Bay Area Air Quality Management District

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Permit Evaluation and Statement of Basis for RENEWAL of

MAJOR FACILITY REVIEW PERMIT

for

Central Contra Costa Sanitary District
Facility #A0907

Facility Address:
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Application: 10118

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Title V Statement of Basis

A. Background

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Title 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it is a major facility as defined by BAAQMD Regulation 2-6-212. It is a major facility because it has the "potential to emit," as defined by BAAQMD Regulation 2-6-218, of 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 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 A0907.

This facility received its initial Title V permit on July 1, 1997. This application is for a permit renewal. Although the current permit expired on June 30, 2002, it continues in force until the District takes final action on the permit renewal. The proposed permit shows all changes to the permit in strikeout/underline format.

B. Facility Description

The Central Contra Costa Sanitary District, (AKA Central San or CCCSD) is a publicly owned treatment works (POTW) facility that provides wastewater collection, treatment and disposal services to the residents of Contra Costa County that live in the Lafayette-Moraga-Orinda areas, the Diablo Valley, as well as the San Ramon/Danville corridor. The sources that are permitted at Central San include liquid and semi-liquid wastewater process sources, as well as a number of combustion sources including a pair of sewage sludge furnaces, a pair of boilers and one cogeneration turbine. Liquid sources include preliminary treatment, primary treatment, flow equalization, secondary treatment, secondary clarification, tertiary treatment, disinfection, and sludge handling. Additional ancillary sources are permitted for the handling of ash and other solid or semi-solid by- products.

Average dry weather wastewater effluent flow capacity is approximately 53,800,000 gal/day. Average wet weather effluent flow capacity is approximately 140,000,000 gal/day. The wastewater processes at Central San are similar to any other "traditional" municipal wastewater

treatment facility, although solids removal is largely a function of the twin sewage sludge furnaces S-9 and S-10. The wastewater plant receives flows from a number of satellite pump stations throughout the service area. Plant processes render the influent homogeneous, allow for physical separation to occur and hasten the occurrence of normal biological processes. Effluent water outflow meets regional water quality control board standards for discharge or reuse.

The criteria pollutant emissions from the combustion processes, specifically the NOx and CO have the potential to emit more than 100 tons per year, hence the need for a Federal Title V Major Facility Permit.

There has been no significant change in emissions since the initial Title V permit issuance.

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 certain 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 derive 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 changes to the Standard Conditions section are minor and address mainly issues of clarification.

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-24).

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 of 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.

The District has reviewed the operations at Central San and concludes that there are no sources at this facility that are exempt and significant, as defined above.

All abatement (control) devices that control permitted or significant sources are listed. Each abatement device whose primary function is to reduce emissions is identified by an A and a number (e.g., A-1). If a source is also an abatement device, such as when an engine controls VOC emissions, it will be listed in the abatement device table but will have an "S" number. An abatement device may also be a source (such as a thermal oxidizer that burns fuel) of secondary emissions. If the primary function of a device is to control emissions, it is considered an abatement (or "A") device. If the primary function of a device is a non-control function, the device is considered to be a source (or "S").

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. The equipment list has been revised to clarify the equipment names or description or to remove portions of the description that are obsolete. For example, in the case of sources S-7 and S-8, the models were previously reported as ME 74129. This is erroneous and will be changed to Model CB 70 for both units. The equipment number for S-7 is ME 74129, while the equipment number for S-8 is ME 74140. These changes have been made in the equipment descriptions.

Each of the permitted sources has previously been issued 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. The capacities in the permitted sources table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-403.

Following are explanations of the differences in the equipment list between the time that the initial Title V permit was issued and the permit proposal date:

Changes to permit:

Devices Removed from Service or Archived since initial- Major Facility Review permit was issued:

Source #	Description	Application Number	Explanation
S-14	Lime Transfer System	N/A	The lime transfer system was removed from the plant in May, 2003. S-14 was archived shortly thereafter.

Devices Permitted Since initial Major Facility Review permit was issued:

Source #	Description	Application Number	Explanation
S-189	Emergency Standby Generator #1, Diesel Fired	4717	Permitted under loss of exemption
S-190	Emergency Standby Generator #2, Diesel Fired	4717	Permitted under loss of exemption
S-191	Portable Standby Generator, Diesel	4717	Permitted under loss of exemption
S-192	Portable Standby Generator, Diesel	4717	Permitted under loss of exemption
S-193	Portable Standby Generator, Diesel	4717	Permitted under loss of exemption
S-194	Portable Standby Generator, Diesel	4717	Permitted under loss of exemption

District permit applications not included in this proposed permit

None

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 Title V permit if they are considered *significant sources* pursuant to the definition in BAAQMD Rule 2-6-239. This facility has no unpermitted or exempt significant sources.

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 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. 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 IV. Section VII is a cross-reference between the limits and monitoring requirements. A discussion of monitoring is included in Section C.VII of this permit evaluation/statement of basis.

Complex applicability determination-POTW NESHAP: 40 CFR Part 63, Subpart VVV, promulgated October 26, 1999, contains the NESHAP standards for POTWs. This NESHAP was evaluated to determine if Central San was subject to the MACT emission control requirements. The NESHAP requires MACT controls at POTWS which are major sources for HAP which are defined thusly: *…any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate 10 tons per year (tpy) or more of any HAP or 25 tpy or more of any combination of HAP.*

The District has reviewed the wastewater borne emissions potential of the most frequently seen HAPs and conclude that Central Contra Costa Sanitary District Facility is not a major source for HAP emissions or for combined HAP emissions. A conservative estimate of HAP emissions may be obtained by using the 80^{th} % factors as developed by the BAAT-AMSA – CWEA studies in the 1990s. This procedure is the most conservative of the 7 accepted procedures developed for calculating emissions from wastewater processes. Most conservatively, the total plant throughput would have to be over 177 million gallons per dry-weather day on an ongoing basis to be a major source for HAP, based on the 80^{th} percentile (most conservative) calculation basis. Central San's maximum design dry weather flow rate is 53.8 million gallons per day, therefore we conclude the facility is not a major source for HAP.

In addition, this POTW is an existing POTW that has not been reconstructed (as defined by 40 CFR 63.1595). Furthermore, Central San is not an Industrial POTW as defined by 40 CFR 63.1595. Central San processes strictly domestic wastewater streams.

Complex applicability determination-Gas Turbine NESHAP: 40 CFR Part 63, Subpart YYYY, promulgated March 5, 2004, establishes the emission standards and operating limitations for hazardous air pollutants (HAP) emissions from stationary gas turbines located at major sources of HAP emissions. The NESHAP requires MACT emission standards on gas turbines located at facilities which are major sources for HAP.

The District has reviewed the water and combustion borne emissions of HAP and concludes that Central San is not a major source for HAP emissions, therefore the gas turbine NESHAP is not applicable to this facility.

Compliance Assurance Monitoring**:** Compliance assurance monitoring is not applicable, since there is no emission control device used to achieve compliance with a federally enforceable emissions limit.

112 (j) Case By Case MACT: This requirement does not apply because there are no major sources for HAP, nor does the facility qualify as a major facility for HAP.

Changes to permit:

Minor changes have been made to the existing operating conditions for the following existing sources:

S-7 and S-8 boilers
S-9 and S-10 Sewage Sludge Furnaces
S-100 Wastewater Treatment Plant
S-188 Gas Turbine Generator

All of these changes to the permit conditions for the above sources are minor and are addressed in the permit conditions section of this SOB.

S-189 and S-190, Backup Generators (BUG), 2500 HP each (permitted under loss of exemption AN 4717): These stationary diesel-fired generators were permitted under loss of exemption permit application 4717 to operate as emergency backup generators according to Condition 19290. This condition follows the template that was used in 2002 for the permitting of existing emergency backup diesel generators, which allowed 200 hours per year for reliability and testing purposes. Since that time, a number of regulatory changes have occurred, including the formal adoption of the Statewide Air Toxic Control Measure (ATCM) for Stationary Compression Ignition (diesel) Engines. Among other things, the ATCM provided for a tiered compliance schedule for operators with more than 4 stationary diesel engines.

While Central San only has 2 stationary diesel engines S-189 and S-190 at the main wastewater treatment plant, they do have an additional 19 stationary diesel engines located at other sites (pump stations) around the Contra Costa Country area. In accordance with the stationary ATCM, Central San has laid out a tiered compliance schedule for all of these engines, with S-189 in full compliance with the ATCM by January 1, 2008 and S-190 in full compliance with the ATCM by January 1, 2009. Central San has indicated that both of these engines require 100 hours per year for reliability and testing purposes. Both of these engines are currently permitted and conditioned to a maximum of 200 hours/year for reliability and testing, as was allowed according to diesel engine permitting policy in 2002. The ATCM, however, limits diesel PM

emissions from emergency backup generators to a maximum emission level of 0.01 g/bhp-hr in order to qualify for 100 hours/year for reliability and testing purposes. The engines will be allowed to continue operating in their current configuration until their ATCM compliance deadlines of 2008 and 2009. We will address the change of condition to modify the conditions to reflect the more stringent controls by way of a future minor modification permit application.

S-191, 192, 193, 194 Portable Diesel Engine Generators: This engine generators were also permitted in loss of exemption application 4717. The engines, being portable are not subject to the Stationary IC Engine ATCM.

V. Schedule of Compliance

A schedule of compliance is required in all Title V 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; …"

Since the District has not determined that the facility is out of compliance with an applicable requirement, the schedule of compliance for this permit contains only sections 2-6-409.10.1 and 2-6-409.10.2.

The BAAQMD Compliance and Enforcement Division has conducted a review of compliance over the past year and has no records of compliance problems at this facility during the past year. The compliance report is contained in Appendix A of this permit evaluation and statement of basis.

VI. Permit Conditions

During the Title V permit development, the District has reviewed the existing permit conditions, deleted the obsolete conditions, and, as appropriate, revised the conditions for clarity and enforceability. Each permit condition is identified with a unique numerical identifier, up to five digits.

When necessary to meet Title V requirements, additional monitoring, recordkeeping, or reporting has been added to the permit.

All 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.

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.

Grandfathered Sources: The District has reviewed and, or added new daily throughput limits on grandfathered sources so as to help ensure compliance with District rules addressing preconstruction review. The applicability of preconstruction review depends on whether there is a "modified source" as defined in District Rule 2-1-234. Whether there is a modified source depends in part on whether there has been an "increase" in "emission level." 2-1-234 defines what will be considered an emissions level increase, and takes a somewhat different approach depending on whether a source has previously permitted by the District.

Sources that were modified or constructed since the District began issuing new source review permits will have permits that contain throughput limits, and these limits are reflected in the Title V permit. These limits have previously undergone District review, and are considered to be the legally binding "emission level" for purposes of 2-1-234.1 and 2-1-234.2. By contrast, for older sources that have never been through preconstruction review (commonly referred to as "grandfathered" sources), an "increase" in "emission level" is addressed in 2-1-234.3. A grandfathered source is not subject to preconstruction review unless its emission level increases above the highest of either: 1) the design capacity of the source, 3) the capacity listed in a permit to operate, or 3) highest capacity demonstrated prior to March 2000. However, if the throughput capacity of a grandfathered source is limited by upstream or downstream equipment (i.e., is "bottlenecked"), then the relaxing of that limitation ("debottlenecking") is considered a modification.

The District has written throughput limits into the Title V permit for grandfathered source S-100. As discussed above, these limits are written for the purpose of determining whether an increase in emission levels has occurred. The purpose of these limits is to facilitate implementation of preconstruction review program. If these limits are exceeded, the facility would be expected to report the exceedance, and the District would treat the reported exceedance as presumptively establishing the occurrence of a modification. The facility would then be expected to apply for a preconstruction permit addressing the modification and the District would consider whether an enforcement action was appropriate.

It is important to note the presumptive nature of throughput limits for grandfathered sources that are created in the Title V permit. These limits are generally based upon the District's review of information provided by the facility regarding the design capacity or highest documented capacity of the grandfathered source. To verify whether these limits reflect the true design, documented, or "bottlenecked" capacity (pursuant to 2-10234.1) of each source is beyond the resource abilities of the District in this Title V process. Moreover, the District cannot be completely confident that the facility has had time or resources necessary to provide the most accurate information available in this regard. Creating throughput limits in the Title V permit for grandfathered sources is not required by either Part 70 or the District's Major Facility Review rules. Despite the lack of such a requirement, and despite the resource and information challenges presented in the Title V process, the District believes that writing presumptive limits for grandfathered sources into the Title V permit will provide a measure of predictability

regarding the future applicability of the preconstruction review program, and that this increased predictability is universally beneficial.

It follows from the presumptive nature of these throughput limits for grandfathered sources that exceedance of these limits is not per se a violation of the permit. *Failure to report an exceedance would be a permit violation.* In this sense, the throughput limits function as monitoring levels, and are imposed pursuant to the District's authority to required monitoring that provide a reasonable assurance of compliance. If an exceedance occurs, the facility would have an opportunity to demonstrate that the throughput limit in fact did not reflect the appropriate limit for purposes of 2-1-234.3. If the facility can demonstrate this, no enforcement action would follow, and the permit would be revised at the next opportunity. It also follows that compliance with these limits is not a "safe harbor" for the facility. If evidence clearly shows that a grandfathered source has undergone a "modification" as defined in 2-1-234.3, the District would consider that a preconstruction review-triggering event, notwithstanding compliance with the throughput limit in the Title V permit. In other words, the protection afforded the facility by complying with the throughput limit in the Title V permit is only as strong as the information on which it was based. There is no Title V "permit shield" associated with throughput limits for grandfathered sources, as they are being proposed. A shield may be provided if the District determines with certainty that a particular limit is appropriate for purposes of 2-1-234.3.

Conditions that are obsolete or that have no regulatory basis have been deleted from the permit.

Conditions have also been deleted due to the following:

- Redundancy in record-keeping requirements.
- Redundancy in other conditions, regulations and rules.
- The condition has been superseded by other regulations and rules.
- The equipment has been taken out of service or is exempt.
- The event has already occurred (i.e. initial or start-up source tests).

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 which 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.

Additional monitoring has been added, where appropriate, to assure compliance with the applicable requirements.

Summary of Changes to Operating Conditions

The following table lists the conditions in order with the respective sources as well as the condition status.

Condition Number(s)	Source Number(s)	Comment (Status)
193	S-100	Condition to be revised to include throughput limits.
19290	S-189	New Cond per AN 4717
19290	S-190	New Cond per AN 4717
19291	S-191	New Cond per AN 4717
19291	S-192	New Cond per AN 4717
19291	S-193	New Cond per AN 4717
19291	S-194	New Cond per AN 4717
21422	S-7, S-8	Clarifications
21423	S-9, S-10	Clarifications
21485	S-188	Clarifications

Condition Discussion

Condition 193 for source S-100

Source S-100 is a grandfathered source. The changes that are proposed establish throughput limits and monitoring requirements. See the discussion on grandfathered sources above.

For S-100 Wastewater Treatment Plant

1. Flowrate

Total wastewater flow shall not exceed 53.8 million gallons per day on a calendar month average during dry weather periods or 140 million gallons per day on a calendar month average during wet weather periods. For the purposes of this limit, wet weather is defined as the months from October through May. [Basis: Cumulative Increase]

~~If off-property odors are detected and identified to originate from this facility, the specific sources shall be covered and vented to an odor control scrubbing system. (Basis: BAAQMD Regulation 1-301)~~

2. Nuisance

In the event that a public nuisance odor source is identified at this facility, the Permit Holder shall employ all measures, practices, or modifications necessary to abate the nuisance. [Basis: Regulation 1-301]

3. Records

To demonstrate compliance with Part 1, above, the Permit Holder shall maintain the following records: [Basis: Regulation 2-6-409.2]

a. Daily and monthly (calendar basis) records of the quantity of wastewater processed at this source.
b. Monthly records shall be totaled for each consecutive 12-month period.
c. All records shall be retained onsite for five years from the date of entry, and made available for inspection by District staff upon request.
d. These recordkeeping requirements do not replace the recordkeeping requirements contained in any applicable District Regulations.

Condition 19290 for sources S-189 and S-190

These stationary emergency backup engines were permitted via AN 4717, to operate for an unlimited number of hours during emergency conditions and for 200 hours for reliability-related activities. The engines are now additionally subject to the CARB stationary CI Engine ATCM, which provides for a tiered compliance schedule for the 21 stationary diesel engines owned and operated by Central San. Central San has chosen a tiered compliance schedule which brings 6 engines into compliance by January 1, 2007; 8 more engines by January 1, 2008, and the last 7 by 2009. Engine S-189 will be brought into full compliance with the ATCM by January 1, 2008 and will finally be granted 100 hours for maintenance and testing. Engine S-190 will be brought into fully compliance with the ATCM by January 1, 2009 and will also be granted 100 hours for maintenance and testing. The conditions for these engines will be changed at the appropriate time via a change of condition NSR application and a Minor Revision Title V application.

Until 2008 and 2009, the engines will continue to operate under condition 19290, as follows:

S-189 Emergency Standby Generator: Diesel Engine, Make: Detroit, Model: DDC1635, Rated Horsepower: 2500 HP.
S-190 Emergency Standby Generator: Diesel Engine, Make: Detroit, Model: DDC1635, Rated Horsepower: 2500 HP.

1. Hours of Operation: The emergency standby engines (S-189, S-190) shall only be operated to mitigate emergency conditions or for the reliability-related activities. Operation for reliability-related activities is shall not exceed 200 hours in any calendar year for S-189 and S-190. Operation while mitigating emergency conditions is unlimited for both S-189 and S-190. [Basis: Reg. 9-8-331]

2. "Emergency Conditions" is defined as any of the following: [Basis: Reg. 9-8-231]
   a. Loss of regular natural gas supply.
   b. Failure of regular electric power supply.
   c. Flood mitigation.
   d. Sewage overflow mitigation.
   e. Fire.
   f. Failure of a primary motor, but only for such time as needed to repair or replace the primary motor.

3. "Reliability-related activities" is defined as any of the following: [Basis: Reg. 9-8-232]

a. Operation of an emergency standby engine to test its ability to perform for an emergency use, or
b. Operation of an emergency standby engine during maintenance of a primary motor.

4. The emergency standby engine shall be equipped with either: [Basis: Reg. 9-8-530]
   a. a non-resettable totalizing meter that measures and records the hours of operation for the engine.
   b. a non-resettable fuel usage meter.

5. Records: The following monthly records shall be maintained in a District-approved log for at least 5 years and shall be made available for District inspection upon request: [Basis: Reg. 9-8-530, 1-441]
   a. Hours of operation (total).
   b. Hours of operation (emergency).
   c. For each emergency, the nature of the emergency condition.

Condition 19291 for sources S-191, S-192, S-193 and S-194

These portable emergency backup gensets were permitted via AN 4717. The engines were permitted via loss of exemption and are not subject to Reg 9-8, since 9-8 applies only to stationary engines. All of these portable standby diesel generators will become subject to the emission limitations of the portable diesel engine ATCM starting on January 1, 2013. At or prior to that time, the compliance plan for these engines will be addressed in a change of condition NSR application and a Minor Revision Title V application. Until that time, sources S-191, S-192, S-193 and S-194 are all subject to Condition 21422 as follows:

S-191 Portable Standby Generator: Diesel Engine, Make: Caterpillar, Model: 3056, Rated Horsepower: 80 HP.
S-192 Portable Standby Generator: Diesel Engine, Make: Caterpillar, Model: 3208, Rated Horsepower: 235 HP.
S-193 Portable Standby Generator: Diesel Engine, Make: Deutz, Model: E10L413, Rated Horsepower: 238 HP.
S-194 Portable Standby Generator: Diesel Engine, Make: Deutz, Model: F3-6L912, Rated Horsepower: 95 HP (2300 RPM)

Portable Equipment Requirements

1. This mobile equipment shall operate at all times in conformance with the eligibility requirements set forth in BAAQMD Regulation 2-1-220 for portable equipment. [Basis: Reg 2-1-220]

2. If the portable equipment remains at any fixed location in the Bay Area Air Basin for more than 12 months, the portable permit will automatically revert to a conventional permanent location BAAQMD permit and will lose its portability. [Basis: Reg 2-1-220.1]

Regulatory Compliance Requirement

3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour that is as dark or darker than Ringlemann 1 or equivalent to 20% opacity. [Basis: Reg 6-301]

4. Operation of Sources S-191, S-192, S-193 and S-194 shall not emit pollutant emissions in sufficient quantities as to cause a public nuisance under Regulation 1-301. [Basis: Reg 1-301]

5. S-191, S-192, S-193 and S-194 shall not be operated for longer than 72 consecutive hours within 1,000 feet of a school. To operate for longer than 72 consecutive hours within 1,000 feet of a school, the Permit Holder must submit an application to the District so that proper notification of your intended operation can be made known to the affected public in advance of any continued usage of the equipment. [Basis: Reg 2-1-114.2.3, 2-1-403, 2-1-412]

Recordkeeping Requirement

6. The following records shall be kept in a District approved logbook and retained for a period of at least five years following the date of entry. The log shall be kept with the equipment and made available to District staff upon request. [Basis: Reg 1-441]

a. Weekly hours of operation or fuel usage for S-191, S-192, S-193 and S-194.
b. Hours of operation or fuel usage shall be totaled on a monthly basis.

Reporting Requirements

7. The Permit Holder shall notify the District, in writing, at least 3 days in advance, of the new location in which they intend to operate for longer than 72 consecutive hours. The notification shall include: [Basis: Reg 1-441]

a. A brief description of the general nature of the operation.
b. The estimated duration of the operation at this site.
c. The name and phone number of a contact person where the equipment will be operated.

8. Within 30 days after the end of every calendar year, the Permit Holder shall provide a year-end summary showing the following information: [Basis: Reg 1-441]

a. The location(s) at which the equipment was operated for more than 72 consecutive hours including the dates operated at each location.
b. The total hours of operation or fuel used by S-191, S-192, S-193 and S-194 for the previous 12 months.

Condition 21422 for sources S-7 and S-8

Each of the boilers S-7 and S-8 have been subject to hourly fuel throughput limits, based on the nameplate BTU capacity while firing natural gas. However, no monitoring or recordkeeping of fuel throughput was required. This modification will add the requirement for regular monitoring

and recordkeeping of fuel usage at both of these sources. Other changes were to remove requirements that are no longer applicable (such as the initial source testing requirements), and to improve the clarity of the wording.

For S-7 Auxiliary Steam Boiler 1 and S-8 Auxiliary Steam Boiler 2; Both Boilers Specifications as Follows: Cleaver Brooks ~~ME7139~~CB700, Maximum Firing Capacity: 28 MM Btu/hr (HHV) with High Turn Down Multi-fuel Burners and Cleaver Brooks induced Flue Gas Recirculation System.

1. S-7 Boiler and S-8 Boiler shall be fired at a rate not to exceed 28 MM Btu/hr (HHV) per boiler. (Basis: Cumulative Increase)

2. Exhaust gas emissions shall not exceed 300 ppm, dry SO2. The Permit Holder shall use the sulfur content of the fuels in conjunction with a material balance to calculate the exhaust gas sulfur dioxide concentration. The Permit Holder shall calculate and record the resulting sulfur dioxide concentration at least 1 time every calendar quarter. (Basis: BAAQMD 9-1-302)

   The Permit Holder shall monitor and record the sulfur content of the landfill gas at a frequency of at least one time every calendar month when burning landfill gas. (Basis: BAAQMD 1-441)

3. Emissions of nitrogen oxides (NOx) shall not exceed 30 ppmv (@ 3 percent O2, dry) when firing gaseous fuels. (Basis: BAAQMD 9-7-301.1)

4. Emissions of nitrogen oxides (NOx) shall not exceed 40 ppmv (@ 3 percent O2, dry) when firing distillate oil. (Basis: BAAQMD 9-7-302.1)

5. Emissions of carbon monoxide (CO) shall not exceed 400 ppmv (@ 3 percent O2, dry) when firing gaseous fuels. (Basis: BAAQMD 9-7-301.2, 9-7-302.2)

6. The distillate oil sulfur content shall not exceed 0.5 percent by weight. (Basis: ~~Cumulative Increase~~ BAAQMD 9-1-304)

7. To demonstrate ongoing compliance with parts 3, 4, and 5 above, the Permit Holder shall perform a compliance source test at a frequency of at least 1 time every 60 months after the ~~initial~~ previous source test. Compliance source tests shall be conducted in accordance with District Manual of Procedures (MOP). Source test results shall be kept on site and made available to the District upon request. (Basis: Cumulative Increase)

8. While burning landfill gas, NMOC emissions shall be abated by at least 98% by weight across S-7 and S-8 auxiliary boiler(s), or the exhaust emissions of NMOC shall be less than 120 ppm by volume, dry basis, expressed at methane, corrected to 3% oxygen. (Basis: BAAQMD 8-34-301.4)

   To demonstrate ongoing compliance with this requirement the Permit Holder shall perform a pre-approved annual source test in accordance with District Manual of

Procedures. The annual source test shall be conducted at a frequency of not less than 9 months nor greater than 12 months after the most recent compliance source test. (Basis: BAAQMD 8-34-412)

To ensure ongoing compliance with the above NMOC destruction efficiency, the Permit Holder shall maintain the rolling 3 clock-hour average first pass boiler temperature of S-7 and S-8 at 770 degrees F or greater when burning landfill gas. While burning landfill gas, the Permit Holder shall continuously monitor the first pass temperatures of S-7 and S-8 and shall calculate and record the rolling 3 clock-hour average temperatures in a District-approved log. (Basis: 40 CFR 50.758 (c)(1)(i))

If a source test demonstrates compliance with all applicable requirements at a different minimum first pass temperature, the APCO may revise the above temperature limit, in accordance with the procedures identified in Regulation 2 -6-414 or 2-6-415 based on the following criteria. The minimum first pass temperature for S-7 and S-8 shall be equal to the average first pass temperature measured during a complying source test (NMOC and CO emission limits were met) minus 50 degrees F. (Basis: 40 CFR 60.758 (c)(1)(i))

The above language was added to Part 8 to clarify the procedures for modifying the [temperature] operating parameter as specified in the landfill NSPS.

9. The Permit Holder shall maintain the following records and provide all of the data necessary to ~~evaluate~~ demonstrate compliance with the above conditions, including the following information:

   a. Monthly records of the quantity of ~~gaseous fuel~~ natural gas, landfill gas, and distillate oil burned at this source.
   b. Monthly records of the distillate oil sulfur content certification.
   c. Monthly records shall be totaled for each consecutive 12-month period.
   d. Records of the rolling 3 clock-hour average first pass boiler temperature.
   e. All records shall be retained on site for five years from the date of entry, and made available for inspection by the District upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations. (Basis: Cumulative Increase, ~~Reg~~ BAAQMD 9-1-304)

Condition # 21423:
Changes to Condition 21423 were necessary to address the fact that the nature of the furnace operation at Central San is not to start up or operate both furnaces at the same time. For this reason the source testing requirements needed to be modified to avoid the potential of requiring the unnecessary (and wasteful) startup of the non-operational furnace for source testing reasons only. Other changes were made for clarification, or to enhance the readability of the condition.

For S-9, Furnace 1, and S-10, Furnace 2, Sewage Sludge Incinerators, BSP Multiple Rotary Hearth, 27 MM Btu/hr Max Heat Input

1. Solid fuel shall be solids derived from CCCSD sewage operations only. (Basis: Cumulative Increase)

2. S-9 and S-10 combined solid fuel throughput shall not exceed 110 ton/day and 20,000 ton in any consecutive 12 month period (Basis: Cumulative Increase)

3. Particulate emissions shall not exceed 0.65 gram per kilogram of dry sludge input (1.3 lb/ton dry sludge input) (Basis: 40 CFR 60.152(a)(1), NSPS).

4. Particulate emissions shall not exceed 343 mg/dscm (0.15 grain per dscf) of exhaust gas volume. The actual measured concentration of particulate matter in the exhaust gas shall be corrected to the concentration which the same quantity of particulate matter would constitute in the exhaust gas minus water vapor corrected to standard conditions, containing 12% CO2 by volume, and as if no auxiliary fuel had been used (Basis: BAAQMD 6-310).

5. Visible emissions shall not exceed 20 percent opacity as detected by an opacity sensing device for a period or periods aggregating more than three minutes in any hour). To comply with this part the Permit Holder shall install and maintain a District-approved opacity sensing continuous emission monitor (CEM). (Basis: BAAQMD 6-401, 40 CFR 60.152(a)(2)

5. Total combined beryllium emissions from S-9 and S-10 are not to exceed 10 grams in any 24 hr period. Unless a waiver is obtained by the APCO (according to 40 CFR 60.13) the Permit Holder is to demonstrate compliance according to EPA Method 104 of Appendix B of 40 CFR 61.33. (Basis: BAAQMD 11-3-301)

7. Total combined mercury emissions from S-9 and S-10 are not to exceed 3200 gram per 24 hour period.. Compliance with this section may be demonstrated by performing an EPA Method 105 (Mercury in Wastewater Treatment Plant Sewage Sludge) test or an equivalent test as pre-approved by the APCO. (Basis: BAAQMD 11-5-302, 40 CFR 61.52)

8. If mercury emissions exceed 1600 gram per 24 hour period, the Permit Holder shall monitor mercury emissions from S-9 and S-10 at a frequency of at least once every 12 months. (Basis: 40 CFR 61.55(a))

9. Lead emissions are not to exceed 15 lb/day per ~~incinerator~~ furnace (Basis: BAAQMD 11, Rule 1).

10. To demonstrate compliance with ~~condition~~ parts 4 through 9, above, and with Regulation 6-211 above, the Permit Holder shall perform a compliance source test ~~source tests shall be conducted~~ within 180 days of ~~permit approval~~ furnace startup, and ongoing source tests at a frequency of at least once every 60 months of furnace operation following the previous source test. Source test protocols shall be prepared and pre-approved by the APCO prior to performing any source tests. Note: Source tests performed prior to issuance of the Title V permit may be used to demonstrate initial compliance as long as

appropriate sampling and analysis methods were used and approved by the APCO. Source tests to demonstrate compliance with 40 CFR part 503 may also be used to demonstrate compliance as long as appropriate sampling and analysis methods were used and approved by the APCO. Source test results shall be submitted to the APCO within 60 days of analytical completion. (Basis: BAAQMD 2-6-501)

a. Sewage Sludge sampling: Sewage sludge sampling shall be performed as noted in condition ~~12~~ 13(f) below. The Permit Holder shall use Method 209F to determine dry sludge content, Method 104 for beryllium, Method 12 for lead, and Method 105 for mercury. (Basis: 40 CFR 60.154)

b. Exhaust particulate testing: Three composite exhaust samples shall be collected according to EPA Method 5 and analyzed for particulate mass. (Basis: 40 CFR 60.154 (d)(3)).

c. Exhaust metals testing: Three composite exhaust samples shall be collected according to EPA Method 5. Two of the samples shall be analyzed by neutron activation for arsenic, cadmium, chromium, copper, nickel, selenium and zinc; and one sample shall be analyzed according to Method 104 (or Method 103) and Method 12, respectively, for beryllium and lead. (Basis: 40 CFR 60.154(d)(3)(i).

11. Ongoing Emissions – Sulfur Dioxide: Exhaust gas emissions shall not exceed 300 ppm, dry SO2. (Basis: BAAQMD 9-1-304)

To demonstrate compliance with this requirement the Permit Holder shall perform a District-approved source test at a frequency of at least one time every calendar year. Source tests shall be conducted using BAAQMD Method ST-19A (or an approved equivalent method) according to a pre-approved source test protocol. Results shall be submitted to the APCO within 60 days of analytical completion. (Basis: BAAQMD 9-1-304)

12**.** NMOC emissions shall be abated by at least 98% by weight across S-9 and S-10 or the concentration shall be less than 120 ppmv, dry NMOC, expressed as methane corrected to 3% oxygen when firing landfill gas. To demonstrate compliance with this requirement, the Permit Holder shall perform a pre-approved initial source test within 60 days of July 1, 2002, or within 60 days of furnace startup (if the furnace is not operational on July 1, 2002), and ongoing source tests at a frequency of not less than 9 months nor greater than 12 months of furnace operation, after the most recent compliance source test. Source test protocols shall be prepared and pre-approved by the APCO prior to performing any source tests. ~~During the source test, CCCSD shall continuously monitor and record combustion temperature. Upon source test completion and successful demonstration of compliance with abatement efficiency standard, District staff shall revise the permit condition as an administrative permit amendment to incorporate the specific minimum temperature setpoint. To ensure ongoing compliance with the above NMOC abatement or emission standard, the Permit Holder shall maintain the rolling 3 clock hour average temperature of hearth 1 at 1,000 degrees F or greater. The Permit~~

~~Holder shall calculate and record the rolling 3 clock-hour average temperatures in a District-approved log. (Basis: BAAQMD Regulation 8-34-301.4)~~

To ensure compliance with the above NMOC abatement efficiency or emission standard, the Permit Holder shall maintain the rolling 3 clock-hour average temperature of hearth 1 at 1,000 degrees F or greater. The Permit Holder shall calculate and record the rolling 3 clock-hour average temperatures in a District-approved log. (Basis: 40CFR 60.158(c)(1)(i))

If a source test demonstrates compliance with all applicable requirements at a different minimum hearth 1 temperature, the APCO may revise the above temperature limit, in accordance with the procedures identified in Regulation 2-6-414 or 2-6-415 based on the following criteria. The minimum hearth 1 temperature for S-9 and S-10 shall be equal to the average hearth 1 temperature measured during a complying source test (NMHC emission limit was met) minus 50 degrees F. (Basis: 40 CFR 60.758(c)(1)(i))

The above language was added to Part 12 to clarify the procedures for modifying the [temperature] operating parameter as specified in the landfill NSPS.

13. Ongoing Monitoring: To demonstrate compliance with the above parts and as required by the New Source Performance Standard (NSPS) for sewage treatment plants the Permit Holder shall:

    a. Install, calibrate, maintain and operate a flow measuring device, which can be used to determine either the mass or volume of sludge charged to the ~~incinerator~~ furnace. The sludge flow measurement device shall be certified by the manufacturer to have an accuracy of ~~±~~plus or minus 5% over its operating range. The flow measurement device shall be operated continuously and data recorded during all periods of operation of the ~~incinerator~~ furnace. (Basis: 40 CFR 60.153(a)(1))

    b. Install, calibrate, maintain and operate a monitoring device that continuously measures and records the pressure drop of the gas flow through the wet scrubber. Where a combination of wet scrubbers is used in series, the pressure drop of the gas flow through the combined system shall be continuously monitored. The device used to monitor scrubber pressure drop shall be certified by the manufacturer to be accurate within ~~±~~ plus or minus 1 inch water gauge and shall be calibrated on an annual basis in accordance with manufacturer's instructions. (Basis: 40 CFR 60.153(b)(1))

    c. Install, calibrate, maintain and operate a monitoring device that continuously measures and records the oxygen content of the furnace exhaust gases. The oxygen monitor shall be located upstream of any rabble shaft cooling air inlet in the furnace exhaust gas stream, fan, ambient air recirculation damper, or any other source of dilution air. The oxygen monitoring device shall be certified by the manufacturer to have a relative accuracy of plus or minus 5 percent over its operating range and shall be calibrated according to method(s) prescribed by the manufacturer at least once each 24-hour operating period. (Basis: 40 CFR 60.153(b)(2))

d. Install, calibrate, maintain and operate temperature measuring devices at every hearth in the multiple hearth furnaces. A minimum of one thermocouple shall be installed in each hearth in the cooling and drying zones, and a minimum of two thermocouples shall be installed in each hearth in the combustion zone. Each temperature measuring device shall be certified by the manufacturer to have an accuracy of plus or minus 5 percent over its operating range. The temperature monitoring devices shall be operated continuously and data recorded during all periods of operation of the furnace. (Basis: 40 CFR 60.153(b)(3))

e. Install, calibrate, maintain and operate a device for measuring the fuel flow to the furnace. The flow measuring device shall be certified by the manufacturer to have an accuracy of plus or minus 5 percent over its operating range. The fuel flow device(s) shall be operated continuous and data recorded during all periods of operation of the furnace. (Basis: 40 CFR 60.153(b)(4))

Parts d and e were modified to write the words plus or minus 5 percent. Previously the expression ± was written in front of 5 percent. The problem with this terminology lies in the fact that the BAAQMD databank containing and printing out the operating conditions is apparently unable to reproduce the + or - symbol noted above. The easiest approach is to spell out plus or minus. Hence the change.

f. Collect and analyze a grab sample of the sludge fed to the furnace once per day. The dry sludge content and the volatile solids content shall be determined in accordance with the method specified in 40 CFR 60.154 c (2). (Basis: 40 CFR 60.153(b)(5))

g. In order to demonstrate compliance with part 2, above, the Permit Holder shall maintain daily records of total solid fuel throughput (ton/day) to S-9 and S-10 sewage sludge ~~incinerators~~ furnaces. (Basis: Cumulative Increase)

h. All records shall be retained onsite for a period of at least 5 years and made available to the APCO upon request. (Basis: Cumulative Increase)

14. Reporting: As required by the New Source Performance Standard (NSPS) and NESHAPs for Beryllium and Mercury, the Permit Holder shall submit to the Administrator and the APCO semi-annually a report in writing which contains the following (Basis: 40 CFR 60.155):

a. A record of average wet scrubber pressure drop measurements for each period of 15 minutes duration or more, when feeding sludge to the furnace, ~~during which~~ when the pressure drop of the scrubber was less than the following limits. (Basis: 40 CFR 60.155(a)(1)).

1. S-9 (Furnace 1) Wet Scrubber A-2: 5.9 inches W.C.
2. S-10 (Furnace 2) Wet Scrubber A-4: 4.7 inches W.C.

b. A record of average oxygen content in the incinerator exhaust gas (prior to dilution) for each period of 1-hour duration or more that the oxygen content exceeds 10 percent. (Basis: 40 CFR 60.155(a)(2)).

c. Any recent reports as appropriate or as requested by the APCO. (Basis: 40 CFR 60.155(a)(3), (4), (5), (6))

Condition # 21485:
The majority of the recommended changes are non-substantive and are only to improve readability and databank consistency. The additional wording regarding the startup and shutdown NOx limitation grace periods is made for consistency.

For S-188, Natural Gas Fired Turbine Generator with HRSG; Solar Model Centaur T-4700, 3500 KW; Maximum Firing Capacity - ~~46 MM Btu/hr (LHV)~~ 49.5 MMBtu/hr (HHV).

The inclusion of the firing limit on a lower heating value basis is not necessary, since the higher heating value represents how fuels are measured and delivered.

1a. S-188 shall be fired only on natural gas. (Basis: Cumulative Increase)
1b. The S-188 firing rate shall not exceed 1188 MMBtu/day (HHV). (Basis: Cumulative Increase)
1c. All natural gas burned at S-188 shall be PUC quality gas. (basis: 2-1-403)

2. NOx emissions from S-188 shall not exceed 42 ppmv, dry, at 15% ~~percent~~ oxygen based on a three clock hour average. (Basis: Reg 9-9-301.1))

3. NOx emissions from S-188 shall not exceed 154 ppmv, dry, at 15% oxygen based on a clock-hour average. (Basis: 40 CFR 60.332)

4. NOx emissions from S-188 shall not exceed 118 pounds in any rolling consecutive 24 hour period. (Basis: Cumulative Increase)

5. NOx emissions from S-188 shall not exceed 19.824 tons in any rolling 365 consecutive day period. (Basis: Cumulative Increase)

6. CO emissions from S-188 shall not exceed 157 pounds each rolling consecutive 24 hour period. (Basis: Cumulative Increase)

7. CO emissions from S-188 shall not exceed 26.376 tons in any rolling 365 consecutive day period. (Basis: Cumulative Increase)

8. Exhaust gas emissions shall not exceed 150 ppm SO2, dry, at 15% O2. The Permit Holder shall use the sulfur content of the gaseous fuel~~s~~ in conjunction with a material balance to calculate the exhaust gas sulfur dioxide concentration. The Permit Holder shall calculate and record the sulfur dioxide concentration at least 1 time every calendar quarter. (Basis: 40 CFR Part 60 Subpart GG)

9. To demonstrate compliance with conditions 6 and 7 above, the Permit Holder shall perform a compliance source test at a frequency of at least 1 time every 60 months after the most recent source test. Source test results shall be kept onsite and made available to the BAAQMD staff upon request. (Basis: Cumulative Increase)

10. The stack at S-188 shall be equipped with BAAQMD approved source testing ports to allow for the suitable sampling and testing of process flue gas emissions from S-188. (Basis: Cumulative Increase)

11. The Permit Holder shall operate a BAAQMD approved emission monitoring and recording system for S-188 to continuously assure compliance with conditions 2, 4, and 5, above. Recording made to comply with this condition shall be retained for at least five years from date of last entry. This log shall be kept on-site and made available to the BAAQMD staff upon request. (Basis: Cumulative Increase, BAAQMD Regulation 2-6-501)

12. The daily usage of natural gas at S-188, as measured at a BAAQMD approved fuel meter dedicated solely to this source, shall be recorded daily in cubic feet (or thousands of cubic feet) in a BAAQMD approved log. This log shall be retained for at least five years from date of last entry. This log shall be kept on-site and made available to the BAAQMD staff upon request. (Basis: Cumulative Increase, BAAQMD Regulation 2-6-501)

13. In order to show compliance with parts 1b and 14, the Permit Holder shall operate a USEPA approved fuel flow monitor and water injection flow monitor and calculate the water-to-fuel ratio on a clock-hour basis and the heat input on a daily basis. (Basis 40 CFR 60.334(c)(1))

14. Exhaust gas emissions shall not exceed 300 SO_2 ppmv, dry. CCCSD shall use the sulfur content of the fuels in conjunction with a material balance to calculate the exhaust gas sulfur dioxide concentrations.
(Basis: BAAQMD 9-1-302)

15. During the start-up of S-188, this source shall be granted a start-up grace period during which S-188 need not meet the emission limit indicated in part 2, and part 3, above. All other conditions imposed on S-188 shall remain in effect and enforceable. This start-up grace period shall begin once fuel is first combusted at S-188 and shall end not more than three hours later. NOx emissions during this start-up grace period shall not be included in the cumulative NOx emissions of any rolling consecutive 24-hour period. During subsequent additional start-ups of S-188 within a single 24 consecutive hour period, there shall be no start-up grace period and all conditions imposed on S-188 shall be in effect and enforceable. Each start-up shall be recorded in a District-approved log which shall be retained for at least five years from the date of last entry, be kept on site, and made available to the District upon request. (Basis: BAAQMD 9-9-114)

A grace period is granted from the ppm NOx limits of Reg 9-9-114 for nominal start-up and shutdown periods (per Regulation 9-8-114. To be consistent with this exemption, the NOx

emissions occurring during these grace periods should not be counted in the cumulative 24 hour emission limit specified in Part 4

16. During the shutdown of S-188, this source shall be granted a shutdown grace period during which S-188 need not meet the emission limit indicated in part 2, and part 3, above. All other conditions imposed on S-188 shall remain in effect and enforceable. This shutdown grace period shall be defined as the last hour of operation of S-188 preceding the time that all fuel combustion at S-188 has ceased. NOx emissions during this start-up grace period shall not be included in the cumulative NOx emissions of any rolling consecutive 24-hour period. Not more than one such grace period may occur in any 24 consecutive hour period. During additional shutdowns of S-188 within a single 24 consecutive hour period, there shall be no shutdown grace period and all conditions imposed on S-188 shall remain in effect and enforceable. Each shutdown shall be recorded in a District-approved log which shall be retained for at least five years from the date of last entry, be kept on site, and made available to the District upon request. (Basis: BAAQMD 9-9-114)

A grace period is granted from the ppm NOx limits of Reg 9-9-114 for nominal start-up and shutdown periods (per Regulation 9-8-114. To be consistent with this exemption, the NOx emissions occurring during these grace periods should not be counted in the cumulative 24 hour emission limit specified in Part 4

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 monitoring identified in the Title V Permit is adequate. 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**.**

A discussion of sulfur monitoring and emission limitation issues follows.

BAAQMD Regulation 9-1-301 (Ground-Level SO2 Concentration Limitations)

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). Modeling studies from a previous permit application indicate that a POTW producing 159,000 cu ft/hr (Santa Rosa produces about 15,000 scf/hr) of digester gas at 300 ppmv (Santa Rosa controls their digester gas sulfide levels to less than 100 ppm) sulfide level would result in an emission rate of approximately 8 lb/hr and a worst case ground level fenceline concentration of 0.02 ppm of SO2. Since this is less than the 0.05 ppmv limit specified in 9-1-301 (most dilute limit), and since the maximum digester gas production rate is approximately 15,000 scf/hr, there is no expectation that the SO2 ground-level concentration limit would be exceeded. This facility does not have equipment that emits large amounts of SO2 and therefore is not required by the APCO to have ground level monitoring for SO2.

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.

BAAQMD Regulation 9-1-302 (300 ppm maximum, from any vapor stream)

Permit condition 18871 for the digester S-190 limits the digester gas concentration to 1500 ppm total sulfur. This is less than the calculated level which would directly produce an exhaust stream of 300 ppmv SO2. Santa Rosa-Laguna controls their digester gas to levels typically below 100 ppm, hence the 300 ppmv standard is not expected to be approached from 100% digester gas combustion.

BAAQMD Regulation 9-1-304 (Sulfur Content of Liquid and Solid Fuels)

The only liquid fuel used at this facility is diesel fuel, hence this part is applicable to those sources burning diesel fuel. The standard in 9-1-304 is 0.5% sulfur maximum in the fuel, which is equivalent to 5,000 ppm. California state requirements specify that CARB diesel shall be used in all sources (mobile and stationary) with the exception of locomotives and ships. The current CARB Diesel sulfur standard is 500 ppm. Further, in June of 2006, the sulfur level of CARB Diesel will be further reduced to 15 ppm.

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 IV of the permit.

Changes to permit

BAAQMD Regulation 6-303, Ringelmann No. 2 limitation, has been added because it applies to the emergency generators.

IX. 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 explaining that specific federally enforceable regulations and standards do not apply to a source or group of sources, or (2) A provision in a major facility review permit explaining that specific federally enforceable applicable requirements for monitoring, recordkeeping and/or reporting 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 Title V permits. The District's program does not allow other types of streamlining in Title V permits.

This facility has no permit shields.

X. Revision History

Initial Issuance: Date

The Title V permit underwent a minor permit revision in application 5738.

XI. Glossary

The glossary was updated.

D. Alternate Operating Scenarios:

No alternate operating scenario has been requested for this facility.

E. Compliance Status:

A **Date** office memorandum from the Director of Compliance and Enforcement, to the Director of the Engineering Division, presents a review of the compliance record of Central Contra Costa Sanitary District (Site #: A0907). The Compliance and Enforcement Division staff has reviewed the records for Site A0907 for the period between **Date1** through **Date2**. During the period subject to review, activities known to the District include:

- There were **X** Notices of Violation issued during this review period.
- The District **did/did not** receive any air pollution complaints alleging the City of Santa Rosa's Wastewater Treatment facility as the source.
- The District did not receive any notifications for continuous emission monitoring (CEM).

The owner certified that all equipment was operating in compliance on **Date**. The Compliance and Enforcement Division has determined that there is no evidence of on-going compliance and no recurring pattern of violations that would warrant consideration of a Title V permit compliance schedule.

F. Differences between the Application and the Proposed Permit:

The California Statewide Air Toxic Control Measure for stationary compression ignition engines was adopted in 2004. This ATCM applies to engines S-189 and S-190 and requires an eventual reduction in the allowable hours of operation for reliability and maintenance . These changes became effective January 1, 2006. The permit conditions will be modified in the future as apropos--and will be classified as administrative amendments.

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APPENDIX A

BAAQMD COMPLIANCE REPORT

APPENDIX B

GLOSSARY

ACT
Federal Clean Air Act

APCO
Air Pollution Control Officer

ARB
Air Resources Board

BAAQMD
Bay Area Air Quality Management District

BACT
Best Available Control Technology

Basis
The underlying authority which 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.

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)

NOx

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, NOx, 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

APPENDIX C

EMISSIONS CHANGES

The following table lists the emissions increases from the eleven permit applications processed since the original Title V Permit Issuance

Central Contra Costa Sanitary District (plant A907)
Emission Changes Since Initial Title V Permit

	NOx (tpy)	CO (tpy)	POC (tpy)	SO2 (tpy)	PM10 (tpy)
AN 4717 (loss of exemption) (5-8-2002) (diesel fired)					
S-189 Emergency Backup Generator	6.0	1.4	0.18	0.1	0.17
S-190 Emergency Backup Generator	6.0	1.4	0.18	0.1	0.17
S-191 Portable Standby Generator, 80 HP	1.24	0.3	0.1	0.02	0.09
S-192 Portable Standby Generator, 235 HP	3.6	0.9	0.3	0.05	0.26
S-193 Portable Standby Generator, 238 HP	3.7	0.9	0.3	0.06	0.27
S-194 Portable Standby Generator, 95 HP	1.5	0.4	0.12	0.02	0.11
Total Net Emission Increases, tpy	**22 tpy**	**5.3**	**0.82**	**0.35**	**1.1**
Current (4-2006) Databank Emissions, tpy	**66.2**	**24.5**	**17**	**0.75**	**4.4**

APPENDIX D

PERMIT APPLICATION ENGINEERING EVALUATIONS

Permit activity since the most recent Title V minor modification permit application 5738 is application 4717, a loss of exemption permit application to permit the stationary and portable emergency backup generators. This engineering evaluation is included hereinafter for reference.

ENGINEERING EVALUATION
CENTRAL CONTRA COSTA SANITARY DISTRICT; SITE 907
APPLICATION 4717

BACKGROUND

CENTRAL CONTRA COSTA SANITARY DISTRICT has applied for a permit to operate two existing standby generators powered by diesel engine (S-189, S-190). The engines have been in operation since 1993 and were thus installed before May 17, 2000 when Regulation 1 and Regulation 2-1 were modified to require engines greater than 50 HP to require a Permit to Operate. As such, S-189 and S-190 constitute Loss-Of-Exemption sources not subject to Regulations 2-1-301 or 2-1-302 ("new" and "modified sources").

Emergency Standby Generator: Diesel Engine, Make: Detroit, Model: DDC1635, Rated Horsepower: 2500 HP.
Emergency Standby Generator: Diesel Engine, Make: Detroit, Model: DDC1635, Rated Horsepower: 2500 HP.

In accordance with Regulation 9-8-331, S-189 and S-190 are limited to 200 hours per year for reliability-related activities and unlimited when used for power in emergency situations.

CENTRAL CONTRA COSTA SANITARY DISTRICT has applied for a portable permit to operate four existing portable standby generators powered by diesel engines (S-191, S-192, S-193, S-194). The engines have been in operation since prior to May 17, 2000 and were thus installed before May 17, 2000 when Regulation 1 and Regulation 2-1 were modified to require engines greater than 50 HP to require a Permit to Operate. As such, S-191, S-192, S-193, and S-194 constitute Loss-Of-Exemption sources not subject to Regulations 2-1-301 or 2-1-302 ("new" and "modified sources").

Portable Standby Generator: Diesel Engine, Make: Caterpillar, Model: 3056, Rated Horsepower: 80 HP.
Portable Standby Generator: Diesel Engine, Make: Caterpillar, Model: 3208, Rated Horsepower: 235 HP.
S-193 **Portable Standby Generator: Diesel Engine, Make: Deutz, Model: E10L413, Rated Horsepower: 238 HP.**
S-194 **Portable Standby Generator: Diesel Engine, Make: Deutz, Model: F3-6L912, Rated Horsepower: 95 HP (2300 RPM)**

EMISSIONS

Emissions from S-189, S-190, S-191, S-192, S-193, and S-194 do not need to be calculated since S-189, S-190, S-191, S-192, S-193, and S-194 are not defined as new or modified sources.

CUMULATIVE INCREASE

Emissions from S-189, S-190, S-191, S-192, S-193, and S-194 do not count towards the facility's cumulative increase since S-189, S-190, S-191, S-192, S-193, and S-194 are not defined as new or modified sources pursuant to Regulation 2-1.

BACT

Since S-189, S-190, S-191, S-192, S-193, and S-194 are loss-of-exemption sources, they are not subject to BACT requirements pursuant to Regulation 2-2.

OFFSETS

Offsets are not required because S-189, S-190, S-191, S-192, S-193, and S-194 are not new or modified sources pursuant to Regulation 2-1 and 2-2.

TOXIC RISK SCREEN ANALYSIS

A Toxic Risk Screen Analysis is not required for these sources since S-189, S-190, S-191, S-192, S-193, and S-194 are not new or modified source and not subject to Regulation 2-1-316.

STATEMENT OF COMPLIANCE

S-189, S-190, S-191, S-192, S-193, and S-194 are loss-of-exemption standby generators installed before May 17, 2000 and therefore not subject to Regulations 9-8-301, 9-8-302, and 9-8-502. S-189, S-190, S-191, S-192, S-193, and S-194 are subject to the monitoring and record keeping procedures described in Regulation 9-8-530, the SO_2 limitations of Regulation 9-1-302 (ground level concentration) and 9-1-304 (0.5% by weight in fuel), and the Ringelmann No. 2 limitations of Regulation 6-303(emissions opacity limitations). Requirements for Regulation 9-8-530 are included in the proposed permit conditions. Compliance with Regulation 9-1-304 is likely since California law mandates using diesel fuel with a 0.05% by weight sulfur.

Per Regulation 6, Section 303, a person shall not emit for a period or periods aggregating more than three minutes in any hour, a visible emission that is as dark or darker than No. 2 on the Ringelmann Chart, or of such opacity as to obscure an observer's view to an equivalent or greater degree, nor shall said emission, as perceived by an opacity sensing device in good working order, where such device is required by District regulations, be equal to or greater than 40% opacity.

This application is considered to be ministerial under the District's proposed CEQA guidelines (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 project is over 1,000 ft from the nearest public school and is therefore not subject to the public notification requirements of Regulation 2-1-412.

A toxic risk screening analysis is not required.

BACT, PSD, NSPS, and NESHAPS are not triggered.

Since S-191, S-192, S-193, and S-194 are not new or modified sources and were installed before May 17, 2000, throughput limitations were not implemented.

PERMIT CONDITIONS

APPLICATION 4717; CENTRAL CONTRA COSTA SANITARY DISTRICT; PLANT 907;
CONDITIONS FOR S-189 AND S-190:

(PC 19290)

1. Hours of Operation: The emergency standby engines (S-189, S-190) shall only be operated to mitigate emergency conditions or for the reliability-related activities. Operation for reliability-related activities is shall

not exceed 200 hours in any calendar year for S-189 and S-190. Operation while mitigating emergency conditions is unlimited for both S-189 and S-190. [Basis: Reg. 9-8-331]

2. "Emergency Conditions" is defined as any of the following: [Basis: Reg. 9-8-231]
a. Loss of regular natural gas supply.
b. Failure of regular electric power supply.
c. Flood mitigation.
d. Sewage overflow mitigation.
e. Fire.
f. Failure of a primary motor, but only for such time as needed to repair or replace the primary motor.

3. "Reliability-related activities" is defined as any of the following: [Basis: Reg. 9-8-232]
a. Operation of an emergency standby engine to test its ability to perform for an emergency use, or
b. Operation of an emergency standby engine during maintenance of a primary motor.

4. The emergency standby engine shall be equipped with either: [Basis: Reg. 9-8-530]
a. a non-resettable totalizing meter that measures and records the hours of operation for the engine.
b. a non-resettable fuel usage meter.

5. Records: The following monthly records shall be maintained in a District-approved log for at least 2 years and shall be made available for District inspection upon request: [Basis: Reg. 9-8-530, 1-441]
a. Hours of operation (total).
b. Hours of operation (emergency).
c. For each emergency, the nature of the emergency condition.

CONDITIONS FOR S-191, S-192, S-193, AND S-194:
(PC 19291)

Portable Equipment Requirements
1. This mobile equipment shall operate at all time in conformance with the eligibility requirements set forth in BAAQMD Regulation 2-1-220 for portable equipment.
[Portable Eligibility Requirements]

2. If the portable equipment remains at any fixed location in the Bay Area Air Basin for more than 12 months, the portable permit will automatically revert to a conventional permanent location BAAQMD permit and will lose its portability.
[Portable Eligibility Residence Time Requirement]

3. Any violation of Condition #1 shall be reported to the Director of the Compliance and Enforcement Division no later than two business days after the incidence. In addition, any loss of portability per condition #2 shall be reported to the Director of the Compliance and Enforcement Division no later than 30 days after the loss of its portability. [Compliance Verification]

Regulatory Compliance Requirement
4. Sources 191, 192, 193, and 194 shall only fire on diesel fuel containing less than 0.5% by weight sulfur.
[Regulation 9-1; toxics]

5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour that is as dark or darker than Ringlemann 1 or equivalent to 20% opacity. [Regulation 6]

6. Operation of Sources 191, 192, 193, and 194 shall not emit emissions in sufficient quantities as to cause a public nuisance under Regulation 1-301. [Regulation 1-301]

7. S-191, S-192, S-193, and S-194 shall not be operated for longer than 72 consecutive hours within 1,000 feet of a school. To operate for longer than 72 consecutive hours within 1,000 feet of a school, the Permit Holder must submit an application to the District so that proper notification of your intended operation can be made known to the affected public in advance of any continued usage of the equipment. [Regulation 2-1-412]

Recordkeeping Requirements

8. The following records shall be kept in a District approved logbook and retained for a period of at least two years following the date of entry. The log shall be kept with the equipment and made available to District staff upon request. [Recordkeeping]

a. Weekly hours of operation or fuel usage for S-191, S-192, S-193, and S-194.
b. Hours of operation or fuel usage shall be totaled on a monthly basis.

Reporting Requirements

9. The Permit Holder shall notify the District, in writing, at least 3 days in advance, of the new location in which they intend to operate for longer than 72 consecutive hours. The notification shall include: [Reporting]

a. Brief description of the general nature of the operation.
b. The estimated duration of the operation at this site.
c. The name and phone number of a contact person where the equipment will be operated.

10. Within 30 days after the end of every calendar year, the applicant shall provide a year-end summary showing the following information: [Reporting]

a. The location(s) at which the equipment was operated for more than 72 consecutive hours including the dates operated at each location.
b. The total amount hours of operation or fuel used by S-191, S-192, S-193, and S-194 for the previous 12 months.

<u>RECOMMENDATION</u>

Waive Authority to Construct and issue a Permit to Operate to CENTRAL CONTRA COSTA SANITARY DISTRICT for:

> Emergency Standby Generator: Diesel Engine, Make: Detroit, Model: DDC1635, Rated Horsepower: 2500 HP.
> Emergency Standby Generator: Diesel Engine, Make: Detroit, Model: DDC1635, Rated Horsepower: 2500 HP.

Waive Authority to Construct and issue a Portable Permit to Operate to CENTRAL CONTRA COSTA SANITARY DISTRICT for:

Portable Standby Generator: Diesel Engine, Make: Caterpillar, Model: 3056, Rated Horsepower: 80 HP.
Portable Standby Generator: Diesel Engine, Make: Caterpillar, Model: 3208, Rated Horsepower: 235 HP.
Portable Standby Generator: Diesel Engine, Make: Deutz, Model: E10L413, Rated Horsepower: 238 HP.
Portable Standby Generator: Diesel Engine, Make: Deutz, Model: F3-6L912, Rated Horsepower: 95 HP (2300 RPM)

BY: Nicholas C. Maiden — 5/8/02

Nicholas C. Maiden
Air Quality Technician

Date

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