SUNSHINE CANYON LANDFILL

A REPUBLIC SERVICES COMPANY

October 27, 2010

Gail Farber, Director
County of Los Angeles
Department of Public Works
900 South Fremont Ave.
Alhambra, CA 91803-1331

Subject: File EP-5, Sunshine Canyon Landfill Odor Mitigation Plan Submittal Request

Ms. Farber:

In response to your letter dated September 27, 2010, Sunshine Canyon Landfill (SCL) has prepared the attached Odor Mitigation Plan for your review and approval. The plan addresses the information specified in item 4 of the letter.

If you have any questions on this submittal, please feel free to contact me.

Sincerely,

for Kurt Bratton

Kurt Bratton
Market Vice President / Post Collection

Cc:

Department of Public Works (Pat Proano)
South Coast Air Quality Management District (Edwin Pupka, David Jones)
Department of Regional Planning (Maria Masis, Richard Bruckner, Bruce Durbin)
Department of Public Health (Gerry Villalobos)
SCL LEA (Cindy Chen)
City of Los Angeles Department of Building and Safety LEA Program (Wayne Tsuda, Dave Thompson)
SCL Technical Advisory Committee (Michal LoGrande)
City of Los Angeles Department of City Planning (Ly Lam)
Los Angeles County Solid Waste Management Committee/Integrated Waste Management Task Force (Margaret Clark)
SCL Community Advisory Committee (Becky Bendikson, Wayde Hunter)

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Odor Mitigation Plan

Sunshine Canyon Landfill
October 27, 2010

Plan Purpose

This plan has been prepared to respond to item #4 in the September 27, 2010 letter from Pat Proano of the County of Los Angeles Department of Public Works (DPW) to Kurt Bratton of Republic Services' Sunshine Canyon Landfill (SCL.)

Item #4 in the letter requires several elements to be contained in an Odor Mitigation Plan. Each specific requirement is quoted and responded to below.

1.0 Measures in AQMD Order for Abatement

DPW Request: **"Identify and provide status on the measures currently being implemented as required by the AQMD's Order for Abatement"**

Response:

Order for Abatement Item Number	Requirement	Status
1a and b	Transfer truck restrictions	Implemented
1c	Working face size restrictions	Implemented
1d	Odor neutralizers applied to transfer truck loads	Implemented. As a preventive measure, all preloaded trucks that would arrive during likely adverse wind condition hours are treated with neutralizer.
2a	Working face misting system	Implemented
2b	DustBoss odor control system	Implemented
3	Landfill perimeter misting system	System is in place but it's use was suspended with SCAQMD approval due to neighborhood requests
4	Tarping misting system	System was implemented but is now not in use due to DPW mandate to use soil instead of tarps.
5a	Haul road time restrictions	Implemented
5b	Neutralizer on haul roads	Implemented
6a	Wind monitoring forecasts	Implemented
6b	Meteorological stations	Implemented
7a	Meterological study	Proposal approved by SCAQMD. Study underway.
7b	Delivery Alternatives Study	Submitted to SCAQMD. Responding to additional information requests from SCAQMD.
7c	Neutralizer at Transfer Station Study	Proposal submitted to SCAQMD. Responding to additional information requests from SCAQMD.

Order for Abatement Item Number	Requirement	Status
7d	Neutralizer Study	Submitted to SCAQMD. No comments from SCAQMD.
7e	Working Face Study	Proposal submitted to SCAQMD. On hold pending resolution of County DPW mandate to use soil cover, which is incompatable with the working face study.
8	Odor Control Consultation	Submitted to SCAQMD. No comments from SCAQMD
9	Vegetation Restoration	Plan submitted to and approved by SCAQMD. Planting to be complete by April 1, 2011.
10	Odor Survey	Implemented.
11	Feasibility Study for Capture, Collection, and Destruction of Odors	Proposal submitted to, and approved by, SCAQMD. Work is underway.
13	Status Reports	Implemented

2.0 Odoriferous Loads

DPW Request: **"A program for managing odoriferous loads currently received at the Landfill, which would include the following at a minimum:**

- **Provide a trained technician to identify odiferous loads.**
- **Immediately bury odiferous waste loads at the working face within one hour of its arrival.**
- **Develop a program to minimize odors from transfer trucks and direct haul loads."**

Response:

SCL has a policy of not accepting odoriferous loads if such loads would negatively impact offsite neighbors. Odoriferous loads can be noted at two points, and in two different ways. First, loads characteristically known as odorous, such as spoiled food waste, can be identified by the scalehouse personnel based on the customer and trucking company. Second, loads can be noted based on the field observations of spotters at the working face. In the second case, spotters and operations personnel will work with scalehouse personnel to identify the source of an odoriferous load, and if necessary, the waste generator will be contacted to either mitigate for odors in future loads, if possible, or to at least prepare for immediate burial of future loads. Both scalehouse personnel and operators will be trained in this procedure, and also will be trained as to likely types of odoriferous loads.

All odoriferous loads are currently immediately buried at the working face. If a odoriferous load is delivered, it is immediately covered with a thick layer of MSW. If odors are still noted from the load through the MSW, it will be further buried with soil. Based on past experience, soil cover is not normally needed to contain the odors.

Odors in transfer trucks and direct haul loads are minimized through Republic's Special Waste procedures. Unusual wastes, such as off-spec food products, are subject to additional testing and screening to determine if the waste can be safely accepted at the landfill. If there are any

criteria that make the waste unacceptable, including adverse odors that cannot be mitigated for, the waste will not be allowed.

As part of the Neutralizer at Transfer Station study required by the SCAQMD's Order for Abatement, the effectiveness of odor neutralizers will be studied. If neutralizers are found to be effective in helping reduce offsite odors, they will continue to be used on Republic-owned transfer trucks.

3.0 Odor Patrol Program

DPW Request: **"An odor patrol program, which would include the following at a minimum:**

- **Provide a trained technician to conduct odor patrols in the surrounding neighborhoods at a frequency of one patrol per hour from 6 am to 10 am, Monday through Saturday, and during adverse wind conditions.**
- **If odor is detected, identify its potential and/or actual source, including those that may not be related to the Landfill's operation, such as an odorous trash dumpster or transfer trucks.**
- **If odor is determined to be related to the Landfill's operation, take immediate action to reduce the odor. Document the streets patrolled on a map, time of the patrol, potential source of odor, and immediate actions taken by the landfill."**

Response:

Currently SCL has implemented an odor patrol program compliant with the SCAQMD Order for Abatement, and requests that that program be considered sufficient by the County. Nevertheless, if the County wishes to mandate the program detailed in their letter, including Saturday coverage, SCL is prepared to meet the requirements.

4.0 Landfill Gas Mitigation Plan

DPW Request: **"Description of the site's current Gas Monitoring and Control Plan, including a map showing locations of gas monitoring probes, gas extraction wells, horizontal and vertical gas collection lines, etc."**

Response:

SCL's gas collection and control system (GCCS) consists of the following:

- Three hundred fifteen (315) vertical gas collection wells;
- Header and lateral piping;
- Horizontal collectors;
- Three flare stations.

The site's GCCS meets the New Source Performance Standards (NSPS) found in 40 CFR Part 60, Subpart WWW. A GCCS Design Plan for SCL was submitted to the U.S. Environmental Protection Agency (EPA) on June 11, 1997. The GCCS Plan was subsequently updated and submitted in August 2006. A brief description of the site's current gas system is included in the following paragraphs. Maps presenting overviews of the site's gas collection and control system are provided in Figures 1 and 2.

Landfill gas extracted from the vertical gas wells and horizontal collectors is delivered to the flare stations through the lateral and header piping network. Gas extraction wells are connected to the main headers by 4- to 12-inch diameter lateral piping. Main header piping at the site is located

primarily above-grade on both the County and City sides of the landfill although some of the originally installed header piping on the south side of the City is below-grade. Main header piping on the City side of the site is 12- to 16-inch diameter HDPE pipe, while the header pipe on the County is 18- to 24-inch HDPE. The existing GCCS covers the entire area of the landfill that presently contains municipal solid waste

Three separate flare stations are currently in operation at SCL. Two, Flares #3 and #8, are located on the north and south ends, of the County side of the landfill, respectively. Flare #1 is on the City side of the site. Each system currently has a permitted capacity of 4,167 standard cubic feet per minute (scfm) of landfill gas at 50 percent methane. Each of the flares has a Permit to Operate (PTO) under the site's current Title V permit.

SCL's gas migration monitoring system consists of a series of multi-depth perimeter gas monitoring probes installed around the final footprint of the landfill in accordance with 27 CCR, SCAQMD Rule 1150.1 and site permits. The perimeter gas monitoring probe locations are shown on Figure 3.

The gas monitoring probes are referred to as the City probes and County probes due to their installation locations around the City and County portions of the landfill, respectively. The City gas monitoring probes include 21 multi-depth monitoring probes and the County gas monitoring probes include 17 multi-depth probes. The probe designations as well as the completion depths are provided on Table 1.

Perimeter gas probes are monitored monthly in accordance with the requirements of SCAQMD Rule 1150.1 and the site's Rule 1150.1 Compliance Plan (August 30, 2000). Monitoring is performed by a third party contractor using instruments and procedures approved by SCAQMD.

DPW Request: **"Compliance history of the site's landfill gas migration control program from January 2, 2009, to the present quarter as well as any corrective actions."**

Response:

As noted above, all perimeter probes at SCL are monitored on a monthly basis. Results are reported as a concentration of percent methane as measured by field instruments.

A summary of the perimeter probe monitoring results from January 2009 to September 2010 is presented in Table 1[1].

The highlighted readings are those that exceed the regulatory limit of 5%. A summary of these readings is presented in Table 2 and they are discussed further below.

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[1] *When reviewing Table 1, the following should be noted:*

Monitoring from January 2009 through January 2010 for some of the perimeter probes located around the County side of the site was performed using a Gastech instrument which reports methane in concentrations of parts per million by volume (ppmv). These results are indicated with an '' next to the value. These values have been converted to percent methane by dividing the reported value by 10,000 since 1% = 10,000 ppmv. For example, a reported reading of 400 ppmv methane has been converted to percent methane as follows:*

$$400\ ppmv \times \frac{1\%}{10{,}000\ ppmv} = 0.0400\ \%\ methane$$

This conversion has been done so all the readings can be readily compared to one another.

Table 3 presents a summary of gas probe exceedances over 5% and the corrective actions taken. Table 3 includes required initial 10-day re-check, second 10-day re-check (if necessary) per 1150.1 requirements and 30-day checks as required by NSPS.

DPW Request: **"Discuss the impacts of the most recent heavy rains on the landfill gas collection system, including identifying locations of damage due to soil erosion, as well as any corrective actions or mitigation measures."**

Heavy rains experienced at SCL in January 2010 are reported to have caused six wells in the gas collection system to be affected by erosion around the wellheads resulting in excess gas emissions from the landfill surface.

Surface emission monitoring is conducted on a quarterly basis in accordance with the site's Rule 1150.1 Compliance Plan (August 30, 2000.) Instantaneous surface monitoring is conducted on a grid that has been established and approved for the site. Surface monitoring is not conducted on grids that are out of bounds as defined in the Compliance Plan or on grids that are under active construction. For example, during the Second Quarter 2010 monitoring event, the following number of grids were either monitored or excluded based on the approved plan:

386 grids were monitored;
493 grids are out of bounds
24 grids were in an active construction area.

Monitoring is performed using instruments and methodology detailed in the approved compliance plan.

With respect to the surface emission monitoring conducted after the heavy rains in January 2010, there were a total of thirty-four locations where the initial instantaneous monitoring result was reported over the 500 ppmv (measured as methane) allowable concentration. All of these locations were on the County side of the site and some of these exceedances were reported as being directly adjacent to a gas extraction well. In accordance with SCAQMD's Rule 1150.1 monitoring requirements, all of these locations were re-monitored 10 days after the initial event. All but nine locations showed exceedances over 500 ppmv during this first re-monitoring event. During the second 10-day re-monitoring, all nine locations showed values of less than 500 ppmv.

The corrective actions taken to remedy these surface emission exceedances include measures that were taken immediately and more extensive actions that address the gas collection system as a whole.

Immediate corrective actions included:

- Placement of additional soil cover on the area;
- Compaction of the additional soil cover including track walking;
- Compaction of soil around a well casing;
- Gas well tuning to ensure wells are operating optimally.

Additional corrective actions included the installation of fifty (50) additional gas extraction wells during June and July 2010. A total of 42 wells were installed on the County side of the landfill, and eight on the City side. The locations of the new wells were selected based on a review of site data including surface emission monitoring, gas well monitoring and gas system parameters to locate wells in optimal locations to reduce potential surface emissions and also to maximize the volume of landfill gas extracted from the landfill. Existing gas extraction wells that were

determined to be damaged and/or not functioning as designed, were abandoned and replaced with a new well.

DPW Request: **"A work plan that includes preventive measures, such as identifying and filling any surface cracks and installing additional extraction wells, as well as contingency measures" and "An implementation schedule for the above work plan."**

Reponse:

A landfill gas preventative measure work plan for SCL's gas collection and monitoring system is presented in Table 4. The table includes an implementation schedule.

The work plan includes actions already being implemented on a routine basis as part of Republic Services' Landfill Gas Management Standard Operating Procedure (SOP). Additional preventative measures have been included as noted.

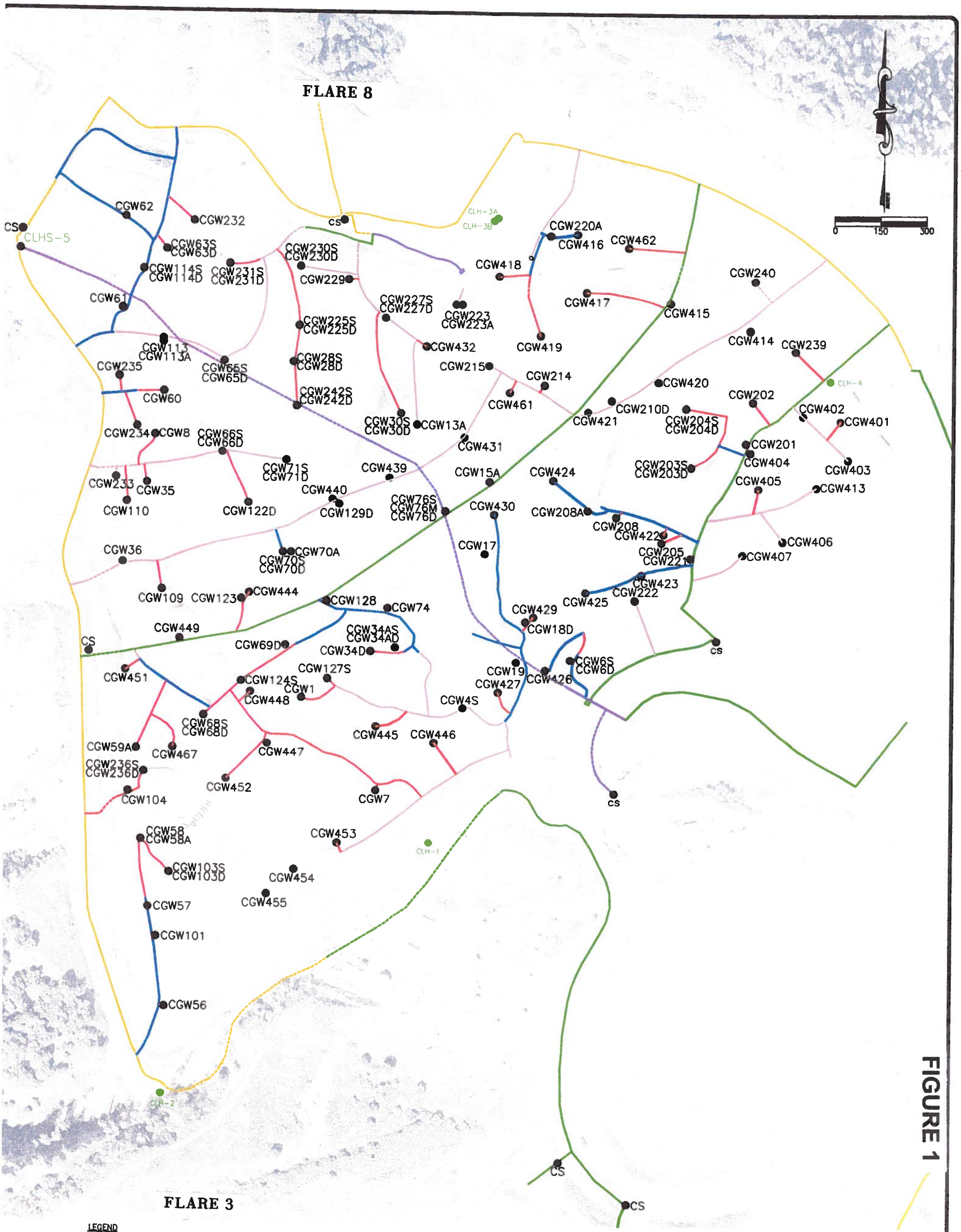
SCL operates and maintains its gas control and monitoring system in accordance Republic Services' Landfill Gas Management SOP (May 1, 2009). The SOP describes the procedures and minimum requirements for:

- Monitoring, inspection, and maintenance of landfill gas collection system components;
- Monitoring, inspection and maintenance of landfill gas control devices;
- Data management, and,
- Environmental reporting.

Under the SOP, the site is required to perform GCCS inspection and maintenance activities on an on-going basis to ensure consistent and reliable operation of the system. Maintenance procedures are intended to be preventative in nature to address problems before they impact the performance of the GCCS or its components.

FLARE 8

FLARE 3



0 150 300

LEGEND

- UNDERGROUND PIPING (DASHED)
- 24" ABOVE GROUND PIPING
- 18" ABOVE GROUND PIPING
- 16" ABOVE GROUND PIPING
- 14" ABOVE GROUND PIPING
- 12" ABOVE GROUND PIPING
- 10" ABOVE GROUND PIPING
- 8" ABOVE GROUND PIPING
- 6" ABOVE GROUND PIPING
- 4" ABOVE GROUND PIPING
- CGWXXX — COUNTY GAS WELL
- CLH — COUNTY LEACHATE HEADER
- CS — CONDENSATE SUMP

SUNSHINE CANYON LANDFILL
COUNTY LANDFILL GAS MAP

FIGURE 1

REPUBLIC SERVICES

Ausenco Vector
143E Spring Hill Drive
Grass Valley, CA 95945
USA
T +1 530 272 2448
F +1 530 272 8533
W www.ausenco.com

Ausenco Vector

MAP DATE: 9-7-2010

FIGURE 2

FLARE 1

PUMP STATION

0
100
200

LEGEND

- ALL UNDERGROUND PIPING SHOWN DASHED
- 24" PIPE
- 18" PIPE
- 16" PIPE
- 14" PIPE
- 12" PIPE
- 10" PIPE
- 8" PIPE
- 6" PIPE
- 4" PIPE
- GWXXX — CITY GAS WELL
- LH — LEACHATE HEADER
- CSX — CONDENSATE SUMP

SUNSHINE CANYON LANDFILL
CITY LANDFILL GAS MAP

REPUBLIC SERVICES

Ausenco Vector
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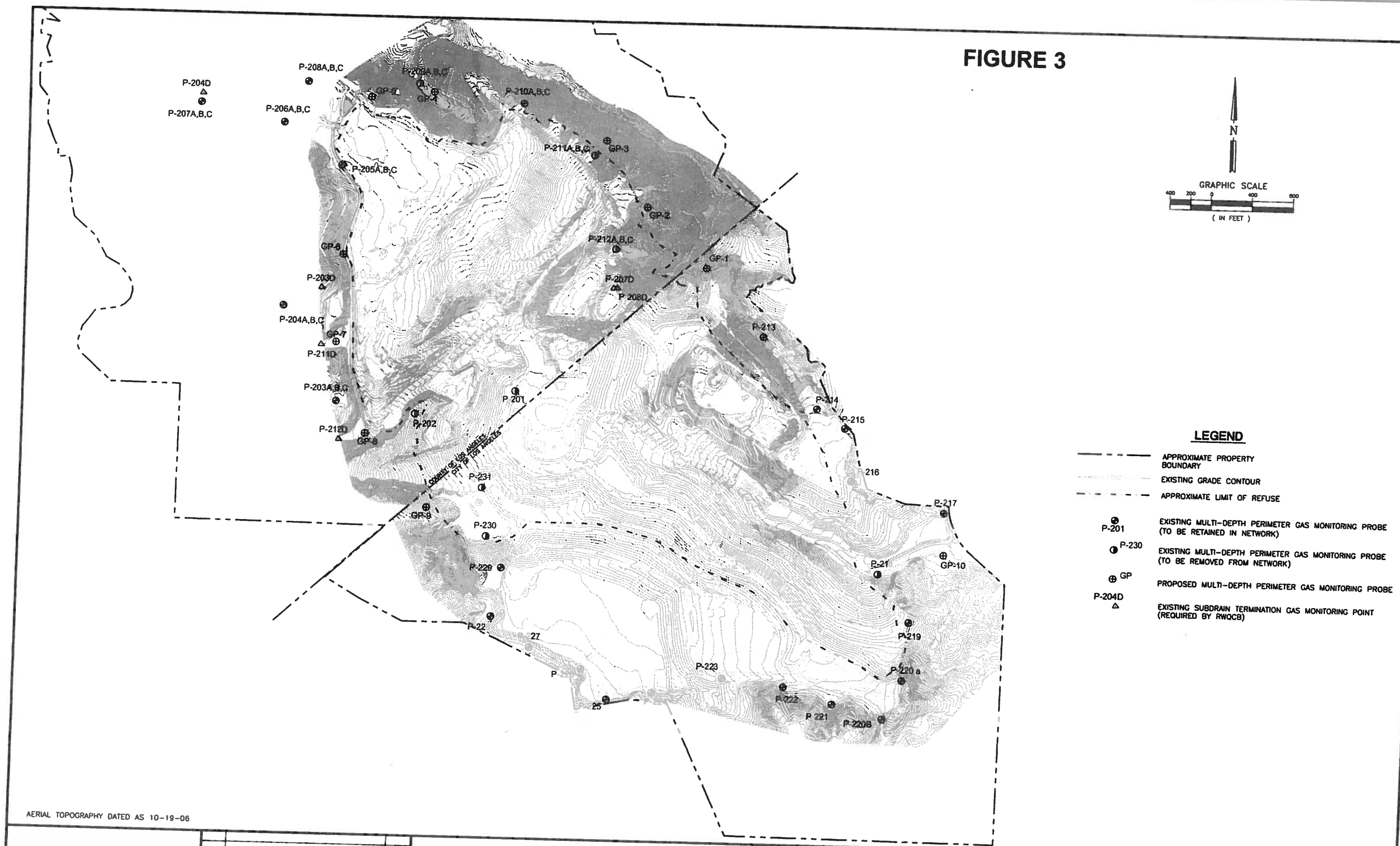
Ausenco Vector

MAP DATE: 9-17-2010

FIGURE 3



AERIAL TOPOGRAPHY DATED AS 10-19-06

NO.	REVISION DESCRIPTION	BY:

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION

BAS
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SUNSHINE CANYON LANDFILL JTD 2007
ENVIRONMENTAL CONTROL SYSTEMS
GAS MONITORING

DESIGNED BY : R.M.G./J.M.B.	SCALE : AS SHOWN	
DRAWN BY : C.A.L.	DATE : 2-2008	FILE NO.: 09197DB.DWG
CHECKED BY : P.W.	DATE : 2-2008	
APPROVED BY :	DATE : 2-2008	

TABLE 1
SUMMARY OF PERIMETER PROBE MONITORING RESULTS
JANUARY 2009 TO SEPTEMBER 2010
(results reported in % methane)

Perimeter Probe ID		Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10
CITY																						
213	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	2.0	0.0	2.0
214	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
	B	0.7	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.9
	C	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
215	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
216	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
217	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
218	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
219	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
220	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
220B	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
221	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
222	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
223	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
224	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
225	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: Readings reported with an * were taken using a Gastech instrument and originally reported as ppmv as methane

indicates result does exceed regulatory threshold of 5% methane - gas sample collected and sent to analyticsal laboratory

TABLE 1
SUMMARY OF PERIMETER PROBE MONITORING RESULTS
JANUARY 2009 TO SEPTEMBER 2010
(results reported in % methane)

Perimeter Probe ID		Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10
226	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
227	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
228	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.5
	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
229	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6	0.0	0.0	0.0	0.0	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
230	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
231	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
241	A				0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	16.5	0.0	0.0	0.0	0
	B				0.0	0.1	0.0	0.0	0.0	0.0	0.5	4.7	0.0	8.4	0.0	0.0	0.0	0.0	30.8	0.0	0.0	30.6
	C				0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.6	0.8	2.1	0.0	0.5	4.0	3.5	5.4
	D				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.3	0.0	0.4
	E				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9

Note: Readings reported with an * were taken using a Gastech instrument and originally reported as ppmv as methane

indicates result exceedS regulatory threshold of 5% methane - gas sample collected and sent to analyticsal laboratory

TABLE 1
SUMMARY OF PERIMETER PROBE MONITORING RESULTS
JANUARY 2009 TO SEPTEMBER 2010
(results reported in % methane)

COUNTY																					
Perimeter Probe ID		Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10
201	A	.3820*	.1680*	.3320*		.0840*	.0828*	.1100*	.1240*	.0100*	.0400*	.0560*	.0420*	.0360*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	.1560*	.0020*	.0780*	.1240*	.0860*	.0360*	.0180*	.0720*	.0700*	.0060*	.0200*	.0240*	.0060*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	.1380*	.0100*	.0800*	.1060*	.0820*	.0640*	.0540*	.0100*	.1070*	.0040*	.0100*	.0140*	.0040*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
202	A	.3529*	.0060*	.2140*	.2240*	.2240*	.0140*	.0080*	.0700*	.0300*	.0050*	.0140*	.0480*	.0050*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	.2500*	.2160*	.1060*	.0950*	.0950*	.0340*	.0520*	.0500*	.1130*	.0200*	0.052	.0180*	.0260*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	.1500*	.0620*	.0300*	.1240*	.1240*	.0200*	.0220*	.0440*	.0340*	.0040*	.0260*	.0200*	.0040*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
203	A	.1620*	.1680*	.1400*	.1800*	.1800*	.0668*	.0140*	.0540*	.0460*	.0500*	.0300*	.0220*	.0148*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	.0820*	.0440*	.1548*	.0820*	.0820*	.0740*	.0500*	.0780*	.0670*	.0560*	.0380*	.0200*	.0200*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	.058*	0.052*	.1120*	.0640*	.0640*	.0808*	.0128*	.0940*	.0600*	.0900*	.0100*	.0080*	.0010*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
204	A	.1960*	.0120*	.0820*	.1420*	.1420*	.1346*	.0100*	.0100*	.0100*												
	B	.1580*	.0080*	.0340*	.1300*	.1300*	.0400*	.0120*	.0300*	.0250*												
	C	.3160*	.2600*	.1340*	.1660*	.1960*	.0760*	.0180*	.1260*	.0640*												
205	A	.2840*	.0320*	.3420*	.2740*	.2740*	.6000*	.1680*	.1560*	.1100*												
	B	.3900*	.0340*	.1280*	.3480*	.3480*	.0720*	.2700*	.2260*	.1600*												
	C	.1700*	.2700*	.2700*	.1100*	.1100*	.2240*	.0300*	.0760*	.1700*												
205R	A										0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B										0.6	0.7	0.4	0.1	0.2	0.8	0.5	0.4	0.6	0.5	0.5	0.4
	C										0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.5	0.6	0.9
	D										0.8	1.2	0	0.0	0.0	0.6	0.0	0.0	2.3	0.0	0.9	0.0
	E										2.0	2.0	0.8	0.8	0.8	1.8	0.7	0.8	0.8	0.7	0.6	0.5
206	A	.2940*	.2760*	.2500*	.2600*	.2340*	.1520*	.1640*	.1620*	.1640*	.0400*	.0680*	.0520*	.0580*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	.2860*	.3040*	.2600*	.2720*	.2440*	.1740*	.1680*	.1460*	.1046*	.0440*	.0620*	.0600*	.0580*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	.1760*	.3020*	.2640*	.2800*	.2400*	.1750*	.1560*	.1768*	.0060*	.0400*	.0640*	.0570*	.0600*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
207	A	41.6	0.0*	0.0*	0.0	0.0	0.0	0.5	0.0	0.0	0.0	35.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	.4360*	0.062*	.0660*	0.064	.0300*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	.1380*	.2000*	.0860*	.0560*	.0549*	0.0	0.0	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
208	A	.1960*	.2400*	.2360*	.2340*	.2060*	.0760*	.0780*	.0500*	.0300*	.0140*	.0250*	.0200*	.0160*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	.2600*	.2780*	.2740*	.2420*	.2500*	.0960*	.1360*	.0100*	.0140*	.0380*	.0360*	.0480*	.0580*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	.2240*	.2090*	.2200*	.2020*	.2186*	.0440*	.0520*	.0300*	.1200*	.0340*	.0580*	.0220*	.0200*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
209	A	.2640*	.7760*	.1900*	.2260*	.2160*	.0920*	.0240*	.0160*	.1480*												
	B	.2586*	.2860*	.1960*	.2180*	.2300*	.1000*	.1200*	.1360*	.1580*												
	C	.2630*	.3040*	.2040*	.2340*	.2186*	.1160*	.0700*	.1540*	.1680*												
210	A	.2820*	.7760*	.8160*	.8342*	32.8	0.0	38.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	.2860*	0.0*	0.2	11.1	0.0	14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0
	C	0.5	.3040*	2.6	0.7	2.5	0.3	0.1	0.0	0.6	0.5	0.3	0.7	0.8	0.6	0.9	0.0	0.8	1.6	0.7	0.9	0.5
239	A	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.3	0.5	0.0	0.3
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.1	0.7	0.0	0.2	0.0	0.6	0.4	0.5	0.3	0.2	0.2	0.2	0.0	0.1	0.0	0.1	0.0
	E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E	0.8	0.6	0.8	0.7	0.6	0.8	0.3	0.9	0.6	0.8	0.5	0.8	0.1	0.6	0.8	0.7	0.8	0.8	0.7	0.8	0.3
242	A										0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B										0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C										0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D										0.7	0.6	0.6	0.7	0.5	0.5	0.6	0.6	0.8	0.7	0.6	0.9
	E										0.0	0.7	0.9	0.0	0.9	0.4	5.3	4.0	5.3	5.2	3.4	3.0
243	A										0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B										0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C										0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
244	A										0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B										0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	C										0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
245	A										0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B										0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.3
	C										0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	D										0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E										0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
246	A										0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B										0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: Readings reported with an * were taken using a Gastech instrument and originally reported as ppmv as methane

indicates result exceeds regulatory threshold of 5% methane - gas sample collected and sent to analyticsal laboratory

TABLE 2
SUMMARY OF PERIMETER PROBE EXCEEDENCES
(results reported in % methane)

Perimeter Probe ID		Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09
214	C	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
229	D	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
241	A				0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0
	B				0.0	0.1	0.0	0.0	0.0	0.0	0.5	4.7	0.0
	C				0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
207	A	41.6	0.0*	0.0*	0.0	0.0	0.0	0.5	0.0	0.0	0.0	35.0	0.0
210	A	.2820*	.7760*	.8160*	.8342*	32.8	0.0	38.3	0.0	0.0	0.0	0.0	0.0
	B	0.0	.2860*	0.0*	0.2	11.1	0.0	14.4	0.0	0.0	0.0	0.0	0.0
242	E										0.0	0.7	0.9

Perimeter Probe ID		Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10
214	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
229	D	0.0	0.0	0.0	9.6	0.0	0.0	0.0	0.0	0.0
241	A	0.0	0.0	0.0	0.0	16.5	0.0	0.0	0.0	0
	B	8.4	0.0	0.0	0.0	0.0	30.8	0.0	0.0	30.6
	C	0.0	0.6	0.8	2.1	0.0	0.5	4.0	3.5	5.4
207	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0
242	E	0.0	0.9	0.4	5.3	4.0	5.3	5.2	3.4	3.0

Note: Readings reported with an * were taken using a Gastech instrument and originally reported as ppmv as methane
Indicates result exceeds regulatory threshold of 5% methane - gas sample collected and sent to analytical laboratory

TABLE 3
SUMMARY OF GAS PROBE EXCEEDENCES AND CORRECTIVE ACTIONS

Gas Probe Location	Date of Initial Exceedence	Reading of Initial Exceedence	10-day Re-check	Second 10-day Re-check	30-day Re-check	Cause of Exceedence	Corrective Action(s)
214C	1/29/2009	9.8%	0.0%	N/A	N/A	Vacuum to gas extraction wells in the vicinity of Probe 214 was lower than expected. A blockage (debris) at the connection point between City Unit 1 North wellfield and the City Unit 1 South wellfield was identified.	The blockage was removed and vacuum to the wells in the vicinity of Probe 214 increased. Reading taken from Probe 214C on January 29, 2009 showed 0.0% methane.
207A	1/29/2009	41.6%	0.0%	N/A	N/A	Likely caused by migration of gas up under-drain syste for the nothern portion of the landfill.	A vacuum line to the sub-drain system was installed.
210A	5/1/2009	32.8%	17.1%	0.0%	N/A	Probe location directly adjacent to upstream end of an underdrain system.	A vacuum line to the sub-drain system was installed.
210B	5/21/2009	11.1%	1.9%	0.4%	N/A	Probe location directly adjacent to upstream end of an underdrain system.	A vacuum line to the sub-drain system was installed.
210A	7/30/2009	38.3%	0.3%	N/A	N/A	Probe location directly adjacent to upstream end of an underdrain system. A valve was mistakenly turned off to the vacuum line that leads to the underdrain system.	A vacuum line to the sub-drain system was installed previously - the valve was turned back on.
210B	7/30/2009	14.4%	0.6%	N/A	N/A	Probe location directly adjacent to upstream end of an underdrain system.	A vacuum line to the sub-drain system was installed previously - the valve was turned back on.
207A	11/16/2009	35.0%	0.0%	N/A	N/A	The vacuum source attached to the underdrain system in the area was removed due to the re-location of some tanks in the area. Although the vacuum line was re-installed, it is believed the gas build-up in the system had not been cleared at the time of the monitoring.	The vacuum line was already re-installed and vacuum applied to the system. No additional corrective actions were taken.
241A	11/16/2009	6.0%	0.0%	N/A	N/A	Likely caused by migration of gas up gravel pack in nearby subdrain system	Shallow probe placed close to the end of the buried subdrain and vacuum applied.
241B	1/25/2010	8.4%	0.0%	0.0%	N/A	Likely caused by low vacuum in line closest to probe location.	Vacuum to line adjusted.
229D	4/19/2010	9.6%	0.0%	N/A	N/A	Likely caused by low vacuum in line closest to probe location.	Vacuum to line adjusted.
242E	4/22/2010	5.3%	0.0%	N/A	N/A	Probe is located on the road up to Flare 8 - no direct cause identified. Exceedence may be due to influence of naturally occurring gas	No corrective actions required. Exceedence cleared at 10-day re-check.

TABLE 3
SUMMARY OF GAS PROBE EXCEEDENCES AND CORRECTIVE ACTIONS

Gas Probe Location	Date of Initial Exceedence	Reading of Initial Exceedence	10-day Re-check	Second 10-day Re-check	30-day Re-check	Cause of Exceedence	Corrective Action(s)
241A	5/24/2010	16.5%	23.9%	24.1	0.0%	Probe located in an area tied to an existing underdrain system. Exceedence may be caused by gas migrating up gravel pack of subdrain to probe location.	Multi-depth Soil vapor extraction well (PCW-241) installed approximately 100 feet south of Probe 241 location to extract gas in this area.
241B	6/14/2010	30.8%	31.3%	0.7%	31.2%	Probe located in an area tied to an existing underdrain system. Exceedence may be caused by gas migrating up gravel pack of subdrain to probe location.	Multi-depth Soil vapor extraction well (PCW-241) installed in July 2010 approximately 100 feet south of Probe 241 location to extract gas in this area.
242E	6/15/2010	5.3%	5.2%	5.4%	5.3%	Results of analytical testing of gas samples sent to the laboratory indicate gas from this location may be naturally-occurring.	Exceedence cleared within 45-day timeframe Additional gas extraction wells were installed on the County side of the site in June and July 2010. Two new wells were installed within 400 linear feet of Probe 242 and connected to the landfill gas extraction system. This work was done within 45 days after detecting the third exceedance. The July 27 exceedence reported took place during the timeframe when the additional gas wells were being installed. As noted below, the 10-day re-check performed on August 6, showed the concentration of methane in Probe 242 E was below 5%. No exceedences over 5% have been reported in Probe 242E since August 2010.
242E	7/27/2009	5.2%	4.3%	N/A	N/A	Results of analytical testing of gas samples sent to the laboratory indicate gas from this location may be naturally-occurring.	Please see above.
241B	9/20/2010	30.6%	36.4%	0.0%	N/A	No vacuum to the probe system was present during the initial monitoring.	The vacuum line was inspected and the system tuned to ensure vacuum was present.
241C	9/20/2010	5.4%	0.2%	N/A	N/A	No vacuum to the probe system was present during the initial monitoring.	The vacuum line was inspected and the system tuned to ensure vacuum was present.

TABLE 4
SUNSHINE CANYON LANDFILL
LANDFILL GAS PREVENTATIVE MEASURE WORK PLAN

	TASK	OBJECTIVE	PROPOSED ACTIONS	PROPOSED IMPLEMENTATION SCHEDULE
1	WELLHEAD INSPECTION	To ensure consistent and reliable operation of each gas extraction well	A. Inspect each wellhead during the monthly monitoring of gas well parameters B. Document the condition of each wellhead in field logbook C. Repair wellhead components as necessary and document actions taken	Currently being fully implemented as part of the monthly gas well monitoring program as required by Republic Services' Landfill Gas Management SOP
2	WELLHEAD MAINTENANCE	To ensure the wellhead is working properly to ensure accurate monitoring results are obtained and tuning can be performed accurately	A. Inspect each wellhead during the monthly monitoring of gas well parameters B. Document the condition of each wellhead in field logbook C. Repair wellhead components as necessary and document actions taken	Currently being fully implemented as part of the monthly gas well monitoring program as required by Republic Services' Landfill Gas Management SOP
2	INSPECTION OF AREA SURROUNDING GAS EXTRACTION WELL	Per NSPS requirements (60.755(c)(5)), the cover integrity in the area immediately surrounding a well is to be visually inspected on a monthly basis to ensure no cover integrity is maintained to prevent surface emissions	A. Visually inspect above grade well casings and surrounding area for signs of damage, deterioration or any other potential problems that might indicate the potential of surface emissions paying special attention to the cover located directly around each well casing to ensure the soil is not pulling away from the well casing B. Look for areas of surface water ponding, erosion, seeps or staining C. Note if area around well casing has settled D. Document condition of well casing and area surrounding well casing E. Notify appropriate personnel if corrective actions need to be taken to remedy any area noted	Currently being implemented as part of the monthly gas well monitoring program as required by Republic Services' Landfill Gas Management SOP. Additional measures that will be implemented are as follows: 1. Documentation of the visual inspection of the area surrounding each gas extraction well
4	MAINTENANCE OF AREA SURROUNDING GAS EXTRACTION WELL	Maintain area at and immediately surrounding each gas extraction well to ensure the soil cover is adequate and in acceptable condition to prevent surface emissions	A. If soil has settled and/or pulled away from the well casing, apply additional soil and compact B. Inspect recently compacted soil to ensure no additional soil needs to be added C. If area around well casing has settled, apply additional soil cover and compact and grade to ensure drainage requirements are met C. If erosion areas are noted, provide additional soil cover, compaction and grading to ensure area is ready for potential rainfall that may cause washout D. Document actions taken	Currently being implemented as part of the monthly gas well monitoring program as required by Republic Services' Landfill Gas Management SOP. Additional measures that will be implemented are as follows: 1. Documentation of the maintenance activities that were performed (if necessary)

TABLE 4
SUNSHINE CANYON LANDFILL
LANDFILL GAS PREVENTATIVE MEASURE WORK PLAN

	TASK	OBJECTIVE	PROPOSED ACTIONS	PROPOSED IMPLEMENTATION SCHEDULE
5	SURFACE MONITORING OF GAS EXTRACTION WELLS AND AREAS SURROUNDING GAS EXTRACTION WELLS	To ensure no surface emissions are present above regulatory limits	A. Conduct quarterly monitoring in accordance with SCAQMD's Rule 1150.1 requirements B. Conduct monthly monitoring with Flame Ionization Detector (FID) C. Record results of monthly monitoring	A. This task is currently being conducted under the site's Rule 1150.1 Compliance Plan. Results of the quarterly monitoring are submitted to the SCAQMD. B. Monthly emission monitoring will be conducted in conjunction with the monthly gas well monitoring beginning the monitoring period of December 2010.
6	INSPECTION OF AREAS SURROUNDING GAS EXTRACTION WELLS PRIOR TO A RAINFALL EVENT	To ensure the areas immediately surrounding gas extraction wells are in good condition such that a rainfall event will not cause soil erosion or other damage that may lead to surface emissions	A. Prior to an anticipated rainfall event, each gas extraction well and the surrounding area will be inspected to ensure the soil cover is intact and appropriate drainage conditions exist. B. Any identified corrective actions will be taken immediately, to ensure these areas have been addressed prior to the anticipated rainfall event. Standard stormwater best management practices will be used to prepare for a rainfall event.	These actions will be taken when notified of a rainfall event.
7	INSTALLATION OF ADDITIONAL GAS EXTRACTION WELLS	To ensure the gas collection and control system is operating effectively to control surface emissions by capturing gas from all areas of the landfilled area.	A. Install additional gas collection wells as deemed necessary by a monthly review of gas monitoring and other system data	This task will be taken after review of gas collection system information indicates additional gas collection wells are necessary to enhance the system performance. Done on an as-needed basis.