



air pollution control district
SANTA BARBARA COUNTY

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Authority to Construct/Permit to Operate 16015

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EQUIPMENT OWNER:

Golden State Water Company

EQUIPMENT OPERATOR:

Golden State Water Company

EQUIPMENT LOCATION:

4949 and 4989 Foxen Canyon Road, Santa Maria

STATIONARY SOURCE/FACILITY:

Golden State Water Co. - 4949 and 4989 Foxen Canyon

SSID: 10836

FID: 11046

EQUIPMENT DESCRIPTION:

Diesel-fired emergency standby engine(s) equipped with a diesel particulate matter filter as listed in the table at the end of this permit.

PROJECT/PROCESS DESCRIPTION:

The diesel engine(s) subject to this permit provide electrical backup power in times of emergencies as defined by the State's *Airborne Toxics Control Measure for Stationary Compression Ignition Engines* (ATCM). This ATCM (CCR Section 93115, Title 17) limits annual engine maintenance and testing hours (as listed for each engine in the equipment list) with no limitation for emergency use.

Definitions of the terms "*maintenance and testing*" and "*emergency use*" are found in the ATCM and the District's webpage at <http://www.ourair.org/dice-atcm/>.

CONDITIONS:

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1. **Emission Limitations.** The mass emissions from the equipment permitted herein shall not exceed the values listed in Table 1. Emissions of PM and other pollutants shall not exceed the emissions standards listed in Table 2 of this permit. Compliance shall be based on the operational, monitoring, recordkeeping and reporting conditions of this permit.

2. **Operational Restrictions.** The equipment permitted herein is subject to the following operational restrictions. The equipment may operate as many hours as necessary for emergency use, as defined in the ATCM¹.
 - a. Maintenance & Testing Use Limit: The stationary emergency standby diesel-fueled engine(s), except for in-use firewater pump engines, shall not be operated for more than the hours listed in the attached equipment list for maintenance and testing² purposes.

 - b. Impending Rotating Outage Use: The stationary emergency standby diesel-fueled engine(s) may be operated in response to the notification of an impending rotating outage if all the conditions cited in the ATCM are met.

 - c. Fuel and Fuel Additive Requirements: The permittee may only add fuel and/or fuel additives that comply with the ATCM to the engine or to any fuel tank directly attached to the engine.

 - d. Near-School Provisions: The stationary emergency standby diesel-fueled engine(s) shall not be operated for non-emergency use, including maintenance and testing, between 7:30 a.m. and 3:30 p.m. on days school is in session.

 - e. Maximum Idle Operations. The engine may not operate at an idle for more than 240 consecutive minutes. [Re: EO DE-05-002-01]

 - f. Number of 10 Minute Idle Sessions Before Regeneration is Required. Regeneration recommended after 12 consecutive sessions; required after 24. [Re: EO DE-05-002-01]

 - g. Minimum Temperature/Load/Time Requirements for Filter Regeneration. The diesel Particulate filter shall operate at 300° Celsius for 30% of operating time or 2 hours, whichever is longer. For most engines, 40% load results in temperature of at least 300° Celsius. [Re: EO DE-05-002-01]

¹ As used in the permit, “ATCM” means Section 93115, Title 17, California Code of Regulations. Airborne Toxic Control Measure for Stationary Compression Ignition (CI) Engines

² “Maintenance and testing” is defined in the ATCM and may also be found on the District webpage at http://www.ourair.org/wp-content/uploads/ES_MT_DICE_Definitions.pdf

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- h. Number of Hours of Operation Before Cleaning/Disposal of Filter. The engine may operate no more than 5,000 hours under normal operating conditions before the diesel particulate filter must be cleaned. [Re: EO DE-05-002-01]
- i. Diagnostic Module Display Warning and Alarm Response Actions. The response actions defined in the District-approved *DPF Operation and Maintenance Plan* shall be implemented in the event of diagnostic module warnings and alarms.
- j. Engine Location. The engine included in this permit shall only operate at the following locations:

Location Name	Street Address	City
Benjamin Foxen Elementary School	4949 Foxen Canyon Rd	Santa Maria
Golden State Water Company	4989 Foxen Canyon Rd	Santa Maria

3. **Monitoring.** The equipment permitted herein is subject to the following monitoring requirements:

- a. Non-Resettable Hour Meter: Each stationary emergency standby diesel-fueled engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the District has determined (in writing) that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator’s compliance history.
- b. Exhaust Temperature and Back Pressure Monitoring. The temperature of the exhaust and back pressure from the engine shall be monitored every six minutes using the CleanAIR HiBACK USB Diagnostic Module installed with the diesel particulate filter.
- c. DPF Operation and Maintenance Plan. This Plan was submitted to the District for its review and approval. The Plan includes documentation specifying the set up and proper operation of the diesel particulate filter and the associated diagnostic module. The Plan specifies the types of reports to be generated from the diagnostic module, the frequency in which these reports will be collected from the diagnostic module, the format of the report to be submitted to the District, and the frequency of submittal of these reports to the District. The Plan defines the diagnostic module programmed warning/alarm settings (including over-pressure alarm, over temperature alarm, etc.) and the actions to be taken in response to these warnings/alarms. This Plan (and all District-approved updates thereof) is an enforceable part of this permit.

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4. **Recordkeeping.** The permittee shall record and maintain the information listed below. Log entries shall be retained for a minimum of 36 months from the date of entry. Log entries made within 24 months of the most recent entry shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request. Log entries made from 25 to 36 months from most recent entry shall be made available to District staff within 5 working days from request. District Form ENF-92 (*Diesel-Fired Emergency Standby Engine Recordkeeping Form*) can be used for this requirement.
 - a. emergency use hours of operation.
 - b. maintenance and testing hours of operation.
 - c. hours of operation for emission testing to show compliance with the ATCM {if specifically allowed for under this permit}.
 - d. hours of operation for all uses other than those specified in items (a) – (c) above along with a description of what those hours were for.
 - e. fuel purchase records that demonstrate that only fuel meeting the requirements of the ATCM is purchased and added to each emergency standby engine, or to any fuel tank directly attached to each emergency standby engine.
 - f. Operating Hours. A log shall be maintained that details the number of operating hours and days for each month that the engine is operated and the cumulative total annual hours. The log shall also identify the number of hours the engine operated before the diesel particulate filter is cleaned. The log shall designate whether the operations were due to: *emergency use – power failure; maintenance & testing; other* (list reason).
 - g. Exhaust Temperature and Engine Back Pressure. Exhaust temperature and engine backpressure data shall be collected and stored electronically by the CleanAIR HiBACK USB Diagnostic Module. At the close of each calendar year, the exhaust temperature and backpressure data (and any other data identified in the *DPF Operation and Maintenance Plan*) shall be downloaded and archived in a MS Excel spreadsheet capable of sorting and other data manipulation. Upon request, the District may require access to this data on a more frequent or ad hoc basis.
 - h. Engine Calibration and Maintenance Logs. IC engine calibration and maintenance logs shall be maintained. All diesel particulate filter maintenance and regeneration actions shall be documented by date and time.

5. **Reporting.** By March 1 of each year, a written report documenting compliance with the terms and conditions of this permit and the ATCM for the previous calendar year shall be provided by

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the permittee to the District (Attn: *Annual Report Coordinator*). All logs and other basic source data not included in the report shall be made available to the District upon request. The report shall include the information required in the Recordkeeping Condition above.

6. **Temporary Engine Replacements - DICE ATCM.** Any reciprocating internal combustion engine subject to this permit and the stationary diesel ATCM may be temporarily replaced only if the requirements (a – h) listed herein are satisfied.
- a. The permitted engine that is being temporarily replaced is in need of routine repair or maintenance.
 - b. The permitted engine does not have a cracked block, unless the block will be replaced under manufacturer’s warranty.
 - c. Replacement parts are available for the permitted engine.
 - d. The permitted engine is returned to its original service within 180 days of installation of the temporary engine.
 - e. The temporary replacement engine has the same or lower manufacturer rated horsepower and same or lower potential to emit of each pollutant as the permitted engine. At the written request of the permittee, the District may approve a replacement engine with a larger rated horsepower if the proposed temporary engine has manufacturer guaranteed emissions (for a brand new engine) or source test data (for a previously used engine) less than or equal to the permitted engine.
 - f. The temporary replacement engine shall comply with all rules and permit requirements that apply to the permitted engine.
 - g. For each permitted engine to be temporarily replaced, the permittee shall submit a completed *Temporary IC Engine Replacement Notification* form (Form ENF-94) within 14 days of the temporary engine being installed. This form may be sent hardcopy, or can be e-mailed (e-mail: enr@sbcapcd.org) to the District (Attn: Engineering Supervisor).
 - h. Within 14 days of returning the original permitted engine to service, the permittee shall submit a completed *Temporary IC Engine Replacement Report* form (Form ENF-95). This form may be sent hardcopy, or can be e-mailed

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(e-mail: enr@sbcapcd.org) to the District (Attn: Engineering Supervisor).

Any engine in temporary replacement service shall be immediately shut down if the District determines that the requirements of this condition have not been met. If the requirements of this condition are not met, the permittee must obtain an ATC before installing or operating a temporary replacement engine.

7. **Permanent Engine Replacements.** The permittee may install a new engine in place of an engine permitted herein without first obtaining an ATC only if the requirements (a – f) listed herein are satisfied.
- a. The permitted stationary diesel-fueled engine is an E/S engine, a firewater pump engine or an engine used for an essential public service (as defined by the District).
 - b. The permitted engine breaks down, cannot be repaired, and needs to be replaced by a new permanent engine.
 - c. The facility provides “good cause” (in writing) for the need to install a new permanent engine before an ATC can be obtained for a new engine.
 - d. The new permanent engine must comply with the requirements of the ATCM for new engines. A temporary replacement engine may be used while the new permanent engine is being procured only if it meets the requirements of the *Temporary Engine Replacements - DICE ATCM* permit condition.
 - e. An ATC application for the new permanent engine must be submitted to the District within 15 days of the existing engine being replaced and the ATC must be obtained no later than 180 days from the date of engine replacement (these timelines include the use of a temporary engine).
 - f. For each new permanent engine installed pursuant to this condition, the permittee shall submit a completed *Permanent IC Engine Replacement Notification* form (Form ENF-96) within 14 days of the new engine being installed. This form may be sent hardcopy, or can be e-mailed (e-mail: enr@sbcapcd.org) to the District (Attn: Engineering Supervisor).

Any engine installed pursuant to this condition shall be immediately shut down if the District determines that the requirements of this condition have not been met.

8. **Notification of Non-Compliance.** Owners or operators who have determined that they are operating their stationary diesel-fueled CI engine(s) in violation of the requirements specified in the ATCM shall notify the District immediately upon detection of the violation and shall be subject to District enforcement action.

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9. **Notification of Loss of Exemption.** Owners or operators of in-use stationary diesel-fueled CI engines who are exempt from all or part of the requirements of the ATCM shall notify the District within five days after they become aware that the exemption no longer applies and shall demonstrate compliance within 180 days after the date the exemption no longer applies.
10. **Enrollment in a DRP/ISC.** Owners or operators shall obtain an ATC before enrolling a stationary diesel-fueled CI engine rated over 50 bhp in a Demand Response Program/Interruptible Service Contract (as defined in the ATCM) for the first time.
11. **Consistency with Analysis.** Operation under this permit shall be conducted consistent with all data, specifications and assumptions included with the application and supplements thereof (as documented in the District's project file) and the District's analyses under which this permit is issued as documented in the Permit Analyses prepared for and issued with the permit.
12. **Equipment Maintenance.** The equipment listed in this permit shall be properly maintained and kept in good condition at all times. The equipment manufacturer's maintenance manual, maintenance procedures and/or maintenance checklists (if any) shall be kept on site.
13. **Compliance.** Nothing contained within this permit shall be construed as allowing the violation of any local, state or federal rules, regulations, air quality standards or increments.
14. **Severability.** In the event that any condition herein is determined to be invalid, all other conditions shall remain in force.
15. **Conflict Between Permits.** The requirements or limits that are more protective of air quality shall apply if any conflict arises between the requirements and limits of this permit and any other permitting actions associated with the equipment permitted herein.
16. **Access to Records and Facilities.** As to any condition that requires for its effective enforcement the inspection of records or facilities by the District or its agents, the permittee shall make such records available or provide access to such facilities upon notice from the District. Access shall mean access consistent with California Health and Safety Code Section 41510 and Clean Air Act Section 114A.
17. **Equipment Identification.** Identifying tag(s) or name plate(s) shall be displayed on the equipment to show manufacturer, model number, and serial number. The tag(s) or plate(s) shall be affixed to the equipment in a permanent and conspicuous position.
18. **Emission Factor Revisions.** The District may update the emission factors for any calculation based on USEPA AP-42 or District emission factors at the next permit modification or permit reevaluation to account for USEPA and/or District revisions to the underlying emission factors.
19. **Reimbursement of Costs.** N/A

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20. **Nuisance.** Except as otherwise provided in Section 41705 of the California H&SC, no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
21. **Grounds for Revocation.** Failure to abide by and faithfully comply with this permit or any Rule, Order, or Regulation may constitute grounds for revocation pursuant to California Health & Safety Code Section 42307 *et seq.*
22. **Transfer of Owner/Operator.** This permit is only valid for the owner and operator listed on this permit unless a *Transfer of Owner/Operator* application has been applied for and received by the District. Any transfer of ownership or change in operator shall be done in a manner as specified in District Rule 203. District Form –01T and the appropriate filing fee shall be submitted to the District within 30 days of the transfer.
23. **Documents Incorporated by Reference.** The documents listed below, including any District-approved updates thereof, are incorporated herein by reference and shall have the full force and effect of a permit condition for this permit. These documents shall be implemented for the life of the Project and shall be made available to District inspection staff upon request.
 - a. *Diesel Particulate Filter Operations and Maintenance Plan (July 2010).*

AIR POLLUTION CONTROL OFFICER

DATE

Attachments:

- Table 1 – Mass Emission Limits
- Table 2 – Emission Standards
- Permit Equipment List
- Permit Evaluation for Authority to Construct/Permit to Operate 16015

Notes:

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- Reevaluation Due Date: November 2024
- ATCM information can be located online at <http://www.ourair.org/dice-atcm/>
- Detailed recordkeeping is required. See Form ENF -92 at the above webpage.
- Stationary sources are subject to an annual emission fee (see Fee Schedule B-3 of Rule 210).
- Annual reports are due by March 1st of each year.
- This permit supersedes Reeval 12744-R4

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TABLE 1. MASS EMISSION LIMITS

Device ID #	NO _x		ROC		CO		SO _x		PM		PM10		PM2.5	
	lb/day	tpy	lb/day	tpy	lb/day	tpy	lb/day	tpy	lb/day	tpy	lb/day	tpy	lb/day	tpy
111243	4.54	0.03	0.35	0.01	3.23	0.02	0.01	0.01	0.26	0.01	0.26	0.01	0.26	0.01

TABLE 2. EMISSION FACTORS (g/bhp-hr)

Device ID #	NO _x	ROC	CO	SO _x	PM	PM10	PM2.5
111243	5.20	0.40	3.70	0.01	0.30	0.30	0.30

Table Notes:

- (a) Mass emission limits based on allowable maintenance and testing hours.
 - (b) NO_x as NO₂. SO_x as SO₂. PM means diesel PM.
 - (c) Device ID # from permit equipment list.
 - (d) lb/day = pounds per day. tpy = tons per year
 - (e) Emission data that round down to 0.00 has been set to a default of 0.01.
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PERMIT EQUIPMENT LIST

ATC/PTO 16015 / FID: 11046 Golden State Water Co. - 4949 and 4989 Foxen Canyon / SSID: 10836

A PERMITTED EQUIPMENT

1 E/S Diesel Generator

<i>Device ID #</i>	111243	<i>Maximum Rated BHP</i>	99.00
<i>Device Name</i>	E/S Diesel Generator	<i>Serial Number</i>	PE4045T678980
<i>Engine Use</i>	Electrical Power	<i>EPA Engine Family</i>	7JDXL04.5057
		<i>Name</i>	
<i>Manufacturer</i>	John Deere	<i>Operator ID</i>	
<i>Model Year</i>	2007	<i>Fuel Type</i>	CARB Diesel - ULSD
<i>Model</i>	4045TF270		
<i>DRP/ISC?</i>	No	<i>Healthcare Facility?</i>	No
<i>Daily Hours</i>	4.00	<i>Annual Hours</i>	50
<i>Location</i>	4949 and 4989 Foxen Canyon Road, Santa Maria		
<i>Note</i>			
<i>Device Description</i>	Turbocharged, diesel-fired internal combustion engine equipped with direct diesel injection, a smoke puff limiter, and CleanAIR Systems Permit Diesel Particulate Matter Filter.		

2 Diesel Particulate Matter Filter

<i>Device ID #</i>	114476	<i>Device Name</i>	Diesel Particulate Matter Filter
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	CleanAIR Systems	<i>Operator ID</i>	
<i>Model</i>	PERMIT Filter	<i>Serial Number</i>	n/a
<i>Location Note</i>	4949 and 4989 Foxen Canyon Road, Santa Maria		
<i>Device Description</i>	Passive regeneration filter with ceramic wall-flow design. Reduces diesel particulate matter by greater than 85-percent, and CO and hydrocarbons up to 99-percent.		



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**PERMIT EVALUATION FOR
AUTHORITY TO CONSTRUCT/PERMIT TO OPERATE 16015**

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1.0 BACKGROUND

This permit addresses requirements of the State's Airborne Toxic Control Measure for Stationary Compression Ignition Engines (DICE ATCM). On March 17, 2005, District Rule 202 {*Exemptions to Rule 201*} was revised to remove the compression-ignited engine (e.g., diesel) permit exemption for units rated over 50 brake horsepower (bhp). That exemption was removed to allow the District to implement the DICE ATCM. This permit authorizes an increase to the daily permitted hours of operation from 2 hours per day to 4 hours per day in order to accommodate annual load testing requirements.

2.0 DICE ATCM/NESHAP COMPLIANCE

Owners of New Stationary DICE E/S engines are subject to the requirements of Table 1 of the ATCM. The ATCM requires that the hours of operation be monitored with a non-resettable hour meter, that CARB Diesel Fuel be used (or approved alternative) and that detailed records of use be recorded and reported. The generator is located near a school (k-12) and is subject to additional operational restrictions (near a school means that the engine is located within 500 feet of school grounds).

The Federal NESHAP for reciprocating internal combustion engines (RICE NESHAP) established inspection and maintenance requirements for emergency standby diesel engines. Engines at residential, institutional, and commercial facilities are exempt from these new requirements. Additionally, engines constructed after 2005 are subject to federal New Source Performance Standards (NSPS) and are not subject to further requirements under NESHAP. The engine on this permit is subject to the requirements of the RICE NESHAP. The engine on this permit is exempt from the requirements of the RICE NESHAP because the engine was constructed after 2005.

3.0 EMISSIONS

Emissions: Mass emission estimates are based on the maximum allowed hours for maintenance and testing. Emissions are determined by the following equations:

$$\begin{aligned} E1, \text{ lb/day} &= \text{Engine Rating (bhp)} * \text{EF (g/bhp-hr)} * \text{Daily Hours (hr/day)} * (\text{lb}/453.6 \text{ g}) \\ E2, \text{ tpy} &= \text{Engine Rating (bhp)} * \text{EF (g/bhp-hr)} * \text{Annual Hours (hr/yr)} * (\text{lb}/453.6 \text{ g}) * (\text{ton}/2000 \text{ lb}) \end{aligned}$$

The emission factors (EF) were chosen based on each engine's rating and age. Unless engine specific data was provided, default emission factors are used as documented on the District's webpage at <http://www.ourair.org/dice/emission-factors/>. Daily hours are 4 hrs/day (re: ATCM FAQ Ver 1.5 #32).

4.0 REEVALUATION REVIEW (not applicable)

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PERMIT EVALUATION FOR AUTHORITY TO CONSTRUCT/PERMIT TO OPERATE 16015

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5.0 AQIA

The project is not subject to the Air Quality Impact Analysis requirements of Regulation VIII.

6.0 OFFSETS/ERCs

Offsets: The emission offset thresholds of Regulation VIII are not exceeded.

ERCs: This source does not generate emission reduction credits.

7.0 AIR TOXICS

An air toxics health risk assessment was not performed for this permitting action because only the daily emissions have increased. Health risk assessments are based on annual and hourly pollutant emission rates and state-approved health risk data. Therefore, the authorized increase in daily emissions does not affect health risk.

A cancer Health Risk Assessment (HRA) screening was originally run for this project as part of the original issuance of ATC/PTO 12744. The results showed a maximum cancer risk of 4.60 in a million, which is below the District's significant risk threshold of 10 in a million. Please see Attachment C for documentation of the health risk originally performed for ATC/PTO 12744.

8.0 CEQA / LEAD AGENCY

The District is the lead agency under CEQA for this project. This project is exempt from CEQA pursuant to the Environmental Review Guidelines for the Santa Barbara County APCD (revised April 30, 2015). Appendix A (*APCD Projects Exempt from CEQA and Equipment or Operations Exempt from CEQA*) provides an exemption specifically for Engines – Diesel-fired emergency/standby engines that comply with the applicable state Air Toxics Control Measure (ATCM). No further action is necessary.

9.0 SCHOOL NOTIFICATION

A school notice pursuant to the requirements of H&SC §42301.6 was required as the project site is located within 1,000 feet of Benjamin Foxen Elementary School and Trivium Charter School. A notice to the parents of the students, and residences and businesses within 1,000 feet of the project will be mailed.

10.0 PUBLIC and AGENCY NOTIFICATION PROCESS/COMMENTS ON DRAFT PERMIT

This project is subject to a 30-day school public notice.

Draft comments, if any are submitted, may be found in this section of the final permit.

11.0 FEE DETERMINATION

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**PERMIT EVALUATION FOR
AUTHORITY TO CONSTRUCT/PERMIT TO OPERATE 16015**

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Fees for this permit were assessed pursuant to Schedule A.3 of Rule 210.

12.0 RECOMMENDATION

It is recommended that this permit be granted with the conditions as specified in the permit.

AQ Engineer/Technician

Date

Supervisor

Date

13.0 ATTACHMENT(S)

- A. Fee Statement
- B. IDS Tables
- C. Air Toxics Documentation

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ATTACHMENT A
Fee Statement



air pollution control district
SANTA BARBARA COUNTY

FEE STATEMENT

ATC/PTO No. 16015

FID: 11046 Golden State Water Co. - 4949 and 4989 Foxen Canyon / SSID: 10836

Permit Fee

Administrative Change \$496.00

Fee Statement Grand Total = \$496

Notes:

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- (1) Fee Schedule Items are listed in District Rule 210, Fee Schedule "A".
 - (2) The term "Units" refers to the unit of measure defined in the Fee Schedule.

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ATTACHMENT B
IDS Tables

PERMIT POTENTIAL TO EMIT

	NO _x	ROC	CO	SO _x	PM	PM ₁₀	PM _{2.5}
lb/day	4.54	0.35	3.23	0.01	0.26	0.26	0.26
lb/hr							
TPQ							
TPY	0.03	0.01	0.02	0.01	0.01	0.01	0.01

FACILITY POTENTIAL TO EMIT

	NO _x	ROC	CO	SO _x	PM	PM ₁₀	PM _{2.5}
lb/day	4.54	0.35	3.23	0.01	0.26	0.26	0.26
lb/hr							
TPQ							
TPY	0.03	0.01	0.02	0.01	0.01	0.01	0.01

STATIONARY SOURCE POTENTIAL TO EMIT

	NO _x	ROC	CO	SO _x	PM	PM ₁₀	PM _{2.5}
lb/day	4.54	0.35	3.23	0.01	0.26	0.26	0.26
lb/hr							
TPQ							
TPY	0.03	0.01	0.02	0.01	0.01	0.01	0.01

Notes:

- (1) Emissions in these tables are from IDS.
- (2) Because of rounding, values in these tables shown as 0.00 are less than 0.005, but greater than zero.

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ATTACHMENT C
Air Toxics Documentation

1.0 SUMMARY

An air toxics Health Risk Assessment (HRA) screening was conducted by the Santa Barbara County Air Pollution Control District (District) for a diesel-fired internal combustion engine (DICE) currently located at 4949 Foxen Canyon Rd, operated by Golden State Water Company. The permittee has requested that the engine also be permitted to operate at 4989 Foxen Canyon Rd. The engine is a 99-bhp Model 4045TF270, manufactured by John Deere. The HRA screening was conducted using the USEPA-recommended screening model, AERSCREEN, with the Hotspots Analysis and Reporting Program (HARP) software, Version 2 (Build 17320). Cancer risk and chronic non-cancer Hazard Index (HI) risk values were calculated and compared to *significance thresholds* for cancer and chronic non-cancer risk adopted by the District’s Board of Directors. The calculated risk values and applicable thresholds are as follows:

	<u>Golden State Water DICE Max Risks</u>	<u>Significance Threshold</u>
Cancer risk:	4.6/million	≥10/million
Chronic non-cancer risk:	<0.1	>1

Based on these results, the operation of the DICE at both 4949 and 4989 Foxen Canyon Rd does not present a significant risk to the surrounding community. For this reason, Authority to Construct/Permit to Operate Mod No. 12744-01 will be issued for this project.

2.0 MODELING INFORMATION

The stack parameter inputs to AERSCREEN View are outlined in Table 2.1.

Table 2.1 – Summary of Stack Parameter Inputs

Source ID	Source Type	Release Type	Release Height (ft)	Temperature (°F)	Velocity (ft/s)	Diameter (ft)
STCK1	POINT	Capped	5.0	889	96.1	0.322

The rural option was enabled, and a flagpole height of 1.5 meters was used for all receptors. The AERSURFACE output file for the 2012-2016 Santa Maria Airport meteorological data set was used. Based on a map provided by the permittee, the engine will not be operated at any location closer than 40 m from the nearest resident. For that reason, the concentration was estimated at 40 m from the source as a conservative assumption. The inversion break-up fumigation and shoreline fumigation options were not enabled. Terrain and building downwash effects were not included in the model.

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ATTACHMENT C
Air Toxics Documentation

After the pollutant concentrations were entered into HARP 2, the cancer risk was determined at the maximally exposed individual resident (MEIR) using the “individual resident” receptor type and the breathing rate from the “RMP using the Derived Method” for an exposure duration of 30 years. Under the inhalation pathway, the fraction of time at home (FAH) values were not applied for any age bins. The chronic non-cancer hazard index was calculated for the MEIR using the “individual resident” receptor type and the breathing rate from the “OEHHA Derived Method.” The only exposure pathway analyzed was the inhalation pathway because diesel PM is not a multipathway pollutant. A list of multipathway pollutants can be found in Table 5.1 of OEHHA's 2015 Guidance Manual, which is included in Section 4.4 of the District’s *Modeling Guidelines for Health Risk Assessments*, referenced in Section 5.0 of this document.

3.0 EMISSIONS

The calculated emissions for this DICE are shown in Table 3.1. The maximum permitted usage of 50 hours per year for maintenance and testing purposes, maximum rated brake horsepower of 99 bhp for this engine, and the ARB’s *Airborne Toxic Control Measure for Stationary Compression Ignition Engines* particulate matter (PM) emission standard of 0.15 g/bhp-hr were used to calculate the annual emissions of diesel PM.

Table 3.1 –Facility Emissions Summary

Pollutant	Emissions (lb/yr)
Diesel PM	1.64

4.0 RESULTS

Table 4.1 displays the cancer and chronic non-cancer risk results at the MEIR. All of the calculated risk values are below the District’s significance thresholds.

Table 4.1 – Summary of Screening Model Results

Pollutant	C _{annual} at MEIR (µg/m ³)	Cancer Risk (per million)	Chronic Non-Cancer Risk (Hazard Index)
Diesel PM	0.00600	4.55	0.001

DRAFT

Authority to Construct/Permit to Operate 16015

ATTACHMENT C

Air Toxics Documentation

5.0 REFERENCES

- Risk notification levels were adopted by the Santa Barbara County Air Pollution Control Board of Directors on June 1993. The risk notification levels were set at 10 per million for cancer risk and a Hazard Index of greater than 1.0 for non-cancer risk.
- Air Resources Board. May 2011. *Final Regulation Order: Amendments to the Airborne Toxic Control Measure for Stationary Compression Ignition Engines*.
<https://www.arb.ca.gov/diesel/documents/FinalReg2011.pdf>.
- Office of Environmental Health Hazard Assessment. February 2015. Air Toxics Hot Spots Program: Risk Assessment Guidelines. California Environmental Protection Agency.
<http://oehha.ca.gov/media/downloads/crn/2015guidancemanual.pdf>.
- Santa Barbara County Air Pollution Control District. August 2018. *Modeling Guidelines for Health Risk Assessments*. <http://www.ourair.org/wp-content/uploads/apcd-15i.pdf>.

6.0 ATTACHMENT

Source parameter data and the AERSCREEN and HARP 2 input and output files for this project may be found in the following location:

\\sbcapcd.org\shares\Toxics\SourceFiles\SSID10836_Golden_State_Water\ATC-PTO Mod 12744-01