apcd air pollution control district
SANTA BARBARA COUNTY

May 3, 2022

Eve Murphy
Mission Terrace Convalescent Hospital
623 W. Junipero Street
Santa Barbara, CA 93105

FID: 11649
Permit: A 15825
SSID: 11397

Re: Draft Authority to Construct 15825

Dear Ms. Murphy:

Enclosed is the draft Authority to Construct (ATC) No. 15825 for the an increase of permitted daily maintenance and testing hours of a 69 bhp Cummins emergency standby engine at 623 W. Junipero Street in Santa Barbara. Please carefully review the enclosed documents to ensure that they accurately describe your facility and that the conditions are acceptable to you. Note that your permitted emission limits may, in the future, be used to determine emission fees.

The estimated permit issuance fee based on our analysis to date is $ 293; you can review our calculation of the fee in the enclosed Permit Evaluation. The final fee amount due will be specified when the final permit is issued. **Please do not pay this fee now**, as we will invoice you when the final permit is issued.

If you have any comments on this draft permit, submit them in writing to the Air Pollution Control District within 21 days from the date of this letter. We will consider your comments before we issue your final permit. Please include the FID and Permit numbers in any correspondence regarding this permit. If we receive no comments within this period, we will issue a **final** permit with the enclosed conditions. If you have no comments and wish to receive the final permit earlier, please email the contact below.

Thank you for your cooperation. If you have any questions, please call me at OgdenC@sbcapcd.org.

Sincerely,

Chase Ogden

Chase Ogden, Air Quality Engineer I
Engineering Division

enc: Draft ATC 15825

cc: Mission Terrace Convalescent Hospital 11649 Project File
Engr Chron File
Chase Ogden, Air Quality Engineer I (Cover letter only)

\\Sbcapcd.org\shares\Groups\ENGR\WP\IC Engines\ATC\ATC 15825\ATC 15825 - Draft Letter - 1-26-2022.docx

air pollution control district
SANTA BARBARA COUNTY

DRAFT

Authority to Construct/Permit to Operate 15825

EQUIPMENT OWNER:

Mission Terrace Convalescent Hospital

EQUIPMENT OPERATOR:

Mission Terrace Convalescent Hospital

EQUIPMENT LOCATION:

623 W. Junipero Street, Santa Barbara

STATIONARY SOURCE/FACILITY:

Mission Terrace Convalescent Hospital

SSID: 11397
FID: 11649

AUTHORIZED MODIFICATION:

This permit authorizes an increase to the daily maintenance and testing hours for the engine originally permitted under ATC/PTO 15219.

EQUIPMENT DESCRIPTION:

Diesel-fired emergency standby engine(s) 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:

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 ATCM[1].

    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 testing[2] 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.

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(s) 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.

---

[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

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. initial start-up hours {if specifically allowed for under this permit}.

    e. hours of operation for all uses other than those specified in items (a) – (d) above along with a description of what those hours were for.

    f. 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.

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 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: engr@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 (e-mail: engr@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: engr@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.

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 Evaluation 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 issued by the manufacturer and 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. **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.

20. **Initial Operations and District Inspection.** The permittee shall:

    a. Within 14 days of initial operations, the permittee shall provide the District written notification of the initial operations start date using the attached yellow Startup Notification card or by e-mail to enfr@sbcapcd.org.

    b. Arrange for equipment inspection by calling the District's Compliance Manager at (805) 961-8800 or via e-mail to enfr@sbcapcd.org no later than fourteen (14) calendar days after initial operations commence. The equipment inspection shall occur not more than thirty (30) calendar days (or other mutually agreed upon time period) after initial operations begin. The Compliance Division may waive this inspection requirement if an initial inspection is deemed unnecessary to verify that the modifications authorized by this permit are in compliance with District rules and permit conditions.

_____

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 15825

Notes:

- Reevaluation Due Date: October 1, 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 ATC/PTO 15219.
- This permit is valid for one year from the date stamped above if unused.

TABLE 1. MASS EMISSION LIMITS

Device ID #	NOx		ROC		CO		SOx		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
393093	2.51	0.01	0.15	0.01	2.81	0.01	0.01	0.01	0.11	0.01	0.11	0.01	0.11	0.01

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

Device ID #	NOx	ROC	CO	SOx	PM	PM10	PM2.5
393093	3.30	0.20	3.70	0.01	0.15	0.15	0.15

Table Notes:

(a) Mass emission limits based on allowable maintenance and testing hours.
(b) NO_x as NO_2. SO_x as SO_2. 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.

PERMIT EQUIPMENT LIST

Device ID #	393093	*Maximum Rated BHP*	69
Device Name	E/S Diesel Generator	*Serial Number*	L17029001
Engine Use	Electrical Power	*EPA Engine Family Name*	HCEXL03.3BAA
Manufacturer	Cummins	*Operator ID*	
Model Year	2017	*Fuel Type*	CARB Diesel - ULSD
Model	4BT3.3-G5		
DRP/ISC?	No	*Healthcare Facility?*	No
Daily Hours	5.00	*Annual Hours*	50
Location Note			
Device Description	EPA Tier 3, diesel-fired, turbocharged		

air pollution control district
SANTA BARBARA COUNTY

DRAFT

PERMIT EVALUATION FOR AUTHORITY TO CONSTRUCT/PERMIT TO OPERATE 15825

1.0 BACKGROUND

This permit authorizes an increase in daily maintenance and testing hours of the 69 bhp emergency standby diesel-fired engine (DID 393093) previously permitted under ATC/PTO 15219. The application for Authority to Construct/Permit to Operate 15825 was received on November 30, 2021 and deemed complete on December 7, 2021.

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.

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 at 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).

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:

E1, lb/day = Engine Rating (bhp) * EF (g/bhp-hr) * Daily Hours (hr/day) * (lb/453.6 g)
E2, tpy = Engine Rating (bhp) * EF (g/bhp-hr) * Annual Hours (hr/yr) * (lb/453.6 g) * (ton/2000 lb)

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 assumed to be 5 hrs/day (re: ATCM FAQ Ver 1.5 #32) unless otherwise requested by the applicant.

4.0 REEVALUATION REVIEW (not applicable)

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 since no change to the annual hours of operation authorized under ATC/PTO 15219 is being made. The Health Risk Assessment originally conducted under ATC/PTO 15219 has been included below and in Attachment D for informational purposes.

An air toxics Health Risk Assessment (HRA) screening was conducted by the Santa Barbara County Air Pollution Control District (District) for the diesel-fired internal combustion engine (DICE) located at Mission Terrace Convalescent Hospital at 623 W Junipero St in Santa Barbara. The engine is a 69-bhp Model 4BT3.3-G5, manufactured by Cummins. 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:

	Mission Terrace DICE Max Risks	Significance Threshold
Cancer risk:	9.6/million	≥10/million
Chronic non-cancer risk:	<0.1	>1

Based on these results, the proposed DICE at Mission Terrace Convalescent Hospital does not present a significant risk to the surrounding community. For this reason, Authority to Construct/Permit to Operate No. 15219 was issued for this project on October 26, 2018.

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 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 La Cumbre Junior High School and Santa Barbara Community Academy.

10.0 PUBLIC and AGENCY NOTFICATION PROCESS/COMMENTS ON DRAFT PERMIT

10.1 The project is located within 1,000 feet of La Cumbre Junior High and Santa Barbara Community Academy. In accordance with the H&SC Section 42301.6, a 30-day school notice is required for this project prior to final permit issuance.

10.2 Draft comments, if any, may be found in the permit appendix.

11.0 FEE DETERMINATION

Fees for this permit were assessed pursuant to Schedule A.3 of Rule 210. The previously permit for this engine, ATC/PTO 15219, was due for a triennial renewal on 10/1/2021. ATC/PTO 15825 supersedes ATC/PTO 15219 upon issuance. Attachment C includes the administrative fee to increase the permitted operating hours.

12.0 RECOMMENDATION

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

Chase Ogden	3/2/2022		
AQ Engineer	Date	Supervisor	Date

13.0 ATTACHMENTS

A. Emission Calculations
B. IDS Tables
C. Fee Statement
D. Air Toxics Documentation

DRAFT

Authority to Construct/Permit to Operate 15825

ATTACHMENT A
Emission Calculations

DICE EMERGENCY STANDBY EMISSION CALCULATIONS (Ver. 1.0)

Attachment: A-1
Permit Number: ATC 15825
Facility: Mission Terrace Convalescent Hospital

Engine Information

Data	*Value*	*Units*	*Reference*
Engine Rating	69	bhp	Permit Application
Maximum Daily Hours	5	hours	Permit Application
Maximum Annual Hours	50	hours	Permit Application
EPA Tier	3	N/A	Permit Application

Emission Factors

Pollutant	*g/bhp-hr*	*Reference*
NO_x	3.3000	EPA Tier 3 for 50 hp to 74.99 hp engines
ROC	0.1998	EPA Tier 3 for 50 hp to 74.99 hp engines
CO	3.7000	EPA Tier 3 for 50 hp to 74.99 hp engines
SO_x	0.0055	EPA AP-42, Table 3.3-2, Calculated Value
PM	0.1500	CARB ATCM, Manufacturer Specifications
PM_{10}	0.1500	AP-42 Chapters 3.2 and 3.3
$PM_{2.5}$	0.1500	AP-42 Chapters 3.2 and 3.3

DICE Potential to Emit

Pollutant	lb/day	TPY
NO_x	2.51	0.01
ROC	0.15	0.00
CO	2.81	0.01
SO_x	0.00	0.00
PM	0.11	0.00
PM_{10}	0.11	0.00
$PM_{2.5}$	0.11	0.00

Processed By: CJO Date: 1/26/2022

DRAFT

Authority to Construct/Permit to Operate 15825

ATTACHMENT B
IDS Tables

PERMIT POTENTIAL TO EMIT

	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$
lb/day	2.51	0.15	2.81	0.00	0.11	0.11	0.11
lb/hr							
TPQ							
TPY	0.01	0.00	0.01	0.00	0.00	0.00	0.00

FACILITY POTENTIAL TO EMIT

	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$
lb/day	2.51	0.15	2.81	0.00	0.11	0.11	0.11
lb/hr							
TPQ							
TPY	0.01	0.00	0.01	0.00	0.00	0.00	0.00

STATIONARY SOURCE POTENTIAL TO EMIT

	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$
lb/day	2.51	0.15	2.81	0.00	0.11	0.11	0.11
lb/hr							
TPQ							
TPY	0.01	0.00	0.01	0.00	0.00	0.00	0.00

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.

DRAFT

Authority to Construct/Permit to Operate 15825

ATTACHMENT C
Fee Statement

air pollution control district
SANTA BARBARA COUNTY

FEE STATEMENT
ATC/PTO No. 15825
FID: 11649 Mission Terrace Convalescent Hospital / SSID: 11397

Permit Fee

Administrative Change	**$470.00**

Fee Statement Grand Total = $470

Notes:

(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.

DRAFT

Authority to Construct/Permit to Operate 15825

ATTACHMENT D
Health Risk Assessment (Originally from ATC/PTO 15219)

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 proposed diesel-fired internal combustion engine (DICE) located at Mission Terrace Convalescent Hospital at 623 W Junipero St in Santa Barbara. The proposed engine is a 69-bhp Model 4BT3.3-G5, manufactured by Cummins. 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:

	Mission Terrace DICE Max Risks	Significance Threshold
Cancer risk:	9.6/million	≥10/million
Chronic non-cancer risk:	<0.1	>1

Based on these results, the proposed DICE at Mission Terrace Convalescent Hospital does not present a significant risk to the surrounding community. For this reason, Authority to Construct/Permit to Operate No. 15219 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	10.0	944.0	25.4	0.333

The urban option was enabled, and a flagpole height of 1.5 meters was used for all receptors. The AERSURFACE output file for the Santa Barbara airport meteorological data from 2014 was used. The inversion break-up fumigation and shoreline fumigation options were not enabled. Terrain effects were not included in the model. Building downwash was included, and the building information is shown in Table 2.2. The X and Y coordinates in the table are relative to the location of the diesel engine.

ATTACHMENT D
Health Risk Assessment (Originally from ATC/PTO 15219)

Table 2.2 – Summary of Building Information

Building ID	Height (m)	Building Type	SW Corner X-coordinate (m)	SW Corner Y-coordinate (m)	X-Length (m)	Y-Length (m)	Rotation Angle (deg)
BLD1	3.0	Rectangular	16.0	-81.0	45.0	68.0	45.0
BLD2	3.0	Rectangular	30.0	-28.0	28.0	40.0	45.0

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 3.4 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 69 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	1.14

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.

DRAFT

Authority to Construct/Permit to Operate 15825

ATTACHMENT D
Health Risk Assessment (Originally from ATC/PTO 15219)

Table 4.1 – Summary of Screening Model Results

Pollutant	C_{annual} at MEIR ($\mu g/m^3$)	Cancer Risk (per million)	Chronic Non-Cancer Risk (Hazard Index)
Diesel PM	0.0126	**9.56**	**0.003**

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/crnr/2015guidancemanual.pdf.
- Santa Barbara County Air Pollution Control District. May 2017. *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 may be found in the following location:

\\sbcapcd.org\shares\Toxics\SourceFiles\SSID11397_Mission_Terrace_Convalescent_Hospital\ATC-PTO 15219