Modification Application for Risk Reduction Activities Sycamore Landfill

Sycamore Landfill, Inc. 8514 Mast Boulevard Santee, California 92071 619-449-9156



01205145.18 | April 2021

7041 Koll Center Parkway, Suite 135 Pleasanton, CA 94566

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This document is dated April 2021 and was prepared and reviewed by the following:

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1.0 INTRODUCTION

1.1 OVERVIEW

This application, prepared by SCS Engineers (SCS), on behalf of Sycamore Landfill, Inc. (SLI) details the risk reduction activities that will be implemented at the Sycamore Landfill (Sycamore or landfill) to reduce health risk. This document serves as both a modification application to have these risk reduction activities permitted, as well as serving as the risk reduction audit and plan (RRAP) detailed in San Diego Air Pollution Control District (SDAPCD) Rule 1210 (e).

SDAPCD Rule 1210 (e) reads as follows:(1) Except as provided in Subsections (e)(2), (e)(3) and (e)(4), within six months of receipt of written notice from the Air Pollution Control Officer that a stationary source's most recent approved public health risk assessment indicates potential public health risks equal to or greater than one or more of the following significant risk mitigation levels, the owner or operator shall submit to the Air Pollution Control Officer, for review for completeness, a stationary source toxic air contaminant risk reduction audit and plan:

(i) Maximum incremental cancer risks equal to or greater than 100 in one million, or

(ii) Cancer burden equal to or greater than 1.0, or

- (iii) Total acute noncancer health hazard index equal to or greater than 1.0, or
- (iv) Total chronic noncancer health hazard index equal to or greater than 1.0.

The risk reduction audit and plan shall contain airborne toxic risk reduction measures proposed by the owner or operator which will be sufficient to reduce the stationary source emissions to levels that result in potential public health risks below the significant risk mitigation levels specified above. Such emission reductions shall be accomplished within five years of the date the plan is submitted to the Air Pollution Control Officer.

(5) The risk reduction audit and plan submitted by the owner or operator shall contain all of the following:

(i) The name, location and standard industrial classification (SIC) code of the stationary source.

(ii) The identification of the emission units and toxic air contaminants emitted by each emission unit that contribute to potential public health risks above the significant risk mitigation levels specified in Subsection (e)(1). Emission units shall be listed by decreasing contribution to the total potential public health risks estimated for the stationary source. Toxic air contaminants shall be listed for each emission unit by decreasing contribution to the potential public health risk estimated for that unit.

The plan need not include identification of emission units which emit toxic air contaminants in amounts which the approved public health risk assessment indicates Regulation XII -14-Rule 1210 do not cause maximum incremental cancer risks greater than 1.0 in a million, nor a total acute noncancer health hazard index of 1.0 or greater, nor a total chronic

noncancer health hazard index of 1.0 or greater. The plan shall include identification of all emission units for which the owner or operator proposes to reduce toxic air contaminant emissions as part of the risk reduction audit and plan.

1.2 BACKGROUND INFORMATION

1.2.1 Applicant Name and Address

Sycamore Landfill, Inc. 8514 Mast Boulevard Santee, CA 92071

1.2.2 Facility Address

Sycamore Landfill 8514 Mast Boulevard Santee, CA 92071

1.2.3 Nature of Business

Municipal Solid Waste Landfill

1.2.4 Persons to Contact Regarding Application

Mr. Jesus Torres Division Manager SLI 8514 Mast Boulevard Santee, CA 92071 (619) 449-9156

Mr. Patrick Sullivan Senior Vice President SCS Engineers 3117 Fite Circle, Suite 108 Sacramento, California 95827 (916) 503-2956

1.2.5 Operation Schedule

9.5 hours per day6 days per week52 weeks per year

1.2.6 Status of Application

This is a modification application for risk reduction activities.

1.2.7 Facility Status

Existing

1.2.8 Compliance Certification

A certification is required for this RRAP by a professional engineer or environmental assessor registered in California. The certification must be from an individual responsible for the processes or operations at the landfill.

"I, Srividhya Viswanathan, certify that this audit and plan meets the requirements of Rule 1210(e) and Part 6, Chapter 6 of Division 26 of the California Health and Safety Code. SLI also certifies that all facilities owned or operated by SLI are in compliance or on approved schedule for compliance with applicable federal, state, and local emission limits and standards."

Certified by:	Srividhya Viswar	hathan, P.E	
	٨	2	I
Signature:			
Date:	4-28-21	0	

A copy of the completed SDAPCD permit application form and fee estimate for the RRAP is provided as **Appendix A** to this report.

2.0 **PROJECT DESCRIPTION**

2.1 EXISTING OPERATION

Sycamore is located in Santee, California. The Site is owned and operated by SLI. The primary function of Sycamore is for the disposal of municipal solid waste (MSW) (Standard Industrial Code (SIC) #4953). The landfill has been in operation since the early 1960s and is equipped with a landfill gas (LFG) collection and control system (GCCS). The original objective of the GCCS was to control the migration of combustible gases to off-site soils (California Code of Regulations [CCR] Title 27). However, over time, the GCCS has been expanded and enhanced to comply with federal, state, and local air quality regulations.

The SLI GCCS consists of vertical and horizontal extraction wells used to collect the LFG, a highdensity polyethylene (HDPE) piping collection system used to convey the collected LFG, and a blower/flare station (BFS) used to destruct the collected LFG. The BFS consists of a Perennial flare (No. 1) rated at 59 Million British Thermal Unit per hour (MMBtu/hr) and a John Zink flare (No. 2) rated at 54 MMBtu/hr.

In addition, collected LFG is sent to the third-party LFG-to-energy (LFGTE) facility, owned and operated by Fortistar, Inc. (Fortistar), used to destruct the collected LFG and produce electricity. This LFGTE facility operates under separate air quality permits under Fortistar's name, and the LFGTE facility is not under common ownership or control with SLI.

2.2 REASON FOR PERMITTING ACTION

SLI received notice from the SDAPCD that the 2013 health risk assessment (HRA) indicated that public risk was above the significant risk mitigation levels under Rule 1210. This requires SLI to submit a RRAP within six months. This document will define risk reduction measures that can be implemented into the facility's air permit (APCD2008-PTO-971111).

3.0 RISK REDUCTION

Sycamore contains the following emission units that contribute to public health risks above the significant mitigation levels:

- Landfill (area source)
- Stockpiles (area source)
- Quarrying (volume source)
- Cover application (volume source)
- Diesel engine (point source)
- Flares (point sources)
- Unpaved and paved haul roads (line volume sources)

3.1 **RISK CONTRIBUTION**

According to the 2013 HRA approval, dated October 29, 2020, unpaved haul roads, stockpiles, and cover application contribute the most to total health risk at the facility, as seen in **Table 1**.

Source	Residential Cancer	Residential Chronic	Maximum Acute
Unpaved Haul Roads	71%	79%	63%
Stockpiles	10%	12%	2%
Cover Application	5%	5%	34%

Table 1. Emission Unit Health Risk Contribution

Specific toxic air contaminants (TACs) that contribute the most to overall health risk under each risk condition are available in **Table 2**.

Table 2. Specific TAC Health Risk Contribution

TAC	Residential Cancer	Residential Chronic	Maximum Acute
Arsenic	88%	70%	2
Diesel PM	7%	12	-
Lead	1%	-	-
Silica, Crystalline	-	28%	=
Nickel	1	1%	99%
Benzene	(<u>_</u>)	72	0.5%

By far, the largest contributors to total risk are non-volatile minerals and metals being released in particulate matter (PM), which is present in fugitive dust emitted from the landfill. These metals and minerals are naturally occurring in the soils present at Sycamore. The RRAP is required due to chronic, non-cancer risks in excess of a hazard index (HI) of 1.0. Therefore, sources and TACs contributing to the chronic, non-cancer risk per Tables 1 and 2 will be the focus of this RRAP.

3.2 RISK REDUCTION EVALUATION

Tables 1 and 2 above show that the largest contribution to health risk for Sycamore are minerals and metals present in PM being emitted on unpaved haul roads, stockpiles, and cover soils, specifically arsenic, crystalline silica, and nickel. The industry standard for reducing PM emissions from these emission units is by providing a routine watering schedule to all haul roads and stockpiles at Sycamore, and depositing chemical dust suppressants on haul roads.

SLI has been following a regimented watering schedule to reduce this health risk since 2013. Local dirt-surfaced access roads to the active disposal area and other locations at the Sycamore Landfill are treated by applying a fine water spray when conditions favor the formation of fugitive dust. Unless visually wet, the application will be made at a minimum of every 4 hours during operating hours. Dust is also controlled by:

- (1) applying a fine water spray on soil cover in work areas when conditions may generate fugitive dust,
- (2) applying water and planting temporary vegetative cover when possible on the intermediate soil cover where wind-blown dust may be generated,
- (3) applying water with a chemical dust suppressant additive, and
- (4) vegetation of the completed landfill slopes.

SLI has selected Roadsaver-C as its preferred chemical dust suppressant. It is an odorless and colorless brine solution that can be used as a cost-effective dust palliative and road stabilizer. SLI currently purchases Roadsaver-C and has continuously used the product twice per year during the drier months of the year (typically in May and September). The safety data sheet (SDS) is available in **Appendix B**. Dust palliatives/stabilizers reduce the silt content of surface material on the roads, thus decreasing fugitive dust release.

Additional risk reduction actions that could hypothetically suppress dust would include paving all roadways, and containing stockpiles inside buildings with baghouses. These actions are infeasible as well as not economically viable. SLI has paved all permanent roads around the facility. Since the location where waste is being deposited daily is constantly changing, it is not reasonable to pave these temporary roads. Stockpiles also move frequently, so installing a building to contain them is not feasible, and would be extremely expensive.

3.3 RISK REDUCTION SCHEDULE

These risk reduction activities are currently being used on-site and will continue for the foreseeable future to suppress dust.

3.4 RISK REDUCTION DEMONSTRATION

When calculating the dust emissions for SLI's 2013 HRA, a standard APCD control efficiency of 80% was used for watering. With the addition of a more regimented watering schedule and use of chemical dust suppressants, an 80% control efficiency was still used based on APCD defaults. However, SLI requests that APCD review the updated risk reduction schedule in Section 3.2 and assess if a higher control efficiency is warranted. We believe the higher control efficiency afforded by the improved watering schedule and use of a soil stabilizer will create the emission reductions necessary to reduce risk.

The 2017 HRA for SLI was submitted in March 2021. The results of this assessment show a drastic decrease in particulate emissions, and thus health risk in general. This is due in part to risk reduction activities including continuing to limit haul road speeds at the landfill, haul road and stockpile watering, and use of chemical dust suppressants. **Table 3** below shows the reduction in health risk between the two HRAs.

Risk Type	2013 HRA	2017 HRA	Units
Cancer Maximum*	388	124	Cancer Risk Per Million
Cancer Maximum Residential	38.30	11.30	Cancer Risk Per Million
Cancer Maximum Worker	0.33	1.48	Cancer Risk Per Million
Chronic Maximum*	31.70	11.44	Hazard Index (HI)
Chronic Maximum Residential	2.90	1.00	Hazard Index (HI)
Chronic Maximum Worker	1.98	0.34	Hazard Index (HI)
Acute Maximum*	3.81	0.48	Hazard Index (HI)
Acute Maximum Residential	0.89	0.15	Hazard Index (HI)
Acute Maximum Worker	0.54	0.12	Hazard Index (HI)
Cancer Burden	0.20	0.20	Cumulative Cancer Risk Multiplied by Population

Table 3. HRA Comparison

*No actual receptor present at this location

The significant risk mitigation levels for SLI are the following:

- Maximum incremental cancer risks equal to or greater than 100 in one million
- Cancer burden equal to or greater than 1.0
- Total acute noncancer health hazard index equal to or greater than 1.0
- Total chronic noncancer health hazard index equal to or greater than 1.0

For 2013, Sycamore emissions cause an exceedance of the chronic, non-cancer HI at one or more residential locations. In 2017, the acute, non-cancer, and cancer risk were below the mitigation levels for all receptors. The only mitigation level exceedance for 2017 was chronic residential, a Hazard HI of 1.00, directly on the cusp of compliance.

This recently submitted HRA should serve as demonstration that the risk reduction measures since 2013 have worked and will only improve if SDAPCD agrees to a higher control efficiency.

3.5 PROGRESS REPORTS

Rule 1210(e) requires progress reports to be submitted at least annually under this RRAP. SLI will provide progress reports as required on an annual basis incorporated into the toxic air contaminant emission inventory report. This report will detail actions taken by SLI to reduce TAC emissions and the estimated public health risk reduction achieved.

4.0 CONCLUSION

SLI has included all required information from Rule 1210(e) regarding the RRAP. The risk reduction activities detailed in this permit modification application serve to update the current permit and show that SLI is taking all necessary steps to reduce health risk at the landfill. From 2013 through 2017, SLI has taken numerous steps to reduce overall health risk as is evident in the HRA results from each year.

Appendix A

General Permit Application Form and Fee Estimate

	Internal Use Only	
APP ID: APCD	-APP/CER-	
SITE ID: APCD	-SITE-	



Submittal of this application does not grant permission	on to construct of	r to operate equipment ex	cept as specified in Kule 24(c).
REASON FOR SUBMITTAL OF APPLICATION:			
New Installation	Existing U or Rule 11 Ch	Jnpermitted Equipment	Modification of Existing Permitted Equipment
Amendment to Existing Authority to Construct or Application	Change of	f Equipment Location	Change of Equipment Ownership
Change of Permit Conditions	Change Po	ermit to Operate Status	Banking Emissions
Registration of Portable Equipment	Other (Sp	ecify)	
List affected APP/PTO Record ID(s): <u>APCD2008-</u>	PTO-971111		
APPLICANT INFORMATION			
Name of Business (DBA) <u>Sycamore Landfill, Inc.</u>		ant at this an any athen a dia.	ant lasting? No. No.
If yes list assigned Site Record IDs listed on your Permi	permitted equipme	ent at this or any other adja	cent locations? Yes Ano
	11.5		
Name of Legal Owner (if different from DBA)			
Fauipment Owner		Authority to	Construct Mailing Address
Name: Sycamore Landfill, Inc.	1	Name: Same as Equipment (Owner
Mailing Address: 8514 Mast Boulevard		Mailing Address:	
City: Santee State: CA	Zip: 92071	City:	State: Zip:
Phone: (619) 733-7525		Phone: ()	
E-Mail Address: nmohr@republicservices.com		E-Mail Address:	
Permit To Operate Mailing Address Invoid			
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Permit To Operate Mailing Addres Name: Same as Equpment Owner Mailing Address: Mailing Address: Zip: City: State: Zip: Phone: () E-Mail Address: EQUIPMENT/PROCESS INFORMATION: Type o equipment storage address. If portable, will operation Equipment Location Address 8514 Mast Boulevard Parcel No. Zip 92071 Site Contact Jesus Torres General Description of Equipment/Process Municipal Sec Application Submitted by Owner Operator EXPEDITED APPLICATION PROCESSING: a) Expedited processing will incur additional fees and permits Expedited processing will incur additional fees and permits SIGNATURE Print Name Neil Mohr Phone (619) 733-7525	ess f Equipment: f Equipment	Invo Name: Same as Equipment (Mailing Address: City: Phone: () E-Mail Address: Stationary Portable, ecutive months at the sam City 449-9156 E-mail:ji Ph Il Consultant Affiliation St Expedited Application P multi the additional fees are paid ngineering review has begun th rmit approval. ue and correct. Compari- E-mail A	ice Mailing Address Owner State: Zip: if portable please enter below the e location Yes Yes No Santee State: CA torres@republicservices.com No SCS Engineers SCS Engineers rocessing and understand that: Scs encelled d) Expedited 4/28/21 No hy Sycamore Landfill, Inc. Address nmohr@republicservices.com

10124 Old Grove Rd. – San Diego - California 92131-1649 – (858) 586-2600 www.sdapcd.org

Internal Use Only			
APP ID: APCD	-APP/CER-		
SITE ID: APCD	-SITE-		

GENERAL PERMIT OR REGISTRATION APPLICATION FORM



Date	_Staff_Initials:	Amt Rec'd \$	Fee Schedule	
RNP:	EMF:	NBF: TA:		GEN_APP_Form_Rev Date: Aug. 2017

Appendix B

Road Saver- C Safety Data Sheet



1. PRODUCT AND COMPANY IDENTIFICATION

Product Identity: Roadsaver®-C Inhibited

Recommended use of the chemical and restrictions on use: Road stabilization, dust control and de-icing

EnviroTech Services, Inc.
910 54 th Ave, Suite 230
Greeley, CO 80634
(970) 346-3900

Emergency Phone: CHEMTREC: (800) 424-9300

SDS Date of Preparation: 7/18/2017

2. HAZARDS IDENTIFICATION

GHS Classification:

Physical	Health	Environment	
Not Hazardous	Not Hazardous	Not Hazardous	

GHS Label Elements:



Causes serious eye irritation.

Wash thoroughly after handling.

Wear eye and face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical attention.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount
Water	7732-18-5	60-75%
Calcium Chloride	10043-52-4	25-40%
Proprietary Corrosion Inhibitor Blend	Proprietary	Proprietary

The exact concentration is determined according to customer request. The exact concentration of the Inhibitor is being withheld as a trade secret.

4. FIRST AID MEASURES

Eye: Flush victim's eyes with large quantities of water, while holding the eyelids apart. Get medical attention if irritation occurs and persists.

Skin: Wash skin thoroughly with soap and water. Get medical attention if irritation develops. Remove and launder clothing before reuse.

Ingestion: Do not induce vomiting. Rinse mouth with water and give one glass of water to drink. Never give anything by mouth an unconscious or convulsing person. Get medical attention if symptoms develop. **Inhalation:** Remove victim to fresh air. If breathing is difficult or irritation persists, get medical attention.

Most important Symptoms: May cause slight eye and skin irritation.

Indication of immediate medical attention/special treatment: Immediate medical attention is not required.

5. FIRE FIGHTING MEASURES

Suitable (and Unsuitable) Extinguishing Media: Use media appropriate for surrounding fire. Cool fire exposed containers and structures with water.

Specific hazards arising from the chemical: Thermal decomposition may yield hydrogen chloride, halogenated compounds, and chlorine gas.

Special Protective Equipment and Precautions for Fire-Fighting Instructions: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing. Aqueous solutions may cause surfaces to be extremely slippery and cause a slip hazard.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures: Wear appropriate protective clothing as described in Section 8. Wash thoroughly after handling.

Methods and Materials for Containment and Cleaning Up: Dike and collect liquid or absorb with an inert absorbent and place in appropriate containers for disposal. Flush spill area with water. Report releases as required by local, state, and federal authorities.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Avoid contact with the eyes, skin, and clothing. Avoid breathing mists or aerosols. Wear protective clothing and equipment as described in Section 8. Wash thoroughly with soap and water after handling. Keep containers closed when not in use.

Conditions for Safe Storage, Including Any Incompatibilities: Store in a cool, dry, well-ventilated area away from incompatible materials. Product may be corrosive to some metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

Calcium Chloride	None Established	
Performance Additive	None Established	

Engineering Controls: Use with adequate general ventilation to minimize exposures.

Respiratory Protection: In operations where exposure levels are excessive, a NIOSH approved respirator with dust/mist cartridges or supplied air respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with OSHA 1910.134 and good industrial hygiene practice.

Skin Protection: Wear impervious gloves such as rubber or neoprene if needed to avoid prolonged skin contact.

Eye Protection: Safety glasses recommended.

Other: Long-sleeved clothing and long pants recommended to avoid prolonged skin contact. Suitable washing facilities should be available in the work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance And Odor: Clear liquid with no odor.

Physical State: Liquid	Odor Threshold: Not established	
Vapor Density: Not determined	Initial Boiling Point/Range: 110-122°C (230-252°F)	
Solubility In Water: Soluble	Vapor Pressure: Not determined	
Relative Density: 1.25-1.42	Evaporation Rate: Not determined	
Melting/Freezing Point: Not determined	pH: 5-10	
VOC Content: Not determined	Octanol/Water Coefficient: Not determined	
Solubility: Complete	Decomposition Temperature: Not determined	
Viscosity: <100 cP @ 70°F	Flammability (solid, gas): Not applicable	
Flashpoint: None	Autoignition Temperature: Not determined	
Flammable Limits: LEL: Not determined	UEL: Not determined	

10. STABILITY AND REACTIVITY

Reactivity: Not normally reactive

Chemical Stability: Stable under normal storage and handling conditions.

Possibility of Hazardous Reactions: None known.

Conditions to Avoid: None known.

Incompatible Materials: Strong oxidizing agents, concentrated acids, and some metals.

Hazardous Decomposition Products: When heated to decomposition emits hydrogen chloride, halogenated compounds, and chlorine gas.

11. TOXICOLOGICAL INFORMATION

HEALTH HAZARDS:

Ingestion: Ingestion may cause slight irritation with nausea, vomiting, and diarrhea.

Inhalation: Inhalation of mists may cause slight irritation of the nose throat and upper respiratory tract.

Eye: May cause slight irritation with pain and tearing.

Skin: May cause slight irritation on prolonged or repeated contact.

Sensitization: This material is not known to cause sensitization.

Chronic: None known.

Carcinogenicity: None of the components is listed as a carcinogen or suspected carcinogen by IARC, NTP, or OSHA.

Germ Cell Mutagenicity: None currently known.

Reproductive Toxicity: None currently known.

Numerical Measures of Toxicity:

No toxicity data available

12. ECOLOGICAL INFORMATION

Ecotoxicity: No data available Persistence and Degradability: Biodegradation is not applicable to inorganic substances. Bioaccumulative Potential: No data available Mobility in Soil: No data available Other Adverse Effects: None known

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with local, state, and federal environmental regulations.

14. TRANSPORT INFORMATION

DOT Hazardous Materials Description: Proper Shipping Name: Not regulated UN Number: None Hazard Class/Packing Group: None Labels Required: None

15. REGULATORY INFORMATION

CERCLA: This product is not subject to CERCLA release reporting. Many states have more stringent release reporting requirements. Report spills required under federal, state, and local regulations.

SARA Hazard Category (311/312): Refer to Section 2 for OSHA Hazard Classification.

SARA 313: This product contains the following chemicals subject to Annual Release Reporting Requirements under SARA Title III, Section 313 (40 CFR 372): None

EPA TSCA Inventory: All of the ingredients in this product are listed on the EPA TSCA Inventory.

CANADA:

This product has been classified under the CPR and this MSDS discloses information elements required by the CPR.

Instability = 0 Physical Hazard = 0

Canadian CEPA: All the components of this product are listed on the Canadian DSL. **Canadian WHMIS Classification:** Not classified as dangerous

16. OTHER INFORMATION

NFPA Rating:	Health = 1	Flammability = 0
HMIS Rating:	Health = 2	Flammability = 0

SDS Revision History: 2/15/2016: New SDS 7/18/2017: Reviewed, no changes required

Disclaimer: This Safety Data Sheet (SDS) is provided in response to customer requests to address the safe handling of the product. All statements, technical information and recommendations contained herein are the best of our knowledge, reliable and accurate. This SDS is not intended to make any representation as to how the product will perform when used for its intended purpose by a user. In that regards the product is sold "AS IS" and nothing in this SDS should be deemed to be a representation or warranty of any injury, loss, or damage, of any kind or nature, which are sustained by or arise from the use of the product. Nothing in this SDS is intended to be a representation or warranty by the manufacturer of the accuracy, safety, or usefulness for any purpose of any technical information, materials, techniques, or practices.

The information contained in this Safety Data Sheet is, to the best of our knowledge, accurate and reliable. This information should be provided to all individuals handling this product. Federal, state, and local regulations should be followed when handling this product.