

SUNSHINE CANYON LANDFILL



LOCAL ENFORCEMENT AGENCY

14747 San Fernando Road
Sylmar, California 91324

June 17, 2015

Honorable Board Members
Sunshine Canyon Landfill Board of Directors
3550 Wilshire Blvd. 18th Floor,
Los Angeles, CA 90010

Subject: Sunshine Canyon Landfill (SWIS No. 19-AA-2000)
Status Report On Adopted Board Motion

Dear Board Members,

During the April 2, 2015 meeting of the Sunshine Canyon Landfill Local Enforcement Agency (SCL LEA) Board of Directors, the Board adopted a motion by Board member Mitchell Englander directing the SCL LEA to take several actions that will result in the mitigation of the landfill odor problem emanating from the Sunshine Canyon Landfill. The SCL LEA would like to present a status report on the progression of each of the directives

Action Item #1 – Direct the SCL LEA Program Manager, upon completion of the review of both SCAQMD consultants’ reports, to provide the Board members with a report of the SCL LEA recommendations along with the technical backup, documentation and reasoning for those recommendations.

The SCL LEA has completed its review of the South Coast Air Quality Management District (SCAQMD) consultants’ reports Hydro Geo Chem, Inc. report titled “*Pneumatic Testing and Recommended Changes at the Sunshine Canyon Landfill, Sylmar, California, March 11, 2015*”. However, there have been delays in the release of SCAQMD’s second consultant’s report. The Yazdani Consulting report is titled “*Evaluation of the Landfill Odor Problem at the Sunshine Canyon Landfill*”. The SCL LEA has been advised that the report is scheduled to be release by the end of June 2015.

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Along with the SCAQMD consultant reports, the SCL LEA is conducting its own research into the best operational practices for maximizing the efficiency of the landfill gas collection system and controlling odor at the landfill. The SCL LEA has evaluated the following documents and is in the process of consolidating the recommendations into a single report:

- Landfill Operating Regulations - Title 27 of the California Code of Regulations and Title 40 of the Code of Federal Regulations
- CalRecycle - "Technologies and Management Options for Reducing Greenhouse Gas Emissions From Landfills"
- Solid Waste Association of North America (SWANA) – Manager of Landfill Operation (MOLO) Text Book
- SCL CAC - Sunshine Canyon Landfill Supplemental Waste Characterization Study
- The reference materials, documents, and analysis that the SCL LEA utilized in developing their recommendations can be found at the following "Dropbox" file. This file is accessible to the public, and can be viewed by going to the following web address:

www.dropbox.com/sh/nm5341eupq7dxj5/AAA42v6IZFt-CGYQdFffifqta?oref=e&n=88965574

The SCL LEA is compiling a comprehensive listing of potential programs and actions that can be implemented to mitigate the odors. The SCL LEA will utilize a holistic approach that will develop the best combinations of programs and practices which will provide the maximum level of odor mitigation in the shortest time possible. The SCL LEA recommendations will also include recommendations on additional research to better help understand the waste stream and the landfill operations. This will help supplement the additional field tests and recommendations that were provided by SCAQMD's consultants. The SCL LEA's compilation and recommendations are approximately 80% completed and is waiting on the release of the SCAQMD's 2nd consultant's report.

Action Item #2 – Direct the SCL LEA to work with SCAQMD and Republic to take the steps needed to immediately improve the LFG collection performance by implementing the optimal combination of programs that will result in improved LFG system design and operations.

The SCL LEA will be issuing a Stipulated Order of Abatement to Republic Services to take the following actions to immediately improve the performance of the site's landfill's gas collection system:

- Implement a pilot program utilizing a non-reusable geosynthetic alternative daily cover (ADC).

- Implement a pilot program on the operational practice of peeling back the compacted soil cover in the location of the active working face.
- Establish a performance evaluation procedure on the effectiveness of the ADC and peel back procedures.
- Implement a pilot program on the installation of high permeability channels within the waste mass to promote landfill gas collection.
- Implement a pilot program to identify problem areas in the intermediate cover and install one of the alternative intermediate cover configurations approved by the SCL LEA.
- Allows the SCL LEA to take further corrective action if the above programs fail to mitigate the landfill's odor problems.
- Require Republic Services to provide periodic reports to the SCL LEA on the progress of the above mentioned programs.

The proposed Stipulated Order of Abatement is currently being reviewed by the SCL LEA legal counsel and will be issued after it is completed. A progress report will be presented to the Board at the next scheduled meeting.

Action Item #3 – Direct the SCL LEA to work with SCAQMD and Republic to modify landfilling operational practices that promote better landfill gas movement throughout the landfill and optimal leachate drainage that will improve the overall LFG collection by discontinuing the use of the 9” of daily soli cover, or allowing the peeling back of daily cover, or use of ACD to promote drainage, reduce saturation and increase permeability to promote movement of LFG, and at the same time develop methods to create a quantifiable reference performance baseline and other methods to determine measurable progress.

In November 2014, Republic Services submitted a request to conduct a pilot project at Sunshine Canyon Landfill using a geosynthetic panel product as an ADC. The SCL LEA reviewed the proposed project and on November 26, 2014 approved the project. Republic Services placed an order for the Enviro Cover system equipment, which was delivered to the landfill in May 2015. The operator is currently training the heavy equipment operators in the proper deployment of the non-reusable geosynthetic cover. It is anticipated that Republic Services will begin utilizing this system in June after the issuance of the Stipulated Order of Abatement. The SCL LEA will continue to monitor the progression to ensure that the ADC pilot program is implemented as directed by the Board of Directors.

Action Item #4 – Direct the SCL LEA staff to implement the pilot visqueen field test, as soon as possible, to develop a reference baseline performance of the effectiveness of the daily and/or intermediate covers in a manner that provides physical and “visual” measurements of landfill gas emissions over a short period of time.

The SCL LEA has established the pilot visqueen field testing procedures and has installed the first test plot at the landfill. There has been some initial interference with birds poking holes into the cover. Additional field work was completed during which monofilament lines with streamers were installed as a bird deterrent measure. The SCL LEA will be conducting additional testing of this initial test plot to refine procedures prior to implementation on a larger scale at the site. Please see the attached status report on the implementation of the visqueen field test for additional details. At the conclusion of the field study, a final report will be issued to the Board at the next scheduled Board meeting.

Action Item #5 – Direct the SCL LEA staff to work with Republic to improve the performance of the intermediate cover, e.g., increase thickness of intermediate cover, utilization of lower permeability intermediate cover materials, utilization of higher compaction to increase density of the intermediate cover, utilizing cured/mature compost to improve vegetative growth (and potential biofilter affect), utilization of less steep intermediate slopes, and/or utilization of biodegradable plastic ADC in combination with the statutory soil intermediate cover.

The SCL LEA is requiring Republic Services to submit a pilot program to identify potential problem areas of the intermediate cover and utilize one or a combination of the SCL LEA recommended alternative intermediate cover configurations or propose an additional intermediate cover configuration that is equivalent or better than those recommended by the SCL LEA. This requirement will be formalized with the signing of the Stipulated Order of Abatement.

Action Item #6 – Direct the SCL LEA staff to work with the respective local enforcement agencies to evaluate Republic’s Transfer Station Odor Reduction/Mitigation Program at their own transfer stations as to its effectiveness. SCL LEA shall independently determine the best management practices for transfer stations, and develop any additional recommendations for improving their performance.

The SCL LEA has met with Republic Services and shared the SCL LEA’s draft “*SCL LEA Procedures and Protocols for the Evaluation for Odor Mitigation Programs at Republic Services Owned/Operated Transfer Stations*” for review by

Republic Services. Republic Services has provided a listing of all transfer stations owned and operated by them in addition to contact information for the scheduling of the assessments.

An international literature search on transfer station odor control best management practices has been completed as of the first week in June 2015. A summary of the various programs and practices found in the literature has been prepared and follow-up on the details is ongoing. Additional efforts are under way to contact and survey local enforcement agencies throughout the State to determine if similar have had similar problems have been encountered and to share potential solutions. The SCL LEA staff has also discussed this project at the local "LEA Roundtable" forum and provided a heads up notice of the impending survey.

Once the LEA survey is completed, a site assessment "checklist form" will be developed and added to the "*SCL LEA Procedures and Protocols for the Evaluation for Odor Mitigation Programs at Republic Services Owned/Operated Transfer Stations*". The SCL LEA is scheduling the first site visit to a Republic Services owned/operated transfer station in the third/fourth week of June 2015.

Action Item #7 - Direct the SCL LEA staff to work with the respective local enforcement agencies to conduct site assessments of transfer stations (which are not Republic-owned/operated) to determine the potential to implement similar odor reduction/mitigation practices as part of the conditions to bring waste to the landfill.

This item is dependent on the completion of the SCL LEA's evaluation of Republic Services Transfer Station Odor Reduction/Mitigation Program. Additionally, Republic Services has provided the SCL LEA a list of major transfer stations that are not owned or operated by them that utilize Sunshine Canyon Landfill. The SCL LEA will work with the City and County LEAs to evaluate transfer stations identified within their respective jurisdictions on the possible implementation of the proposed odor program.

Action Item #8 - Direct the SCL LEA to report back within 45 days on the results and analysis of the SCL CAC waste characterization study that was done on the wastestream from the City of Los Angeles transfer station.

The SCL CAC enhanced waste characterization study has been completed. On May 18, 2015, an electronic copy of this report was transmitted to all of the Board members and placed on the SCL LEA website for the public. The SCL LEA has analyzed the report and in collaboration with Tetra Tech produced the attached summary factsheet explaining the key findings of the study. Tetra Tech made a

presentation at the May 14th meeting of the Sunshine Canyon Landfill Community Advisory Committee (CAC).

A detailed presentation on the waste analysis will be made at the next Board of Directors meeting. The report has also been published on the MSW Management magazine website. (<http://foresternetwork.com/daily/waste/special-report-waste-composition-study-msw-management/>)

Action Item #9 - Direct the SCL LEA staff to immediately plan and conduct additional comprehensive waste characterization studies of the overall SCL waste stream which can be utilized as a baseline (and to determine future changes) of the material types, physical and chemical characteristics, and any other data that can be utilize do develop additional odor mitigation measures.

The SCL LEA has studied the procedures used in conducting the SCL CAC enhanced waste characterization study conducted at the Central Los Angeles Recycling and Transfer Station (CLARTS). SCL LEA staff is modifying the proposed procedures for a larger and more thorough study of the entire waste stream in addition to researching the purchase of necessary equipment to conduct the study at the landfill. It is projected that the new study will be conducted in July once all of the preparation work is completed. The SCL LEA is currently working with representatives from SCAQMD and CalRecycle on protocols to make this a collaborate study. An update on the study will be provided at the next Board of Directors meeting.

Action Item #10 - Direct the SCL LEA staff to report back within 45 days on the status of each of the above directives, and any support/assistance that the SCL LEE will require from the Board of Directors.

This status report will fulfill the requirement of Action Item #10. A copy of this status report will be posted on the SCL LEA website.

Action Item #11 – Direct SCL LEA to work with Republic to determine and maintain an ongoing inventory, updated monthly, of all landfill gas collection wells which have more than 10% of their overall length below grade filled with leachate or water.

The SCL LEA has worked with Republic Services and was provided a list of all landfill gas collection wells impacted by liquid and if the well is equipped with a dedicated pump. A site map showing the location of the impacted wells and the area

of 9" compacted soil daily cover was also provided. As of June 12, 2015, there were 61 wells identified as being impacted by liquids. All collection wells onsite that have been identified as being impacted by liquids have been equipped with a dedicated pump. These wells are pumped out on a routine basis to maintain proper vacuum in the collection system. Republic Services has identified 5 wells that are currently having problems and will require that the pump be pulled from the well and serviced. The list will be updated on a monthly basis to determine any trends in the liquid management and to ensure that problem wells are brought back online in a timely manner.

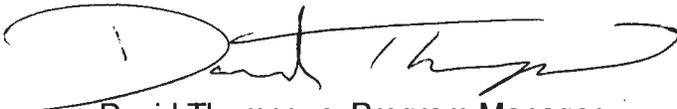
Due to file size of all of the attachments and the limited email capacity, the attachments have been placed in the SCL LEA "Dropbox" under the Status Report folder at the following web address:

www.dropbox.com/sh/nm5341eupq7dxj5/AAA42v6lZfT-CGYQdFfflqta?oref=e&n=88965574

If you desire a hard copy of any of these reports, please let me know and I will have it sent out.

Please let me know if you have any questions regarding this report or need any additional information.

Sincerely,



David Thompson, Program Manager
Sunshine Canyon Landfill Local Enforcement Agency

Cc: Mr. Gerry Villalobos, SCL LEA
Ms. Nancy Wax, City Attorney
Ms. Grace Chan, County Counsel
Mr. Nick Hendricks, City Planning
Ms. Maria Masis, County Regional Planning
Mr. Mohsen Nazemi, SCAQMD
Mr. Nick Sanchez, SCAQMD
Dr. Wen Yang, LARWQCB
Mr. Matins Aiyetiwa, County DPW
Mr. Wayde Hunter, SCL LEA
Mr. Rob Sherman, Republic Services