

San Joaquin Valley Air Pollution Control District
Authority to Construct
Application Review
Soil Remediation Project Utilizing an Internal Combustion Engine

Facility Name: [Facility Name](#) Date: [June 1, 2016](#)
Mailing Address: [Mailing Address](#) Engineer: [Name](#)
[City, State Zip](#) Lead Engineer: [Name](#)
Contact Person: [Contact](#)
Telephone: [Telephone](#)
Application #(s): [ATC Number](#)
Project #: [Project Number](#)
Deemed Complete: [Date](#)

I. Proposal

[Facility Name](#) is applying for an Authority to Construct (ATC) permit for a soil [\[and groundwater\]](#) remediation operation served by an internal combustion engine.

OR

[Facility Name](#) is applying for an Authority to Construct (ATC) permit to modify their soil [\[and groundwater\]](#) remediation operation to [\(state the type of modification\)](#).

II. Applicable Rules

Rule 2010 Permits Required (12/17/92)
Rule 2201 New and Modified Stationary Source Review Rule (8/15/19)
Rule 2410 Prevention of Significant Deterioration (6/16/11)
Rule 2520 Federally Mandated Permits (8/15/19)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4651 Volatile Organic Compounds from Decontamination of Soil (9/20/07)
Rule 4701 Internal Combustion Engines (8/21/03)
Rule 4702 Internal Combustion Engines (8/18/11)
Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 California Health and Safety Code (Health Risk Assessment)
CH&SC 42301.6 California Health and Safety Code (School Notice)
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387:
CEQA Guidelines

III. Project Location

The facility is located at [location]. The facility is/is not located within 1,000 feet of the outer boundary of any K-12 school. *If school notice is required then state:* Therefore, pursuant to CH&SC 42301.6, California Health and Safety Code (School Notice), public notification [is/is not] required.

If located at existing stationary source then add:

Although this operation is located at [Facility Name and #], it is considered a separate stationary source with a different SIC code since the soil remediation operation is not considered a normal business activity of the existing facility.

IV. Process Description

The remediation system will consist of a [Make, Model, bhp rating] bhp internal combustion engine, which will be fueled by the extracted gasoline vapors and will use LPG/Natural gas as auxiliary fuel. The exhaust from the IC engine will pass through a 3-way catalyst to reduce the CO, VOC, and NO_x emissions. The internal combustion engine will destroy at least 95% of the contaminants in the process stream prior to discharge into the atmosphere.

Operating Schedule:

The operating schedule is [] hr/day, [] days/week, and [] weeks/year. The expected life of this project is [] years.

V. Equipment Listing

Internal Combustion Engine:

Manufacturer: []
Model #: []
Rated Power: [] BHP
Primary Fuel: Gasoline vapors

Secondary Fuel: LPG/Natural gas
Flow Rate: [] cfm
Stack Diameter: [] in
Stack Height: [] ft
Stack Exit Temperature: [] °F
Stack Exit Velocity: [] fps or fpm
Destruction Efficiency: [] % (District BACT requirement: 95%)

Catalytic Converter:

Manufacturer: []
Model #: []

Extraction Blower/Motor:

Manufacturer: []
Model #: []
Power Rating: [] bhp

C-xxxx-x-x: SOIL [AND GROUNDWATER] REMEDIATION PROJECT SERVED BY A [MANUFACTURER AND MODEL #] [XXX] BHP NATURAL GAS/LPG-FIRED INTERNAL COMBUSTION ENGINE WITH [QTY] [MANUFACTURER AND MODEL #] 3-WAY CATALYTIC CONVERTER(S) IN SERIES))

VI. Emission Control Technology Evaluation

IC Engine

The engine control equipment consists of [QTY] Manufacturer and Model # catalytic converter(s) in series)). The figures provided by the manufacturer as shown in Section VII.B represent the control efficiency of the catalytic converter(s) in series)).

VII. Emissions Calculations

A. Assumptions

- Gasoline heating value: 20,300 Btu/lb¹
- F-Factor for gasoline: 8,850 dscf/MMBtu²
- Brake Specific Fuel Consumption (BSFC) of a naturally aspirated, spark ignition engine: 10,500 Btu/hp-hr³
- For calculation purposes a control efficiency of 95% will be used, since 95% is currently the District's minimum BACT requirement.
- Assume that the engine will run on 100% gasoline vapors for the entire length of the project. This scenario represents the worst case.

B. Emission Factors

NOTE: If engine is subject to the emission limit requirements of Rule 4702 Section 5.2 Tables 1 & 2, make sure that those limits will be met. Also let the applicant know that the engine is subject to those emission limits and the engine

¹ AP-42 Table 3.3-1

² $F_d = 10^6 \times [(3.64 \times 14.76) + (1.53 \times 84.9) + (0.57 \times 0.08) - (0.46 \times 2.7)] \times (459.67 + 60 \text{ }^\circ\text{F} / 459.67 + 68 \text{ }^\circ\text{F}) / 20,300 \text{ Btu/lb} = 8,850 \text{ dscf/MMBtu}$

³ From CAPCOA Portable Equipment IC Engine Technical Reference Document (5/95).

will have source testing and alternate monitoring requirements as well (Please look in the Compliance section under Rule 4702 for more details).

The following emission factors for NO_x, CO, and PM₁₀ are from AP-42 (10/96), Table 3.3-1 for gasoline combustion.

NOTE: If applicant proposes a higher emission factor than the ones shown below, then change the tables below accordingly to reflect the proposed emission factors. If the emission factors proposed are below the ones shown in the table below, then use the emission factors in the table.

CAUTION: If the engine is subject to Rule 4702 and the proposed emission factors do not meet the Rule 4702 limits (as shown in the Compliance section of Rule 4702) then make sure that the applicant is notified and told that the engine does not meet the Rule emission limits. The applicant must comply with the Rule limit prior to issuance of ATC.

Emission Factors (Uncontrolled)		
Pollutant	EF _(Gasoline) (lbs/bhp-hr)	Basis
NO _x	0.011	AP-42 Table 3.3-1 OR Controlled EF proposed by Applicant
SO _x	0.0001271	Conservative CA sulfur content of 150 ppmw
PM ₁₀	0.000721	AP-42 Table 3.3-1
CO	0.439	AP-42 Table 3.3-1 OR Controlled EF proposed by Applicant
VOC	0.0216	AP-42 Table 3.3-1 OR Controlled EF proposed by Applicant

Emission Factor Adjustment for Control Devices

Control Efficiency	
Pollutant	Control Efficiency
NO _x	95% ⁴
CO	95% ⁴
VOC	95% ⁵

NOTE: If the applicant proposes a control efficiency below 95% for NO_x and CO, that control efficiency should be used instead of the 95%.

⁴ Compliance Assistance Program – *Soil Decontamination*, Page 300-68 states an overall control efficiency of extracted vapors range from 95% to 99%. For the purposes of this project 95% will be used as the control efficiency, regardless if the actual control efficiency is higher than 95%.

⁵ Minimum BACT requirement is 95% control efficiency.

The following table shows the controlled emission factors for NO_x, SO_x, PM₁₀, CO and VOC.

Emission Factors (Controlled)			
Pollutant	EF_(Gasoline) (lbs/bhp-hr)	EF_(Gasoline) (g/bhp-hr)	EF_(Gasoline) (ppmv)⁶
NO _x	0.00055	0.249	20.2*
SO _x	0.0001271	0.0577	-
PM ₁₀	0.000721	0.327	-
CO	0.02195	9.957	1,326.2
VOC	0.00108	0.49	114.2

*NOTE: If a different control efficiency than the one from table 2 (above) is being used then recalculate EF by multiplying the new control efficiency by the emission factors in Table 1 and recalculate the emissions concentration in attachment III. *Also note that after 1/1/2014, Rule 4702 requires 11 ppmv NO_x @ 15% O₂ controlled emission factor.*

C. Calculations

1. Pre-Project Potential to Emit, (PE₁)

Since this is a new emissions unit, the PE₁ = 0

OR

The daily, annual, and quarterly pre-project emissions are shown below.

Pre-Project Potential to Emit, PE₁			
Pollutant	Daily PE	Annual PE	Quarterly PE
NO _x	[]	[]	[]
SO _x	[]	[]	[]
PM ₁₀	[]	[]	[]
CO	[]	[]	[]
VOC	[]	[]	[]

2. Post Project Potential to Emit, (PE₂)

VOC emissions will be calculated based on the maximum gasoline fuel consumption by using the VOC gasoline emission factor and multiplying that by the engine bhp rating. The calculations are shown below:

$$PE \text{ (lb/day)} = \text{Emission Factor [] (g/bhp-hr)} \times \text{Engine BHP rating} \times 24 \text{ hrs/day}$$

$$PE_{NOx} = 0.249 \text{ g/bhp-hr} \times [] \text{ bhp} \times 24 \text{ (hrs/day)} = [] \text{ lb-NOx/day}$$

$$PE_{SOx} = 0.0577 \text{ g/bhp-hr} \times [] \text{ BHP} \times 24 \text{ (hrs/day)} = [] \text{ lbs-SOx/day}$$

⁶ As calculated in [Appendix III](#)

$$PE_{PM_{10}} = 0.327 \text{ g/bhp-hr} \times [] \text{ BHP} \times 24 \text{ (hrs/day)} = [] \text{ lb-PM}_{10}/\text{day}$$

$$PE_{CO} = 0.9.957 \text{ g/bhp-hr} \times [] \text{ BHP} \times 24 \text{ (hrs/day)} = [] \text{ lb-CO}/\text{day}$$

$$PE_{VOC} = 0.0.490 \text{ g/bhp-hr} \times [] \text{ BHP} \times 24 \text{ (hrs/day)} = [] \text{ lb-VOC}/\text{day}$$

If the daily PE (controlled or uncontrolled) is below 2 pounds of VOC per day, then please add the following section; otherwise delete it.

If the uncontrolled VOC emissions drop below 2.0 lb/day, the applicant will be allowed to take off their control device. However, since the VOC emissions calculated above are below 2.0 lb-VOC/day, the calculated VOC emission will be adjusted to 2.0 lb-VOC/day in order to show no increase in emissions from this operation once the control device is taken off-line. Since BACT is no longer required once the uncontrolled emissions are below two pounds per day, adjusting the DEL to 2.0 lb-VOC/day has no ramifications to the project.

Summary of Daily, Annual & Quarterly PE₂			
Pollutant	Daily (lb/day)	Annual (lb/year)⁷	Quarterly (lb/qtr)⁸
NO _x	[]	[]	[]
SO _x	[]	[]	[]
PM ₁₀	[]	[]	[]
CO	[]	[]	[]
VOC	[]	[]	[]

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

[For New Stationary Sources]

Since this is a new facility, SSPE1 is equal to zero.

[For Modifications to an Existing Stationary Source]

Pursuant to Section 4.9 of District Rule 2201, the Pre-project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Since this is an existing facility, SSPE1 is equal to the PE_{Total Pre-Project} for all criteria pollutants.

⁷ PE_{Annual} (lb/yr) = PE_{Total} (lb/day) x 365 (days/yr)

⁸ PE_{Quarterly} (lb/qtr) = (PE_{Annual}) (lb/yr) ÷ 4 qtr/yr

The Pre-project Stationary Source Potential to Emit (SSPE1) is presented in the following table:

SSPE1 (lbs/yr)					
Permit #	NO_x	SO_x	PM₁₀	CO	VOC
C-xxxx-x-x	[]	[]	[]	[]	[]
C-xxxx-x-x	[]	[]	[]	[]	[]
Total	[]	[]	[]	[]	[]

4. Post-Project Stationary Source Potential to Emit (SSPE2)

Pursuant to Section 4.10 of District Rule 2201, the Post-project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site. The Post-project Stationary Source Potential to Emit (SSPE2) is presented in the following table:

SSPE2 (lbs/yr)					
Permit #	NO_x	SO_x	PM₁₀	CO	VOC
C-xxxx-x-x	[]	[]	[]	[]	[]
Total	[]	[]	[]	[]	[]

5. Major Source Determination

A Major Source is a facility where the SSPE2 for any pollutant exceeds the following Major Source threshold values:

Major Source					
Pollutant	NO_x	SO_x	PM₁₀	CO	VOC
SSPE2 (lb/yr)	[]	[]	[]	[]	[]
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	[Yes or No]	[Yes or No]	[Yes or No]	[Yes or No]	[Yes or No]

Since none of the threshold values in the above table are exceeded, this facility is not a Major Source.

OR

Since the annual VOC emissions are above the major source threshold values in the above table, this facility is now a Major Source for VOC. *(If this is true, this project is NO LONGER A GEAR. Check with your supervisor before further processing.)*

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). Therefore the following PSD Major Source thresholds are applicable.

PSD Major Source Determination (tons/year)							
	NO2	VOC	SO2	CO	PM	PM10	CO2e
Estimated Facility PE before Project Increase	0	0	0	0	0	0	0
PSD Major Source Thresholds	250	250	250	250	250	250	100,000
PSD Major Source ? (Y/N)	N	N	N	N	N	N	N

As shown above, the facility **is not** an existing major source for PSD for at least one pollutant. Therefore the facility **is not** an existing major source for PSD.

6. Baseline Emissions (BE)

Annual BE

The annual BE is performed pollutant by pollutant to determine the amount of offsets required, where necessary, when the SSPE1 is greater than the offset threshold. For this project the annual BE will be performed to calculate quarterly Baseline Emissions (QBE)

BE = Pre-project Potential to Emit for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, Located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.23

Since this is a new facility, the annual BE is equal to zero.

OR

Since this unit is not located at a major source, BE = Pre-project Potential to Emit.

Annual BE lbs/yr					
Permit Number	NO _x	SO _x	PM ₁₀	CO	VOC
C-xxxx-xx	[]	[]	[]	[]	[]

6. Baseline Emissions (BE)

Annual BE

The annual BE is performed pollutant by pollutant to determine the amount of offsets required, where necessary, when the SSPE1 is greater than the offset threshold. For this project the annual BE will be performed to calculate quarterly Baseline Emissions (QBE)

BE = Pre-project Potential to Emit for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, Located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.23

Since this is a new facility, the annual BE is equal to zero.

OR

Since this unit is not located at a major source, BE = Pre-project Potential to Emit.

Annual BE lbs/yr					
Permit Number	NO _x	SO _x	PM ₁₀	CO	VOC
C-xxxx-xx	[]	[]	[]	[]	[]

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

As discussed in Section VII.C.5 above, this facility is not a major source for any of the pollutants addressed in this project; therefore, the project does not constitute a SB 288 Major Modification

8. Federal Major Modification

District Rule 2201 states that Federal Major Modifications are the same as “Major Modification” as defined in 40 CFR 51.165 and part D of Title I of the CAA.

Since this facility is not a Major Source for any pollutants, this project does not constitute a Federal Major Modification. Additionally, since the facility is not a major source for PM10 (140,000 lb/year), it is not a major source for PM2.5 (200,000 lb/year).

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to pollutants for which the District is in attainment or for unclassified pollutants. The pollutants addressed in the PSD applicability determination are listed as follows:

- NO₂ (as a primary pollutant)
- SO₂ (as a primary pollutant)
- CO
- PM
- PM₁₀
- Greenhouse gases (GHG): CO₂, N₂O, CH₄, HFCs, PFCs, and SF₆

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not (See Section VII.C.5 of this document).

In the case the facility is an existing PSD Major Source, the second step of the PSD evaluation is to determine if the project results in a PSD significant increase.

In the case the facility is NOT an existing PSD Major Source but is an existing source, the second step of the PSD evaluation is to determine if the project, by itself, would be a PSD major source.

In the case the facility is new source, the second step of the PSD evaluation is to determine if this new facility will become a new PSD major Source as a result of the project and if so, to determine which pollutant will result in a PSD significant increase.

A. Potential to Emit for New or Modified Emission Units vs PSD Major Source Thresholds

As a screening tool, the project potential to emit from all new and modified units is compared to the PSD major source threshold, and if total project potential to emit from all new and modified units is below this threshold, no further analysis will be needed.

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). Therefore the following PSD Major Source thresholds are applicable.

PSD Major Source Determination: Potential to Emit (tons/year)							
	NO2	VOC	SO2	CO	PM	PM10	CO2e
Total PE from New and Modified Units	0	0	0	0	0	0	0
PSD Major Source threshold	250	250	250	250	250	250	100,000
New PSD Major Source?	N	N	N	N	N	N	N

As shown in the table above, the project potential to emit, by itself, does not exceed any of the PSD major source thresholds. Therefore, Rule 2410 is not applicable and no further discussion is required.

10. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in Appendix B.

VIII. Compliance

Rule 2201 - New and Modified Stationary Source Review Rule

A. BACT

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis for the following*:

- a) Any new emissions unit with a potential to emit exceeding two pounds per day,

- b) The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day, and/or
- c) Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day.
- d) Any new or modified emissions unit, in a stationary source project, which results in a Major Modification.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

The applicant is proposing to install a new emissions unit with a PE of [] lb/day for VOC as calculated in section VII.C.2. Since the daily VOC emissions are [greater/less] than 2.0 lbs/day, BACT [will/will not] be triggered. [The daily emissions for [pollutant(s)] is/are also above 2.0 lb/day. Therefore, BACT will be triggered for [pollutants]].

OR

The applicant is proposing to modify its existing emissions unit with an AIPE of [] lb/day for VOC as calculated in the following section. Since the daily VOC emissions are [greater/less] than 2.0 lbs/day, BACT [will/will not] be triggered. [The daily AIPE for [pollutants] are also above 2.0 lb/day. Therefore, BACT will also be triggered for [pollutants]].

Adjusted Increase in Permitted Emissions (AIPE)

AIPE = PE2 – HAPE where,

AIPE = Adjusted Increase in Permitted Emissions, lb/day.
PE2 = the emission unit's post project Potential to Emit, lb/day.
HAPE = the emission unit's Historically Adjusted Potential to Emit, lb/day.

Historically Adjusted Potential to Emit (HAPE) Calculations:

HAPE = PE1 x (EF2 / EF1) where,

PE1 = The emission unit's Potential to Emit prior to modification or relocation.
EF2 = The emission unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1.
EF1 = The emission unit's permitted emission factor for the pollutant before the modification or relocation.

EF1 = [] % (Taken from project # [])

EF2 = [] % (As proposed by the applicant, 95% District BACT requirement)

$$\begin{aligned}
 \text{AIPE (lb/day)} &= \text{PE}_2 \text{ (lb/day)} - [\text{PE}_1 \text{ (lb/day)} \times (\text{EF}_2 / \text{EF}_1)] \\
 &= \text{PE}_2 \text{ (lbs/day)} - [\text{PE}_1 \text{ (lbs/day)} \times (0.95 / 0.95)] \\
 &= \text{PE}_2 \text{ (lbs/day)} - [\text{PE}_1 \text{ (lbs/day)} \times 1] \\
 &= \text{PE}_2 \text{ (lbs/day)} - \text{PE}_1 \text{ (lbs/day)}
 \end{aligned}$$

Adjusted Increase in Permitted Emissions (AIPE)			
Pollutant	PE₂ Daily Post Project (lb/day)	PE₁ Daily Pre Project (lb/day)	AIPE (lb/day)
NO _x	[]	[]	[]
SO _x	[]	[]	[]
PM ₁₀	[]	[]	[]
CO	[]	[]	[]
VOC	[]	[]	[]

2. BACT Guidance

Per District Policy APR 1305, Section IX, “A top-down BACT analysis shall be performed as a part of the Application Review for each application subject to the BACT requirements pursuant to the District’s NSR Rule for source categories or classes covered in the BACT Clearinghouse, relevant information under each of the following steps may be simply cited from the Clearinghouse without further analysis.”

SJVUAPCD BACT Clearinghouse Guideline 2.1.2 specifies the achieved in practice or contained in SIP BACT and technologically feasible BACT for soil remediation operations utilizing an IC engine. Therefore, relevant information will be cited without further analysis.

See Appendix I: BACT Clearinghouse Guideline 2.1.2

3. Top-Down BACT Analysis

The applicant is proposing to use an IC engine with a 3-way catalytic converter at 95% or greater control efficiency and LPG as auxiliary fuel for NO_x, CO, and VOC. Per the Top-Down analysis in Appendix I of this evaluation, this proposed equipment is achieved in practice BACT and there is not a more effective technologically feasible control. Therefore, the proposed equipment satisfies the BACT requirement.

B. Offsets

1. Offset Applicability

Pursuant to Section 4.5.3, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the Post-project Stationary Source Potential to Emit (SSPE2) equals to or exceeds the offset threshold levels in Table 4-1 or Rule 2201.

The following table compares the post-project facility-wide annual emissions in order to determine if offsets will be required for this project.

Offset Applicability			
Pollutant	SSPE2 (lb/yr)	Offset Threshold Levels (lb/yr)	Offsets Required?
NO _x	[]	20,000	[Yes or No]
SO _x	[]	54,750	[Yes or No]
PM ₁₀	[]	29,200	[Yes or No]
CO	[]	200,000	[Yes or No]
VOC	[]	20,000	[Yes or No]

2. Quantity of Offsets Required

As shown in the table above, the SSPE2 is not greater than or equal to the offset threshold levels for any criteria pollutant. Therefore, offsets will not be required.

OR

As shown in the table above, the SSPE2 meets or exceeds the offset threshold levels. Therefore, offsets will be required. *(If this is true, this project is NO LONGER A GEAR. Check with your supervisor before further processing.)*

C. Public Notification

1. Applicability

Public noticing is required for:

- a) Any new Major Source, which is a new facility that is also a Major Source,
- b) SB 288 Major Modifications or Federal Major Modifications,
- c) Any project which results in the offset thresholds being exceeded,
- d) New emission units with an PE of greater than 100 pounds during any one day for any one pollutant, and/or
- e) Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a) Major Source

The following table compares the pre-project and post-project facility-wide annual emissions in order to determine if this facility is already an existing Major Source or if the facility is becoming a new Major Source as a result of this project.

Major Source Applicability				
Pollutant	SSPE1 (lb/yr)	SSPE2 (lb/yr)	Major Source Levels (lb/yr)	Major Source?

NO _x	[]	[]	20,000	[Yes or No]
SO _x	[]	[]	140,000	[Yes or No]
PM ₁₀	[]	[]	140,000	[Yes or No]
CO	[]	[]	200,000	[Yes or No]
VOC	[]	[]	20,000	[Yes or No]

Since none of the criteria pollutants are above the major source levels, public noticing is not required for this project.

b) SB 288 or Federal Major Modification

[For new stationary sources]

Since this facility is a new stationary source, and is not becoming a major source, an SB288 or Federal Major Modification is not triggered. Therefore public noticing is not required for this project.

[For existing non-major stationary sources]

This facility is not becoming a major source as a result of this project. Since for non-major sources, the SB288 or Federal Major Modification threshold levels are equivalent to the major source threshold levels, an SB288 or a Federal Major Modification is not triggered. Therefore, public noticing is not required for this project.

c) Offset Threshold

The following table compares the pre-project SSPE1 with the post-project SSPE2 in order to determine if any offset thresholds have been surpassed.

Offset Threshold				
Pollutant	SSPE1 (lb/yr)	SSPE2 (lb/yr)	Offset Levels (lb/yr)	Public Notice Required?
NO _x	[]	[]	20,000	[Yes or No]
SO _x	[]	[]	54,750	[Yes or No]
PM ₁₀	[]	[]	29,200	[Yes or No]
CO	[]	[]	200,000	[Yes or No]
VOC	[]	[]	20,000	[Yes or No]

Since the SSPE2 does not surpass the offset threshold levels, public noticing is not triggered for this project.

d) PE > 100 lb/day

[For new stationary sources]

For new emissions units, public notification is required if the PE exceeds 100 lb/day for any pollutant. As shown in section VII.C.2.a, the daily PE does not exceed 100 lb/day for any criteria pollutant. Therefore, public noticing is not required for this project for exceeding the PE Public Notice Thresholds.

OR

For new emissions units, public notification is required if the PE exceeds 100 lb/day for any pollutant. As shown in section VII.C.2.a, the daily PE exceeds 100 lb/day for [VOC and CO]. Therefore, public noticing is required for this project for exceeding the PE Public Notice Thresholds.

[For existing non-major stationary sources]

For new emissions units, public notification is required if the PE exceeds 100 lb/day for any pollutant. Since this project is a modification to the existing soil remediation operation and not a new emissions unit, public noticing will not be required.

e) SSIPE > 20,000 lb/yr

The SSIPE (NEC) is calculated and shown as follows:

SSIPE = SSPE2 – SSPE1

Stationary Source Increase in Permitted Emissions (SSIPE)			
Pollutant	SSPE2 (lb/yr)	SSPE1 (lb/yr)	SSIPE (lb/yr)
NO _x	[]	[]	[]
SO _x	[]	[]	[]
PM ₁₀	[]	[]	[]
CO	[]	[]	[]
VOC	[]	[]	[]

As shown in the above table, the SSIPE for this project does **not** exceed the 20,000 lb/yr public notice threshold.

Therefore, public noticing is not required for SSIPE purposes.

OR

As shown in the above table, the SSIPE for this project exceeds the 20,000 lb/yr public notice threshold.

Therefore, public noticing will be required for SSIPE purposes.

2. Public Notice Action

As discussed above, public noticing pursuant to District Rule 2201 is required for this project because (state the reason for public notice). Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be electronically published on the District's website prior to the issuance of the ATC for this equipment.

OR

This project will not result in emissions for any criteria pollutant which would subject these emission units to any of the noticing requirements listed above. Therefore, public notice will not be required for this project.

D. Daily Emissions Limits (DEL)

Daily Emission Limits (DELs) are required by section 3.17. The DELs are required to enforce the applicability of BACT. For this soil remediation project, the DELs are stated in the form of emission factors multiplied by the IC engines rated bhp. The following conditions will serve to form the DELs for this unit:

- a) The total VOC emissions from the soil remediation system served by the internal combustion engine shall not exceed [] pounds in any one day. [District Rule 2201]
- b) The emissions from the soil remediation system shall not exceed any of the following limits: 0.249 g-NO_x/hp-hr (or 20.2 ppmv @ 15% O₂), 9.957 g-CO/hp-hr (or 1,326.2 ppmv @ 15% O₂), 0.49 g-VOC/hp-hr (or 114.2 ppmv @ 15% O₂), 0.268 g-SO_x/hp-hr, or 0.327 g-PM₁₀/hp-hr. [District Rule 2201 and Rule 4702] N

E. Compliance Assurance

The following measures shall be taken to ensure continued compliance with District Rules:

1. Source Testing

Measurements to determine the influent and effluent gas flow rates shall be taken at the initial inspection.

If IC engine is Full-Time > 50 bhp please add the following, otherwise delete:

Pursuant to District Rule 4702, Section 6.3, internal combustion engines shall be required to demonstrate compliance with the NO_x, CO and VOC emission limits upon initial start-up and at least once every 24 months thereafter. There are no additional federal, state or local source testing requirements for this class and category of operation. Therefore, Facility Name will be required to source test the NO_x, CO and VOC emissions from the engine upon initial start-up and at least once every 24 months thereafter.

2. Monitoring

Monitoring of influent and exhaust VOC concentrations will be required once a week.

If IC engine is Full-Time > 50 bhp with add-on exhaust control please add the following, otherwise delete:

Pursuant to District Rule 4702, Section 5.8.1, engines shall either install and maintain continuous emissions monitoring equipment for NO_x, CO and oxygen, as identified in Rule 1080 (Stack Monitoring), or install and maintain APCO approved alternate monitoring. For the purpose of compliance with the emission monitoring requirements of the rule, the applicant is proposing to monitor the NO_x, CO and O₂ concentrations from the engine using a portable analyzer. In accordance with District Policy SSP 1810 (Emissions Monitoring for Rule 4701 and 4702, [Alternate Monitoring Scheme A](#)), the following conditions will be placed on the ATC and the PTO to assure compliance with the monitoring requirements:

1. The Permittee shall monitor and record the stack concentration of NO_x (as NO₂), CO, and O₂ at least once every calendar quarter using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702]
2. If the NO_x or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, exceed the permitted emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4701]

3. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4701]
4. {General Condition 109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081]
5. All records shall be retained for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 1070]

(If a different monitoring scheme is proposed and approved, select the appropriate conditions from the Alternate Monitoring Policy to replace the above conditions)

3. Record Keeping

The permittee shall maintain records for all monitored data for a period of five years.

Add the following if Alternate Monitoring is required

Permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range.

(If a different monitoring scheme is proposed and approved, select the appropriate conditions from the Alternate Monitoring Policy to replace the above conditions)

4. Reporting

The permittee shall submit initial startup test report and maintain all other monitoring records on site. Such records shall be made available for District inspection upon request.

Rule 2410 Prevention of Significant Deterioration

As shown in Section VII.C.9.A of the above, this is a new facility and the project potential to emit, by itself, does not exceed any of the PSD major source thresholds. Therefore, this facility is not a PSD source and Rule 2410 does not apply.

Rule 2520 - Federally Mandated Operating Permits

Since this facility’s potential emissions do not exceed any major source thresholds of Rule 2201, this facility is not a major source, and Rule 2520 does not apply.

Rule 4101 - Visible Emissions

Rule 4101 states that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity.

As long as the equipment is properly maintained and operated, compliance with visible emissions limits is expected under normal operating conditions.

Rule 4102 - Public Nuisance

Rule 4102 states that no air contaminant shall be released into the atmosphere that causes a public nuisance.

CH&SC 41700 - California Health and Safety Code

The District’s Risk Management Policy for Permitting New and Modified Sources (APR 1905, 3/2/01) requires that a Risk Management Review is performed for any increase in hourly or annual emissions of Hazardous Air Pollutants (HAPs). HAPs are limited to substances included on the list in CH&SC 44321 and that have an OEHHA approved health risk value.

This project results in increases in emissions of HAPs

The risk associated with emissions increase for this project was reviewed by performing a prioritization in accordance with the requirements of the CAPCOA prioritization guidelines. The resulting [prioritization score](#), [acute hazard index](#), [chronic hazard index](#), and [cancer risk](#) from this project is shown below.

Health Risk Assessment Summary	
	Worst Case Potential
Prioritization Score	[]
Cancer Risk	[]
Acute Hazard Index	[]
Chronic Hazard Index	[]
T-BACT Required?	Yes/No
Project Approved?	Yes/No

Use one of the following paragraphs (delete all others as well as italicized language):

Prioritization Score less than or equal to 1.0 (Project or total Facility)

Pursuant to the District Risk Management Policy for New and Modified Sources, a screening Health Risk Assessment (HRA) is not required since the prioritization score is equal to or less than 1.0.

The project is approved for permitting without consideration of Toxic Best Available Control Technology (T-BACT).

In accordance with this policy, no further analysis is required, and compliance with District Rule 4102 requirements is expected.

See Appendix II: Health Risk Assessment Summary

OR

Cancer risk less than or equal to 1.0 per million (acute and chronic indices) (T-BACT not required)

Pursuant to the District Risk Management Policy for New and Modified Sources, a Health Risk Assessment (HRA) is required for projects with a prioritization score greater than 1.0. Since the prioritization score of the sum of all projects subject to District's Risk Management Review Policy is greater than one, a HRA is requested.

District policy APR 1905 specifies that the increase in emissions associated with a proposed new source or modification project not pose a significant health risk. A cancer risk greater than 1.0 per million is considered to pose a significant risk.

Since the HRA indicates that risk is below District acute, chronic, and cancer risk thresholds, Toxic Best Available Technology (T-BACT) is not required for this project.

In accordance with the policy, no further analysis is required. As long as the unit is properly maintained and operated, it should not be a public nuisance. Therefore compliance with District Rule 4102 requirements is expected.

See Appendix II: Health Risk Assessment Summary

OR

Increase in cancer risk greater than 1.0 per million (T-BACT Required)

District policy APR 1905 specifies that the increase in emissions associated with a proposed new source or modification project not pose a significant health risk. A cancer risk greater than 1.0 per million is considered to pose a significant risk.

For projects where the increase in cancer risk is greater than 1.0 per million, Toxic Best Available Technology (T-BACT) is required.

Based on the HRA results, T-BACT is required for this project.

The applicant has proposed T-BACT, therefore, compliance with District Risk Management Policy is expected. **{Note: If T-BACT is not proposed, the project cannot be approved.**

If Applicable add the following Section (highlighted in blue)

The following permit conditions are required to ensure compliance with the assumptions made for the risk management review:

- [Add HRA Conditions]

In accordance with the policy, no further analysis is required. As long as the unit is properly maintained and operated it should not be a public nuisance. Therefore compliance with District Rule 4102 requirements is expected.

See Appendix II: Health Risk Assessment Summary

District Rule 4201, Particulate Matter Concentration

Particulate matter emissions from the project will be less than or equal to the rule limit of 0.1 grain per cubic foot of gas at dry standard conditions as shown by the following equation.

1. F-factor for gasoline is 8,850 dscf/MMBtu
2. PM₁₀ emission factor is 0.0687 lb/MMBtu (based on 0.000721 lb/hp-hr)

Based on PM₁₀ emission factor listed above, and assuming 100% PM is PM₁₀:

$$\left(\frac{0.0687 \text{ lb} - \text{PM}}{\text{MMBtu}} \times \frac{7,000 \text{ grain}}{\text{lb}} \right) / \left(\frac{8,850 \text{ dscf}}{\text{MMBtu}} \right) = 0.0019 \frac{\text{grain}}{\text{dscf}}$$

Since $0.0019 \frac{\text{grain}}{\text{dscf}}$ is \leq to 0.1 grain per dscf, compliance with Rule 4201 is expected.

Rule 4651 – Volatile Organic Compounds from Decontamination of Soil

The applicant is not proposing to excavate, transport, handle, ex-situ decontaminate, or dispose contaminated soil. Therefore, per section 2.0, this rule is not applicable.

District Rule 4701 – Internal Combustion Engines - Phase I

The purpose of this rule is to limit the emissions of nitrogen oxides (NOx), carbon monoxide (CO), and volatile organic compounds (VOC) from internal combustion engines. Except as provided in

Section 4.0, the provisions of this rule apply to any internal combustion engine rated greater than 50 bhp that requires a PTO.

The proposed engine(s) are also subject to District Rule 4702, "Internal Combustion Engines". Since emissions limits of District Rule 4702 and all other requirements are equivalent or more stringent than District Rule 4701 requirements, compliance with District Rule 4702 requirements will satisfy requirements of District Rule 4701.

District Rule 4702 – Internal Combustion Engines

This rule applies to any internal combustion engine rated at 25 brake horsepower or greater.

For Engines less than 25 bhp

The IC engine used as the control device for this soil remediation project is rated at XXX bhp. Since this rule only applies to IC engines greater than 25 bhp, the engine is not subject to the requirements of this rule and no further discussion is required. *{delete all other discussions for this rule}*

For Engines less than 50 bhp but greater than 25 bhp

Except for the requirements of Section 5.1, the requirements of this rule shall not apply to stationary engines rated at least 25 Brake Horsepower, up to and including 50 Brake Horsepower. Since this engine is rated between 25 and 50 bhp, only Section 5.1 applies and no further discussion aside from Section 5.1 is required. *{delete all other discussions for this rule besides Section 5.1}*

For Engines that are taking an annual limit of 200 hours/year (low-use engine)

Section 4.2 states that except for the requirements of Sections 5.9 and 6.2.3, the requirements of this rule shall not apply to a low-use engine, provided that the engine is operated with an operating nonresettable elapsed time meter. Since this engine is limited to no more than 200 hours per year, as demonstrated by an elapsed time meter, only Sections 5.9 and 6.2.3 apply and no further discussion aside from Sections 5.9 and 6.2.3 is required. *{Delete all other discussions for this rule besides Sections 5.9 and 6.2.3}*

For engines that are permitted under a District Portable Equipment Registration

Section 4.1.7 states that the requirements of this rule shall not apply to an internal combustion engine registered as a portable emissions unit under Rule 2280 (Portable Equipment Registration).

Since the engine utilized for the soil remediation operates under a District Portable Equipment Registration, the provisions of this rule do not apply and no further discussion is required. *{Delete all other discussions for this rule}*

For engines that are permitted under a State of California Portable Equipment Registration

Section 4.1.6 states that the requirements of this rule shall not apply to an internal combustion engine registered as a portable emissions unit under the Statewide Portable Equipment Registration Program pursuant to California Code of Regulations Title 13, Division 3, Chapter 9, Article 5, Sections 2450-2465.

Since the engine utilized for the soil remediation operates under a Statewide Portable Equipment Registration Program, the provisions of this rule do not apply and no further discussion is required. *{Delete all other discussions for this rule}*

For full-time, engines greater than 50 bhp

Pursuant to Section 5.2, The operator of a spark-ignited internal combustion engine rated at >50 bhp that is used exclusively in non-AO shall not operate it in such a manner that results in emissions exceeding the limits in Table 1 for the appropriate engine type until such time that the engine has demonstrated compliance with Table 2 emission limits pursuant to the compliance deadlines in Section 7.5. In lieu of complying with Table 1 emission limits, the operator of a spark-ignited engine shall comply with the applicable emission limits pursuant to Section 8.0.

The engine proposed by **Facility Name** is subject to the NO_x, CO and VOC emission limits of Section 5.2.1, Table 1, Category 1.c (Rich-Burn; all other engines) and on and after 1/1/2014 [will be/is] subject to Table 2, Category [1.c/1.d], [Limited Use/All other engines]. The applicant is proposing to operate the engine at or below the NO_x, CO and VOC emission limits shown in the following table:

Table 1 Engine Emission Levels @15% O₂			
Engine Type (Rich-Burn)	NO _x	CO	VOC
Category 1.c	25 ppmv or 96% reduction	2000 ppmv	750 ppmv
C-xxxx-xx	xx.x	xx.x	xx.x

Pursuant to Section 5.2.2, on and after the compliance schedule specified in Section 7.5, the operator of a spark-ignited engine > 50 bhp that is used in non-AO shall comply with all the applicable requirements of the rule and shall comply with the applicable NO_x, CO, and VOC emission limits pursuant to Table 2; comply with the SO_x control requirements of Section 5.7, pursuant to the deadlines specified in Section 7.5; and comply with the monitoring requirements of Section 5.10, pursuant to the deadlines specified in Section 7.5.

In lieu of complying with the NOx emission limit requirement of Section 5.2.2.1.1, an operator may pay an annual fee to the District, as specified in Section 5.6, pursuant to Section 7.6 of the rule.

Table 2 Engine Emission Levels @15% O₂			
Engine Type (Rich-Burn)	NOx	CO	VOC
Category 1.c (Limited Use)	25 ppmv	2000 ppmv	250 ppmv
Category 1.d	11 ppmv	2000 ppmv	250 ppmv
C-xxxx-xx	xx.x	xx.x	xx.x

Note: Contact the applicant if the engine does not meet the above limits. Applicant must propose to meet above limits in order for the project to be approved.

On and after the compliance schedule specified in Section 7.5, operators of non-AO spark-ignited engines and non-AO compression-ignited engines shall comply with the sulfur oxides (SOx) control requirements by operating the engine exclusively on PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases; or

Limit gaseous fuel sulfur content to no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet; or

Use California Reformulated Gasoline for gasoline-fired spark-ignited engines; or

Use California Reformulated Diesel for compression-ignited engines; or

Operate the engine on liquid fuel that contains no more than 15 ppm sulfur, as determined by the test method specified in Section 6.4.6; or

Install and properly operate an emission control system that reduces SO₂ emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6.

The engine in this project is operated on commercially purchased propane/LPG until such point that it can combust the gasoline vapors drawn from the underground spill being remediated. Commercial propane/LPG will continue to be available as auxiliary fuel to maintain operation of the engine when gasoline vapor concentration is unable to maintain stable operation without supplemental fuel.

Pursuant to Section 6.3, source testing of the NOx, CO and VOC emission concentrations shall be conducted within 60 days of initial startup and at least once every 24 months thereafter.

Facility name will be required to maintain an engine operating log that includes source testing results and periodic exhaust sampling monitoring data.

Therefore, compliance with all of the applicable requirements of this rule is expected.

District Rule 4801 - Sulfur compounds

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO₂, on a dry basis averaged over 15 consecutive minutes.

Using the ideal gas equation and the emission factors presented in Section VII, the sulfur compound emissions are calculated as follows:

$$\text{Volume SO}_2 = \frac{n RT}{P}$$

With:

N = moles SO₂

T (Standard Temperature) = 60°F = 520°R

P (Standard Pressure) = 14.7 psi

R (Universal Gas Constant) = $\frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot \text{°R}}$

SO_x emission factor in lb/MMBtu = 0.84 lb/MMBtu based on AP-42 Table 3.3-1

EPA F-Factor for gasoline: 8,850 dscf/MMBtu at 60 °F

$$\frac{0.084 \text{ lb} - \text{SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,850 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot \text{°R}} \times \frac{520 \text{ °R}}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 56.3 \frac{\text{parts}}{\text{million}}$$

$$\text{Sulfur Concentration} = 56.3 \frac{\text{parts}}{\text{million}} < 2,000 \text{ ppmv (or 0.2\%)},$$

California Health & Safety Code 42301.6 (School Notice)

Example (a): (For a Non-School Notice project - > 1,000 feet.)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

Example (b): (For a Non-School Notice project – no increase in emissions)

The District has verified that this site is located within 1,000 feet of a school. However, pursuant to California Health and Safety Code 42301.6, since this project will not result in an increase in emissions, a school notice is not required.

Example (c): (For a School Notice project.)

The District has verified that this site is located within 1,000 feet of the following school:

School Name: [Name]
Address: [Address]

Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is required. Prior to the issuance of the ATC for this equipment, notices will be provided to the parents/guardians of all students of the affected school, and will be sent to all residents within 1,000 ft. of the site.

If there is no school w/in ¼ mile of the emissions increase, include the following discussion, otherwise delete:

The District has verified that there are no additional schools within ¼ mile of the emission source.

If there is a school w/in ¼ mile of the emissions increase, include the following discussion, otherwise delete:

Since a school notice has been triggered (due to the above-listed school within 1,000 of the emission source), notices will also be provided to the parents/guardians of all students from all school sites within ¼ mile of the emission source. The following schools(s) are within ¼ mile of the emission source:

School Name: [Name]
Address: [Address]
(Add additional schools if necessary)

(Note: Refer to [FYI - 71](#) for guidance on how to process a School Notice project.)

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (District) adopted its *Environmental Review Guidelines* (ERG) in 2001.

The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the

project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the project qualifies for ministerial approval under the District's Guideline for Expedited Application Review (GEAR). Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit are based on a case-by-case analysis of a particular project's potential for litigation risk, which in turn may be based on a project's potential to generate public concern, its potential for significant impacts, and the project proponent's ability to pay for the costs of litigation without a letter of credit, among other factors.

As described above, the project requires only ministerial approval, and is exempt from the provisions of CEQA. As such, an Indemnification Agreement or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. Recommendations

Issue Authority to Construct [C-xxxx-xx](#) subject to the permit conditions on the attached draft Authority to Construct document.

X. Billing Information

Permit Number	Fee Schedule	Fee Description
C-xxxx-x-x	3020-10-[]	[] bhp

- APPENDIX I: BACT Guideline 2.1.2 & Top-Down BACT Analysis
- APPENDIX II: HRA Summary
- APPENDIX III: Emissions Conversion Spreadsheet
- APPENDIX IV: Draft Authority to Construct
- APPENDIX V: Emissions Profile

APPENDIX I

BACT Guideline 2.1.2 & Top-Down BACT Analysis

**San Joaquin Valley
Unified Air Pollution Control District**

Best Available Control Technology (BACT) Guideline 2.1.2*

Last Update: June 18, 1992

Emissions Unit: Soil Remediation Operation - I.C. Engine

Pollutant	Achieved in Practice or contained in SIP	Technologically Feasible	Alternate Basic Equipment
VOC	LPG auxiliary fuel and 3 - way catalytic converter @ 95% control	Natural gas or LPG auxiliary fuel and 3 - way catalytic converter @ 95% control	
SO _x	LPG auxiliary fuel	Natural gas or LPG auxiliary fuel	
NO _x	LPG auxiliary fuel and 3 - way catalytic converter	Natural gas or LPG auxiliary fuel and 3 - way catalytic converter	
CO	LPG auxiliary fuel and 3 - way catalytic converter	Natural gas or LPG auxiliary fuel and 3 - way catalytic converter	
PM ₁₀	LPG auxiliary fuel	Natural gas or LPG auxiliary fuel	

*This is a Summary Page for this Class of Source - Permit Specific BACT Determinations on Next Page(s)

Top-Down BACT Analysis

a. Step 1 - Identify All Possible VOC Control Technologies

The SJVUAPCD BACT Clearinghouse Guideline 2.1.2 identifies for this soil remediation operation:

-Natural gas or LPG auxiliary fuel and 3 – way catalytic converter @ 95% control

b. Step 2 - Eliminate Technologically Infeasible Options

There are no technologically infeasible options listed.

c. Step 3 - Rank Remaining Control Technologies by Control Effectiveness

- Natural gas or LPG auxiliary fuel and 3 – way catalytic converter @ 95% control.

d. Step 4 - Cost Effectiveness Analysis

The applicant is already proposing the most effective control technology listed above. Therefore, per SJVUAPCD BACT policy, the cost effectiveness analysis is not required.

e. Step 5 - Select BACT

The applicant is proposing BACT by the use of an [IC engine with a 3-way catalytic converter at 95% or greater VOC control efficiency and LPG as auxiliary fuel.](#)

APPENDIX II

HRA Summary

APPENDIX III

Emissions Conversion Spreadsheet

Grams/Brake Horsepower - Hour ----> Parts Per Million Volume

g/Bhp-hr ----> ppmv

Variables:		
Engine Size:	100	hp
NO _x :	0.249	g/bhp-hr
CO:	9.957	g/bhp-hr
VOC:	0.49	g/bhp-hr
O ₂ level:	15	%
Engine Efficiency:	35	% (Assumed)
F-factor:	8850	dscf/MMBtu
Fuel Type	0	

Given:		
Conversion #1:	379.5	dscf/lb-mole
Conversion #2:	393.236	bhp-hr/MMBtu
Conversion #3:	453.59	g/lb
MW _(NO_x) :	46	as NO ₂
MW _(CO) :	28	
MW _(VOC) :	16	as CH ₄
O ₂ Correction:	3.542	
Pressure (p)	1	atm
Temp (oF)	60	oF

Formula:

g	1	1	(20.9 - O₂ %)	Conversion #1	Conversion #2	1	Engine Eff.	—
bhp-hr	F-factor	MW_{pollutant}	20.9	1	1	Conversion #3	1	—

for NO_x:

$$\begin{array}{r}
 \Rightarrow \frac{0.25 \text{ g}}{\text{bhp-hr}} \times \frac{\text{MMBtu}}{8850 \text{ dscf}} \times \frac{1 \text{ lb-mol}}{46 \text{ lb}} \times \frac{20.9 - 15}{20.9} \times \frac{379.5 \text{ dscf}}{1 \text{ lb-mol}} \times \frac{393.24 \text{ bhp-hr}}{\text{MMBtu}} \times \frac{\text{lb}}{453.59 \text{ g}} \times \frac{35\%}{1} = 20.187 \text{ PPM}
 \end{array}$$

for CO:

$$\begin{array}{r}
 \Rightarrow \frac{9.96 \text{ g}}{\text{bhp-hr}} \times \frac{\text{MMBtu}}{8850 \text{ dscf}} \times \frac{1 \text{ lb-mol}}{28 \text{ lb}} \times \frac{20.9 - 15}{20.9} \times \frac{379.5 \text{ dscf}}{1 \text{ lb-mol}} \times \frac{393.24 \text{ bhp-hr}}{\text{MMBtu}} \times \frac{\text{lb}}{453.59 \text{ g}} \times \frac{35\%}{1} = 1326.157 \text{ PPM}
 \end{array}$$

for VOC:

$$\begin{array}{r}
 \Rightarrow \frac{0.49 \text{ g}}{\text{bhp-hr}} \times \frac{\text{MMBtu}}{8850 \text{ dscf}} \times \frac{1 \text{ lb-mol}}{16 \text{ lb}} \times \frac{20.9 - 15}{20.9} \times \frac{379.5 \text{ dscf}}{1 \text{ lb-mol}} \times \frac{393.24 \text{ bhp-hr}}{\text{MMBtu}} \times \frac{\text{lb}}{453.59 \text{ g}} \times \frac{35\%}{1} = 114.209 \text{ PPM}
 \end{array}$$

APPENDIX V

Emissions Profile

ATC Conditions
(Do Not Include With Application Review)

IC Engines < 50 Bhp

{1420} The soil remediation system shall be maintained in proper operating condition at all times. [District Rule 2201] N

{15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] N

{98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] N

{14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] N

{1431} Only liquefied petroleum gas or natural gas shall be used as auxiliary fuel for the combustion of VOC. [District Rule 2201] N

The VOC control device shall be at least 95% efficient in controlling the VOC from the soil remediation project. [District Rule 2201] N

The emissions from the soil remediation system shall not exceed any of the following limits: 0.249 g-NOx/hp-hr (or 20.2 ppmv @ 15% O₂), 9.957 g-CO/hp-hr (or 1,326.2 ppmv @ 15% O₂), 0.49 g-VOC/hp-hr (or 114.2 ppmv @ 15% O₂), 0.0577 g-SOx/hp-hr, or 0.327 g-PM₁₀/hp-hr. [District Rule 2201]

{1444} The total VOC emission rate from the soil remediation system served by the internal combustion engine shall not exceed xxx pounds in any one day. [District Rule 2201] N

{1413} Sampling ports adequate for extraction of grab samples, measurement of gas flow rate, and use of an FID, PID, or other District-approved VOC detection device shall be provided for both the influent and the effluent gas streams. [District Rule 1081] N

{1414} Laboratory samples shall be taken at the initial inspection, under the supervision of the APCD Inspector. Samples shall be taken from both the influent and the effluent gas stream sampling ports. [District Rule 1081] N

Laboratory samples shall be analyzed for *[TPH and BTEX or trichloroethylene (TCE) or perchloroethylene (PCE)]*. [District Rule 2201] N

{1416} Measurements to determine the influent and the effluent gas flow rates shall be taken at the initial inspection. Flow rate calculations shall be submitted to the District along with the laboratory sample analysis results. [District Rule 1081] N

{1417} Initial compliance with VOC emission rate and control efficiency requirements shall be demonstrated by the results of the laboratory sample analysis. The results shall be submitted to the District within 60 days of the test. [District Rule 1081] N

Sampling to demonstrate ongoing compliance with the VOC emission rate and control efficiency requirements shall be performed at least once per week by sampling both the influent and the effluent gas streams with an FID, PID, or other District-approved VOC detection device. [District Rule 1081] N

If the uncontrolled VOC emission rate is below 2 lb/day, as demonstrated by five consecutive weekly samples, the control device may be taken off-line and sampling shall only be performed on a monthly basis to continuously demonstrate that the uncontrolled VOC emissions are below 2 lb/day. [District Rule 1081] N

{1425} Records of the cumulative running time and the measured influent and effluent VOC concentrations shall be maintained. [District Rule 2201] N

{2780} All records shall be retained for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 2201] N

Registered Portable Engine

{1420} The soil remediation system shall be maintained in proper operating condition at all times. [District Rule 2201] N

{15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] N

{98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] N

{14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] N

{1431} Only liquefied petroleum gas or natural gas shall be used as auxiliary fuel for the combustion of VOC. [District Rule 2201] N

The VOC control device shall be at least 95% efficient in controlling the VOC from the soil remediation project. [District Rule 2201] N

The emissions from the soil remediation system shall not exceed any of the following limits: 0.249 g-NO_x/hp-hr (or 20.2 ppmv @ 15% O₂), 9.957 g-CO/hp-hr (or 1,326.2 ppmv @ 15% O₂), 0.49 g-VOC/hp-hr (or 114.2 ppmv @ 15% O₂), 0.0577 g-SO_x/hp-hr, or 0.327 g-PM₁₀/hp-hr. [District Rule 2201]

{1444} The total VOC emission rate from the soil remediation system served by the internal combustion engine shall not exceed xxx pounds in any one day. [District Rule 2201] N

{1413} Sampling ports adequate for extraction of grab samples, measurement of gas flow rate, and use of an FID, PID, or other District-approved VOC detection device shall be provided for both the influent and the effluent gas streams. [District Rule 1081] N

{1414} Laboratory samples shall be taken at the initial inspection, under the supervision of the APCD Inspector. Samples shall be taken from both the influent and the effluent gas stream sampling ports. [District Rule 1081] N

Laboratory samples shall be analyzed for *[TPH and BTEX or trichloroethylene (TCE) or perchloroethylene (PCE)]*. [District Rule 2201] N

{1416} Measurements to determine the influent and the effluent gas flow rates shall be taken at the initial inspection. Flow rate calculations shall be submitted to the District along with the laboratory sample analysis results. [District Rule 1081] N

{1417} Initial compliance with VOC emission rate and control efficiency requirements shall be demonstrated by the results of the laboratory sample analysis. The results shall be submitted to the District within 60 days of the test. [District Rule 1081] N

Sampling to demonstrate ongoing compliance with the VOC emission rate and control efficiency requirements shall be performed at least once per week by sampling both the influent and the effluent gas streams with an FID, PID, or other District-approved VOC detection device. [District Rule 2201] N

If the uncontrolled VOC emission rate is below 2 lbs/day, as demonstrated by five consecutive weekly samples, the control device may be taken off-line and sampling shall only be performed on a monthly basis to continuously demonstrate that the uncontrolled VOC emissions are below 2 lbs/day. [District Rule 1081] N

{1425} Records of the cumulative running time and the measured influent and effluent VOC concentrations shall be maintained. [District Rule 2201] N

{2863} The internal combustion engine shall not remain at any one location for more than 12 consecutive months. [District Rule 4702] N

{2864} The permittee shall notify the District Compliance Division of each location at

which the equipment is located in excess of 24 hours. Such notification shall be made no later than 2 weeks prior to starting operation at the location. [District Rules 1070 and 2201] N

{2865} The permittee shall maintain daily records of the locations at which the equipment was operated, the dates the equipment operated at each location, the distance from the internal combustion engine's exhaust stack to the nearest receptor (i.e. business, residence, etc.) at each location, the daily VOC emissions at each location, and the cumulative annual VOC emissions. [District Rules 1070, 2201, and 4102] N

{2780} All records shall be retained for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 2201] N

< 200 Hours Operation

{1420} The soil remediation system shall be maintained in proper operating condition at all times. [District Rule 2201] N

{15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] N

{98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] N

{14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] N

{1431} Only liquefied petroleum gas or natural gas shall be used as auxiliary fuel for the combustion of VOC. [District Rule 2201] N

The VOC control device shall be at least 95% efficient in controlling the VOC from the soil remediation project. [District Rule 2201] N

The emissions from the soil remediation system shall not exceed any of the following limits: 0.249 g-NO_x/hp-hr (or 20.2 ppmv @ 15% O₂), 9.957 g-CO/hp-hr (or 1,326.2 ppmv @ 15% O₂), 0.49 g-VOC/hp-hr (or 114.2 ppmv @ 15% O₂), 0.0577 g-SO_x/hp-hr, or 0.327 g-PM₁₀/hp-hr. [District Rule 2201]

{1444} The total VOC emission rate from the soil remediation system served by the internal combustion engine shall not exceed xxx pounds in any one day. [District Rule 2201] N

{2866} The engine is limited to no more than 200 hours in any one calendar year, and

shall be equipped with a non-resettable totalizing hour meter. [District Rule 2201 and 4702] N

{1413} Sampling ports adequate for extraction of grab samples, measurement of gas flow rate, and use of an FID, PID, or other District-approved VOC detection device shall be provided for both the influent and the effluent gas streams. [District Rule 1081] N

{1414} Laboratory samples shall be taken at the initial inspection, under the supervision of the APCD Inspector. Samples shall be taken from both the influent and the effluent gas stream sampling ports. [District Rule 1081] N

Laboratory samples shall be analyzed for *[TPH and BTEX or trichloroethylene (TCE) or perchloroethylene (PCE)]*. [District Rule 2201] N

{1416} Measurements to determine the influent and the effluent gas flow rates shall be taken at the initial inspection. Flow rate calculations shall be submitted to the District along with the laboratory sample analysis results. [District Rule 1081] N

{1417} Initial compliance with VOC emission rate and control efficiency requirements shall be demonstrated by the results of the laboratory sample analysis. The results shall be submitted to the District within 60 days of the test. [District Rule 1081] N

Sampling to demonstrate ongoing compliance with the VOC emission rate and control efficiency requirements shall be performed at least once per week by sampling both the influent and the effluent gas streams with an FID, PID, or other District-approved VOC detection device. [District Rule 1081] N

If the uncontrolled VOC emission rate is below 2 lb/day, as demonstrated by five consecutive weekly samples, the control device may be taken off-line and sampling shall only be performed on a monthly basis to continuously demonstrate that the uncontrolled VOC emissions are below 2 lb/day. [District Rule 1081] N

{1425} Records of the cumulative running time and the measured influent and effluent VOC concentrations shall be maintained. [District Rule 2201] N

{2867} The permittee shall maintain annual records of total hours of engine operation. [District Rule 1070] N

{2780} All records shall be retained for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 2201] N

[Full-Time > 50 bhp](#)

{1420} The soil remediation system shall be maintained in proper operating condition at all times. [District Rule 2201] N

{15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] N

{98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] N

{14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] N

{1431} Only commercial propane, liquefied petroleum gas (LPG) or natural gas shall be used as auxiliary fuel for the combustion of VOC. [District Rules 2201 and 4702] N

The VOC control device shall be at least 95% efficient in controlling the VOC from the soil remediation project. [District Rule 2201] N

The emissions from the soil remediation system shall not exceed any of the following limits: 0.249 g-NO_x/hp-hr (or 20.2 ppmv @ 15% O₂), 9.957 g-CO/hp-hr (or 1,326.2 ppmv @ 15% O₂), 0.49 g-VOC/hp-hr (or 114.2 ppmv @ 15% O₂), 0.0577 g-SO_x/hp-hr, or 0.327 g-PM₁₀/hp-hr. [District Rule 2201]

{1444} The total VOC emission rate from the soil remediation system served by the internal combustion engine shall not exceed xxx pounds in any one day. [District Rule 2201] N

{1413} Sampling ports adequate for extraction of grab samples, measurement of gas flow rate, and use of an FID, PID, or other District-approved VOC detection device shall be provided for both the influent and the effluent gas streams. [District Rule 1081] N

{1414} Laboratory samples shall be taken at the initial inspection, under the supervision of the APCD Inspector. Samples shall be taken from both the influent and the effluent gas stream sampling ports. [District Rule 1081] N

Laboratory samples shall be analyzed for *[TPH and BTEX or trichloroethylene (TCE) or perchloroethylene (PCE)]*. [District Rules 2201 and 4102] N

{1416} Measurements to determine the influent and the effluent gas flow rates shall be taken at the initial inspection. Flow rate calculations shall be submitted to the District along with the laboratory sample analysis results. [District Rule 1081] N

{1417} Initial compliance with VOC emission rate and control efficiency requirements shall be demonstrated by the results of the laboratory sample analysis. The results shall be submitted to the District within 60 days of the test. [District Rule 1081] N

Sampling to demonstrate ongoing compliance with the VOC emission rate and control

efficiency requirements shall be performed at least once per week by sampling both the influent and the effluent gas streams with an FID, PID, or other District-approved VOC detection device. [District Rule 1081] N

If the uncontrolled VOC emission rate is below 2 lb/day, as demonstrated by five consecutive weekly samples, the control device may be taken off-line and sampling shall only be performed on a monthly basis to continuously demonstrate that the uncontrolled VOC emissions are below 2 lb/day. [District Rule 1081] N

{1425} Records of the cumulative running time and the measured influent and effluent VOC concentrations shall be maintained. [District Rule 2201] N

{2780} All records shall be retained for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 2201] N

Stationary Full-Time > 50 bhp

{1420} The soil remediation system shall be maintained in proper operating condition at all times. [District Rule 2201] N

{15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] N

{98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] N

{14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] N

{1431} Only liquefied petroleum gas or natural gas shall be used as auxiliary fuel for the combustion of VOC. [District Rule 2201] N

The VOC control device shall be at least 95% efficient in controlling the VOC from the soil remediation project. [District Rule 2201] N

The emissions from the soil remediation system shall not exceed any of the following limits: 0.249 g-NO_x/hp-hr (or 20.2 ppmv @ 15% O₂), 9.957 g-CO/hp-hr (or 1,326.2 ppmv @ 15% O₂), 0.49 g-VOC/hp-hr (or 114.2 ppmv @ 15% O₂), 0.0577 g-SO_x/hp-hr, or 0.327 g-PM₁₀/hp-hr. [District Rules 2201 and 4702]

{1444} The total VOC emission rate from the soil remediation system served by the internal combustion engine shall not exceed xxx pounds in any one day. [District Rule 2201] N

{1413} Sampling ports adequate for extraction of grab samples, measurement of gas

flow rate, and use of an FID, PID, or other District-approved VOC detection device shall be provided for both the influent and the effluent gas streams. [District Rule 1081] N

{1414} Laboratory samples shall be taken at the initial inspection, under the supervision of the APCD Inspector. Samples shall be taken from both the influent and the effluent gas stream sampling ports. [District Rule 1081] N

Laboratory samples shall be analyzed for *[TPH and BTEX or trichloroethylene (TCE) or perchloroethylene (PCE)]*. [District Rules 2201 and 4102] N

{1416} Measurements to determine the influent and the effluent gas flow rates shall be taken at the initial inspection. Flow rate calculations shall be submitted to the District along with the laboratory sample analysis results. [District Rule 1081] N

{1417} Initial compliance with VOC emission rate and control efficiency requirements shall be demonstrated by the results of the laboratory sample analysis. The results shall be submitted to the District within 60 days of the test. [District Rule 1081] N

Sampling to demonstrate ongoing compliance with the VOC emission rate and control efficiency requirements shall be performed at least once per week by sampling both the influent and the effluent gas streams with an FID, PID, or other District-approved VOC detection device. [District Rule 1081] N

If the uncontrolled VOC emission rate is below 2 lb/day, as demonstrated by five consecutive weekly samples, the control device may be taken off-line and sampling shall only be performed on a monthly basis to continuously demonstrate that the uncontrolled VOC emissions are below 2 lb/day. [District Rule 1081] N

{2869} Source testing of the NO_x, CO and VOC emission concentrations shall be conducted within 60 days of initial startup and at least once every 24 months thereafter. [District Rule 4702] N

{2870} Source testing for NO_x emissions shall be conducted utilizing CARB 100 or EPA method 7E. [District Rule 4702] N

{2871} Source testing for CO emissions shall be conducted utilizing CARB 100 or EPA method 10. [District Rule 4702] N

{2872} Source testing for VOC emissions shall be conducted utilizing EPA method 25 or EPA method 18, referenced as methane. [District Rule 4702] N

{109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] N

{2873} The results of each source test must be submitted to the District within 60 days thereafter. [District Rule 1081] N

{2874} Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] N

The permittee shall monitor and record the stack concentration of NOX (as NO₂), CO, and O₂ at least once every calendar quarter using a portable emission monitor that meets District specifications. [In-stack O₂ monitors may be allowed if approved by the APCO.] Monitoring shall be performed not less than once every month for 12 months if 2 consecutive deviations are observed during quarterly monitoring. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 day of restarting the engine unless monitoring has been performed within the last month if on a monthly monitoring schedule, or within the last quarter if on a quarterly monitoring schedule. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] N

{2876} If the NOX or CO concentrations corrected to 15% O₂, as measured by the portable analyzer, exceed the permitted emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4702] N

{2877} The permittee shall maintain records of: (1) the date and time of NOX, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NOX and CO concentrations corrected to 15% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4702] N

{2878} The results of the measurements taken with the District approved analyzer shall be maintained on the premises at all times. [District Rules 1070 and 4702] N

{1425} Records of the cumulative running time and the measured influent and effluent VOC concentrations shall be maintained. [District Rules 2201 and 4702] N

{2780} All records shall be retained for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 1070] N