draft (CEQA) Mitigated Negative Declaration was prepared during early January 2011. In particular, additional work was required by Environ (Air Quality) and JMA (cultural resources) to address public comments. In mid-January, the Response document was finalized and submitted to the LA Department of Recreation and Parks for distribution and scheduling for its Board of Commissioners public hearing. The language of the Mitigation Agreement between SCL and the City was finalized by attorneys representing both parties in late January. At its Board Meeting on February 2, 2011, the RAP Board of Commissioners approved the recommendations that the City Council adopt the MND and associated Mitigation Monitoring and Reporting Plan (MMRP) and approve the Agreement with Allied Remediation Services, Inc., (ARS). Follow up concerns about the need for additional approval from the California Department of Fish and Game (1600 streambed alteration agreement) surfaced in early March. These concerns were dismissed by researching the permit history and demonstrating that DFG required no further approvals for the project. The project was again reviewed in a public hearing at the Energy & Environment Committee of the LA City Council on March 22, 2011. It then received City Council approval on March 29, 2011.

The Notice of Determination (NOD) was filed on March 30<sup>th</sup>. SCL obtained bids from landscape contractors and grading contractors during March. Planning for the spring collection and site survey work at Chatsworth occurred during April and with a site visit was held on May 5<sup>th</sup>.

#### Report on new CC-2/3A Development Activity at SCL, Including Permits Required Prior to Development:

The Design Report for Cell CC-2/3A was submitted to the Los Angeles Regional Water Quality Control Board on February 8, 2011 and approval for the design was received on April 6, 2011 after the public comment review period. The approval is for a 35-acre cell. Construction of the liner system began on April 18, 2011. Initially, a 6-acre portion of the new cell will be constructed; it is anticipated this 6-acre portion will be finished by the end of May 2011. Liner construction on another 4-acre portion of the cell will then be constructed with an anticipated completion date of the end of June. An additional 5 -10 acres will also be completed by August 2011.

#### Odor Mitigation Plan in Compliance with County and AQMD Requirements

An Odor Plan of Action was submitted to SCAQMD and other agencies on May 3, 2011. This plan was prepared to document the processes that either are currently in place or are proposed to be implemented at the site. It was prepared to respond to SCAQMD's request for an odor management plan for the site. A preliminary document was submitted on March 31<sup>st</sup>; comments were received and incorporated into the final plan.

## Report on any new developments at the landfill since the last TAC meeting on Dec. 10, 2010

New developments at Sunshine Canyon Landfill since the last TAC meeting held on December 10, 2010 include the following:

- On January 12, 2011, there was movement of a temporary construction slope which caused a horizontal movement of approximately 20 feet and a vertical offset of 5-10 feet. The Report of Geologic Observations regarding this occurrence is included in Attachment 1;
- On March 20, 2011, there was a storm event where over 4 inches of rain fell on the site with winds averaging over 15-25 miles per hour. There were also wind gusts of over 50 mph. This occurrence is discussed further below and the response to agency comments is included as Attachment 2;
- Development of Cell CC-2/3A began in September 2010 with liner construction starting in April 2011. A summary of the excavation and floor liner projects is included as Attachment 3.

## Gas-to-Energy Facility

The DSEIR was published on May 10, 2011 for public comments and will be available on the AQMD website at <http://www.aqmd.gov/ceqa/nonaqmd.html>

The air permit should start the public comment period later this week. There is no date yet from AQMD but the permit department was waiting for the DSEIR to publish prior to putting the air permit out for public comment.

## Adequacy of drainage infrastructure

A storm event on March 20, 2011 caused a slope washout on the closed City North landfill when high winds (gusts up to 50 mph) blew away a portion of a geomembrane lining from a temporary drainage channel. The resulting stormwater runoff flowing along the eastern perimeter of the facility eroded soil and exposed some refuse from the closed City North landfill. Some debris (soil and trash) washed down into the terminal sedimentation basin.

The Los Angeles RWQCB issued an NOV on April 5, 2011 for this event. A response to the NOV was submitted to the RWQCB and the SCL LEA on May 5, 2011. The response detailed the actions that were taken on March 21<sup>st</sup> immediately following the storm, the interim actions that have taken place to ensure stormwater runoff is addressed and the long-term, permanent actions that will be taken. The May 5<sup>th</sup> response is provided as Attachment to this report.

## Final cover design (County top deck)

As requested by the Los Angeles Regional Water Quality Control Board, a study is being performed for an alternative final cover design for the County portion of the site. This study is expected to be completed before the end of 2011.

Please do not hesitate to contact me at (818)-833-6511 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'DC', with a stylized flourish extending to the right.

David Cieply  
General Manager

Cc: Linn Wyatt, City Planning  
Ly Lam, City Planning  
Maria Masis, LA County Regional Planning  
Linda Lee, County Department of Public Works  
Emiko Thompson, County Department of Public Works  
Cindy Chen, SCL-LEA  
Gerry Villalobos, SCL-LEA  
David Thompson, SCL-LEA  
Becky Van Sickle, Sunshine Canyon Landfill  
Patti Costa, Sunshine Canyon Landfill  
Rafael Garcia, Sunshine Canyon Landfill

# **ATTACHMENT 1**

# A-Mehr Inc.

*Professional Engineers and Scientists Specializing in Landfills*

23016 Mill Creek Drive  
Laguna Hills, CA 92653

Phone (949) 206-0157  
Fax (949) 206-9157

January 12, 2011

Ms. Patti Costa, P.E.  
Sunshine Canyon Landfill  
14747 San Fernando Road  
Sylmar, California 91342

Subject: Report of Geologic Observations  
Ground Movement of Temporary Construction Slope  
Sunshine Canyon City/County Landfill,  
Sylmar, California

Dear Ms. Costa,

Please find the following summary of geologic observations related to the movement of a temporary construction slope within the operation / excavation area on January 11, 2011.

## **Description of Site Conditions**

On January 11, 2011, Independent Construction, Inc. (IC) continued excavation of soil for operations within the area of future cell CC-2 at Sunshine Canyon City/County Landfill. The primary activities on that day were excavation of slopes below the former leachate treatment plant (the LTP area). The LTP area was being lowered relative to the adjacent county scales pad (approximate elevation 1,670 feet above mean sea level), along an east and southeast-facing approximately 2:1 cut slope. On January 11, 2011, the area of excavation reached an approximate elevation of 1,575 ft-msl and an A-Mehr geologist was monitoring soil and rock conditions within the excavation area and exposed cut slope.

Observations during previous excavation activities in the area determined that stable bedrock materials occur below a generally southwest dipping, clay-lined surface. As the floor of the excavation was lowered, the daylight line of this surface generally migrated to the west, towards the 2:1 cut slope. The planned actions for this area were to monitor the base of the cut slope for the presence of stable bedrock, establish a key surface fully within this stable material, and fill the key surface with engineered fill to form a temporary soil stabilization buttress along the base of the cut slope, which will remain until the slope is fully excavated as planned in the future.

At about 2:30 pm on January 11, 2011, the A-Mehr geologist noted movement near the northern end of the excavation area floor. Movement was primarily to the east and continued overnight. The attached Figure 1 shows the approximate extent of the movement. As shown in the figure, the area of movement covers approximately seven acres. Based on the character of the graben structure along the head scarp, and observations of offset surface features at the toe of the movement, we tentatively estimate that horizontal (easterly-directed) movement was on the order of 20 feet. Vertical offset is estimated to be on the order of 5 to 10 feet.

Ms. Patti Costa, P.E.  
January 12, 2011  
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Facilities and features impacted by the ground movement include:

- Access road to the County disposal area;
- County truck scales;
- SCE overhead power lines through the site; and
- Overhead power lines to County scale house (removed as of 1/12/11);

Shortly after noting the initial cracks, the County scales and scale house were closed and all subsequent truck traffic is being managed through the City Scales. Southern California Edison was notified regarding the power poles located within the movement area and power to the overhead lines has been switched off.

#### **Planned Actions**

A-Mehr plans to further investigate the observed slope movement through the following investigation activities:

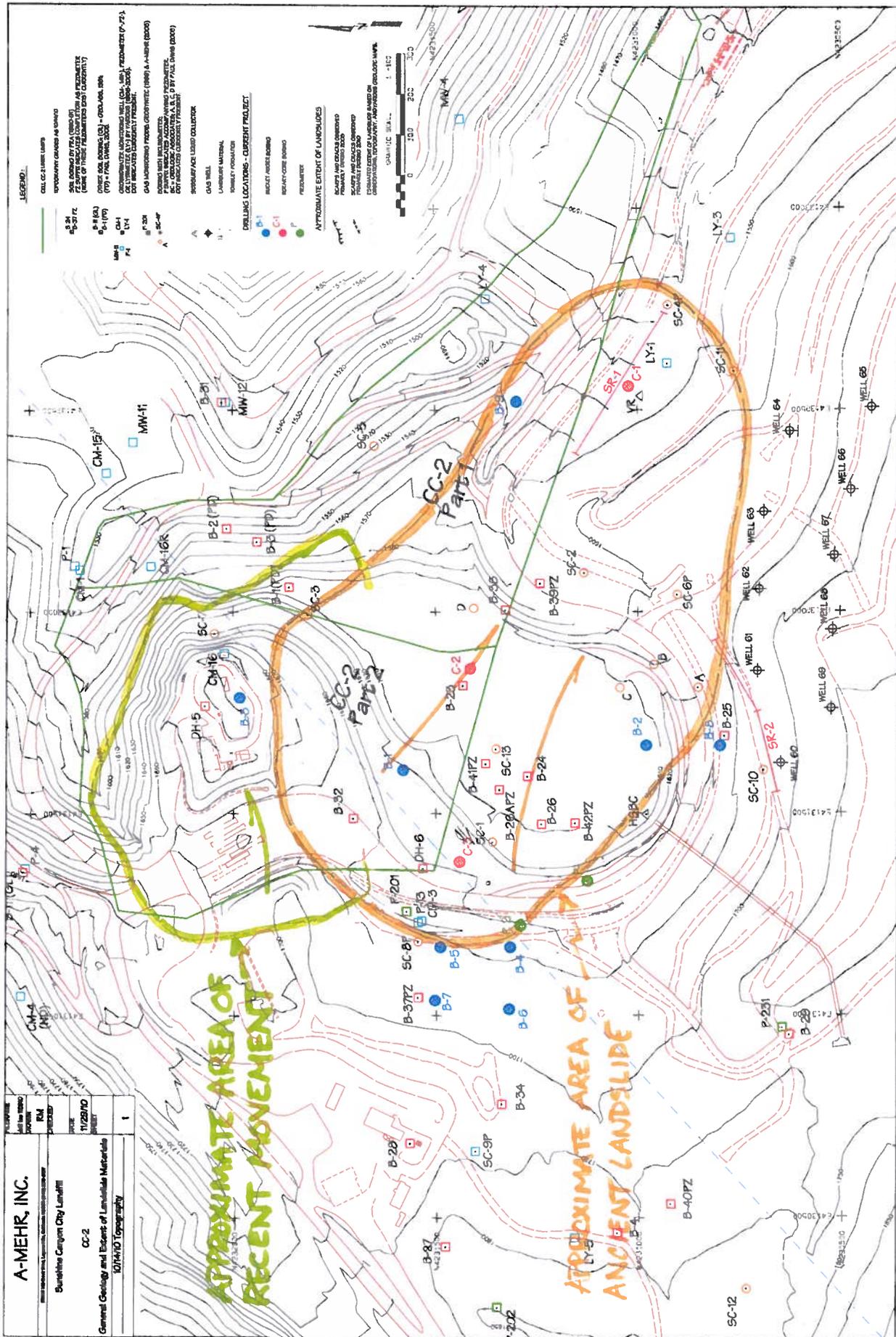
- Conduct geologic mapping of the slope movement and surrounding area;
- Drill 3 to 5 bucket auger borings to refusal or groundwater;
- Drill 3 to 5 small diameter borings to a depth of approximately 100 to 150 feet;
- Downhole log the bucket auger borings.
- Perform televiewer logging of the small diameter boreholes.
- Install inclinometers in some or all of the small diameter boreholes.

A-Mehr will prepare a report summarizing the results of the above investigative activities. The report will provide recommendations regarding procedures for completing the planned permanent removal of the affected movement area including maintenance of 2:1 grades in all remaining temporary construction slopes.

Sincerely,  
A-MEHR, INC..

  
M. Ali Mehrazari, P.E.  
Principal Engineer

  
Paul Davis, CEG 320  
Senior Geologist



<b>A-MEHR, INC.</b>	
Project Name	RM
Client	11/28/10
Scale	AS SHOWN
Drawn by	RM
Checked by	RM
General Geology and Extent of Laminated Materials	CC-2
10/11/10 Topography	

## **ATTACHMENT 2**

# SUNSHINE CANYON LANDFILL



May 5, 2011

Dr. Wen Yang  
Chief, Land Disposal Unit  
Los Angeles Regional Water Quality Control Board  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Subject: Sunshine Canyon Landfill, File No. 58-17  
Notice of Violation, Order No. R4-2008-0088

Dear Dr. Yang,

This letter is provided in response to the Notice of Violation (NOV) dated April 5, 2011 regarding alleged violations of requirements of the Waste Discharge Requirements (WDRs) (Order No. R4-2008-0088) and the National Pollutant Discharge Elimination System (NPDES) general permit issued by the California State Water Resources Control Board (WDID No. 4 19S001306) for the Sunshine Canyon Landfill. This response presents a description of the weather event of March 20, 2011, the assessment of the resulting impacts to the landfill, a summary of steps taken to mitigate and prevent future impacts from potential similar events, and responses to each of the alleged violations.

This response also provides the information requested from the Sunshine Canyon Landfill LEA by letter dated March 23, 2011 referencing a Focused Inspection Report for the site. The focused inspection was also in response to the March 20, 2011 storm event. The SCL LEA agreed the response to their March 23<sup>rd</sup> letter would be due concurrent with the date of our response to any related notice of violation received from the Los Angeles RWQCB.

## *Description of March 20, 2011 Weather Event*

Sunshine Canyon Landfill received over four inches of rainfall on March 20, 2011. The storm was accompanied by winds averaging over 15-25 miles per hour (mph) at the site, with gusts greater than 50 mph recorded at the nearby Newhall Pass weather station. The high winds and gusts caused a portion of a temporary plastic-lined drainage channel that was installed to convey surface water from the east perimeter of the site to the terminal sedimentation basin to blow away thereby compromising its intended function. This channel segment crossed a portion of the east, closed City Landfill. After the plastic liner was blown away by the high winds and gusts, runoff from the storm event caused erosion of the cover soil and exposure of some refuse.

## *Impact to the Landfill*

The impacted area of the closed landfill was investigated by our consulting engineer on March 21, 2011. It was estimated the average dimensions of eroded final cover of the east

closed City Landfill were approximately 500 feet long by 10 feet wide, covering an area of approximately 5,000 square feet. Within this area, refuse was exposed in an incised trench area averaging approximately 2 feet wide. It is estimated that less than 20 cubic yards of refuse may have eroded from this area and mixed with mud in the area above the terminal basin.

#### *Mitigation and Preventative Measures Taken*

As stated the written notification submitted to the RWQCB on March 23, 2011, corrective actions began immediately following the March 20, 2011 storm event. The following activities have been completed as of the date of this response:

- Eroded slope areas were repaired by the placement of compacted soil beginning on March 21, 2011 and completed on March 23, 2011;
- All sediment and other materials were removed from the channels leading to the terminal basin;
- Sediments in the terminal basin have been managed to facilitate drying of the material and to date, approximately 5,000 cubic yards of sediment have been removed from the basin;
- Additional compacted fill was placed in the affected area of the closed City Landfill to bring the final cover to its original grades or higher;
- The temporary geomembrane-lined channel for the east perimeter drainage has been reconstructed in a new alignment, and;
- A design and bid package for construction of a permanent drainage system to manage stormwater from the east perimeter drainage area has been completed.

This repair work was monitored by our consultant, A-Mehr, Inc. The consultant's report is included as Attachment 1 to this report. The report documents the repair work monitored by A-Mehr during the period March 22 – April 4, 2011.

#### **RESPONSES TO RWQCB NOTICE OF VIOLATION**

*Discharge of waste to land as a result of inadequate waste disposal and postclosure maintenance practices, and that have not been specifically described to the Regional Board and for which valid WDRs are not in force, are prohibited (Section C.1 of the WDRs):*

The active landfill disposal face is fully covered each day with 9 inches of compacted soil to prevent litter and contact of refuse and surface water. The site is inspected regularly during the rainy season to identify maintenance needed in closed areas or drainage control systems. Damage to the closure cap during the March 20, 2011 rainfall event was limited to the area of the temporary channel that was blown away during the storm by the high winds.

Valid WDRs were in effect during the time of waste disposal in this area of the site and proper disposal and cover techniques were employed during the time operations were being conducted. As previously described, the events that occurred during the storm event were significant in that the high winds and gusts contributed to the damage of the temporary drainage channel and subsequent erosion of landfill material.

*The discharge of waste to surface drainage courses or to groundwater is prohibited (Section C.4 of the WDRs):*

Waste consisting primarily of paper and plastic was exposed solely as a result of the slope washout due to the temporary plastic-lined drainage channel that was impacted by high winds during the heavy rainstorm event of March 20, 2011. These materials were completely removed from the area within two days, and measures were taken to prevent additional erosion of refuse slopes by the import of clean soil and track-walking and compaction of the placed soil.

*Wastes deposited at the Landfill shall be confined thereto, and shall not be permitted to blow, fall, or otherwise migrate off-site, or to enter off-site water drainage facilities of watercourses (Section E.4 of the WDRs):*

As a result of the heavy rainfall, some material (primarily plastic and paper) washed down to the terminal basin. Some of this material overflowed into the riser pipes, which resulted in some of the materials entering the municipal storm drain system. Removal of this material from the storm drain system commenced as soon as possible in the early morning of March 21, 2011. All of the material was removed as of March 22, 2011 and the storm drain area was continuously inspected throughout the week to ensure no off-site migration occurred.

*All components of the facility drainage system must be designed and constructed to withstand site-specific maximum intensity precipitation (peak flow) from a 100-year, 24-hour storm (Section K.1.c of the WDRs):*

All drainage systems are designed and constructed for conveyance of peak flow from a 100-year, 24-hour storm at present interim landfill grades. The site is currently not at final grades. There is no evidence that damage to the temporary channel was caused by insufficient hydraulic capacity. The channels and other drainage structures designed and constructed at Sunshine Canyon Landfill have been based on the runoff data contained in Appendix J of the JTD which developed peak flows from the Capital Storm as defined in the Los Angeles County Hydrology Manual. As stated in Section C.3.8.2 of the JTD, this storm has been shown to produce higher peak runoff volumes than the 100-year, 24-hour storm referenced in Title 27. Accordingly, if the structures are appropriately maintained, they meet or exceed the design criteria contained in Section C.3.8.1 and C.3.8.3.1 of the JTD. As previously discussed, wind gusts in excess of 50 mph were recorded during the storm event that occurred on March 20, 2011. The damage appears to have been caused by these high winds accompanying the storm.

*All drainage structures shall be protected and maintained continuously to ensure their effectiveness (Section K.4 of the WDRs):*

The interim drainage channel that was damaged during the March 20, 2011 storm event is scheduled to be replaced with a permanent channel during 2011 pursuant to regulatory approvals for construction. The interim channel was regularly inspected by landfill operations staff and, as noted above, was damaged by an unanticipated high wind event.

*Storm water discharges and authorized non-storm water discharges shall not cause or threaten to cause pollution, contamination or nuisance (Discharge Prohibition A.2 of the General Industrial Stormwater Permit):*

Storm water discharges from the site are controlled by four (4) large sedimentation basins including the terminal basin. The outlet storm water risers in the terminal basin are equipped with screens including geonet and gravel filters to prevent any contaminants from leaving the site to cause pollution or nuisance to off-site receptors. As previously stated, all material that was observed in the municipal storm drain system, was removed by March 22<sup>nd</sup>

and the creek was monitored for the remainder of the week to ensure no materials were missed. The materials that were removed consisted of paper and plastic.

**ADDITIONAL RESPONSES TO FOCUSED INSPECTION REPORT, SCL LEA LETTER OF MARCH 23, 2011**

*Submit a work plan for the upgrade, repair and/or replacement of the surface water drainage system*

A design and bid package for construction of a permanent drainage system to manage stormwater from the east perimeter drainage area is currently being prepared. It is anticipated the bid documents will be completed by the end of May 2011. It is our intent that this permanent drainage system will be completed prior to the beginning of the next rainy season.

*Include maintenance procedures to be utilized to prevent blockage of system components during storm events*

Inspection of the stormwater control systems is part of the facility's monthly inspection procedure. The inspections include checking the structural control systems for deterioration, erosions, cracks, tears, structural failures, excess sediment and obstructions that would prevent the system from functioning as designed. As items are identified, they are noted on an inspection form which is given to the Operations Manager. An Action Plan is then developed for items needing attention and tasks are assigned for completion.

Sunshine Canyon Landfill staff is committed to comply with all terms of the site's Waste Discharge Requirements and the General Industrial Stormwater Permit. We will be enhancing our stormwater management system in 2011 that should satisfy any RWQCB expressed concerns. Please do not hesitate to contact me if you require any additional information or have any questions.

Sincerely,

David Cieply  
General Manager  
Sunshine Canyon Landfill

Attachment 1 - Report of Earthwork and Drainage Repairs, March 20, 2011 Rainfall Event

cc: Mr. Wayne Tsuda, SCL LEA Program Manager  
Dr. Grace Harper, LADBS  
Dana Prevost, LADBS  
Martins Aiyetiwa, LA County DPW  
Sue Markie, CalRecycle  
Lindsay Aventino, LA City Watershed Protection Division  
Mr. Kurt Bratton, Republic Services  
Mr. Tony Pelletier, Republic Services  
Mr. Tom Bruen

Sunshine Canyon Landfill  
14747 San Fernando Road, Sylmar, CA 91342  
Phone 818-833-6500 Fax: 818-362-5484

# **ATTACHMENT 1**

**Sunshine Canyon Landfill  
14747 San Fernando Road, Sylmar, CA 91342  
Phone 818-833-6500 Fax: 818-362-5484**

# A-Mehr Inc.

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Fax (949) 206-9157

April 28, 2011

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

RE: Earthwork and Drainage Repairs  
March 20, 2011 Rainfall Event

Dear Ms. Costa:

This letter documents repair work monitored by us during the period March 22-April 4, 2011 following the storm event on March 20, 2011 that resulted in damage to the temporary east drainage channel and erosion of final cover of the small (east) closed City Landfill.

## Conditions Before Repairs

We inspected the site on Monday, March 21 immediately following the storm event and observed the following:

- A section of the temporary east drainage channel extending from the terminal sedimentation basin to approximately 500 feet up the slope of the closed City Landfill was damaged. The HDPE liner had been blown away and the underlying soil was eroded, exposing some refuse. We estimate the area of erosion averaged about 10 feet wide, with the area of refuse exposure averaging approximately 2 feet wide. Figure 1 shows the general area of the temporary channel and location of the damaged section.
- Mud, and apparently some refuse from the eroded area, was washed into the area above the terminal sedimentation basin.

## Repairs

We observed contractors making repairs to the eroded area and the temporary channel during the period March 22, 2011 through April 4, 2011. Major activities during this period are described below.

- Loose refuse in areas where it was exposed was removed, and the area covered with soil. This work was completed on March 23, 2011.
- Excavators were used to remove sediment from the area above the terminal basin and load it into trucks. The excavated sediment, which included some paper and plastic refuse, was hauled to the active landfill area for disposal. This work was substantially completed on March 23, 2011.

Patti Costa  
April 28, 2011  
Page 2

- Compacted soil was placed in the eroded area to restore the final cover in the closed landfill area to its original grades or higher. We performed eight (8) density tests at locations shown on Figure 1 to confirm the cover was compacted to a minimum of 90 percent of maximum dry density. A summary of compaction test results is attached. This work was completed on March 30, 2011.
- The temporary channel was reconstructed in a new alignment as shown on Figure 1, including installation of a 40-mil liner with the edges placed in a one-foot deep anchor trench on both sides, and placement of sand bags periodically to prevent wind uplift. This work was completed on April 4, 2011.

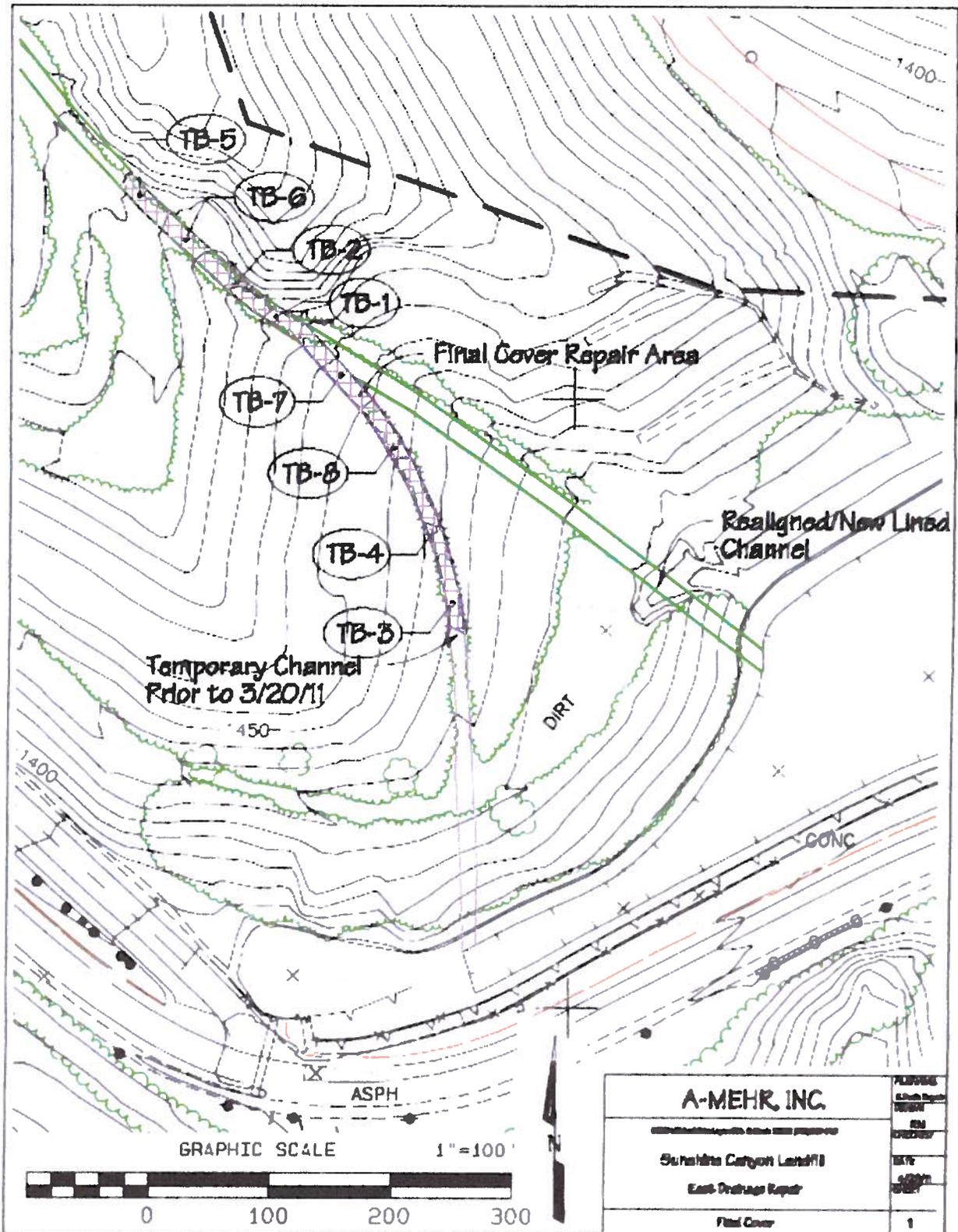
Based on our observations and review of test data, we conclude that the final cover of the closed City Landfill and temporary drainage channel have been restored to a condition equal to or better than their condition prior to March 20, 2011, and that all sediment and any refuse contained therein have been removed from the area above the terminal sedimentation basin. Selected photographs of the repair work are attached.

Respectfully submitted,

**A-Mehr, Inc.**



M. Ali Mehrzarin, P.E.  
Principal Engineer



<b>A-MEHR, INC.</b>		<small>PROJECT</small> <small>Client Name</small> <small>NO. 12345</small>
Sunahita Canyon Landfill		<small>DATE</small> <small>1/20/11</small>
East Drainage Repair		<small>SCALE</small> <small>1" = 100'</small>
Final Cover		<small>NO.</small> <small>1</small>



**Photo 1 - Grading For the Replacment Temporary Channel**



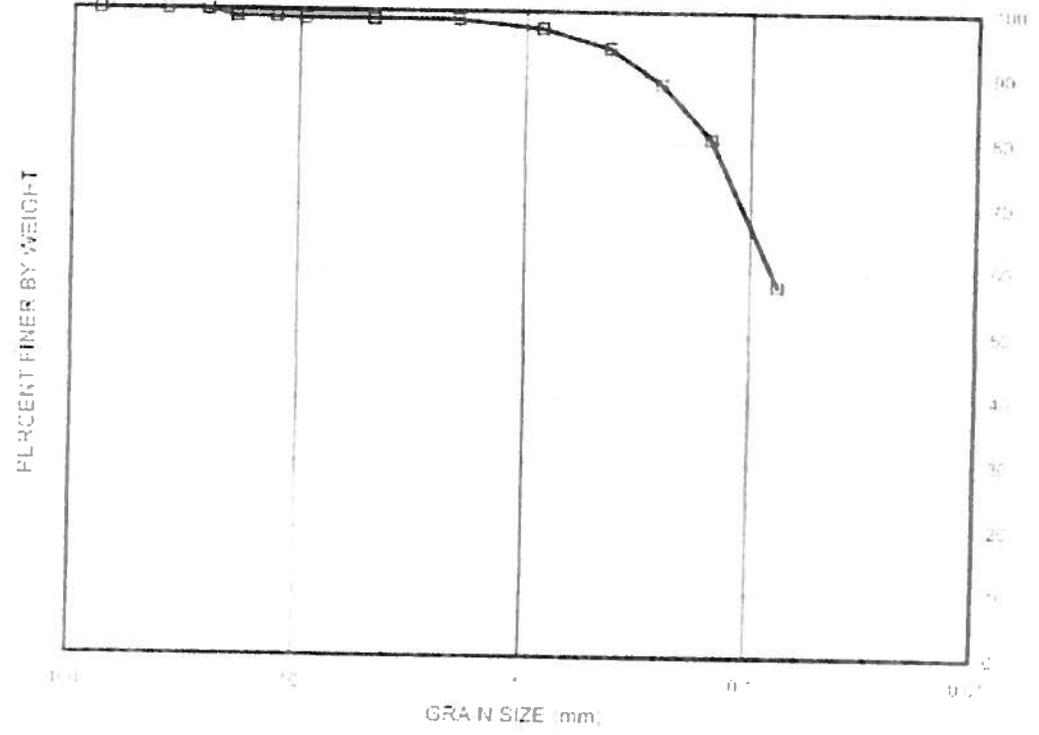
**Photo 2 - Realigned and Reconstructed Temporary Channel**

SUNSHINE CANYON LANDFILL  
 TEMPORARY CHANNEL AND FINAL COVER REPAIRS  
 STRUCTURAL FILL FIELD DENSITY TEST INFORMATION

DATE	TEST NUMBER	RETEST NUMBER	LOCATION & DESCRIPTION	ELEVATION (FT)	SOIL DESCRIPTION	PROBE DEPTH (INCHES)	WET DENSITY (PCF)	DRY DENSITY (PCF)	MOISTURE (MC)	MOISTURE PROCTOR (MC)	% COM. FRACTION	TEST OR FAIL	COA TECH
03/29/11	15-1	-	South drive basin, temp drainage channel	615	dry clay	6"	120.0	113.0	5.0	13.3	93	PASS	LM
03/29/11	15-2	-	South drive basin, temp drainage channel	611	dry clay	6"	129.1	112.2	16.4	14.6	93	PASS	LM
03/29/11	15-3	-	South drive basin, temp drainage channel	610	dry clay	6"	121.3	109.3	12.1	11.0	90	PASS	LM
03/29/11	15-4	-	South drive basin, temp drainage channel	640	dry clay	6"	122.2	110.2	12.1	11.0	91	PASS	LM
03/29/11	15-5	-	South drive basin, temp drainage channel	617	dry clay	6"	126.9	112.9	11.9	12.4	93	PASS	LM
03/29/11	15-6	-	South drive basin, temp drainage channel	616	dry clay	6"	125.9	112.1	11.6	12.1	93	PASS	LM
03/29/11	15-7	-	South drive basin, temp drainage channel	617	dry clay	6"	126.1	112.6	11.7	12.2	93	PASS	LM
03/29/11	15-8	-	South drive basin, temp drainage channel	650	dry clay	6"	127.0	113.7	14.1	12.6	94	PASS	LM

GRAVEL		SAND		SILT OR CLAY
75 μm	4.75 mm	75 μm	4.75 mm	75 μm

3" 1" 1/2" 3/4" #4 #10 #20 #40 #60 #100 #200



SYMBOL	BORING NO	SAMPLE NO	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTICITY INDEX
U	N/A	TB-1	N/A	Full	Cl	30	10

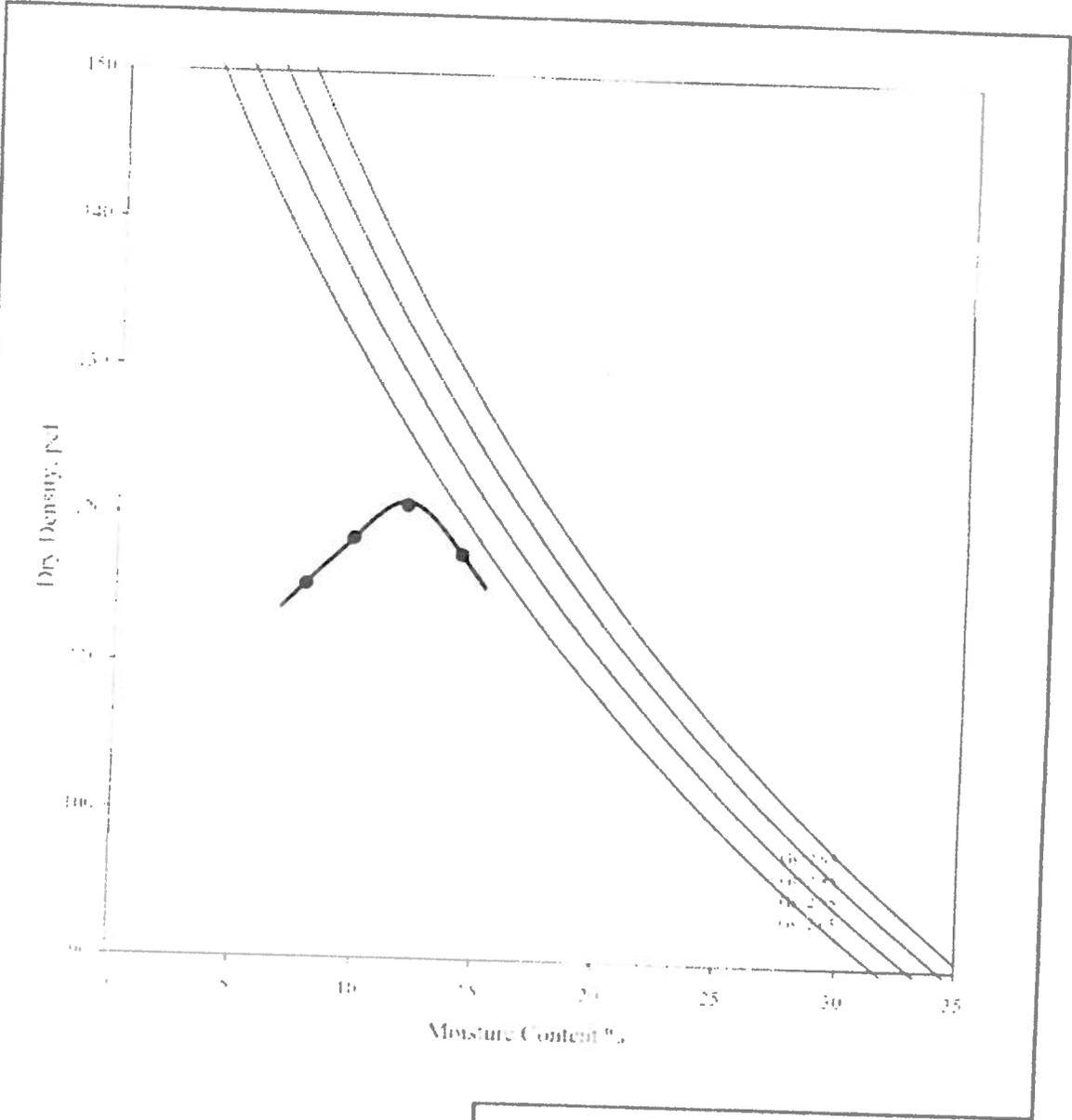
 <b>ENVIRONMENTAL GEOTECHNOLOGY LABORATORY</b>	Project Name:
	Client Job No:
	Client Name:
<b>GRAIN SIZE DISTRIBUTION CURVE</b> (ASTM D422)	
Apr-1*	FIGURE

### SUMMARY OF LABORATORY TEST RESULTS

PROJECT NAME: Sunshine Canyon Landfill Final Cover      EGI JOB NO: 11-211-003  
 PROJECT NO: BF009400      CLIENT: A-Mehr Inc.  
 DATE: 4/12/2011      SUMMARIZED BY: JT

BORING NO	SAMPLE NO	DEPTH (ft)	MOISTURE CONTENT ASTM D2216 (%)	ATTERBERG LIMITS ASTM D4318 (LL, PL, PI)
N/A	TB-1	N/A	15.7	30, 20, 10

NO. OF TESTS: 1      METHOD: ASTM D2216, D4318



Maximum Dry Density = 121 pcf		Boring No: N/A	
Optimum Moisture Content = 12 %		Sample: 1B-1	
 <b>Environmental Geotechnology Laboratory</b>		Depth: N/A feet	
		Description: CL	
<b>Modified Proctor</b> (ASTM D1557)		Project Name:	Sunshine Canyon Landfill
			Final Cover
		Client Name:	A-Mehr, Inc.
		Job No:	N/A
		EGL Project No:	11-211-003
Date:	Apr-11	Figure	

# **ATTACHMENT 3**

# Sunshine Canyon Landfill Cell CC-2 Development

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## **BACKGROUND**

Development of Cell CC-2 started in September 2010 and is divided into two main projects:

1. **Part 1 Excavation Project** consists of the mass excavation of the north portion of Cell CC-2, straddling the County and City limits to establish the subgrade for a fifteen acre floor for construction of a multi-layered liner.

Approximately 4.0 MCY of soil was excavated and stockpiled at various locations on-site and/or used as daily cover for landfill operations. Removal of the existing landslide was also included in this project. Landslide material was removed completely from the floor area of the cell and stockpiled as noted above. Buttresses and subdrains are being installed under the direction of the field CQA team of professional engineers and geologists.

Additional work includes the construction of drainage and access road improvements, relocation of the County scale facilities, relocation of utilities and environmental control systems.

This project is scheduled for completion in June 2011.

2. **Floor Liner Project** consists of a 15-acre multi-layered liner approved by the Los Angeles Regional Water Quality Control Board accordance with the approved RWQCB. The project scope of work includes:
  - Exposure of existing liner limits
  - Removal of unsuitable materials below the subgrade
  - Construct the floor liner , with the following components:
    - a) Primary Clay Layer – two feet thick
    - b) 60 mil HDPE liner
    - c) Sand Layer – one foot thick
    - d) 16 oz. geotextile
    - e) Secondary Clay Layer – two feet thick
    - f) 80 mil HDPE liner
    - g) 16 oz. geotextile
    - h) LCRS Gravel Layer – one foot thick
    - i) 16 oz. geotextile
    - j) Protective Cover Soil Layer - two feet thick
  - Construct road and drainage facilities;
  - Construct LCRS piping system;
  - Construct LFG horizontal collector system.

The 15-acre floor liner is divided into three specific phases for development over a five month period.

## Sunshine Canyon Landfill Cell CC-2 Development

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- (1) 6-acre floor is located at the north limits of CC-2 and immediately south of the existing County lined area and west of the City lined area. This phase commenced in April 2011 and is scheduled for completion in June 2011.
- (2) 4-acre floor is located immediately south of the 6-acre floor and west of the City lined area. This phase commenced in April 2011 and is scheduled for completion in July 2011.
- (3) 5-acre floor is located immediately south of the 4-acre floor and west of the City lined area. This phase is scheduled to start in July 2011 and be completed by August 2011.

Each of the three phases will be certified by the project CQA professional and submitted to the RWQCB for final approval and acceptance.

The completed phases will create one contiguous 15-acre lined area within Cell CC-2.