Modification Application for Risk Reduction Activities
Otay Landfill

Otay Landfill, Inc.
1700 Maxwell Road
Chula Vista, California 91911
619-421-3773

SCS ENGINEERS

01205144.33 | September 2024 (Revised December 2024, Revised June 2025, Revised February 2026, Revised May 2026)

4683 Chabot Drive, Suite 200
Pleasanton, CA 94588

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This document is dated May 2026 and was prepared and reviewed by the following:

[redacted]

Gabrielle F. Stephens
Vice President

[redacted]

Jeff Leadford, P.E.
Project Manager
SCS ENGINEERS

1.0 INTRODUCTION

1.1 OVERVIEW

This application, prepared by SCS Engineers (SCS), on behalf of Otay Landfill, Inc. (OLI) details the risk reduction activities that will be implemented at the Otay Landfill (Otay 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 or District) 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 10 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

Otay Landfill, Inc.
1700 Maxwell Road
Chula Vista, CA 91911

1.2.2 Facility Address

Otay Landfill
1700 Maxwell Road
Chula Vista, CA 91911

1.2.3 Nature of Business

Municipal Solid Waste Landfill

1.2.4 Persons to Contact Regarding Application

Marco Cervantes
Environmental Manager
Otay Landfill, Inc.
1700 Maxwell Road
Chula Vista, CA 91911
(619) 332-9021
MCervantes2@republicservices.com

Gabrielle Stephens
Vice President
SCS Engineers
4683 Chabot Drive, Suite 200
Pleasanton, CA 94588
(562) 355-6510
gstephens@scsengineers.com

1.2.5 Operation Schedule

11 hours per day
6 days per week
52 weeks per year

1.2.6 Status of Application

This is a modification application for risk reduction activities.

1.2.7 Facility Status

Existing facility

2.0 PROJECT DESCRIPTION

2.1 EXISTING OPERATION

Otay is located in Chula Vista, California. The Site is owned and operated by OLI. The primary function of Otay is for the disposal of municipal solid waste (MSW) (Standard Industrial Code (SIC) #4953). The landfill is equipped with a landfill gas (LFG) collection and control system (GCCS), the original objective of which 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 OLI GCCS consists of vertical and horizontal extraction wells used to collect the LFG, a high-density 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 John Zink flare (No. 1) rated at 150 million British Thermal Units per hour (MMBtu/hr) and a Perennial flare (No. 2) rated at 48 MMBtu/hr.

2.2 REASON FOR PERMITTING ACTION

OLI received notice from the SDAPCD that the 2021 health risk assessment (HRA) indicated that public risk was above the significant risk mitigation levels under Rule 1210. This requires OLI to submit a RRAP within six months. OLI submitted the initial RRAP in September 2024 and provided updated Plans in December 2024 and June 2025. Since the submittal, the District incorporated additional equipment emissions from a permit application submitted by OLI (a crushing operation) and proposed risk reduction measures, as well as updated receptor locations and more recent meteorological data. As a result, the previously submitted RRAP was required to be re-submitted. A revised RRAP was re-submitted in February 2026. A subsequent incompleteness letter was sent by the SDAPCD on March 11, 2026 which summarized revisions to the plan that must be addressed.

This document will define risk reduction measures that can be incorporated into and implemented by the facility's air permit (APCD2009-PTO-971112).

3.0 RISK REDUCTION

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

- Landfill (area source)
- Diesel engines (point source)
- Flares (point sources)
- Stockpiles (area sources)
- Unpaved and paved haul roads (line volume sources)

3.1 RISK CONTRIBUTION

As required by the California H&S code, section 44360, the District requested an HRA on November 15, 2022 for the 2021 calendar year. OLI submitted an HRA to the District on May 14, 2023. The District provided comments on the HRA as well as comments provided from the Office of Environmental Health Hazard Assessment (OEHHA) to Otay Landfill on October 12, 2023. OLI submitted a revised HRA to the District on December 11, 2023. The District approved the HRA on March 21, 2024. A revised HRA was performed by the District in November 2025, which showed risk over the cancer risk thresholds.

According to the revised HRA, the specific contaminants that contribute the most to the residential cancer risk are arsenic (46 percent (%)), diesel particulate (31%) and to a lesser extent, benzene (7%), vinyl chloride (5%), and ethylbenzene (4%). This is from residential receptor #69 located directly East of the facility in a new residential development. The largest contributor to cancer risk are metals, specifically arsenic, being released from the unpaved and paved roads. The diesel particulate emissions from engines, specifically Engine 8460, which is a newly added source with the proposed concrete crushing operation, also contributes to the cancer risk. The RRAP is required due to residential cancer risk exceeding ten in one million. These sources and TACs will remain the focus of the RRAP.

3.2 ADJUSTMENTS TO SDAPCD HRA

After discussion with SDAPCD staff, there were some adjustments that should be considered in the HARP model. Specifically, a deposition rate of 0.02 being used instead of 0.05 as all sources at the facility are controlled. In addition, the AERMOD plotfiles did not line up directly with the emission sources in HARP and were reconnected as needed. SDAPCD agreed with these adjustments, which brought the maximum residential cancer receptor to 22.5 in a million risk.

3.3 RISK REDUCTION EVALUATION

The largest contribution to health risk for Otay is a non-volatile metal (arsenic) specifically from paved and unpaved roads. Please note this excludes the contribution of arsenic from the John Zink enclosed flare. OLI will be replacing the John Zink flare with a new more efficient ultra-low emission flare and will test the new flare for arsenic to maintain the assumption that there will be no risk contribution from this source.

The next largest contribution on residences is diesel particulate emissions from the 8460 engine. This diesel engine is used in the new crushing operation and uses an EPA Tier 4 final particulate emission factor. Benzene, vinyl chloride, and ethylbenzene come mainly from the fugitive landfill gas emitted from the landfill surface and would be hard to additionally control. The landfill already controls this source with a gas collection and control system that sends landfill gas to the flares and is fully operational.

3.4 RISK REDUCTION MEASURES AND SCHEDULE

OLI has considered the following measures to reduce the residential cancer risk at the Otay Landfill:

1. Watering paved roadways on a more frequent basis. While the current permit requires watering unpaved roadways every 4 hours, OLI is already conducting watering every 2 hours, including paved roadways. Preliminary estimates indicate this practice may achieve

approximately 95–96% control efficiency, but these values will be confirmed once the District upon District approval of the Plan. Currently a 95% control efficiency is being used, so this would reduce paved emissions by 50%. Upon Plan approval, OLI will ensure that watering every 2 hours will be documented.

2. Reducing vehicle speeds on all unpaved roadways from 15 miles per hour to 10 miles per hour. SDAPCD's current emission assumptions indicate this may reduce emissions by approximately 33%; however, OLI will verify the calculation basis with the District before finalizing this measure. OLI will modify the posted signage within 180 days of Plan approval.
3. Modifying the 10000 and 20000 diesel tipper engines to be EPA Tier 4 final as these engines were built in 2019 and have since replaced the tipper engines noted in the 2021 emission inventory. Calculations are provided in the same way Engine 8460 emissions were calculated by APCD. The same hours per year from APCD's calculations were used on these sheets and are available upon request.
4. Engines P2098 and P2099 were removed from the site and no longer contribute to risk.
5. Modeling of the fugitive landfill surface now includes a release height equal to the height of the landfill mound and an initial vertical dimension of the release height divided by 2.15 as allowed in the AERMOD User Guide.
6. Replacement of current John Zink flare with ultra-low emission flare. Permit application to be submitted in second quarter 2026 with expected permit issuance in mid-2027, and installation in 2028, after which arsenic testing would be conducted.

OLI emphasizes that the above measures are proposed; however, final commitments will be made after Plan approval by SDAPCD to ensure that proposed controls align with accurate, mutually agreed-upon emission inputs.

3.5 RISK REDUCTION DEMONSTRATION

The significant risk mitigation levels for the Facility are the following:

- Maximum exposed individual resident cancer risk equal to or greater than 10 in one million (22.5)

Based on SDAPCD's revised HRA inputs, preliminary estimates indicate that the measures evaluated in Section 3.4 will reduce risk to 7.45 in a million at the highest impacted residential receptor near the facility which is under the 10 in a million threshold. These values remain subject to change pending approval of these risk reduction measures by SDAPCD. **Table 1** below shows the preliminary estimated revised forecast for a future risk assessment using % reductions from the provided HRA.

Table 1. Proposed HRA Risk Reduction

Risk Type	2021 HRA	Risk Reduction Amount from Items #1 through #6	Resulting Risk	Units
Cancer Maximum Residential	22.5	15.1	7.45	Cancer Risk Per Million

3.6 PROGRESS REPORTS

Rule 1210(e) requires progress reports to be submitted at least annually under this RRAP. The Facility 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 the Facility to reduce TAC emissions and the estimated public health risk reduction achieved through the submittal of testing and/or add-on controls. This includes verification that watering is performed every two hours on paved and unpaved roadways, that posted 10 mile per hour vehicle speeds are adhered to, ensuring no additional emission sources were brought on site, and status update of new, replacement ultra-low emission flare installation/operation/testing.

4.0 APPLICATION FORM AND FEE

The General Permit or Registration Application Form can be found in **Appendix A**. The fee estimate provided by the SDAPCD as well as the payment receipt in the amount of $7,528 that was previously paid can be found in **Appendix B**. OLI will pay any additional invoice for fees promptly.

5.0 CONCLUSION

OLI has included all required information from Rule 1210(e) regarding the RRAP. The risk reduction activities proposed in this RRAP show a reduction of risk below the 10 in a million risk threshold for cancer at the nearest residence and awaits SPAPCD approval. This effort demonstrates OLI's commitment to reducing public health risk to the extent technically feasible.

Appendix A

General Permit Application Form

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

GENERAL PERMIT OR REGISTRATION APPLICATION FORM

San Diego County Air Pollution Control District

Submittal of this application does not grant permission to construct or to operate equipment except as specified in Rule 24(c).

REASON FOR SUBMITTAL OF APPLICATION:

- ☐ New Installation
- ☐ Amendment to Existing Authority to Construct or Application
- ■ Change of Permit Conditions
- ☐ Registration of Portable Equipment
- ☐ Existing Unpermitted Equipment or Rule 11 Change
- ☐ Change of Equipment Location
- ☐ Change Permit to Operate Status to Inactive
- ☐ Other (Specify)_____
- ☐ Modification of Existing Permitted Equipment
- ☐ Change of Equipment Ownership *(please provide proof of ownership)*
- ☐ Banking Emissions

List affected APP/PTO Record ID(s): APCD2009-PTO-971112

APPLICANT INFORMATION

Name of Business (DBA) Otay Landfill, Inc.

Does this organization own or operate any other APCD permitted equipment at this or any other adjacent locations? ■ Yes ☐ No

If yes, list assigned Site Record IDs listed on your Permits APCD1989-SITE-07494

Name of Legal Owner (if different from DBA)_____

Equipment Owner			Authority to Construct Mailing Address		
Name: Otay Landfill Inc.			Name: Same as Equipment Owner		
Mailing Address: 1700 Maxwell Road			Mailing Address:		
City: Chula Vista	State: CA	Zip: 91911	City:	State:	Zip:
Phone: (619) 449-9026			Phone: ( )		
E-Mail Address: jtorres@republicservices.com			E-Mail Address:		

Permit To Operate Mailing Address			Invoice Mailing Address		
Name: Same as Equipment Owner			Name: Same as Equipment Owner		
Mailing Address:			Mailing Address:		
City:	State:	Zip:	City:	State:	Zip:
Phone: ( )			Phone: ( )		
E-Mail Address:			E-Mail Address:		

EQUIPMENT/PROCESS INFORMATION: Type of Equipment: ■ Stationary ☐ Portable, ***if portable please enter below the equipment storage address.*** **If portable, will operation exceed 12 consecutive months at the same location ☐ Yes ■ No**

Equipment Location Address Otay Landfill - 1700 Maxwell Road City Chula Vista State: CA

Parcel No. _____ Zip 91911 Phone (619) 332-9021 E-mail: mcervantes2@republicservices.com

Site Contact Marco Cervantes Phone (619) 332-9021

General Description of Equipment/Process Municipal Solid Waste Landfill

Application Submitted by ☐ Owner ☐ Operator ☐ Contractor ■ Consultant Affiliation SCS Engineers

EXPEDITED APPLICATION PROCESSING: ☐ I hereby request Expedited Application Processing and understand that:

a) Expedited processing will incur additional fees and permits will not be issued until the additional fees are paid in full (see Rule 40(d)(8)(iv) for details) b) Expedited processing is contingent on the availability of qualified staff c) Once engineering review has begun this request cannot be cancelled d) Expedited processing does not guarantee action by any specific date nor does it guarantee permit approval.

☐ **This application contains trade secret or confidential information** *(see reverse for instructions)*

I hereby certif[redacted]tion provided on this application is true and correct.

SIGNATURE _____ Date 5/8/2026

Print Name Ma Company Otay Landfill, Inc.

Phone (619) 332-9021 E-mail Address mcervantes2@republicservices.com

Internal Use Only

Date _____ Staff Initials: _____ Amt Rec'd $ _____ Fee Schedule _____

RNP: _____ EMF: _____ NBF: _____ TA: _____ *GEN_APP_Form_Rev Date: Aug. 2017*

Appendix B

Fee Estimate and Payment Receipt

SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT

FEE ESTIMATE

Applicant Site ID/EIF ID:	*APCD1989-SITE-07494, EIF ID 7263*		
Applicant DBA:	*Otay Landfill*	Fee Schedule:	RRP
	1700 Maxwell Road	Reason for Submittal:	Other
	Chula Vista, CA 91911	Existing Site?	Yes
APCD Engineer:	*Jim Swaney*	Estimate Date:	9/12/2024
Equipment Description:	*Estimated fees to review Risk Reduction Plan related to APCD2022-HRA-0028 for their 2021 emissions, to add review and revise flare emission factors*		

ACTIVITY		EMPLOYEE CLASSIFICATION	LABOR HOURS	COST	SUBTOTAL	
Initial Evaluation Fee - T&M (Rule 40(d)(3)(i))						
Authority to Construct		Engineering Services	15.0	$4,110.00		ETM
Permit to Operate		Engineering Services		$0.00	$4,110.00	ETM
T&M Application - No Fixed Fee, see above						
Authority to Construct/Permit to Operate			N/A	T+M	$0.00	ETM
Additional Evaluation and Processing Fees (Rule 40(d)(5))						
New Source Review		Engineering Services		$0.00	$0.00	NSR
		Monitoring Services		$0.00	$0.00	AQI
Prev. Significant Deterioration		Engineering Services		$0.00	$0.00	PSD
AB2588 Hot Spots (Rule 40(f)(6))		Engineering Services	12.0	$3,288.00		
(Health Risk Assessment)		Monitoring Services		$0.00		
		HRA Base Estimate	Standard		$3,288.00	ETM
Tile V		Engineering Services		$0.00	$0.00	TIV
NESHAPS/ATCM/NSPS		Engineering Services		$0.00	$0.00	HAP
CEQA		Engineering Services		$0.00	$0.00	CEQ
AB 3205 Notice		Engineering Services		$0.00		
		Public Notice Costs		$0.00	$0.00	AB3
Equipment subject to Rule 11(a)(3)		Engineering Services		$0.00	$0.00	R51
H&SC 42301(e)		Engineering Services		$0.00	$0.00	HSC
Testing or Test Witness		Engineering Services		$0.00		STF
		Source Testing Services		$0.00		ad-hoc
Fixed Test Fee Sched.	NA	Fixed Testing Fees		$0.00	$0.00	ad-hoc
Miscellaneous Fees						
Processing Fee (Rule 40(d)(1)(ii))			1.0	$130	$130.00	EFX
Renewal Fee (Rule 40(e)(2)(ii))			N/A	N/A	$0.00	REN
Emissions Fee (Rule 40(e)(2)(iv))				N/A	$0.00	EMF

ESTIMATE TOTAL: $7,528.00

NOTES:

(1) To avoid possible processing delays, this document should be submitted with your application forms.

(2) The fees contained in this estimate are are based on APCD Rule 40. Final fee may be more or less than this estimate (see Rule 40(d)(1)(iii) or Rule 40(f)(6)).

(3) Emissions determined to be greater than 5 tons per year will be charged a emission fee on a ton per year basis. (see Rule 40 (e)(2)(iv)(A))

(4) Fees paid by credit card will be assessed a 2.19% processing fee (see Rule 40(c)(5))

(5) Federal government payments made through DFAS: Please reference the above liste Site ID Record number in your DFAS submittal.

(6) This estimate is valid only for applications or Health Risk Assessments received by the District by June 30, 2024

SAN DIEGO COUNTY AIR P
10124 OLD GROVE ROAD
SAN DIEGO, CA 92131

09/17/2024 14:59:35
MID: XXXXXXXXXXX005 TID: XXXXX301

CREDIT CARD

VISA SALE

Card #	XXXXXXXXXXXX3284
SEQ #:	5
Batch #:	79
INVOICE	5
Approval Code:	02401S
Entry Method:	Manual
Mode:	Online
Tax Amount:	$0.00
Cust Code:	
Card Code:	M

SALE AMOUNT $7692.86

I agree to pay above total amount
according to card issuer agreement.
(Merchant agreement if Credit Voucher)

X_____

MERCHANT COPY