

Bay Area Air Quality Management District

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**Permit Evaluation
and
Statement of Basis
for**

**RENEWAL of
MAJOR FACILITY REVIEW PERMIT**

**for
GenOn Delta, LLC, Contra Costa Generating Station
Facility #A0018**

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June, 2011

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Application Number: 21614

TABLE OF CONTENTS

A.	Background.....	3
B.	Facility Description	5
C.	Permit Content.....	9
I.	Standard Conditions.....	9
II.	Equipment	10
III.	Generally Applicable Requirements	10
IV.	Source-Specific Applicable Requirements	11
V.	Schedule of Compliance	17
VI.	Permit Conditions	18
VII.	Applicable Limits and Compliance Monitoring Requirements	19
VIII.	Test Methods.....	23
IX.	Revision History	23
X.	Title IV Acid Rain Permit.....	23
XI.	Glossary	23
XII.	Acid Rain Permit Application.....	23
D.	Alternate Operating Scenarios:.....	23
E.	Permit Shield	23
F.	Compliance Status:.....	24
APPENDIX A	BAAQMD COMPLIANCE REPORT	25
APPENDIX B	ENGINEERING EVALUATION FOR APPLICATION 11740.....	29
APPENDIX C	GLOSSARY	35

Permit Evaluation/Statement of Basis for Renewal of Major Facility Review Permit

A. Background

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Volume 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it is a Phase II Acid Rain facility as defined by BAAQMD Regulation 2-6-217 and because it is a “major facility” as defined by BAAQMD Regulation 2-6-212. It is an Acid Rain facility because it burns fossil fuel and serves a generator that is over 25 MW that is used to generate electricity for sale. It is a “major facility” because it has the potential to emit more than 100 tons per year of a regulated air pollutant.

Major Facility Operating permits (Title V permits) must meet specifications contained in 40 CFR Part 70 as contained in BAAQMD Regulation 2, Rule 6. The permits must contain all applicable requirements (as defined in BAAQMD Regulation 2-6-202), monitoring requirements, recordkeeping requirements, and reporting requirements. The permit holders must submit reports of all monitoring at least every six months and compliance certifications at least every year.

In addition, Phase II Acid Rain facilities must meet the requirements of Title IV of the federal Clean Air Act, Acid Rain, and the Acid Rain regulations in Parts 72 through 78 of Volume 40 of the Code of Federal Regulations. These regulations were adopted and incorporated by reference in BAAQMD Regulation 2, Rule 7, Acid Rain. The main provisions of the regulations for natural gas and distillate oil fired acid rain sources, such as the ones at this facility, are the requirement to obtain one SO₂ allowance for each ton of SO₂ that is emitted, stringent monitoring requirements for NO_x, CO, CO₂, and SO₂, and stringent recordkeeping and reporting.

In the Bay Area, state and District requirements are also applicable requirements and are included in the permit. These requirements can be federally enforceable or non-federally enforceable. All applicable requirements are contained in Sections I through VI of the permit.

Each facility in the Bay Area is assigned a facility identifier that consists of a letter and a 4-digit number. This identifier is also considered to be the identifier for the permit. The identifier for this facility is A0018.

This facility received its initial Major Facility Review permit on September 14, 1998 under Pacific Gas & Electric Company. The initial Title IV permit, which was incorporated into the Major Facility Review permit, was effective on January 1, 1998. This application is for a renewal of the Title IV and Title V permits. The standard sections of the permit have been upgraded to include new standard language used in all Title V permits. Also, various other corrections have been made to the permit. The proposed permit shows all changes to the permit in ~~strikeout~~/underline format.

GenOn Delta, LLC (formerly Mirant) took ownership of the facility from Pacific Gas & Electric Company on April 16, 1999. At that time, the Major Facility Review Permit for the Contra Costa Power Plant facility was transferred from Pacific Gas & Electric Company to GenOn Delta, LLC.

The primary responsible official, secondary responsible official, and facility contact have changed.

All of these revisions are described below in the permit content section. The proposed permit shows all changes to the permit in strikeout/underline format.

The facility has submitted 17 applications since the Major Facility Review permit was issued on September 14, 1998. One application (#2610) was cancelled. Following is a list of the applications:

<u>Application #</u>	<u>Description</u>	<u>Date of Receipt</u>
19626	Minor Title V Modification	2/22/99
892	NO _x Reduction	2/2/00
1000	Proposed Unit 8	3/6/00
1119	Modification	4/4/00
2610	Banking	3/20/01 (cancelled)
4412	Exemption	3/11/02
4951	Transfer of ERC	4/22/02
5800	Transfer of ERC	7/17/02
6419	Title IV Permit Renewal	9/25/02
7180	Title V Permit Renewal	3/14/03
9283	Transfer of ERC	3/9/04
11740	Diesel Fire Pump	2/1/05
15335	Title V Admin. Amendment	10/20/06
15554	Transfer of A/C 1000 and 14550	11/30/06
22222	Condition Change	7/8/10
22223	Title V Admin. Amendment	7/8/10
21614	Title V Renewal	2/19/10

Application 892 was submitted for combustion modifications at S-9 Boiler, to enable the unit to comply with BAAQMD Regulation 9, Rule 11. The modifications were: installation of new low NO_x burners, improving the flue gas recirculation system, and over fire air systems. The proposed retrofit is part of GenOn's compliance plan under the Advanced Technology alternative Emission Control Plan ("system-wide emissions bubble") of Section 9 of District Regulation 9, Rule 11. Additional temporary permit conditions were required during the initial commissioning period. These conditions no longer apply.

Application 1000 was for Unit 8 Combined Cycle Power Plant, rated at 530 MW. An Authority to Construct was issued on 7/24/2001. Although construction has been suspended, concrete pads were poured and the permit engineer had determined that "substantial progress" had been made.

Subsequently, the Authority to Construct for Unit 8 was extended for three additional 2 year periods. The Authority to Construct was transferred in late 2006 to Pacific Gas & Electric. Unit No. 8 was renamed the Gateway Generating Station and was commissioned in 2009.

Application 1119 is for the purpose of retrofitting S-10 boiler with selective catalytic reduction (SCR). No additional permit conditions were required because these boilers are already subject to the requirements of District Regulation 9, Rule 11.

Application 4412 is for a 500kW Clean Energy Demonstration Project that was projected to have NO_x emissions of 8.6E-04 lb/day, CO + VOC emissions of 1.86 E-02 lb/day and SO₂ emissions of 5.4E-1 lb/day. The source was deemed exempt by Regulation 2-1-114.2 because the unit will be fired exclusively on natural gas with a firing rate less than 10 million Btu/hour.

Application 4951 is for a transfer of PM₁₀ and SO_x emission reduction credits owned by Mirant (now GenOn) to Ultramar. Application 5800 is for a transfer of emission reduction credits owned by Mirant (GenOn) to Midway Power. Application 9283 is for a transfer of emission reduction credits owned by Midway Power to Mirant (now GenOn). These applications do not affect the permit for the remaining sources.

Application 19626 is for incorporation of non-SIP requirements of District Regulation 9, Rule 11 into the Title V permit as explicit permit conditions. These added conditions, applied under authority of CEQA, would remain in force regardless of changes of ownership, CPUC regulatory status, or rule applicability.

Application 11740 added a diesel fire pump to the facility. Condition No. 22225 was added to the District permit.

Application 15335 changed the secondary responsible official in the Title V permit.

Application 15554 transferred the Authority to Construct for Contra Costa Unit No. 8 to PG&E.

Application 22222 added a permit limit that will require GenOn to shut down Unit 6 and Unit 7 (S-9 and S-10) on April 30, 2013 contingent upon several regulatory approvals. This condition will ensure that when GenOn receives the appropriate regulatory approvals the Contra Costa Power Plant will shut down prior to the start of commercial operation of the proposed GenOn Marsh Landing Generating Station.

Application 22233 added the condition language from Application 22222 to the Title V permit.

Application 21614 is for renewal of the Title IV and V permits, which is the subject of this action.

B. Facility Description

The facility is a power plant that produces maximum 690 MW of electrical power for commercial sale and distribution originally. The power plant includes two power generating

units consisting of steam generating boilers, steam turbines, turbogenerators and associated equipment. Boilers 9 and 10 began commercial operation in 1964.

To comply with the Acid Rain Program, established in accordance with Title IV, PG&E installed and certified Continuous Emissions Monitoring Systems (CEMS) for the 2 boilers. These CEMS are monitoring NO_x and CO emissions.

Boilers 9 and 10 at Contra Costa Power Plant are currently operating under the Advanced Technology Alternative Emission Control Plan (ATAECP) contained in BAAQMD Regulation 9-11-309. This plan specifies Systemwide NO_x emission Rate Limits that are included in the current Major facility Review Permit for Pittsburg (Plant #12), Contra Costa (Plant #18), and the former Potrero Power plant (Plant #26). As an alternative means of compliance with the ATAECF limits stated in Regulation 9-11-309, the provisions contained in BAAQMD Regulation 2, Rule 9, Interchangeable Emission Reduction Credits (IERC's) may be utilized among the three Power Plants mention above. However, the applied IERC's can only be used to offset excess emissions from the former Potrero Power Plant.

The 1998 plant inventory emissions are as follows:

Boilers	Heat Input (MM Btu/hr)	NO_x (tons/yr)	CO (tons/yr)	SO₂ (tons/yr)	VOC (tons/yr)	PM (tons/yr)	NH3 (tons/yr)
S-9	7,619,909	514.0	145.1	2.24	31.57	27.58	
S-10	11,813,895	305.7	225.0	3.48	48.94	42.76	0.0
S-20							
S-33					0.365		
S-34							
S-35							
S-37							
S-40					0.183		
S-100							
Exempt Sources					0.548		
Total	19,433,804	819.7	370.1	5.72	81.606	70.34	0.0

There has been a significant reduction in S-9 NO_x emissions due to 91% less fuel being burned and because of combustion modifications made to reduce NO_x. The modifications were: installation of new low NO_x burners, improving the flue gas recirculation system, and over fire air systems. There has also been a significant reduction in NO_x emissions at S10 Boiler due to 50% less fuel being burned and because of the installation of a NO_x abatement device (Selective Catalytic Reduction System) in 2000. The NO_x control measures were made by the owner/operator to comply with BAAQMD Regulation 9, Rule 11, "Nitrogen Oxides and Carbon Monoxide From Utility Electric Power Generating Boilers".

The 2003 plant inventory emissions are as follows:

Boilers	Heat Input, (MM Btu/hr)	NO_x (tons/yr)	CO (tons/yr)	SO₂ (tons/yr)	VOC (tons/yr)	PM (tons/yr)	NH₃ (tons/yr)
S-9	688,906	20.3	27.9	0.2	1.8	2.5	
S-10 (SCR)	5,256,233	28.9	212.0	1.6	13.9	19.2	65.525
S-20							
S-33					0.365		
S-34							
S-35							
S-37							
S-40					0.183		
S-100							
Exempt Sources					0.548		
Total	5,945,139	49.2	239.9	1.8	16.796	21.7	65.525

The change in plant emissions between 2003 and 1998 are:

Pollutant	Change in Plant Emissions (tons/yr)
NO _x	-770.50
CO	-130.2
SO ₂	-3.92
VOC	-64.81
PM	-48.64
NH ₃	+65.525

The 2009 plant inventory emissions are as follows:

Boilers	Heat Input, (MM Btu/hr)	NO_x (tons/yr)	CO (tons/yr)	SO₂ (tons/yr)	VOC (tons/yr)	PM (tons/yr)	NH₃ (tons/yr)
S-9	7.82 E05	7.90	15.28	0.24	0.57	1.15	
S-10 (SCR)	1.13 E06	5.68	22.01	0.33	0.80	1.66	0.50
S-20					0.018		
S-23					0.274		
S-24					0.292		
S-33					0.055		
S-34							
S-35							
S-37							
S-39					0.055		
S-40					0.018		
S-47					0.073		
S-100							
Exempt Sources					0.548		
Total	1.91 E06	13.58	37.29	0.57	2.70	2.81	0.50

The change in plant emissions between 2009 and 2003 are:

Pollutant	Change in Plant Emissions (tons/yr)
NO _x	-35.62
CO	-277.19
SO ₂	-1.23
VOC	-14.10
PM	-18.89
NH ₃	-65.03

The emission reductions at the Contra Costa power plant are shown above and clearly show large emission reductions for all criteria pollutants and ammonia. The fuel usage at the large boilers (S-9, S-10) has been reduced by 68% from 2003 to 2009. The large boilers are scheduled to be shutdown permanently on April 30, 2013.

Boilers 9 and 10 have been operated exclusively on natural gas since 1994 and no longer have the capability of combusting a non-gaseous fuel. Historically, the S-9 and S-10 have had the ability to burn fuel oil, therefore the requirements to monitor opacity from the boilers were deleted from the permit.

The facility also has a number of miscellaneous sources, such as sandblasting, gasoline service station, paint spray operation, sand blasting, solvent wipe cleaning operation, oil-water separator, cooling towers, and dissolved air floating unit, and a diesel-fired engine fire pump.

Regulation 9, Rule 11 contains CO limits to prevent any tradeoff of NO_x for CO since some NO_x control technologies have the potential to increase CO emissions while reducing NO_x. This regulation requires a CO concentration of no more than 400 ppmvd during steady state operation for source testing. During normal operating conditions, these boilers are subject to load swings, which may increase CO concentrations above 400 ppmvd and thus, under the circumstances, are limited by the Regulation to 1000 ppmvd (1 hour clock average). CO emissions are not expected to increase or decrease from retrofitting S-10 with an SCR system.

The addition of the SCR unit also increased the ammonia emissions. Based on the required maximum ammonia slip of 10 ppmvd (3% O₂) or 0.0044 lb NH₃/MMBtu per BAAQMD Regulation 9-11 311 and 2003 annual fuel usage, the estimated ammonia emissions are as follows:

$$(3400 \text{ MMBtu/hr})(0.0044 \text{ lb NH}_3/\text{MMBtu})(8760 \text{ hr/yr}) = 131,050 \text{ lb/yr or } 65.525 \text{ ton/yr NH}_3$$

Aqueous ammonia is stored in three horizontal steel storage tanks. These tanks are sealed and pressurized; therefore ammonia emissions to the atmosphere from tank breathing and working loss are not expected. See attached application #1119.

C. Permit Content

The legal and factual basis for the permit follows. The permit sections are described in the order presented in the permit.

I. Standard Conditions

This section contains administrative requirements and conditions that apply to all facilities. If the Title IV (Acid Rain) requirements for fossil-fuel fired electrical generating facilities or the accidental release (40 CFR § 68) programs apply, the section will contain a standard condition pertaining to these programs. Many of these conditions were derived from 40 CFR § 70.6, Permit Content, which dictates certain standard conditions that must be placed in the permit. The language that the District has developed for many of these requirements has been adopted into the BAAQMD Manual of Procedures, Volume II, Part 3, Section 4, and therefore must appear in the permit.

The standard conditions also contain references to BAAQMD Regulation 1 and Regulation 2. These are the District's General Provisions and Permitting rules.

The facility is subject to Standard Condition I.K., Accidental Release, because of aqueous ammonia storage with 30,000 gallons capacity at 30% by weight.

Changes to permit:

- The rule dates in Standard Condition I.A have been updated and corrected. Regulation 2, Rule 5 and Regulation 2, Rule 9 have been added to this section.

II. Equipment

This section of the permit lists all permitted or significant sources. Each source is identified by an S and a number (e.g., S-10).

Permitted sources are those sources that require a BAAQMD operating permit pursuant to BAAQMD Rule 2-1-302.

Significant sources are those sources that have a potential to emit more than 2 tons of a “regulated air pollutant,” as defined in BAAQMD Rule 2-6-222, per year or 400 pounds of a “hazardous air pollutant,” as defined in BAAQMD Rule 2-6-210, per year.

Major Facility Review permits list all abatement (control) devices.

The equipment section is considered to be part of the facility description. It contains information that is necessary for applicability determinations, such as fuel types, contents or sizes of tanks, etc. This information is part of the factual basis of the permit.

Each of the permitted sources has previously been issued an authority to construct or a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. These permits are issued in accordance with state law and the District’s regulations.

Changes to permit:

S-47 Diesel Fire Pump has been added to Table II-A.

III. Generally Applicable Requirements

This section of the permit lists requirements that generally apply to all sources at a facility including insignificant sources and portable equipment that may not require a District permit. If a generally applicable requirement applies specifically to a source that is permitted or significant, the standard will also appear in Section IV and the monitoring for that requirement will appear in Sections IV and VII of the permit. Parts of this section apply to all facilities (e.g., particulate, architectural coating, odorous substance, and sandblasting standards). In addition, standards that apply to insignificant or unpermitted sources at a facility (e.g., refrigeration units that use more than 50 pounds of an ozone-depleting compound) are placed in this section.

Unpermitted sources are exempt from normal District permits pursuant to an exemption in BAAQMD Regulation 2, Rule 1. They may, however, be specifically described in a Major Facility Review permit if they are considered significant sources pursuant to the definition in BAAQMD Rule 2-6-239.

Changes to permit:

Language has been added to Section III to clarify that this section contains requirements that may apply to temporary sources. This provision requires contractors that have "portable" equipment permits to comply with all applicable requirements to work at the facility on a temporary basis, even if the permit does not specifically list the temporary source. Examples are temporary sandblasting or soil-vapor extraction equipment.

Section III has been modified to state that SIP standards are now found on EPA's website and are not included as part of the permit.

Table III has been updated by adding the following rules and standards to conform to current practice:

- SIP Regulation 2, Rule 1, Section 429, Federal Emissions Statement
- Regulation 6, Rule 1, Particulate Matter and Visible Emissions
- SIP Regulation 6, Particulate Matter and Visible Emissions
- Regulation 8, Rule 3 Organic Compounds – Architectural Coatings
- SIP Regulation 8, Rule 40, Aeration of Contaminated Soil and Removal of Underground Storage Tanks
- SIP Regulation 8, Rule 47, Air Stripping and Soil Vapor Extraction Operations
- SIP Regulation 9, Rule 1, Sulfur Dioxide

The dates of adoption or approval of the rules and their "federal enforceability" status in Table III have also been updated.

IV. Source-Specific Applicable Requirements

This section of the permit lists the applicable requirements that apply to permitted or significant sources. These applicable requirements are contained in tables that pertain to one or more sources that have the same requirements. The order of the requirements is:

- District Rules
- SIP Rules (if any) are listed following the corresponding District rules. SIP rules are District rules that have been approved by EPA for inclusion in the California State Implementation Plan (SIP). SIP rules are "federally enforceable" and a "Y" (yes) indication will appear in the "Federally Enforceable" column. If the SIP rule is the current District rule, separate citation of the SIP rule is not necessary and the "Federally Enforceable" column will have a "Y" for "yes". If the SIP rule is not the current District rule, the SIP rule or the necessary portion of the SIP rule is cited separately after the District rule. The SIP portion will be federally enforceable; the non-SIP version will not be federally enforceable, unless EPA has approved it through another program.
- Other District requirements, such as the Manual of Procedures, as appropriate.
- Federal requirements (other than SIP provisions)
- BAAQMD permit conditions. The text of BAAQMD permit conditions is found in Section VI of the permit.
- Federal permit conditions. The text of Federal permit conditions, if any, is found in Section VI of the permit.

Section IV of the permit contains citations to all of the applicable requirements for particular sources. The text of the requirements is found in the regulations, which are readily available on the District's or EPA's websites, or in the permit conditions, which are found in Section VI of the permit. All monitoring requirements are cited in Section VII. Section VII is a cross-reference between the limits and monitoring requirements.

Complex Applicability Determinations

The facility is not subject to 112(j) of the Clean Air Act because it is not a major source of hazardous air pollutants.

Per 40 CFR 64.2(a), an emission unit is subject to 40 CFR 64, Compliance Assurance Monitoring, if the unit is subject to a federally enforceable requirement for a pollutant, the pollutant is controlled by an abatement device, and the emissions of the pollutant before abatement are more than 100% of the major source thresholds. The potential to emit for each boiler is greater than 100 tons/year each for NO_x and CO. The boilers are exempt from CAM requirements for NO_x per 40 CFR Part 64.2(b)(iii) since the facility is subject to the acid rain permit program. The boilers are not subject to CAM requirements for CO since there is no abatement device for this pollutant.

40 CFR Part 72, Acid Rain Program

The boilers are subject to the Acid Rain program contained in 40 CFR Parts 72 through 78 (including Part 75 monitoring requirements) because they are utility units as defined in 40 CFR 72.2.

Part 72, Subpart A, establishes general provisions and operating permit program requirements for sources and affected units under the Acid Rain program, pursuant to Title IV of the Clean Air Act. The gas turbines are affected units subject to the program in accordance with 40 CFR Part 72, Subpart A, Section 72.6(a)(3)(i). The facility continues to meet 72.9 Standard Requirements which requires the submission of a complete acid rain permit application, the possession of a valid acid rain permit, meeting the monitoring requirements of part 75, and holding sufficient allowances, and comply with the acid rain SO₂ limit. The facility is expected to comply with the excess emissions, recordkeeping and reporting requirements in 72.9(e) and 72.9(f).

Part 72, Subpart C, contains requirements for acid rain permit applications and compliance plans. The facility is expected to continue to meet these requirements.

Part 72, Subpart E, contains the requirements for the acid rain permit which must include all elements of a complete acid rain application.

40 CFR Part 75, Continuous Emission Monitoring

Part 75, Subpart A, contains the applicability criteria, compliance dates, and prohibitions. The emissions units at the facility are subject to Part 72 and are therefore subject to Part 75. The NO_x monitoring is subject to part 75 per 75.2(c). The facility is expected to continue to meet the compliance dates and prohibitions contained in part 75 Subpart A.

Part 75, Subpart B, contains specific monitoring provisions for each pollutant subject to part 75. The emissions units at this facility are required to meet the SO₂, NO_x, CO₂ monitoring requirements contained in 75.10(a)(1), 75.10(a)(2), 75.10(a)(3) Opacity monitoring under 75.10(a)(4) is not required for gas fired units in accordance with 75.14(c). 75.10(b) requires each CEM to meet equipment, installation, and performance specification in part 75 Appendix A and quality assurance/quality control in Appendix B. 75.10(c) requires heat input rate monitoring to meet requirements contained in part 75 Appendix F. The facility is expected to continue to comply with the requirements contained in 75.10(b) and (c).

75.10(d) contains primary equipment hourly operating requirements that require the CEM to monitor emissions when the emissions unit combusts fuel except as specified in 75.11(e) and during periods of calibration, quality assurance, or preventive maintenance, performed pursuant to §75.21 and appendix B of this part, periods of repair, periods of backups of data from the data acquisition and handling system, or recertification performed pursuant to §75.20. This section also contains requirements for calculating hourly averages from four 15-minute periods and validity of data and data substitution. Emission concentrations for a given hour are not considered valid unless it is based on four valid measurements. The data substitution requirements are contained in Subpart D. The facility is expected to continue to comply with the requirements contained in 75.10(d). 75.10(f) specifies minimum measurement capability requirement for CEMs and 75.10(g) contains the minimum recordkeeping and reporting requirements. The facility is expected to continue to meet 75.10(f) and (g).

75.11 contains specific provisions for SO₂ monitoring. 75.11(d)(2) allows the use of Appendix D to monitor SO₂ emissions from gas fired units. The facility monitors sulfur content of the natural gas to meet Part 75 SO₂ monitoring requirements.

75.12 contains specific provisions for NO_x emission rates. The facility uses a NO_x CEM and an O₂ monitor to meet this requirement.

75.13 contains CO₂ monitoring requirements. The facility monitors CO₂ in accordance with this section using the procedures in part 75 Appendix G.

75.14 contains opacity monitoring requirements. The facility is exempt from opacity monitoring under part 75 per 75.14(c).

Part 75 Subpart C contains operation and maintenance requirements including certification and recertification of the CEMs, quality assurance/quality control requirements, reference test methods, and out-of-control periods and adjustment for system bias. The facility is expected to continue to meet these requirements.

Part 75, Subpart D (75.30 through 75.36) contains Missing Data Substitution Procedures for SO₂, NO_x, flowrate, CO₂, and heat input procedures. The facility is expected to continue to meet these requirements.

Part 75, Subpart F contains the recordkeeping requirements including the contents of a part 75 monitoring plan. This subpart requires the facility to record the operating time, heat input rate, and load for each emissions unit. Additionally, the facility must record emissions data for SO₂, NO_x, CO₂, and O₂ along with quality assurance/quality control information.

Part 75, Subpart G contains the reporting requirements for affected facilities subject to part 75. The facility is expected to continue to meet these requirements.

40 CFR Part 98, Mandatory Green House Gas Reporting

The boilers are subject to state and federal mandatory green house gas reporting requirements (40 CFR Part 98, Title 17 CCR Subchapter 10, Article 2). The facility is expected to meet the federal green house gas reporting requirements.

Title 17 California Code of Regulations, Subchapter 10, Article 2

The facility is expected to meet the state green house gas reporting requirements.

Regulation 8, Rule 8

S-34 Fixed Roof Oil Water Surge Tank; S-35 API Separator; S-37 Dissolved Air Flotation

This equipment is associated with the large fuel oil tanks that are onsite. The majority of these tanks have been drained and have some residual oil. Regulation 8, Rule 8 contains the following exemptions that apply to S-34, S-35, and S-37.

8-8-112 Exemption, Wastewater Critical Organic Compound Concentration Or

Temperature: The requirements of Sections 8-8-301, 302, 306, 307, and 308 shall not apply to any wastewater separation system that processes influent wastewater with a temperature of less than 20 degrees C (68 oF) except at petroleum refineries. Wastewater having a concentration of less than 1.0 ppm (volume) critical organic compounds, as defined in Section 8-8-210, dissolved in the water samples, is exempt from the requirements of Sections 8-8-301, 302, 306, 307, 308, 312 and 313. The requirements of Section 8-8-502 must be met.

(Adopted 11/1/89; Amended 9/15/04)

8-8-113 Exemption, Secondary Wastewater Treatment Processes And Stormwater

Sewer Systems: The requirements of Sections 8-8-301, 302, 306, and 308 shall not apply to any secondary wastewater treatment processes or stormwater sewer systems, as defined in Sections 8-8-208 and 216, that are used as a wastewater polishing step or for collection of stormwater that is segregated from the process wastewater collection system.

Changes to permit:

Section IV has been modified to remove the statement that SIP standards are now found on EPA's website and are not included as part of the permit.

The dates of adoption or approval of the rules and their "federal enforceability" status have been updated.

Regulation 6, Rule 1 requirements were added to Table IV-A and Table IV-B.

SIP Regulation 6 requirements were added to Table IV-A and Table IV-B.

The citation for Regulation 9, Rule 11, Section 401 was removed from Table IV-A and IV-B since the facility is meeting the Rule requirements and S-10 has been retrofitted with an SCR.

The citation for Regulation 11, Rule 1 Hazardous Pollutants, Lead were removed from Table IV-A and IV-B since the facility can no longer burn fuel oil in the boilers (See Condition No. 672).

Regulatory citations to Table IV-A and IV-B associated with Part 72 Acid Rain Program were added.

Regulatory citations to Table IV-A and IV-B associated with Part 75 Acid Rain Program were added.

Citations to Table IV-A and IV-B for 40 CFR Part 98 mandatory federal green house gas reporting requirements were added.

Citations to Table IV-A and IV-B for Air Resources Board mandatory green house gas reporting requirements were added (Title 17 CCR, Chapter 10, Article 2).

Condition 672, Part 2, has been removed from Table IV-B since S-10 is no longer fired on liquid fuels.

Condition 672, Part 7, has been added to Table IV-A and IV-B. This condition requires GenOn to shutdown S-9 and S-10 after receiving the appropriate regulatory approvals. This permit change was processed as an administrative amendment under Application 22223.

S20, Service Station:

A typo was corrected on the citation for 8-7-301.13 and 8-7-302.14.

S33, Paint Spray Operation-Maintenance:

The requirements for this source have been updated. The current District Regulation 8, Rule 3, Architectural Coatings, adopted on July, 1, 2009, has been included. The January 2, 2004 version of the rule has been approved into the SIP and added to Table IV-D.

S34, Fixed Roof Oil Water Surge Tank

Added 8/29/04 SIP version of Regulation 8, Rule 8 to Table IV-E.

S35, API Separator

Added 8/29/04 SIP version of Regulation 8, Rule 8 to Table IV-F.

S37, Dissolved Air Flotation

Added 8/29/04 SIP version of Regulation 8, Rule 8 to Table IV-G.

S40, Solvent Wipe Cleaning Operation:

The requirements for this source have been updated. 8-16-304 and 8-16-501.1 have been removed from Table IV-H since the facility no longer uses Trichloroethylene. 8-16-501.1 was removed from Table IV-H since this requirement has been deleted from the Rule. 8-16-501.2 solvent recordkeeping for non-wipe cleaning operations has been removed.

S100, Sand Blast Facility

Added Regulation 6, Rule 1 and SIP Regulation 6 requirements to Table IV-I.

S47, Diesel Fire Pump

Added Regulation 6, Rule 1 and SIP Regulation 6 requirements to Table IV-J.
Added Condition No. 22851 to Table IV-J.

V. Schedule of Compliance

A schedule of compliance is required in all Major Facility Review permits pursuant to BAAQMD Regulation 2-6-409.10 which provides that a major facility review permit shall contain the following information and provisions:

“409.10 A schedule of compliance containing the following elements:

- 10.1 A statement that the facility shall continue to comply with all applicable requirements with which it is currently in compliance;
- 10.2 A statement that the facility shall meet all applicable requirements on a timely basis as requirements become effective during the permit term; and
- 10.3 If the facility is out of compliance with an applicable requirement at the time of issuance, revision, or reopening, the schedule of compliance shall contain a plan by which the facility will achieve compliance. The plan shall contain deadlines for each item in the plan. The schedule of compliance shall also contain a requirement for submission of progress reports by the facility at least every six months. The progress reports shall contain the dates by which each item in the plan was achieved and an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.”

There are no changes to the permit in this section.

VI. Permit Conditions

The existing permit conditions are derived from previously issued District Authorities to Construct (A/C) or Permits to Operate (P/O). Permit conditions may also be imposed or revised as part of the annual review of the facility by the District pursuant to California Health and Safety Code (H&SC) § 42301(e), through a variance pursuant to H&SC § 42350 *et seq.*, an order of abatement pursuant to H&SC § 42450 *et seq.*, or as an administrative revision initiated by District staff. After issuance of the Title V permit, permit conditions will be revised using the procedures in Regulation 2, Rule 6, Major Facility Review. Permit conditions may also be derived from periodic monitoring requirements pursuant to BAAQMD Regulation 2-5-503, Monitoring.

Each permit condition is identified with a unique numerical identifier, up to five digits. Each part of the condition is also identified by a part number and each subpart is identified by a letter (for example, Condition 672, part 1a).

The regulatory basis is listed following each condition. The regulatory basis may be a rule or regulation. The District is also using the following terms for regulatory basis:

- **BACT:** This term is used for a condition imposed by the Air Pollution Control Officer (APCO) to ensure compliance with the Best Available Control Technology in Regulation 2-2-301.
- **Cumulative Increase:** This term is used for a condition imposed by the APCO that limits a source's operation to the operation described in the permit application pursuant to BAAQMD Regulation 2-1-403.
- **Offsets:** This term is used for a condition imposed by the APCO to ensure compliance with the use of offsets for the permitting of a source or with the banking of emissions from a source pursuant to Regulation 2, Rules 2 and 4.
- **PSD:** This term is used for a condition imposed by the APCO to ensure compliance with a Prevention of Significant Deterioration permit issued pursuant to Regulation 2, Rule 2.
- **TRMP:** This term is used for a condition imposed by the APCO to ensure compliance with limits that arise from the District's Toxic Risk Management Policy.
- **Recordkeeping:** This term is used for a condition imposed by the APCO to ensure compliance with equipment and process operating limits.

Any changes to existing permit conditions are clearly shown in "strike-out/underline" format in the proposed permit. When the permit is issued, all "strike-out" language will be deleted and all "underline" language will be retained, subject to consideration of comments received.

Condition 672

This condition was revised under Application 22223 as an administrative amendment. The condition requires GenOn to shutdown S-9 and S-10 after receiving certain required regulatory approvals.

Condition 8854

The basis was added to recordkeeping requirement in Part 3 (2-6-501).

Condition 8855

The basis was added to recordkeeping requirement in Part 3 (2-6-501).

Condition 22225 Changed to 22851

This condition for the diesel fire pump has been changed from Condition 22225 to 22851 in Section VI.

VII. Applicable Limits and Compliance Monitoring Requirements

This section of the permit is a summary of numerical limits and related monitoring requirements for each source. The summary includes a citation for each monitoring requirement, frequency of monitoring, and type of monitoring. The applicable requirements for monitoring are completely contained in Sections IV, Source-Specific Applicable Requirements, and VI, Permit Conditions, of the permit.

The District has reviewed all monitoring and has determined the existing continuous emission monitoring is adequate. For the boiler equipped with SCR, the equipment needs to test for ammonia slip concentration quarterly as specified in BAAQMD Regulation 9-11-311.

The tables below contain only the limits for which there is no monitoring or inadequate monitoring in the applicable requirements. The District has examined the monitoring for other limits and has determined that monitoring is adequate to provide a reasonable assurance of compliance. Calculations for potential to emit will be provided in the discussion when no monitoring is proposed due to the size of a source.

Monitoring decisions are typically the result of a balancing of several different factors including: 1) the likelihood of a violation given the characteristics of normal operation, 2) degree of variability in the operation and in the control device, if there is one, 3) the potential severity of impact of an undetected violation, 4) the technical feasibility and probative value of indicator monitoring, 5) the economic feasibility of indicator monitoring, and 6) whether there is some other factor, such as a different regulatory restriction applicable to the same operation, that also provides some assurance of compliance with the limit in question.

These factors are the same as those historically applied by the District in developing monitoring for applicable requirements. It follows that, although Title V calls for a re-examination of all monitoring, there is a presumption that these factors have been appropriately balanced and incorporated in the District's prior rule development and/or permit issuance. It is possible that, where a rule or permit requirement has historically had no monitoring associated with it, no monitoring may still be appropriate in the Title V permit if, for instance, there is little likelihood of a violation. Compliance behavior and associated costs of compliance are determined in part by the frequency and nature of associated monitoring requirements. As a result, the District will generally revise the nature or frequency of monitoring only when it can support a conclusion that existing monitoring is inadequate.

PM Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S9 and S10 Boilers	BAAQMD Regulation 6-301	Ringelmann 1.0 for less than 3 min/hr	None
S9 and S10 Boilers	BAAQMD Regulation 6-304	Ringelmann 2.0 or greater than 40% opacity for less than 3 min/hr during tube cleaning	None
S9 and S10 Boilers	BAAQMD Regulation 6-310	0.15 gr/dscf	None
S9 and S10 Boilers	BAAQMD Regulation 6-310.3	0.15 gr/dscf at 6% O ₂	None

PM Discussion:

BAAQMD Regulation 6 “Particulate Matter and Visible Emissions”

Visible Emissions

Source S9 and S10 Boilers, had opacity monitors pursuant to District Regulation 1-520.1 because they held a permit to burn fuel oil. The facility gave up the permit to burn fuel oil and has accepted a condition to burn natural gas exclusively at this source. Therefore, the source will no longer have an opacity monitor. The Title IV Acid Rain regulation, 40 CFR 75 (75.14(c)), exempts gas-fired equipment from the requirement for opacity monitoring.

Moreover, in EPA's June 24, 1999 agreement with CAPCOA and ARB, "Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", EPA has agreed that natural-gas-fired combustion sources do not need additional monitoring to verify compliance with Regulation 6, Visible Emissions. Therefore, no monitoring is necessary for this requirement.

Particulate Weight Limitation

BAAQMD Regulation 6-310 limits filterable particulate (FP) emissions from any source to 0.15 grains per dry standard cubic foot (gr/dscf) of exhaust volume. Section 310.3 limits filterable particulate emissions from “heat transfer operations” to 0.15 gr/dscf @ 6% O₂. These are the “grain loading” standards.

S9 and S10 Boilers

S9 and S10 Boilers are subject to BAAQMD Regulation 6-310.3, 0.15 gr/dscf PM @ 6% O₂. No monitoring has been imposed because the margin of compliance is high, as shown by the following calculation.

Natural Gas

The AP-42 factor for natural gas combustion is 7.6 lb/million standard cubic feet of natural gas (MMscf).

Converting to an emission factor per MMbtu:

$$(7.6 \text{ lb/MMscf}) \times (\text{MMscf}/1,050 \text{ MMbtu}) = 0.00724 \text{ lb/MMbtu}$$

The flue gas production rate for natural gas at 0% oxygen is 8,710 dscf. At 6% oxygen, the production rate is:

$$(20.9/20.9-6) (8710 \text{ dscf}) = 12,217 \text{ dscf}$$

The calculated particulate loading is:

$$(0.00724 \text{ lb PM/MMbtu}) \times (7000 \text{ gr/lb}) / (12,217 \text{ dscf/MMbtu}) = 0.004 \text{ gr/dscf}$$

The ratio of the limit to the calculated grain loading is 37.5:1, therefore, no additional monitoring is necessary to assure compliance.

SO₂ Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S9 and S10 Boilers	BAAQMD 9-1-301	Ground level concentrations of SO ₂ shall not exceed: 0.5 ppm for 3 consecutive minutes AND 0.25 ppm averaged over 60 consecutive minutes AND 0.05 ppm averaged over 24 hours	None
S9 and S10 Boilers	BAAQMD 9-1-302	300 ppm (dry)	None

SO₂ Discussion:

BAAQMD Regulation 9-1-301

Area monitoring to demonstrate compliance with the ground level SO₂ concentration requirements of Regulation 9-1-301 is at the discretion of the APCO (per BAAQMD Regulation 9-1-501). This facility does not have equipment that emits large amounts of SO₂ and therefore is not required to have ground level monitoring by the APCO.

All facility combustion sources are subject to the SO₂ emission limitations in District Regulation 9, Rule 1 (ground-level concentration and emission point concentration). In EPA's June 24, 1999 agreement with CAPCOA and ARB, "Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", EPA has agreed that natural-gas-fired combustion sources do not need additional monitoring to verify compliance with Regulation 9, Rule 1, since violations of the regulation are unlikely. Therefore, no monitoring is necessary for this requirement for S9 and S10 Boilers, which will exclusively burn natural gas.

Following is a list of revisions to Section VII:

Added Regulation 6, Rule 1 and SIP Regulation 6 requirements to Table VII-A and VII-B.
Updated the Regulation 9, Rule 11 NO_x lb/MMBtu emission limit to 0.018 lbs/MMBtu in Table VII-A and VII-B.

The citation for Regulation 11, Rule 1 Hazardous Pollutants, Lead were removed from Table VII-A and VII-B since the facility can no longer burn fuel oil in the boilers (See Condition No. 672).

Updated references to Condition 16327 part 3 in Table VII-A and VII-B to reflect current Regulation 9, Rule 11 requirements.

S-20, Service Station

In Table VII-C for S-20, Section 8-7-301.1 was corrected to 8-7-301.10.

S-33, Maintenance Coating Operation

Regulation 8-3-302 has been removed from Table VII-D, since maintenance coating VOC limits are contained in 8-3-301.

S-34, Fixed Roof Oil Water surge Tank; S-35, API Separator; S-37, Dissolved Air Flotation (DAF)

Added SIP 8-8-112 to Table VII-E.

Added Regulation 8, Rule 16, Section 111 was added to Table VII-F.

S-40, Wipe Cleaning-Facility Wide

Removed 8-16-304 from Table VII-F, since wipe cleaning is exempt from this section in accordance with 8-16-111. The facility is still required to maintain records of solvent use in accordance with 8-16-501.3.

S-100, Sand Blasting

Added Regulation 6, Rule 1 and SIP Regulation 6 requirements.

S-47, Diesel Fire Pump

Added Table VII-H to the Title V permit for the facility.

VIII. Test Methods

This section of the permit lists test methods that are associated with standards in District or other rules. It is included only for reference. In most cases, the test methods in the rules are source test methods that can be used to determine compliance but are not required on an ongoing basis. They are not applicable requirements.

If a rule or permit condition requires ongoing testing, the requirement will also appear in Section VII of the permit.

Changes to permit

The test methods for Regulation 11 have been deleted since the boilers only burn natural gas (See Condition No. 672) and are no longer a significant source of lead emissions.

IX. Revision History

Changes have been documented in the Title V permit and SOB.

X. Title IV Acid Rain Permit

The Title IV Acid Rain permit is contained in the Title V permit. 40 CFR 75 requires that it contain the following elements:

- Statement of Basis
- SO₂ allowance allocations and NO_x requirements, if any.
- Any comments, notes or justifications regarding permit decisions
- The permit application (attached at the end of the Title V permit)

Changes to permit

The name of the Designated Representative has been changed. The dates of the permit term have been updated.

XI. Glossary

Additions and corrections have been made to the glossary.

XII. Acid Rain Permit Application

The Title IV Permit Application is considered part of the Title IV permit and therefore, is attached to the permit.

D. Alternate Operating Scenarios:

No alternate operating scenario has been requested for this facility.

E. Permit Shield

The District rules allow two types of permit shields. The permit shield types are defined as follows: (1) A provision in a major facility review permit that identifies and justifies specific federally enforceable regulations and standards are not applicable to a source or group of sources, or (2) A provision in a major facility review permit that identifies and justifies specific federally enforceable applicable requirements for monitoring, recordkeeping and/or reporting which are

subsumed because other applicable requirements for monitoring, recordkeeping, and reporting in the permit will assure compliance with all emission limits.

The second type of permit shield is allowed by EPA's White Paper 2 for Improved Implementation of the Part 70 Operating Permits Program. The District uses the second type of permit shield for all streamlining of monitoring, recordkeeping, and reporting requirements in Major Facility Review permits. The District's program does not allow other types of streamlining in Major Facility Review permits.

This facility has no permit shields.

F. Compliance Status:

An office memorandum from the Director of Compliance and Enforcement dated , to the Director of Engineering, presents a review of the compliance record of GenOn (Site #: A0018). The Compliance and Enforcement Division staff has reviewed the records for the period from . This review was initiated as part of the District evaluation of an application by the facility for a Title V permit renewal. During the period subject to review, activities known to the District include:

- The District did not receive any alleged complaints.
- The District did not issue any Notices of Violation during this review period.
- The facility is not operating under a Variance or an Order of Abatement from the District Board of Directors.
- No monitor excesses were reported or documented.

The owner certified that all equipment was operating in compliance on . No ongoing non-compliance issues have been identified to date.

APPENDIX A

BAAQMD COMPLIANCE REPORT

COMPLIANCE & ENFORCEMENT DIVISION

Inter-Office Memorandum

July 13, 2011

TO: JOHN CHILADAKIS – DIRECTOR OF ENGINEERING *JCH*

FROM: BRIAN BATEMAN – DIRECTOR OF ENFORCEMENT *BB*

SUBJECT: REVIEW OF COMPLIANCE RECORD OF:

GENON DELTA, LLC, CONTRA COSTA GENERATING STATION; SITE #A0018

Background

This review was initiated as part of the District evaluation of an application by GENON DELTA, LLC, CONTRA COSTA GENERATING STATION (GENON DELTA, LLC) for a Title V Permit Renewal. It is standard practice of the Compliance and Enforcement Division to undertake a compliance record review in advance of a renewal of a Title V Permit to Operate. The purpose of this review is to assure that any non-compliance problems identified during the prior five-year permit term have been adequately addressed, or, if non-compliance persists, that a schedule of compliance is properly incorporated into the Title V permit compliance schedule. In addition, the review checks for patterns of recurring violation that may be addressed by additional permit terms. Finally, the review is intended to recommend, if necessary, any additional permit conditions and limitations to improve compliance.

GENON DELTA, LLC is a power generation facility using natural-gas to fire a Boiler which in turn powers steam Turbines. Continuous Emission Monitors are in place to measure applicable pollutants.

Compliance Review

1. Violation History

Staff reviewed GENON DELTA, LLC Annual Compliance Certifications from for **9/19/05 to 6/30/11** and found no ongoing non-compliance and no recurring pattern of violations.

Staff also reviewed the District compliance records for GENON DELTA, LLC for **9/15/05 through 6/30/11**. During this period GENON DELTA, LLC activities known to the District include:

REVIEW OF COMPLIANCE RECORD OF:
GENON DELTA, LLC, CONTRA COSTA GENERATING STATION – SITE #A0018
 July 13, 2011
 Page 2 of 3

District-issued Notice of Violation:

NOV#	Regulation	Date Occur	# of Days	Comments	Disposition
A49155A	1-522.7	08/17/07	2-prediscovery	Excess Not Reported within 96 hrs	Resolved
A49155B	2-6-502	08/17/07	2-prediscovery	Excess Not Reported within 10 days	Resolved

The District received **5** notifications for Reportable Compliance Activities (RCA).

Episode	Date Occur	# of Days	Comments	Disposition
04V38	6/10/06	1	Breakdown	Cancelled
04V39	6/10/06	1	Excess—Bad SPLC Card	Cancelled
05C08	8/17/07	1	Excess CO	NOV A49155
05C09	8/28/07	1	Excess CO	NOV A49155
05E80	3/17/08		Pending District approval	unresolved
05K17	12/08/08		Pending District approval	unresolved
05L93	4/20/09	1	Excess Emission NOx	No Action

2. Complaint History

The District did not receive any air pollution complaints alleging GENON DELTA, LLC as the source.

3. Reportable Compliance Activity

Reportable Compliance Activity (RCA), also known as “Episode” reporting, is the reporting of compliance activities involving a facility as outlined in District Regulations and State Law. Reporting covers breakdown requests, indicated monitor excesses, pressure relief device releases, inoperative monitor reports and flare monitoring.

Within the permit period, **9/15/05 – 6/30/11**, the District received **7** notifications for RCA's. **1** NOV's were issued as a result of these RCA's.

4. Enforcement Agreements, Variances, or Abatement Orders

There were no enforcement agreements, variances, or abatement orders for GENON DELTA, LLC over the period of the initial permit period or thereafter.

REVIEW OF COMPLIANCE RECORD OF:

GENON DELTA, LLC, CONTRA COSTA GENERATING STATION – SITE #A0018

July 13, 2011

Page 3 of 3

Conclusion

Following its review of all available facility and District compliance records from the date of issuance of GENON DELTA, LLC's initial Title V permit until the present (9/15/05 to 6/30/11), the District's Compliance and Enforcement Division has determined that GENON DELTA, LLC was in intermittent compliance from the initial permit period through the present. However, GENON DELTA, LLC has demonstrated no evidence of ongoing noncompliance and no recurring pattern of violations that would warrant consideration of a Title V permit compliance schedule for this facility.

Based on this review and analysis of all the violations for the 5 -year period, the District has concluded that no schedule of compliance or change in permit terms is necessary beyond what is already contained in the facility's current Title V permit.

APPENDIX B

ENGINEERING EVALUATION FOR APPLICATION 11740

**Engineering Evaluation
S-41 Emergency Standby Diesel Engine/Fire Pump
Mirant Delta, LLC. Plant # 18
Application # 11740**

Background

Mirant Delta, LLC. operates a power plant in Antioch, CA. This application is for a LOE Permit to Operate for an emergency back-up firepump. The Diesel driven fire pump is:

**S-41 Emergency Standby Diesel Fire Pump, Cummins, Model C8.3-F2, 270
BHP**

This engine is subject to the new Stationary Diesel Engine ATCM as an in-use emergency stand-by engine.

Emissions Calculations

The S-2 Diesel Engine has not been certified by CARB. However, ISO 8178 D2 Cycle emission factors have been provided. Operation for maintenance and reliability purposes are 50 hours per year, planned at one-half hour per week, 52 weeks per year, with an allowance of an additional 24 hours for operating the engine after a maintenance problem is repaired. The emissions are summarized in the following table:

Pollutant	Engine Emissions gm/hp-hr	Maximum Emissions Lb/day	Emissions Lb/yr for 50 hours	Emissions Tons/yr for 50 hours
NOx	4.70	67.1	139.8	0.070
CO	0.66	9.42	19.6	0.010
Organics	0.24	3.4	7.14	0.004
PM-10	0.11	1.6	1.57	0.001
SO2	0.930 (Note 1)	13.3	27.7	0.014

Note 1: Based on the 0.00205 lb/hp-hr of AP-42.

The emission calculations are as follows:

Hours of Operation = 50 hr/yr (1/2 hour per week plus 24 extra hours for troubleshooting)
 Fuel Consumption = 12.72 gal/hr
 Estimated Fuel Usage = 12.72 gal/hr X 50 hr/yr = 636 gal/yr.
 Engine power = 270 HP

NOx = 4.70 gm/hp-hr (270 hp)(1 lb/453.6 gm)(50 hr/yr) = 139.8 lb/yr or 0.070 TPY

CO = 0.66 gm/hp-hr (270 hp)(1 lb/453.6 gm)(50 hr/yr) = 19.6 lb/yr or 0.010 TPY

POC = 0.24 gm/hp-hr (270 hp)(1 lb/453.6 gm)(50 hr/yr) = 7.14 lb/yr or 0.004 TPY

PM10 = 0.11 gm/hp-hr (270 hp)(1 lb/453.6 gm)(50 hr/yr) = 1.57 lb/yr or 0.001 TPY

SO₂ = (0.00205 lb/hp-hr)(270 hp)(50 hr/yr) = 27.7 lb/yr or 0.014 TPY

Plant Cumulative Emissions

There is no cumulative increase since this is a Loss of Exclusion source.

Toxics Risk Screening Analysis

There is no toxic risk screening analysis since this is a Loss of Exclusion source.

BACT

Since this engine was on site prior to September 1, 2001, BACT does not apply.

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, 2006, there is a prohibition on the operation of in-use Diesel emergency standby engines greater than 50 bhp unless certain operating requirements and emission standards are met. The philosophy used in the ATCM for in-use engines is to limit the non-emergency hours of operation based on the PM10 emissions. These standards are summarized in the ATCM Table 2 excerpt below:

TABLE 2: SUMMARY OF THE EMISSION STANDARDS AND OPERATING REQUIREMENTS FOR IN-USE STATIONARY EMERGENCY STANDBY DIESEL-FUELED CI ENGINES > 50 BHP (SEE SUBSECTION (e)(2)(B)3.)			
DIESEL PM			
DIESEL PM STANDARDS (g/bhp-hr)	MAXIMUM ALLOWABLE ANNUAL HOURS OF OPERATION FOR ENGINES MEETING DIESEL PM STANDARDS		
	Emergency Use	Non-Emergency Use	
		Emission Testing to show compliance¹	Maintenance & Testing (hours/year)
>0.40 ²	Not Limited by ATCM ²	Not Limited by ATCM ²	20
>0.15 and ≤ 0.40	Not Limited by ATCM ²	Not Limited by ATCM ²	21 to 30
>0.01 and ≤ 0.15	Not Limited by ATCM ²	Not Limited by ATCM ²	31 to 50 (Upon approval by the District)
≤ 0.01	Not Limited by ATCM ²	Not Limited by ATCM ²	51 to 100 (Upon approval by the District)

1. Emission testing limited to testing to show compliance with subsections (e)(2)(B)3.
2. May be subject to emission or operational restrictions as defined in current applicable district rules, regulations, or policies.

Since this engine emits PM10 at 0.11 g/bhp-hr, the engine is allowed to operate no more than 50 hours annually for maintenance and reliability purposes. For the other criteria pollutants, the ATCM requires the engine to meet the Tier 1 standards in Title 13, CCR, Section 2423 for off-road engines of the same horsepower rating, irrespective of the new engine's model year:

	S-2 D2 Cycle g/bhp-hr	ATCM Tier 1 g/bhp-hr
NOx	4.70	6.9
CO	0.66	8.5

HC (POC)	0.24	1.0
NMHC+NOx	N/A	none

The other requirements of the ATCM are as follows:

(e)(1)(B): The engine is required to use only CARB certified fuel, requiring refilling of any fuel tanks with 15ppm Sulfur Diesel after January 1, 2006 (any 500 ppm Sulfur Diesel can be used until consumed).

(e)(4)(A)2.: The Owner/Operator shall provide to the District by 7/1/05 the information listed in (e)(4)(A)3. Most of this information is included in Data Form ICE, but not all the information. Per (e)(4)(A)5., the District can exempt the Owner/Operator from supplying information already in District Records. A permit condition will be imposed requiring the missing information.

(e)(4)(D)2.: Demonstration of Compliance is required by 1/1/06.

(e)(4)(G)1.: Requirement for a non-resettable hour meter.

(e)(4)(G)2.: Requirement for a particulate filter backpressure monitor.

(e)(4)(I): Reporting Requirements.

(h)(1) and (h)(2): Emission test options for satisfying Demonstration of Compliance (e)(4)(D)2.

(i)(1) and (i)(2): Test Methods.

This engine complies with the ATCM for in-use emergency stand-by engines.

Statement of Compliance

Source S-41 is subject to and expected to be in compliance with the requirements of District Regulation 1-301 "Public Nuisance", District Regulation 6 "Particulate Matter and Visible Emissions", Regulation 9-8 "NOx and CO from Stationary Internal Combustion Engines" and Regulation 9-1 "Sulfur Dioxide". In order to ensure compliance with the requirements of these regulations, the facility will be conditionally permitted to meet the requirements.

This project is considered to be ministerial under the District's CEQA Regulation 2-1-311 and therefore is not subject to CEQA review.

The project is not within 1000 feet of the nearest school and therefore not subject to the public notification requirements of Reg. 2-1-412.

A toxic risk screen was not required.

BACT, Prevention of Significant Deterioration (PSD), New Source Performance Standards (NSPS), Offsets and National Emissions Standards for Hazardous Air Pollutants (NESHAPs) do not apply to this application.

S-41 complies with the ATCM for in-use emergency stand-by engines that is effective January 1, 2006.

Permit Conditions

Mirant Delta, LLC.
3201 Wilbur Avenue
Antioch, CA 94509
Plant 18

S-41 Emergency Standby Diesel Engine/Fire Pump, Cummins, Model C8.3-F2, 270 BHP

1. The Owner/Operator shall operate S - 41, stationary emergency standby engine, only to mitigate emergency conditions or for reliability-related activities (maintenance and testing). Operating while mitigating emergency conditions and while emission testing to show compliance with this condition is unlimited. Operating for reliability-related activities is limited to 50 hours per year.
(Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(2)(B)3.a.II.i)
2. The Owner/Operator shall operate the emergency standby engine(s) 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 and properly maintained.
(Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(4)(G)1.)
3. The Owner/Operator shall operate the emergency standby engine(s) only when a properly operating and maintained back-pressure monitor is installed that notifies the Owner/Operator when the high backpressure limit of the engine is approached.
(Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(4)(G)2.)
4. Prior to January 1, 2006, the Owner/Operator shall provide the District an emission report from a District approved emission test to demonstrate actual emissions of the S-41 engine. The report shall include the plant number 14987 and be sent to the Manager of Source Test, Technical Division, with a copy of the summary emission page(s) sent to the Engineering Division, Permit Evaluation Section. All source testing shall be done in accordance with the District's Manual of Procedures. The Owner/Operator shall install all necessary source test ports, subject to the approval of the Manager of Source Test in the BAAQMD Technical Services Division.
(Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(4)(D)2., (h)(1), (h)(2), (i)(1) and (i)(2))
5. Records: The Owner/Operator shall maintain the following monthly records in a District-approved log for at least 5 years from the date of entry. 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 (maintenance and testing).
 - b. Hours of operation for emission testing.
 - c. Hours of operation (emergency).
 - d. For each emergency, the nature of the emergency condition.
 - e. CARB Certification Executive Order for the engine.
 - f. Fuel usage for engine. The Owner/Operator shall document fuel use through the retention of fuel purchase records that account for all fuel used in the engine and all fuel purchased for use in the engine, and, at a minimum, contain the following information for each individual fuel purchase transaction:
 - I. identification of the fuel purchased as either CARB Diesel, or an alternative diesel fuel that meets the requirements of the Verification Procedure, or an alternative fuel, or CARB Diesel fuel used with additives that meet the requirements of the Verification Procedure, or any combination of the above;
 - II. amount of fuel purchased;
 - III. date when the fuel was purchased;
 - IV. signature of owner or operator or representative of owner or operator who received the fuel; and
 - V. signature of fuel provider indicating fuel was delivered.
(Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations,

Subsection (e)(4)(I), Regulation 1-441, Toxics)

6. Prior to July 1, 2005, the Owner/Operator shall provide the Engineering Division of the District all of the engine information listed in Stationary Diesel Engine ATCM” section 93115, title 17, CA Code of Regulations, Subsection (e)(4)(A)3., including the following:
 - (e)(4)(A)3.b.III. Engine Family,
 - (e)(4)(A)3.b.X. Direction of stack outlet
 - (e)(4)(A)3.d.II. Typical Load
 - (e)(4)(A)3.d.III Typical annual hours of operation
 - (e)(4)(A)3.f. Whether the engine is included in an existing AB2588 emission inventory.

Recommendations

It is recommended that an Authority to Construct be waived and a Permit to Operate be issued to Spectra, Inc. for:

**S-41 Emergency Standby Diesel Fire Pump, Cummins, Model C8.3-F2,
270 BHP**

by: _____ Date: _____
Craig Ullery
Air Quality Engineer II
Engineering Division

APPENDIX C

GLOSSARY

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ACT

Federal Clean Air Act

APCO

Air Pollution Control Officer

AP-42

EPA's Compilation of Air Pollutant Emission Factors

ARB

Air Resources Board

BAAQMD

Bay Area Air Quality Management District

BACT

Best Available Control Technology

Basis

The underlying authority that allows the District to impose requirements.

CAA

The federal Clean Air Act

CAAQS

California Ambient Air Quality Standards

CAPCOA

California Air Pollution Control Officers Association

CEQA

California Environmental Quality Act

CFR

The Code of Federal Regulations. 40 CFR contains the implementing regulations for federal environmental statutes such as the Clean Air Act. Parts 50-99 of 40 CFR contain the requirements for air pollution programs.

CO

Carbon Monoxide

Cumulative Increase

The sum of permitted emissions from each new or modified source since a specified date pursuant to BAAQMD Rule 2-1-403, Permit Conditions (as amended by the District Board on 7/17/91) and SIP Rule 2-1-403, Permit Conditions (as approved by EPA on 6/23/95).

Cumulative increase is used to determine whether threshold-based requirements are triggered.

District

The Bay Area Air Quality Management District

dscf

Dry Standard Cubic Feet

EPA

The federal Environmental Protection Agency.

Excluded

Not subject to any District regulations.

Federally Enforceable, FE

All limitations and conditions which are enforceable by the Administrator of the EPA including those requirements developed pursuant to 40 CFR Part 51, subpart I (NSR), Part 52.21 (PSD), Part 60 (NSPS), Part 61 (NESHAPs), Part 63 (MACT), and Part 72 (Permits Regulation, Acid Rain), including limitations and conditions contained in operating permits issued under an EPA-approved program that has been incorporated into the SIP.

FP

Filterable Particulate as measured by BAAQMD Method ST-15, Particulate.

HAP

Hazardous Air Pollutant. Any pollutant listed pursuant to Section 112(b) of the Act. Also refers to the program mandated by Title I, Section 112, of the Act and implemented by 40 CFR Part 63.

IERC

Interchangeable Emission Reduction Credit, as defined by BAAQMD Regulation 2-9-212.

Major Facility

A facility with potential emissions of: (1) at least 100 tons per year of regulated air pollutants, (2) at least 10 tons per year of any single hazardous air pollutant, and/or (3) at least 25 tons per year of any combination of hazardous air pollutants, or such lesser quantity of hazardous air pollutants as determined by the EPA administrator.

MFR

Major Facility Review. The District's term for the federal operating permit program mandated by Title V of the Federal Clean Air Act and implemented by District Regulation 2, Rule 6.

MOP

The District's Manual of Procedures.

NAAQS

National Ambient Air Quality Standards

NESHAPS

National Emission Standards for Hazardous Air Pollutants. See in 40 CFR Parts 61 and 63.

NMHC

Non-methane Hydrocarbons (Same as NMOC)

NMOC

Non-methane Organic Compounds (Same as NMHC)

NO_x

Oxides of nitrogen.

NSPS

Standards of Performance for New Stationary Sources. Federal standards for emissions from new stationary sources. Mandated by Title I, Section 111 of the Federal Clean Air Act, and implemented by 40 CFR Part 60 and District Regulation 10.

NSR

New Source Review. A federal program for pre-construction review and permitting of new and modified sources of pollutants for which criteria have been established in accordance with Section 108 of the Federal Clean Air Act. Mandated by Title I of the Federal Clean Air Act and implemented by 40 CFR Parts 51 and 52 and District Regulation 2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

Offset Requirement

A New Source Review requirement to provide federally enforceable emission offsets for the emissions from a new or modified source. Applies to emissions of POC, NO_x, PM₁₀, and SO₂.

Phase II Acid Rain Facility

A facility that generates electricity for sale through fossil-fuel combustion and is not exempted by 40 CFR 72 from Titles IV and V of the Clean Air Act.

POC

Precursor Organic Compounds

PM

Particulate Matter

PM₁₀

Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns

PSD

Prevention of Significant Deterioration.

A federal program for permitting new and modified sources of those air pollutants for which the District is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the Act and implemented by both 40 CFR Part 52 and District Regulation 2, Rule 2.

SIP

State Implementation Plan. State and District programs and regulations approved by EPA and developed in order to attain the National Air Ambient Quality Standards. Mandated by Title I of the Act.

SO₂

Sulfur dioxide

THC

Total Hydrocarbons (NMHC + Methane)

Title V

Title V of the federal Clean Air Act. Requires a federally enforceable operating permit program for major and certain other facilities.

TOC

Total Organic Compounds (NMOC + Methane, Same as THC)

TPH

Total Petroleum Hydrocarbons

TRMP

Toxic Risk Management Plan

TSP

Total Suspended Particulate

VOC

Volatile Organic Compounds

Units of Measure:

bhp	=	brake-horsepower
btu	=	British Thermal Unit
cfm	=	cubic feet per minute
g	=	grams
gal	=	gallon
gpm	=	gallons per minute
hp	=	horsepower
hr	=	hour

lb	=	pound
in	=	inches
max	=	maximum
m ²	=	square meter
min	=	minute
mm	=	million
MMbtu	=	million btu
MMcf	=	million cubic feet
ppmv	=	parts per million, by volume
ppmw	=	parts per million, by weight
psia	=	pounds per square inch, absolute
psig	=	pounds per square inch, gauge
scfm	=	standard cubic feet per minute
yr	=	year

