ENGINEERING EVALUATION RS Alameda, LLC ("Red Sea")

Plant: 20241 Application: 21977

5101 Lafayette Ave, Santa Clara, CA 95054

BACKGROUND

RS Alameda, LLC ("Red Sea") has applied to obtain an Authority to Construct (AC) and/or a Permit to Operate (PO) for the following equipments:

S-1 Emergency Standby Diesel Generator Set

Cummins, Inc, Model: QSK60G6 NR2, 2919BHP, 18.91MMBTU

Abated by

A-1 Diesel Particular Filter, Make: Clean Emission Products Inc, Model FL-35-16ASA

S-2 Emergency Standby Diesel Generator Set

Cummins, Inc, Model: QSK60G6 NR2, 2919BHP, 18.91MMBTU

Abated by

A-2 Diesel Particular Filter, Make: Clean Emission Products Inc, Model FL-35-16ASA

S-3 Emergency Standby Diesel Generator Set

Cummins, Inc, Model: QSK60G6 NR2, 2919BHP, 18.91MMBTU

Abated by

A-3 Diesel Particular Filter, Make: Clean Emission Products Inc, Model FL-35-16ASA

The Emergency Diesel Engine Generator Sets (S-1, S-2, and S-3) are equipped with the best available control technology (BACT) for minimizing the release of air borne criteria pollutants and harmful air toxins due to fuel combustion. The criteria pollutants are nitrogen oxides (NOx), carbon monoxide (CO), precursor organic compounds (POC) from unburned diesel fuel, sulfur dioxide (SO2) and particulate matter (PM10). POC from a combustion source is denoted as non-methane hydrocarbons (NMHC). All of these pollutants are briefly discussed on the District's web site at www.baaqmd.gov.

A-1, A-2 and A-3 have not been certified by the California Air Sources Board, and the applicant must demonstrate their abatement efficiency prior to issuance of the Permit to Operate by the District.

The engines meet the Environmental Protection Agency and California Air Resources Board (EPA/CARB) Tier 2 Off-road standard. The engines will burn commercially available California low sulfur diesel fuel. The sulfur content of the diesel fuel will not exceed 0.0015% by weight.

EMISSIONS

S-1, S-2, and S-3 have been certified by CARB to be a cleaner burning engine. Except for SO2, the emission factors for these engines are from the CARB Certification (CARB Executive Order # U-R-002-0341). The SO2 emissions were calculated based on the maximum allowable sulfur content (0.0015 wt% S) of the diesel fuel with assumption that all of the sulfur present will be converted to SO2 during the combustion process. The POC emission factor is assumed to be 5% of the total CARB's certified NOx and POC (NMHC+NOx) factor based on District Policy.

Basis:

For S-1, S-2, and S-3 2919 hp output rating 36 hr/yr operation for testing and maintenance 138 gallons/hr max fuel use rate

S-1, S-2, and S-3 are in the same engine family, so for both S-1, S-2, and S-3, NMHC + NOx, CO and PM10 emission factors were provided by CARB Certification with Executive Order U-R-002-0341

POC is assumed to be 5% of NMHC + NOx

NOx is assumed to be 95% of NMHC + NOx

SO2 emissions are quantified based on the full conversion of 0.0015 wt% (~ 15 ppm) sulfur in the ULS diesel fuel.

The SO2 emission factor was derived from EPA AP-42, Table 3.4-1.

A-1, A-2, and A-3 are not certified diesel particulate filters.

PM reduction of 70% was estimated using EPA AP-42, Table 3.4-1

Annual Emissions:

Annual emissions are calculated based on the number of hours per year of operation for testing and maintenance.

Daily Emissions:

Daily emissions are calculated to establish whether a source triggers the requirement for BACT (10 lb/highest day total source emissions for any class of pollutants). 24-hr/day of operation will be assumed since no daily limits are imposed on intermittent and unexpected operations.

Table 1-Emission for S-1

	Emission Factor	Abated Factor	Abated Factor	Annual	Annual	Max. Daily
Pollutant	(g/kw-hr)	(g/kw-hr)	(g/hp-hr)	Emissions (lb/yr)	Emissions (TPY)	(lb/day)
NMHC+NOx	5.4	5.4	4.03	•		
NOx	5.13	5.13	3.83	885.80	0.4429	590.54
POC	0.27	0.27	0.20	46.62	0.0233	31.08
CO	0.5	0.5	0.37	86.34	0.0432	57.56
PM10	0.09	0.027	0.008	1.87	0.0009	1.25
SO2			0.001515 *lb SO2/MMBTU	1.03	0.00052	0.69

Table 2-Emission for S-2

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	Emission Factor	Abated Factor	Abated Factor	Annual Emissions	Annual Emissions	Max. Daily
Pollutant	(g/kw-hr)	(g/kw-hr)	(g/hp-hr)	(lb/yr)	(TPY)	(lb/day)
NMHC+NOx	5.4	5.4	4.03			
NOx	5.13	5.13	3.83	885.80	0.4429	590.54
POC	0.27	0.27	0.20	46.62	0.0233	31.08
CO	0.5	0.5	0.37	86.34	0.0432	57.56
PM10	0.09	0.027	0.020	4.66	0.0023	3.11
SO2			0.001515 *lb SO2/MMBTU	1.03	0.00052	0.69

Table 3-Emission for S-3

		Table 5 Lilliss				
	Emission Factor	Abated Factor	Abated Factor	Annual	Annual	Max. Daily
				Emissions	Emissions	
Pollutant	(g/kw-hr)	(g/kw-hr)	(g/hp-hr)	(lb/yr)	(TPY)	(lb/day)
NMHC+NOx	5.4	5.4	4.03			
NOx	5.13	5.13	3.83	885.80	0.4429	590.54
POC	0.27	0.27	0.20	46.62	0.0233	31.08
CO	0.5	0.5	0.37	86.34	0.0432	57.56
PM10	0.09	0.027	0.020	4.66	0.0023	3.11

SO2 0.001515 1.03 0.00052 0.69 *lb SO2/MMBTU

PLANT CUMULATIVE INCREASE

Table 3 summarizes the cumulative increase in criteria pollutant emissions that will result from the operation of S-1, S-2, and S-3.

Table 4

Pollutant	Current plant emissions (TPY)	Increase in plant emissions associated with this application (TPY)	Cumulative emissions (Current + Increase) (TPY)
NOx	0	1.329	1.329
POC	0	0.070	0.070
CO	0	0.130	0.130
PM10	0	0.007	0.007
SO2	0	0.002	0.002

TOXIC RISK SCREENING ANALYSIS

This application required a Toxics Risk Screen because the diesel particulate emissions are greater than the toxic trigger level.

Table 5

Toxic Pollutant Emitted	Emission Rate (lb/yr)	Risk Screening Trigger (lb/yr)
PM10 (Diesel Particulate) from S-1	4.66	0.34
PM10 (Diesel Particulate) from S-2	4.66	0.34
PM10 (Diesel Particulate) from S-2	4.66	0.34

S-1, S-2, and S-3 meet Best Available Control Technology for toxics (TBACT) since the diesel particulate emissions are less than 0.15 g/bhp-hr. For an engine that meets the TBACT requirement, it must also pass the toxic risk screening level of less than ten in a million. Estimates of residential risk assume exposure to annual average toxic air contaminant concentrations occur 24 hours per day, 350 days per year, for a 70-year lifetime. Risk estimates for offsite workers assume exposure occurs 8 hours per day, 245 days per year, for 40 years. Risk estimates for students assume a higher breathing rate, and exposure is assumed to occur 10 hours per day, 36 weeks per year, for 9 years.

Based on 36 hours per year of operation for each of S-1, S-2, and S-3 the emergency generator pass the Health Risk Screening Analysis (HRA) conducted on Sept 29th 2010 by the District's Toxic Evaluation Section. The source poses no significant toxic risk, since the increased cancer risk to the maximally exposed receptor (Resident) is 9.9 in a million with a hazard index for of 0.0035. The increased cancer risk to workers is 3.7 in a million with a hazard index of 0.0026. The increased risk to the student attending Kathryn Hughes Elementary School is 0.8 in a million with a hazard index of 0.00064. In accordance with the District's Regulation 2, Rule 5, this risk level is considered acceptable, as it has been determined that S-1, S-2, and S-3 meet the current TBACT standards.

BACT

In accordance with Regulation 2, Rule 2, Section 301, BACT is triggered for any new or modified source with the potential to emit 10 pounds or more per highest day of POC, NPOC, NOx, CO, SO₂ or PM₁₀.

BACT is triggered for NOx, POC, PM10,and CO for S-1, S-2, and S-3 since the maximum daily emissions of each source for these pollutants exceeds 10 lb/day. Please refer to the discussion on "Daily Emissions" in page 2 of this evaluation. BACT for these sources are presented in the current BAAQMD BACT/TBACT Workbook for IC

Engine – Compression Ignition: Stationary Emergency, non-Agricultural, non-direct drive fire pump, Document # 96.1.3, Revision 6 dated 4/13/2009. For NOx, POC, CO, and PM10, BACT(2) is the current off-road tier standard for the horsepower. BACT(1) has not been determined.

Source Category

			gine – Compression Ignition:		Revision:	6	
	Source:		nary Emergency, non-Agricultural, lirect drive fire pump		Document #:	96.1.3	
	Class:	> 50 1	BHP Output		Date:	04/13/2009	
	POLLUTA	ANT	BACT 1. Technologically Feasible/ Cost Effective 2. Achieved in Practice 3. TBACT			CAL TECHY	NOLOGY
	POC		 n/s^d Current tier^{a,b} standard for POC at applicable horsepower rating. 	2.	n/s ^d Any engine cer plicable standa		ed to achieve the
	NOx		 n/s^d Current tier^{a,b} standard for NOx at applicable horsepower rating. 	2.	n/s ^d Any engine cer plicable standa		ed to achieve the
SO ₂ $ \begin{array}{c} 1. \ n/s^d \\ 2. \ Fuel \ sulfur \ content \ not \ to \ exceed \\ 0.0015\% \ (wt) \ or \ 15 \ ppm. \end{array} $ $ \begin{array}{c} 1. \ n/s^d \\ 2. \ CARB $			uel (Ultra Lov	w Sulfur Diesel).			
1. n/s^d 2. The more stringent of either 2.75 g/bhp-hr [319 ppmvd @ 15% O_2] ^c or the current Tier ^{a,b} standard. 1. n/s^d 2. Any engine certified or verified to applicable standard.		ed to achieve the					
PM ₁₀ 1. n/s ^d 2. More stringent of either 0.15 g/bhp-hr or the current Tier standard. 3. TBACT: The more stringent of either 0.15 g/bhp-hr or the current Tier standard.		2. or 3.	verified to ach	ieve the applic technology der	monstrated, certified		
	NPOC		1. n/s 2. n/s		n/s n/s		

References

a. <u>Current tier standard (listed on http://www.baaqmd.gov/pmt/bactworkbook/96-1-2.pdf)</u>: The current CARB or EPA off-road tier standard for the pollutant of concern within the appropriate horsepower

- range. Where NMHC + NOx is listed (with no individual standards for NOx or NMHC) as the standard, the portions may be considered 95% NOx and 5% NMHC. For the purposes of determining BACT NMHC = POC. Any engine which has been certified or demonstrated to meet the current year tier standard may be considered a current certified engine for that pollutant.
- b. For pollutants NOx, POC and CO, an engine which does not meet the current EPA or CARB off-road tier standard may represent BACT2, providing 1) the engine met the most stringent EPA Tier Standard in effect at the time of installation (Tier 1 minimum) or 2) the engine met the most stringent EPA Tier Standard in effect prior to the Tier change for that horsepower rating with the permit application submitted within 6 months of the effective date of the Tier change. [Source: California Health & Safety Code Section 93116.3(b)(7)]
- c. Previous BACT determination dated 01/11/02.
- d. Cost effectiveness analysis must be based on lesser of 50 hr/yr or as limited by toxic risk screen.

From the table below, S-1, S-2, and S-3 satisfy the current BACT(2) standards for NOx, POC, CO, and PM10. Table 6

		1 doic 0		
	S-1 emissions	S-2 emissions	S-3 emissions	BACT requiremets
	g/bhp-hr	g/bhp-hr	g/bhp-hr	g/bhp-hr
NOx	3.83	3.83	3.83	4.56
NMHC (POC)	0.20	0.20	0.20	0.24
CO	0.37	0.37	0.37	2.6
PM_{10}	0.02	0.02	0.02	0.15

OFFSETS

Offsets must be provided for any new or modified source at a facility that emits more than 10 tons/yr of POC or NOx per Regulation 2-2-302. Table 4 summarizes the increase in criteria pollutant emissions that will result from the operation of S-1, S-2, and S-3.

Table 7

Pollutant	Current plant emissions (TPY)	Increase in plant emissions associated with this application (TPY)	Cumulative emissions (Current + Increase) (TPY)	Regulation 2-2-302 and 2-2-303 Offset Triggers (TPY)
NOx	0	1.329	1.329	> 10; < 35
POC	0	0.070	0.070	> 10; < 35
CO	0	0.130	0.130	NA
PM10	0	0.007	0.007	> 1*
SO2	0	0.002	0.002	> 1*

^{*}Applies to major facilities with a cumulative increase, minus contemporaneous emission reduction credits, in excess of 1 ton/year since April 5, 1991.

It can be seen from Table 7 above that S-1, S-2, and S-3 do not trigger any offset. Therefore, offsets are not warranted for any emission.

NSPS

The engine is subject to 40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines because it was manufactured after April 1, 2006, as required by Section 60.4200(a)(2)(i).

The engine S-1, S-2, S-3 has a total displacement of 60.1 liters and has 16 cylinders, so each cylinder has a volume of less than 10 liters. Section 60.4205(b) requires these engines to comply with the emission standards in Section

60.4202, which refers to 40CFR89.112 and 40CFR89.113 for all pollutants. For engines greater than 750, these standards are:

NMHC+NOx: 4.77 g/hp-hr

CO: 2.61 g/hp-hr PM: 0.15 g/hp-hr

20% opacity during acceleration mode 15% opacity during lugging mode

50% opacity during peaks in acceleration or lugging mode

According to CARB Executive Order U-R-002-0341, the engines (S-1, S-2, and S-3) will comply with the standards

Sections 60.4206 and 60.4211(a) require that the owner/operator operate and maintain the engines according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine. The owner/operator is expected to comply with this requirement.

Section 60.4207(a) requires that by October 1, 2007, the owner/operator must use fuel that complies with 40 CFR 80.510(a). This means that the fuel must have a sulfur content of 500 parts per million (ppm) maximum, a cetane index of 40 or a maximum aromatic content of 35 volume percent. The owner/operator is expected to comply with this requirement because CARB diesel is required to be used in California.

Section 60.4207(b) requires that by October 1, 2010, the owner/operator must use fuel that complies with 40 CFR 80.510(b). This means that the fuel must have a sulfur content of 15 parts per million (ppm) maximum, and the same cetane index or aromatic content as above. The owner/operator is expected to comply with this requirement because CARB diesel is required to be used in California.

Section 60.4209(a) requires a non-resettable hour meter. This requirement is already in the standard permit conditions.

The engines will comply with the requirements of Section 60.4211(c) because it has been certified in accordance with 40 CFR Part 89.

The engines will comply with the requirement in Section 60.4211(e) to run for less than 100 hours per year for maintenance checks and readiness testing, and the prohibition of running for any reason other than emergency operation, maintenance, and testing because they are limited by permit condition to 36 hours per year for reliability testing and otherwise may only operate for emergencies.

The owner/operator is not required to perform tests in accordance with Section 60.4212 or 60.4213.

Section 60.4214 states that owner/operators do not have to submit an initial notification to EPA for emergency engines.

Because the engine has a diesel particulate filter, the owner/operator is subject to Section 60.4214(c).

The owner/operator is required to comply with certain sections of 40 CFR 60, Subpart A, General Provisions. The owner/operator is expected to comply with this requirement.

NESHAP

This engine is not subject to the emission or operating limitations in 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, because it is an emergency stationary reciprocating internal combustion engine (40 CFR 63.6600(c)).

CARB STATIONARY DIESEL ENGINE ATCM

The State Office of Administrative Law approved the Airborne Toxic Control Measure (ATCM) on November 8, 2004. State law requires the local Air Districts to implement and enforce the requirements of the ATCM. Effective January 1, 2005, there is a prohibition on the operation of new diesel emergency standby engines greater than 50 bhp unless the following operating requirements and emission standards are met:

"Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations.

Diesel PM – General Requirements

- 1. Meet 0.15 g/bhp-hr PM standard
- 2. Operate 50 hours per year, or less, for maintenance and testing (except emergency use and emissions testing)

or

- 1. Meet 0.01 g/bhp-hr PM standard
- 2. Operate up to 100 hours per year for maintenance and testing (except emergency use and emissions testing), upon approval by the District.

HC,NOx, NMHC+NOx, CO

- Meet standards for off-road engines of the same model year and horsepower rating as specified in the OFF-Road Compression Ignition Engine Standards; or if no standards have been established
- 2. Meet the Tier 2 standards for an off-road engine for the same maximum rated power.

This emergency standby diesel engines (S-1, S-2, S-3)) are in compliance with the above ATCM requirements. The diesel engine will operate for no more than 50 hours per year for maintenance and reliability testing. This engine is subject to the Tier 2 off-road CI engine standards for HC, NOx, NMHC+NOx and CO. As shown in the Table 5, the engines meet these requirements.

Table 6. ATCM Tier 2 Compliance (GEN> 750BHP)

	CARB Certified	CARB Certified	CARB Certified	ATCM Tier 2
	for S-1(g/bhp-hr)	for S-2(g/bhp-hr)	for S-3(g/bhp-hr)	g/bhp-hr
NMHC+NOx	4.03	4.03	4.03	4.8
NOx	3.83	3.83	3.83	N/A
NMHC (POC)	0.20	0.20	0.20	N/A
CO	0.37	0.37	0.37	2.6
PM	0.02	0.02	0.02	0.15

STATEMENT OF COMPLIANCE

S-1, S-2, S-3 will be operated as an emergency standby engine and therefore is not subject to the emission rate limits in Regulation 9, Rule 8 ("NOx and CO from Stationary Internal Combustion Engines"). S-1, S-2, and S-3 are exempt from the requirements of Sections 9-8-301 through 305, 501 and 503 per Reg. 9-8-110.5 (Emergency Standby Engines). S-1, S-2, and S-3 are subject to and expected to comply with 9-8-330 (Emergency Standby Engines, Hours of Operation) since non-emergency hours of operation will be limited in the permit conditions to 50 hours per year. S-1, S-2, and S-3 is also subject to and expected to comply with monitoring and record keeping requirements of Regulation 9-8-530 and the SO2 limitations of 9-1-301 (ground-level concentration) and 9-1-304 (0.5% by weight in fuel). Regulation 9-8-530 requirements are incorporated into the proposed permit conditions. Compliance with Regulation 9, Rule 1 is very likely since diesel fuel with a 0.0015% by weight sulfur is mandated for use in California. Like all combustion sources, S-1, S-2, and S-3 are subject to Regulation 6, Rule 1 ("Particulate Matter"). Regulation 6-1-303.1 limits opacity from internal combustion engines to Ringelmann 2.

This engine is not expected to produce visible emissions or fallout in violation of this regulation and will be assumed to be in compliance with Regulation 6-1.

This application is considered to be ministerial under the District's Regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emission factors in accordance with Permit Handbook Chapter 2.3.

This facility is greater than 500 feet and less than 1,000 feet from the nearest school and therefore is subject to the public notification requirements of Regulation 2-1-412. A public notice was prepared and sent to:

All addresses within 1000 feet of the diesel generator set.

Parents and guardians of students of Kathryn Hughes Elementary School, 4949 Calle De Escuela, Santa Clara, CA 95054.

PSD is not triggered.

PERMIT CONDITIONS

This application is subject to Permit Condition # 22836 and Permit Condition #24762

COND#	22836	
COMDII	22030	

- 1. The owner/operator shall not exceed 36 hours per year per engine for reliability-related testing.
- [Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(2)(A)(3) or (e)(2)(B)(3)]
- 2. The owner/operator shall operate each emergency standby engine only for the following purposes: to mitigate emergency conditions, for emission testing to demonstrate compliance with a District, State or Federal emission limit, or for reliability-related activities (maintenance and other testing, but excluding emission testing). Operating while mitigating emergency conditions or while emission testing to show compliance with District, State or Federal emission limits is not limited.

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(2)(A)(3) or (e)(2)(B)(3)]

3. The owner/operator shall operate each emergency standby engine only when a non-resettable totalizing meter (with a minimum display capability of 9,999 hours) that measures the hours of operation for the engine is installed, operated and properly maintained.

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection(e)(4)(G)(1)]

- 4. Records: The owner/operator shall maintain the following monthly records in a District-approved log for at least 36 months from the date of entry (60 months if the facility has been issued a Title V Major Facility Review Permit or a Synthetic Minor Operating Permit). Log entries 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.
 - a. Hours of operation for reliability-related activities (maintenance and testing).
 - b. Hours of operation for emission testing to show compliance with emission limits.
 - c. Hours of operation (emergency).
 - d. For each emergency, the nature of the emergency condition.
 - e. Fuel usage for each engine(s).

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(4)(I), (or, Regulation 2-6-501)]

5. At School and Near-School Operation:

If the emergency standby engine is located on school grounds or within 500 feet of any school grounds, the following requirements shall apply:

The owner/operator shall not operate each stationary emergency standby diesel-fueled engine for non-emergency use, including maintenance and testing, during the following periods:

a. Whenever there is a school sponsored activity (if the engine is located on school grounds)

b. Between 7:30 a.m. and 3:30 p.m. on days when school is in session. "School" or "School Grounds" means any public or private school used for the purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in a private home(s).

"School" or "School Grounds" includes any building or structure, playground, athletic field, or other areas of school property but does not include unimproved school property.

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(2)(A)(1)] or (e)(2)(B)(2)]

COND#	24762	
$COMD\pi$	2 T / U2	

- 1. The owner/operator shall abate the particulate emissions from the emergency diesel engine with a Diesel Catalyzed Particulate Filter at all times the engine is in operation. The Diesel Catalyzed Particulate Filter shall achieve a minimum abatement efficiency of 69.878 percent of total particulate matter at all times.

 [Basis: "ATCM for Stationary Compression Ignition Engines" Section 93115.6(a)(3) or 93115.6(b)(3), title 17, CA Code of Regulations, Cumulative Increase]
- 2. Within 30 days of start-up of the engine, the applicant shall conduct a source test to demonstrate compliance with the above emissions limitations. All source testing shall be done in compliance with the District's Manual of Procedures. The applicant shall obtain approval from the Manager of the District's Source Test Section for the installation of test ports and source test procedures. The source test results shall be submitted to the District's Director of Compliance and Enforcement no later than 30 days from the date of the source test, and final Permit to Operate for the engine shall not be issued until the source test has been approved by the District.

 [Basis: Cumulative Increase]
- 3. The owner/operator shall install and maintain a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. The owner/operator shall maintain records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached in a District-approved log for at least 36 months from the date of entry (60 months if the facility has been issued a Title V Major Facility Review Permit or a Synthetic Minor Operating Permit). [Basis: "ATCM for Stationary Compression Ignition Engines" Section 93115.10(e), title 17, CA Code of Regulations; 40 CFR 60.4214c]

RECOMMENDATION

Issue an Authority to Construct to RS Alameda, LLC ("Red Sea") for:

S-1 Emergency Standby Diesel Generator Set

Cummins, Inc, Model: QSK60G6 NR2, 2919BHP, 18.91MMBTU

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RS ALAMEDA, LCC ("RED SEA")

Application: 21977 Plant: 20241