

San Joaquin Valley  
Unified Air Pollution Control District

**Guideline for Expedited Application Review (GEAR-29)**  
**Temporary Replacement Emissions Units**

Approved by: <u>Arnaud Marjollet</u> Arnaud Marjollet Director of Permit Services	Date <u>March 17, 2016</u>
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**I. Purpose**

The purpose of this GEAR Policy is to outline the procedures for expedited processing of Authority to Construct (ATC) applications to permit temporary replacement emissions units (TREUs).

**II. Background**

Industrial emissions units may break down, requiring immediate repair. In order that the facility may temporarily replace a unit that requires repair as expediently as possible, this GEAR allows for expedited processing.

Rule 2201 exempts TREUs (as defined in Rule 2201) from BACT and Offsets. Also, since the TREU is temporary, must have a potential to emit no greater than the unit being replaced, and may not be operated at the same time as the unit being replaced, the TREU project is not considered to represent any change in emissions.

Please note that TREUs that meet all the conditions of Rule 2201 Section 8.0 qualify for an Application Shield, which allows the ATC application to be submitted within seven calendar days of completing the construction or installation of the replacement. Additionally, pursuant to Section 8.6, for those units qualifying for an Application Shield that are removed from service within seven calendar days of completing the installation of the TREU, an ATC application is not necessary provided the permittee submits a report to the District demonstrating compliance with the requirements of Section 8 within seven calendar days of completing the installation of the TREU.

**III. Applicability**

This policy applies to all ATC applications for TREUs.

#### **IV. Permit Application and Supplementary Forms**

The applicant must submit a complete ATC application form. A supplemental application form may be required.

#### **V. Requirements for TREUs**

Pursuant to Rule 2201:

- A) The TREU is an emissions unit which is at a Stationary Source for less than 180 days in any twelve month period and replaces an existing emissions unit which is shut down for maintenance or repair. The time spent at a maintenance or storage facility is not considered time located at the stationary source.
- B) The Potential to Emit from a TREU must not exceed the Potential to Emit from the existing emissions unit.
- C) If a TREU is used to replace a TREU, the combined time at the Stationary Source for the two TREU shall not exceed a total of 180 days in any twelve-month period.
- D) An emissions unit not removed from the Stationary Source within 180 days is not a TREU.

#### **VI. Application Review**

To standardize the application review for all TREU projects, the application review found on the Airnet will be used as a base document, ensuring that ATCs and PTOs are issued in a consistent and expeditious manner.

Non-COC ATCs for TREUs shall be issued within 7 days of being deemed complete. If a COC is requested, the District's preliminary decision will be made within 7 days, and the final decision will be made after the EPA review period and after addressing any comments received from EPA.

#### **VII. Authority To Construct Conditions**

To ensure uniformity, one standard set of conditions shall be written on the ATC. The standard permit conditions are presented in the following application review format.

#### **VIII. Compliance Responsibilities**

Nothing in this Policy shall be construed to shield a unit that has operated out of compliance with District, state or federal requirements. A unit designated as a TREU is subject to enforcement action for any and all violations.

#### **IX. UPDATES**

The application review associated with this GEAR will be updated as necessary. Each update will be posted on the AIRNET and District website.

**San Joaquin Valley Air Pollution Control District**  
**Authority to Construct Application Review**  
**Temporary Replacement Emissions Unit: TYPE of Equipment**

Facility Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_ Engineer: \_\_\_\_\_  
Lead Engineer: \_\_\_\_\_  
  
Contact Person: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Application #: \_\_\_\_\_  
Project #: \_\_\_\_\_  
Complete: \_\_\_\_\_

**I. Proposal**

Facility Name has proposed to install Equipment as a temporary replacement emissions unit (TREU) for unit x-xxx (see current permit in Appendix A). The TREU will replace the regularly permitted unit for up to 180 days during a 12-month period while the regular unit is being serviced or repaired.

**[Delete the rest of this Section if this is not a Title V Source]**

Facility Name has received their Title V Operating Permit. This modification can be classified as a Title V minor modification pursuant to Rule 2520, Section 3.20, and could be processed with a Certificate of Conformity (COC).

**If COC is not Requested - otherwise delete**

However, the facility has not requested that this project be processed in that manner. Therefore, the facility will be required to submit a Title V minor modification application prior to operating under the revised provisions of the ATC(s) issued with this project.

**OR if COC is Requested - otherwise delete**

Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the ATC(s), and the facility must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC(s) issued with this project.

**II. Applicable Rules**

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4000 Series	Prohibitory Rules (Various Dates)

CH&SC 41700 Health Risk Assessment  
CH&SC 42301.6 School Notice  
California Environmental Quality Act (CEQA)  
Public Resources Code 21000-21177: CEQA  
Title 14 CCR, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

### III. Project Location

The project is located at [Location]. The District has verified that the equipment is not located within 1,000 feet of the outer boundary of a K-12 school.

**If within 1,000 feet, use the following sentence:**

Please see the discussion under CH&SC 42301.6 below.

### IV. Process Description

The equipment [describe its purpose]. As a TREU, it may only be located at the stationary source for up to 180 days during any 12 month period.

### V. Equipment Listing

S-XXXX-YY-0: [EQUIPMENT] SERVING AS A TEMPORARY REPLACEMENT  
EMISSIONS UNIT (TREU) [FOR PERMIT UNIT X]

### VI. Emission Control Technology Evaluation

Since the TREU has lower emissions than the unit being replaced, an emission control technology evaluation is not necessary.

### VII. General Calculations

#### A. Assumptions

##### **ADD Or Subtract assumptions as Necessary**

Operating schedule:	24 hours/day
Density of diesel fuel:	7.1 lb/gal
EPA F-factor (adjusted to 60 °F):	9,051 dscf/MMBtu
Fuel heating value:	137,000 Btu/gal
BHP to Btu/hr conversion:	2,542.5 Btu/bhp-hr
Thermal efficiency of engine:	commonly $\approx$ 35%
PM <sub>10</sub> fraction of diesel exhaust:	0.96 (CARB, 1988)

#### B. Emission Factors

The following emissions factors for the TREU engine have been supplied by the applicant/manufacturer/certification **[Adjust as necessary]**. The emission factors for the existing unit being replaced are taken from the current permit. Both sets of emission factors are presented in the following table.  
**[Adjust Units as necessary]**

Emission Factors					
Original Unit			TREU		
NO <sub>x</sub>	4.5	g/hp·hr	NO <sub>x</sub>	1.5	g/hp·hr
SO <sub>x</sub>	0.0051	g/hp·hr	SO <sub>x</sub> *	0.0051	g/hp·hr
PM <sub>10</sub>	0.15	g/hp·hr	PM <sub>10</sub>	0.01	g/hp·hr
CO	2.60	g/hp·hr	CO	2.6	g/hp·hr
VOC	0.3	g/hp·hr	VOC	0.14	g/hp·hr

### C. Calculations

#### 1. Pre-Project Emissions (PE1)

The pre-project emissions are the emissions from the unit that is being temporarily replaced (S-XXXX-YY-Z), and are presented in the following table.

[Example automated table for **IC Engine**] Fill-in the Blue, then F-9 the green, one column at a time.]

Daily PE from S-7837-18-0										
NO <sub>x</sub>	4.5	g/hp·hr x	900	hp x	24	hr/day ÷	454	g/lb=	142.7	lb/day
SO <sub>x</sub>	0.0051	g/hp·hr x	900	hp x	24	hr/day ÷	454	g/lb=	0.2	lb/day
PM <sub>10</sub>	0.15	g/hp·hr x	900	hp x	24	hr/day ÷	454	g/lb=	4.8	lb/day
CO	2.60	g/hp·hr x	900	hp x	24	hr/day ÷	454	g/lb=	82.5	lb/day
VOC	0.3	g/hp·hr x	900	hp x	24	hr/day ÷	454	g/lb=	9.5	lb/day

#### 2. Post-Project PE (PE2)

The daily PE2 are the emissions from the TREU and are calculated in the following table.

[Example automated tables for **combustion sources**]

Daily PE2				
Pollutant	Emission Factors (lb/MMBtu)	Rating (MMBtu/hr)	Daily Hours of Operation	PE2 Total (lb/day)

NO <sub>x</sub>	0.0061	99.9	24	14.6
SO <sub>x</sub>	0.00285	99.9	24	6.8
PM <sub>10</sub>	0.0076	99.9	24	18.2
CO	0.0222	99.9	24	53.2
VOC	0.0055	99.9	24	13.2

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

Pursuant to District Rule 2201, the SSPE1 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

Pursuant to Rule 2201, the emissions from a TREU may not exceed the emissions from the unit being replaced. Since the TREU may not be operated at the same time as the unit being replaced, there is no change in emissions associated with this project and the SSPE1 calculation is not necessary.

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

Pursuant Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs, at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

The emissions from the TREU do not exceed the emissions from the unit being replaced. Since the TREU may not be operated at the same time as the unit being replaced, there is no change in emissions associated with this project. Therefore the SSPE2 is the same as the SSPE1 and the SSPE2 calculation is not necessary.

### 5. Major Source Determination

According to project S-1234567, this facility is not a major source for NO<sub>x</sub> emissions. [Adjust as Necessary]

### 6. Baseline Emissions (BE)

Baseline emissions are used to calculate the amount of offsets required for a project. Since TREU projects are exempt from offsets, the BE are not necessary.

### 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."

The proposed unit is a temporary replacement (no more than 180 days) of the primary unit. As the proposed unit is a "replacement unit", it is treated as an existing unit for purposes of SB 288 major modification calculations. The utilization and emissions of the TREU are not expected to be greater than the unit being replaced. The TREU cannot operate at the same time as the unit being replaced. With these inherent limitations, the use of the TREU will not result in an increase in emissions for any air pollutant as compared to the unit being replaced. As such there is not a significant net emission increase and the project does not constitute an SB 288 Major Modification.

### **8. Federal Major Modification**

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.

The proposed unit is a temporary replacement (no more than 180 days) of the primary unit. As the proposed unit is a "replacement unit", it is treated as an existing unit for purposes of Federal Major Modification calculations. The utilization and emissions of the TREU are not expected to be greater than the unit being replaced. The TREU cannot operate at the same time as the unit being replaced. With these inherent limitations, the use of the TREU will not result in an increase in emissions for any air pollutant as compared to the unit being replaced. As such there is not a significant net emission increase and the project does not constitute a Federal Major Modification.

### **9. Quarterly Net Emissions Change (QNEC)**

The QNEC is used to complete the emission profile screen for the District's PAS database. Pursuant to Rule 2201, the emissions from a TREU may not exceed the emissions from the unit being replaced. Since the TREU may not be operated at the same time as the unit being replaced, the QNEC calculation is not necessary.

[Please complete the emissions profile in PAS with zero's in all of the annual PE and QNEC cells, then delete this line.]

## **VIII. Compliance**

### **Rule 2201 - New and Modified Stationary Source Review Rule**

#### **A. Best Available Control Technology (BACT)**

Pursuant to Section 4.2.5, the TREU is exempt from BACT requirements.

## **B. Offsets**

Pursuant to Section 4.6.5, the TREU is exempt from offset requirements.

## **C. Public Notification**

The emissions from the TREU do not exceed the emissions from the unit being replaced. Since the TREU may not be operated at the same time as the unit being replaced, there is no change in emissions associated with this project. Therefore, Public Noticing is not required.

## **D. Daily Emissions Limits (DELs)**

DELs and other enforceable conditions are required to restrict a unit's maximum daily emissions to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and the latest PTO and enforceable, in a practicable manner, on a daily basis. The following conditions are listed on the permit to ensure compliance.

### **[Example for Engines]**

- Emissions from this IC engine shall not exceed any of the following limits: 1.5 g-NO<sub>x</sub>/bhp-hr, 2.6 g-CO/bhp-hr, or 0.14 g-VOC/bhp-hr. [District Rule 2201, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]
- Emissions from this IC engine shall not exceed 0.01 g-PM<sub>10</sub>/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]
- Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]

### **[Example for Boilers, etc.]**

- Emissions shall not exceed any of the following limits: x lb-NO<sub>x</sub>/MMBtu, y lb-PM<sub>10</sub>/MMBtu, z lb-CO/MMBtu, t lb-VOC/MMBtu. [District Rule 2201]

## **E. Compliance Assurance**

### **1. Source Testing**

Pursuant to District Policy FYI-103, source testing is not required for TREUs.

### **2. Monitoring**

No monitoring is required to demonstrate compliance with Rule 2201.

### **3. Recordkeeping**



In order to meet the definition of a TREU, the unit must not be operated or retained on-site for more than 180 days in any 12 month period. The time spent at a maintenance or storage facility is not considered time located at the stationary source.

The following conditions are listed on the permit to ensure compliance.

- This unit shall not be located at this stationary source for more than 180 days in any 12 month period. The time spent at a maintenance or storage facility is not considered time located at the stationary source. [District Rule 2201]
- The operator shall maintain records of the specific equipment that this unit replaces, and of the dates and location of its operation. Operator shall maintain a record of each individual period of time and of the total time that this unit is located at this stationary source. [District Rule 2201]

#### 4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

#### 5. TREU Qualification

Pursuant to Section 3.41.1, the PE from a TREU must not exceed the PE from the existing emissions unit that it replaces.

The daily emissions (based on 24 hours per day [**Adjust as necessary**]) from the TREU are compared to the daily emissions from the existing unit in the following table.

Daily PE Comparison (lb/day)		
Pollutant	C-XXXX-YY	TREU S-XXXX-YY
NO <sub>x</sub>	142.7	39.6
SO <sub>x</sub>	0.2	0.1
PM <sub>10</sub>	4.8	0.3
CO	82.5	68.7
VOC	9.5	3.7

**If applicable use this paragraph:**

Pursuant to District Policy APR 1130, *Increases in Maximum Daily Permitted Emissions of Less than or Equal to 0.5 lb/day*, the increase in SO<sub>x</sub> emissions rounds to zero. Therefore, this unit qualifies as a TREU.

As shown above, the none of the daily emissions from the TREU do not exceed the emissions from the engine being replaced.

The following condition is listed on the permit to ensure compliance.

- This unit shall only be used to temporarily replace an existing unit that is shut down for maintenance or repair, and may only be used in this capacity if it meets the criteria set forth for a TREU in Rule 2201, Sections 3.41.1 through 3.41.3. [District Rule 2201]

### **Rule 2520 - Federally Mandated Operating Permits**

This facility does not hold a Title V operating permit.

**ONLY If Title V, use *one of the two* following sets of conditions, and Delete the other.**

- {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Y
- {1831} Prior to operating with modifications authorized by this Authority to Construct, the permittee shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Y

**or**

- {1829} The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Y

### **4000 Series Prohibitory Rules**

The emissions from the TREU do not exceed the emissions from the unit being replaced. Since the unit being replaced currently complies with all applicable District Prohibitory Rules, a compliance demonstration of this section is not necessary.

**If the unit being replaced is subject to alternate monitoring, include the following, and add the appropriate District Rule reference:**

Since this unit is subject to alternate monitoring, the following condition is listed on the permit to ensure compliance.

- This unit is subject to all alternate monitoring and related recordkeeping requirements as the unit that is being replaced. [District Rule XXXX]

Continued compliance is expected.

### **California Health & Safety Code 41700 (Health Risk Assessment)**

District Policy APR 1905 *Risk Management Policy for Permitting New and Modified Sources* (3/2/01) 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.

The emissions from the TREU do not exceed the emissions from the unit being replaced. Since the TREU may not be operated at the same time as the unit being replaced, there is no change in emissions associated with this project. Therefore, a Health Risk Assessment is not necessary.

**California Health & Safety Code 42301.6 (School Notice)**

**Option 1:**

The District has verified that this site is not located within 1,000 feet of a K-12 school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

**Option 2:**

The District has verified that this site is located within 1,000 feet of a K-12 school. The emissions from the TREU do not exceed the emissions from the unit being replaced. Since the TREU may not be operated at the same time as the unit being replaced, there is no change in emissions associated with this project. Therefore does not trigger a school notice.

**Use for diesel engines only:**

**Title 17 California Code of Regulations (CCR), Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines**

The TREU has lower emissions than the engine being replaced, therefore compliance with 17 CCR 93115 is expected.

**California Environmental Quality Act (CEQA)**

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 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; and
- 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.

**IX. Recommendation**

Compliance with all applicable rules and regulations is expected. The issuance of ATC S-XXXX-YY-0 is recommended subject to the conditions listed on the attached draft ATC.

**X. Billing Information**

<b>Billing Schedule</b>			
<b>Permit Number</b>	<b>Fee Schedule</b>	<b>Fee Description</b>	<b>Fee Amount</b>
S-XXXX-YY	3020-10-D	500 bhp IC engine	\$479

**Appendixes**

- A. Current Permit
- B. Emissions Data Sheet [**Otherwise Delete**]
- C. Compliance Certification Form [**Delete if NOT a COC project**]
- D. Emissions Profile
- E. Draft ATC

**List of ATC Conditions. Delete all after using.**

**For TV only:**

- {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Y
- {1831} Prior to operating with modifications authorized by this Authority to Construct, the permittee shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Y

or

- {1829} The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520]

**Use for all units:**

- This unit shall only be used to temporarily replace an existing unit that is shut down for maintenance or repair, and may only be used in this capacity if it meets the criteria set forth for a TREU in Rule 2201, Sections 3.41.1 through 3.41.3. [District Rule 2201]
- This unit shall not be located at this stationary source for more than 180 days in any 12 month period. The time spent at a maintenance or storage facility is not considered time located at the stationary source. [District Rule 2201]
- The operator shall maintain records of the specific equipment that this unit replaces, and of the dates and location of its operation. Operator shall maintain a record of each individual period of time and of the total time that this unit is located at this stationary source. [District Rule 2201]
- {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
- {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]
- {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

**Use appropriate DELs**

- Emissions from this IC engine shall not exceed any of the following limits: 1.5 g-NO<sub>x</sub>/bhp-hr, 2.6 g-CO/bhp-hr, or 0.14 g-VOC/bhp-hr. [District Rule 2201, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]
- Emissions from this IC engine shall not exceed 0.01 g-PM<sub>10</sub>/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]
- Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, 17 CCR 93115, and 40 CFR Part 60 Subpart IIII]

**For units with Alternate Monitoring:**

- This unit is subject to all alternate monitoring and related recordkeeping requirements as the unit that is being replaced. [District Rule XXXX]

# Appendix A Current Permit

# Appendix B

## Emissions Data Sheet

Appendix C  
Compliance Certification Form



# Appendix D

## Emissions Profile

Appendix E  
Draft ATC