Bay Area Air Quality Management District

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Permit Evaluation
and
Statement of Basis
for
RENEWAL of

MAJOR FACILITY REVIEW PERMIT

for

SFPP, LP
Facility #A4022

Facility Address:
1550 Solano Way
Concord, CA 94520

Mailing Address:
1100 Town & Country Road
Orange, CA 92868

Application Engineer: M.K. Carol Lee
Site Engineer: Xuna Cai

Application: 23083, 24889 and 25866

November 2016

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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. Monitoring requirements are contained in section VII 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 A4020.

This facility received its initial Title V permit on November 21, 2001. The permit was renewed on May 18, 2009. Although the current permit expired on May 17, 2014, it continues in force until the District takes final action on the permit renewal because the facility submitted a complete renewal application on November 18, 2013, at least six months prior to expiration. This application seeks to renew the Title V permit for the second time.

The District proposes to renew the permit. The permit will include modifications requested by the permittee, as well as other modifications by the District, and it will incorporate earlier permit revisions and modifications between the two renewals. The standard sections of the permit have been updated to include new standard language used in all Title V permits and new requirements applicable to all Title V facilities. Also, various other corrections have been made to the permit.

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 8 applications since the last administrative amendment of the Major Facility Review permit was issued on October 6, 2015. A detailed summary of the 8 applications is provided in the Appendix of this Statement of Basis. Of the 8 applications, 2 were for

alterations that did not result in any required amendment of the permit. The remaining 6 applications did affect that permit and the following is a list of the applications:

Application #	Description
23083	Title V: Minor Revision for App# 23082
24889	Title V: Minor Revision for App# 24742
25866	Title V: Renewal
23082	Clarification that S-32 is an Emergency Standby Diesel Fire Pump
24742	Addition of S-49 Oil-Water Separator
27155	Addition of S-50 Oil-Water Separator

Application 25866 seeks renewal of the Title V permit, which is the subject of this action. Application 23083 and 24889 seeks to incorporate the changes processed by Applications 23082 and 24742 in the District permit into the facility's Title V permit. Evaluation of Applications 23083 and 24889 has been incorporated into this renewal and will be completed upon completion of this action.

This Statement of Basis will cover the evaluation of Applications 25866, 24889, and 23083. See Appendix A for copies of the evaluation reports for Applications 23082, 24742, and 27155 which amended the Title V permit.

B. Facility Description

SFPP, LP is a bulk terminal where refined petroleum products are stored in storage tanks and distributed via pipelines. Emissions from the facility are primarily volatile organic compounds, the main pollutant of concern.

There has been no significant change in emissions due to the addition of oil water separators and other revisions after the issuance of the first renewal of the permit.

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.

Changes to permit:

- The dates of adoption and approval of rules in Standard Condition 1.A have been updated.
- Added BAAQMD Regulation 2, Rule 5 – New Source Review of Toxic Air Contaminants and SIP Regulation 2, Rule 6 – Permits, Major Facility Review as applicable requirements for Standard Conditions 1.A.
- The address in Standard Condition 1.F for the Bay Area Air Quality Management District has been updated to 375 Beale Street, Suite 600, in San Francisco, CA 94105.
- The division name and region number format of the USEPA in Standard Condition 1.G was updated.
- 40 CFR Part 68 was added as Part K of the Standard Conditions because the facility is subject to the requirements, but to date they have not crossed any of the storage thresholds that would require a Risk Management Plan to be submitted.

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., S24).

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.

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-24). 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.

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.

Changes to permit:

- Sources, S49 and S50, Oil-Water Separators (and associated A-50 Carbon Adsorption System for S-50) were permitted (Applications 24742 and 27155, respectively), and sources, S27 and S-42, Oil-Water Separators (and associated A-6 Thermal/Catalytic Oxidizer) were removed after the last renewal of Title V permit was issued.
- Description of source, S31, was amended (Application 23082) to reflect it is actually an Emergency Standby Diesel Fire Pump and applicable requirements were updated for this category of engine.
- Added a column to Table IIA to show the basis for the capacity and limit applicable to the source and indicated basis of the limit (see Section VI. Permit Conditions for more details) for consistency with other Title V permits.

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. There are no exempt significant sources at this facility.

Changes to permit:

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

- SIP Regulation 2, Rule 1, General Requirements
- BAAQMD Regulation 2, Rule 2, New Source Review
- SIP Regulation 2, Rule 2, New Source Review
- BAAQMD Regulation 2, Rule 4, Emission Banking
- SIP Regulation 2, Rule 4, Emission Banking
- BAAQMD Regulation 2, Rule 6, Major Facility Review
- SIP Regulation 2, Rule 6, Major Facility Review
- SIP Regulation 8, Rule 3, Organic Compounds – Architectural Coatings
- California Health and Safety Code, Title 17, Section 93116, Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater.
- 40 CFR 82 Subpart H, Protection of Stratospheric Ozone; Halon Emissions Reduction
- 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 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.

CAM:

Because it is difficult to determine the VOC emissions from S3 Storage Tank, S5 through S13 Storage Tanks, S18 through S26 Storage Tanks, and S40 Pipeline Surge System on an individual basis, it is presumed that the pre-abatement potential to emit for each pollutant specific emissions unit exceeds 100 tpy of VOC. Because these sources are abated by A1 Vapor Burner and are subject to a federally-enforceable emission limitation or standard, they trigger an applicability analysis for 40 CFR 64, Compliance Assurance Monitoring (CAM). The federally-enforceable emission standard that applies to the sources is a minimum VOC destruction efficiency at A1 of 99.8% by weight as specified in District permit condition 13143, part 2.

The sources are exempt from CAM per 40 CFR 64.2(b)(vi) because the A1 VOC destruction efficiency requirement specifies the use of a continuous compliance determination method as specified in the current Part 70 (Title V) permit. District permit condition 13143, part 3, requires that the owner/operator continuously monitor the combustion chamber temperature of A1 Vapor Burner to ensure that a minimum combustion chamber temperature of 1200 degrees Fahrenheit is maintained. The owner/operator has established via source testing that there is a correlation between a minimum VOC destruction efficiency of 99.8% by weight and a minimum combustion chamber temperature of 1200 degrees F.

NESHAPS

The facility meets the definition of pipeline breakout station because it is a facility along a pipeline containing storage vessels used to relieve surges or receive and store gasoline from the pipeline for reinjection and continued transportation by pipeline or to other facilities. The facility has no loading rack for gasoline distribution.

The facility is not subject to the requirements of 40 CFR 63, Subpart R – National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations). The facility is exempt from the requirements of Subpart R because E_P, emissions screening factor (= 0.36) is <1.0, and emissions of a single HAP are less than 10 tpy and total HAPs are less than 25 tpy.

However, the facility is subject to the requirements of 40 CFR 63, Subpart BBBBBB – National Emission Standards for Hazardous Air Pollutants for Source category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities as per 63.11081(a)(1).

E_P Calculations

$$E_P=CF\ [6.7(T_F)(1\text{-}CE)+0.21(T_E)+0.093(T_{ES})+0.1(T_I)+5.3X10^{-6}(C)]+0.04(OE)$$
$$= 0.36$$

Where,
E_P=emissions screening factor for pipeline breakout station;
CF=0.161;
CE=0.0, control efficiency;
T_F=0.0, total number of fixed roof tanks without internal floating roof;
T_E=0.0, total number of external floating roof tanks with only primary seals;
T_{ES}=6.0, total number of external floating roof tanks with primary and secondary seals;
T_I=15; total number of fixed roof gasoline tanks with an internal floating roof;
C=9357, number of valves, pumps, connectors, loading arm valves, and open ended lines in gasoline service;
OE=0.6, other HAP screening factor (tons/yr);

HAP emission calculations

Potential to emit VOC from gasoline products = 100 tpy
HAP concentrations by weight in VOC (Ref: Gasoline Marketing (Stage I & Stage II), Volume III Chapter 11, Revised final, Area Source Committee, Emission Inventory Improvement Program, January 2001, Table 11.3-2) are used to calculate HAP emissions:

Benzene (= 0.9%) = 0.9 tpy
Ethyl Benzene (= 0.1%) = 0.1 tpy
n-hexane (= 1.6%) = 1.6 tpy
POM as 16-PAH (= 0.05%) = 0.05 tpy
Toluene (= 1.3%) = 1.3 tpy
2,2,4-Trimethylpentane (= 0.8%) = 0.8 tpy
Xylene (= 0.5%) = 0.5 tpy

Total HAP emissions = 5.25 tpy

On November 8, 2004, the California Air Resources Board (CARB or ARB) adopted an Air Toxics Control Measure (ATCM) for stationary diesel engines, which was effective on January 1, 2005. The measure restricted the hours of operation for older standby engines and required controls and/or lower emission rates for prime and new standby engines. Since the ATCM is a state standard, it is not federally enforceable. S31 is subject to the ATCM requirements for fire pumps.

Changes to permit:

- Clarification was added to Section IV to indicate that any subsections of any requirement listed in the tables are included as part of the applicable requirement. If only certain subsections of a requirement are listed, then only those subsections listed are applicable.
- The dates of adoption or SIP approval of the rules and their "federal enforceability" status will be updated.
- Dates which have already past will be deleted from the Future Effective Date column.
- The applicable requirements of 40 CFR 63, Subpart A will be added.
- The applicable requirements of newly amended District's Regulation 8 Rules 18 will be updated.
- New tables in Section IV and VII for S49 and S50 will be added.
- Tables in Section IV and VII for S27 and S42 will be deleted.
- Description of source, S31, will be amended and its applicable requirements in Table IV and VII amended. In addition, 40 CFR 63 Subpart ZZZZ was added as an applicable requirement. Because there are no limits to be monitored, the applicable requirements are listed in Table IV-J only. Nothing was added to Table VII or the permit conditions because the requirements are explicit in Table IV-J.
- Permit condition ID # 13143 for S3, S13, S18, S19, S20, S21, S22, S23, S24, S25, and S26 will be amended as part of this Title V renewal to set the grandfathered limits for these grandfathered sources as renumbered Part 11. In addition, the recordkeeping requirements will be renumbered to Part 12. This throughput amendment will be reflected in Tables IV-B, IV-D, IV-E, IV-F, IV-G, and IV-H.
- Permit condition ID # 26352 for S4 will be added as part of this Title V renewal to set a grandfathered limit for this grandfathered source. Table IV-C will be amended to add this permit condition as applicable requirement.
- Permit condition ID # 26353 for S14 will be added as part of this Title V renewal to set a grandfathered limit for this grandfathered source. Table IV-H will be amended to add this permit condition as applicable requirement.
- Permit condition ID # 26348 for S28 will be added as part of this Title V renewal to set a firm limit for this grandfathered source. The basis of the limit was based on the data obtained from Application Nol. 4705 which had the indicated throughput in the data form for S28 and in the evaluation report. Table IV-I will be amended to add this permit condition as an applicable requirement.

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; 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."

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 responsible official for SFPP, LLC submitted a signed Certification Statement form dated June 8, 2016. On this form, the responsible official certified that the following statements are true:

- Based on information and belief formed after reasonable inquiry, the source(s) identified in the Applicable Requirements and Compliance Summary form that is(are) in compliance will continue to comply with the applicable requirement(s);
- Based on information and belief formed after reasonable inquiry, the source(s) identified in the Applicable Requirements and Compliance Summary form will comply with future-effective applicable requirement(s), on a timely basis;
- Based on information and belief formed after reasonable inquiry, information on application forms, all accompanying reports, and other required certifications is true, accurate, and complete;
- All fees required by Regulation 3, including Schedule P, have been paid.

Changes to permit:
No changes will be made to this part of the permit.

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.

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.

Grandfathered Sources

The District has reviewed and, where appropriate, revised or added new annual and daily throughput limits on 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 2-234.1. 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 2-1-234.1.2. 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, 2) 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 sources. 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 exceedence, and the District would treat the reported exceedence 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 2-1-234.1.2) 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 exceedence of these limits is not per se a violation of the permit. Failure to report an exceedence 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 exceedence occurs, the facility would have an opportunity to demonstrate that the throughput limit in fact did not reflect the appropriate limit for purposes of 2-1-234.1.2. 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 2-1-234.1.2, 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 2-1-234.1.2.

Permit condition ID # 13143 for S13, S18, S19, S20, S21, S22, S23, S24, S25, and S26 will be amended as part of this Title V renewal to set the grandfathered limits for these grandfathered sources and will be renumbered Part 11. In addition, the recordkeeping requirements will be renumbered to Part 12.

Permit condition ID # 26352 for S4 will be added as part of this Title V renewal to set a grandfathered limit for this grandfathered source.

Permit condition ID # 26353 for S14 will be added as part of this Title V renewal to set a grandfathered limit for this grandfathered source.

Source S28 was permitted in 1990 and is a grandfathered source as indicated in Application Number 4705. However, no permit conditions were included when it was permitted. As a result, Application 4705 was reviewed to determine the permit throughput of S28 when it was permitted. Permit condition ID # 26348 for S28 will be added as part of this Title V renewal to set a grandfathered limit for this source.

All other sources have either firm or NSR limits.

Additional Changes to permit:

- Permit conditions ID# 3590 for S27 will be deleted because source has been shutdown.
- Permit condition ID # 17450 for S42 will be deleted because source has been shutdown.
- Permit condition ID # 24925 for S31 will be replacing permit condition # 22820 (Application 23082).
- Permit condition ID # 25392 for S49 will be added (Application 24742).
- Permit condition ID # 26112 for S50 will be added (Application 27155).
- Permit condition ID # 26348 for S28 will be added to reflect application limit of Application No. 4705.

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 monitoring is adequate.

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**.**

SO_2 Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-31 Emergency Standby Diesel Fire Pump	BAAQMD 9-1-301	Ground level concentrations of SO2 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
	BAAQMD 9-1-304	Sulfur content of fuel < 0.5% by weight	None

SO2 Discussion:

BAAQMD Regulation 9-1-301

Area monitoring to demonstrate compliance with the ground level SO_2 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 SO_2 and therefore is not required to have ground level monitoring by the APCO.

All facility combustion sources are subject to the SO_2 emission limitations in District Regulation 9, Rule 1 (ground-level concentration and emission point concentration).

S-31 Emergency Standby Diesel Fire Pump will be fired with California diesel fuel with a maximum sulfur content of 0.0015% by wt. resulting in insignificant SO2 emissions. Moreover, the generators operate infrequently, therefore additional monitoring is not warranted.

PM Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-31 Emergency Standby Diesel Fire Pump	BAAQMD Regulation 6-1-303	Ringelmann 2.0	None
	BAAQMD Regulation 6-1-310.3	0.15 gr/dscf at 6% O2	None

PM Discussion:

BAAQMD Regulation 6 "Particulate Matter and Visible Emissions"

Visible Emissions

Because S-31 Emergency Standby Diesel Fire Pump will be fired exclusively on diesel fuel with a maximum sulfur content of 0.0015% by weight (mandated for use in California), visible emissions are not expected. Therefore, S-31 is expected to continue to comply with Regulation 6-1-303.1.

Moreover, the emergency standby generators operate infrequently, so additional monitoring is not warranted.

Particulate Weight Limitation

BAAQMD Regulation 6-1-310 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% O_2. These are the "grain loading" standards.

Because S-31 Emergency Standby Diesel Fire Pump will be fired exclusively on diesel fuel with a maximum sulfur content of 0.0015% by weight (mandated for use in California) it is expected to comply with Regulation 6-1-310.

Moreover, the emergency standby generators operate infrequently, so additional monitoring is not warranted. Requiring CEM or annual source tests for these sources would be onerous.

In addition, EPA's July 2001 agreement with CAPCOA and ARB titled, "CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP: Combustion Sources: Summary of

Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", proposes the following monitoring to demonstrate compliance with the grain loading standard for non-utility distillate-oil-fueled emergency piston-type IC Engines: Maintain records of all engine usage (such as time or fuel meter readings) and maintenance. These sources are subject to such a monitoring requirement.

Changes to permit:

- Dates which have already passed will be deleted from the Future Effective Date column.
- The applicable requirements of District's Regulation 8 Rules 18 will be updated.
- New tables for S49 and S50 will be added.
- Table VII-I for S27 and Table VII-M for S42 will be deleted.
- Table VII-J for S31 will be updated by including ATCM requirements for in-use fire pumps.
- Permit condition ID # 13143 for S3, S13, S18, S19, S20, S21, S22, S23, S24, S25, and S26 will be amended as part of this Title V renewal to set the grandfathered limits for these grandfathered sources and will be renumbered Part 11. In addition, the recordkeeping requirements will be renumbered to Part 12. This amendment will be reflected in Tables VII-B, VII-D, VII-E, VII-F, VII-G, VII-H.
- Permit condition ID # 26352 for S4 will be added as part of this Title V renewal to set a grandfathered limit for this grandfathered source. Table VII-C will be amended to add this permit condition as applicable requirement.
- Permit condition ID # 26353 for S14 will be added as part of this Title V renewal to set a grandfathered limit for this grandfathered source. Table VII-H will be amended to add this permit condition as applicable requirement.
- Permit condition ID # 26348 for S28 will be added as part of this Title V renewal to set a grandfathered limit for this source. The Table VII-I will be amended to add this permit condition as an applicable requirement.

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:
Applicable requirements of Regulation 6-1-311 will be added.
Applicable requirements of Regulation 9-1-304 will be added.
Applicable requirements of amended Regulation 8-18 will be added.

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

Changes to permit:
This section was updated to reflect the changes to the permit.

XI. Glossary

Changes to permit:
Additional terms were added to the glossary for additional information and clarity.

D. Alternate Operating Scenarios

No alternate operating scenario has been requested for this facility.

F. Compliance Status

The responsible official for SFPP, LLC submitted a signed Certification Statement form dated June 8, 2016. On this form, the responsible official certified that the following four statements are true:

Based on information and belief formed after reasonable inquiry, the sources identified in the Applicable Requirements and Compliance Summary form that are in compliance will continue to comply with the applicable requirements;

Based on information and belief formed after reasonable inquiry, the sources identified in the Applicable Requirements and Compliance Summary form will comply with future-effective applicable requirements, on a timely basis;

Based on information and belief formed after reasonable inquiry, information on application forms, all accompanying reports, and other required certifications is true, accurate, and complete;

All fees required by Regulation 3, including Schedule P have been paid.

G. Differences between the Application and the Proposed Permit:

The Title V permit application was originally submitted on November 18, 2013. This version is the basis for constructing the proposed Title V permit. Changes to the permit ***conditions, sources, etc.*** include the following:

- S27 Oil-Water Separator and S42 Shallow Tray Air Stripper (and associated A6 Thermal/Catalytic Oxidizer) was removed from Sections II, IV, VI, and VII of the permit because the devices have been shutdown and removed from the facility.
- Amended the name of S31 to reflect that it is a fire pump engine and updated its requirements in Section IV and VII.
- Added S49 and S50 Oil Water Separators into Section II, IV, VI, and VII because sources were permitted in Application 24742 and 27155, respectively.
- Permit condition ID # 13143 which includes S13, S18, S19, S20, S21, S22, S23, S24, S25, and S26 was amended as part of this Title V renewal to set the grandfathered limits for these grandfathered sources.
- Permit condition ID # 26352 for S4 has been added as part of this Title V renewal to set a grandfathered limit for this source.
- Permit condition ID # 25353 for S14 has been added as part of this Title V renewal to set a grandfathered limit for this source.
- Permit condition ID # 26348 for S28 has been added as part of this Title V renewal to set a firm limit for this source.

APPENDIX A

BAAQMD EVALUATION REPORTS

SUMMARY OF PERMIT APPLICATIONS FOR A4022

Application #	Project Description
23083	Title V: MR NSR App # 23082
24889	Title V: MR NSR App # 24742
25866	Renewal
27771	Add blower to oil-water separator. (no change to Title V permit)
26498	Install variable speed fan drive to A-1. (no change to Title V permit)
23082	Clarified that S-31 is an Emergency Standby Diesel Fire Pump
24742	Replacement of Oil Water Separator with S-49 Oil Water Separator.
27155	Replace 2 Oil/Water Separator with S-50 Oil Water Separator

ENGINEERING EVALUATION
SFPP, L.P.
PLANT NO. 4022
APPLICATION NO. 23082

BACKGROUND

SFPP L.P. has requested to correct the source description on its Permit to Operate the following source at its Concord station:

S-31 Direct Drive Emergency Standby Fire Pump: Diesel Engine, Make Caterpillar, Model 3306, Model Year 1986, Rated 226 BHP

S-31 was permitted as a Loss-of-Exemption emergency diesel generator in Application 4703 in year 2002. During the facility's recent review of the permit, the facility realized that S-31 has been misidentified as a emergency generator and it is actually a direct drive fire pump. Because in-use direct drive fire pumps are subject to different requirements in the "California Air Resource Board Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines," the facility requests to correct the source description and the permit limit on reliability-related testing hours.

EMISSIONS

Emissions from the source do not need to be calculated since it is not defined as a new or modified source.

CUMULATIVE INCREASE

Emissions from the source do not count towards the facility's cumulative increase since it is not defined as a new or modified source pursuant to Regulation 2-1.

BACT

Since the source is a Loss-of-Exemption source, it is not subject to BACT requirements pursuant to Regulation 2-2.

OFFSETS

Offsets are not required because the source is not a new or modified source pursuant to Regulation 2-1 and 2-2.

TOXICS RISK SCREENING ANALYSIS

Toxics Risk Screening Analysis is not required for the source since it is not a new or modified source and is not subject to Regulation 2-1-316.

STATEMENT OF COMPLIANCE

S-31 is a loss-of-exemption standby engine installed before May 17, 2000. Pursuant to Regulation 9-8-110.5, it is not subject to Regulations 9-8-304, 9-8-305, 9-8-501 and 9-8-503.

S-31 is subject to the monitoring and record keeping procedures described in Regulation 9-8-530, hours of operation requirements in Regulation 9-8-330, 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 6-1-303 (emissions opacity limitations). Recording keeping requirements and hours of operation requirements are included in the permit conditions. Compliance with Regulation 9-1-304 is expected since California law mandates using diesel fuel with a 0.015% by weight sulfur. Properly maintained engines are also expected to meet the opacity limitations in Regulation 6-1-303.

The engine is subject to the requirements for in-use emergency standby engines in the California Air Resource Board "Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines." Because S-31 is an in-use emergency fire pump that are driven directly by stationary diesel-fueled Cl engines and only operated the number of hours necessary to comply with the testing requirements of National Fire Protection Association (NFPA) 25 "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems" 2002 edition, Section 93115.3(n) exempts the engine from the requirements of section 93115.6(b)(3). In a letter to the air districts dated January 25, 2006, CARB clarified the ATCM requirements concerning the operation of direct-drive fire pump and indicated that "the total number of hours of engine operation necessary to comply with NFPA-25 range from 28 to 34 hours." This requirement will be incorporated into the permit condition.

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 2.3.1.

The source is not defined as a new or modified source and is therefore not subject to the public notification requirements of Regulation 2-1-412.

A toxics risk screening analysis is not required.

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

PERMIT CONDITIONS

Conditions for S-31:

Permit Condition Number 24924

1. The owner/operator shall limit the operation of S31 for ~~Operating for~~ reliability-related activities ~~is limited~~ to ~~no more than~~ 34 hours per year which is the number of hours necessary to

comply with the testing requirements of the National Fire Protection Association (NFPA) 25. This emergency fire pump is subject to the current National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems."
[Basis: "Stationary Diesel Engine ATCM", CA Code of Regulations, Title 17, Section 93115.3(n)]

2. The owner/operator shall operate each emergency standby engine only for the following purposes: to mitigate emergency conditions, for emission testing to demonstrate compliance with a District, State or Federal emission limit, or for reliability-related activities (maintenance and other testing, but excluding emission testing). Operating while mitigating emergency conditions or while emission testing to show compliance with District, State or Federal emission limits is not limited.
[Basis: "Stationary Diesel Engine ATCM", CA Code of Regulations, Title 17, Section 93115.4(a)(29), BAAQMD Regulation 9-8-230]

3. The owner/operator shall operate each emergency standby engine only when a non-resettable totalizing meter (with a minimum display capability of 9,999 hours) that measures the hours of operation for the engine is installed, operated and properly maintained.
[Basis: BAAQMD Regulation 9-8-530,"Stationary Diesel Engine ATCM", CA Code of Regulations, Title 17, Section 93115.10(~~e~~d)(1)]

4. Records: The owner/operator shall maintain the following monthly records in a District-approved log for at least 36 months from the date of entry (60 months if the facility has been issued a Title V Major Facility Review Permit or a Synthetic Minor Operating Permit). Log entries shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request.

a. Hours of operation for reliability-related activities (maintenance and testing).
b. Hours of operation for emission testing to show compliance with emission limits.
c. Hours of operation (emergency).
d. For each emergency, the nature of the emergency condition.
e. Fuel usage for each engine(s).

[Basis: BAAQMD Regulation 9-8-530, 2-6-501, and "Stationary Diesel Engine ATCM", CA Code of Regulations, Title 17, Section 93115.10(~~g~~f)]

RECOMMENDATION

Issue the Permit to Operation to SFPP for the following equipment:

S-31 Direct Drive Emergency Standby Fire Pump: Diesel Engine, Make Caterpillar, Model 3306, Model Year 1986, Rated 226 BHP

BY: _____

Xuna Cai **Date**
Air Quality Engineer

ENGINEERING EVALUATION
SFPP, L.P.
Plant #4022
Application #24742

I. BACKGROUND

SABS Environmental Services, on behalf of SFPP, L.P., is applying for an Authority to Construct and/or Permit to Operate a new oil-water separator at SFPP's Concord Station:

S-49 Oil Water Separator #3: Make Enquip, Model M-2.5-18 ICB Double Wall, Rated Water Flow Rate100 GPM, Total Volume 2,500 Gallons; Abated by A-1, Vapor Burner System.

The new source is to replace one of the existing oil-water separators, S-27. The facility proposes a throughput limit of 25,000 gallons of wastewater per day. One flow meter at the water-side effluent and one flow meter at the oil-side effluent will be used to keep track of the amount of total wastewater processed at S-49 instead of one flow meter for the influent because the facility expects significant maintenance issues and potential failure for an influent meter due to the dirt and debris in the incoming stream.

II. EMISSION CALCULATIONS

Annual Emissions:

Basis:
- A daily throughput of 25,000 gallons.
- Only POC emissions are expected.
- An uncontrolled emission factor of 5 lb/1000 gal. This factor is based on EPA, AP-42, Chapter 5.1 Petroleum Refining, Table 5.1-2 for uncontrolled oil-water separator.
- S-49 will be abated by A-1, Vapor Burner System, with an overall controlled efficiency of 99.8% as required in Permit Condition Number 13143.
- An operating schedule of 365 days per year.

Unabated Annual POC Emissions = (25,000 gal/day) (5 lb POC/1000 gal) (365 days/yr) = 45,625 lb/yr
Abated Annual POC Emissions = (45,625 lb/yr) (1-99.8%) = 91.25 lb/yr = 0.046 ton/yr

Maximum Daily Emissions:

Daily emissions are calculated to establish whether a source triggers the requirement for BACT (10 lb/highest day total source emissions for any class of pollutants).

Max. Unabated Daily POC Emissions = (25,000 gal/day) (5 lb/1000 gal) = 125 lb/day

Contemporaneous Emission Reduction Credits:

S-49, Oil-Water Separator, in this application is intended to replace the existing oil-water separator (S-27). Therefore, the onsite contemporaneous emission reduction credits are calculated for shutting down S-27.

According to the facility's records, S-27 processed 35,271 gallons of wastewater per year on average over the last three years. There is no annual throughput limit on S-27 as a permit condition.

S-27 has no emission testing data available to determine the baseline emission rate. However, it must comply with the current Regulation 8-8 since 2004, and it is equipped with a vapor-tight fixed cover to comply with Regulation 8-8-302. Therefore, the controlled emission factor from AP-42, Table 5.1-2 is used since covered separator is listed as applicable control technologies in this table.

POC Emission Reduction Credits = (35,271 gal/yr) (0.2 lb POC/1000 gal) = 7.05 lb/yr = 0.004 ton/yr

III. PLANT CUMULATIVE INCREASE SINCE 4/5/1991

POC = 0 (existing, post 1991) + 0.046 tpy (application) – 0.004 tpy (reduction credits) = 0.042 tpy

IV. OFFSETS

Offsets are required from the facility per Regulation 2-2-302 because the facility has been permitted to emit more than 35 tons POC per year. Emission offsets shall be provided for the POC emission increase (0.042 TPY) at a 1.15 to 1.0 ratio. The facility has submitted the Bank Certificate 1221 with 1.491 ton/yr of POC credits. 0.048 TPY POC credits will be subtracted from the Bank Certificate 1221.

V. TOXICS SCREENING ANALYSIS

Wastewater processed at S-49 can contain various amounts of gasoline and other petroleum products. The worse case scenario, which assumes that the vapor has similar compositions as gasoline vapor, is used to estimate the maximum toxic air contaminant emissions. The abated emissions of potential toxic air contaminants (TAC) from this operation are shown below:

TAC	Weight % in Vapor *	Abated Annual Emission (lb/yr)	Chronic Trigger Level (lb/yr)	Acute Trigger Level (lb/hr)	Trigger levels exceeded?
Benzene	0.4	0.18	3.8	2.9	No
Ethylbenzene	0.1	0.05	43	n/a	No
Toluene	1.1	0.50	12,000	82	No
Xylenes	0.4	0.18	27,000	49	No
n-Hexane	1.4	0.64	270,000	n/a	No
POM as 16-PAH	0.05	0.02	3.2	n/a	No

**Source: USEPA, Gasoline Distribution Industry (Stage I) - Background Information for Proposed Standards. Office of Air Quality Planning and Standards, Research Triangle Park, NC. 27711. EPA-453/R-94-002a, Table 3-2. January 1994.*

Since the estimated TAC emissions are less than the trigger levels of Regulation 2-5, a Health Risk Screening Analysis is not required

VI. BEST AVAILABLE CONTROL TECHNOLOGY

Per Regulation 2-2-301, S-49 triggers BACT because emissions of POC are in excess of 10.0 pound per highest day (125 lb POC/day). According to the District's BACT/TBACT Workbook, Document # 177.1.1 dated October 4, 1991, the BACT1 requirement for oil water separators with less than 250 GPM capacity is vapor-tight fixed cover and vented to vapor recovery system with combined collection and destruction efficiency of 95%. The proposed oil-water separator is equipped with vapor-tight fixed cover and abated by a vapor recovery system A-1, Vapor Burner System. According to Permit Condition Number 13143, A-1 is required to achieve an overall controlled efficiency of 99.8%.

VII. STATEMENT OF COMPLIANCE

The owner/operator of S-49 is subject to and expected to comply with Regulation 8-8: Wastewater Collection and Separation Systems. The capacity of S-49 is 100 GPM, and therefore S-49 is subject to the requirements in Section 301. It complies with Section 301.3 because it is equipped with a vapor-tight fixed cover with a vapor recovery system which is expected to have a combined collection and destruction efficiency of at least 95% by weight.

CEQA: This application is considered to be ministerial under the District's Regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emission factors in accordance with Permit Handbook Chapter (3.3).

Watersbill: This project is greater than 1,000 ft from the nearest public school and therefore is not subject to the public notification requirements of Regulation 2-1-412.

New Source Performance Standards (NSPS):
S-49 is not subject to 40 CFR 60 Subpart QQQ: Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems because it is not in a refinery.

National Emission Standards for Hazardous Air Pollutants (NESHAP):
S-49 is not subject to NESHAPS 40 CFR 61 Subpart FF: National Emission Standards for Benzene Waste Operation since the owner/operator of S-49 is not a chemical manufacturing plant, coke by-product recovery plant, petroleum refinery or hazardous waste treatment facility. Also, because the facility is not subject to any subpart of 40 CFR parts 60, 61, or 63 referencing the use of Subpart VV for oil-water separator, S-49 is not subject to NESHAPS 40 CFR 63 Subpart VV: National Emission Standards for Hazardous Air Pollutants for Oil-Water Separators and Organic-Water Separators per Section 63.1040.

Prevention of Significant Deterioration (PSD):
The emission increase resulted from this project is expected to be less than 1 TPY of any criteria pollutants. Since it is far below the PSD thresholds, the project is not subject to PSD review.

VIII. PERMIT CONDITIONS

S-49 will be subject to Permit Condition Number 25392. In addition, permit conditions for A-1 are already included in the existing Permit Condition Number 13143, requiring the minimum 99.8% destruction efficiency, the minimum operating temperature, temperature monitoring and recording, annual source test, and recordkeeping. Please refer to Attachment A for more details. Therefore, these requirements for A-1 will not be repeated in Permit Condition Number 25392.

Permit Condition Number 25392

1. The owner/operator of S-49 shall ~~not exceed~~ensure that wastewater throughput ~~limits of~~ at S-49 does not exceed 9,125,000 gallons during any consecutive twelve-month period. (Basis: Cumulative Increase; ~~Toxics~~Regulation 2, Rule 5)

2. The owner/operator shall abate POC emissions from S-49 with Abatement Device A-1, Vapor Burner System, during all periods of operation. (Basis: Regulation 8-8-302; BACT; ~~Toxics~~Regulation 2, Rule 5)

3. The owner/operator of S-49 shall maintain the following records for each month of operation of the source:
a. Quantities of wastewater processed.
b. Monthly throughput shall be totaled for each consecutive twelve-month period.
All records shall be retained on-site for five years, from the date of entry, and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations. (Basis: Cumulative Increase)

4. The owner/operator shall remove S-27 from service within 14 days of the startup of S-49. (Basis: offsets)

IX. RECOMMENDATION

Issue an Authority to Construct to SFPP for the following:

S-49 Oil Water Separator #3: Make Enquip, Model M-2.5-18 ICB Double Wall, Rated Water Flow Rate100 GPM, Total Volume 2,500 Gallons; Abated by A-1, Vapor Burner System.

_____ _____

Xuna Cai Date
Air Quality Engineer

ENGINEERING EVALUATION
SFPP
Plant #4022
Application #27155

I. BACKGROUND

SFPP, LP is applying for a Permit to Operate a new oil-water separator at its Concord station:

S-50 Oil Water Separator: Make HydroFlo Technologies, Model TS-064-S, 75 GPM; Abated by A-50 Carbon Adsorption System: Make Vent-Scrub, Model VSC-200, Two Carbon Vessels in Series, 200 lb Carbon per Vessel, and 100 CFM Rating Each Vessel.

S-50 has been installed since January 2015. It replaced two existing oil-water separators, S-47 and S-48. S-47 and S-48 have a rated capacity of 15 and 50 gallons per minute (GPM), respectively, so S-50 has a slightly higher capacity (75 GPM) than the two combined. It is used to remove free phase product from extracted groundwater associated with site clean-up activities. VOC emissions will be controlled by a carbon adsorption system. A flow meter is in place to keep track of the amount of total groundwater processed at S-50.

According to Application 9577, the permitted POC emissions associated with S-47 and S-48 have been fully offset by SFPP using Banking Certificate 899. The throughput limit for S-47 and S-48 combined is 21,600 gallons groundwater per day, equivalent to 7,884,000 gallons per year. If S-50 was permitted to handle 7,884,000 gallon groundwater per year, a Health Risk Screening Analysis would be required. Therefore, the facility agreed to a throughput limit of 3,942,000 gallons per year to keep the estimated Benzene emissions below the trigger level. In the last three years, S-47 and S-48 have processed a total of 201,100 gallons of groundwater per year on average, so the proposed limit for S-50 shall be adequate.

Because the organic vapor from the existing oil-water separators, S-47 and S-48, contains methane and methane will not be adsorbed by carbon, the facility has been having issues to monitor breakthrough of the carbon beds using the required flame ionization detector (FID). The facility conducted a lab analysis of a carbon bed which was considered having a breakthrough based on the FID monitoring results in 2012, and the analysis indicates that the carbon still had available adsorption capability. The facility proposed to a photoionization detector (PID) in place of FID because PID will not detect methane. However, for vapor streams whose composition is not known and remains constant, PID is not considered an appropriate monitoring instrument. As an alternative, the facility proposed to use an FID along with a carbon tip, so the difference between readings with and without a carbon tip is assumed to be the concentration of non-methane organic compounds (NMOC). This solution is not ideal either. Staff from the District's Compliance and Enforcement Division indicates that the manufacturer's recommendation for the use of carbon tip is for calibration purpose only not for monitoring. In addition, the carbon tip has no indicator for saturation, so the reading with a carbon tip which is assumed to be the concentration of methane can actually include NMOC. Since currently there is no portable monitoring instrument available to completely resolve this issue and the oil-water separator is needed immediately for groundwater remediation, the facility agreed to use an FID along with a carbon tip to determine breakthrough even it could result in some unnecessary change-out of carbon based on past experience, and will use a new carbon tip for each monitoring event to avoid saturation. The District will continue to work with the facility to identify a better monitoring instrument.

II. EMISSION CALCULATIONS

Basis:
- An annual throughput of 3,942,000 gallons.
- An emission factor of 0.2 lb/1000 gal. This factor is based on EPA, AP-42, Chapter 5.1 Petroleum Refining, Table 5.1-2 for controlled oil-water separator. The applicable control technologies are covered separator and/or vapor recovery systems. Since S-30 is both covered and abated by a vapor recovery system, the controlled factor is used.
- Only POC emissions are expected.

Annual POC Emissions = (3,942,000 gal/yr) (0.2 lb POC/1000 gal) = 788.40 lb/yr = 0.394 ton/yr

Contemporaneous Emission Reduction Credits:

The facility has removed S-47 and S-48, oil-water separators, from service prior to the installation of S-50. S-47 and S-48 were permitted with an annual throughput limit of 7,884,000 gallons in Application 9577, and have been fully offset by the facility. Per Regulation 2-6-605.4, the baseline throughput and baseline emission rate shall be based on the levels allowed by the permit condition.

Baseline Annual POC Emissions = (7,884,000 gal/yr) (0.2 lb POC/1000 gal) = 1576.80 lb/yr = 0.788 ton/yr

Annual POC Emission Increase = 0.000 ton/yr

Maximum Daily Emissions:

Daily emissions are calculated to establish whether a source triggers the requirement for BACT (10 lb/highest day total source emissions for any class of pollutants). A full 24-hour day and the maximum capacity of 75 GPM will be assumed since no daily limits are imposed on the operation.

Max. Daily POC Emissions = (75 gal/min) (60 min/hr) (24 hr/day) (0.2 lb/1000 gal) = 21.6 lb/day

III. PLANT CUMULATIVE INCREASE SINCE 4/5/1991

The project will result in no cumulative increase.

IV. OFFSETS

Offsets are not required because the project will result in no cumulative increase.

V. TOXICS SCREENING ANALYSIS

Groundwater processed at S-50 can contain various amounts of gasoline and other petroleum products. The worse case scenario, which assumes that the vapor has similar compositions as gasoline vapor, is used to estimate the maximum toxic air contaminant emissions. The emissions of potential toxic air contaminants (TAC) from this operation are shown below:

TAC	Weight % in Vapor *	Annual Emission (lb/yr)	Chronic Trigger Level (lb/yr)	Trigger levels exceeded?
Benzene	0.4	3.15	3.8	No
Ethylbenzene	0.1	0.79	43	No
Toluene	1.1	8.67	12,000	No
Xylenes	0.4	3.15	27,000	No
n-Hexane	1.4	11.04	270,000	No
Naphthalene	0.00027	0.002	3.2	No

**Source: USEPA, Gasoline Distribution Industry (Stage I) - Background Information for Proposed Standards. Office of Air Quality Planning and Standards, Research Triangle Park, NC. 27711. EPA-453/R-94-002a, Table 3-2. January 1994. In addition, Estimated Naphthalene Weight % in Gasoline Vapor per USEPA - National Emission Standards for*

Hazardous Air Pollutants for Source Categories: Gasoline Distribution Bulk Terminals, Bulk Plants Pipeline Facilities, and Gasoline Dispensing Facilities [Federal Register: November 9, 2006 (Volume 71, Number 217).

Since the estimated TAC emissions are below the trigger levels of Regulation 2-5, a Health Risk Screening Analysis is not required

VI. BEST AVAILABLE CONTROL TECHNOLOGY

Per Regulation 2-2-301, S-50 triggers BACT because emissions of POC are in excess of 10.0 pound per highest day (21.6 lb POC/day). According to the District's BACT/TBACT Workbook, Document # 177.1.1 dated October 4, 1991, the BACT1 requirement for oil water separators with less than 250 GPM capacity is vapor-tight fixed cover and vented to vapor recovery system with combined collection and destruction efficiency of 95%. The proposed oil-water separator is equipped with vapor-tight fixed cover and abated by a vapor recovery system consisting of two carbon vessels in series. The carbon system is a typical control technology and is expected to achieve destruction efficiency greater than 95%.

VII. STATEMENT OF COMPLIANCE

The owner/operator of S-50 is subject to and expected to comply with Regulation 8-8: Wastewater Collection and Separation Systems. The capacity of S-30 is 75 GPM, and therefore S-50 is subject to the requirements in Section 301. It complies with Section 301.3 because it is equipped with a vapor-tight fixed cover with a carbon adsorption system which is expected to have a combined collection and destruction efficiency of at least 95% by weight. The recording keeping requirements in Section 503 will be included in the permit condition.

CEQA: This application is considered to be ministerial under the District's Regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emission factors in accordance with Permit Handbook Chapter (3.3). In addition, because the Air District determined that this project will not result in an increase in air pollutant emissions, and it has no potential for resulting in any additional or different environmental impacts beyond what is already entailed in the applicant's existing use, approval of the project also qualifies for the "Common Sense" exemption.

Watersbill: This project is greater than 1,000 ft from the nearest public school and therefore is not subject to the public notification requirements of Regulation 2-1-412.

New Source Performance Standards (NSPS):
S-50 is not subject to 40 CFR 60 Subpart QQQ: Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems because it is not located at a refinery.

National Emission Standards for Hazardous Air Pollutants (NESHAP):
S-50 is not subject to NESHAPS 40 CFR 63 Subpart VV: National Emission Standards for Hazardous Air Pollutants for Oil-Water Separators and Organic-Water Separators per Section 63.1040. The facility is not subject to another subpart of 40 CFR parts 60, 61, or 63 referencing the use of Subpart VV for oil-water separator.

Prevention of Significant Deterioration (PSD):
The emission increase resulted from this project is expected to be less than 1 TPY of any criteria pollutants. Since they are far below the PSD thresholds, the project is not subject to PSD review.

VIII. PERMIT CONDITIONS

S-50 is subject to Permit Condition 26112 as shown below:

1. The owner/operator of S-50 shall ensure that the ~~not exceed~~ groundwater throughput at S-50~~limit of~~ does not exceed 3,942,000 gallons during any consecutive twelve-month period. (Basis: Cumulative Increase)

2. The owner/operator shall vent Source S-50 at all times to Abatement Device A-50, two (200 lb minimum capacity) activated carbon vessels arranged in series. (Basis: Cumulative Increase; BACT)

3. The owner/operator of S-50 shall monitor with a flame-ionization detector (FID), or other method approved in writing by the Air Pollution Control Officer at the following locations:

a. At the inlet to the second to last carbon vessel in series.
b. At the inlet to the last carbon vessel in series.
c. At the outlet of the carbon vessel that is last in series prior to venting to the atmosphere.

When using an FID to monitor breakthrough, readings may be taken with and without a carbon filter tip fitted on the FID probe. Concentrations measured with the carbon filter tip in place shall be considered methane for the purposes of these permit conditions.

(Basis: Cumulative Increase; BACT)

4. The owner/operator shall record these monitor readings in a monitoring log at the time they are taken. The monitoring results shall be used to estimate the frequency of carbon change-out necessary to maintain compliance with parts 5 and 6, and shall be conducted on a weekly basis. The owner/operator of this source may propose for District review, based on actual measurements taken at the site during operation of the source, that the monitoring schedule be changed based on the decline in organic emissions and/or the demonstrated breakthrough rates of the carbon vessels. Written approval by the District's Engineering Division must be received by the owner/operator prior to a change to the monitoring schedule. (Basis: Cumulative Increase)

5. The owner/operator shall change out the second to last carbon vessel with unspent carbon upon breakthrough, defined as the detection at its outlet of the higher of the following:

a. 10 % of the inlet stream concentration to the carbon vessel.
b. 100 ppmv or greater (expressed as C1).

(Basis: Cumulative Increase; BACT)

6. The owner/operator shall change out the last carbon vessel with fresh carbon within 24 hours upon detection at its outlet of 100 ppmv or greater (expressed as C1). (Basis: Cumulative Increase; BACT)

7. The owner/operator of S-50 shall maintain the following records for each month of operation of the source:

a. Quantities of groundwater processed.
b. Monthly throughput shall be totaled for each consecutive twelve-month period.
c. Each monitor reading or analysis result.
d. The dates and the number of carbon beds removed from service.

All records shall be retained on-site for five years, from the date of entry, and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations. (Basis: Cumulative Increase)

IX. RECOMMENDATION

Waive the Authority to Construct and issue the Permit to Operate the following equipment:

S-50 Oil Water Separator: Make HydroFlo Technologies, Model TS-064-S, 75 GPM; Abated by A-50 Carbon Adsorption System: Make Vent-Scrub, Model VSC-200, Two Carbon Vessels in Series, 200 lb Carbon per Vessel, and 100 CFM Rating Each Vessel.

_____ _____

Xuna Cai
Senior Air Quality Engineer

Date

APPENDIX B

GLOSSARY

ACT
Federal Clean Air Act

APCO
Air Pollution Control Officer

API
American Petroleum Institute

ARB
Air Resources Board

BAAQMD
Bay Area Air Quality Management District

BACT
Best Available Control Technology

BARCT
Best Available Retrofit Control Technology

Basis
The underlying authority that allows the District to impose requirements.

C_5
An Organic chemical compound with five carbon atoms

C_6
An Organic chemical compound with six carbon atoms

CAA
The federal Clean Air Act

CAAQS
California Ambient Air Quality Standards

CAPCOA
California Air Pollution Control Officers Association

CEC
California Energy Commission

CEQA
California Environmental Quality Act

CEM
Continuous Emission Monitor: a monitoring device that provides a continuous direct measurement of some pollutant (e.g. NOx concentration) in an exhaust stream.

CFP
Clean Fuels Project

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). Used to determine whether threshold-based requirements are triggered.

DAF
A "dissolved air flotation" unit is a process vessel where air bubbles injected at the bottom of the vessel are used to carry solids in the liquid into a froth on the liquid surface, where it is removed.

DWT
Dead Weight Ton

District
The Bay Area Air Quality Management District

DNF
Dissolved Nitrogen Flotation (See DAF)

dscf
Dry Standard Cubic Feet

dscm
Dry Standard Cubic Meter

E 6, E 9, E 12
Very large or very small number values are commonly expressed in a form called scientific notation, which consists of a decimal part multiplied by 10 raised to some power. For example, 4.53 E 6 equals (4.53) x (10^6) = (4.53) x (10 x 10 x 10 x 10 x 10 x 10) = 4,530,000. Scientific notation is used to express large or small numbers without writing out long strings of zeros.

EFRT
An "external floating roof tank" minimizes VOC emissions with a roof with floats on the surface of the liquid, thus preventing the formation of a VOC-rich vapor space above the liquid surface as the level in the tank drops. If such a vapor space were allowed to form, it would be expelled when the tank was re-filled. On an EFRT, the floating roof is not enclosed by a second, fixed tank roof, and is thus described as an "external" roof.

EPA
The federal Environmental Protection Agency.

ETP
Effluent Treatment Plant

Excluded
Not subject to any District regulations.

FCC
Fluid Catalytic Cracker

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 (HAP), 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.

FR
Federal Register

FRT
Floating Roof Tank (See EFRT and IFRT)

GDF
Gasoline Dispensing Facility

GLM
Ground Level Monitor

grain
1/7000 of a pound

Graphitic
Made of graphite.

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.

H_2S
Hydrogen Sulfide

H_2SO_4
Sulfuric Acid

Hg
Mercury

HHV
Higher Heating Value. The quantity of heat evolved as determined by a calorimeter where the combustion products are cooled to 60F and all water vapor is condensed to liquid.

IFRT
An "internal floating roof tank" minimizes VOC emissions with a roof with floats on the surface of the liquid, thus preventing the formation of a VOC-rich vapor space above the liquid surface as the level in the tank drops. If such a vapor space were allowed to form, it would be expelled when the tank was re-filled. On an IFRT, the floating roof is enclosed by a second, fixed tank roof, and thus is described as an "internal" roof.

ISOM
Isomerization plant

LHV
Lower Heating Value. Similar to the higher heating value (see HHV) except that the water produced by the combustion is not condensed but retained as vapor at 60F.

Lighter
"Lightering" is a transfer operation during which liquid is pumped from an ocean-going tanker vessel to a smaller vessel such as a barge. Like any liquid transfer operation, lightering of organic liquids produces organic vapor emissions.

Long ton
2200 pounds

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.

MDEA
Methyl Diethanolamine

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.

Mo Gas
Motor gasoline

MOP
The District's Manual of Procedures.

MOSC
Mobil Oil Sludge Conversion (licensed technology)

MSDS
Material Safety Data Sheet

MTBE
methyl tertiary-butyl ether

NA
Not Applicable

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.)

O2
The chemical name for naturally-occurring oxygen gas.

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.

Regulated Organic Liquid
"Regulated organic liquids" are those liquids which require permits, or which are subject to some regulation, when processed at a liquid-handling operation. For example, for refinery marine terminals, regulated organic liquids are defined as "organic liquids" in Regulation 8, Rule 44.

RFG
Refinery Fuel Gas

RMG
Refinery Make Gas

SCR
A "selective catalytic reduction" unit is an abatement device that reduces NOx concentrations in the exhaust stream of a combustion device. SCRs utilize a catalyst, which operates at a specific temperature range, and injected ammonia to promote the conversion of NOx compounds to nitrogen gas.

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

SO_2 Bubble
An SO2 bubble is an overall cap on the SO2 emissions from a defined group of sources, or from an entire facility. SO2 bubbles are sometimes used at refineries because combustion sources are typically fired entirely or in part by "refinery fuel gas" (RFG), a waste gas product from refining operations. Thus, total SO2 emissions may be conveniently quantified by monitoring the total amount of RFG that is consumed, and the concentration of H2S and other sulfur compounds in the RFG.

SO_3
Sulfur trioxide

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

TPY
Tons Per Year

TRMP
Toxic Risk Management Plan

TSP
Total Suspended Particulate

TVP
True Vapor Pressure
VOC
Volatile Organic Compounds

Units of Measure:

bbl	=	barrel of liquid (42 gallons)
bhp	=	brake-horsepower
btu	=	British Thermal Unit
C	=	degrees Celcius
cfm	=	cubic feet per minute
F	=	degrees Fahrenheit
f^3	=	cubic feet
g	=	grams
gal	=	gallon
gpm	=	gallons per minute
gr	=	grain
hp	=	horsepower
hr	=	hour
lb	=	pound
in	=	inches
max	=	maximum
m^2	=	square meter
min	=	minute
M	=	thousand
Mg	=	mega-gram, one thousand grams
µg	=	micro-gram, one millionth of a gram
MM	=	million
mm	=	million
MMbtu	=	million btu
mm Hg	=	millimeters of Mercury (pressure)
MW	=	megawatts
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

Symbols:

<	=	less than
>	=	greater than
≤	=	less than or equal to
≥	=	greater than or equal to