

San Joaquin Valley Air Pollution Control District
Authority to Construct
Application Review
Soil Decontamination Operation Using Activated Carbon

Facility Name: _____ Date: June 1, 2016
Mailing Address: _____ Engineer: _____
Lead Engineer: _____

Contact Person: _____
Telephone: _____
Application #(s): _____
Project #: _____
Deemed Complete: _____

I. Proposal

Facility Name is applying for an Authority to Construct (ATC) permit for a soil decontamination operation served by an activated carbon system.

OR

Facility Name is applying for an Authority to Construct (ATC) permit to modify their soil decontamination operation served by an activated carbon system to **(state the type of modification)**.

II. Applicable Rules

- 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 4651 Soil Decontamination Operations (9/20/07)
- 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 District has verified that the facility [is/is not] located within 1,000 feet of the outer boundary of any K-12 school. 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 state:

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

VOC will be extracted from subsurface soil by mechanically drawing air through the soil matrix. This will be done by connecting a vacuum pump with blower motor to extraction wells. When suction is applied to the wells it induces a subsurface airflow radially toward perforations in the well casings. Organic vapors are removed by adsorption as the gas stream passes through a bed of specially “activated” carbon. This material has a very large surface area for adsorption due to the presence of a large number of pores throughout the carbon. The organic vapors diffuse into these pores and are retained on the carbon surface due to both chemical and physical forces. For this operation, [two/three] carbon canisters will be connected in series. When the first canister approaches the saturation point where it is unable to adsorb additional VOCs, the canister is removed from service with the second canister in series now serving as the first and a fresh canister installed as the new final canister. In this way, if the first canister reaches saturation before it can be replaced, extracted VOCs are still adsorbed by the second canister rather than passing through to atmosphere. The activated carbon system will capture at least 95% of the VOC in the process stream prior to discharge into the atmosphere.

Operating Schedule:

The operating schedule is [] hr/day and [] days/year.

V. Equipment Listing

Activated Carbon System:

Manufacturer: []
[] carbon canisters @ [] lbs each
Model #: []
Control Efficiency: [] % (Per applicant, District BACT requirement: 95%)

Extraction Blower/Motor:

Power Rating: [] hp
Maximum Stack Flowrate: [] cfm

C-xxxx-x-x: SOIL REMEDIATION PROJECT SERVED BY [TWO] [XXX] LB [MANUFACTURER],
MODEL [XXX], CARBON CANISTERS CONNECTED IN SERIES

VI. Emission Control Technology Evaluation

Activated Carbon System:

Carbon adsorption is a remediation technology in which pollutants are removed from air by physical adsorption onto activated carbon grains. Carbon is "activated" for this purpose by processing the carbon to create porous particles with a large internal surface area that attracts and adsorbs organic molecules as well as certain metal and inorganic molecules.

The control equipment consists of a carbon system, as described in Section IV above. The VOC-contaminated air from the extraction wells will be ducted through the carbon system where a minimum of 95% (by weight) of the VOC will be captured. After treatment by the carbon system the treated effluent stream is released to the atmosphere. To prevent potential VOC emissions from the spent carbon canisters, the canisters will be sealed gas-tight and sent to a regeneration facility or landfill for disposal.

VII. Emissions Calculations

A. Assumptions

Process Weight:

- Maximum influent concentration: [] ppmv as gasoline of VOC being removed from the soil (proposed by applicant)
- Maximum influent rate: [] scfm
- Control efficiency: []% (as proposed by the applicant) minimum BACT requirement
- Molecular weight of gasoline = 100 lb/lb-mole (EPA On-line Tools for Site Assessment Calculation)
- Molecular weight of methane = 16.043 lb/lb-mole

B. Emission Factors

(Include the following conversion if ppmv provided is not in ppmv as methane)

VOC concentrations are measured with reference to methane. This requires that the molecular weight be adjusted to methane. Since the applicant stated that the maximum influent concentration is [] ppmv as [gasoline @ 100 lb/lb-mole], the adjusted concentration can be determined as follows:

$(\text{mass emissions})_{\text{as methane}} = \text{mass emissions}_{\text{as gasoline}}$

$$(\text{concentration} \times \text{flowrate} \times \text{molar volume} \times \text{molecular weight})_{\text{methane}} = (\text{concentration} \times \text{flowrate} \times \text{molar volume} \times \text{molecular weight})_{\text{gasoline}}$$

$$(\text{concentration} \times \text{molecular weight})_{\text{methane}} = (\text{concentration} \times \text{molecular weight})_{\text{gasoline}}$$

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) | | | |
|--|-----------------|------------------|---------------------|
| | Daily PE | Annual PE | Quarterly PE |
| NO _x | -- | -- | -- |
| SO _x | -- | -- | -- |
| PM ₁₀ | -- | -- | -- |
| CO | -- | -- | -- |
| VOC | [] | [] | [] |

2. Post Project Potential to Emit PE (PE2)

$$\begin{aligned} &\text{Influent concentration}_{\text{methane}} \\ &= \text{concentration}_{\text{gasoline}} \times \text{molecular weight}_{\text{gasoline}} / \text{molecular weight}_{\text{methane}} \\ &= [] \text{ ppmv-gasoline} \times 100 \text{ lb-gasoline/lb-mole} / 16.043 \text{ lb-methane/lb-mole} \\ &= [] \text{ ppmv as methane} \end{aligned}$$

$$\begin{aligned} &\text{Maximum effluent VOC concentration}_{\text{methane}} \\ &= \text{influent concentration}_{\text{methane}} \times (1 - \text{control efficiency}) \\ &= [] \text{ ppmv as methane} \times (1 - 0.95) \\ &= [] \text{ ppmv as methane} \end{aligned}$$

$$\text{PE VOC}_{\text{controlled}} = \text{Influent concentration as methane (ppmv)} \times \text{Influent Flow Rate (ft}^3\text{/min)} \times 1 \text{ lb-mole/379.5 ft}^3 \times \text{Mol. Wt. (lb/lb-mole)} \times 1440 \text{ min/day} \times (1 - \text{control efficiency})$$

$$= ([] \times 10^{-6}) \times ([] \text{ ft}^3\text{/min}) \times (1 \text{ lb-mole/379.5 ft}^3) \times (16.043 \text{ lb/lb-mole}) \times 1440 \text{ min/day} \times (1 - \text{control efficiency})$$

$$= [] \text{ lb-VOC/day}$$

(If the daily controlled PE above is below 2 pounds per day, add the following section)

Once effluent VOC emissions drop below 2 pounds per day, the emissions unit is no longer subject to BACT and may operate at a lower control efficiency or without any controls at all. 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 reduced or taken off-line. The effluent concentration will be recalculated as follows:

$$\begin{aligned} \text{Concentration (ppmv)} &= (2.0 \text{ lbs/day}) \div [\text{Influent Flow Rate (ft}^3/\text{min)} \times 1 \text{ lb-mole}/379.5 \\ &\quad \text{ft}^3 \times \text{Mol. Wt. (lb/lb-mole)} \times 1440 \text{ min/day} \times 10^{-6}] \\ &= (2.0 \text{ lbs/day}) \div [([] \text{ ft}^3/\text{min}) \times (1 \text{ lb-mole}/379.5 \text{ ft}^3) \times ([] \text{ lb/lb-} \\ &\quad \text{mole}) \times 1440 \text{ min/day} \times 10^{-6}] \\ &= [] \text{ ppmv} \end{aligned}$$

Verification of Carbon Breakthrough:

Per District policy of carbon breakthrough in a carbon adsorption remediation project, the **first or first set of canisters** must be capable of operating at least 168 consecutive hours (or seven days) at the maximum influent concentration before breakthrough. The last canister is only for backup upon breakthrough of the first set of canisters. Therefore, the breakthrough period for the first set is required to be no less than seven days, calculated as follows:

$$\begin{aligned} \text{Max influent Contaminant rate} &= [X] \text{ lb/day} \\ \text{Max effluent Contaminant rate} &= [Y] \text{ lb/day (based on a [95]\% control)} \\ \text{VOC adsorbed} &= \text{Max Influent VOC} - \text{Max Effluent VOC} \\ &= [X] - [Y] \text{ lb/day} \\ &= [Z] \text{ lb/day} \\ \text{\# of canisters proposed} &= [\#] \\ \text{Mass of carbon/canister} &= [M] \text{ lbs (proposed by the applicant)} \\ \text{Mass of Breakthrough Carbon*} &= (\text{number of canisters} - 1) \times (M) \\ &= [A] \text{ lbs} \end{aligned}$$

**The last canister is not included as it is only used for backup.*

Assuming a working bed capacity of 20% for carbon (weight of solvent per weight of carbon) before breakthrough, the total mass of carbon from the canisters to adsorb solvent is:

$$[A] \text{ lbs} \times (0.2) = [B] \text{ lbs}$$

The number of days before breakthrough would then be:

$$[B] \text{ lb} \div [Z] \text{ lb/day} = [\#] \text{ days}$$

Since the breakthrough period is greater than seven days, this project is approvable.

| Post-Project Potential to Emit (PE2) | | |
|--------------------------------------|----------|---------|
| Pollutant | (lb/day) | (lb/yr) |
| NO _x | -- | -- |
| SO _x | -- | -- |
| PM ₁₀ | -- | -- |
| CO | -- | -- |
| VOC | [] | [] |

Note: PE_{annual} (lb/yr) = PE (lb/day) x 365 (days/yr)

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

[For New Facilities]

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

[For existing facilities]

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.

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

| Pre-Project Stationary Source Potential to Emit [SSPE1] (lb/year) | | | | | |
|---|-----------------|-----------------|------------------|----|-----|
| Permit # | NO _x | SO _x | PM ₁₀ | CO | VOC |
| C-xxxx-x-x | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 |

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:

| Post Project Stationary Source Potential to Emit [SSPE2] (lb/year) | | | | | |
|--|-----------------|-----------------|------------------|----|-----|
| Permit # | NO _x | SO _x | PM ₁₀ | CO | VOC |
| C-xxxx-x-x | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 |

5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to Section 3.24 of District Rule 2201, a Major Source is a stationary source with post-project emissions or a Post Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. However, Section 3.24.2 states, “for the purposes of determining major source status, the SSPE2 shall not include 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.”

| Major Source Determination (lb/year) | | | | | |
|--------------------------------------|-----------------|-----------------|------------------|-------------|-------------|
| Pollutant | NO _x | SO _x | PM ₁₀ | 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)

a) Annual BE

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 3.22

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 (lb/year) | | | | | |
|----------------------------|-----------------|-----------------|------------------|----|-----|
| Permit Number | NO _x | SO _x | PM ₁₀ | CO | VOC |
| C-xxxx-xx | 0 | 0 | 0 | 0 | [] |

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, Section 3.18 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 PM_{2.5} (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.

(Enter VOC emissions)

| 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,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- 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/not greater] than 2.0 lbs/day, BACT [will or will not] be triggered.

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.

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)

$$\begin{aligned} \text{AIPE (lb/day)} &= \text{PE2 (lb/day)} - [\text{PE1 (lb/day)} \times (\text{EF2} / \text{EF1})] \\ &= \text{PE2 (lb/day)} - [\text{PE1 (lb/day)} \times (0.95 / 0.95)] \end{aligned}$$

$$= PE_2 \text{ (lb/day)} - [PE_1 \text{ (lb/day)} \times 1]$$

$$= PE_2 \text{ (lb/day)} - PE_1 \text{ (lb/day)}$$

| 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 [2.1.3](#) specifies the achieved in practice or contained in SIP BACT and technologically feasible BACT for soil remediation operations utilizing a carbon adsorption system. Therefore, relevant information will be cited without further analysis.

See Appendix A: BACT Clearinghouse Guideline 2.1.3

3. Top-Down BACT Analysis

The applicant is proposing to use a [carbon adsorption system with 95% or greater control efficiency](#). Per the Top-Down analysis in [Appendix I](#) of this evaluation, this proposed equipment is the 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 of 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 Determination (lb/year) | | | | | |
|---------------------------------------|-----------------|-----------------|------------------|---------|--------|
| | NO _x | SO _x | PM ₁₀ | CO | VOC |
| Post Project SSPE (SSPE2) | -- | -- | -- | -- | -- |
| Offset Threshold | 20,000 | 54,750 | 29,200 | 200,000 | 20,000 |
| Offsets triggered? | No | No | No | No | 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 new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- d. Any project which results in the offset thresholds being surpassed, and/or
- e. Any project with an SSPE of greater than 20,000 lb/year for any pollutant.

a) New Major Source

Example (a): (For a new facility – non Major Source.)

New Major Sources are new facilities, which are also Major Sources. As shown in Section VII.C.5 above, the SSPE2 is not greater than the Major Source threshold for any criteria pollutant. Therefore, public noticing is not required for this project for new Major Source purposes.

Example (c): (For an existing facility.)

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

b) SB 288 or Federal Major Modification

As demonstrated in VII.C.7, this project does not constitute a Major Modification; therefore, public noticing for Major Modification purposes is not required.

c) PE > 100 lb/day

Example (a): (For a project not including a new emissions unit.)

Applications which include a new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. There are no new emissions units associated with this project; therefore public noticing is not required for this project for Potential to Emit Purposes.

Example (b): (For a project including a new emissions unit – PE ≤ 100 lb/day.)

Applications which include a new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant, therefore public noticing for PE > 100 lb/day purposes is not required.

Example (c): (For a project including a new emissions unit – PE > 100 lb/day.)

The PE2 for this new unit is compared to the daily PE Public Notice thresholds in the following table:

| PE > 100 lb/day Public Notice Thresholds | | | |
|--|---------------------|--------------------------------|---------------------------------|
| Pollutant | PE2 (lb/day) | Public Notice Threshold | Public Notice Triggered? |
| NO _x | 0 | 100 lb/day | No |
| SO _x | 0 | 100 lb/day | No |
| PM ₁₀ | 0 | 100 lb/day | No |
| CO | 0 | 100 lb/day | No |
| VOC | 110 | 100 lb/day | Yes |

Therefore, public noticing for PE > 100 lb/day purposes is required.

d) Offset Threshold

Example (a): (For a project not surpassing the offset threshold.)

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

| Offset Threshold | | | | |
|-------------------------|--------------------|--------------------|---------------------|----------------------------|
| Pollutant | SSPE1 (lb/year) | SSPE2 (lb/year) | Offset Threshold | Public Notice Required? |
| NO _x | 0 | 0 | 20,000 lb/year | No |
| SO _x | 0 | 0 | 54,750 lb/year | No |
| PM ₁₀ | 0 | 0 | 29,200 lb/year | No |
| CO | 0 | 0 | 200,000 lb/year | No |
| VOC | 0 | 8,500 | 20,000 lb/year | No |

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

Example (b): (For a project surpassing the offset threshold.)

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

| Offset Threshold | | | | |
|-------------------------|--------------------|--------------------|---------------------|----------------------------|
| Pollutant | SSPE1 (lb/year) | SSPE2 (lb/year) | Offset Threshold | Public Notice Required? |
| NO _x | 0 | 0 | 20,000 lb/year | No |
| SO _x | 0 | 0 | 54,750 lb/year | No |
| PM ₁₀ | 0 | 0 | 29,200 lb/year | No |
| CO | 0 | 0 | 200,000 lb/year | No |
| VOC | 0 | 22,000 | 20,000 lb/year | Yes |

As detailed above, offset thresholds were surpassed for VOC with this project; therefore public noticing is required for offset purposes. *(If this is true, this project is NO LONGER A GEAR. Check with your supervisor before further processing.)*

(Note: Public notification is independent of whether or not Offsets are required. For example, if this project involves the installation of emergency (offset-exempt) equipment and the offset threshold is surpassed, then public notification would still be triggered. And conversely, if this project involves the installation of new equipment which required offsets; however, the SSPE1 was already greater than the offset threshold, public notification would not be triggered.)

e) SSPE > 20,000 lb/year

An SSPE exceeding 20,000 pounds per year for any one pollutant triggers public notice.

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSPE is calculated as the Post

Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e. $SSIPE = SSPE2 - SSPE1$. The values for SSPE2 and SSPE1 are calculated according to Rule 2201, Sections 4.9 and 4.10, respectively. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

Example (a): (For a project where the SSIPE \leq 20,000 lb/year.)

| Stationary Source Increase in Permitted Emissions [SSIPE] – Public Notice | | | | | |
|--|-----------------|-----------------|-----------------|-------------------------------|-------------------------|
| Pollutant | SSPE2 (lb/year) | SSPE1 (lb/year) | SSIPE (lb/year) | SSIPE Public Notice Threshold | Public Notice Required? |
| NO _x | 0 | 0 | 0 | 20,000 lb/year | No |
| SO _x | 0 | 0 | 0 | 20,000 lb/year | No |
| PM ₁₀ | 0 | 0 | 0 | 20,000 lb/year | No |
| CO | 0 | 0 | 0 | 20,000 lb/year | No |
| VOC | 8,500 | 0 | 8,500 | 20,000 lb/year | No |

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

Example (b): (For a project where the SSIPE $>$ 20,000 lb/year.)

| Stationary Source Increase in Permitted Emissions [SSIPE] – Public Notice | | | | | |
|--|-----------------|-----------------|-----------------|-------------------------------|-------------------------|
| Pollutant | SSPE2 (lb/year) | SSPE1 (lb/year) | SSIPE (lb/year) | SSIPE Public Notice Threshold | Public Notice Required? |
| NO _x | 0 | 0 | 0 | 20,000 lb/year | No |
| SO _x | 0 | 0 | 0 | 20,000 lb/year | No |
| PM ₁₀ | 0 | 0 | 0 | 20,000 lb/year | No |
| CO | 0 | 0 | 0 | 20,000 lb/year | No |
| VOC | 22,000 | 0 | 22,000 | 20,000 lb/year | Yes |

As demonstrated above, the SSIPEs for VOC was greater than 20,000 lb/year; therefore public noticing for SSIPE purposes is required.

f) Public Notice Action

Example (a): (For a project not requiring public notification.)

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

Example (b): (For a project requiring public notification – PE $>$ 100 lb/day.)

As discussed above, public noticing is required for this project for NO_x emissions in excess of 100 lb/day. 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.

(Note: When public notification is required an additional section in the EE gets added, Section VIII-Rule 2201-F, see below)

D. Daily Emissions Limits (DEL)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

- {1463 modified} The total controlled VOC emissions from the soil remediation system shall not exceed XX pounds in any one day. [District Rule 2201]
- The effluent VOC concentration level after the control device shall not exceed xxx ppmv, as methane. [District Rule 2201]

E. Compliance Assurance

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

1. Source Testing

VOC source testing upon initial startup is required.

- {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]
- {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]
- {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]

2. Monitoring

Monitoring of influent and exhaust VOC concentrations will be required weekly. If the uncontrolled VOC emission rate is below 2.0 lb/day as demonstrated by five consecutive weekly samples, the control device may be taken off-line and sampling shall be performed

monthly for ongoing demonstration to show that the uncontrolled VOC emissions are below 2.0 lb/day.

- Ongoing compliance with VOC emission rate and control efficiency requirements shall be demonstrated 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]
- Control device may be taken off-line after uncontrolled VOC emissions from the soil remediation operation do not exceed 2.0 lb/day, as demonstrated by five consecutive weekly samples using a FID, PID, or other District-approved VOC detection device. Once taken off-line, permittee shall conduct monthly sampling with a FID, PID, or other District-approved VOC detection device to ensure uncontrolled VOC emissions do not exceed 2.0 lb/day. If uncontrolled VOC emissions exceed 2.0 lb/day, the control device shall be placed back on-line as soon as possible. [District Rule 2201]

3. Record Keeping

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

- {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]

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.

- {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]
- {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]
- {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]

F. Ambient Air Quality Analysis

(Note: Applicable only when public notice is triggered, otherwise delete this section.)

An AAQA is conducted by the Technical Services group, for any project which has an increase in emissions and triggers public notification requirements. Discuss the AAQA

results as follows. To perform an AAQA, Technical Services needs the distance from the emissions point source (stack) to the fence line property boundaries in all four directions.

For example:

Section 4.14.1 of this Rule requires that an ambient air quality analysis (AAQA) be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The Technical Services Division of the SJVAPCD conducted the required analysis. Refer to Appendix X of this document for the AAQA summary sheet.

The proposed location is in an attainment area for NO_x, CO, and SO_x. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for NO_x, CO, or SO_x.

The proposed location is in a non-attainment area for PM₁₀. The increase in the ambient PM₁₀ concentration due to the proposed equipment is shown on the table titled Calculated Contribution. The levels of significance, from 40 CFR Part 51.165 (b)(2), are shown on the table titled Significance Levels.

| Significance Levels | | | | | |
|----------------------------|--|------------|-----------|-----------|-----------|
| Pollutant | Significance Levels (µg/m ³) - 40 CFR Part 51.165 (b)(2) | | | | |
| | Annual Avg. | 24 hr Avg. | 8 hr Avg. | 3 hr Avg. | 1 hr Avg. |
| PM ₁₀ | 1.0 | 5 | N/A | N/A | N/A |

| Calculated Contribution | | | | | |
|--------------------------------|---|------------|-----------|-----------|-----------|
| Pollutant | Calculated Contributions (µg/m ³) | | | | |
| | Annual Avg. | 24 hr Avg. | 8 hr Avg. | 3 hr Avg. | 1 hr Avg. |
| PM ₁₀ | 0.XX | X.XX | N/A | N/A | N/A |

As shown, the calculated contribution of PM₁₀ will not exceed the EPA significance level. This project is not expected to cause or make worse a violation of an air quality standard.

(Note: Special permit conditions may be required as a result of the AAQA.)

Rule 2410 Prevention of Significant Deterioration

As shown in Section C.9.A 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

Section 4.0 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

Discuss whether a Health Risk Assessment is required and/or the results of the HRA, including any special conditions to consider when issuing the ATC(s).

District Policy APR 1905 – Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

Example (a): (For a project with no increase in emissions.)

As demonstrated above, there are no increases in emissions associated with this project, therefore a health risk assessment is not necessary and no further risk analysis is required.

(Note 1: An HRA is necessary if there is a change in any HRA parameter, i.e. exhaust flow rate changes, stack changes, fuel use and type changes, receptor distances, etc.)

(Note 2: If example (a) is used, delete the following sections, since they don't apply if an HRA was not performed.)

Example (b): (For a project with a Prioritization score ≤ 1 .)

An HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project (Appendix X), the total facility prioritization score including this project was less than or equal to one. Therefore, no future analysis is required to determine the impact from this project and compliance with the District's Risk Management Policy is expected.

Example (c): (For a project with a Prioritization score > 1 .)

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (Appendix X), the total facility prioritization score including this project was greater than one. Therefore, a health risk assessment was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

| HRA Summary | | |
|--------------------|----------------|-----------------|
| Unit | Cancer Risk | T-BACT Required |
| X-XXXX-X-X | XX per million | Yes/No |

Discussion of T-BACT

Discuss whether a T-BACT is or is not triggered and the requirements which satisfy T-BACT (if any).

Example (a): (For a project where T-BACT not triggered.)

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is not required for this project because the HRA indicates that the risk is not above the District’s thresholds for triggering T-BACT requirements; therefore, compliance with the District’s Risk Management Policy is expected.

Example (b): (For a project where T-BACT is triggered)

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is required for this project because the HRA indicates that the risk is above the District’s thresholds for triggering T-BACT requirements.

For this project T-BACT is triggered for VOC. T-BACT is satisfied with BACT for VOC (see Appendix X), which is the use of a [carbon adsorption system with a 95% or greater control efficiency](#); therefore, compliance with the District’s Risk Management Policy is expected.

(Note: List all conditions necessary to ensure that the equipment is operated in the manner assumed when the RMR was performed.)

See Appendix II: Health Risk Assessment Summary

Rule 4651 Soil Decontamination Operations

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.

California Health & Safety Code 42301.6 (School Notice)

Reference project location and its proximity to a school and state whether or not school notice is required for this project.

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-x-x subject to the permit conditions on the attached draft Authority to Construct.

X. Billing Information

| Annual Permit Fees | | | |
|--------------------|--------------|-----------------|------------|
| Permit Number | Fee Schedule | Fee Description | Annual Fee |
| C-XXXX-X-X | 3020-01-[] | [] Electric HP | \$882.00 |

Appendices

- A: BACT Guideline 2.1.3 & Top-Down BACT Analysis
- B: Quarterly Net Emissions Change (QNEC)
- C: HRA Summary
- D: Draft Authority to Construct
- E: Emissions Profile

APPENDIX A

BACT Guideline 2.1.3 & Top-Down BACT Analysis

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

Best Available Control Technology (BACT) Guideline 2.1.3*

Last Update: September 15, 1993

Emissions Unit: Soil Remediation Operation - Carbon Adsorption

| Pollutant | Achieved in Practice or contained in SIP | Technologically Feasible | Alternate Basic Equipment |
|-----------|---|--------------------------|---------------------------|
| VOC | 95% Control efficiency for uncontrolled emissions over 2 lb/day | | |

*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 [2.1.3](#) identifies for this soil remediation operation:

- 95% control efficiency for uncontrolled emissions above 2 lb/day

b. Step 2 - Eliminate Technologically Infeasible Options

There are no technologically infeasible options listed.

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

- 95% control efficiency for uncontrolled emissions above 2 lb/day

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 with the use of a [carbon adsorption system with a 95% or greater control efficiency](#).

APPENDIX B

Quarterly Net Emissions Change (QNEC)

Quarterly Net Emissions Change (QNEC)

The QNEC is entered into PAS database and subsequently reported to CARB. For seasonal sources, or where the emissions differ quarter to quarter, then evaluate each pollutant for each quarter separately. The QNEC is calculated for each pollutant, for each unit, as the difference between the post-project quarterly potential to emit (PE2) and the pre-project quarterly potential to emit (PE1).

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District’s PAS database. The QNEC shall be calculated as follows:

QNEC = PE2 - PE1, where:

- QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
- PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
- PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

EXAMPLE:

$$\begin{aligned}
 PE2_{quarterly} &= PE2_{annual} \div 4 \text{ quarters/year} \\
 &= 4,600 \text{ lb/year} \div 4 \text{ qtr/year} \\
 &= 1,150 \text{ lb VOC/qtr}
 \end{aligned}$$

$$\begin{aligned}
 PE1_{quarterly} &= PE1_{annual} \div 4 \text{ quarters/year} \\
 &= 4,600 \text{ lb/year} \div 4 \text{ qtr/year} \\
 &= 1,150 \text{ lb VOC/qtr}
 \end{aligned}$$

| Quarterly NEC [QNEC] | | | |
|-----------------------------|--------------|--------------|---------------|
| | PE2 (lb/qtr) | PE1 (lb/qtr) | QNEC (lb/qtr) |
| VOC | 0 | 0 | 0 |

(Note: Include a table for each permit unit, if it makes sense to do so.)

APPENDIX C

HRA Summary

APPENDIX D

Draft Authority to Construct

APPENDIX E

Emissions Profile

Conditions

(Do Not Include With Application Review)

{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

If effluent VOC emissions are greater than 2.0 lb/day, the VOC control device shall be at least 95% efficient in controlling the VOC from the soil remediation project. [District Rule 2201] N

{2856} The total VOC emissions from the soil remediation system shall not exceed xxx pounds in any one day. [District Rule 2201] N

{1422} Neither the soil ventilation rate nor the effluent gas flow rate shall exceed xxx scfm. [District Rule 2201] N

The VOC concentration of the exhaust gas from the soil remediation system served by the carbon adsorption shall not exceed xxx ppmv, as methane . [District Rule 2201]

{1412} A minimum of two carbon canisters which are connected in series shall be utilized. [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

{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

Control device may be taken off-line after uncontrolled VOC emissions from the soil remediation operation does not exceed 2.0 lb/day, as demonstrated by five consecutive weekly samples using a FID, PID, or other District-approved VOC detection device . Once taken off-line, permittee shall conduct monthly sampling with a FID, PID, or other District-approved VOC detection device to ensure uncontrolled VOC emissions do not exceed 2.0 lb/day. If uncontrolled VOC emissions exceed 2.0 lb/day, the control device shall be placed back on-line as soon as possible. [District Rule 2201] N

{1421} The carbon canisters removed from the system shall be sealed vapor tight. [District Rule 2201] 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