

Encina Wastewater Authority

**6200 Avenida Encinas
Carlsbad, CA 92011**

**SDAPCD Facility ID
5985**

August 2022

Prepared by:



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Risk Reduction Audit and Plan for Reporting Year 2017

Risk Reduction Audit and Plan for Facility Reporting Year 2017

Prepared for:

**Encina Wastewater Authority
6200 Avenida Encinas
Carlsbad, CA 92011**

SDAPCD Facility ID 5985

August 2022

Table of Contents

1.0	INTRODUCTION	1
1.1	Facility Information.....	1
1.2	Permit Action.....	2
2.0	RISK REDUCTION	3
2.1	Risk Reduction Evaluation.....	3
2.1.1	<i>SDAPCD HRA Results – Acute Health Hazard Index</i>	<i>3</i>
2.2	Risk Reduction Measures.....	5
2.3	Emissions with Selected Risk Reduction Measures	5
2.4	HRA Results with Risk Reduction Measures	5
2.4.1	<i>Risk Reduction HRA Results – Acute Health Hazard Index.....</i>	<i>6</i>
2.5	Risk Reduction Schedule	9

List of Figures

Figure 2-1: Risk Reduction Acute HHI Isopleth and Locations of PMI and MEIW	7
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List of Tables

Table 1-1: Plan Contacts	2
Table 2-1: SDAPCD Acute HHI Results Per Source from All Pollutants Targeting the Eyes at MEIW	3
Table 2-2: SDAPCD Acute HHI Results Per Pollutant from All Sources at MEIW	4
Table 2-3: Risk Reduction Acute HHI Results Per Source from All Pollutants Targeting the Eyes at MEIW.....	8
Table 2-4: Risk Reduction Acute HHI Results Per Pollutant from All Sources at MEIW	9

Table of Appendices

APPENDIX A – GENERAL PERMIT APPLICATION

APPENDIX B – HEALTH RISK ASSESSMENT RESULTS

List of Acronyms and Abbreviations

AB	Assembly Bill
bhp	Brake Horsepower
EWA	Encina Wastewater Authority
HARP2	Hotspots Analysis and Reporting Program, Version 2
HHI	Health Hazard Index
HRA	Health Risk Assessment
kW	Kilowatt
MEIR	Maximally Exposed Individual Resident
MEIW	Maximally Exposed Individual Worker
MGD	Million Gallons per Day
PMI	Point of Maximum Impact
OEHHA	Office of Environmental Health Hazard Assessment
SDAPCD	San Diego County Air Pollution Control District
TAC	Toxic Air Contaminant
UTM	Universal Transverse Mercator

Encina Wastewater Authority Risk Reduction Audit and Plan for Reporting Year 2017

1.0 INTRODUCTION

The Encina Wastewater Authority (EWA) facility located at 6200 Avenida Encinas in Carlsbad, CA, is regulated by the California Air Toxics “Hot Spots” Program under Assembly Bill 2588 (AB 2588), which is administered by the San Diego County Air Pollution Control District (SDAPCD). As part of this program, a Health Risk Assessment (HRA) based on 2017 facility emissions was conducted by EWA with assistance from Yorke Engineering, LLC (Yorke) and subsequently revised by the SDAPCD. The HRA predicted the non-cancer acute Health Hazard Index (HHI) exceeded the SDAPCD Rule 1210 risk reduction level of 1.0.

In accordance with SDAPCD Rule 1210 (effective November 4, 2021), Yorke has prepared this risk reduction audit and plan on behalf of EWA. The plan outlines the procedures EWA will use to reduce facility risks below the risk reduction levels applicable to the 2017 HRA.

1.1 Facility Information

EWA is an essential public service treating up to 43 million gallons per day (MGD) of sewage wastewater from over 379,000 residents and businesses throughout a 125-square-mile service area. EWA is owned by six public agencies and governed by a Joint Powers Authority that includes the cities of Carlsbad, Vista, and Encinitas, as well as Buena Sanitation, Vallecitos Water, and Leucadia Wastewater Districts. The facility houses complex processes and equipment that protect the local ocean environment, preserve public health, and provide valuable water resources for the region. It also has extensive systems for neighborhood odor control, electricity generation from treatment process gas (cogeneration), and biosolids processing that produces a high-quality fertilizer product.

The SDAPCD permit ID for EWA is APCD1984-SITE-03370, and the emissions inventory facility ID is 5985. The facility address is:

Encina Wastewater Authority
6200 Avenida Encinas
Carlsbad, CA 92011

The facility’s equipment includes:

- 43 MGD wastewater treatment consisting of headworks, primary sedimentation basins, and secondary treatment;
- Varec Biogas 244 Series flare equipped with an enclosed burner and autopilot ignition system;
- Biosolids processing operation;

- Four lean-burn cogeneration engines fired on digester gas or natural gas, rated 1,306 and 1,085 brake horsepower (bhp), respectively, driving a 750-kilowatt (kW) generator each; and
- One 1,528-bhp diesel emergency standby engine.

All sources can operate at any time of day.

The team responsible for preparation and implementation of the risk reduction audit and plan are listed in Table 1-1.

Table 1-1: Plan Contacts

Alicia Appel		Julie Mitchell
Encina Wastewater Authority		Yorke Engineering, LLC
Address:	6200 Avenida Encinas Carlsbad, CA 92011	2356 Moore Street, Suite 206 San Diego, CA, 92110
Phone:	(760) 268-8861	(619) 375-9142
E-mail:	AAppel@encinajpa.com	JMitchell@YorkeEngr.com

1.2 Permit Action

The permit application accompanying this plan is only for risk reduction actions as required per Rule 1210. The General Permit or Registration Application Form is provided in Appendix A, along with the SDAPCD application fee estimate.

2.0 RISK REDUCTION

2.1 Risk Reduction Evaluation

The HRA conducted by the SDAPCD predicted that the non-cancer acute HHI exceeded the Rule 1210 risk reduction threshold of 1.0 at two off-site worker locations.

The risk evaluation examines sources and pollutants that cause a significant portion of the acute risk at the two off-site worker locations and assesses potential reduction measures.

2.1.1 SDAPCD HRA Results – Acute Health Hazard Index

The acute HHI was calculated for an exposure duration of 1 hour. The SDAPCD acute HHI analysis used maximum hourly emission rates from all sources, even though all sources do not operate simultaneously or continuously; only three of the four cogeneration engines operate simultaneously.

In addition, modeled emissions from Odor Reduction Facility #3 (ORF-3) associated with the aerated sludge system (Permit #961446) included sodium hydroxide and chlorine, substances that were no longer used in the caustic scrubber in 2017. This also contributes to an overestimation of emissions.

The acute HHI at the Maximally Exposed Individual Worker (MEIW), receptor 95 (UTM coordinates 470,355, 3,664,224), was mainly due to formaldehyde emissions from the cogeneration engines (63%) and emissions from the ORF-3 (22%), mainly sodium hydroxide (16%) and chlorine (5%), targeting the eyes, as shown in Tables 2-1 and 2-2. The source/pollutant profile is very similar for the other receptors over the risk reduction threshold.

Table 2-1: SDAPCD Acute HHI Results Per Source from All Pollutants Targeting the Eyes at MEIW

Sources	Description	MEIW	
		Acute HHI	Contribution (%)
ALL	All Sources	1.06E+00	100%
1004	Flare	1.57E-02	1.48%
1016_1	Headworks	3.17E-03	0.30%
1016_2	Headworks	3.18E-03	0.30%
1016_3	Headworks	3.10E-03	0.29%
1016_4	Headworks	3.10E-03	0.29%
1016_RTO	RTO	5.32E-04	0.05%
542	Cogen Engine 542	1.90E-01	17.90%
543	Cogen Engine 543	1.69E-01	15.89%
544	Cogen Engine 544	1.69E-01	15.90%
545	Cogen Engine 545	1.41E-01	13.34%
961446_1	ORF-1	6.65E-04	0.06%
961446_2	ORF-3	2.37E-01	22.34%
982044	Emergency Diesel ICE	1.26E-01	11.86%

Table 2-2: SDAPCD Acute HHI Results Per Pollutant from All Sources at MEIW

Pollutant	CAS No.	Target Organs											
		Alimentary	Bone	Cardiovascular	Central Nervous	Endocrine	Eye	Hematologic	Immune	Kidney	Reproductive/ Development	Respiratory	Skin
Formaldehyde	50000	0	0	0	0	0	0.7678	0	0	0	0	0	0
Ammonia	7664417	0	0	0	0	0	0.1711	0	0	0	0	0.1711	0.171
1,4-Dioxane	123911	0	0	0	0	0	0.0579	0	0	0	0	0.0579	0
Sodium Hydroxide	1310732	0	0	0	0	0	0.0365	0	0	0	0	0.0365	0
Toluene	108883	0	0	0	0	0	0.0133	0	0	0	0	0.0133	0
Perchloroethylene	127184	0	0	0	0	0	0.0068	0	0	0	0	0.0068	0
Acrolein	107028	0	0	0	0	0	0.0045	0	0	0	0	0.0045	0
Hydrogen Sulfide	7647010	0	0	0	0	0	0.0017	0	0	0	0	0.0017	0
Acetaldehyde	75070	0	0	0	0.0007	0	0.0007	0	0	0	0	0.0007	0
Xylenes	1330207	0	0	0	0.0005	0	0.0005	0	0	0	0	0.0005	0
Methyl ethyl ketone	78933	0	0	0	3E-05	0	3E-05	0	0	0	0	3E-05	0
Chlorine	7782505	0	0	0	0	0	4E-08	0	0	0	0	4E-08	0
1,1,1-TCA	71556	0	0	0	5E-05	0	0	0	0	0	0	0	0
1,3-Butadiene	106990	0	0	0	0	0	0	0	0	0	0.0009	0	0
Arsenic	7440382	0	0	0.028	0.0285	0	0	0	0	0	0.0285	0	0
Benzene	71432	0	0	0	0	0	0	0.070	0.070	0	0.0701	0	0
Carbon Disulfide	75150	0	0	0	0.0012	0	0	0	0	0	0.0012	0	0
Chloroform	67663	0	0	0	0.1538	0	0	0	0	0	0.1538	0.1538	0
Copper	7440508	0	0	0	0	0	0	0	0	0	0	0.0001	0
Hydrochloric Acid	7783064	0	0	0	0.2725	0	0	0	0	0	0	0	0
Mercury	7439976	0	0	0	0.009	0	0	0	0	0	0.009	0	0
Methylene Chloride	75092	0	0	0.001	0.0015	0	0	0	0	0	0	0	0
Nickel	7440020	0	0	0	0	0	0	0	0.052	0	0	0	0
Total Acute HHI		0	0	0.03	0.468	0	1.061	0.07	0.123	0	0.263	0.447	0.171

This risk reduction evaluation focuses on reductions associated with ORF-3 and the aerated sludge system (permit #961446); since the ORF-3 no longer uses the caustic scrubber, it no longer has any emissions of sodium hydroxide or chlorine.

Although the cogeneration engine formaldehyde emissions contribute to approximately 63% of the acute HHI, the reductions associated with ORF-3 are sufficient to reduce the risks below the reduction threshold, and thus are the focus of this plan.

Through the Capital Improvement Program and ongoing maintenance programs, EWA continues to evaluate, upgrade, and replace equipment to protect air quality and treat odors from the facility.

2.2 Risk Reduction Measures

The risk reduction measure that has been implemented is the removal of the caustic scrubber associated with ORF-3. This has eliminated the introduction of the sodium hydroxide and chlorine into this system and the associated emissions of these chemicals.

The equipment description in the permit for this unit was modified in 2019 to remove the caustic scrubber; thus, no additional permit modifications are needed to ensure compliance.

These reductions are real, permanent, quantifiable, and enforceable through the SDAPCD permit for ORF-3 (Permit APCD2008-PTO-961446).

2.3 Emissions with Selected Risk Reduction Measures

The emissions from all sources were evaluated to include any foreseeable new or increased emissions of toxic air contaminants (TACs) from the stationary source per Rule 1210. Since this risk reduction plan is required for acute risks, only the hourly throughput/usage rates were examined. The hourly operating profile examined in the 2017 HRA is representative of maximum operations and EWA does not anticipate any increase in hourly emissions associated with any of the sources.

After the incorporation of the risk reduction measure to remove the caustic scrubber associated with ORF-3, the following change will be included in the emissions inventory:

- Elimination of sodium hydroxide and chlorine emissions from ORF-3.

Removal of the caustic scrubber in ORF-3 eliminates the potential for sodium hydroxide and chlorine emissions. Since no sodium hydroxide or chlorine enter, or are introduced into, ORF-3, there is no potential for sodium hydroxide or chlorine emissions.

Detailed emission calculations were provided by SDAPCD.

2.4 HRA Results with Risk Reduction Measures

To demonstrate that the removal of sodium hydroxide and chlorine associated with the scrubber for ORF-3 will be sufficient to reduce the acute HHI below the significance thresholds, an updated HRA was conducted.

The risk reduction HRA modeling was conducted using the emissions discussed in Section 2.3. This HRA only examined the acute non-cancer health impacts, as this was the only health risk above the risk reduction thresholds. The HRA was conducted in the same manner as the previously submitted assessment, following the SDAPCD HRA guidelines (SDAPCD 2022), which are based on the Office of Environmental Health Hazard Assessment (OEHHA 2015) Tier 1 technique and guidance from SDAPCD HRA staff.

The risk reduction HRA used the same methodology as the SDAPCD HRA, including using the SDAPCD provided AERMOD files without any changes and the same Hotspots Analysis and Reporting Program, version 2 (HARP2) parameters, only revising the ORF-3 emissions.

2.4.1 Risk Reduction HRA Results – Acute Health Hazard Index

The acute HHI was calculated for an exposure duration of 1 hour. The risk reduction acute HHI analysis used maximum hourly emission rates from all sources, even though all sources do not operate simultaneously or continuously; only three of the four cogeneration engines operate simultaneously.

The risk reduction HRA calculated the acute HHI was below the threshold of 1.0 at all actual receptors [Maximally Exposed Individual Resident (MEIR), MEIW, and maximum sensitive receptor], locations where the public may be present for a 1-hour period. Figure 2-1 shows the acute HHI isopleths and the locations of the point of maximum impact (PMI) and MEIW.

The acute risk was predicted to be greater than 1.0 along short segments of the eastern and western facility property boundary. These locations are next to the I-5 freeway and Avenida Encinas, both locations where public access is not expected or would be limited to durations significantly less than 1 hour. SDAPCD HRA guidelines note that for acute analyses, potential receptors do not include sidewalks.

The MEIW was predicted to occur at receptor 94 (UTM coordinates 470,344, 3,664,244), which is located approximately 20 meters north of the previously predicted MEIW, also located at U-Haul Moving & Storage of Carlsbad.

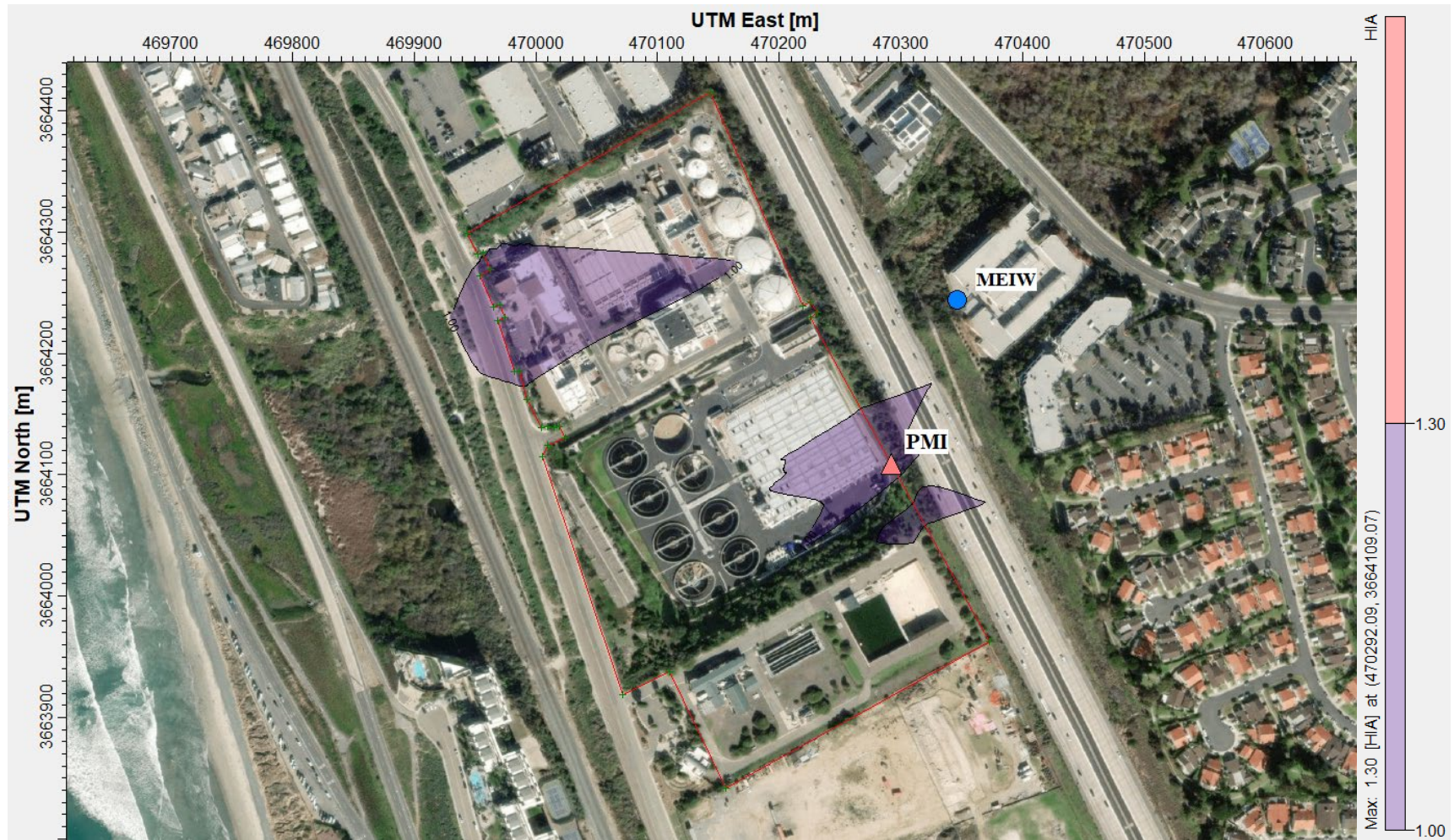
The acute HHI at the MEIW was mainly due to formaldehyde emissions from the cogeneration engines (84%), targeting the eyes, as shown in Tables 2-3 and 2-4.

Appendix B presents detailed tables summarizing the HRA results at each receptor type, broken down by pollutant and source.

This HRA demonstrates that the discontinued use of sodium hydroxide and chlorine associated with ORF-3 reduces the acute HHI below the risk reduction threshold at all actual receptors.

Air dispersion modeling and risk calculation files will be provided electronically to the SDAPCD.

Figure 2-1: Risk Reduction Acute HHI Isopleth and Locations of PMI and MEIW



Notes:

Red TrianglePMI

Blue Circle.....MEIW

Table 2-3: Risk Reduction Acute HHI Results Per Source from All Pollutants Targeting the Eyes at MEIW

Sources	Description	MEIW	
		Acute HHI	Contribution (%)
ALL	All Sources	9.30E-01	100%
1004	Flare	6.83E-03	0.73%
1016_1	Headworks	3.78E-03	0.41%
1016_2	Headworks	3.74E-03	0.40%
1016_3	Headworks	3.50E-03	0.38%
1016_4	Headworks	3.46E-03	0.37%
1016_RTO	RTO	5.61E-04	0.06%
542	Cogen Engine 542	2.13E-01	22.94%
543	Cogen Engine 543	2.00E-01	21.47%
544	Cogen Engine 544	1.98E-01	21.28%
545	Cogen Engine 545	1.66E-01	17.89%
961446_1	ORF-1	3.79E-04	0.04%
961446_2	ORF-3	4.47E-03	0.48%
982044	Emergency Diesel ICE	1.26E-01	13.54%

Table 2-4: Risk Reduction Acute HHI Results Per Pollutant from All Sources at MEIW

Pollutant	CAS No.	Target Organs											
		Alimentary	Bone	Cardiovascular	Central Nervous	Endocrine	Eye	Hematologic	Immune	Kidney	Reproductive/ Development	Respiratory	Skin
Formaldehyde	50000	0	0	0	0	0	0.8689	0	0	0	0	0	0
Sodium Hydroxide	1310732	0	0	0	0	0	0.0365	0	0	0	0	0.0365	0
Chlorine	7782505	0	0	0	0	0	0.0141	0	0	0	0	0.0141	0
Acrolein	107028	0	0	0	0	0	0.0045	0	0	0	0	0.0045	0
Ammonia	7664417	0	0	0	0	0	0.0034	0	0	0	0	0.0034	0
1,4-Dioxane	123911	0	0	0	0	0	0.0011	0	0	0	0	0.0011	0.0011
Acetaldehyde	75070	0	0	0	0	0	0.0011	0	0	0	0	0.0011	0
Hydrogen Sulfide	7647010	0	0	0	0.0004	0	0.0004	0	0	0	0	0.0004	0
Toluene	108883	0	0	0	0.0002	0	0.0002	0	0	0	0	0.0002	0
Perchloroethylene	127184	0	0	0	2E-05	0	2E-05	0	0	0	0	2E-05	0
Xylenes	1330207	0	0	0	0	0	2E-08	0	0	0	0	2E-08	0
Methyl ethyl ketone	78933	0	0	0	0.1389	0	0	0	0	0	0	0	0
1,1,1-TCA	71556	0	0	0	0.0777	0	0	0	0	0	0.0777	0.0777	0
1,3-Butadiene	106990	0	0	0	0	0	0	0.0489	0.0489	0	0.0489	0	0
Arsenic	7440382	0	0	0	0	0	0	0	0	0	0	0	0
Benzene	71432	0	0	0	0	0	0	0	0.0526	0	0	0	0
Carbon Disulfide	75150	0	0	0.0254	0.0254	0	0	0	0	0	0.0254	0	0
Chloroform	67663	0	0	0	0.009	0	0	0	0	0	0.009	0	0
Copper	7440508	0	0	0.0008	0.0008	0	0	0	0	0	0	0	0
Hydrochloric Acid	7783064	0	0	0	0.0006	0	0	0	0	0	0.0006	0	0
Mercury	7439976	0	0	0	0	0	0	0	0	0	0.0009	0	0
Methylene Chloride	75092	0	0	0	0	0	0	0	0	0	0	0.0001	0
Nickel	7440020	0	0	0	3E-05	0	0	0	0	0	0	0	0
Total Acute HHI		0	0	0.026	0.253	0	0.93	0.049	0.101	0	0.163	0.139	0.001

2.5 Risk Reduction Schedule

The ORF-3 permit was modified in 2019 to remove the caustic scrubber; thus, the risk reduction measures have already been implemented. The validation HRA shows that these measures are sufficient to reduce the acute HHI below the significant risk threshold. Therefore, no progress reports on the implementation of these reduction measures are needed.

This plan culminates EWA's requirements for the AB 2588 risk reduction program for acute risks for reporting year 2017.

APPENDIX A – GENERAL PERMIT APPLICATION

GENERAL PERMIT OR REGISTRATION APPLICATION INSTRUCTIONS



GENERAL

The owner or designated agent must complete and sign this form and file it with one copy of all attachments, required supplementary forms, drawings and the appropriate fee.

The appropriate fee (payable to "San Diego County APCD") must be submitted with this Permit/Registration Application. Application processing will not begin until the full required fee has been received. Excess fees will be refunded upon completion of the application process. If you do not know the appropriate fee or need to discuss the information required, please contact the District at (858) 586-2600 and ask for assistance in determining an application fee.

REASON FOR SUBMITTAL OF APPLICATION

- New Installation - check if you are installing equipment that does not currently have a District Permit to Operate (PTO)
- Existing Unpermitted Equipment or Rule 11 Change - check if applying for existing equipment that is currently unpermitted or equipment that is now subject to District Rules due to Rule 11 changes
- Modification of Existing Permitted Equipment - check if you are making a change to equipment with a current District Permit to Operate. (List affected PTO Record ID(s) – Note: PTO Record ID Format: APCD2015-PTO-123456)
- Amendment to Existing Application - check if you are amending a previously submitted application form or current Authority to Construct. (List affected Application Record ID(s) Application Record ID Format: APCD2015-APP-123456)
- Change of Equipment Location - check if you are moving non-portable equipment with a current District Permit to Operate. (List affected PTO Record IDs)
- Change of Equipment Ownership - check if you wish to transfer ownership of a District Permit to Operate to a different owner. **Provide proof of ownership with application.** (List affected PTO Record ID(s))
- Change of Permit Conditions - check if you are proposing changes only to conditions for an existing permit to operate. (List affected PTO Record ID(s) on line 12)
- Change Permit to Operate Status to Inactive - Used to place a permit in inactive (non-operational) status. (List affected PO #(s))
- Banking Emissions - check if you are applying for emission reduction credits
- Registration of Portable Equipment - check this line if you are applying for registration of portable equipment
- Other - check for any action not covered
- List affected Application/PTO Record ID(s) - list any permits or open applications affected by the proposed modification/change

TRADE SECRET INFORMATION AND PUBLIC AVAILABILITY OF APPLICATIONS

All information submitted with this application is considered a public record and is accessible online while under review unless otherwise designated as Trade Secret.

If your application contains information you consider to be trade secret or otherwise confidential, you must indicate so on this form and attach a separate document justifying the request as required by District Rule 176. Only this application form and the justification will be made available online if this status is requested; however, the District may make additional information available if it is publicly requested and determined not to qualify as trade secret as described in District Rules 176 and 177.

APPLICANT INFORMATION

Please enter the requested addresses, including the address to be used to send the Authority to Construct, Permit to Operate, and invoices.

EQUIPMENT/PROCESS INFORMATION

Check Stationary or Portable depending upon the type of equipment for which you are filing an application. Also check Yes if the equipment is portable and will operate more than 180 consecutive days at a single site. Otherwise, check No.

Please enter the location where the equipment is or will operate. If the application is for a portable operation please enter the address that will be used to store the portable unit.

INDEMNIFICATION

In accordance with District Rule 40(d)(8)(vi), the applicant, to the extent the applicant is at fault in causing liability to the District, shall indemnify the District (including its agents, officers and employees) from any claim, action, liability, or proceeding to attack, set aside, void or annul the applicant's project or any of the proceedings, acts or determinations taken, done or made as a result of the District's processing and/or approval of the project. The applicant's obligation to indemnify shall include, but not be limited to, payment of all court costs and attorneys' fees, costs of any judgments or awards against the District, damages, and/or settlement costs, which arise out of the District's processing and/or approval of the applicant's project, except that an applicant shall only be responsible for indemnifying the District according to the proportion of fault caused by the applicant, as determined by a court. By signing and submitting this application, an applicant agrees to such indemnification.

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 | ☐ Existing Unpermitted Equipment or Rule 11 Change | ☐ Modification of Existing Permitted Equipment |
| ☐ Amendment to Existing Authority to Construct or Application | ☐ Change of Equipment Location | ☐ Change of Equipment Ownership <i>(please provide proof of ownership)</i> |
| ☐ Change of Permit Conditions | ☐ Change Permit to Operate Status to Inactive | ☐ Banking Emissions |
| ☐ Registration of Portable Equipment | ☐ Other (Specify) _____ | |

List affected APP/PTO Record ID(s): _____

APPLICANT INFORMATION

Name of Business (DBA) _____

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 _____

Name of Legal Owner (if different from DBA) _____

Equipment Owner

Authority to Construct Mailing Address

Name:	Name:
Mailing Address:	Mailing Address:
City: State: Zip:	City: State: Zip:
Phone: ()	Phone: ()
E-Mail Address:	E-Mail Address:

Permit To Operate Mailing Address

Invoice Mailing Address

Name:	Name:
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 _____ City _____ State: _____

Parcel No. _____ Zip _____ Phone () _____ E-mail: _____

Site Contact _____ Phone () _____

General Description of Equipment/Process _____

Application Submitted by ☐ Owner ☐ Operator ☐ Contractor ☐ Consultant Affiliation _____

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 certify that all information provided on this application is true and correct.

SIGNATURE _____ Date _____

Print Name _____ Company _____

Phone () _____ E-mail Address _____

Internal Use Only

Date _____	Staff Initials: _____	Amt Rec'd \$ _____	Fee Schedule _____
RNP: _____	EMF: _____	NBF: _____	TA: _____

GEN_APP_Form_Rev Date: Aug. 2017

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

www.sdapcd.org

**SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT
APPLICATION FEE ESTIMATE**

Applicant Site ID/EIF ID:	APCD1984-SITE-03370	Enter PTO/TVP for Modifications
Applicant DBA:	Encina Wastewater Authority	Fee Schedule: 91A
		Reason for Submittal: Risk Reduction
		Existing Site? Yes
APCD Engineer:	Jim Swaney	Estimate Date: 8/25/2022
Equipment Description:	Risk Reduction Plan for 2017 HRA	

ACTIVITY	EMPLOYEE CLASSIFICATION	LABOR HOURS	COST	SUBTOTAL
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Initial Evaluation Fee - T&M (Rule 40(d)(3)(i))

Authority to Construct	Engineering Services		\$0.00		ETM
Permit to Operate	Engineering Services		\$0.00	\$0.00	ETM

T&M Application - No Fixed Fee, see above

Authority to Construct/Permit to Operate	N/A	T+M	\$0.00	ETM
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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
Toxics New Source Review (Health Risk Assessment)	Engineering Services	5.0	\$1,190.00		
	Monitoring Services		\$0.00		
	HRA Base Estimate	N/A	\$0.00	\$1,190.00	TNS
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	\$98	\$98.00	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

NOTES:

ESTIMATE TOTAL: **\$1,288.00**

- (1) To avoid possible processing delays, this document should be submitted with your application forms.
- (2) The fees contained in this estimate are based on APCD Rule 40. Final fee may be more or less than this estimate (see Rule 40(d)(1)(iii)).
- (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 Site ID Record number in your DFAS submittal.
- (6) This estimate is valid only for applications received by the District by June 30, 2023

APPENDIX B – HEALTH RISK ASSESSMENT RESULTS

Acute Hazard Index by Source for All Pollutants Combined at PMI, MEIR, MEIW and Sensitive Receptor
Encina Wastewater AB2588 HRA 2017

Sources	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)	
	receptor #	3941	receptor #	26	receptor #	120	receptor #	94
	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
	470,292.09	3,664,109.07	469,840.41	3,664,262.78	470,330.37	3,664,506.50	470,344.44	3,664,243.64
	Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)
ALL	1.30E+00	100%	8.31E-01	100%	6.21E-01	100%	9.30E-01	100%
1004	1.91E-02	1.47%	9.65E-03	1.16%	2.05E-03	0.33%	6.83E-03	0.73%
1016_1	3.24E-03	0.25%	2.68E-03	0.32%	2.28E-03	0.37%	3.78E-03	0.41%
1016_2	3.23E-03	0.25%	2.65E-03	0.32%	2.25E-03	0.36%	3.74E-03	0.40%
1016_3	3.02E-03	0.23%	2.56E-03	0.31%	2.16E-03	0.35%	3.50E-03	0.38%
1016_4	3.01E-03	0.23%	2.54E-03	0.31%	2.13E-03	0.34%	3.46E-03	0.37%
1016_RTO	5.63E-04	0.04%	4.63E-04	0.06%	6.48E-04	0.10%	5.61E-04	0.06%
542	2.15E-01	16.48%	1.90E-01	22.92%	1.43E-01	23.08%	2.13E-01	22.94%
543	2.02E-01	15.51%	1.94E-01	23.37%	1.52E-01	24.56%	2.00E-01	21.47%
544	1.90E-01	14.60%	2.19E-01	26.31%	1.44E-01	23.27%	1.98E-01	21.28%
545	1.35E-01	10.40%	2.05E-01	24.68%	1.54E-01	24.85%	1.66E-01	17.89%
961446_1	1.05E-02	0.81%	6.73E-03	0.81%	5.21E-02	8.40%	8.10E-03	0.87%
961446_2	3.83E-02	2.94%	3.28E-02	3.94%	4.67E-02	7.53%	2.07E-01	22.28%
982044	5.27E-01	40.46%	1.06E-03	0.13%	1.13E-02	1.82%	1.26E-01	13.54%

Notes:

Individual sources are not additive because risk is based on specific target organs, which may be different per source

PMI receptor equivalent to AERMOD View receptor #994 (risk receptor)

**Maximum Acute Hazard Index by Pollutant at PMI, MEIR, MEIW and Sensitive Receptor
Encina Wastewater AB2588 HRA 2017**

Pollutant CAS	Pollutant	Point of Maximum Impact (PMI)		Maximally Exposed Individual Resident (MEIR)		Sensitive Receptor		Maximally Exposed Individual Worker (MEIW)	
		receptor #	3941	receptor #	26	receptor #	120	receptor #	94
		UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)	UTM Easting (m)	UTM Northing (m)
		470,292.09	3,664,109.07	469,840.41	3,664,262.78	470,330.37	3,664,506.50	470,344.44	3,664,243.64
		Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)	Acute Hazard Index	Contribution (%)
-	ALL	1.30E+00	100%	8.31E-01	100%	6.21E-01	100%	9.30E-01	100%
1104	Fluorocarb(Cl)	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
1151	PAHs-w/o	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
9901	DieselExhPM	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
50000	Formaldehyde	1.11E+00	85.55%	8.18E-01	98.45%	6.04E-01	97.36%	8.69E-01	93.39%
67641	[D] Acetone	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
67663	Chloroform	1.71E-02	1.31%	1.39E-02	1.68%	3.28E-02	5.28%	7.77E-02	8.35%
71432	Benzene	9.55E-02	7.33%	1.47E-02	1.76%	2.28E-02	3.68%	4.89E-02	5.26%
71556	1,1,1-TCA	7.23E-06	0.00%	5.61E-06	0.00%	1.89E-05	0.00%	2.66E-05	0.00%
74828	CH4	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
75070	Acetaldehyde	1.88E-02	1.44%	3.93E-05	0.00%	4.03E-04	0.06%	4.49E-03	0.48%
75092	Methylene Chlor	2.09E-04	0.02%	1.63E-04	0.02%	5.36E-04	0.09%	7.55E-04	0.08%
75150	CS2	1.68E-04	0.01%	1.31E-04	0.02%	4.41E-04	0.07%	6.20E-04	0.07%
78933	MEK	4.35E-08	0.00%	2.60E-08	0.00%	9.59E-09	0.00%	2.03E-08	0.00%
79016	TCE	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
91203	Naphthalene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
100414	Ethyl Benzene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
106467	p-DiClBenzene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
106990	1,3-Butadiene	3.70E-03	0.28%	7.48E-06	0.00%	7.94E-05	0.01%	8.85E-04	0.10%
107028	Acrolein	1.53E-01	11.72%	3.08E-04	0.04%	3.27E-03	0.53%	3.65E-02	3.92%
107062	EDC	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
108883	Toluene	4.30E-04	0.03%	1.58E-04	0.02%	2.67E-04	0.04%	4.42E-04	0.05%
108907	Chlorobenzn	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
110543	Hexane	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
115071	Propylene	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
123911	1,4-Dioxane	9.32E-04	0.07%	7.23E-04	0.09%	2.44E-03	0.39%	3.43E-03	0.37%
127184	Perc	6.33E-05	0.00%	4.90E-05	0.01%	1.65E-04	0.03%	2.32E-04	0.02%
1310732	Sodium Hydroxid	9.89E-04	0.08%	8.26E-04	0.10%	6.99E-04	0.11%	1.15E-03	0.12%
1330207	Xylenes	3.02E-05	0.00%	6.64E-06	0.00%	1.22E-05	0.00%	2.25E-05	0.00%
7439921	Lead	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
7439965	Manganese	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
7439976	Mercury	3.75E-02	2.88%	7.58E-05	0.01%	8.05E-04	0.13%	8.98E-03	0.96%
7440020	Nickel	2.20E-01	16.88%	4.44E-04	0.05%	4.71E-03	0.76%	5.26E-02	5.65%
7440382	Arsenic	9.85E-02	7.56%	5.17E-03	0.62%	3.77E-03	0.61%	2.54E-02	2.74%
7440439	Cadmium	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
7440473	Chromium	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
7440508	Copper	4.62E-04	0.04%	9.33E-07	0.00%	9.91E-06	0.00%	1.11E-04	0.01%
7440666	Zinc	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
7647010	HCl	2.74E-03	0.21%	1.04E-03	0.13%	4.05E-04	0.07%	1.05E-03	0.11%
7664417	NH3	1.17E-02	0.89%	9.72E-03	1.17%	8.71E-03	1.40%	1.41E-02	1.52%
7782492	Selenium	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
7782505	Chlorine	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
7783064	H2S	3.56E-02	2.73%	2.81E-02	3.39%	6.65E-02	10.71%	1.39E-01	14.93%
18540299	Cr(VI)	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%
25321226	DiClBenzenes	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%	0.00E+00	0.00%

Notes:

Individual pollutants are not additive because risk is based on specific target organs, which may be different per pollutant.

PMI receptor equivalent to AERMOD View receptor #994 (risk receptor)