

<b>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</b>  <b>STATIONARY SOURCE COMPLIANCE DIVISION</b>  <b>PERMIT APPLICATION PROCESSING AND CALCULATIONS</b>	PAGES	PAGE 1
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**Applicant**

Sunshine Canyon Landfill  
14747 San Fernando Road  
Sylmar, California 91342

**Equipment Location**

SAME

**Equipment Description and Conditions**

A/N 501513 (Previous A/N 449641)

See Draft Permit

A/N 502517

TV Minor Permit Revision.

**History**

The Sunshine Canyon Landfill is an active Class III landfill. The site is surrounded by hills and a freeway with the exception of the south side where a housing complex is located approximately half a mile. This application was submitted to modify the previous application, A/N 449641 and to relocate the system from the top of the landfill to the bottom of the hill near the front gate by the entrance to the landfill. The system is being relocated so that the area can be used for landfilling.

**Process Description**

Leachate and condensate will be collected at the top landfill and sent to the treatment system located at the bottom of the hill near the front gate by the entrance to the landfill. The leachate/condensate will be collected in an influent surge tank and then pumped thru three filters for particulate removal. Then the leachate/condensate will be treated by three liquid phase carbon adsorbers connected in series. Prior to sewerage, the leachate/condensate will be pumped to a 5,000 gallon surge tank where it will be treated with sodium hypochlorite. The emergency storage tanks will be operated only when the influent surge tank is full and when the influent is diverted in order to replace a pump or a carbon adsorber.

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### Calculations

There is no emission increase from the removal of the air strippers and the addition of the three liquid phase carbon adsorbers.

VOC emissions from the influent surge tank:

$$10 \text{ ppm} \times 57,000 \text{ gal/day} \times 8.34 \text{ lb/gal} \\ = 4.75 \text{ lbs/day in liquid}$$

Assume 10% of vapor in the liquid is vented to the carbon adsorbers. The remainder is captured in the liquid phase carbon adsorbers.

$$R1 = 4.75 \times 0.1 = 0.475 \text{ lbs/day} \\ = 0.02 \text{ lbs/hr}$$

With 99% carbon removal efficiency:

$$R2 = 0.475 \text{ lbs/day} \times (1 - 0.99) \\ = 0.00475 \text{ lbs/day} \\ = 0.0002 \text{ lbs/hr}$$

Since the emergency tanks get full after the surge tank gets full, the emissions are the same for each tank being filled in series (not additive).

Carbon replacement:

Assume 20 lbs VOC loading per 100 lbs of carbon  
Therefore, 200 lbs carbon can hold 40 lbs VOC  
 $40 \text{ lbs VOC} \times \text{day} / 0.475 \text{ lbs} = 84 \text{ days}$

In addition, to verify the assumptions made to calculate emissions from the proposed equipment, EPA Tank 4.0 program was also utilized. The program also demonstrated that emissions from the proposed equipment will be negligible (see attached).

### Evaluation

CEQA: This application is for a modification to existing equipment with no emission increase. Therefore, the existing CEQA document is still applicable. No further action is required.

Rule 212: There is no emission increase, no toxic risk increase and no school within 1000 feet. Therefore, a public notice is not required.

Rule 401: Visible Emissions  
No violations are expected

Rule 402: Nuisance  
Nuisance is not expected.

Reg. XIII: New Source Review  
No emission increase. Therefore, not applicable.

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Rule 1401: No emission increase.  
Equipment is in compliance.

Reg XXX: Title V Permits

This modification is a "MINOR" permit revision which requires a 45 day EPA notice.

**Conclusions and Recommendations**

The equipment is in compliance with the Rules and Regulations of the SCAQMD. Recommend issuing a revised Title V Permit to include a Permit to Construct/Operate for this equipment after a 45 day EPA notice.