air pollution control district
SANTA BARBARA COUNTY

DRAFT

PERMIT TO OPERATE 8039-R11

and

PART 70 RENEWAL OPERATING PERMIT 8039

PACIFIC COAST ENERGY COMPANY LP
ORCUTT HILL STATIONARY SOURCE
ORCUTT HILL INTERNAL COMBUSTION ENGINES

ORCUTT HILL OILFIELD
SANTA BARBARA COUNTY, CALIFORNIA

OPERATOR

Pacific Coast Energy Company LP

OWNERSHIP

Pacific Coast Energy Company LP

Santa Barbara County
Air Pollution Control District

(District Permit to Operate)
(Part 70 Operating Permit)

June 2021

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ABBREVIATIONS/ACRONYMS

AP-42	USEPA's *Compilation of Emission Factors*
District	Santa Barbara County Air Pollution Control District
API	American Petroleum Institute
ASTM	American Society for Testing Materials
BACT	Best Available Control Technology
bpd	barrels per day (1 barrel = 42 gallons)
CAM	compliance assurance monitoring
CEMS	continuous emissions monitoring
dscf	dry standard cubic foot
EU	emission unit
gal	gallon
gr	grain
HAP	hazardous air pollutant (as defined by CAAA, Section 112(b))
H_2S	hydrogen sulfide
I&M	inspection & maintenance
k	kilo (thousand)
l	liter
lb	pound
lbs/day	pounds per day
lbs/hr	pounds per hour
LACT	Lease Automatic Custody Transfer
LPG	liquid petroleum gas
M	thousand
MACT	Maximum Achievable Control Technology
MM	million
MW	molecular weight
NEI	net emissions increase
NG	natural gas
NSPS	New Source Performance Standards
O_2	oxygen
OCS	outer continental shelf
PM	particulate matter
PM_{10}	particulate matter less than 10 µm in size
$PM_{2.5}$	particulate matter less than 2.5 µm in size
ppm (vd or w)	parts per million (volume dry or weight)
psia	pounds per square inch absolute
psig	pounds per square inch gauge
PRD	pressure relief device
PTO	Permit to Operate
RACT	Reasonably Available Control Technology
ROC	reactive organic compounds, same as "VOC" as used in this permit
RVP	Reid vapor pressure
scf	standard cubic foot
scfd (or scfm)	standard cubic feet per day (or per minute)
SIP	State Implementation Plan
STP	standard temperature (60°F) and pressure (29.92 inches of mercury)
THC	Total hydrocarbons
tpy, TPY	tons per year
TVP	true vapor pressure
USEPA	United States Environmental Protection Agency
VE	visible emissions
VRS	vapor recovery system

1.0 Introduction

1.1 Purpose

General: The Santa Barbara County Air Pollution Control District (District) is responsible for implementing all applicable federal, state and local air pollution requirements which affect any stationary source of air pollution in Santa Barbara County. The federal requirements include regulations listed in the Code of Federal Regulations: 40 CFR Parts 50, 51, 52, 55, 61, 63, 68, 70 and 82. The State regulations may be found in the California Health & Safety Code, Division 26, Section 39000 et seq. The applicable local regulations can be found in the District's Rules and Regulations. This is a combined permitting action that covers both the renewal of the Federal Part 70 permit (*Part 70 Operating Permit 8039*) as well as the reevaluation of the State Operating Permit (*Permit to Operate 8039*). Santa Barbara County is designated as a non-attainment area for the state PM10 ambient air quality standard. As of July 1, 2020, the County achieved attainment status for the ozone state ambient air quality standards.

Part 70 Permitting. The initial Part 70 permit for the internal combustion engines was issued on May 22, 1999 in accordance with the requirements of the District's Part 70 operating permit program. This permit is the seventh renewal of the Part 70 permit, and may include additional applicable requirements and associated compliance assurance conditions. The Orcutt Hill internal combustion engines are a part of the Pacific Coast Energy Orcutt Hill Stationary Source, which is a major source for VOC[1], NO_X and CO. Conditions listed in this permit are based on federal, state or local rules and requirements. Sections 9.A, 9.B and 9.C of this permit are enforceable by the District, the USEPA and the public since these sections are federally-enforceable under Part 70. Where any reference contained in Sections 9.A, 9.B or 9.C refers to any other part of this permit, that part of the permit referred to is federally-enforceable. Conditions listed in Section 9.D are "District-only" enforceable.

Pursuant to the stated aims of Title V of the CAAA of 1990 (i.e., the Part 70 operating permit program), this Part 70 permit renewal has been designed to meet two objectives. First, compliance with all conditions in this permit would ensure compliance with all federally-enforceable requirements for the facility. Second, the permit would be a comprehensive document to be used as a reference by the permittee, the regulatory agencies and the public to assess compliance.

This reevaluation incorporates greenhouse gas emission calculations for the stationary source. On January 20, 2011, the District revised Rule 1301 to include greenhouse gases (GHGs) that are "subject to regulation" in the definition of "Regulated Air Pollutants". District Part 70 operating permits incorporate the revised definition.

1.2 Facility Overview

1.2.1 General Overview: The Orcutt Hill internal combustion engines are located on various leases on the stationary source which is approximately 2.5 miles south of the city of Orcutt. The engines were previously owned and operated for many years by Unocal. Several transfers of ownership/operator have since taken place and are listed below. The most recent change was a

[1] VOC as defined in Regulation XIII has the same meaning as reactive organic compounds as defined in Rule 102. The term ROC shall be used throughout the remainder of this document, but where used in the context of the Part 70 regulation, the reader shall interpret the term as VOC.

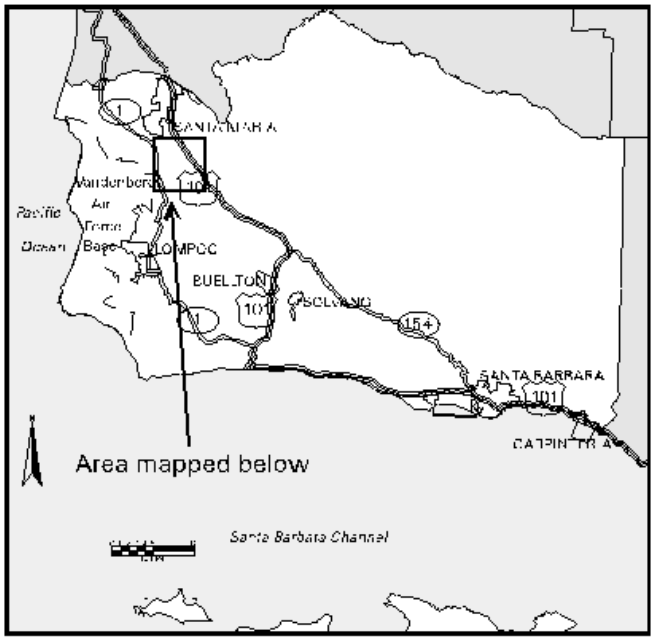
name change only from Breitburn Energy to Pacific Coast Energy Company (PCEC) which occurred in December 2011.

Date of Transfer	New Owner	New Operator
April 9, 1996	Nuevo Energy Company	Torch Operating Company
February 27, 2001	Nuevo Energy Company	Nuevo Energy Company
September 30, 2003	ERG Operating Company	ERG Operating Company
November 5, 2004	BreitBurn Energy	BreitBurn Energy
December 2011 (name change only)	Pacific Coast Energy	Pacific Coast Energy

For District regulatory purposes, the facility is located in the Northern Zone of Santa Barbara County[2]. Figure 1.1 shows the relative location of the facility within the county.

[2] District Rule 102, Definition: "Northern Zone"

PACIFIC COAST ENERGY CO.
ORCUTT HILL STATIONARY SOURCE



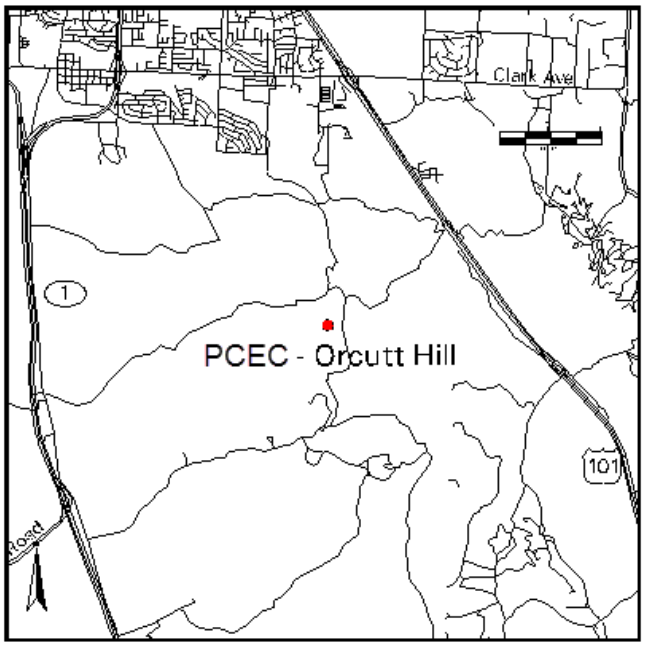


Figure 1.1 Location Map for the Orcutt Hill Internal Combustion Engines

The *Pacific Coast Energy Company - Orcutt Hill Stationary Source* (SSID 2667), which was originally developed in the 1920s by Union Oil Company, consists of the following facilities:

- California Coast Lease (FID 3206)
- Fox Lease (FID 3313)
- Dome Lease (FID 3314)
- Folsom Lease (FID 3316)
- Graciosa Lease (FID 3318)
- Hartnell Lease (FID 3319)
- Hobbs Lease (FID 3320)
- Newlove Lease (FID 3321)
- Pinal Lease (FID 3322)
- Rice Ranch Lease (FID 3323)
- Squires Lease (FID 3324)
- Getty-Hobbs Lease (FID 3495)
- Orcutt Hill Compressor Plant (FID 4104)
- Orcutt Hill Internal Combustion Engines (FID 4214)
- Orcutt Hill Steam Generators (FID 10482)
- Orcutt Hill Field (MVFF) (FID 1904)

The Orcutt Hill internal combustion engines consist of the following engines):

- Forty-three (43) unmodified, rich-burn, non-cyclic internal combustion engines
- Two (2) limited use (<200-hours/year), unmodified, rich-burn, non-cyclic internal combustion engines
- Twenty-Nine (29) derated, rich-burn, non-cyclic internal combustion engines
- One (1) limited use (<200-hours/year), unmodified, lean-burn, non-cyclic internal combustion engine
- One (1) controlled limited use (<200 hour/year), rich-burn, non-cyclic internal combustion engine
- One (1) limited use (<50 hour/year), Tier 3, turbocharged, diesel-fired internal combustion engine serving an emergency generator

Internal combustion engines fired on field gas (rich/lean burn) are located at various locations throughout the stationary source. These engines are used to drive pumping units, pumps, compressors and other oil and gas production equipment. Oil well reciprocating pumping units may be designated cyclic or non-cyclic engines per District Rule 333. The diesel-fired engine provides power to an emergency generator and is equipped with a charge air cooler, an electronic control module, and a smoke puff limiter. Fourteen engines were depermitted since issuance of the previous permit reevaluation. This change is reflected in the permit renewal.

1.2.2 Facility New Source Review Overview: Most of the Orcutt Hill internal combustion engines were in place and operating before a permit to operate was required. Therefore, much of the equipment was not subject to New Source Review requirements and was issued a Permit to Operate without an Authority to Construct. Table 1.1 provides a summary of the New Source Review history and issuance of Permits to Operate for the Orcutt Hill internal combustion engines facility.

Table 1.1
New Source Review Overview

Permit Number	Issuance Date	Permitted Modification
ATC 8955	06/03/93	Installation of a modified fuel pressure regulator to lean-out the fuel/air ratio on the Fox Lease water injection pump.
ATC 9052	06/03/93	Controlled 17 engines not subject to Rule 333 to provide emission reductions equivalent to what would be achieved by controlling a large compressor at the Battles Gas Plant. Permit canceled in January 1997 after the Battles Gas Plant was dismantled. The emission controls have been removed from the 17 engines.
ATC 9119	03/03/94	Installation of an intake air/water injection system and retarded timing on a Clark/RA-4 compressor at the Orcutt Hill Compressor Plant.
ATC 9386	03/20/95	Authorized temporary removal of orifice plates and temporary installation and testing of AST fuel/air injection devices. ATC canceled 09/30/96.
ATC/PTO 10837	08/13/02	Application was made to remove Condition 9.C.3.c.(ii) of PTO 8039-R4 that required supplemental source testing. Modification included in this permit.
ATC/PTO 10840	08/13/02	Permit limits the use of ICE ID# 004434, the Clark compressor, to less than 200-hours/year.
ATC/PTO 10840-01	10/08/02	Modification to AP 10840 and PTO 8039-R5 to add/revise DOI/ERC conditions.
ATC 11372	03/04/05	Reduction in hours for Waukesha 2425 at Fox Injection Well to less than 200 hr/yr and installation of electric motor to generate ERCs; also addition of new 23 hp LeRoi (ID# 107312) engine.
ATC/PTO 11372-01	03/20/06	Modify LeRoi engine operating hours by reducing operating hours to 1000 hr/yr.
PTO Mod 8039-04	06/01/09	Remove eleven engines destroyed or relocated out of state from permit to qualify for ERCs.
PTO Mod 8039-05	05/13/09	Remove seventeen engines from permit to qualify for ERCs. The engines were destroyed or relocated out of state. Supersedes PTO Mod 8039-04. See DOI 046.
PTO 13592	12/16/11	Install one Tier 3 Emergency Generator.
PTO Mod 8039-07	n/a	Remove 8 engines from permit to qualify for ERCs. The engines were destroyed or relocated out of state. See DOIs 064 and 0072. This permit modification was not issued final. These modifications were incorporated directly into permit renewal R8.
PTO Mod 8039-08	10/15/2013	Remove 3 internal combustion engines from permit to qualify for ERCs. The engines were destroyed or relocated out of state. See DOI 063-01.

Permit Number	Issuance Date	Permitted Modification
PTO Mod 8039-09	1/31/2014	Remove 5 internal combustion engines from permit to qualify for ERCs. The engines were destroyed or relocated out of state. See DOI 077-01.

1.3 Emission Sources

The emissions from this facility are entirely due to combustion of field natural gas in the engines subject to this permit. Section 4 of the permit provides the District's engineering analysis of these emission sources. Section 5 of the permit describes each engine and the allowable emissions from each engine.

1.4 Emission Control Overview

Air quality emission controls are utilized on one of the Orcutt Hill internal combustion engines. A modified fuel pressure regulator is used to lean-out the fuel/air ratio on a water injection pump (ID# 004435, the Waukesha 2475).

1.5 Offsets/Emission Reduction Credit Overview

The Pacific Coast Energy Company - Orcutt Hill Stationary Source triggers offsets for NO_x and ROC emissions. See section 7.3 for details.

Electrification of the following Orcutt Hill internal combustion engines has generated Emission Reduction Credits:

1) Reduction in operating hours of a Clark RA-4 gas compressor. This project generated NO_X, ROC, and SO_X ERCs and is documented in Decision of Issuance (DOI) 0031 issued October 7, 2002.

2) Reduction in operating hours of the Fox Lease water injection pump. This project generated NO_X, ROC, and SO_X ERCs and is documented in DOI 0038 issued March 23, 2005.

3) Electrification of 17 water injection pump engines at the Pinal and Newlove Leases. The operator applied for PTO Mod 8039-04 to remove seventeen engines from permit. These engines have been destroyed or relocated to another facility in Michigan. DOI 0046 was issued 12/18/2007.

4) Electrification of 7 gas fired well pump engines located at the Newlove, Cal Coast and Pinal leases. This project generated NO_X, ROC, and SO_X ERCs and is documented in DOI 0064 issued October 26, 2010.

5) Electrification of 1 field gas fired well pump engine located at the Newlove lease. This project generated NO_X, ROC, and SO_X ERCs and is documented in DOI 0072 issued October 3, 2011.

6) Electrification of 12 field gas fired well pump engine located at the Pacific Coast Energy Company - Orcutt Hill Stationary Source. This project generated NO_X, ROC, and SO_X ERCs and is documented in DOI 0077 issued May 2012.

7) Electrification of 5 field gas fired well pump engine located at the Pacific Coast Energy Company - Orcutt Hill Stationary Source. This project generated NO_X, ROC, and SO_X ERCs and is documented in DOI 0077-01 issued May 2012. DOI 077-01 modified DOI 007 since only five of the engines subject to DOI 077 were electrified.

1.6 Part 70 Operating Permit Overview

1.6.1 Federally-enforceable Requirements: All federally-enforceable requirements are listed in 40 CFR Part 70.2 (*Definitions*) under "applicable requirements". These include all SIP-approved District Rules, all conditions in the District-issued Authority to Construct permits, and all conditions applicable to major sources under federally promulgated rules and regulations. These requirements are enforceable by the public under CAAA. (*see Tables 3.1 and 3.2 for a list of federally-enforceable requirements)*

1.6.2 Insignificant Emissions Units: Insignificant emission units are defined under District Rule 1301 as any regulated air pollutant emitted from the unit, excluding HAPs, that are less than 2 tons per year based on the unit's potential to emit and any HAP regulated under section 112(g) of the Clean Air Act that does not exceed 0.5 ton per year based on the unit's potential to emit. Insignificant activities must be listed in the Part 70 application with supporting calculations. Applicable requirements may apply to insignificant units.

1.6.3 Federal Potential to Emit: The federal potential to emit (PTE) of a stationary source does not include fugitive emissions of any pollutant, unless the source is: (1) subject to a federal NSPS/NESHAP requirement which was in effect as of August 7, 1980, or (2) included in the 29-category source list specified in 40 CFR 70.2. The federal PTE does include all emissions from any insignificant emissions units. None of the equipment at this facility is subject to a federal NSPS/NESHAP requirement, nor is it included in the 29-category list, therefore the federal PTE does not include fugitive emissions. (*See Section 5.4 for the federal PTE for this source)*

1.6.4 Permit Shield: The operator of a major source may be granted a shield: (a) specifically stipulating any federally-enforceable conditions that are no longer applicable to the source and (b) stating the reasons for such non-applicability. The permit shield must be based on a request from the source and its detailed review by the District. Permit shields cannot be indiscriminately granted with respect to all federal requirements. The permittee has not made a request for a permit shield.

1.6.5 Alternate Operating Scenarios: A major source may be permitted to operate under different operating scenarios, if appropriate descriptions of such scenarios are included in its Part 70 permit application and if such operations are allowed under federally-enforceable rules. The permittee made no request for permitted alternative operating scenarios.

1.6.6 Compliance Certification: Part 70 permit holders must certify compliance with all applicable federally-enforceable requirements including permit conditions. Such certification must accompany each Part 70 permit application; and, be re-submitted annually on the anniversary date of the permit or on a more frequent schedule specified in the permit. A "responsible official" of the owner/operator company whose name and address is listed prominently in the Part 70 permit signs each certification. (*see Section 1.6.9 below)*

1.6.7 Permit Reopening: Part 70 permits are re-opened and revised if the source becomes subject to a new rule or new permit conditions are necessary to ensure compliance with existing rules. The permits are also re-opened if they contain a material mistake or the emission limitations or other conditions are based on inaccurate permit application data.

1.6.8 Hazardous Air Pollutants (HAPs): Part 70 permits regulate emission of HAPs from major sources through the imposition of maximum achievable control technology (MACT), where applicable. The federal PTE for HAP emissions from a source is computed to determine MACT or any other rule applicability.

1.6.9 Responsible Official: The designated responsible official and his mailing address is:

Phil Brown
Vice President of Operations
Pacific Coast Energy Company
1555 Orcutt Hill Rd.
Orcutt, CA 93455

2.0 Process Description

2.1 Process Summary

2.1.1 Unmodified IC Engines: Forty-three (43) of the ICEs (See Table 5.1-1 for specific ID#s) are rated below 50 hp and are not subject to Rule 333 emission limits.

2.1.2 Limited Use IC Engines: Three (3) of the ICEs (ID#s 004306, 004305, and 004434) are rated above 50 hp and are not subject to Rule 333 emission limits because they are operated less than 200-hours/year.

2.1.3 Derated IC Engines: Twenty-Nine (29) of the ICEs (See Table 5.1-1 for specific ID#s) are equipped with orifice plates to derate each engine to below 50 hp. Derating is not considered to be an emission control. These engines are not subject to Rule 333 emission limits.

2.1.4 Controlled Limited Use IC Engines: One (1) of the ICEs (ID# 004435) is a controlled engine rated above 50 hp operated less than 200 hours per year. Although it is not subject to Rule 333 emissions standards, the emission limits correspond to those of Rule 333.

2.1.5 Diesel-Fired Emergency Generator: One (1) Tier 3 diesel-fired ICE providing power for an emergency generator operated no more than 50 hours per year. This engine is subject to Rule 333.

2.2 Support Systems

There are no additional support systems for the Orcutt Hill internal combustion engines.

2.3 Maintenance/Degreasing Activities

2.3.1 Paints and Coatings: The use of paints and coatings at the Pacific Coast Energy Company - Orcutt Hill Stationary Source are discussed in the permits for individual Orcutt Hill leases and for the compressor plant.

2.3.2 Solvent Usage: The use of solvents at the Pacific Coast Energy Company - Orcutt Hill Stationary Source is discussed in the permits for individual Orcutt Hill leases and for the compressor plant.

2.4 Other Processes

2.4.1 Unplanned Activities/Emissions: The permittee does not anticipate or foresee any circumstances that would require special equipment use and result in excess emissions.

2.6 Detailed Process Equipment Listing

Refer to Table 5.1-1 for a complete listing of all permitted equipment.

3.0 Regulatory Review

This section identifies the federal, state and local rules and regulations applicable to the Orcutt Hill internal combustion engines.

3.1 Rule Exemptions Claimed

📖 District Rule 202 (*Exemptions to Rule 201*): The following exemptions apply to this facility. An exemption from permit, however, does not necessarily grant relief from any applicable prohibitory rule.

- **Section D.6 De Minimis Exemptions**: This section requires Pacific Coast Energy to maintain a record of each *de minimis* change, which shall include emission calculations demonstrating that each physical change meets the criteria listed in the rule. This exemption applies to a project in the broadest sense. Such records shall be made available to the District upon request. As of June 2020, the de minimis total at the Pacific Coast Energy Company - Orcutt Hill Stationary Source is 20.94 lbs ROC/day. This total does not include the previously claimed emissions from the Sx Sands project (ATC 13140).
- **Section D.8 Routine Repair and Maintenance**: A permit shall not be required for routine repair or maintenance of permitted equipment, not involving structural changes.
- **Section D.14 Architectural Coatings**: Application of architectural coating in the repair and maintenance of a stationary structure is exempt from permit requirements.
- **Section U.2 Degreasing Equipment**: Single pieces of degreasing equipment, which use unheated solvent, and which: a) have a liquid surface area of less than 1.0 square foot unless the aggregate liquid surface area of all degreasers at a stationary source, covered by this exemption is greater than 10 square feet; and b) use only organic solvents with an initial boiling point of 302^{O} F or greater; or c) use materials with a volatile organic compound content of two-percent or less by weight as determined by EPA Method 24.
- **Section U.3 Wipe Cleaning**: Equipment used in wipe cleaning operations provided that the solvents used do not exceed 55 gallons per year. The permittee shall maintain records of the amount of solvents used for each calendar year. These records shall be kept for a minimum of 3 years and be made available to the District on request.

In addition, the following two Rule 202 permit exemptions may apply:

- **Section F.1.c Internal Combustion Engines**: Engines used to propel vehicles, as defined in Section 670 of the California Vehicle Code, but not including any engine mounted on such vehicles that would otherwise require a permit under the provisions of District Rules and Regulations.
- **Section F.2 Portable Internal Combustion Engines**: Portable ICEs eligible for statewide registration pursuant to Title 13, Section 2450 *et seq.*, and not integral to the stationary source operations.

The following Rule exemptions have been approved by the District:

📖 District Rule 321 (*Solvent Cleaning Operations*): Section D.4 exempts solvent wipe cleaning operations from the requirements of this rule.

📖 District Rule 333 (*Control Of Emissions from Reciprocating Internal Combustion Engines*): The permittee has claimed the following exemptions from this rule:

- Engines that are exempt from permit under the provisions of Rule 202.
- Any engine that has a total aggregated operational period less than 200 hours per calendar year is exempt from the requirements of Rule 333, with the exception of the engine identification requirement in Section D.1, the elapsed operating time meter requirement in Section D.2, the recordkeeping provisions in Section J.3, and the compliance schedules for these provisions specified in Section K.

3.2 Compliance with Applicable Federal Rules and Regulations

3.2.1 40 CFR Parts 51/52 {*New Source Review (Nonattainment Area Review and Prevention of Significant Deterioration*)}: The Orcutt Hill internal combustion engines were installed and permitted prior to the applicability of these regulations. All modifications are subject to the District's New Source Review regulation. Compliance with the District regulation assures compliance with 40 CFR 51/52.

3.2.2 40 CFR Part 60 {*New Source Performance Standards)*: This facility is not currently subject to any NSPS. See permits of the individual Orcutt Hill leases and the compressor plant for NSPS applicability of those facilities.

3.2.3 40 CFR Part 61 {*NESHAP}*: This facility is not currently subject to the provisions of this Subpart.

3.2.4 40 CFR Part 63 {*MACT*}: On June 17, 1999, EPA promulgated Subpart HH, National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Oil and Natural Gas Production and Natural Gas Transmission and Storage. This facility currently is not subject to the provisions of this Subpart. The IC engines listed in this permit are located at various locations throughout the Orcutt Hill stationary source. Each lease qualifies for an exemption from Subpart HH, National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Oil and Natural Gas Production and Natural Gas Transmission and Storage. Exemptions are documented for each facility (lease).

3.2.5 40 CFR Part 63 Subpart ZZZZ: The engines listed on this permit are subject to the requirements of Subpart ZZZZ. Limited use stationary RICE are defined as engines that operate less than 100 hours per year. Therefore the engines listed on this permit that may operate up to 200 hours per year are not considered "limited use" for the purpose of compliance with the RICE NESHAP. They are subject to the NESHAP requirements for full-time engines.

Existing non-emergency four-stroke rich-burn spark ignition RICE rated 500 bhp or less at area sources of HAP emissions must comply with the following operating requirements:

(1) change the oil and filter every 1,440 hours of operation or annually, whichever comes first;

(2) inspect spark plugs every 1,440 hours of operation or annually, whichever comes first;

(3) inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first.

Existing non-emergency two-stroke lean-burn spark ignition RICE rated 500 bhp or less at area sources of HAP emissions must comply with the following operating requirements:

(1) change the oil and filter every 4,320 hours of operation or annually, whichever comes first;

(2) inspect spark plugs every 4,320 hours of operation or annually, whichever comes first;

(3) inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first.

Existing emergency standby compression ignition RICE at area sources of HAP emissions must comply with the following operating requirements:

(1) change the oil and filter every 500 hours of operation or annually, whichever comes first;

(2) inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first;

(3) inspect all hoses and belts every 500 hours of operation or annually, whichever comes first.

3.2.6 40 CFR Part 64 {Compliance Assurance Monitoring}: This rule became effective on April 22, 1998. This rule affects emission units at the source subject to a federally-enforceable emission limit or standard that uses a control device to comply with the emission standard, and either pre-control or post-control emissions exceed the Part 70 source emission thresholds. Compliance with this rule was evaluated and it was determined that no emission units at this facility are currently subject to CAM. This is because the engine (ID# 004435, the Waukesha 2475) with a pre-control emission potential greater than 50-tons/year is controlled through the use of a fuel/air controller. This method does not meet the definition of a "control device" in the CAM rule.

3.2.7 40 CFR Part 70 {*Operating Permits*}: This Subpart is applicable to the Orcutt Hill internal combustion engines. Table 3.1 lists the federally-enforceable District promulgated rules that are "generic" and apply to the Orcutt Hill internal combustion engines. Table 3.2 lists the federally-enforceable District promulgated rules that are "unit-specific" that apply to the Orcutt Hill internal combustion engines. These tables are based on data available from the District's administrative files and from the permittee's Part 70 Operating Permit renewal application. Table 3.4 includes the adoption dates of these rules.

In its Part 70 permit application, the permittee certified compliance with all existing District rules and permit conditions. This certification is also required of the permittee semi-annually.

3.3 Compliance with Applicable State Rules and Regulations

3.3.1 Division 26. Air Resources {California Health & Safety Code}: The administrative provisions of the Health & Safety Code apply to this facility and will be enforced by the District. These provisions are District-enforceable only.

3.3.2 California Administrative Code Title 17: These sections specify the standards by which abrasive blasting activities are governed throughout the State. All abrasive blasting activities at the Orcutt Hill Internal Combustion Engines are required to conform to these standards. Compliance will be assessed through onsite inspections. These standards are District-enforceable only. However, CAC Title 17 does not preempt enforcement of any SIP-approved rule that may be applicable to abrasive blasting activities.

3.3.3 Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition (CI) Engines (CCR Section 93115, Title 17): This ATCM applies for all stationary diesel-fueled engines rated over 50 brake horsepower (bhp) at this facility. On March 17, 2005, District Rule 202 was revised to remove the compression-ignited engine (e.g. diesel) permit exemption for units rated over 50 bhp to allow the District to implement the State's ATCM for Stationary Compression Ignition Engines. Compliance shall be assessed through onsite inspections and reporting.

3.4 Compliance with Applicable Local Rules and Regulations

3.4.1 Applicability Tables: Tables 3.1 and 3.2 list the federally enforceable District rules that apply to the facility. Table 3.3 lists the non-federally-enforceable District rules that apply to the facility. Table 3.4 lists the adoption date of all rules that apply to the facility.

3.4.2 Rules Requiring Further Discussion: This section provides a more detailed discussion regarding the applicability and compliance of certain rules. The following is a rule-by-rule evaluation of compliance for this facility:

Rule 201 - Permits Required: This rule applies to any person who builds, erects, alters, replaces, operates or uses any article, machine, equipment, or other contrivance that may cause the issuance of air contaminants. The equipment included in this permit is listed in Attachment 10.5. An Authority to Construct is required to return any de-permitted equipment to service and may be subject to New Source Review.

Rule 210 - Fees: Pursuant to Rule 201.G, District permits are reevaluated every three years. This includes the re-issuance of the underlying permit to operate. Also included are the PTO fees. The fees for this facility are based on District Rule 210, Fee Schedule A; however, Part 70 specific costs are based on cost reimbursement provisions (Rule 210.C). Attachment 10.2 presents the fee calculations for the reevaluated permit.

Rule 301 - Circumvention: This rule prohibits the concealment of any activity that would otherwise constitute a violation of Division 26 (Air Resources) of the California H&SC and the District rules and regulations. To the best of the District's knowledge, the permittee has historically operated in compliance with this rule.

Rule 302 - Visible Emissions: This rule prohibits the discharge from any single source any air contaminants for which a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade than a reading of 1 on the Ringelmann Chart or of such opacity to obscure an observer's view to a degree equal to or greater than a reading of 1 on the Ringelmann Chart. The District reviewed this facility for applicability, and since there are no flares or diesel fired engines at this source, this permit is not conditioned to require visible emissions inspections.

Rule 303 (Nuisance): Rule 303 prohibits any source from discharging such quantities of air contaminants or other material in violation of Section 41700 of the Health and Safety Code which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety or any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property. Compliance with this rule is assessed through the District's enforcement staff's complaint response program. Based on the source's location, the potential for public nuisance is small.

Rule 304 (Particulate Matter - Northern Zone): A person shall not discharge into the atmosphere from any source particulate matter in excess of 0.3 grain per cubic foot of gas at standard conditions. It is unlikely that gas fired engines will exceed these particulate matter standards.

Rule 309 - Specific Contaminants: Under Section "A", no source may discharge sulfur compounds and combustion contaminants (particulate matter) in excess of 0.2 percent as SO_2 (by volume) and 0.3 gr/scf (at 12% CO_2) respectively. It is unlikely that gas fired engines will exceed these standards.

Rule 310 - Odorous Organic Compounds: This rule prohibits the discharge of H_2S and organic sulfides that result in a ground level impact beyond the property boundary in excess of either 0.06 ppmv averaged over 3 minutes and 0.03 ppmv averaged over 1 hour. No measured data exists to confirm compliance with this rule.

Rule 311 - Sulfur Content of Fuels: This rule limits the sulfur content of fuels combusted in the Orcutt Hill internal combustion engines to 0.5 percent (by weight) for liquids fuels and 50 gr/100 scf (calculated as H_2S) {or 796 ppmvd} for gaseous fuels. All piston IC engines on this stationary source are expected to be in compliance with the fuel limit as determined by required fuel analysis documentation.

Rule 317 - Organic Solvents: This rule sets specific prohibitions against the discharge of emissions of both photochemically and non-photochemically reactive organic solvents (40 lb/day and 3,000 lb/day respectively). Solvents may be used on the lease during normal operations for degreasing by wipe cleaning and for use in paints and coatings in maintenance operations. There is the potential to exceed the limits under Section B.2 during significant surface coating activities. The permittee will be required to maintain records to ensure compliance with this rule.

Rule 321 - Solvent Cleaning Operations: This rule was revised on September 20, 2010 to fulfill the commitment in the 2001 and 2004 Clean Air Plans to implement requirements for solvent cleaning machines and solvent cleaning. The revised rule contains solvent reactive organic compounds (ROCs) content limits, revised requirements for solvent cleaning machines, and sanctioned solvent cleaning devices and methods. These proposed provisions apply to solvent cleaning machines and wipe cleaning.

Rule 322 - Metal Surface Coating Thinner and Reducer: This rule prohibits the use of photochemically reactive solvents for use as thinners or reducers in metal surface coatings. The permittee will be required to maintain records during maintenance operations to ensure compliance with this rule.

Rule 323.1 - Architectural Coatings: This rule sets the standards for any architectural coating that is supplied, sold, offered for sale, or manufactured for use within the District.

Rule 324 - Disposal and Evaporation of Solvents: This rule prohibits any source from disposing more than one and a half gallons of any photochemically reactive solvent per day by means that will allow the evaporation of the solvent into the atmosphere. The permittee will be required to maintain records to ensure compliance with this rule.

Rule 330 - Surface Coating of Metal Parts and Products: This rule sets standards for many types of coatings applied to metal parts and products. In addition to the ROC standards, this rule sets operating standards for application of the coatings, labeling and recordkeeping.

Rule 333 - Control of Emissions from Reciprocating Internal Combustion Engines: This rule applies to all engines with a rated brake horsepower of 50 or greater that are fueled by liquid or gaseous fuels. The unmodified engines are less than 50 bhp therefore these are not subject to the rule. The derated engines are derated below 50 bhp, therefore they are exempt from the rule. Additionally, per Section B.1.b any engine exempt from the requirement to obtain a permit under Rule 202 is also exempt from this rule. Five engines at the stationary source are rated higher than 50 hp. Three of these engines (ID#s 004306, 004305, and 004434 operate less than 200-hours/year and qualify for the exemption in Rule 333.B.2. The fourth engine (# 13723) powers

an emergency generator and is exempt per Rule 333 B.1.d. The fifth engine, (ID# 004435) the Waukesha 2475 engine, is not subject to Rule 333 emission limitations since it is limited to operations less than 200 hours per year by permitting action ATC 11372. The permittee chose to operate this engine in compliance with Rule 333 emission limits to avoid an emissions increase, thus, the engine controls remain in place. The permit contains periodic emission and control monitoring if the engine operates more than 100 hours in any six-month period.

Rule 352 - Natural Gas-Fired Fan-Type Central Furnaces and Small Water Heaters: This rule applies to new water heaters rated less than 75,000 Btu/hr and new fan-type central furnaces. It requires the certification of newly installed units.

Rule 353 - Adhesives and Sealants: This rule applies to the use of adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, or any other primers. Compliance shall be based on site inspections.

Rule 505 - Breakdown Conditions: This rule describes the procedures that the permittee must follow when a breakdown condition occurs to any emissions unit associated with the Orcutt Hill internal combustion engines. A breakdown condition is defined as an unforeseeable failure or malfunction of (1) any air pollution control equipment or related operating equipment which causes a violation of an emission limitation or restriction prescribed in the District Rules and Regulations, or by State law, or (2) any in-stack continuous monitoring equipment, provided such failure or malfunction:

a. Is not the result of neglect or disregard of any air pollution control law or rule or regulation;

b. Is not the result of an intentional or negligent act or omission on the part of the owner or operator;

c. Is not the result of improper maintenance;

d. Does not constitute a nuisance as defined in Section 41700 of the Health and Safety Code;

e. Is not a recurrent breakdown of the same equipment.

Rule 810 - Federal Prevention of Significant Deterioration: This rule, revised June 20, 2013, incorporates the federal Prevention of Significant Deterioration rule requirements into the District's rules and regulations. Future projects at the facility will be evaluated to determine whether they constitute a new major stationary source or a major modification.

3.5 Compliance History

This section contains a summary of the recent compliance history for this facility and was obtained from documentation contained in the District's administrative file.

3.5.1 Facility Inspections. Routine facility inspections were conducted on April 17, 2019, May 20, 2020 and January 11, 2021 since issuance of the previous permit renewal. The reports for these inspections were reviewed as part of the current permit renewal process. The reports indicate that there were no compliance issues resulting from these inspections..

3.5.2 Variances: During the last three years, the operator has not applied for any variances

3.5.3 Violations: There have been no enforcement actions issued to this facility since issuance of the previous permit reevaluation.

Table 3.1 - Generic Federally-Enforceable District Rules

Generic Requirements	Affected Emission Units	Basis for Applicability
RULE 101: Compliance by Existing Installations	All emission units	Emission of pollutants
RULE 102: Definitions	All emission units	Emission of pollutants
RULE 103: Severability	All emission units	Emission of pollutants
RULE 201: Permits Required	All emission units	Emission of pollutants
RULE 202: Exemptions to Rule 201	Applicable emission units, as listed in form 1302-H of the Part 70 application.	Insignificant activities/emissions, per size/rating/function
RULE 203: Transfer	All emission units	Change of ownership
RULE 204: Applications	All emission units	Addition of new equipment of modification to existing equipment.
RULE 205: Standards for Granting Permits	All emission units	Emission of pollutants
RULE 206: Conditional Approval of Authority to Construct or Permit to Operate	All emission units	Applicability of relevant Rules
RULE 207: Denial of Applications	All emission units	Applicability of relevant Rules
RULE 208: Action on Applications – Time Limits	All emission units. Not applicable to Part 70 permit applications.	Addition of new equipment of modification to existing equipment.
RULE 212: Emission Statements	All emission units	Administrative
RULE 301: Circumvention	All emission units	Any pollutant emission
RULE 302 : Visible Emissions	All emission units	Particulate matter emissions
RULE 303: Nuisance	All emission units	Emissions that can injure, damage or offend.
RULE 304: Particulate matter – Northern Zone	Each PM Source	Emission of PM in effluent gas
RULE 309: Specific Contaminants	All emission units	Combustion contaminant emission
RULE 311: Sulfur Content of Fuel	All combustion units	Use of fuel containing sulfur

Generic Requirements	Affected Emission Units	Basis for Applicability
RULE 317: Organic Solvents	Emission units using solvents	Solvent used in process operations.
RULE 321: Solvent Cleaning Operations	Emission units using solvents	Solvent used in process operations.
RULE 322: Metal Surface Coating Thinner and Reducer	Emission units using solvents	Solvent used in process operations.
RULE 323: Architectural Coatings	Paints used in maintenance and surface coating activities	Application of architectural coatings.
RULE 323.I: Architectural Coatings	Paints used in maintenance and surface coating activities	Application of architectural coatings.
RULE 324: Disposal and Evaporation of Solvents	Emission units using solvents	Solvent used in process operations.
RULE 353: Adhesives and Sealants	Emission units using adhesives and solvents.	Adhesives and sealants used in process operations.
RULE 505.A, B1, D: Breakdown Conditions	All emission units	Breakdowns where permit limits are exceeded or rule requirements are not complied with.
RULE 603: Emergency Episode Plans	Stationary sources with PTE greater than 100 tpy	Pacific Coast Energy Co. Orcutt Hill is a major source.
RULE 901: New Source Performance Standards (NSPS)	All emission units	Applicability standards are specified in each NSPS.
RULE 1001: National Emission Standards for Hazardous Air Pollutants (NESHAPS)	All emission units	Applicability standards are specified in each NESHAPS.
REGULATION VIII: New Source Review	All emission units	Addition of new equipment of modification to existing equipment. Applications to generate ERC Certificates.
REGULATION XIII (RULES 1301-1305): Part 70 Operating Permits	All emission units	Pacific Coast Energy Co. Orcutt Hill is a major source.

Table 3.2 - Unit-Specific Federally-Enforceable District Rules

Unit-Specific Requirements	Affected Emission Units	Basis for Applicability
RULE 333: Control of Emissions from Reciprocating Internal Combustion Engines	IC engines ID#s 004306, 004305, 004434 and 004435.	Internal combustion engines with a rated brake horsepower of 50 or greater.
RULE 360: Emissions of Oxides of Nitrogen from Large Water Boilers and Small Boilers	Any new small boiler installed at the facility.	New units rated from 75,000 Btu/hr to 2.000 MMBtu/hr

Table 3.3 - Non-Federally-Enforceable District Rules

Requirement	Affected Emission Units	Basis for Applicability
RULE 210: Fees	All emission units	Administrative
RULE 310: Odorous Org. Sulfides	All emission units	Emission of organic sulfides
RULE 352: Natural Gas-Fired Fan-Type Central Furnaces	New water heaters and furnaces	Upon installation
RULES 501-504: Variance Rules	All emission units	Administrative
RULE 505.B2, B3, C, E, F, G: Breakdown Conditions	All emission units	Breakdowns where permit limits are exceeded.
RULES 506-519: Variance Rules	All emission units	Administrative

Table 3.4 – Adoption Dates of District Rules Applicable at Issuance of Permit

Rule No.	Rule Name	Adoption Date
Rule 101	Compliance by Existing Installations: Conflicts	June 1981
Rule 102	Definitions	August 25, 2016
Rule 103	Severability	October 23, 1978
Rule 201	Permits Required	June 21, 2012
Rule 202	Exemptions to Rule 201	August 25, 2016
Rule 203	Transfer	April 17, 1997
Rule 204	Applications	April 17, 1997
Rule 205	Standards for Granting Permits	April 17, 1997

Rule No.	Rule Name	Adoption Date
Rule 206	Conditional Approval of Authority to Construct or Permit to Operate	October 15, 1991
Rule 208	Action on Applications - Time Limits	April 17, 1997
Rule 212	Emission Statements	October 20, 1992
Rule 301	Circumvention	October 23, 1978
Rule 302	Visible Emissions	June 1981
Rule 303	Nuisance	June 1981
Rule 304	Particulate Matter – Northern Zone	October 23, 1978
Rule 309	Specific Contaminants	October 23, 1978
Rule 310	Odorous Organic Sulfides	October 23, 1978
Rule 311	Sulfur Content of Fuels	October 23, 1978
Rule 317	Organic Solvents	October 23, 1978
Rule 321	Solvent Cleaning Operations	June 21, 2012
Rule 322	Metal Surface Coating Thinner and Reducer	October 23, 1978
Rule 323.I	Architectural Coatings	June 19, 2014
Rule 324	Disposal and Evaporation of Solvents	October 23, 1978
Rule 325	Crude Oil Production and Separation	July 19, 2001
Rule 326	Storage of Reactive Organic Compound Liquids	January 18, 2001
Rule 328	Continuous Emissions Monitoring	October 23, 1978
Rule 330	Surface Coating of Metal Parts and Products	June 21, 2012
Rule 331	Fugitive Emissions Inspection and Maintenance	December 10, 1991
Rule 333	Control of Emissions from Reciprocating Internal Combustion Engines	June 19, 2008
Rule 352	Natural Gas-Fired Fan-Type Central Furnaces and Small Water Heaters	October 20, 2011
Rule 353	Adhesives and Sealants	June 21, 2012
Rule 360	Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers	March 15, 2018
Rule 361	Small Boilers, Steam Generators and Process Heaters	June 20, 2019
Rule 505	Breakdown Conditions (Section A, B1 and D)	October 23, 1978

Rule No.	Rule Name	Adoption Date
Rule 603	Emergency Episode Plans	June 15, 1981
Rule 801	New Source Review	August 25, 2016
Rule 802	Nonattainment Review	August 25, 2016
Rule 803	Prevention of Significant Deterioration	August 25, 2016
Rule 804	Emission Offsets	August 25, 2016
Rule 805	Air Quality Impact and Modeling	August 25, 2016
Rule 806	Emission Reduction Credits	August 25, 2016
Rule 808	New Source Review for Major Sources of Hazardous Air Pollutants	May 20, 1999
Rule 810	Federal Prevention of Significant Deterioration (PSD)	June 20, 2013
Rule 901	New Source Performance Standards (NSPS)	September 20, 2010
Rule 1001	National Emission Standards for Hazardous Air Pollutants (NESHAPS)	October 23, 1993
Rule 1301	General Information	August 25, 2016
Rule 1302	Permit Application	November 9, 1993
Rule 1303	Permits	November 9, 1993
Rule 1304	Issuance, Renewal, Modification and Reopening	November 9, 1993
Rule 1305	Enforcement	November 9, 1993

4.0 Engineering Analysis

4.1 General

The engineering analyses performed for this permit were limited to the review of:

- → facility process flow diagrams
- → emission factors and calculation methods for each emissions unit
- → emission control equipment (including RACT, BACT, NSPS, NESHAP, MACT)
- → emission source testing, sampling, CEMS, CAM
- → process monitors needed to ensure compliance

Unless noted otherwise, default ROC/THC reactivity profiles from the District's document titled "*VOC/ROC Emission Factors and Reactivities for Common Source Types*" dated July 13, 1998 (ver 1.1) was used to determine non-methane, non-ethane fraction of THC.

4.2 Piston Internal Combustion Engines

4.2.1 The equipment included in this permit consists of seventy-seven (78) field-gas-fired, piston IC engines used to drive pumping units, pumps, compressors, and other equipment used in oil production operations. The breakdown of the engines is as follows:

* Forty-four (44) unmodified, rich-burn, non-cyclic internal combustion engines;
* Two (2) limited use (<200-hours/year), unmodified, rich-burn, non-cyclic internal combustion engines;
* Twenty- nine (29) derated, rich-burn, non-cyclic internal combustion engines;
* One (1) limited use (<200-hours/year), unmodified, lean-burn, non-cyclic internal combustion engine;
* One (1) controlled limited use (<200 hour/year), rich-burn, non-cyclic internal combustion engine.
* One (1) limited use (<50 hour/year), Tier 3, turbocharged, diesel-fired internal combustion engine serving an emergency generator

One of the engines is controlled. Engine ID# 004435 is a rich-burn engine and utilizes a modified fuel pressure regulator to lean-out the fuel/air ratio.

Emission Calculations:

$$ER = [(EF \times SCFPP \times HHV) \div 10^6]$$

where:

ER	= Emission rate (lb/period)
EF	= Pollutant specific emission factor (lb/MMBtu)
SCFPP	= gas flow rate per operating period (scf/period)
HHV	= gas higher heating values (1,350 Btu/scf)

Emission Factors (EF) for Uncontrolled Rich Burn ICEs (All ID#s Except 004434 and 004435).

Pollutant	Emission Factor	Units	Notes
NO_X	1.905	lb/MMBtu	1.a
ROC	0.103	lb/MMBtu	1.a
CO	1.600	lb/MMBtu	1.a
PM	0.010	lb/MMBtu	1.a
PM_{10}	0.010	lb/MMBtu	1.a
SO_X as SO_2	0.100 = (0.169)(ppmv) / HHV	lb/MMBtu	2

Emission Factors (EF) for Lean Burn ICE ID# 004434

Pollutant	Emission Factor	Units	Notes
NO_X	1.905	lb/MMBtu	1.a
ROC	0.103	lb/MMBtu	1.a
CO	0.400	lb/MMBtu	1.a
PM	0.046	lb/MMBtu	1.a
PM_{10}	0.046	lb/MMBtu	1.a
SO_X as SO_2	0.100 = (0.169)(ppmv) / HHV	lb/MMBtu	2

Controlled Emission Factors (EF) for Rich Burn ICE ID# 004435

Pollutant	Emission Factor	Units	Notes
NO_X	0.190	lb/MMBtu	1.b
ROC	0.830	lb/MMBtu	1.b
CO	10.10	lb/MMBtu	1.b
PM	0.010	lb/MMBtu	1.b
PM_{10}	0.010	lb/MMBtu	1.b
SO_X as SO_2	0.100 = (0.169)(ppmv) / HHV	lb/MMBtu	2

Emission Factors (EF) for Diesel ICE ID# 113723

Pollutant	Emission Factor	Units	Notes
NO_X	2.80	g/bhp-hr	3
ROC	0.20	g/bhp-hr	3
CO	3.70	g/bhp-hr	3
PM	0.015	g/bhp-hr	3
PM_{10}	0.015	g/bhp-hr	3
SO_X as SO_2	0.01	g/bhp-hr	2

Notes for tables above:

1.a. District Permit Guidance Document for Reciprocating ICEs dated January 27, 1998, page 6, Table 3.6-1, which values are from AP-42 and District Hearing Board dictated gas-fired engine EFs.

1.b. District Permit Guidance Document for Reciprocating ICEs dated January 27, 1998, page 7, Table 3.6-3, which values are from AP-42 gas-fired engine EFs based on Rule 333.D.2 lean-burn limits, i.e. 125 ppmv NO_X, 4,500 ppmv CO, and 750 ppmv ROC at 15% excess oxygen.

2. Based on mass balance of sulfur in gaseous fuel and limit of 796 ppmv S.

3. The emission factors (EF) were chosen based on each engine's rating and age.

4.3 BACT/NSPS/NESHAP/MACT

To date, this facility has not triggered Best Available Control Technology (BACT), New Source Performance Standards (NSPS) National Emission Standards for Hazardous Air Pollutants (NESHAP), or Maximum Available Control Technology (MACT).

4.4 CEMS/Process Monitoring/CAM

4.4.1 CEMS: There are no CEMS at this facility.

4.4.2 Process Monitoring: In many instances, ongoing compliance beyond a single (snap shot) source test is assessed by the use of process monitoring systems. Examples of these monitors include: engine hour meters, fuel usage meters, flare gas flow meters and hydrogen sulfide analyzers. Once these process monitors are in place, it is important that they be well maintained and calibrated to ensure that the required accuracy and precision of the devices are within specifications. At a minimum the following process monitors will be required to be in good working order:

- → Master fuel meters (totalizers) are used to determine total fuel (scf) delivered to the internal combustion engines. Fuel is then apportioned to individual engines based on the operational parameters for each engine.
- → Non-resettable engine-use hour meters for any engine that the permittee claims is exempt from Rule 333 standards by operating less than 200-hours/year.

4.4.3 CAM: The Pacific Coast Energy Company - Orcutt Hill Stationary Source is a major source that is subject to the USEPA's Compliance Assurance Monitoring (CAM) rule (40 CFR 64). Any emissions unit at the facility with uncontrolled emissions potential exceeding major source emission thresholds for any pollutant is subject to CAM provisions. It was determined that CAM was not applicable to any equipment units at this facility.

4.5 Source Testing/Sampling

Source testing and sampling are required in order to ensure compliance with permitted emission limits, prohibitory rules, control measures and the assumptions that form the basis for issuing operating permits.

Normally, for Rule 333 compliance, biennial source testing is required. Because the operating hours of the Clark Compressor (ID# 004435) are limited to less than 200 hours per year, Rule 333 emission standards and monitoring do not directly apply. For this controlled engine, the permit has been conditioned to verify compliance with Rule 333 equivalent NOx ppm limitations through testing with a portable NOx analyzer and checks of the fuel-air controller. In general, process monitors used to ensure compliance are: a) equipment recording gaseous fuel use; b) IC engine process parameter recorders (e.g., A/F ratio controller recorder); and c) IC engine operation logs required under District Rule 333.

At a minimum, the permittee shall sample, monitor, or analyze as applicable the process streams below on a periodic basis, pursuant to District Rules and standards:

- ➔ Fuel (produced) Gas: Analysis for gross heating value (HHV) and fuel sulfur content, *annually*.
- ➔ Fuel (produced) Gas: Analysis for H_2S by colorimetric gas detection tube and fuel sulfur content, *quarterly*.

All sampling and analyses are required to be performed according to District approved procedures and methodologies. Typically, the appropriate ASTM methods are acceptable. It is important that all sampling and analysis be traceable by chain of custody procedures.

4.6 Part 70 Engineering Review: Hazardous Air Pollutant Emissions

Total emissions of hazardous air pollutants (HAP) are computed for each emissions unit. The HAP emission factors and references are listed in Table 5.4-1. Potential HAP emissions from the facility, based on the worst-case operational scenario, are computed and listed in Table 5.4-2. The stationary source HAP emission totals are summarized in Table 5.4-3. HAP emissions have been included in the Part 70 permit solely for the purpose of any future MACT applicability determination. They do not constitute any emissions or operations limit.

5.0 Emissions

5.1 General

The facility was analyzed to determine all air-related emission sources. Emissions calculations are divided into "permitted" and "exempt" categories. District Rule 202 determines permit exempt equipment. The permitted emissions for each emissions unit is based on the equipment's potential-to-emit (as defined by Rule 102).

Section 5.2 details the permitted emissions for each emissions unit. Section 5.3 details the overall permitted emissions for the facility based on reasonable worst-case scenarios using the potential-to-emit for each emissions unit. Section 5.4 provides the federal potential to emit calculation using the definition of potential to emit used in Rule 1301. Section 5.5 provides the basis of the greenhouse gas emission estimates and Section 5.6 provides the estimated HAP emissions from the facility. Section 5.7 (if applicable) provides the estimated emissions from permit exempt equipment and also serves as the Part 70 list of insignificant emissions. The District uses a computer database to accurately track the emissions from a facility. Attachment 10.4 contains the District's documentation for the information entered into that database.

5.2 Permitted Emission Limits - Emission Units

Each emissions unit associated with the facility was analyzed to determine the potential-to-emit for the following pollutants:

- ⇒ Nitrogen Oxides (NO_x) [3]
- ⇒ Reactive Organic Compounds (ROC)
- ⇒ Carbon Monoxide (CO)
- ⇒ Sulfur Oxides (SO_x) [4]

[3] Calculated and reported as nitrogen dioxide (NO_2)

[4] Calculated and reported as sulfur dioxide (SO_2)

⇒ Particulate Matter (PM) [5]
⇒ Particulate Matter smaller than 10 microns (PM_{10})
⇒ Particulate Matter smaller than 2.5 microns ($PM_{2.5}$)
⇒ Greenhouse Gases (GHG)

Permitted emissions are calculated for both short term (daily) and long term (annual) time periods. Section 4.0 (Engineering Analysis) provides a general discussion of the basic calculation methodologies and emission factors used. The reference documentation for the specific emission calculations, as well as detailed calculation spreadsheets, may be found in Section 4 and Attachments 10.1 and 10.2 respectively. Table 5.1-1 provides the basic operating characteristics. Table 5.1-2 provides the specific emission factors. Tables 5.1-3 and 5.1-4 show the permitted short-term and permitted long-term emissions for each unit or operation. In the table, the last column indicates whether the emission limits are federally-enforceable. Those emissions limits that are federally-enforceable are indicated by the symbol "FE". Those emissions limits that are District-only enforceable are indicated by the symbol "A".

5.3 Permitted Emission Limits - Facility Totals

The total potential-to-emit for all emission units associated with this facility were analyzed. This analysis looked at the reasonable worst-case operating scenarios for each operating period. The equipment operating in each of the scenarios are presented below. Unless otherwise specified, the operating characteristics defined in Table 5.1-1 for each emission unit are assumed. Table 5.2 shows the total permitted emissions for the facility. The permitted facility emission totals have been reduced in this permit reevaluation due to the depermitting of fourteen internal combustion engines.

5.4 Part 70: Federal Potential to Emit for the Facility

Table 5.4 lists the federal Part 70 potential to emit. Coating emissions, although exempt from permit requirements, are included in the federal potential to emit calculation. This facility does not belong to one of the categories listed in 40 CFR 70.2, therefore fugitive emissions do not contribute to the federal PTE.

5.5 Greenhouse Gas Emissions Computations

On January 20, 2011, the District revised Rule 1301 to include greenhouse gases (GHGs) that are "subject to regulation" in the definition of "Regulated Air Pollutants". The facility's potential to emit has been estimated, however the greenhouse gas PTE is not an emission limit. The facility will not become subject to emission limits for GHGs unless a project triggers federal Prevention of Significant Deterioration requirements under Rule 810.

GHG emissions from combustion sources are calculated using emission factors found in Tables C-1 and C-2 of 40 CFR Part 98 and global warming potentials found in Table A-1 of 40 CFR Part 98. CO_2 equivalent emission factors are calculated for CO_2, CH_4, and N_2O individually, then summed to calculate a total CO_{2e} emission factor. Annual CO_{2e} emission totals are presented in short tons.

For natural gas combustion the emission factor is:
(53.02 kg CO_2/MMbtu) (2.2046 lb/kg) = 116.89 lb CO_2/MMBtu
(0.001 kg CH_4/MMBtu) (2.2046 lb/kg)(21 lb CO_2e/lb CH4) = 0.046 lb CO_2e/MMBtu
(0.0001 kg N_2O/MMBtu) (2.2046 lb/kg)(310 lb CO_2e/lb N_2O) = 0.068 lb CO_2e/MMBtu

[5] Calculated and reported as all particulate matter smaller than 100 μm

Total CO2e/MMBtu = 116.89 + 0.046 + 0.068 = 117.00 lb CO_2e/MMBtu

5.6 Part 70: Hazardous Air Pollutant Emissions for the Facility

Hazardous air pollutants (HAP) emission factors, for each type of emissions unit, are listed in Table 5.4-1. Potential HAP emissions, based on the worst-case scenario, are shown in Table 5.4-2. HAPs emission totals have been revised since issuance of the previous permit renewal based on revised HAPs emission factors.

5.7 Exempt Emission Sources/Part 70 Insignificant Emissions

There are no exempt emissions units associated with the Orcutt Hill internal combustion engines.

Table 5.1-1
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Operating Equipment Description

Equipment Category	District Device Number	Emission Unit	Engine Use	PCEC Unique ID #	Fuel	% Sulfur By Volume	Max BHP	BHP Limited By	BSFC BTU/bhp-hr	Operating Limitations Use (MMBTU) Hourly	Annual	Load	Max Load Schedule Hours	Day	Qtr	Year
Unmodified Rich-Burn Non-Cyclic Internal Combustion Engines																
	004390	M & M (605)	Well Pump	8488	FNG	0.0796	46.0	Nameplate	11,000	0.51	4,433	1	1	24	2,190	8,760
	004430	M & M (605)	Out of Service	8785	FNG	0.0796	46.0	Nameplate	11,000	0.51	4,433	1	1	24	2,190	8,760
	004322	M & M (605)	Out of Service	8826	FNG	0.0796	46.0	Nameplate	11,000	0.51	4,433	1	1	24	2,190	8,760
	004411	M & M (283)	Out of Service	8864	FNG	0.0796	25.0	Nameplate	10,500	0.26	2,300	1	1	24	2,190	8,760
	004399	M & M (605)	Well Pump	8874	FNG	0.0796	46.0	Nameplate	11,000	0.51	4,433	1	1	24	2,190	8,760
	004376	M & M (283)	Well Pump	8967	FNG	0.0796	25.0	Nameplate	10,500	0.26	2,300	1	1	24	2,190	8,760
	004403	M & M (283)	Newlove Tks VR	8970	FNG	0.0796	25.0	Nameplate	10,500	0.26	2,300	1	1	24	2,190	8,760
	005865	M & M (283)	Well Pump	8971	FNG	0.0796	25.0	Nameplate	10,500	0.26	2,300	1	1	24	2,190	8,760
	006473	M & M (403)	Well Pump	8996	FNG	0.0796	32.0	Nameplate	11,000	0.35	3,084	1	1	24	2,190	8,760
	004397	M & M (283)	Well Pump	9228	FNG	0.0796	25.0	Nameplate	10,500	0.26	2,300	1	1	24	2,190	8,760
	004421	M & M (605)	Well Pump	9268	FNG	0.0796	46.0	Nameplate	11,000	0.51	4,433	1	1	24	2,190	8,760
	004383	M & M (283)	Well Pump	9300	FNG	0.0796	25.0	Nameplate	10,500	0.26	2,300	1	1	24	2,190	8,760
	004394	M & M (283)	Well Pump	9534	FNG	0.0796	25.0	Nameplate	10,500	0.26	2,300	1	1	24	2,190	8,760
	101250	M & M (403)	Out of Service	9602	FNG	0.0796	32.0	Nameplate	11,000	0.35	3,084	1	1	24	2,190	8,760
	004365	M & M (283)	Well Pump	9603	FNG	0.0796	25.0	Nameplate	10,500	0.26	2,300	1	1	24	2,190	8,760
	004404	Leroi (226)	Well Pump	9748	FNG	0.0796	23.0	Nameplate	9,100	0.21	1,833	1	1	24	2,190	8,760
	004377	M & M (283)	Well Pump	9904	FNG	0.0796	25.0	Nameplate	10,500	0.26	2,300	1	1	24	2,190	8,760
	101251	Leroi (226)	Out of Service	9994	FNG	0.0796	23.0	Nameplate	9,100	0.21	1,833	1	1	24	2,190	8,760
	101252	M & M (425)	Out of Service	10373	FNG	0.0796	39.0	Nameplate	10,500	0.41	3,587	1	1	24	2,190	8,760
	004381	M & M (425)	Well Pump	10498	FNG	0.0796	39.0	Nameplate	10,500	0.41	3,587	1	1	24	2,190	8,760
	004420	Leroi (226)	Well Pump	10757	FNG	0.0796	23.0	Nameplate	9,100	0.21	1,833	1	1	24	2,190	8,760
	004386	M & M (425)	Well Pump	10775	FNG	0.0796	39.0	Nameplate	10,500	0.41	3,587	1	1	24	2,190	8,760
	004392	M & M (425)	Well Pump	10786	FNG	0.0796	39.0	Nameplate	10,500	0.41	3,587	1	1	24	2,190	8,760
	004413	M & M (605)	Well Pump	10905	FNG	0.0796	46.0	Nameplate	11,000	0.51	4,433	1	1	24	2,190	8,760
	004379	Leroi (226)	Inst Air Comp	10986	FNG	0.0796	23.0	Nameplate	9,100	0.21	1,833	1	1	24	2,190	8,760
	004419	M & M (283)	Well Pump	11105	FNG	0.0796	25.0	Nameplate	10,500	0.26	2,300	1	1	24	2,190	8,760
	004401	M & M (283)	Well Pump	11330	FNG	0.0796	25.0	Nameplate	10,500	0.26	2,300	1	1	24	2,190	8,760
	008779	M & M (605)	Well Pump	11386	FNG	0.0796	46.0	Nameplate	11,000	0.51	4,433	1	1	24	2,190	8,760
	004418	M & M (425)	Well Pump	11609	FNG	0.0796	39.0	Nameplate	10,500	0.41	3,587	1	1	24	2,190	8,760
	004398	M & M (283)	Well Pump	11841	FNG	0.0796	25.0	Nameplate	10,500	0.26	2,300	1	1	24	2,190	8,760

Table 5.1-1 (cont.)
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Operating Equipment Description

Equipment Category	District Device Number	Emission Unit	Engine Use	PCEC Unique ID #	Fuel	% Sulfur By Volume	Max BHP	BHP Limited By	BSFC BTU/bhp-hr	Operating Limitations Use (MMBTU) Hourly	Annual	Load	Max Load Schedule Hours	Day	Qtr	Year
Unmodified Rich-Burn Non-Cyclic Internal Combustion Engines																
	004384	M & M (283)	Well Pump	11842	FNG	0.0796	25.0	Nameplate	10,500	0.26	2,300	1	1	24	2,190	8,760
	008996	M & M (425)	Well Pump	11883	FNG	0.0796	39.0	Nameplate	10,500	0.41	3,587	1	1	24	2,190	8,760
	008780	M & M (605)	Well Pump	11889	FNG	0.0796	46.0	Nameplate	11,000	0.51	4,433	1	1	24	2,190	8,760
	004382	M & M (HEB)	Well Pump	11931	FNG	0.0796	46.0	Nameplate	10,500	0.48	4,231	1	1	24	2,190	8,760
	004380	M & M (425)	Well Pump	11971	FNG	0.0796	39.0	Nameplate	10,500	0.41	3,587	1	1	24	2,190	8,760
	004396	M & M (605)	Well Pump	11999	FNG	0.0796	46.0	Nameplate	11,000	0.51	4,433	1	1	24	2,190	8,760
	004412	M & M (605)	Well Pump	12004	FNG	0.0796	46.0	Nameplate	11,000	0.51	4,433	1	1	24	2,190	8,760
	004378	International (153)	Port Air Comp	12023	FNG	0.0796	28.0	Nameplate	9,100	0.25	2,232	1	1	24	2,190	8,760
	008781	M & M (605)	Well Pump	12034	FNG	0.0796	46.0	Nameplate	11,000	0.51	4,433	1	1	24	2,190	8,760
	004391	M & M (425)	Well Pump	12045	FNG	0.0796	39.0	Nameplate	10,500	0.41	3,587	1	1	24	2,190	8,760
	004427	M & M (605)	Well Pump	12122	FNG	0.0796	46.0	Nameplate	11,000	0.51	4,433	1	1	24	2,190	8,760
	004400	M & M (605)	Well Pump	12133	FNG	0.0796	46.0	Nameplate	11,000	0.51	4,433	1	1	24	2,190	8,760
	004425	M & M (283)	Well Pump	12166	FNG	0.0796	25.0	Nameplate	10,500	0.26	2,300	1	1	24	2,190	8,760
	107312	LeRoi	Jkt Wtr Fan	9270	FNG	0.0796	23.0	Nameplate	10,500	0.24	242	1	1	24	1,000	1,000
Limited Use Rich-Burn Non-Cyclic Uncontrolled Internal Combustion Engines																
	004306	M & M (800T)	Pinal Inj	12195	FNG	0.0796	175.0	Nameplate	8,150	1.43	285	1	1	24	200	200
	004305	M & M (800T)	Newlove Tran 2	12205	FNG	0.0796	175.0	Nameplate	8,150	1.43	285	1	1	24	200	200
Derated Rich-Burn Non-Cyclic Internal Combustion Engines																
	004359	Waukesha (145)	Well Pump	9553	FNG	0.0796	49.5	Orifice Plate @ 0.922"	10,000	0.50	4,336	1	1	24	2,190	8,760
	101256	Waukesha (145)	Out of Service	9818	FNG	0.0796	49.5	Orifice Plate @ 0.922"	10,000	0.50	4,336	1	1	24	2,190	8,760
	008184	Waukesha (145)	Well Pump	10215	FNG	0.0796	49.5	Orifice Plate @ 0.922"	10,000	0.50	4,336	1	1	24	2,190	8,760
	004307	Waukesha (WAK)	Well Pump	10939	FNG	0.0796	49.6	Orifice Plate @ 0.98"	9,100	0.45	3,954	1	1	24	2,190	8,760
	008762	Waukesha (WAK)	1Cal Coast Inj	11010	FNG	0.0796	49.6	Orifice Plate @ 0.98"	9,100	0.45	3,954	1	1	24	2,190	8,760
	008763	Waukesha (WAK)	Well Pump	11033	FNG	0.0796	49.6	Orifice Plate @ 0.98"	9,100	0.45	3,954	1	1	24	2,190	8,760
	004331	Waukesha (817)	Newlove Inj	11143	FNG	0.0796	49.5	Orifice Plate @ 0.922"	10,000	0.50	4,336	1	1	24	2,190	8,760

Table 5.1-1 (cont.)
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Operating Equipment Description

Equipment Category	District Device Number	Emission Unit	Engine Use	PCEC Unique ID #	Fuel	% Sulfur By Volume	Max BHP	BHP Limited By	BSFC BTU/bhp-hr	Operating Limitations Use (MMBTU) Hourly	Annual	Load	Max Load Schedule Hours	Day	Qtr	Year
Derated Rich-Burn Non-Cyclic Internal Combustion Engines																
	004338	Waukesha (145)	Well Pump	11480	FNG	0.0796	49.5	Orifice Plate @ 0.922"	10,000	0.50	4,336	1	1	24	2,190	8,760
	004336	Waukesha (145)	Well Pump	11484	FNG	0.0796	49.5	Orifice Plate @ 0.922"	10,000	0.50	4,336	1	1	24	2,190	8,760
	004367	Waukesha (145)	Well Pump	11489	FNG	0.0796	49.5	Orifice Plate @ 0.922"	10,000	0.50	4,336	1	1	24	2,190	8,760
	008764	Waukesha (145)	Out of Service	11499	FNG	0.0796	49.5	Orifice Plate @ 0.922"	10,000	0.50	4,336	1	1	24	2,190	8,760
	004355	Waukesha (145)	Well Pump	11505	FNG	0.0796	49.5	Orifice Plate @ 0.922"	10,000	0.50	4,336	1	1	24	2,190	8,760
	004372	Waukesha (817)	Well Pump	11511	FNG	0.0796	49.5	Orifice Plate @ 0.922"	10,000	0.50	4,336	1	1	24	2,190	8,760
	004342	Waukesha (145)	Well Pump	11513	FNG	0.0796	49.5	Orifice Plate @ 0.922"	10,000	0.50	4,336	1	1	24	2,190	8,760
	004351	M & M (800)	Well Pump	11523	FNG	0.0796	48.0	Orifice Plate @ 0.85"	8,150	0.39	3,427	1	1	24	2,190	8,760
	004402	Waukesha (145)	Cal Coast Inj	11615	FNG	0.0796	49.5	Orifice Plate @ 0.922"	10,000	0.50	4,336	1	1	24	2,190	8,760
	004344	M & M (800)	Well Pump	11667	FNG	0.0796	48.0	Orifice Plate @ 0.85"	8,150	0.39	3,427	1	1	24	2,190	8,760

Table 5.1-1 (cont.)
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Operating Equipment Description

Equipment Category	District Device Number	Emission Unit	Engine Use	PCEC Unique ID #	Fuel	% Sulfur By Volume	Max BHP	BHP Limited By	BSFC BTU/bhp-hr	Operating Limitations Use (MMBTU) Hourly	Annual	Load	Max Load Schedule Hours	Day	Qtr	Year
Derated Rich-Burn Non-Cyclic Internal Combustion Engines																
	008998	Waukesha (145)	Well Pump	11712	FNG	0.0796	49.5	Orifice Plate @ 0.922"	10,000	0.50	4,336	1	1	24	2,190	8,760
	004315	Waukesha (195)	Out of Service	11763	FNG	0.0796	41.8	Orifice Plate @ 1.65"	9,100	0.38	3,332	1	1	24	2,190	8,760
*	008783	M & M (336)	Well Pump	11830	FNG	0.0796	46.3	Orifice Plate @ 1.30"	8,360	0.39	3,391	1	1	24	2,190	8,760
	008766	Waukesha (817)	Out of Service	11975	FNG	0.0796	49.5	Orifice Plate @ 0.922"	10,000	0.50	4,336	1	1	24	2,190	8,760
	004324	Waukesha (145)	Well Pump	11983	FNG	0.0796	49.5	Orifice Plate @ 0.922"	10,000	0.50	4,336	1	1	24	2,190	8,760
*	008767	Waukesha (WAK)	Cal Coast Inj	12066	FNG	0.0796	49.6	Orifice Plate @ 0.98"	9,100	0.45	3,954	1	1	24	2,190	8,760
	008784	M & M (800)	Well Pump	12145	FNG	0.0796	48.0	Orifice Plate @ 0.85"	8,150	0.39	3,427	1	1	24	2,190	8,760
	004356	M & M (800)	Well Pump	12151	FNG	0.0796	48.0	Orifice Plate @ 0.85"	8,150	0.39	3,427	1	1	24	2,190	8,760
*	004371	M & M (800)	Well Pump	12155	FNG	0.0796	48.0	Orifice Plate @ 0.85"	8,150	0.39	3,427	1	1	24	2,190	8,760
	004345	M & M (800)	Well Pump	12159	FNG	0.0796	48.0	Orifice Plate @ 0.85"	8,150	0.39	3,427	1	1	24	2,190	8,760
*	004353	M & M (800)	Well Pump	12161	FNG	0.0796	48.0	Orifice Plate @ 0.85"	8,150	0.39	3,427	1	1	24	2,190	8,760
	005306	Waukesha (WAK)	Cal Coast Inj	12168	FNG	0.0796	49.6	Orifice Plate @ 0.98"	9,100	0.45	3,954	1	1	24	2,190	8,760
Limited Use Lean-Burn, Two-Stroke, Non-Cyclic Internal Combustion Engine																
	004434	Clark / RA-4	Comp Plant	19766	FNG	0.0796	400.0	Nameplate	13,750	5.50	1,100	1	1	24	200	200
Controlled Limited Use Rich-Burn, Non-Cyclic Internal Combustion Engine																
	004435	Waukesha (2475)	Fox Inj	12163	FNG	0.0796	301.0	Nameplate	9,100	2.74	548	1	1	24	200	200
Tier 3 Diesel Fired Internal Combustion Engine																
	113723	John Deere (4024HF)	Generator	TBD	Diesel	0.0796	80	Nameplate	--	--	--	1	1	2	50	50

Table 5.1-2
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Emission Factors

Equipment Category	District Device Number	Emission Unit	PCEC ID #	NOx	ROC	CO	SOx	PM	$PM_{2.5/10}$	GHG	E F Units	References
Unmodified Rich-Burn Non-Cyclic Internal Combustion Engines												
	004390	M & M (605)	8488	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004430	M & M (605)	8785	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004322	M & M (605)	8826	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004411	M & M (283)	8864	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004399	M & M (605)	8874	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	
	004376	M & M (283)	8967	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004403	M & M (283)	8970	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	005865	M & M (283)	8971	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	006473	M & M (403)	8996	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004397	M & M (283)	9228	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004421	M & M (605)	9268	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004383	M & M (283)	9300	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004394	M & M (283)	9534	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	101250	M & M (403)	9602	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004365	M & M (283)	9603	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004404	Leroi (226)	9748	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004377	M & M (283)	9904	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	101251	Leroi (226)	9994	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	101252	M & M (425)	10373	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004381	M & M (425)	10498	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004420	Leroi (226)	10757	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004386	M & M (425)	10775	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004392	M & M (425)	10786	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004413	M & M (605)	10905	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004379	Leroi (226)	10986	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004419	M & M (283)	11105	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004401	M & M (283)	11330	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	008779	M & M (605)	11386	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004418	M & M (425)	11609	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004398	M & M (283)	11841	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A

Table 5.1-2 (cont.)
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Emission Factors

Equipment Category	District Device Number	Emission Unit	PCEC ID #	NOx	ROC	CO	SOx	PM	$PM_{2.5/10}$	GHG	E F Units	References
Unmodified Rich-Burn Non-Cyclic Internal Combustion Engines												
	004384	M & M (283)	11842	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	008996	M & M (425)	11883	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	008780	M & M (605)	11889	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004382	M & M (HEB)	11931	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004380	M & M (425)	11971	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004396	M & M (605)	11999	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004412	M & M (605)	12004	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004378	International (153)	12023	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	008781	M & M (605)	12034	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004391	M & M (425)	12045	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004427	M & M (605)	12122	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004400	M & M (605)	12133	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004425	M & M (283)	12166	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	107312	LeRoi	9270	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
Limited Use Rich-Burn Non-Cyclic Uncontrolled Internal Combustion Engines												
	004306	M & M (800T)	12195	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004305	M & M (800T)	12205	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
Derated Rich-Burn Non-Cyclic Internal Combustion Engines												
	004359	Waukesha (145)	9553	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	101256	Waukesha (145)	9818	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	008184	Waukesha (145)	10215	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004307	Waukesha (WAK)	10939	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	008762	Waukesha (WAK)	11010	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	008763	Waukesha (WAK)	11033	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004331	Waukesha (817)	11143	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A

Table 5.1-2 (cont.)
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Emission Factors

Equipment Category	District Device Number	Emission Unit	PCEC ID #	NOx	ROC	CO	SOx	PM	$PM_{2.5/10}$	GHG	E F Units	References
Derated Rich-Burn Non-Cyclic Internal Combustion Engines												
	004338	Waukesha (145)	11480	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004336	Waukesha (145)	11484	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004367	Waukesha (145)	11489	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	008764	Waukesha (145)	11499	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004355	Waukesha (145)	11505	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004372	Waukesha (817)	11511	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004342	Waukesha (145)	11513	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004351	M & M (800)	11523	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A A
	004402	Waukesha (145)	11615	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004344	M & M (800)	11667	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A

Table 5.1-2 (cont.)
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Emission Factors

Equipment Category	District Device Number	Emission Unit	PCEC ID #	NOx	ROC	CO	SOx	PM	$PM_{2.5/10}$	GHG	E F Units	References
Derated Rich-Burn Non-Cyclic Internal Combustion Engines												
	004315	Waukesha (195)	11763	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	008783	M & M (336)	11830	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	008766	Waukesha (817)	11975	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004324	Waukesha (145)	11983	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	008767	Waukesha (WAK)	12066	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	008784	M & M (800)	12145	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004356	M & M (800)	12151	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004371	M & M (800)	12155	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004345	M & M (800)	12159	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	004353	M & M (800)	12161	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
	005306	Waukesha (WAK)	12168	1.905	0.103	1.600	0.100	0.010	0.010	117.000	lb/MMBtu	A
Limited Use Lean-Burn, Two-Stroke, Non-Cyclic Internal Combustion Engine												
	004434	Clark / RA-4	19766	1.905	0.103	0.400	0.100	0.046	0.046	117.000	lb/MMBtu	A
Controlled Limited Use Rich-Burn, Non-Cyclic Internal Combustion Engine												
	004435	Waukesha (2475)	12163	0.190	0.830	10.100	0.100	0.010	0.010	117.000	lb/MMBtu	A
Tier 3 Diesel Fired Internal Combustion Engine												
	113723	John Deere (4024HF)	TBD	2.80	0.20	3.70	0.01	0.15	0.15	159.070	lb/MMBtu	A

Notes:
1. Emission factors from SBCAPCD Permit Guideline Document: "Reciprocating Gas-Fired Internal Combustion Engines"
2. Field gas high heating value = 1,350 Btu/scf

Table 5.1-3
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Hourly and Daily Emissions

Equipment Category	District Device Number	Emission Unit	PCEC ID #	NOx		ROC		CO		SOx		PM		$PM_{2.5/10}$		GHG		Enforceability	
				lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	Type	Basis
Unmodified Rich-Burn Non-Cyclic Internal Combustion Engines																			
	004390	M & M (605)	8488	0.96	23.13	0.05	1.25	0.81	19.43	0.05	1.21	0.01	0.12	0.01	0.12	59.20	1420.85		
	004430	M & M (605)	8785	0.96	23.13	0.05	1.25	0.81	19.43	0.05	1.21	0.01	0.12	0.01	0.12	59.20	1420.85	A	--
	004322	M & M (605)	8826	0.96	23.13	0.05	1.25	0.81	19.43	0.05	1.21	0.01	0.12	0.01	0.12	59.20	1420.85	A	--
	004411	M & M (283)	8864	0.50	12.00	0.03	0.65	0.42	10.08	0.03	0.63	0.00	0.06	0.00	0.06	30.71	737.10	A	--
	004399	M & M (605)	8874	0.96	23.13	0.05	1.25	0.81	19.43	0.05	1.21	0.01	0.12	0.01	0.12	59.20	1420.85	A	--
	004376	M & M (283)	8967	0.50	12.00	0.03	0.65	0.42	10.08	0.03	0.63	0.00	0.06	0.00	0.06	30.71	737.10	A	--
	004403	M & M (283)	8970	0.50	12.00	0.03	0.65	0.42	10.08	0.03	0.63	0.00	0.06	0.00	0.06	30.71	737.10	A	--
	005865	M & M (283)	8971	0.50	12.00	0.03	0.65	0.42	10.08	0.03	0.63	0.00	0.06	0.00	0.06	30.71	737.10	A	--
	006473	M & M (403)	8996	0.67	16.09	0.04	0.87	0.56	13.52	0.04	0.84	0.00	0.08	0.00	0.08	41.18	988.42	A	--
	004397	M & M (283)	9228	0.50	12.00	0.03	0.65	0.42	10.08	0.03	0.63	0.00	0.06	0.00	0.06	30.71	737.10	A	--
	004421	M & M (605)	9268	0.96	23.13	0.05	1.25	0.81	19.43	0.05	1.21	0.01	0.12	0.01	0.12	59.20	1420.85	A	--
	004383	M & M (283)	9300	0.50	12.00	0.03	0.65	0.42	10.08	0.03	0.63	0.00	0.06	0.00	0.06	30.71	737.10	A	--
	004394	M & M (283)	9534	0.50	12.00	0.03	0.65	0.42	10.08	0.03	0.63	0.00	0.06	0.00	0.06	30.71	737.10	A	--
	101250	M & M (403)	9602	0.67	16.09	0.04	0.87	0.56	13.52	0.04	0.84	0.00	0.08	0.00	0.08	41.18	988.42	A	--
	004365	M & M (283)	9603	0.50	12.00	0.03	0.65	0.42	10.08	0.03	0.63	0.00	0.06	0.00	0.06	30.71	737.10	A	--
	004404	Leroi (226)	9748	0.40	9.57	0.02	0.52	0.33	8.04	0.02	0.50	0.00	0.05	0.00	0.05	24.49	587.71	A	--
	004377	M & M (283)	9904	0.50	12.00	0.03	0.65	0.42	10.08	0.03	0.63	0.00	0.06	0.00	0.06	30.71	737.10	A	--
	101251	Leroi (226)	9994	0.40	9.57	0.02	0.52	0.33	8.04	0.02	0.50	0.00	0.05	0.00	0.05	24.49	587.71	A	--
	101252	M & M (425)	10373	0.78	18.72	0.04	1.01	0.66	15.72	0.04	0.98	0.00	0.10	0.00	0.10	47.91	1149.88	A	--
	004381	M & M (425)	10498	0.78	18.72	0.04	1.01	0.66	15.72	0.04	0.98	0.00	0.10	0.00	0.10	47.91	1149.88	A	--
	004420	Leroi (226)	10757	0.40	9.57	0.02	0.52	0.33	8.04	0.02	0.50	0.00	0.05	0.00	0.05	24.49	587.71	A	--
	004386	M & M (425)	10775	0.78	18.72	0.04	1.01	0.66	15.72	0.04	0.98	0.00	0.10	0.00	0.10	47.91	1149.88	A	--
	004392	M & M (425)	10786	0.78	18.72	0.04	1.01	0.66	15.72	0.04	0.98	0.00	0.10	0.00	0.10	47.91	1149.88	A	--
	004413	M & M (605)	10905	0.96	23.13	0.05	1.25	0.81	19.43	0.05	1.21	0.01	0.12	0.01	0.12	59.20	1420.85	A	--
	004379	Leroi (226)	10986	0.40	9.57	0.02	0.52	0.33	8.04	0.02	0.50	0.00	0.05	0.00	0.05	24.49	587.71	A	--
	004419	M & M (283)	11105	0.50	12.00	0.03	0.65	0.42	10.08	0.03	0.63	0.00	0.06	0.00	0.06	30.71	737.10	A	--
	004401	M & M (283)	11330	0.50	12.00	0.03	0.65	0.42	10.08	0.03	0.63	0.00	0.06	0.00	0.06	30.71	737.10	A	--
	008779	M & M (605)	11386	0.96	23.13	0.05	1.25	0.81	19.43	0.05	1.21	0.01	0.12	0.01	0.12	59.20	1420.85	A	--
	004418	M & M (425)	11609	0.78	18.72	0.04	1.01	0.66	15.72	0.04	0.98	0.00	0.10	0.00	0.10	47.91	1149.88	A	--
	004398	M & M (283)	11841	0.50	12.00	0.03	0.65	0.42	10.08	0.03	0.63	0.00	0.06	0.00	0.06	30.71	737.10	A	--

Table 5.1-3 (cont.)
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Hourly and Daily Emissions

Equipment Category	District Device Number	Emission Unit	PCEC ID #	NOx		ROC		CO		SOx		PM		$PM_{2.5/10}$		GHG		Enforcebility	
				lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	Type	Basis
Unmodified Rich-Burn Non-Cyclic Internal Combustion Engines																			
	004384	M & M (283)	11842	0.50	12.00	0.03	0.65	0.42	10.08	0.03	0.63	0.00	0.06	0.00	0.06	30.71	737.10	A	–
	008996	M & M (425)	11883	0.78	18.72	0.04	1.01	0.66	15.72	0.04	0.98	0.00	0.10	0.00	0.10	47.91	1149.88	A	–
	008780	M & M (605)	11889	0.96	23.13	0.05	1.25	0.81	19.43	0.05	1.21	0.01	0.12	0.01	0.12	59.20	1420.85	A	–
	004382	M & M (HEB)	11931	0.92	22.08	0.05	1.19	0.77	18.55	0.05	1.16	0.00	0.12	0.00	0.12	56.51	1356.26	A	–
	004380	M & M (425)	11971	0.78	18.72	0.04	1.01	0.66	15.72	0.04	0.98	0.00	0.10	0.00	0.10	47.91	1149.88	A	–
	004396	M & M (605)	11999	0.96	23.13	0.05	1.25	0.81	19.43	0.05	1.21	0.01	0.12	0.01	0.12	59.20	1420.85	A	–
	004412	M & M (605)	12004	0.96	23.13	0.05	1.25	0.81	19.43	0.05	1.21	0.01	0.12	0.01	0.12	59.20	1420.85	A	–
	004378	International (153)	12023	0.49	11.65	0.03	0.63	0.41	9.78	0.03	0.61	0.00	0.06	0.00	0.06	29.81	715.48	A	–
	008781	M & M (605)	12034	0.96	23.13	0.05	1.25	0.81	19.43	0.05	1.21	0.01	0.12	0.01	0.12	59.20	1420.85	A	–
	004391	M & M (425)	12045	0.78	18.72	0.04	1.01	0.66	15.72	0.04	0.98	0.00	0.10	0.00	0.10	47.91	1149.88	A	–
	004427	M & M (605)	12122	0.96	23.13	0.05	1.25	0.81	19.43	0.05	1.21	0.01	0.12	0.01	0.12	59.20	1420.85	A	–
	004400	M & M (605)	12133	0.96	23.13	0.05	1.25	0.81	19.43	0.05	1.21	0.01	0.12	0.01	0.12	59.20	1420.85	A	–
	004425	M & M (283)	12166	0.50	12.00	0.03	0.65	0.42	10.08	0.03	0.63	0.00	0.06	0.00	0.06	30.71	737.10	A	–
	107312	LeRoi	9270	0.46	11.04	0.02	0.60	0.39	9.27	0.02	0.58	0.00	0.06	0.00	0.06	28.26	678.13	FE	–
Limited Use Rich-Burn Non-Cyclic Uncontrolled Internal Combustion Engines																			
	004306	M & M (800T)	12195	2.72	65.21	0.15	3.53	2.28	54.77	0.14	3.41	0.01	0.34	0.01	0.34	166.87	4004.91	A	–
	004305	M & M (800T)	12205	2.72	65.21	0.15	3.53	2.28	54.77	0.14	3.41	0.01	0.34	0.01	0.34	166.87	4004.91	A	–
Derated Rich-Burn Non-Cyclic Internal Combustion Engines																			
	004359	Waukesha (145)	9553	0.94	22.63	0.05	1.22	0.79	19.01	0.05	1.18	0.00	0.12	0.00	0.12	57.92	1389.96	A	–
	101256	Waukesha (145)	9818	0.94	22.63	0.05	1.22	0.79	19.01	0.05	1.18	0.00	0.12	0.00	0.12	57.92	1389.96	A	–
	008184	Waukesha (145)	10215	0.94	22.63	0.05	1.22	0.79	19.01	0.05	1.18	0.00	0.12	0.00	0.12	57.92	1389.96	A	–
	004307	Waukesha (WAK)	10939	0.86	20.64	0.05	1.12	0.72	17.33	0.04	1.08	0.00	0.11	0.00	0.11	52.81	1267.42	A	–
	008762	Waukesha (WAK)	11010	0.86	20.64	0.05	1.12	0.72	17.33	0.04	1.08	0.00	0.11	0.00	0.11	52.81	1267.42	A	–
	008763	Waukesha (WAK)	11033	0.86	20.64	0.05	1.12	0.72	17.33	0.04	1.08	0.00	0.11	0.00	0.11	52.81	1267.42	A	–
	004331	Waukesha (817)	11143	0.94	22.63	0.05	1.22	0.79	19.01	0.05	1.18	0.00	0.12	0.00	0.12	57.92	1389.96	A	–

Table 5.1-3 (cont.)
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Hourly and Daily Emissions

Equipment Category	District Device Number	Emission Unit	PCEC ID #	NOx		ROC		CO		SOx		PM		$PM_{2.5/10}$		GHG		Enforceability	
				lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	Type	Basis
Derated Rich-Burn Non-Cyclic Internal Combustion Engines																			
	004338	Waukesha (145)	11480	0.94	22.63	0.05	1.22	0.79	19.01	0.05	1.18	0.00	0.12	0.00	0.12	57.92	1389.96	A	–
	004336	Waukesha (145)	11484	0.94	22.63	0.05	1.22	0.79	19.01	0.05	1.18	0.00	0.12	0.00	0.12	57.92	1389.96	A	–
	004367	Waukesha (145)	11489	0.94	22.63	0.05	1.22	0.79	19.01	0.05	1.18	0.00	0.12	0.00	0.12	57.92	1389.96	A	–
	008764	Waukesha (145)	11499	0.94	22.63	0.05	1.22	0.79	19.01	0.05	1.18	0.00	0.12	0.00	0.12	57.92	1389.96	A	–
	004355	Waukesha (145)	11505	0.94	22.63	0.05	1.22	0.79	19.01	0.05	1.18	0.00	0.12	0.00	0.12	57.92	1389.96	A	–
	004372	Waukesha (817)	11511	0.94	22.63	0.05	1.22	0.79	19.01	0.05	1.18	0.00	0.12	0.00	0.12	57.92	1389.96	A	–
	004342	Waukesha (145)	11513	0.94	22.63	0.05	1.22	0.79	19.01	0.05	1.18	0.00	0.12	0.00	0.12	57.92	1389.96	A	–
	004351	M & M (800)	11523	0.75	17.89	0.04	0.97	0.63	15.02	0.04	0.94	0.00	0.09	0.00	0.09	45.77	1098.49	A	–
	004402	Waukesha (145)	11515	0.94	22.63	0.05	1.22	0.79	19.01	0.05	1.18	0.00	0.12	0.00	0.12	57.92	1389.96	A	–
	004344	M & M (800)	11667	0.75	17.89	0.04	0.97	0.63	15.02	0.04	0.94	0.00	0.09	0.00	0.09	45.77	1098.49	A	

Table 5.1-3 (cont.)
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Hourly and Daily Emissions

Equipment Category	District Device Number	Emission Unit	PCEC ID #	NOx		ROC		CO		SOx		PM		$PM_{2.5/10}$		GHG		Enforcebility	
				lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	Type	Basis
Derated Rich-Burn Non-Cyclic Internal Combustion Engines																			
	004315	Waukesha (195)	11763	0.72	17.39	0.04	0.94	0.61	14.61	0.04	0.91	0.00	0.09	0.00	0.09	44.50	1068.11	A	--
	008783	M & M (336)	11830	0.74	17.70	0.04	0.96	0.62	14.86	0.04	0.93	0.00	0.09	0.00	0.09	45.29	1086.89	A	--
	008766	Waukesha (817)	11975	0.94	22.63	0.05	1.22	0.79	19.01	0.05	1.18	0.00	0.12	0.00	0.12	57.92	1389.96	A	--
	004324	Waukesha (145)	11983	0.94	22.63	0.05	1.22	0.79	19.01	0.05	1.18	0.00	0.12	0.00	0.12	57.92	1389.96	A	--
	008767	Waukesha (WAK)	12066	0.86	20.64	0.05	1.12	0.72	17.33	0.04	1.08	0.00	0.11	0.00	0.11	52.81	1267.42	A	--
	008784	M & M (800)	12145	0.75	17.89	0.04	0.97	0.63	15.02	0.04	0.94	0.00	0.09	0.00	0.09	45.77	1098.49	A	--
	004356	M & M (800)	12151	0.75	17.89	0.04	0.97	0.63	15.02	0.04	0.94	0.00	0.09	0.00	0.09	45.77	1098.49	A	--
	004371	M & M (800)	12155	0.75	17.89	0.04	0.97	0.63	15.02	0.04	0.94	0.00	0.09	0.00	0.09	45.77	1098.49	A	--
	004345	M & M (800)	12159	0.75	17.89	0.04	0.97	0.63	15.02	0.04	0.94	0.00	0.09	0.00	0.09	45.77	1098.49	A	--
	004353	M & M (800)	12161	0.75	17.89	0.04	0.97	0.63	15.02	0.04	0.94	0.00	0.09	0.00	0.09	45.77	1098.49	A	
	005306	Waukesha (WAK)	12168	0.86	20.64	0.05	1.12	0.72	17.33	0.04	1.08	0.00	0.11	0.00	0.11	52.81	1267.42	A	--
Limited Use Lean-Burn, Two-Stroke, Non-Cyclic Internal Combustion Engine																			
	004434	Clark / RA-4	19766	10.48	251.46	0.57	13.60	2.20	52.80	0.55	13.15	0.25	6.07	0.25	6.07	643.50	15444.00	FE	ATC 9119
ControlledLimited Use Rich-Burn, Non-Cyclic Internal Combustion Engine																			
	004435	Waukesha (2475)	12163	0.52	12.49	2.27	54.56	27.66	663.96	0.27	6.55	0.03	0.66	0.03	0.66	320.47	7691.39	FE	ATC 8955
Tier 3 Diesel Fired Internal Combustion Engine																			
	113723	John Deere (4024HF)	TBD	--	0.99	--	0.07	--	1.31	--	0.01	--	0.05	--	0.05			A	PTO 13592

Table 5.1-4
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Quarterly and Annual Emissions

Equipment Category	District Device Number	Emission Unit	PCEC ID #	NOx		ROC		CO		SOx		PM		$PM_{2.5/10}$		GHG		Enforcebility	
				TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	Type	Basis
Unmodified Rich-Burn Non-Cyclic Internal Combustion Engines																			
	004390	M & M (605)	8488	1.06	4.22	0.06	0.23	0.89	3.55	0.06	0.22	0.01	0.02	0.01	0.02	64.83	259.30	A	
	004430	M & M (605)	8785	1.06	4.22	0.06	0.23	0.89	3.55	0.06	0.22	0.01	0.02	0.01	0.02	64.83	259.30	A	--
	004322	M & M (605)	8826	1.06	4.22	0.06	0.23	0.89	3.55	0.06	0.22	0.01	0.02	0.01	0.02	64.83	259.30	A	--
	004411	M & M (283)	8864	0.55	2.19	0.03	0.12	0.46	1.84	0.03	0.11	0.00	0.01	0.00	0.01	33.63	134.52	A	--
	004399	M & M (605)	8874	1.06	4.22	0.06	0.23	0.89	3.55	0.06	0.22	0.01	0.02	0.01	0.02	64.83	259.30	A	--
	004376	M & M (283)	8967	0.55	2.19	0.03	0.12	0.46	1.84	0.03	0.11	0.00	0.01	0.00	0.01	33.63	134.52	A	--
	004403	M & M (283)	8970	0.55	2.19	0.03	0.12	0.46	1.84	0.03	0.11	0.00	0.01	0.00	0.01	33.63	134.52	A	--
	005865	M & M (283)	8971	0.55	2.19	0.03	0.12	0.46	1.84	0.03	0.11	0.00	0.01	0.00	0.01	33.63	134.52	A	--
	006473	M & M (403)	8996	0.73	2.94	0.04	0.16	0.62	2.47	0.04	0.15	0.00	0.02	0.00	0.02	45.10	180.39	A	--
	004397	M & M (283)	9228	0.55	2.19	0.03	0.12	0.46	1.84	0.03	0.11	0.00	0.01	0.00	0.01	33.63	134.52	A	--
	004421	M & M (605)	9268	1.06	4.22	0.06	0.23	0.89	3.55	0.06	0.22	0.01	0.02	0.01	0.02	64.83	259.30	A	--
	004383	M & M (283)	9300	0.55	2.19	0.03	0.12	0.46	1.84	0.03	0.11	0.00	0.01	0.00	0.01	33.63	134.52	A	--
	004394	M & M (283)	9534	0.55	2.19	0.03	0.12	0.46	1.84	0.03	0.11	0.00	0.01	0.00	0.01	33.63	134.52	A	--
	101250	M & M (403)	9602	0.73	2.94	0.04	0.16	0.62	2.47	0.04	0.15	0.00	0.02	0.00	0.02	45.10	180.39	A	--
	004365	M & M (283)	9603	0.55	2.19	0.03	0.12	0.46	1.84	0.03	0.11	0.00	0.01	0.00	0.01	33.63	134.52	A	--
	004404	Leroi (226)	9748	0.44	1.75	0.02	0.09	0.37	1.47	0.02	0.09	0.00	0.01	0.00	0.01	26.81	107.26	A	--
	004377	M & M (283)	9904	0.55	2.19	0.03	0.12	0.46	1.84	0.03	0.11	0.00	0.01	0.00	0.01	33.63	134.52	A	--
	101251	Leroi (226)	9994	0.44	1.75	0.02	0.09	0.37	1.47	0.02	0.09	0.00	0.01	0.00	0.01	26.81	107.26	A	--
	101252	M & M (425)	10373	0.85	3.42	0.05	0.18	0.72	2.87	0.04	0.18	0.00	0.02	0.00	0.02	52.46	209.85	A	--
	004381	M & M (425)	10498	0.85	3.42	0.05	0.18	0.72	2.87	0.04	0.18	0.00	0.02	0.00	0.02	52.46	209.85	A	--
	004420	Leroi (226)	10757	0.44	1.75	0.02	0.09	0.37	1.47	0.02	0.09	0.00	0.01	0.00	0.01	26.81	107.26	A	--
	004386	M & M (425)	10775	0.85	3.42	0.05	0.18	0.72	2.87	0.04	0.18	0.00	0.02	0.00	0.02	52.46	209.85	A	--
	004392	M & M (425)	10786	0.85	3.42	0.05	0.18	0.72	2.87	0.04	0.18	0.00	0.02	0.00	0.02	52.46	209.85	A	--
	004413	M & M (605)	10905	1.06	4.22	0.06	0.23	0.89	3.55	0.06	0.22	0.01	0.02	0.01	0.02	64.83	259.30	A	--
	004379	Leroi (226)	10986	0.44	1.75	0.02	0.09	0.37	1.47	0.02	0.09	0.00	0.01	0.00	0.01	26.81	107.26	A	--
	004419	M & M (283)	11105	0.55	2.19	0.03	0.12	0.46	1.84	0.03	0.11	0.00	0.01	0.00	0.01	33.63	134.52	A	--
	004401	M & M (283)	11330	0.55	2.19	0.03	0.12	0.46	1.84	0.03	0.11	0.00	0.01	0.00	0.01	33.63	134.52	A	--
	008779	M & M (605)	11386	1.06	4.22	0.06	0.23	0.89	3.55	0.06	0.22	0.01	0.02	0.01	0.02	64.83	259.30	A	--
	004418	M & M (425)	11609	0.85	3.42	0.05	0.18	0.72	2.87	0.04	0.18	0.00	0.02	0.00	0.02	52.46	209.85	A	--
	004398	M & M (283)	11841	0.55	2.19	0.03	0.12	0.46	1.84	0.03	0.11	0.00	0.01	0.00	0.01	33.63	134.52	A	--

Table 5.1-4 (cont.)
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Quarterly and Annual Emissions

Equipment Category	District Device Number	Emission Unit	PCEC ID #	NOx		ROC		CO		SOx		PM		$PM_{2.5/10}$		GHG		Enforcebility	
				TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	Type	Basis
Unmodified Rich-Burn Non-Cyclic Internal Combustion Engines																			
	004384	M & M (283)	11842	0.55	2.19	0.03	0.12	0.46	1.84	0.03	0.11	0.00	0.01	0.00	0.01	33.63	134.52	A	--
	008996	M & M (425)	11883	0.85	3.42	0.05	0.18	0.72	2.87	0.04	0.18	0.00	0.02	0.00	0.02	52.46	209.85	A	--
	008780	M & M (605)	11889	1.06	4.22	0.06	0.23	0.89	3.55	0.06	0.22	0.01	0.02	0.01	0.02	64.83	259.30	A	--
	004382	M & M (HEB)	11931	1.01	4.03	0.05	0.22	0.85	3.38	0.05	0.21	0.01	0.02	0.01	0.02	61.88	247.52	A	--
	004380	M & M (425)	11971	0.85	3.42	0.05	0.18	0.72	2.87	0.04	0.18	0.00	0.02	0.00	0.02	52.46	209.85	A	--
	004396	M & M (605)	11999	1.06	4.22	0.06	0.23	0.89	3.55	0.06	0.22	0.01	0.02	0.01	0.02	64.83	259.30	A	--
	004412	M & M (605)	12004	1.06	4.22	0.06	0.23	0.89	3.55	0.06	0.22	0.01	0.02	0.01	0.02	64.83	259.30	A	--
	004378	International (153)	12023	0.53	2.13	0.03	0.11	0.45	1.79	0.03	0.11	0.00	0.01	0.00	0.01	32.64	130.57	A	--
	008781	M & M (605)	12034	1.06	4.22	0.06	0.23	0.89	3.55	0.06	0.22	0.01	0.02	0.01	0.02	64.83	259.30	A	--
	004391	M & M (425)	12045	0.85	3.42	0.05	0.18	0.72	2.87	0.04	0.18	0.00	0.02	0.00	0.02	52.46	209.85	A	--
	004427	M & M (605)	12122	1.06	4.22	0.06	0.23	0.89	3.55	0.06	0.22	0.01	0.02	0.01	0.02	64.83	259.30	A	--
	004400	M & M (605)	12133	1.06	4.22	0.06	0.23	0.89	3.55	0.06	0.22	0.01	0.02	0.01	0.02	64.83	259.30	A	--
	004425	M & M (283)	12166	0.55	2.19	0.03	0.12	0.46	1.84	0.03	0.11	0.00	0.01	0.00	0.01	33.63	134.52	A	--
	107312	LeRoi	9270	0.23	0.23	0.01	0.01	0.19	0.19	0.01	0.01	0.00	0.00	0.00	0.00	14.13	14.13	FE	ATC 11372
Limited Use Rich-Burn Non-Cyclic Uncontrolled Internal Combustion Engines																			
	004306	M & M (800T)	12195	0.27	0.27	0.01	0.01	0.23	0.23	0.01	0.01	0.00	0.00	0.00	0.00	16.69	16.69	A	--
	004305	M & M (800T)	12205	0.27	0.27	0.01	0.01	0.23	0.23	0.01	0.01	0.00	0.00	0.00	0.00	16.69	16.69	A	--
Derated Rich-Burn Non-Cyclic Internal Combustion Engines																			
	004359	Waukesha (145)	9553	1.03	4.13	0.06	0.22	0.87	3.47	0.05	0.22	0.01	0.02	0.01	0.02	63.42	253.67	A	--
	101256	Waukesha (145)	9818	1.03	4.13	0.06	0.22	0.87	3.47	0.05	0.22	0.01	0.02	0.01	0.02	63.42	253.67	A	--
	008184	Waukesha (145)	10215	1.03	4.13	0.06	0.22	0.87	3.47	0.05	0.22	0.01	0.02	0.01	0.02	63.42	253.67	A	--
	004307	Waukesha (WAK)	10939	0.94	3.77	0.05	0.20	0.79	3.16	0.05	0.20	0.00	0.02	0.00	0.02	57.83	231.30	A	--
	008762	Waukesha (WAK)	11010	0.94	3.77	0.05	0.20	0.79	3.16	0.05	0.20	0.00	0.02	0.00	0.02	57.83	231.30	A	--
	008763	Waukesha (WAK)	11033	0.94	3.77	0.05	0.20	0.79	3.16	0.05	0.20	0.00	0.02	0.00	0.02	57.83	231.30	A	--
	004331	Waukesha (817)	11143	1.03	4.13	0.06	0.22	0.87	3.47	0.05	0.22	0.01	0.02	0.01	0.02	63.42	253.67	A	--

Table 5.1-4 (cont.)
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Quarterly and Annual Emissions

Equipment Category	District Device Number	Emission Unit	PCEC ID #	NOx		ROC		CO		SOx		PM		$PM_{2.5/10}$		GHG		Enforcebility Type	Enforcebility Basis
				TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY		
Derated Rich-Burn Non-Cyclic Internal Combustion Engines																			
	004338	Waukesha (145)	11480	1.03	4.13	0.06	0.22	0.87	3.47	0.05	0.22	0.01	0.02	0.01	0.02	63.42	253.67	A	–
	004336	Waukesha (145)	11484	1.03	4.13	0.06	0.22	0.87	3.47	0.05	0.22	0.01	0.02	0.01	0.02	63.42	253.67	A	–
	004367	Waukesha (145)	11489	1.03	4.13	0.06	0.22	0.87	3.47	0.05	0.22	0.01	0.02	0.01	0.02	63.42	253.67	A	–
	008764	Waukesha (145)	11499	1.03	4.13	0.06	0.22	0.87	3.47	0.05	0.22	0.01	0.02	0.01	0.02	63.42	253.67	A	–
	004355	Waukesha (145)	11505	1.03	4.13	0.06	0.22	0.87	3.47	0.05	0.22	0.01	0.02	0.01	0.02	63.42	253.67	A	–
	004372	Waukesha (817)	11511	1.03	4.13	0.06	0.22	0.87	3.47	0.05	0.22	0.01	0.02	0.01	0.02	63.42	253.67	A	–
	004343	Waukesha (145)	11514	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	A	–
	004351	M & M (800)	11523	0.82	3.26	0.04	0.18	0.69	2.74	0.04	0.17	0.00	0.02	0.00	0.02	50.12	200.47	A A	
	004402	Waukesha (145)	11615	1.03	4.13	0.06	0.22	0.87	3.47	0.05	0.22	0.01	0.02	0.01	0.02	63.42	253.67	A	
	004344	M & M (800)	11667	0.82	3.26	0.04	0.18	0.69	2.74	0.04	0.17	0.00	0.02	0.00	0.02	50.12	200.47		

Table 5.1-4 (cont.)
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Quarterly and Annual Emissions

Equipment Category	District Device Number	Emission Unit	PCEC ID #	NOx		ROC		CO		SOx		PM		$PM_{2.5/10}$		GHG		Enforceability	
				TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	Type	Basis
Derated Rich-Burn Non-Cyclic Internal Combustion Engines																			
	004315	Waukesha (195)	11763	0.79	3.17	0.04	0.17	0.67	2.67	0.04	0.17	0.00	0.02	0.00	0.02	48.73	194.93	A	--
	008783	M & M (336)	11830	0.81	3.23	0.04	0.17	0.68	2.71	0.04	0.17	0.00	0.02	0.00	0.02	49.59	198.36	A	--
	008766	Waukesha (817)	11975	1.03	4.13	0.06	0.22	0.87	3.47	0.05	0.22	0.01	0.02	0.01	0.02	63.42	253.67	A	--
	004324	Waukesha (145)	11983	1.03	4.13	0.06	0.22	0.87	3.47	0.05	0.22	0.01	0.02	0.01	0.02	63.42	253.67	A	--
	008767	Waukesha (WAK)	12066	0.94	3.77	0.05	0.20	0.79	3.16	0.05	0.20	0.00	0.02	0.00	0.02	57.83	231.30	A	--
	008784	M & M (800)	12145	0.82	3.26	0.04	0.18	0.69	2.74	0.04	0.17	0.00	0.02	0.00	0.02	50.12	200.47	A	--
	004356	M & M (800)	12151	0.82	3.26	0.04	0.18	0.69	2.74	0.04	0.17	0.00	0.02	0.00	0.02	50.12	200.47	A	--
	004371	M & M (800)	12155	0.82	3.26	0.04	0.18	0.69	2.74	0.04	0.17	0.00	0.02	0.00	0.02	50.12	200.47	A	--
	004345	M & M (800)	12159	0.82	3.26	0.04	0.18	0.69	2.74	0.04	0.17	0.00	0.02	0.00	0.02	50.12	200.47	A	--
	004353	M & M (800)	12161	0.82	3.26	0.04	0.18	0.69	2.74	0.04	0.17	0.00	0.02	0.00	0.02	50.12	200.47	A	
	005306	Waukesha (WAK)	12168	0.94	3.77	0.05	0.20	0.79	3.16	0.05	0.20	0.00	0.02	0.00	0.02	57.83	231.30	A	--
Limited Use Lean-Burn, Two-Stroke, Non-Cyclic Internal Combustion Engine																			
	004434	Clark / RA-4	19766	1.05	1.05	0.06	0.06	0.22	0.22	0.05	0.05	0.03	0.03	0.03	0.03	64.35	64.35	FE	ATC 9119
ControlledLimited Use Rich-Burn, Non-Cyclic Internal Combustion Engine																			
	004435	Waukesha (2475)	12163	0.05	0.05	0.23	0.23	2.77	2.77	0.03	0.03	0.00	0.00	0.00	0.00	32.05	32.05	FE	ATC 11372
Tier 3 Diesel Fired Internal Combustion Engine																			
	113723	John Deere (4024HF)	TBD	--	0.01	--	0.01	--	0.02	--	0.01	--	0.01	--	0.01				

Table 5.2
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Total Permitted Facility Emissions

A. HOURLY (lb/hr)

Equipment Category	NO_X	ROC	CO	SO_X	PM	$PM_{2.5/10}$	GHG
Internal Combustion Engines	71.19	6.09	80.42	3.97	0.60	0.60	4,660.55
	71.19	**6.09**	**80.42**	**3.97**	**0.60**	**0.60**	**4660.55**

B. DAILY (lb/day)

Equipment Category	NO_X	ROC	CO	SO_X	PM	$PM_{2.5/10}$	GHG
Internal Combustion Engines	1,709.45	146.33	1,931.30	95.27	14.37	14.37	111,853.16
	1,709.45	**146.33**	**1,931.30**	**95.27**	**14.37**	**14.37**	**111,853.16**

C. QUARTERLY (tpq)

Equipment Category	NO_X	ROC	CO	SO_X	PM	$PM_{2.5/10}$	GHG
Internal Combustion Engines	60.29	3.48	52.70	3.18	0.34	0.34	3,731.84
	60.29	**3.48**	**52.70**	**3.18**	**0.34**	**0.34**	**3,731.84**

D. ANNUAL (tpy)

Equipment Category	NO_X	ROC	CO	SO_X	PM	$PM_{2.5/10}$	GHG
Internal Combustion Engines	235.56	12.97	199.92	12.36	1.27	1.27	14,495.67
	235.56	**12.97**	**199.92**	**12.36**	**1.27**	**1.27**	**14,495.67**

Table 5.3
Permit to Operate 8039-R11
BreitBurn Energy Orcutt Hill Internal Combustion Engines
Federal Potential to Emit

A. HOURLY (lb/hr)

Equipment Category	NO_X	ROC	CO	SO_X	PM	$PM_{2.5/10}$
Internal Combustion Engines	71.19	6.09	80.42	3.97	0.60	0.60
Exempt Emissions	0.00	0.00	0.00	0.00	0.00	0.00
	71.19	**6.09**	**80.42**	**3.97**	**0.60**	**0.60**

B. DAILY (lb/day)

Equipment Category	NO_X	ROC	CO	SO_X	PM	$PM_{2.5/10}$
Internal Combustion Engines	1,709.45	146.33	1,931.30	95.27	14.37	14.37
Exempt Emissions	0.00	0.00	0.00	0.00	0.00	0.00
	1,709.45	**146.33**	**1,931.30**	**95.27**	**14.37**	**14.37**

C. QUARTERLY (tpq)

Equipment Category	NO_X	ROC	CO	SO_X	PM	$PM_{2.5/10}$
Internal Combustion Engines	60.29	3.48	52.70	3.18	0.34	0.34
Exempt Emissions	0.00	0.00	0.00	0.00	0.00	0.00
	60.29	**3.48**	**52.70**	**3.18**	**0.34**	**0.34**

D. ANNUAL (tpy)

Equipment Category	NO_X	ROC	CO	SO_X	PM	$PM_{2.5/10}$
Internal Combustion Engines	235.56	12.97	199.92	12.36	1.27	1.27
Exempt Emissions	0.00	0.00	0.00	0.00	0.00	0.00
	235.56	**12.97**	**199.92**	**12.36**	**1.27**	**1.27**

Table 5.4-1
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Hazardous Pollutant Emission Factors

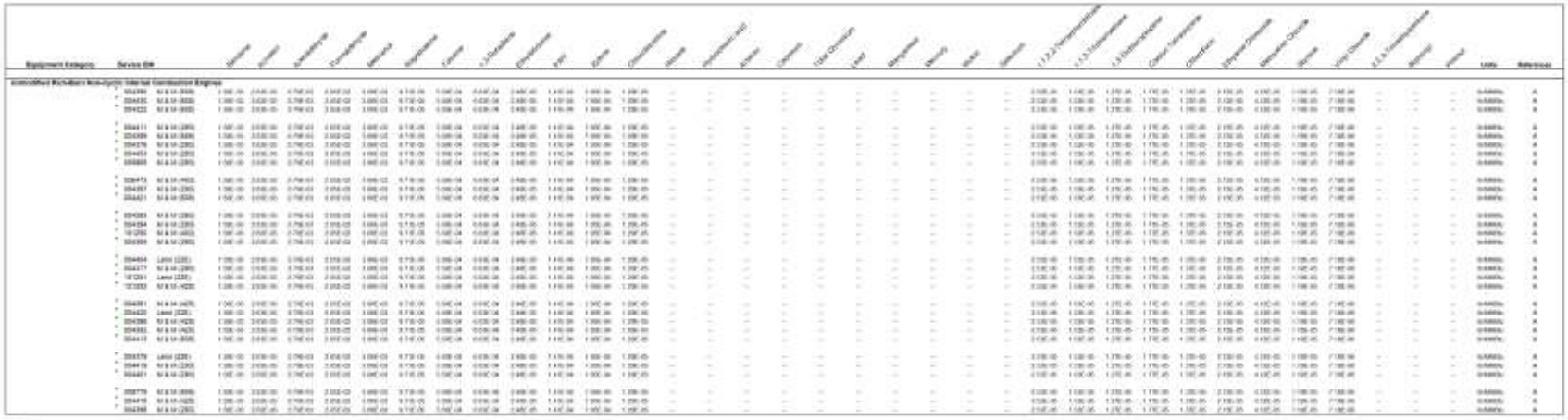


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Table 5.4-1 (cont.)
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Hazardous Pollutant Emission Factors

Equipment Category	Device ID#		Benzene	Acrolein	Acetaldehyde	Formaldehyde	Methanol	Naphthalene	Toluene	1,3-Butadiene	Ethylbenzene	PAH	Xylene	Chlorobenzene	Hexane	Hydrochloric acid	Arsenic	Cadmium	Total Chromium	Lead	Manganese	Mercury	Nickel	Selenium
Unmodified Rich-Burn Non-Cyclic Internal Combustion Engines																								
	* 004384	M & M (283)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 008986	M & M (425)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 008780	M & M (808)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 004382	M & M (HBB)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 004380	M & M (425)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 004386	M & M (605)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 004412	M & M (605)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 004378	International (153)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 008781	M & M (808)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 004381	M & M (428)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 004427	M & M (808)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 004420	M & M (808)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 004425	M & M (283)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 107312	LeRoi	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
Limited Use Rich-Burn Non-Cyclic Uncontrolled Internal Combustion Engines																								
	* 004308	M & M (808T)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 004305	M & M (808T)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
Derated Rich-Burn Non-Cyclic Internal Combustion Engines																								
	* 004209	Waukesha (145)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 101286	Waukesha (145)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 008184	Waukesha (145)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 004307	Waukesha (WAK)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 008782	Waukesha (WAK)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 008783	Waukesha (WAK)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--
	* 004331	Waukesha (817)	1.58E-03	2.63E-03	2.79E-03	2.05E-02	3.06E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.95E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--

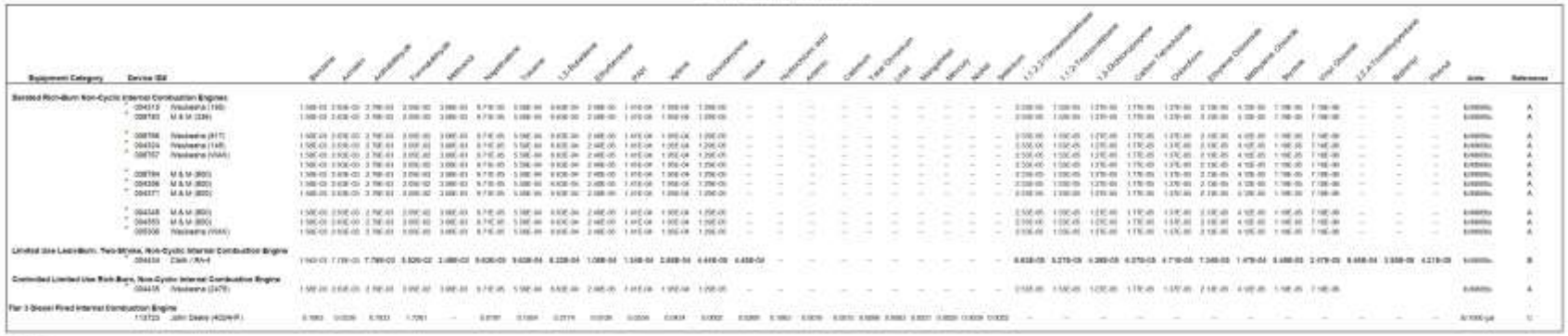
Equipment Category	Device ID#		1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,3-Dichloropropene	Carbon Tetrachloride	Chloroform	Ethylene Dibromide	Methylene Chloride	Styrene	Vinyl Chloride	2,2,4-Trimethylpentane	Biphenyl	Phenol	Units	References
Unmodified Rich-Burn Non-Cyclic Internal Combustion Engines																
	* 004384	M & M (283)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 008986	M & M (425)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 008780	M & M (808)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004382	M & M (HBB)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004380	M & M (425)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004386	M & M (605)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004412	M & M (605)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004378	International (153)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 008781	M & M (808)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004381	M & M (428)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004427	M & M (808)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004420	M & M (808)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004425	M & M (283)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 107312	LeRoi	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
Limited Use Rich-Burn Non-Cyclic Uncontrolled Internal Combustion Engines																
	* 004308	M & M (808T)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004305	M & M (808T)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
Derated Rich-Burn Non-Cyclic Internal Combustion Engines																
	* 004209	Waukesha (145)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 101286	Waukesha (145)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 008184	Waukesha (145)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004307	Waukesha (WAK)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 008782	Waukesha (WAK)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 008783	Waukesha (WAK)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004331	Waukesha (817)	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.19E-05	7.18E-06	--	--	--	lb/MMBtu	A

Table 5.4-1 (cont.)
Permit to Operate 8039-R10
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Hazardous Pollutant Emission Factors

Equipment Category	Device ID#		Benzene	Acrolein	Acetaldehyde	Formaldehyde	Methanol	Naphthalene	Toluene	1,3-Butadiene	Ethylbenzene	PAH	Xylene	Chromium(tot)	Hexane	Hydrochloric acid	Arsenic	Cadmium	Total Chromium	Lead	Manganese	Mercury	Nickel	Selenium	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,3-Dichloropropene	Carbon Tetrachloride	Chloroform	Ethylene Dibromide	Methylene Chloride	Styrene	Vinyl Chloride	2,2,4-Trimethylpentane	Biphenyl	Phenol	Units	References
Derated Rich-Burn Non-Cyclic Internal Combustion Engines																																						
	* 004338	Waukesha (148)	1.58E-03	2.63E-03	2.75E-03	2.85E-02	3.00E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.66E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.18E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004339	Waukesha (148)	1.58E-03	2.63E-03	2.75E-03	2.85E-02	3.00E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.66E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.18E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004367	Waukesha (148)	1.58E-03	2.63E-03	2.75E-03	2.85E-02	3.00E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.66E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.18E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 008764	Waukesha (148)	1.58E-03	2.63E-03	2.75E-03	2.85E-02	3.00E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.66E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.18E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004366	Waukesha (148)	1.58E-03	2.63E-03	2.75E-03	2.85E-02	3.00E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.66E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.18E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004372	Waukesha (817)	1.58E-03	2.63E-03	2.75E-03	2.85E-02	3.00E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.66E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.18E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004342	Waukesha (148)	1.58E-03	2.63E-03	2.75E-03	2.85E-02	3.00E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.66E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.18E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004381	M & M (830)	1.58E-03	2.63E-03	2.75E-03	2.85E-02	3.00E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.66E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.18E-05	7.18E-06	--	--	--	lb/MMBtu	A
			1.58E-03	2.63E-03	2.75E-03	2.85E-02	3.00E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.66E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.18E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004402	Waukesha (148)	1.58E-03	2.63E-03	2.75E-03	2.85E-02	3.00E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.66E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.18E-05	7.18E-06	--	--	--	lb/MMBtu	A
	* 004344	M & M (830)	1.58E-03	2.63E-03	2.75E-03	2.85E-02	3.00E-03	9.71E-05	5.58E-04	6.63E-04	2.48E-05	1.41E-04	1.66E-04	1.29E-05	--	--	--	--	--	--	--	--	--	--	2.53E-05	1.53E-05	1.27E-05	1.77E-05	1.37E-05	2.13E-05	4.12E-05	1.18E-05	7.18E-06	--	--	--	lb/MMBtu	A

References:
A - USEPA, AP-42 Table 3.2-3, Uncontrolled Emission Factors for 4-Stroke Rich-Burn Engines

Table 5.4-1 (cont.)
Permit to Operate 8039-R10
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Hazardous Pollutant Emission Factors



References:
A - USEPA, AP-42 Table 3.2-3 Uncontrolled Emission Factors for 4-Stroke Rich-Burn Engines
B - USEPA, AP-42 Table 3.2-1 Uncontrolled Emission Factors for 2-Stroke Lean-Burn Engines
C - VCAPCD AB 2588 Combustion Emission Factors (May 2005) for Diesel IC Engines

Table 5.4-1
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Annual Hazardous Air Pollutant Emissions (TPY)

Equipment Category	Device ID		Benzene	Acrolein	Acetaldehyde	Formaldehyde	Methanol	Naphthalene	Toluene	1,3-Butadiene	Ethylbenzene	PAH	Xylene	Chlorobenzene	Hexane	Hydrochloric acid	Arsenic	Cadmium	Total Chromium	Lead	Manganese	Mercury	Nickel	Selenium	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,3-Dichloropropene	Carbon Tetrachloride	Chloroform	Ethylene Dibromide	Methylene Chloride	Styrene	Vinyl Chloride	2,2,4-Trimethylpentane	Biphenyl	Phenol
Unmodified Rich-Burn Non-Cyclic Internal Combustion Engines																																				
	004390	M & M (605)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004430	M & M (605)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004322	M & M (605)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004411	M & M (285)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004389	M & M (605)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004376	M & M (285)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004403	M & M (285)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	008868	M & M (285)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	006473	M & M (403)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004387	M & M (285)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004421	M & M (605)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004363	M & M (285)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004394	M & M (285)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	101290	M & M (425)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004385	M & M (285)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004404	Lenz (220)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004377	M & M (285)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	101251	Lenz (220)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	101252	M & M (425)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004381	M & M (425)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004320	Lenz (220)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004386	M & M (425)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004382	M & M (425)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004413	M & M (605)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004378	Lenz (220)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004419	M & M (285)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	003401	M & M (285)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	008779	M & M (605)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004418	M & M (425)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	004390	M & M (285)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–	–	–	–	–	–	–	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–	–	–
	TOTAL HAPS from IC Engines =		7.11E-02	1.18E-01	1.29E-01	9.23E-01	1.38E-01	4.37E-03	2.51E-02	2.09E-02	1.13E-03	6.15E-03	8.79E-03	5.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-03	6.89E-04	5.72E-04	7.87E-04	6.17E-04	6.59E-04	1.86E-03	5.34E-04	3.21E-04	0.00E+00	0.00E+00	0.00E+00
	Total Combined HAPs =		1.560																																	

Table 5.4-1 (cont.)
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Annual Hazardous Air Pollutant Emissions (TPY)

Equipment Category	Device ID#		Benzene	Acrolein	Acetaldehyde	Formaldehyde	Methanol	Naphthalene	Toluene	1,3-Butadiene	Ethylbenzene	PAH	Xylene	Chlorobenzene	Hexane	Hydrochloric acid	Arsenic	Cadmium	Total Chromium	Lead	Manganese	Mercury	Nickel	Selenium	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,3-Dichloropropene	Carbon Tetrachloride	Chloroform	Ethylene Dichloride	Methylene Chloride	Styrene	Vinyl Chloride	2,2,4-Trimethylpentane	Biphenyl	Phenol
Unmodified Rich-Burn Non-Cyclic Internal Combustion Engines																																				
	004084	M & M (283)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
	008896	M & M (425)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
	008750	M & M (605)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
	004092	M & M (HCD)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--		
	004080	M & M (425)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
	004086	M & M (605)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
	004412	M & M (605)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
	004078	International (183)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]											[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
	008751	M & M (605)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
	004091	M & M (425)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
	004427	M & M (605)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
	004603	M & M (603)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
	004428	M & M (283)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
	107312	LaRoi	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]											[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
Limited Use Rich-Burn Non-Cyclic Uncontrolled Internal Combustion Engines																																				
	004306	M & M (803T)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
	004309	M & M (803T)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
Derated Rich-Burn Non-Cyclic Internal Combustion Engines																																				
	004308	Waukesha (145)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
	101206	Waukesha (108)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
	008184	Waukesha (145)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
	004307	Waukesha (WAK)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
	008762	Waukesha (WAK)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
	008763	Waukesha (WAK)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
	004331	Waukesha (817)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--	--	--	--	--	--	--	--	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	--	--
		TOTAL HAP'S From IC Engines =	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		Total Combined HAPs =	1.271																																	

Table 5.4-1 (cont.)
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Annual Hazardous Air Pollutant Emissions (TPY)

Equipment Category	Device ID#		Benzene	Acrolein	Acetaldehyde	Formaldehyde	Methanol	Naphthalene	Toluene	1,3-Butadiene	Ethylbenzene	PAH	Xylene	Chlorobenzene	Styrene	Hydrochloric acid	Arsenic	Cadmium	Total Chromium	Lead	Manganese	Mercury	Nickel	Selenium	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,3-Dichloropropene	Carbon Tetrachloride	Chloroform	Ethylene Dibromide	Methylene Chloride	Styrene	Vinyl Chloride	2,2,4-Trimethylpentane	Biphenyl	Phenol
Derated Rich-Burn Non-Cyclic Internal Combustion Engines																																			
	* 004339	Waukesha (148)	5.43E-03	5.70E-03	8.85E-03	4.44E-02	8.03E-03	2.11E-04	1.21E-03	1.44E-03	5.38E-05	3.08E-04	4.23E-04	2.88E-05	--	--	--	--	--	--	--	--	--	--	5.40E-05	3.32E-05	2.75E-05	3.84E-05	2.97E-05	4.62E-05	8.83E-05	2.50E-05	1.56E-05	--	--	--
	* 004336	Waukesha (148)	5.43E-03	5.70E-03	8.85E-03	4.44E-02	8.03E-03	2.11E-04	1.21E-03	1.44E-03	5.38E-05	3.08E-04	4.23E-04	2.88E-05	--	--	--	--	--	--	--	--	--	--	5.40E-05	3.32E-05	2.75E-05	3.84E-05	2.97E-05	4.62E-05	8.83E-05	2.50E-05	1.56E-05	--	--	--
	* 004367	Waukesha (148)	5.43E-03	5.70E-03	8.85E-03	4.44E-02	8.03E-03	2.11E-04	1.21E-03	1.44E-03	5.38E-05	3.08E-04	4.23E-04	2.88E-05	--	--	--	--	--	--	--	--	--	--	5.40E-05	3.32E-05	2.75E-05	3.84E-05	2.97E-05	4.62E-05	8.83E-05	2.50E-05	1.56E-05	--	--	--
	* 008764	Waukesha (145)	3.43E-03	5.70E-03	8.85E-03	4.44E-02	8.03E-03	2.11E-04	1.21E-03	1.44E-03	5.38E-05	3.08E-04	4.23E-04	2.88E-05	--	--	--	--	--	--	--	--	--	--	5.40E-05	3.32E-05	2.75E-05	3.84E-05	2.97E-05	4.62E-05	8.83E-05	2.50E-05	1.56E-05	--	--	--
	* 004355	Waukesha (145)	3.43E-03	5.70E-03	8.85E-03	4.44E-02	8.03E-03	2.11E-04	1.21E-03	1.44E-03	5.38E-05	3.08E-04	4.23E-04	2.88E-05	--	--	--	--	--	--	--	--	--	--	5.40E-05	3.32E-05	2.75E-05	3.84E-05	2.97E-05	4.62E-05	8.83E-05	2.50E-05	1.56E-05	--	--	--
	* 004372	Waukesha (917)	3.43E-03	5.70E-03	8.85E-03	4.44E-02	8.03E-03	2.11E-04	1.21E-03	1.44E-03	5.38E-05	3.08E-04	4.23E-04	2.88E-05	--	--	--	--	--	--	--	--	--	--	5.40E-05	3.32E-05	2.75E-05	3.84E-05	2.97E-05	4.62E-05	8.83E-05	2.50E-05	1.56E-05	--	--	--
	* 004342	Waukesha (145)	3.43E-03	5.70E-03	8.85E-03	4.44E-02	8.03E-03	2.11E-04	1.21E-03	1.44E-03	5.38E-05	3.08E-04	4.23E-04	2.88E-05	--	--	--	--	--	--	--	--	--	--	5.40E-05	3.32E-05	2.75E-05	3.84E-05	2.97E-05	4.62E-05	8.83E-05	2.50E-05	1.56E-05	--	--	--
	* 004361	M & M (600)	2.71E-03	4.51E-03	4.78E-03	3.51E-02	6.34E-03	1.66E-04	9.56E-04	1.14E-03	4.25E-05	2.43E-04	3.34E-04	2.27E-05	--	--	--	--	--	--	--	--	--	--	4.34E-05	2.62E-05	2.18E-05	3.03E-05	2.35E-05	3.65E-05	7.00E-05	2.04E-05	1.23E-05	--	--	--
	* 004403	Waukesha (148)	5.43E-03	5.70E-03	8.85E-03	4.44E-02	8.03E-03	2.11E-04	1.21E-03	1.44E-03	5.38E-05	3.08E-04	4.23E-04	2.88E-05	--	--	--	--	--	--	--	--	--	--	5.40E-05	3.32E-05	2.75E-05	3.84E-05	2.97E-05	4.62E-05	8.83E-05	2.50E-05	1.56E-05	--	--	--
	* 004344	M & M (600)	2.71E-03	4.51E-03	4.78E-03	3.51E-02	6.34E-03	1.66E-04	9.56E-04	1.14E-03	4.25E-05	2.43E-04	3.34E-04	2.27E-05	--	--	--	--	--	--	--	--	--	--	4.34E-05	2.62E-05	2.18E-05	3.03E-05	2.35E-05	3.65E-05	7.00E-05	2.04E-05	1.23E-05	--	--	--
	TOTAL HAPS from IC Engines =		1.25E-02	9.96E-03	6.80E-02	4.29E-01	9.16E-02	2.02E-03	1.16E-02	1.38E-02	5.16E-04	2.93E-03	4.06E-03	2.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.26E-04	1.78E-04	3.84E-04	3.68E-04	2.85E-04	4.42E-04	8.04E-04	2.47E-04	1.49E-04	0.00E+00	0.00E+00	0.00E+00
	Total Combined HAPs =		0.873																																

Notes:
1. These are estimates only, and are not intended to represent emission limits.
2. Based on CAAA, Section 112 (b) (4) stipulations, the HAP emissions listed above can not be aggregated at the source for any purpose, including determination of HAP major source status for MACT applicability.

Table 5.4-1 (cont.)
Permit to Operate 8039-R11
Pacific Coast Energy Orcutt Hill Internal Combustion Engines
Annual Hazardous Air Pollutant Emissions (TPY)

Equipment Category	Device ID#		Benzene	Acrolein	Acetaldehyde	Formaldehyde	Methanol	Naphthalene	Toluene	1,3-Butadiene	Ethylbenzene	PAH	Xylene	Chlorobenzene	Hexane	Hydrochloric acid	Arsenic	Cadmium	Total Chromium	Lead	Manganese	Mercury	Nickel	Selenium	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,3-Dichloropropene	Carbon Tetrachloride	Chloroform	Ethylene Dibromide	Methylene Chloride	Styrene	Vinyl Chloride	2,2,4-Trimethylpentane	Biphenyl	Phenol
Derated Rich-Burn Non-Cyclic Internal Combustion Engines																																				
	004316	Waukesha (195)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	—	—	—	—	—	—	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—
	008783	M & M (336)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	—	—	—	—	—	—	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—
	008786	Waukesha (817)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	—	—	—	—	—	—	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—
	004324	Waukesha (145)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	—	—	—	—	—	—	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—
	008787	Waukesha (WAK)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	—	—	—	—	—	—	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—
	008784	M & M (800)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	—	—	—	—	—	—	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—
	004356	M & M (800)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	—	—	—	—	—	—	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—
	004371	M & M (800)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	—	—	—	—	—	—	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—
	004346	M & M (800)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	—	—	—	—	—	—	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—
	004353	M & M (800)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	—	—	—	—	—	—	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—
	005306	Waukesha (WAK)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	—	—	—	—	—	—	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—
Limited Use Lean-Burn, Two-Stroke, Non-Cyclic Internal Combustion Engine																																				
	004434	Clark / RA-4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	—	—	—	—	—	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Controlled Limited Use Rich-Burn, Non-Cyclic Internal Combustion Engine																																				
	004439	Waukesha (2375)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	—	—	—	—	—	—	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—
Tier 3 Diesel Fired Internal Combustion Engine																																				
	113723	John Deere (4024HF)	[illegible]	[illegible]	[illegible]	[illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—	—	—	—	—	—	—	—	—	—	—
		TOTAL HAPS from IC Engines =	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		Total Combined HAPs =	**7.082**																																	

Notes:
1. These are estimates only, and are not intended to represent emission limits.
2. Based on CAAA, Section 112 (n) (4) stipulations, the HAP emissions listed above can not be aggregated at the source for any purpose, including determination of HAP major source status for MACT applicability.

Pacific Coast Energy Company: Orcutt Hill
Stationary Source Hazardous Air Pollutant Emissions (TPY)

Facility	Permit #	Acetaldehyde	Acrolein	Benzene	Ethylbenzene	Formaldehyde	Hexane	n-Octane	Naphthalene	PAH	Toluene	Xylene	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Manganese	Mercury	Nickel	Selenium	Propyl	1,3-Butadiene	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,3-Dichloropropene	Ethylene Tetrachloride	Chloroethane	Chloroform	Ethylene Dichloride	Methylene Chloride	Lead	Methylene Chloride	Mercury	Phenol	Styrene	Vinyl Chloride	Total - All HAPS
6218 - Orcutt Hill IC Engines	PTO 8039-R9	1.16E-01	4.63E-01	3.27E-01	8.83E-01	3.02E+00	7.04E-03	2.23E-02	4.09E-02	2.56E-02	9.65E-02	3.79E-02	6.81E-04	–	1.64E-04	6.57E-03	–	3.39E-04	2.19E-04	4.27E-04	2.41E-04	2.17E-06	1.11E-01	4.33E-03	3.63E-03	2.19E-03	3.04E-03	2.37E-03	2.82E-03	4.44E-03	2.69E-02	1.19E-03	5.46E-03	4.64E-01	2.32E-05	2.04E-03	1.23E-03	5.925
6164 - Orcutt Hill Compressor Plant	PTO 8174 - R7	8.57E-06	1.63E-06	9.63E-03	1.99E-05	3.55E-05	5.22E-01	–	9.28E-07	8.34E-07	5.78E-04	5.57E-04	4.17E-07	2.58E-08	2.29E-06	2.92E-06	1.75E-07	7.93E-07	5.42E-07	4.38E-06	5.01E-06	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	8.532
3266 - Cal Coast Lease (Orcutt Hill)	PTO 8226-R10	–	–	4.63	–	–	0.37	0.26	–	–	4.60	4.47	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	14.533
19402 - Orcutt Hill - Steam Generators	PTO 11405-R3	2.97E-04	2.93E-04	2.48E-03	6.82E-04	1.16E-03	7.04E-02	6.19E-02	3.84E-05	2.86E-06	3.04E-03	2.39E-03	1.92E-05	1.15E-06	1.06E-04	1.24E-04	8.09E-06	3.65E-05	2.49E-05	2.91E-04	2.58E-06	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.543
5322 - Pinal Lease	PTO 8582-R8	–	–	8.77E-02	–	–	6.87E-01	3.73E-01	–	–	5.09E-02	5.00E-04	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1.879
3324 - Squires Lease	PTO 8821-R9	–	–	8.34E-02	–	–	6.72E-01	4.78E-01	–	–	4.64E-02	2.80E-04	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1.261
3315 - Hartnell Lease	PTO 9025-R7	–	–	3.49E-02	–	–	4.54E-01	3.63E-01	–	–	1.68E-02	5.00E-04	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.854
3323 - Rice Ranch Lease (Orcutt Hill)	PTO 9035-R7	–	–	1.29E-03	–	–	8.19E-02	3.68E-02	–	–	5.08E-04	5.00E-04	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.901
3316 - Folkson Lease	PTO 9026-R7	–	–	3.05E-02	–	–	3.48E-01	2.62E-01	–	–	1.08E-02	5.00E-04	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.649
3329 - Hobbs Lease	PTO 9027-R7	–	–	3.48E-02	–	–	3.98E-01	2.29E-01	–	–	1.89E-02	5.00E-04	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.597
3318 - Dolan Lease	PTO 9080-R7	–	–	2.97E-02	–	–	2.98E-01	2.20E-01	–	–	1.08E-02	5.00E-04	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.564
3495 - Getty Hobbs Lease (Orcutt Hill)	PTO 9031-R7	–	–	1.29E-03	–	–	4.16E-02	3.68E-02	–	–	5.08E-04	5.00E-04	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.891
3313 - Fox Lease	PTO 8514-R9	–	–	3.67E-03	–	–	1.98E-01	1.47E-01	–	–	5.08E-04	5.00E-04	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.317
3319 - Graciosa Lease	PTO 9028-R7	–	–	7.77E-03	–	–	1.34E-01	1.11E-01	–	–	2.56E-03	5.00E-04	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.257
1964 - Orcutt Hill Field (MVF)	PTO 11404-R3	–	–	4.09E-04	6.40E-04	–	–	–	–	–	2.28E-03	5.60E-04	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.005
3321 - Newlove Lease	PTO 8260-R9	2.43E-01	2.11E-01	2.68E-01	1.40E-03	6.63E-03	3.63E+00	2.08E+00	2.26E-04	3.13E-04	1.42E-01	1.09E-02	1.66E-04	9.39E-06	8.80E-04	1.18E-03	6.57E-06	2.97E-04	2.63E-04	1.64E-03	1.89E-06	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6.968
Total Stationary Source - By Pollutant		0.52	0.86	5.45	0.91	3.01	7.63	5.49	0.126.02	2.59E-02	4.91	4.51	8.57E-04	1.86E-05	1.13E-03	1.38E-03	7.39E-05	4.74E-04	4.48E-04	2.28E-03	2.62E-04	2.17E-06	0.11	4.33E-03	3.63E-03	2.19E-03	3.04E-03	2.37E-03	2.65E-03	4.44E-03	2.69E-02	1.19E-03	5.46E-03	0.80	3.32E-05	2.05E-03	1.23E-03	33.48

Notes:
1. These are estimates only, and are not intended to represent emission limits.
2. Based on CAAA, Section 112 (n) (4) stipulations, the HAP emissions listed above can not be aggregated at the source for any purpose, including determination of HAP major source status for MACT applicability.

6.0 Air Quality Impact Analyses

6.1 Modeling

Air quality modeling has not been required for this stationary source.

6.2 Increments

An air quality increment analysis has not been required for this stationary source.

6.3 Monitoring

Air quality monitoring is not required for this stationary source.

6.4 Health Risk Assessment

The Pacific Coast Energy Company - Orcutt Hill Stationary Source is subject to the Air Toxics "Hot Spots" Program (AB 2588). A health risk assessment (HRA) for the Orcutt Hill facilities was prepared by the District on September 28, 1993 under the requirements of the AB 2588 program. The HRA is based on 1991 toxic emissions inventory data submitted to the District by Luft Environmental Consulting on behalf of the Unocal Corporation, the previous owners of this stationary source.

Based on the 1991 toxic emissions inventory, a cancer risk of about 5 per million at the property boundary was estimated for the stationary source. This risk is primarily due to benzene emitted from storage tanks at the site. Additionally, chronic and acute noncarcinogenic risks of 0.3 and 0.2 have been estimated by the District and are mainly due to acrolein emissions from internal combustion engines. Approximately 3,663 pounds of benzene and about 317 pounds of acrolein were emitted from the entire stationary source in 1991. The cancer and noncancer risk projections are less than the District's AB 2588 significance thresholds of 10 in a million and 1.0, respectively.

A second health risk assessment (HRA), based on the 2005 toxics emissions inventory, was prepared for the Orcutt Hill facilities in conjunction with the Diatomite Project permit process located on the Newlove Lease. This HRA was revised in January 2009, to reflect the current status of electrification of injection pump engines and engine locations. The results of this HRA are provided below:

Pathway	Health Impact Type	HARP Receptor Number	HARP Receptor Type	UTM Easting (NAD83, m)	UTM Northing (NAD83, m)	Heath Risk	Significant Risk Level
Inhalation Only	Cancer	12024	Boundary	735210	3858241	8.73	≥ 10
	Chronic	12024	Boundary	735210	3858241	0.0175	≥ 1
	Acute	11936	Boundary	735998	3859372	0.823	≥ 1
Multi Pathway	Cancer	12024	Boundary	735210	3858241	9.80	≥ 10
	Chronic	12024	Boundary	735210	3858241	0.0175	≥ 1
	Acute	11936	Boundary	735998	3859372	0.823	≥ 1

7.0 CAP Consistency, Offset Requirements and ERCs

7.1 General

Santa Barbara County has not attained the state PM_{10} air quality standards. Therefore, emissions from all emission units at the stationary source and its constituent facilities must be consistent with the provisions of the USEPA and State approved Clean Air Plans (CAP) and must not interfere with progress toward attainment of federal and state ambient air quality standards. Under District regulations, any modifications at the source that result in an emission increase of any nonattainment pollutant exceeding 25 lbs/day must apply BACT (NAR). Increases above offset thresholds will trigger offsets at the source or elsewhere so that there is a net air quality benefit for Santa Barbara County. These offset threshold levels are 240 lbs/day for all attainment pollutants and precursors (except carbon monoxide and $PM_{2.5}$) and 25 tons/year for all non-attainment pollutants and precursors (except carbon monoxide and $PM_{2.5}$).

On July 1, 2020, Santa Barbara County achieved attainment for the State ozone standards. This change was initiated by the California Air Resources Board (CARB) at their December 2019 public hearing and it was later approved by the Office of Administrative Law**.**

7.2 Clean Air Plan

The 2007 Clean Air Plan, adopted by the District Board on August 16, 2007, addressed both federal and state requirements, serving as the maintenance plan for the federal eight-hour ozone standard and as the state triennial update required by the Health and Safety Code to demonstrate how the District will expedite attainment of the state eight-hour ozone standard. The plan was developed for Santa Barbara County as required by both the 1998 California Clean Air Act and the 1990 Federal Clean Air Act Amendments..

In December 2019 the District Board adopted the 2019 Ozone Plan. The 2019 Plan provides a three-year update to the 2010 Clean Air Plan. As Santa Barbara County has only recently attained the state eight-hour ozone standard, the 2019 Clean Air Plan demonstrates how the District plans to maintain that standard. The 2019 Clean Air Plan therefore satisfies all state triennial planning requirements.

7.3 Offset Requirements

The Pacific Coast Energy Company Orcutt Hill stationary source triggers emission offsets for NO_x and ROCs. Tables 7.3-1, 7.3-2 and 7.3-3 summarize the emissions and offset totals for this stationary source.

TABLE 7.3-1
NOx Emissions and ERCs Used
Pacific Coast Energy Orcutt Hill

PROJECT/ PERMIT	Issuance Date	NOx TPY	ERC Certificate
I.C. Engines From Previous Permits (P8039-R6)	29-Mar-09	0.239	249 [(a)(b)]
Newlove Thermal Oxidizer (A13000)	17-Jul-09	1.670	249 [(a)(b)]
Newlove Diatomite Project (A12084-03)	5-Nov-10	6.020	249 [(a)(b)]
Steam Generator Modifications (A11405-01, A11405-02, & ATC/PTO 11405)	15-Jun-12	1.090	249, [(a)(b)]
Newlove Diatomite Project (A12084-04)	21-Feb-13	2.338	249 [(a)(b)]
		11.357	

	Emission Reduction Credits Used TPY	Distance Factor	Emission Liability TPY
NOx ERCs	13.628	1.2	11.357
TOTAL	**13.628**		**11.357**

Notes:

(a) ERCs are used to offset NOx emissions with a 1.2 distance factor.
(b) ERCs generated from the electrification of seventeen gas fired engines at the Orcutt Hill Stationary Source.
(c) Emission units: TPY = tons per year.
(d) ERCs from ATC 13000 are still is use despite the cancellation of the permit due to Rule 806.

Table 7.3-2
Pre-2016 ROC Emissions and ERCs Used
Pacific Coast Energy Orcutt Hill

PROJECT/PERMIT	Issuance Date	ROC TPY	ERC Certificate
Pinal Replace 3,000 Bbl Wash Tank (P10752)	2-Jan-02	0.010	172 [(a)(b)]
Cal Coast Replace 2000 bbl Crude Tank (P10934)	10-Jun-03	0.120	172 [(a)(b)]
Cal Coast 750 Bbl Wash Tank (P10833)	25-Jun-03	0.070	172 [(a)(b)]
Cal Coast 750 Bbl Wastewater Tank (P11191)	12-Jul-04	0.140	172 [(a)(b)]
Compressor Plant Convert Inlet Scrubber to Sulfur Scrubber (P11580)	25-Jul-05	0.090	172 [(a)(b)]
Orcutt MVFF (A11666)	27-Jul-05	0.040	172 [(a)(b)]
Steam Generator Modifications (A11405-01, A11405-02, & ATC/PTO 11405)	29-Mar-06	0.770	172 [(a)(b)]
I.C. Engines NEI From Previous Permits (P8039-R6)	29-Mar-06	0.010	172 [(a)(b)]
Compressor Plant Convert Inlet Scrubber to a Sulfur Scrubber (A12032)	5-Jun-07	0.010	172 [(a)(b)]
Compressor Plant New VRU & Component Update (A12767)	8-Aug-08	1.100	172 [(a)(b)]
Newlove Four New Wells (A13141)	16-Apr-09	0.040	172 [(a)(b)]
Newlove Throughput Increase (A13134)	15-Jun-09	0.170	172 [(a)(b)]
Newlove Thermal Oxidizer (A13000)	17-Jul-09	0.235	172 [(a)(b)(c)]
Compressor Plant Replaced Road Oil Tank with a Wastewater Tank (A13161)	18-Aug-09	0.110	172 [(a)(b)]
Squires Convert Liquid Knockout to a Sulfur Scrubber (A13296)	20-Nov-09	0.160	172 [(a)(b)]
Newlove Twenty-nine New Sx Sand Wells (A13140)	2-Dec-09	2.240	172 [(a)(b)]
Newlove Five Sx Wells (P13230)	29-Dec-09	0.405	172 [(a)(b)(d)]
Newlove New Sulfur Scrubber (A13397)	16-Jun-10	0.180	172 [(a)(b)]
Newlove Loading Rack (A13513)	4-Nov-10	0.095	172 [(a)(b)]
Cal Coast Loading Rack & Throughput Increase (A13514)	4-Nov-10	0.129	172 [(a)(b)]
Pinal Loading Rack & Throughput Increase (A13539)	4-Nov-10	0.023	172 [(a)(b)]
Newlove Diatomite Project (A12084-03)	15-Nov-10	5.290	172 [(a)(b)]
I.C. Engines New 80 bhp Backup Generator for the Field Office (A13592)	3-Feb-11	0.001	237 [(a)(b)]
Hartnell New H2S Scrubber at K7 (A13408)	3-May-11	0.230	172 [(a)(b)]
Newlove Vacuum Truck Washout Station (A13368)	10-Nov-11	0.889	172 [(a)(b)]
Newlove Replace 3,000 Bbl Wash Tank (A13948)	27-Sep-12	0.000	172 [(a)(b)]
Orcutt Compressor Plant H2S Scrubber Replacement (A13902)	7-Dec-12	0.170	270 [(a)(b)]
Newlove Diatomite Project (A12084-04)	21-Feb-13	3.753	270 [(a)(b)]
Newlove Lease Backup Vapor Recovery Unit (A14019)	15-Apr-13	0.179	270 [(a)(b)]
Cal Coast Lease Vapor Recovery Compressors (A14179-01)	11-Dec-14	0.018	296 [(a)(b)]
Pinal Lease Vapor Recovery Compressors (A14180-01)	11-Dec-14	0.073	296 [(a)(b)]
Orcutt Hill Compressor Plant H2S Scrubber Fugitives (AM 13902-01)	7-Mar-14	0.240	269 [(a)(b)]
Orcutt Hill Compressor Plant H2S Scrubber Fugitives (AM 13902-01)	7-Mar-14	0.043	296 [(a)]
Orcutt Hill Compressor Plant H2S Scrubber Fugitives (AM 13902-01)	7-Mar-14	0.167	270 [(a)]
Orcutt Hill Compressor Plant Pressure Vessel Replacement (A14343)	10-Mar-14	0.176	288 [(a)]
Newlove Lease Tank, Separators, and Heat Exchangers (A14385)	14-Oct-14	0.790	345 [(a)(b)]
Orcuttt Hill Compressor Plant Pressure Vessek Replacement (AM 14343-01)	28-Oct-14	0.081	329 [(a)(b)]
Cal Coast Lease Replacement Crude Oil Tank (AM 14223-01)	13-Jan-15	0.100	269 [(a)(b)]
		18.347	

	TPY	Distance Factor	Emission Liability TPY
ROC ERCs[(a)]	3.304	1.2	2.753
NOx ERCs[(a)(b)]	18.713	1.2	15.594
TOTAL	**22.016**		**18.347**

Notes:

(a) ERCs are used to offset ROC emissions with a 1.2 distance factor.
(b) Interpollutant trade. NOx ERCs used to offset ROC emissions with a 1.0 interpollutant trade factor.
(c) ERCs from ATC 13000 are still is use despite the cancellation of the permit due to Rule 806.
(d) This value also corrects an error in the ATC 13230 offset table which reflects offsets only for components in gas service. Emissions from components in oil service should have also been offset.

Table 7.3-3
PCEC Orcutt Hill Stationary Source ROC Emissions and ERCs Used After August 25, 2016

REACTIVE ORGANIC COMPOUNDS (ROC)					
PROJECT	Issuance Date	ROC TPY	Distance Factor	ERC Liability	ERC Certificate
ATC 14921 (Wash Tank Replacement)	9-Mar-17	0.440	1.1	0.484	301[1]
ATC/PTO 15256 (MVFF Throughput Increase)	30-Nov-18	0.013	1.1	0.015	462
ATC 15506 (Wash Tank Replacement)	30-Jul-20	0.270	1.1	0.296	507
	TOTAL	**0.453**		**0.499**	

[1] NOx for ROC Interpollutant trade.

7.4 Emission Reduction Credits

The following is Emission Reduction Credits activity related to this permit:

DOI 0031:

This action (10/07/2002) approved ERCs for NO_X, ROC, CO and SO_X from the electrification of the Clark RA-4 field gas compressor engine at the compressor plant on the Pacific Coast Energy Company - Orcutt Hill Stationary Source.

Total DOI ERCs Approved:	NO_X	=	0.000 tpq	(3.140 tpy)
	ROC	=	7.195 tpq	(28.949 tpy)
	CO	=	2.681 tpq	(11.382 tpy)
	SOx	=	0.083 tpq	(0.543 tpy)

DOI 0038:

This action (03/23/2005) approved ERCs for NOx, ROC, and SOx ERCs from the electrification of the well pump used at the Fox injection well on the Fox Lease on the Pacific Coast Energy Company - Orcutt Hill Stationary Source.

Total DOI ERCs Approved:	NO_X	=	0.068 tpq	(0.428 tpy)
	ROC	=	0.093 tpq	(1.053 tpy)
	SOx	=	0.076 tpq	(0.387 tpy)

DOI 0046:

This action (12/18/07) approved ERCs for NO_X, ROC, and CO ERCs from the replacement of 17 field gas fired injection engines with electric motors. Each engine was rated less than 50 bhp. This includes 4 engines at the Newlove 67 injection facility, 3 engines at the Pinal injection facility and 10 engines at the Newlove injection facility, all located on the Pacific Coast Energy Company - Orcutt Hill Stationary Source.

Total DOI ERCs Approved:	NO_X	=	8.014 tpq	(32.056 tpy)
	ROC	=	0.655 tpq	(2.620 tpy)
	CO	=	6.023 tpq	(24.092 tpy)

DOI 0064:

This action (10/26/10) approved ERCs for NO_X, ROC, and CO ERCs from the replacement of 7 field gas fired well pump engines with electric motors. Each engine was rated less than 50 bhp. These engines were formerly located at the Newlove, Cal Coast and Pinal leases at the Orcutt Hill stationary source. DOI 064 was originally issued for nine engines however two were not electrified. The ERCs summarized below reflect the reduced amount of ERCs.

Total DOI ERCs Approved:	NO_X	=	4.476 tpq	(17.904 tpy)
	ROC	=	0.232 tpq	(0.929 tpy)
	CO	=	1.456 tpq	(5.824 tpy)

DOI 0072:

This action (10/3/11) approved ERCs for NO_X, ROC, and CO ERCs from the replacement of 1 field gas fired well pump engine with an electric motor. The engine was rated less than 50 bhp. This engine was formerly located the Newlove lease on the Pacific Coast Energy Company - Orcutt Hill Stationary Source.

Total DOI ERCs Approved:	NO_X	= 0.339	tpq (1.358 tpy)
	ROC	= 0.019	tpq (0.076 tpy)
	CO	= 0.145	tpq (0.581 tpy)

DOI 0077:

This action (May 2012) approved ERCs for NO_X, ROC, and CO ERCs from the replacement of 12 field gas fired well pump engine with electric motors. The engines were rated less than 50 bhp. This engines were formerly located the Pacific Coast Energy Company - Orcutt Hill Stationary Source.

Total DOI ERCs Approved:	NO_X	= 6.402	tpq (25.608 tpy)
	ROC	= 0.353	tpq (1.414 tpy)
	CO	= 3.047	tpq (12.188 tpy)

DOI 0063:

This action (July 2012) approved ERCs for NO_X, ROC, and CO ERCs from the replacement of 3 field gas fired well pump engine with electric motors. The engines were rated less than 50 bhp. This engines were formerly located the Pacific Coast Energy Company - Orcutt Hill Stationary Source.

Total DOI ERCs Approved:	NO_X	= 0.644	tpq (2.577 tpy)
	ROC	= 0.036	tpq (0.145 tpy)
	CO	= 0.276	tpq (1.103 tpy)

DOI 0077-01:

This action (October 2013) approved ERCs for NO_X, ROC, and CO ERCs from the replacement of 5 field gas fired well pump engine with electric motors. DOI 077 was issued for the replacement of twelve engines however only five of these engines were eventually electrified. The engines were rated less than 50 bhp. This engines were formerly located the Pacific Coast Energy Company - Orcutt Hill Stationary Source.

Total DOI ERCs Approved:	NO_X	= 1.876 tpq (7.504 tpy)
	ROC	= 0.119 tpq (0.477 tpy)
	CO	= 1.171 tpq (4.685 tpy)

8.0 Lead Agency Permit Consistency

To the best of the District's knowledge, no other governmental agency's permit requires air quality mitigation.

TABLE OF CONTENTS

9.0 Permit Conditions

This section lists the applicable permit conditions for the Orcutt Hill internal combustion engines. Section A lists the standard administrative conditions. Section B lists 'generic' permit conditions, including emission standards, for all equipment in this permit. Section C lists conditions affecting specific equipment. Section D lists non-federally-enforceable (i.e., District only) permit conditions. Conditions listed in Sections A, B, and C are enforceable by the USEPA, the District, the State of California and the public. Conditions listed in Section D are enforceable only by the District and the State of California. Where any reference contained in Sections 9.A, 9.B or 9.C refers to any other part of this permit, that part of the permit referred to is federally-enforceable. In case of a discrepancy between the wording of a condition and the applicable federal or District rule(s), the wording of the rule shall control.

For the purposes of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in this permit, nothing in the permit shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed.

9.A Standard Administrative Conditions

The following federally-enforceable administrative permit conditions apply to the Orcutt Hill internal combustion engines:

A.1 **Compliance with Permit Conditions.**

(a) The permittee shall comply with all permit conditions in Sections 9.A, 9.B and 9.C.

(b) This permit does not convey property rights or exclusive privilege of any sort.

(c) Any permit noncompliance constitutes a violation of the Clean Air Act and is grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application.

(d) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(e) A pending permit action or notification of anticipated noncompliance does not stay any permit condition.

(f) Within a reasonable time period, the permittee shall furnish any information requested by the Control Officer, in writing, for the purpose of determining:

(i) compliance with the permit, or
(ii) whether or not cause exists to modify, revoke and reissue, or terminate a permit or for an enforcement action. [*Re: 40 CFR Part 70.6, District Rules 1303.D.1]*

(g) In the event that any condition herein is determined to be in conflict with any other condition contained herein, then, if principles of law do not provide to the contrary, the

condition most protective of air quality and public health and safety shall prevail to the extent feasible.

A.2 **Emergency Provisions.** The permittee shall comply with the requirements of the District, Rule 505 (Upset/Breakdown rule) and/or District Rule 1303.F, whichever is applicable to the emergency situation. In order to maintain an affirmative defense under Rule 1303.F, the permittee shall provide the District, in writing, a "notice of emergency" within 2 days of the emergency. The "notice of emergency" shall contain the information/documentation listed in Sections (1) through (5) of Rule 1303.F. [*Re: 40 CFR 70.6, District Rule 1303.F*]

A.3 **Compliance Plan.**

(a) The permittee shall comply with all federally-enforceable requirements that become applicable during the permit term, in a timely manner, as identified in the Compliance Plan.

(b) For all applicable equipment, the permittee shall implement and comply with any specific compliance plan required under any federally-enforceable rules or standards. [*Re: District Rule 1302.D.2*]

A.4 **Right of Entry.** The Regional Administrator of USEPA, the Control Officer, or their authorized representatives, upon the presentation of credentials, shall be permitted to enter upon the premises where a Part 70 Source is located or where records must be kept:

(a) To inspect the stationary source, including monitoring and control equipment, work practices, operations, and emission-related activity;

(b) To inspect and duplicate, at reasonable times, records required by this Permit to Operate;

(c) To sample substances or monitor emissions from the source or assess other parameters to assure compliance with the permit or applicable requirements, at reasonable times. Monitoring of emissions can include source testing. [*Re: District Rule 1303.D.2*]

A.5 **Permit Life.** The Part 70 permit shall become invalid three years from the date of issuance unless a timely and complete renewal application is submitted to the District. Any operation of the source to which this Part 70 permit is issued beyond the expiration date of this Part 70 permit and without a valid Part 70 operating permit (or a complete Part 70 permit renewal application) shall be a violation of the CAAA, § 502(a) and 503(d) and of the District rules.

The permittee shall apply for renewal of the Part 70 permit not later than 6-months before the date of the permit expiration. Upon submittal of a timely and complete renewal application, the Part 70 permit shall remain in effect until the Control Officer issues or denies the renewal application. [*Re: District Rule 1304.D.1*]

A.6 **Payment of Fees.** The permittee shall reimburse the District for all its Part 70 permit processing and compliance expenses for the stationary source on a timely basis. Failure to reimburse on a timely basis shall be a violation of this permit and of applicable requirements and can result in forfeiture of the Part 70 permit. Operation without a Part 70 permit subjects the source to potential enforcement action by the District and the USEPA pursuant to section 502(a) of the Clean Air Act. [*Re: District Rules 1303.D.1 and 1304.D.11, 40 CFR 70.6*]

A.7 **Prompt Reporting of Deviations.** The permittee shall submit a written report to the District documenting each and every deviation from the requirements of this permit or any applicable federal requirements within 7 days after discovery of the violation, but not later than 180-days after the date of occurrence. The report shall clearly document 1) the probable cause and extent of the deviation, 2) equipment involved, 3) the quantity of excess pollutant emissions, if any, and 4) actions taken to correct the deviation. The requirements of this condition shall not apply to deviations reported to District in accordance with Rule 505. *Breakdown Conditions,* or Rule 1303.F *Emergency Provisions. [District Rule 1303.D.1, 40 CFR 70.6(a) (3)]*

A.8 **Reporting Requirements/Compliance Certification.** The permittee shall submit compliance certification reports to the USEPA and the Control Officer every six months. A paper copy, as well as a complete PDF electronic copy of these reports, shall be in a format approved by the District. These reports shall be submitted on District forms and shall identify each applicable requirement/condition of the permit, the compliance status with each requirement/condition, the monitoring methods used to determine compliance, whether the compliance was continuous or intermittent, and include detailed information on the occurrence and correction of any deviations (excluding emergency upsets) from permit requirement. The reporting periods shall be each half of the calendar year, e.g., January through June for the first half of the year. These reports shall be submitted by September 1st and March 1st, respectively, each year. Supporting monitoring data shall be submitted in accordance with the "Semi-Annual Monitoring/Compliance Verification Report" condition in section 9.C. The permittee shall include a written statement from the responsible official, which certifies the truth, accuracy, and completeness of the reports. [*Re: District Rules 1303.D.1, 1302.D.3, 1303.2.c*]

A.9 **Federally-Enforceable Conditions.** Each federally-enforceable condition in this permit shall be enforceable by the USEPA and members of the public. None of the conditions in the District-only enforceable section of this permit are federally-enforceable or subject to the public/USEPA review. [*Re: CAAA, § 502(b)(6), 40 CFR 70.6*]

A.10 **Recordkeeping Requirements.** Records of required monitoring information shall include the following:

(a) The date, place as defined in the permit, and time of sampling or measurements;

(b) The date(s) analyses were performed;

(c) The company or entity that performed the analyses;

(d) The analytical techniques or methods used;

(e) The results of such analyses; and

(f) The operating conditions as existing at the time of sampling or measurement;

The records (electronic or hard copy), as well as all supporting information including calibration and maintenance records, shall be maintained for a minimum of five (5) years from date of initial entry by the permittee and shall be made available to the District upon request. [*Re: District Rule 1303.D.1.f, 40 CFR 70.6(a)(3)(ii)(A)*]

A.11 **Conditions for Permit Reopening.** The permit shall be reopened and revised for cause under any of the following circumstances:

(a) Additional Requirements: If additional applicable requirements (e.g., NSPS or MACT) become applicable to the source which has an unexpired permit term of three (3) or more

years, the permit shall be reopened. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirement. However, no such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended. All such re-openings shall be initiated only after a 30-day notice of intent to reopen the permit has been provided to the permittee, except that a shorter notice may be given in case of an emergency.

(b) Inaccurate Permit Provisions: If the District or the USEPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms or conditions of the permit, the permit shall be reopened. Such re-openings shall be made as soon as practicable.

(c) Applicable Requirement: If the District or the USEPA determines that the permit must be revised or revoked to assure compliance with any applicable requirement including a federally-enforceable requirement, the permit shall be reopened. Such re-openings shall be made as soon as practicable.

Administrative procedures to reopen and revise/revoke/reissue a permit shall follow the same procedures as apply to initial permit issuance. Re-openings shall affect only those parts of the permit for which the cause to reopen exists.

If a permit is reopened, the expiration date does not change. Thus, if the permit is reopened, and revised, then it will be reissued with the expiration date applicable to the re-opened permit. [*Re: 40 CFR 70.7, 40 CFR 70.6*]

A.12 **Grounds for Revocation.** Failure to abide by and faithfully comply with this permit or any Rule, Order, or Regulation may constitute grounds for the APCO to petition for permit revocation pursuant to California Health & Safety Code Section 42307 *et seq*.

A.13 **Severability.** In the event that any condition herein is determined to be invalid, all other conditions shall remain in force.

9.B. Generic Conditions

The generic conditions listed below apply to all emission units, regardless of their category or emission rates. In case of a discrepancy between the wording of a condition and the applicable federal or District rule(s), the wording of the rule shall control.

B.1 **Circumvention (Rule 301).** A person shall not build, erect, install, or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of Division 26 (Air Resources) of the Health and Safety Code of the State of California or of these Rules and Regulations. This Rule shall not apply to cases in which the only violation involved is of Section 41700 of the Health and Safety Code of the State of California, or of District Rule 303. [*Re: District Rule 301*]

B.2 **Visible Emissions (Rule 302).** The permittee shall not discharge into the atmosphere from any single source of emission or air contaminants for a period or periods aggregating more than three minutes in any one hour which is:

(a) As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or

(b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection B.2(a) above.

[*Re: District Rule 302*].

B.3 **Nuisance (Rule 303).** No pollutant emissions from any source at Pacific Coast Energy Co. Orcutt Hill Stationary Source shall create nuisance conditions. Operations shall not endanger health, safety or comfort, nor shall they damage any property or business. [*Re: District Rule 303*]

B.4 **Specific Contaminants (Rule 309).** The permittee shall not discharge into the atmosphere from any single source sulfur compounds and combustion contaminants (particulate matter) in excess of the applicable standards listed in Sections A through E of Rule 309. [*Re: District Rule 309*].

B.5 **Sulfur Content of Fuels (Rule 311).** The permittee shall not burn fuels with a sulfur content in excess of 796 ppm_{vd} or 50 gr/100 scf (calculated as H_2S) for gaseous fuel. [*Reference: District Rule 311.B*]

B.6 **Emergency Episode Plans (Rule 603).** During emergency episodes, the permittee shall implement the Emergency Episode Plan dated March 30, 1999. [*Reference District Rule 603*]

B.7 **Adhesives and Sealants (Rule 353).** The permittee shall not use adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, or any other primers, unless the permittee complies with the following:

(a) Such materials used are purchased or supplied by the manufacturer or suppliers in containers of 16 fluid ounces or less; or alternately

(b) When the permittee uses such materials from containers larger than 16 fluid ounces and the materials are not exempt by Rule 353, Section B.1, the total reactive organic compound emissions from the use of such material shall not exceed 200 pounds per year unless the substances used and the operational methods comply with Sections D, E, F, G, and H of Rule 353. Compliance shall be demonstrated by recordkeeping in accordance with Section B.2 and/or Section O of Rule 353. *[Re: District Rule 353]*

B.8 **CARB Registered Portable Equipment.** State registered portable equipment shall comply with State registration requirements. A copy of the State registration shall be readily available whenever the equipment is at the facility. [*Re: District Rule 202*]

9.C Requirements and Equipment Specific Conditions

This section contains non-generic federally-enforceable conditions, including emissions and operations limits, monitoring, recordkeeping and reporting for each specific equipment group. This section may also contain other non-generic conditions.

C.1 **Unmodified Rich-Burn Non-Cyclic Internal Combustion Engines.** The following equipment is included in this emissions unit category:

ID#	Equipment
107312	Gas-fired internal combustion engines with a nameplate rating greater than 20 hp and less than 50 hp.

(a) Emission Limits: Emission limits for engine ID #107312 are not federally-enforceable.

(b) Hourly Heat Input: Maximum heat input (MMBtu/hour) to the internal combustion engine listed in this condition is restricted to the values listed in the "Use per Hour" column of Table 5.1-1.

(c) Annual Heat Input: Maximum annual heat input (MMBtu/year) to the internal combustion engine listed in this condition is restricted to the values listed in the "Use per Year" column of Table 5.1-1.

(d) Fuel Type: The engine shall be fired on gaseous fuels only.

(e) Fuel Use Monitoring: The permittee shall comply with the Fuel Use Monitoring Plan approved for the engines listed on this permit. The Plan may be modified only upon written approval by the District and shall be maintained on-site and made available to District personnel upon request.

(f) Engine Identification: The engine shall have its PCEC identification number permanently and legibly liquid welded or stamped into the engine block. The location of the identifying stamp shall be readily accessible for inspection. PCEC shall maintain a reference list containing the make, model, serial number, rated maximum HP and RPM that corresponds to the PCEC identification number on the engine block.

(g) Reporting: On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all data required by the *Semi-Annual Compliance Verification Reports* condition of this permit.

C.2 **Limited Use Internal Combustion Engines.** The following equipment are included in this emissions unit category:

ID#s.	Equipment
004306, 004305, 004434 and 004435	Gas-fired internal combustion engines with a nameplate rating greater than 50 hp that operate less than 200 hours/year

(a) Emission Limits: Emission limits for engine ID#s 004306, 004305, 004434 and 004435 are not federally-enforceable.

(b) IC Engine ID# 004435: The operator shall meet District Rule 333.E.1 NO_X, ROC and CO ppm_v limits. The Rule 333 ppm_v NOx limitations shall be verified through testing with a portable NOx analyzer and confirmation of operation of the fuel air controller if the engine runs more than 100 hours in any six-month period.

(i) All emission readings shall be taken at the engine's typical duty cycle.

(ii) The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations.

(iii) The engine's operating parameters and control equipment parameters shall be monitored and recorded at the time of each emission reading.

(iv) An emission reading in excess of the applicable requirements shall not be considered a violation of this permit as long as the engine is brought into compliance and a follow-up inspection documents compliance within 15 days of the initial out-of-compliance reading.

(c) Operational Limits: Engine ID#s 004306, 004305, 004434 and 004435 shall each operate less than two hundred (200) hours per calendar year and shall each be equipped with a non-resettable engine-use hour meter in accordance with Rule 333.D.

(d) Monitoring: The operator shall record the engine hour meter readings every first working day of each calendar quarter.

(e) Recordkeeping: The operator shall maintain engine hour meter logs documenting the hours of operation of engine ID#s 004306, 004305, 004434 and 004435 for each calendar year. The operator shall maintain records of each portable analyzer reading from Engine ID# 004435, including the date, emission readings, analyzer calibration records, engine operating parameters and control equipment parameters, and the results of any follow-up readings. The records (electronic or hard copy) shall be maintained by the permittee and shall be made available to the District upon request.

(f) Reporting: On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all data required by the *Semi-Annual Compliance Verification Reports* condition of this permit.

C.3 **Derated Internal Combustion Engines.** The orifice plate on each derated engine shall not have an orifice greater than the diameter listed in the table 5.1-1. The orifice plate shall be made from 10 gauge mild steel stock with a sharp edge circular orifice. The orifice plate shall be located between the carburetor and the intake manifold. The orifice plate shall be in place at all times the engine operates.

The operator shall inspect approximately one quarter of the orifice plates each calendar quarter and document the results of each inspection. Each orifice plate must be inspected at least once every twelve months, and different orifice plates shall be inspected each quarter until all the orifice plates have been inspected. In addition, the operator shall assist District personnel in the measurement and/or inspection of an orifice plate upon request.

The operator shall replace an orifice plate within thirty (30) calendar days after any inspection if it shows corrosion or degradation that enlarges the specified hole diameter, or if there is any other indication the plate is not properly restricting fuel flow to the engine. The District shall be notified in writing each time an orifice plate is replaced. The quarterly orifice plate inspection results and the date of replacement shall be recorded in a log.

C.4 **Temporary Engine Replacements - DICE ATCM.** Any reciprocating internal combustion engine subject to this permit and the stationary diesel ATCM may be temporarily replaced only if the requirements (a - h) listed herein are satisfied.

(a) The permitted engine that is being temporarily replaced is in need of routine repair or maintenance.

(b) The permitted engine does not have a cracked block, unless the block will be replaced under manufacturer's warranty.

(c) Replacement parts are available for the permitted engine.

(d) The permitted engine is returned to its original service within 180 days of installation of the temporary engine.

(e) The temporary replacement engine has the same or lower manufacturer rated horsepower and same or lower potential to emit of each pollutant as the permitted engine. At the written request of the permittee, the District may approve a replacement engine with a larger rated horsepower if the proposed temporary engine has manufacturer guaranteed emissions (for a brand new engine) or source test data (for a previously used engine) less than or equal to the permitted engine.

(f) The temporary replacement engine shall comply with all rules and permit requirements that apply to the permitted engine.

(g) For each permitted engine to be temporarily replaced, the permittee shall submit a completed *Temporary IC Engine Replacement Notification* form (Form ENF-94) within 14 days of the temporary engine being installed. This form may be sent hardcopy, or can be e-mailed (e-mail: engr@sbcapcd.org) to the District (Attn: Engineering Supervisor).

(h) Within 14 days of returning the original permitted engine to service, the permittee shall submit a completed *Temporary IC Engine Replacement Report* form (Form ENF-95). This form may be sent hardcopy, or can be e-mailed (e-mail: engr@sbcapcd.org) to the District (Attn: Engineering Supervisor).

Any engine in temporary replacement service shall be immediately shut down if the District determines that the requirements of this condition have not been met. If the requirements of this condition are not met, the permittee must obtain an ATC before installing or operating a temporary replacement engine.

C.5 **Permanent Engine Replacements.** The permittee may install a new engine in place of an engine permitted herein without first obtaining an ATC only if the requirements (a – f) listed herein are satisfied.

(a) The permitted stationary diesel IC engine is an E/S engine, a firewater pump engine or an engine used for an essential public service (as defined by the District).

(b) The permitted engine breaks down, cannot be repaired, and needs to be replaced by a new permanent engine.

(c) The facility provides "good cause" (in writing) for the need to install a new permanent engine before an ATC can be obtained for a new engine.

(d) The new permanent engine must comply with the requirements of the ATCM for new engines. A temporary replacement engine may be used while the new permanent engine is being procured only if it meets the requirements of the *Temporary Engine Replacements - DICE ATCM* permit condition.

(e) An ATC application for the new permanent engine must be submitted to the District within 15 days of the existing engine being replaced and the ATC must be obtained no later than 180 days from the date of engine replacement (these timelines include the use of a temporary engine).

(f) For each new permanent engine installed pursuant to this condition, the permittee shall submit a completed *Permanent IC Engine Replacement Notification* form (Form ENF-96) within 14 days of the new engine being installed. This form may be sent hardcopy, or can be e-mailed (e-mail: engr@sbcapcd.org) to the District (Attn: Engineering Supervisor).

Any engine installed pursuant to this condition shall be immediately shut down if the District determines that the requirements of this condition have not been met.

C.6 **Notification of Non-Compliance.** Owners or operators who have determined that they are operating their stationary diesel-fueled engine(s) in violation of the requirements specified in the ATCM shall notify the District immediately upon detection of the violation and shall be subject to District enforcement action.

C.7 **Notification of Loss of Exemption.** Owners or operators of in-use stationary diesel-fueled CI engines, who are subject to an exemption specified in the ATCM from all or part of the requirements of the ATCM, shall notify the District immediately after they become aware that the exemption no longer applies and shall demonstrate compliance within 180 days after notifying the District.

C.8 **Enrollment in a DRP/ISC - January 1, 2005.** Any stationary diesel CI engine rated over 50 bhp that enrolls for the first time in a Demand Response Program/Interruptible Service Contract (as defined in the ATCM) on or after January 1, 2005, shall first obtain an Authority to Construct permit to ensure compliance with the emission control requirements and hour limitations governing ISC engines

C.9 **Fuel Gas Sulfur Limit.** The total sulfur content (calculated as H_2S at standard conditions, 60^o F and 14.7 psia) of the gaseous fuel burned at the facility shall not exceed 50 grains per 100 cubic feet (796 ppmv). The operator shall measure the total sulfur content annually in accordance with

ASTM-D1072 or a District approved equivalent method. The H_2S content shall be measured quarterly using colorimetric gas detection tubes or equivalent. Records shall be kept on site and made available for inspection by the District upon request.

C.10 **Semi-Annual Monitoring/Compliance Verification Reports.** The permittee shall submit a report to the District every six months to verify compliance with the emission limits and other requirements of this permit. The reporting periods shall be each half of the calendar year, e.g., January through June for the first half of the year. These reports shall be submitted by September 1 and March 1, respectively, each year, and shall be in a format approved by the District, with one hard copy and one PDF copy. All logs and other basic source data not included in the report shall be available to the District upon request. The second report shall also include an annual report for the prior four quarters. The report shall include the following information:

(a) *Limited Use Internal Combustion Engines*

(i) Engine hour meter logs detailing the requirements of Rule 333.B.2 for any engine operating less than two hundred (200) hours per calendar year.

(ii) Written ICE operations logs consistent with the requirements of Rule 333.J.

(b) Annual NOx and ROC emissions from both permitted and exempt equipment.

(c) Written documentation of the fuel sulfur content per Condition C.9.

(d) The quarterly orifice plate inspection results per Condition C.3.

(e) Records of oil and filter changes, air cleaner, hoses, and belts inspections.

C.11 **DOI #0038.** The conditions and limits contained in DOI #0038 (and all updates thereof) are hereby incorporated by reference as an enforceable part of this permit.

C.12 **DOI #0031.** The conditions and limits contained in DOI #0031 (and all updates thereof) are hereby incorporated by reference as an enforceable part of this permit.

C.13 **DOI #0046.** The conditions and limits contained in DOI #0046 (and all updates thereof) are hereby incorporated by reference as an enforceable part of this permit.

C.14 **DOI #0064.** DOI #0064 (and all updates thereof) are hereby incorporated by reference as an enforceable part of this permit.

C.15 **DOI #0072.** DOI #0072 (and all updates thereof) are hereby incorporated by reference as an enforceable part of this permit.

C.16 **DOI #0077.** DOI #0077 (and all updates thereof) are hereby incorporated by reference as an enforceable part of this permit.

C.17 **Documents Incorporated by Reference.** PCEC shall implement, and operate in accordance with, each of the plans listed below. These plans, including any District-approved updates thereof, are incorporated herein and shall have the full force and effect of a permit condition for this operating permit. These plans shall be implemented for the life of the project.

- *Fuel Use Monitoring Plan (approved June 29, 2011)*

- *Process Monitor Calibration and Maintenance Plan (approved August 7, 2000)*

9.D District-Only Conditions

The following section lists permit conditions that are not federally-enforceable (i.e., not enforceable by the USEPA or the public). However, these conditions are enforceable by the District and the State of California. These conditions have been determined as being necessary to ensure that operation of the facility complies with all applicable local and state air quality rules, regulations and laws. Failure to comply with any of these conditions shall be a violation of District Rule 206, this permit, as well as any applicable section of the California Health & Safety Code.

D.1 **Condition Acceptance.** Acceptance of this operating permit by the permittee shall be considered as acceptance of all terms, conditions, and limits of this permit.

D.2 **Consistency with Analysis.** Operation under this permit shall be conducted consistent with all data, specifications and assumptions included with the application and supplements thereof (as documented in the District's project file), and with the District's analyses under which this permit is issued as documented in the Permit Analyses prepared for and issued with the permit.

D.3 **Emergency Standby Diesel-Fired Internal Combustion Engines.** The following equipment are included in this emissions unit category:

ID#s.	Equipment
113723	Diesel-Fired E/S DICE, John Deere 4024HF285, 80 hp, Tier 3

(a) **Emission Limits.** The mass emissions from the equipment permitted herein shall not exceed the values listed in Tables 5.1-3 and 5.1-4. Emissions of PM and other pollutants shall not exceed the emissions standards listed in Table 5.1-2 of this permit. Compliance shall be based on the operational, monitoring, recordkeeping and reporting conditions of this permit.

(b) **Operational Restrictions.** The equipment permitted herein is subject to the following operational restrictions listed below. Emergency use operations, as defined in the ATCM[6], have no operational hours limitations.

(i) Maintenance & Testing Use Limit: The stationary emergency standby diesel-fueled compression ignition (CI) engine(s) subject to this permit, except for in-use firewater pump engines, shall limit maintenance and testing[7] operations to no more than the hours listed in the attached permit equipment list.

(ii) Impending Rotating Outage Use: The stationary emergency standby diesel-fueled CI engine(s) subject to this permit may be operated in response to the notification of an

[6] As used in the permit, "ATCM" means Section 93115, Title 17, California Code of Regulations. Airborne Toxic Control Measure for Stationary Compression Ignition (CI) Engines

[7] "maintenance and testing" is defined in of the ATCM and may also be found on the District webpage at http://www.sbcapcd.org/eng/atcm/dice/ES_MT_DICE_Definitions.pdf

impending rotating outage if all the conditions cited in the ATCM are met, as applicable.

(iii) Fuel and Fuel Additive Requirements: The permittee may only add fuel and/or fuel additives to the engine or any fuel tank directly attached to the engine that comply with the ATCM, as applicable.

(c) **Monitoring.** The equipment permitted herein is subject to the following monitoring requirements:

(i) Non-Resettable Hour Meter: Each stationary emergency standby diesel-fueled CI engine(s) subject to this permit shall have installed a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the District has determined (in writing) that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history.

(d) **Recordkeeping.** The permittee shall record and maintain the information listed below. Log entries shall be retained for a minimum of 36 months from the date of entry. Log entries made within 24 months of the most recent entry shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request. Log entries made from 25 to 36 months from most recent entry shall be made available to District staff within 5 working days from request. Use of District Form ENF-92 (*Diesel-Fired Emergency Standby Engine Recordkeeping Form*) can be used for this requirement.

(i) emergency use hours of operation.

(ii) maintenance and testing hours of operation.

(iii) hours of operation for emission testing to show compliance with the ATCM {if specifically allowed for under this permit}.

(iv) hours of operation for all uses other than those specified in items (i) – (iii) above along with a description of what those hours were for.

(v) The owner or operator shall document fuel use through the retention of fuel purchase records that demonstrate that the only fuel purchased and added to an emergency standby engine or engines, or to any fuel tank directly attached to an emergency standby engine or engines, meets the requirements of the ATCM.

(vi) The following maintenance records:

a. The date of each oil and filter change, the number of hours of operation since the last oil change;

b. The date of each air filter inspection and the number of hours of operation since the last air filter inspection. Indicate if the air filter was replaced as a result of the inspection;

c. The date of each hose and belt inspection and the number of hours of operation since the last hose and belt inspection. Indicate if any hose or belt was replaced as a result of the inspection

(e) **Reporting.** On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all data required by the *Semi-Annual Compliance Verification Reports* condition of this permit

D.4 **Internal Combustion Engine Operational Limits and Monitoring.** The following limits apply to all internal combustion engines included in this permit:

(a) *Hourly Heat Input*: Maximum heat input (MMBtu/hour) to the internal combustion engines listed in this permit is restricted to the values listed in the "Use per Hour" column of Table 5.1-1.

(b) *Annual Heat Input*: Maximum annual heat input (MMBtu/year) to the internal combustion engines listed in this permit is restricted to the values listed in the "Use per Year" column of Table 5.1-1.

(c) *Fuel Type*: Engines shall be fired on gaseous fuels only.

(d) *Fuel Use Monitoring*: The permittee shall comply with the *Fuel Use Monitoring Plan* (FUMP) approved by the District for the engines listed in this permit. The FUMP may be modified only upon written approval by the District and shall be maintained on-site and made available to District personnel upon request. The latest District approved FUMP is incorporated by reference as an enforceable part of this permit.

(e) *Engine Identification*: Each engine shall have its operator identification number permanently and legibly liquid welded or stamped into the engine block the location of the identifying stamp shall be the same for each engine model and shall be readily accessible for inspection.

(f) *Reference List*: For each engine's unique operator identification number, stamped into the engine block per Condition 9.D.4.(e), the permittee shall maintain a reference list containing the make, model, serial number, rated maximum HP and the corresponding RPM.

D.5 **ERCs - Use of the Clark Compressor.** The permittee shall provide emission offsets from the District's Source Register for any NO_X emissions from the operation of the Clark Compressor (ID# 004434) beyond 200 hours per year. Furthermore, the permittee must apply for an Authority to Construct for the increase in emissions if operations of the engine will exceed 200 hours per year and those increased potential emissions shall be offset with ERCs from the District's Source Register.

D.6 **ERCs - Orcutt Hill Field Gas Compression.** All field gas processed at the Orcutt Hill stationary source shall be processed by electrically-driven compressors with the exception of backup compression by the Clark Compressor (ID# 004434).

D.7 **ERCs - Orcutt Hill Wastewater Injection Wells.** All injection wells located at the Newlove, Pinal Leases and the Newlove 67 location at the Orcutt Hill stationary source shall be powered by electrically-driven pumps.

D.8 **New Electrically-Driven Well Pumps.** All new oil and gas wells at the Newlove Lease, Cal Coast Lease, Dome Lease, Squires Lease, Folsom Lease, Pinal Lease and the Hobbs Lease shall be powered by electrically driven pumps.

D.9 **Annual Compliance Verification Reports.** The permittee shall submit a report to the District, by March 1st of each year containing the information listed below and shall document compliance with all applicable permit requirements. A paper copy, as well as a complete PDF electronic copy of these reports, shall be in a format approved by the District. These reports shall be in a format approved by the District. All logs and other basic source data not included in the report shall be available to the District upon request. Pursuant to Rule 212, the annual report shall include a completed *District Annual Emissions Inventory* questionnaire, or the questionnaire may be submitted electronically via the District website. The report shall include the following information:

(a) Fuel use per Condition D.4(d) of this permit. Monthly records shall be generated no later than 90-days after the close of the subject month.

(b) The heating value of the gaseous fuel (Btu/SCF).

(c) The annual emissions totals of all pollutants in tons per year for each emission unit and summarized for the entire facility.

(d) emergency use hours of operation.

(e) maintenance and testing hours of operation.

(f) hours of operation for all uses other than for emergency use and maintenance and testing, along with a description of what those hours were for.

(g) written statement of fuel sulfur content from fuel supplier if provided in lieu of fuel use records.

D.10 **Compliance.** Nothing contained within this permit shall be construed to allow the violation of any local, State or Federal rule, regulation, ambient air quality standard or air quality increment.

D.11 **Process Stream Sampling and Analysis.** The permittee shall sample analyze the process streams listed in Section 4.5 of this permit according to the methods and frequency detailed in that Section. All process stream samples shall be taken according to District approved ASTM methods and must follow traceable chain of custody procedures.

D.12 **Process Monitoring Systems - Operation and Maintenance.** All facility process monitoring devices listed in Section 4.4 shall be properly operated and maintained according to the *Process Monitor Calibration and Maintenance Plan* approved by the District on August 7, 2000.

D.13 **Mass Emission Limitations.** Mass emissions for each equipment item (i.e., emissions unit) associated with the Orcutt Hill Internal Combustion Engines shall not exceed the values listed in Table 5.1-3 and 5.1-4. Emissions for the internal combustion engines shall not exceed the total limits listed in Table 5.2.

Air Pollution Control Officer

_____

_____

Date

NOTES:

(a) This permit supersedes PTO 8039-R10, PTO 8039-10
(b) Permit Reevaluation Due Date: June 1, 2024

10.0 Attachments

10.1 Emission Calculation Documentation Orcutt Hill IC Engines
10.2 Fee Statement
10.3 IDS Database Emission Tables
10.4 Equipment List

10.1 EMISSION CALCULATION DOCUMENTATION ORCUTT HILL IC ENGINES

This attachment contains all relevant emission calculation documentation used for the emission tables in Section 5. Refer to Section 4 for the general equations. The letter A refers to Tables 5.1-1 and 5.1-2.

Reference A - Internal Combustion Engines

→ The maximum operating schedule is in units of hours

Gaseous fuel default characteristics:
⇒ HHV = 1,350 Btu/scf
⇒ Fuel S = 796 ppmvd as H_2S for all equipment

→ Brake Specific Fuel Consumption (BSFC) for each model of ICE is listed in Table 5.1-1.

→ Emission factor units (lb/MMBtu) are based on HHV.

→ The NO_X emission factors for all uncontrolled IC engines are based on factors dictated by the District Hearing Board. The NO_X emission factor for controlled IC engines are based on District Rule 333 limits.

→ ROC emission factors for all uncontrolled IC engines are based on factors dictated by the District Hearing Board. The ROC emission factors for controlled IC engines are based on District Rule 333 limits, as given by the District PGD on reciprocating ICEs dated January 27, 1998, page 7.

→ The CO emission factors for all uncontrolled IC engines are based on factors dictated by the District Hearing Board. The CO emission factor for controlled IC engines are based on District Rule 333 limits, as given by the District PGD on reciprocating ICEs dated January 27, 1998, page 7.

SO_2 emission limits (factors) are based on mass balance based on fuel S. Thus, for gas-fired and diesel-fired IC engines:

→ SO_2 (lb/MMBtu) = 0.169 lb SO_2/scf of H_2S * 1/HHV*(ppmvd S in fuel) = 0.100

→ PM emission limits are based on USEPA, AP-42, Table 3.2.4 (gas-fired ICE) as given by the District PGD on reciprocating ICEs dated January 27, 1998, page 7.

Greenhouse Gas Emissions Computations:

GHG emissions from combustion sources are calculated using emission factors found in Tables C-1 and C-2 of 40 CFR Part 09 and global warming potentials found in Table A-1 of 40 CFR Part 98. CO_2 equivalent emission factors are calculated for CO_2, CH_4, and N_2O individually, then summed to calculate a total CO_{2e} emission factor. Annual CO_{2e} emission totals are presented in short tons.

For natural gas combustion the emission factor is:
(53.02 kg CO_2/MMbtu) (2.2046 lb/kg) = 116.89 lb CO_2/MMBtu
(0.001 kg CH_4/MMBtu) (2.2046 lb/kg)(21 lb CO_2e/lb CH4) = 0.046 lb CO_2e/MMBtu
(0.0001 kg N_2O/MMBtu) (2.2046 lb/kg)(310 lb CO_2e/lb N_2O) = 0.068 lb CO_2e/MMBtu
Total CO2e/MMBtu = 116.89 + 0.046 + 0.068 = <u>117.00 lb CO_2e/MMBtu</u>

10.2 Fee Statement

air pollution control district
SANTA BARBARA COUNTY

FEE STATEMENT
PT-70/Reeval No. 08039 - R11
FID: 04214 Orcutt Hill IC Engines / SSID: 02667

Device No.	Device Name	Fee Schedule	Qty of Fee Units	Fee per Unit	Fee Units	Max or Min. Fee Apply?	Number of Same Devices	Pro Rate Factor	Device Fee	Penalty Fee?	Fee Credit	Total Fee per Device
004306	IC Engine: (#12195)	A3	1.430	551.72	Per 1 million Btu input	No	1	1.000	788.96	0.00	0.00	788.96
004307	IC Engine: (#10939)	A3	0.450	551.72	Per 1 million Btu input	No	1	1.000	248.27	0.00	0.00	248.27
004315	IC Engine: (#11763)	A3	0.380	551.72	Per 1 million Btu input	No	1	1.000	209.65	0.00	0.00	209.65
004322	IC Engine: (#8826)	A3	0.510	551.72	Per 1 million Btu input	No	1	1.000	281.38	0.00	0.00	281.38
004324	IC Engine: (#11983)	A3	0.500	551.72	Per 1 million Btu input	No	1	1.000	275.86	0.00	0.00	275.86
004331	IC Engine: (#11143)	A3	0.500	551.72	Per 1 million Btu input	No	1	1.000	275.86	0.00	0.00	275.86
004336	IC Engine: (#11484)	A3	0.500	551.72	Per 1 million Btu input	No	1	1.000	275.86	0.00	0.00	275.86
004338	IC Engine: (#11480)	A3	0.500	551.72	Per 1 million Btu input	No	1	1.000	275.86	0.00	0.00	275.86
004342	IC Engine: (#11513)	A3	0.500	551.72	Per 1 million Btu input	No	1	1.000	275.86	0.00	0.00	275.86
004344	IC Engine: (#11667)	A3	0.390	551.72	Per 1 million Btu input	No	1	1.000	215.17	0.00	0.00	215.17
004345	IC Engine: (#12159)	A3	0.390	551.72	Per 1 million Btu input	No	1	1.000	215.17	0.00	0.00	215.17
004351	IC Engine: (#11523)	A3	0.390	551.72	Per 1 million Btu input	No	1	1.000	215.17	0.00	0.00	215.17
004353	IC Engine: (#12161)	A3	0.390	551.72	Per 1 million Btu input	No	1	1.000	215.17	0.00	0.00	215.17
004355	IC Engine: (#11505)	A3	0.500	551.72	Per 1 million Btu input	No	1	1.000	275.86	0.00	0.00	275.86

004356	IC Engine: (#12151)	A3	0.390	551.72	Per 1 million Btu input	No	1	1.000	215.17	0.00	0.00	215.17
004359	IC Engine: (#9553)	A3	0.500	551.72	Per 1 million Btu input	No	1	1.000	275.86	0.00	0.00	275.86
004365	IC Engine: (#9603)	A3	0.260	551.72	Per 1 million Btu input	No	1	1.000	143.45	0.00	0.00	143.45
004367	IC Engine: (#11489)	A3	0.500	551.72	Per 1 million Btu input	No	1	1.000	275.86	0.00	0.00	275.86
004371	IC Engine: (#12155)	A3	0.390	551.72	Per 1 million Btu input	No	1	1.000	215.17	0.00	0.00	215.17
004372	IC Engine: (#11511)	A3	0.500	551.72	Per 1 million Btu input	No	1	1.000	275.86	0.00	0.00	275.86
004376	IC Engine: (#8967)	A3	0.260	551.72	Per 1 million Btu input	No	1	1.000	143.45	0.00	0.00	143.45
004377	IC Engine: (#9904)	A3	0.260	551.72	Per 1 million Btu input	No	1	1.000	143.45	0.00	0.00	143.45
004378	IC Engine: (#12023)	A3	0.250	551.72	Per 1 million Btu input	No	1	1.000	137.93	0.00	0.00	137.93
004379	IC Engine: (#10986)	A3	0.210	551.72	Per 1 million Btu input	No	1	1.000	115.86	0.00	0.00	115.86
004380	IC Engine: (#11971)	A3	0.410	551.72	Per 1 million Btu input	No	1	1.000	226.21	0.00	0.00	226.21
004381	IC Engine: (#10498)	A3	0.410	551.72	Per 1 million Btu input	No	1	1.000	226.21	0.00	0.00	226.21
004382	IC Engine: (#11931)	A3	0.480	551.72	Per 1 million Btu input	No	1	1.000	264.83	0.00	0.00	264.83
004383	IC Engine: (#9300)	A3	0.260	551.72	Per 1 million Btu input	No	1	1.000	143.45	0.00	0.00	143.45
004384	IC Engine: (#11842)	A3	0.260	551.72	Per 1 million Btu input	No	1	1.000	143.45	0.00	0.00	143.45
004386	IC Engine: (#10775)	A3	0.410	551.72	Per 1 million Btu input	No	1	1.000	226.21	0.00	0.00	226.21
004390	IC Engine: (#8488)	A3	0.510	551.72	Per 1 million Btu input	No	1	1.000	281.38	0.00	0.00	281.38
004391	IC Engine: (#12045)	A3	0.410	551.72	Per 1 million Btu input	No	1	1.000	226.21	0.00	0.00	226.21
004392	IC Engine: (#10786)	A3	0.410	551.72	Per 1 million Btu input	No	1	1.000	226.21	0.00	0.00	226.21
004394	IC Engine: (#9534)	A3	0.260	551.72	Per 1 million Btu input	No	1	1.000	143.45	0.00	0.00	143.45
004396	IC Engine: (#11999)	A3	0.510	551.72	Per 1 million Btu input	No	1	1.000	281.38	0.00	0.00	281.38
004397	IC Engine: (#9228)	A3	0.260	551.72	Per 1 million Btu input	No	1	1.000	143.45	0.00	0.00	143.45

004398	IC Engine: (#11841)	A3	0.260	551.72	Per 1 million Btu input	No	1	1.000	143.45	0.00	0.00	143.45
004399	IC Engine: (#8874)	A3	0.510	551.72	Per 1 million Btu input	No	1	1.000	281.38	0.00	0.00	281.38
004400	IC Engine:(#12133)	A3	0.510	551.72	Per 1 million Btu input	No	1	1.000	281.38	0.00	0.00	281.38
004401	IC Engine: (#11330)	A3	0.260	551.72	Per 1 million Btu input	No	1	1.000	143.45	0.00	0.00	143.45
004402	IC Engine: (#11615)	A3	0.500	551.72	Per 1 million Btu input	No	1	1.000	275.86	0.00	0.00	275.86
004403	IC Engine: (#8970)	A3	0.260	551.72	Per 1 million Btu input	No	1	1.000	143.45	0.00	0.00	143.45
004404	IC Engine: (#9748)	A3	0.210	551.72	Per 1 million Btu input	No	1	1.000	115.86	0.00	0.00	115.86
004411	IC Engine: (#8864)	A3	0.260	551.72	Per 1 million Btu input	No	1	1.000	143.45	0.00	0.00	143.45
004412	IC Engine: (#12004)	A3	0.510	551.72	Per 1 million Btu input	No	1	1.000	281.38	0.00	0.00	281.38
004413	IC Engine: (#10905)	A3	0.510	551.72	Per 1 million Btu input	No	1	1.000	281.38	0.00	0.00	281.38
004418	IC Engine: (#11609)	A3	0.410	551.72	Per 1 million Btu input	No	1	1.000	226.21	0.00	0.00	226.21
004419	IC Engine: (#11105)	A3	0.260	551.72	Per 1 million Btu input	No	1	1.000	143.45	0.00	0.00	143.45
004420	IC Engine: (#10757)	A3	0.210	551.72	Per 1 million Btu input	No	1	1.000	115.86	0.00	0.00	115.86
004421	IC Engine: (#9268)	A3	0.510	551.72	Per 1 million Btu input	No	1	1.000	281.38	0.00	0.00	281.38
004425	IC Engine: (#12166)	A3	0.260	551.72	Per 1 million Btu input	No	1	1.000	143.45	0.00	0.00	143.45
004427	IC Engine: (#12122)	A3	0.510	551.72	Per 1 million Btu input	No	1	1.000	281.38	0.00	0.00	281.38
004430	IC Engine: (#8785)	A3	0.510	551.72	Per 1 million Btu input	No	1	1.000	281.38	0.00	0.00	281.38
004434	IC Engine: (#19766)	A3	5.500	551.72	Per 1 million Btu input	No	1	1.000	3,034.46	0.00	0.00	3,034.46
004435	IC Engine: (#12163)	A3	2.740	551.72	Per 1 million Btu input	No	1	1.000	1,511.71	0.00	0.00	1,511.71
005306	IC Engine: (#12168)	A3	0.450	551.72	Per 1 million Btu input	No	1	1.000	248.27	0.00	0.00	248.27
005865	IC Engine: (#8971)	A3	0.260	551.72	Per 1 million Btu input	No	1	1.000	143.45	0.00	0.00	143.45
006473	IC Engine: (#8996)	A3	0.350	551.72	Per 1 million Btu input	No	1	1.000	193.10	0.00	0.00	193.10

008184	IC Engine: (#10215)	A3	0.500	551.72	Per 1 million Btu input	No	1	1.000	275.86	0.00	0.00	275.86
008762	IC Engine: (#11010)	A3	0.450	551.72	Per 1 million Btu input	No	1	1.000	248.27	0.00	0.00	248.27
008763	IC Engine: (#11033)	A3	0.450	551.72	Per 1 million Btu input	No	1	1.000	248.27	0.00	0.00	248.27
008764	IC Engine: (#11499)	A3	0.500	551.72	Per 1 million Btu input	No	1	1.000	275.86	0.00	0.00	275.86
008766	IC Engine: (#11975)	A3	0.500	551.72	Per 1 million Btu input	No	1	1.000	275.86	0.00	0.00	275.86
008767	IC Engine: (#12066)	A3	0.450	551.72	Per 1 million Btu input	No	1	1.000	248.27	0.00	0.00	248.27
008779	IC Engine: (#11386)	A3	0.510	551.72	Per 1 million Btu input	No	1	1.000	281.38	0.00	0.00	281.38
008780	IC Engine: (#11889)	A3	0.510	551.72	Per 1 million Btu input	No	1	1.000	281.38	0.00	0.00	281.38
008781	IC Engine: (#12034)	A3	0.510	551.72	Per 1 million Btu input	No	1	1.000	281.38	0.00	0.00	281.38
008783	IC Engine: (#11830)	A3	0.390	551.72	Per 1 million Btu input	No	1	1.000	215.17	0.00	0.00	215.17
008784	IC Engine: (#12145)	A3	0.390	551.72	Per 1 million Btu input	No	1	1.000	215.17	0.00	0.00	215.17
008996	IC Engine: (#11883)	A3	0.410	551.72	Per 1 million Btu input	No	1	1.000	226.21	0.00	0.00	226.21
101250	IC Engine: (#9602)	A3	0.350	551.72	Per 1 million Btu input	No	1	1.000	193.10	0.00	0.00	193.10
101251	IC Engine: (#9994)	A3	0.210	551.72	Per 1 million Btu input	No	1	1.000	115.86	0.00	0.00	115.86
101252	IC Engine: (#10373)	A3	0.410	551.72	Per 1 million Btu input	No	1	1.000	226.21	0.00	0.00	226.21
101256	IC Engine: (#9818)	A3	0.500	551.72	Per 1 million Btu input	No	1	1.000	275.86	0.00	0.00	275.86
107312	IC Engine (#9270)	A3	0.240	551.72	Per 1 million Btu input	No	1	1.000	132.41	0.00	0.00	132.41
113723	Emergency Backup Generator	A3	1.000	551.72	Per 1 million Btu input	No	1	1.000	551.72	0.00	0.00	551.72
004311	IC Engine: (#10923)	A3	0.510	551.72	Per 1 million Btu input	No	1	1.000	281.38	0.00	0.00	281.38
	Device Fee Sub-Totals =								**$22,063.28**	**$0.00**	**$0.00**	
	Device Fee Total =											**$22,063.28**

Permit Fee

Fee Based on Devices	**$22,063.28**

Fee Statement Grand Total = $22,063

Notes:

(1) Fee Schedule Items are listed in District Rule 210, Fee Schedule "A".
(2) The term "Units" refers to the unit of measure defined in the Fee Schedule.

10.3 IDS Database Emission Tables

Table 1
Permitted Potential to Emit (PPTE)

	NO_X	ROC	CO	SO_X	TSP	$PM_{2.5/10}$
PTO 8039 – ORCUTT ICEs						
lb/day	1,709.45	146.33	1,931.30	95.27	14.37	14.37
tons/year	235.56	12.97	199.92	12.36	1.27	1.27

Table 2
Facility Potential to Emit (FPTE)

	NO_X	ROC	CO	SO_X	TSP	$PM_{2.5/10}$
PTO 8039 – ORCUTT ICEs						
lb/day	1,709.45	146.33	1,931.30	95.27	14.37	14.37
tons/year	235.56	12.97	199.92	12.36	1.27	1.27

Table 3
Federal PT-70 Facility Potential to Emit (PT 70 FPTE)

	NO_X	ROC	CO	SO_X	TSP	PM_{10}
PTO 8039 – ORCUTT ICEs						
lb/day	1,709.45	146.33	1,931.30	95.27	14.37	14.37
tons/year	235.56	12.97	199.92	12.36	1.27	1.27

Table 4
Stationary Source Emissions

	NO_X	ROC	CO	SO_X	TSP	$PM_{10/2.5}$
PCEC Orcutt Hill Stationary Source						
lbs/day	1762.49	3566.82	2028.28	115.60	44.77	44.77
tons/year	245.23	165.87	217.61	16.07	6.82	6.82

10.4 Equipment List

Santa Barbara County Air Pollution Control District – Equipment List

PT-70/Reeval 08039 R11 / FID: 04214 Orcutt Hill IC Engines / SSID: 02667

A PERMITTED EQUIPMENT

1 IC Engine: (#12195)

Device ID #	**004306**	***Device Name***	**IC Engine: (#12195)**
Rated Heat Input	1.430 MMBtu/Hour	*Physical Size*	175.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	12195
Model	800T	*Serial Number*	
Location Note	Newlove Tran 2		
Device Description			

2 IC Engine: (#10939)

Device ID #	**004307**	***Device Name***	**IC Engine: (#10939)**
Rated Heat Input	0.450 MMBtu/Hour	*Physical Size*	49.60 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	10939
Model	WAK	*Serial Number*	
Location Note			
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.98" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

3 IC Engine: (#11763)

Device ID #	**004315**	***Device Name***	**IC Engine: (#11763)**
Rated Heat Input	0.380 MMBtu/Hour	*Physical Size*	41.80 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11763
Model	195	*Serial Number*	
Location Note	Jacket Water Pump 3		
Device Description	Engine use: Out of Service Capacity limits: Orifice Plate @ 1.65" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

4 IC Engine: (#8826)

Device ID #	**004322**	***Device Name***	**IC Engine: (#8826)**
Rated Heat Input	0.510 MMBtu/Hour	*Physical Size*	46.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	8826
Model	605	*Serial Number*	
Location Note	Squires #14		
Device Description	Capacity limits: nameplate		

5 IC Engine: (#11983)

Device ID #	**004324**	***Device Name***	**IC Engine: (#11983)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11983
Model	145	*Serial Number*	
Location Note	Hobbs #18		
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.922" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

6 IC Engine: (#11143)

Device ID #	**004331**	***Device Name***	**IC Engine: (#11143)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11143
Model	817	*Serial Number*	
Location Note	Newlove Injection #10E		
Device Description	Capacity limits: Orifice Plate @ 0.922" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

7 IC Engine: (#11484)

Device ID #	**004336**	***Device Name***	**IC Engine: (#11484)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11484
Model	145	*Serial Number*	
Location Note	Dome #15		
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.922" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

8 IC Engine: (#11480)

Device ID #	**004338**	***Device Name***	**IC Engine: (#11480)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11480
Model	145	*Serial Number*	
Location Note	Newlove Injection #4		
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.922" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

9 IC Engine: (#11513)

Device ID #	**004342**	***Device Name***	**IC Engine: (#11513)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11513
Model	145	*Serial Number*	
Location Note	Folsom #6		
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.922" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

10 IC Engine: (#11667)

Device ID #	**004344**	***Device Name***	**IC Engine: (#11667)**
Rated Heat Input	0.390 MMBtu/Hour	*Physical Size*	48.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	11667
Model	800	*Serial Number*	
Location Note	Newlove #57		
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.85" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

11 IC Engine: (#12159)

Device ID #	**004345**	***Device Name***	**IC Engine: (#12159)**
Rated Heat Input	0.390 MMBtu/Hour	*Physical Size*	48.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	12159
Model	800	*Serial Number*	
Location Note	Dome #7		
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.85" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

12 IC Engine: (#11523)

Device ID #	**004351**	***Device Name***	**IC Engine: (#11523)**
Rated Heat Input	0.390 MMBtu/Hour	*Physical Size*	48.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	11523
Model	800	*Serial Number*	
Location Note	Newlove #52		
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.85" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

13 IC Engine: (#12161)

Device ID #	**004353**	***Device Name***	**IC Engine: (#12161)**
Rated Heat Input	0.390 MMBtu/Hour	*Physical Size*	48.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	12161
Model	800	*Serial Number*	
Location Note	Cal Coast #21		
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.85" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

14 IC Engine: (#11505)

Device ID #	**004355**	***Device Name***	**IC Engine: (#11505)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11505
Model	145	*Serial Number*	
Location Note	Newlove Injection #7B		
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.922" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

15 IC Engine: (#12151)

Device ID #	**004356**	***Device Name***	**IC Engine: (#12151)**
Rated Heat Input	0.390 MMBtu/Hour	*Physical Size*	48.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	12151
Model	800	*Serial Number*	
Location Note	Newlove #69		
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.85" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

16 IC Engine: (#9553)

Device ID #	**004359**	***Device Name***	**IC Engine: (#9553)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	9553
Model	145	*Serial Number*	
Location Note	Squires #38		
Device Description	Capacity limits: Orifice Plate @ 0.922"		

17 IC Engine: (#9603)

Device ID #	**004365**	***Device Name***	**IC Engine: (#9603)**
Rated Heat Input	0.260 MMBtu/Hour	*Physical Size*	25.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	9603
Model	283	*Serial Number*	
Location Note	Hartnell #8		
Device Description	Engine use: Out of Service Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

18 IC Engine: (#11489)

Device ID #	**004367**	***Device Name***	**IC Engine: (#11489)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11489
Model	145	*Serial Number*	
Location Note	Squires #23		
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.922" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

19 IC Engine: (#12155)

Device ID #	**004371**	***Device Name***	**IC Engine: (#12155)**
Rated Heat Input	0.390 MMBtu/Hour	*Physical Size*	48.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	12155
Model	800	*Serial Number*	
Location Note			
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.85" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

20 IC Engine: (#11511)

Device ID #	**004372**	***Device Name***	**IC Engine: (#11511)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11511
Model	817	*Serial Number*	
Location Note	Cal Coast #4		
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.922" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

21 IC Engine: (#8967)

Device ID #	**004376**	***Device Name***	**IC Engine: (#8967)**
Rated Heat Input	0.260 MMBtu/Hour	*Physical Size*	25.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	8967
Model	283	*Serial Number*	
Location Note	Hartnell #14/Newlove 94		
Device Description	Capacity limits: nameplate		

22 IC Engine: (#9904)

Device ID #	**004377**	***Device Name***	**IC Engine: (#9904)**
Rated Heat Input	0.260 MMBtu/Hour	*Physical Size*	25.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	9904
Model	283	*Serial Number*	
Location Note	Jacket Water Fan #3		
Device Description	Engine use: Fan Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

23 IC Engine: (#12023)

Device ID #	**004378**	***Device Name***	**IC Engine: (#12023)**
Rated Heat Input	0.250 MMBtu/Hour	*Physical Size*	28.00 Brake Horsepower
Manufacturer	International	*Operator ID*	12023
Model	153	*Serial Number*	
Location Note	Aero Vap Fin Fan		
Device Description	Engine use: Aero Vap Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

24 IC Engine: (#10986)

Device ID #	**004379**	***Device Name***	**IC Engine: (#10986)**
Rated Heat Input	0.210 MMBtu/Hour	*Physical Size*	23.00 Brake Horsepower
Manufacturer	Leroi	*Operator ID*	10986
Model	226	*Serial Number*	
Location Note	Air Compressor		
Device Description	Engine use: Out of Service Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

25 IC Engine: (#11971)

Device ID #	**004380**	***Device Name***	**IC Engine: (#11971)**
Rated Heat Input	0.410 MMBtu/Hour	*Physical Size*	39.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	11971
Model	425	*Serial Number*	
Location Note	Newlove 42 Trans #1		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

26 IC Engine: (#10498)

Device ID #	**004381**	***Device Name***	**IC Engine: (#10498)**
Rated Heat Input	0.410 MMBtu/Hour	*Physical Size*	39.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	10498
Model	425	*Serial Number*	
Location Note	Newlove 42 Trans #2		
Device Description	Engine use: Trans Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

27 IC Engine: (#11931)

Device ID #	**004382**	***Device Name***	**IC Engine: (#11931)**
Rated Heat Input	0.480 MMBtu/Hour	*Physical Size*	46.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	11931
Model	HEB	*Serial Number*	
Location Note	Squires #20		
Device Description	Engine use: Shipping Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

28 IC Engine: (#9300)

Device ID #	**004383**	***Device Name***	**IC Engine: (#9300)**
Rated Heat Input	0.260 MMBtu/Hour	*Physical Size*	25.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	9300
Model	283	*Serial Number*	
Location Note	Cal Coast #1		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel: field nat gasFuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

29 IC Engine: (#11842)

Device ID #	**004384**	***Device Name***	**IC Engine: (#11842)**
Rated Heat Input	0.260 MMBtu/Hour	*Physical Size*	25.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	11842
Model	283	*Serial Number*	
Location Note	Cal Coast #22		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

30 IC Engine: (#10775)

Device ID #	**004386**	***Device Name***	**IC Engine: (#10775)**
Rated Heat Input	0.410 MMBtu/Hour	*Physical Size*	39.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	10775
Model	425	*Serial Number*	
Location Note	Hobbs #7		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

31 IC Engine: (#8488)

Device ID #	**004390**	***Device Name***	**IC Engine: (#8488)**
Rated Heat Input	0.510 MMBtu/Hour	*Physical Size*	46.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	8488
Model	605	*Serial Number*	
Location Note	Dome #2		
Device Description	Capacity limits: nameplate		

32 IC Engine: (#12045)

Device ID #	**004391**	***Device Name***	**IC Engine: (#12045)**
Rated Heat Input	0.410 MMBtu/Hour	*Physical Size*	39.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	12045
Model	425	*Serial Number*	
Location Note	Newlove #110		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

33 IC Engine: (#10786)

Device ID #	**004392**	***Device Name***	**IC Engine: (#10786)**
Rated Heat Input	0.410 MMBtu/Hour	*Physical Size*	39.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	10786
Model	425	*Serial Number*	
Location Note	Dome #5		
Device Description	Engine use: Well Pump On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

34 IC Engine: (#9534)

Device ID #	**004394**	***Device Name***	**IC Engine: (#9534)**
Rated Heat Input	0.260 MMBtu/Hour	*Physical Size*	25.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	9534
Model	283	*Serial Number*	
Location Note	Graciosa #10		
Device Description	Engine use: Out of Service Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

35 IC Engine: (#11999)

Device ID #	**004396**	***Device Name***	**IC Engine: (#11999)**
Rated Heat Input	0.510 MMBtu/Hour	*Physical Size*	46.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	11999
Model	605	*Serial Number*	
Location Note	Newlove #29		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

36 IC Engine: (#9228)

Device ID #	**004397**	***Device Name***	**IC Engine: (#9228)**
Rated Heat Input	0.260 MMBtu/Hour	*Physical Size*	25.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	9228
Model	283	*Serial Number*	
Location Note	Cal Coast #22		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

37 IC Engine: (#11841)

Device ID #	**004398**	***Device Name***	**IC Engine: (#11841)**
Rated Heat Input	0.260 MMBtu/Hour	*Physical Size*	25.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	11841
Model	283	*Serial Number*	
Location Note	Hartnell #8		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

38 IC Engine: (#8874)

Device ID #	**004399**	***Device Name***	**IC Engine: (#8874)**
Rated Heat Input	0.510 MMBtu/Hour	*Physical Size*	46.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	8874
Model	605	*Serial Number*	
Location Note	Hobbs #15		
Device Description	Capacity limits: nameplate		

39 IC Engine:(#12133)

Device ID #	**004400**	***Device Name***	**IC Engine:(#12133)**
Rated Heat Input	0.510 MMBtu/Hour	*Physical Size*	46.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	12133
Model	605	*Serial Number*	
Location Note	Hobbs #22		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

40 IC Engine: (#11330)

Device ID #	**004401**	***Device Name***	**IC Engine: (#11330)**
Rated Heat Input	0.260 MMBtu/Hour	*Physical Size*	25.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	11330
Model	283	*Serial Number*	
Location Note	Pinal #20		
Device Description	Engine use: Compressor Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

41 IC Engine: (#11615)

Device ID #	**004402**	***Device Name***	**IC Engine: (#11615)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11615
Model	145	*Serial Number*	
Location Note	Newlove #58		
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.922" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

42 IC Engine: (#8970)

Device ID #	**004403**	***Device Name***	**IC Engine: (#8970)**
Rated Heat Input	0.260 MMBtu/Hour	*Physical Size*	25.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	8970
Model	283	*Serial Number*	
Location Note	Newlove Tank VRS		
Device Description	Capacity limits: nameplate		

43 IC Engine: (#9748)

Device ID #	**004404**	***Device Name***	**IC Engine: (#9748)**
Rated Heat Input	0.210 MMBtu/Hour	*Physical Size*	23.00 Brake Horsepower
Manufacturer	Leroi	*Operator ID*	9748
Model	226	*Serial Number*	
Location Note	Newlove #42/#94		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

44 IC Engine: (#8864)

Device ID #	**004411**	***Device Name***	**IC Engine: (#8864)**
Rated Heat Input	0.260 MMBtu/Hour	*Physical Size*	25.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	8864
Model	283	*Serial Number*	
Location Note	Newlove #96		
Device Description	Capacity limits: nameplate		

45 IC Engine: (#12004)

Device ID #	**004412**	***Device Name***	**IC Engine: (#12004)**
Rated Heat Input	0.510 MMBtu/Hour	*Physical Size*	46.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	12004
Model	605	*Serial Number*	
Location Note	Cal Coast #2		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

46 IC Engine: (#10905)

Device ID #	**004413**	***Device Name***	**IC Engine: (#10905)**
Rated Heat Input	0.510 MMBtu/Hour	*Physical Size*	46.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	10905
Model	605	*Serial Number*	
Location Note	Newlove #36		
Device Description	Engine use: Out of Service Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

47 IC Engine: (#11609)

Device ID #	**004418**	***Device Name***	**IC Engine: (#11609)**
Rated Heat Input	0.410 MMBtu/Hour	*Physical Size*	39.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	11609
Model	425	*Serial Number*	
Location Note	Pinal #23		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

48 IC Engine: (#11105)

Device ID #	**004419**	***Device Name***	**IC Engine: (#11105)**
Rated Heat Input	0.260 MMBtu/Hour	*Physical Size*	25.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	11105
Model	283	*Serial Number*	
Location Note	Newlove #96		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

49 IC Engine: (#10757)

Device ID #	**004420**	***Device Name***	**IC Engine: (#10757)**
Rated Heat Input	0.210 MMBtu/Hour	*Physical Size*	23.00 Brake Horsepower
Manufacturer	Leroi	*Operator ID*	10757
Model	226	*Serial Number*	
Location Note	Pinal #7		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

50 IC Engine: (#9268)

Device ID #	**004421**	***Device Name***	**IC Engine: (#9268)**
Rated Heat Input	0.510 MMBtu/Hour	*Physical Size*	46.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	9268
Model	605	*Serial Number*	
Location Note	Newlove 67-4		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

51 IC Engine: (#12166)

Device ID #	**004425**	***Device Name***	**IC Engine: (#12166)**
Rated Heat Input	0.260 MMBtu/Hour	*Physical Size*	25.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	12166
Model	283	*Serial Number*	
Location Note	Squires #40		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

52 IC Engine: (#12122)

Device ID #	**004427**	***Device Name***	**IC Engine: (#12122)**
Rated Heat Input	0.510 MMBtu/Hour	*Physical Size*	46.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	12122
Model	605	*Serial Number*	
Location Note	Squires #28		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

53 IC Engine: (#8785)

Device ID #	**004430**	***Device Name***	**IC Engine: (#8785)**
Rated Heat Input	0.510 MMBtu/Hour	*Physical Size*	46.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	8785
Model	605	*Serial Number*	
Location Note	Squires #39		
Device Description	Capacity limits: nameplate		

54 IC Engine: (#19766)

Device ID #	**004434**	***Device Name***	**IC Engine: (#19766)**
Rated Heat Input	5.500 MMBtu/Hour	*Physical Size*	400.00 Brake Horsepower
Manufacturer	Clark	*Operator ID*	19766
Model	RA-4	*Serial Number*	
Location Note			
Device Description	Capacity limits: nameplate		

55 IC Engine: (#12163)

Device ID #	**004435**	***Device Name***	**IC Engine: (#12163)**
Rated Heat Input	2.740 MMBtu/Hour	*Physical Size*	301.00 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	12163
Model	2475	*Serial Number*	
Location Note	Fox Injection #1		
Device Description	Capacity limits: nameplate		

56 IC Engine: (#12168)

Device ID #	**005306**	***Device Name***	**IC Engine: (#12168)**
Rated Heat Input	0.450 MMBtu/Hour	*Physical Size*	49.60 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	12168
Model	WAK	*Serial Number*	
Location Note	Cal Coast Inj. #3		
Device Description	Engine use: Out of Service Capacity limits: Orifice Plate @ 0.98" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

57 IC Engine: (#8971)

Device ID #	**005865**	***Device Name***	**IC Engine: (#8971)**
Rated Heat Input	0.260 MMBtu/Hour	*Physical Size*	25.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	8971
Model	283	*Serial Number*	
Location Note	Newlove #42		
Device Description	Capacity limits: nameplate		

58 IC Engine: (#8996)

Device ID #	**006473**	***Device Name***	**IC Engine: (#8996)**
Rated Heat Input	0.350 MMBtu/Hour	*Physical Size*	32.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	8996
Model	403	*Serial Number*	
Location Note	Squires #11		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

59 IC Engine: (#10215)

Device ID #	**008184**	***Device Name***	**IC Engine: (#10215)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	10215
Model	145	*Serial Number*	
Location Note	Cal Coast Inj #8		
Device Description	Capacity limits: Orifice Plate @ 0.922"		

60 IC Engine: (#11010)

Device ID #	**008762**	***Device Name***	**IC Engine: (#11010)**
Rated Heat Input	0.450 MMBtu/Hour	*Physical Size*	49.60 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11010
Model	WAK	*Serial Number*	
Location Note	Cal Coast Injection #3		
Device Description	Engine use: Cal Coast Inj Capacity limits: Orifice Plate @ 0.98" Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

61 IC Engine: (#11033)

Device ID #	**008763**	***Device Name***	**IC Engine: (#11033)**
Rated Heat Input	0.450 MMBtu/Hour	*Physical Size*	49.60 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11033
Model	WAK	*Serial Number*	
Location Note			
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.98" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

62 IC Engine: (#11499)

Device ID #	**008764**	***Device Name***	**IC Engine: (#11499)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11499
Model	145	*Serial Number*	
Location Note			
Device Description	Engine use: Out of Service Capacity limits: Orifice Plate @ 0.922" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

63 IC Engine: (#11975)

Device ID #	**008766**	***Device Name***	**IC Engine: (#11975)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11975
Model	817	*Serial Number*	
Location Note			
Device Description	Engine use: Out of Service Capacity limits: Orifice Plate @ 0.922" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

64 IC Engine: (#12066)

Device ID #	**008767**	***Device Name***	**IC Engine: (#12066)**
Rated Heat Input	0.450 MMBtu/Hour	*Physical Size*	49.60 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	12066
Model	WAK	*Serial Number*	
Location Note	Cal Coast Injection #2		
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.98" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

65 IC Engine: (#11386)

Device ID #	**008779**	***Device Name***	**IC Engine: (#11386)**
Rated Heat Input	0.510 MMBtu/Hour	*Physical Size*	46.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	11386
Model	605	*Serial Number*	
Location Note	Newlove #82		
Device Description	Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

66 IC Engine: (#11889)

Device ID #	**008780**	***Device Name***	**IC Engine: (#11889)**
Rated Heat Input	0.510 MMBtu/Hour	*Physical Size*	46.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	11889
Model	605	*Serial Number*	
Location Note	Pinal #3		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

67 IC Engine: (#12034)

Device ID #	**008781**	***Device Name***	**IC Engine: (#12034)**
Rated Heat Input	0.510 MMBtu/Hour	*Physical Size*	46.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	12034
Model	605	*Serial Number*	
Location Note	Newlove #17A		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

68 IC Engine: (#11830)

Device ID #	**008783**	***Device Name***	**IC Engine: (#11830)**
Rated Heat Input	0.390 MMBtu/Hour	*Physical Size*	46.30 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	11830
Model	336	*Serial Number*	
Location Note	Pinal #31		
Device Description	Engine use: Out of Service Capacity limits: Orifice Plate @ 1.30" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

69 IC Engine: (#12145)

Device ID #	**008784**	***Device Name***	**IC Engine: (#12145)**
Rated Heat Input	0.390 MMBtu/Hour	*Physical Size*	48.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	12145
Model	800	*Serial Number*	
Location Note	Newlove #69		
Device Description	Engine use: Out of Service Capacity limits: Orifice Plate @ 0.85" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

70 IC Engine: (#11883)

Device ID #	**008996**	***Device Name***	**IC Engine: (#11883)**
Rated Heat Input	0.410 MMBtu/Hour	*Physical Size*	39.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	11883
Model	425	*Serial Number*	
Location Note			
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

71 IC Engine: (#9602)

Device ID #	**101250**	***Device Name***	**IC Engine: (#9602)**
Rated Heat Input	0.350 MMBtu/Hour	*Physical Size*	32.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	9602
Model	403	*Serial Number*	
Location Note			
Device Description	Engine use: Out of Service Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

72 IC Engine: (#9994)

Device ID #	**101251**	***Device Name***	**IC Engine: (#9994)**
Rated Heat Input	0.210 MMBtu/Hour	*Physical Size*	23.00 Brake Horsepower
Manufacturer	Leroi	*Operator ID*	9994
Model	226	*Serial Number*	
Location Note			
Device Description	Engine use: Out of Service Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

73 IC Engine: (#10373)

Device ID #	**101252**	***Device Name***	**IC Engine: (#10373)**
Rated Heat Input	0.410 MMBtu/Hour	*Physical Size*	39.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	10373
Model	425	*Serial Number*	
Location Note			
Device Description	Engine use: Out of Service Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

74 IC Engine: (#9818)

Device ID #	**101256**	***Device Name***	**IC Engine: (#9818)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	9818
Model	145	*Serial Number*	
Location Note			
Device Description	Capacity limits: Orifice Plate @ 0.922"		

75 IC Engine (#9270)

Device ID #	**107312**	***Device Name***	**IC Engine (#9270)**
Rated Heat Input	0.240 MMBtu/Hour	*Physical Size*	23.00 Brake Horsepower
Manufacturer	Le Roi	*Operator ID*	9270
Model		*Serial Number*	
Location Note			
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 1000 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

76 Emergency Backup Generator

Device ID #	113723	*Maximum Rated BHP*	80.00
Device Name	Emergency Backup Generator	*Serial Number*	50RJS6DT3
Engine Use	Electrical Power	*EPA Engine Family Name*	9DJXL03.0113
Manufacturer	John Deere	*Operator ID*	TBD
Model Year	2009	*Fuel Type*	CARB Diesel - ULSD
Model	4024HF285		
DRP/ISC?	No	*Healthcare Facility?*	No
Daily Hours	2.00	*Annual Hours*	50
Location Note	Field Office Building, 1555 Orcutt Hill Road, Orcutt		
Device Description	Tier 3, turbocharged, diesel-fired internal combustion engine equipped with a charge air cooler, an electronic control module, and a smoke puff limiter.		

77 IC Engine: (#10923)

Device ID #	**004311**	***Device Name***	**IC Engine: (#10923)**
Rated Heat Input	0.510 MMBtu/Hour	*Physical Size*	46.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	10923
Model	605	*Serial Number*	
Location Note	Newlove #65		
Device Description	Engine use: Well Pump Capacity limits: nameplate On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

E DE-PERMITTED EQUIPMENT

1 IC Engine: (#11549)

Device ID #	**004308**	***Device Name***	**IC Engine: (#11549)**
Rated Heat Input	0.450 MMBtu/Hour	*Physical Size*	49.60 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11549
Model	WAK	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	Engine use: Pinal Inj Capacity limits: Orifice Plate @ 0.98" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

2 IC Engine: (#11591)

Device ID #	**004312**	***Device Name***	**IC Engine: (#11591)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11591
Model	145	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.922" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

3 IC Engine: (#8343)

Device ID #	**004316**	***Device Name***	**IC Engine: (#8343)**
Rated Heat Input	0.450 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	8343
Model	140	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	Capacity limits: Orifice Plate @ 0.98"		

4 IC Engine: (#11627)

Device ID #	**004319**	***Device Name***	**IC Engine: (#11627)**
Rated Heat Input	0.450 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11627
Model	140	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	Engine use: Newlove Inj Capacity limits: Orifice Plate @ 0.98" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

5 IC Engine: (#11927)

Device ID #	**004320**	***Device Name***	**IC Engine: (#11927)**
Rated Heat Input	0.450 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11927
Model	140	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.98" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

6 IC Engine: (#11504)

Device ID #	**004341**	***Device Name***	**IC Engine: (#11504)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11504
Model	145	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	Engine use: Newlove Inj Capacity limits: Orifice Plate @ 0.922" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

7 IC Engine: (#11695)

Device ID #	**004343**	***Device Name***	**IC Engine: (#11695)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11695
Model	145	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	Engine use: Out of Service Capacity limits: Orifice Plate @ 0.922" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

8 IC Engine: (#11698)

Device ID #	**004348**	***Device Name***	**IC Engine: (#11698)**
Rated Heat Input	0.390 MMBtu/Hour	*Physical Size*	48.00 Brake Horsepower
Manufacturer	Minneapolis Moline	*Operator ID*	11698
Model	800	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.85" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

9 IC Engine: (#11628)

Device ID #	**005304**	***Device Name***	**IC Engine: (#11628)**
Rated Heat Input	0.450 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11628
Model	140	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	Engine use: Cal Coast Inj Capacity limits: Orifice Plate @ 0.98" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

10 IC Engine: (#10367)

Device ID #	**005307**	***Device Name***	**IC Engine: (#10367)**
Rated Heat Input	0.450 MMBtu/Hour	*Physical Size*	49.60 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	10367
Model	WAK	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	Engine use: Out of Service Capacity limits: Orifice Plate @ 0.98" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

11 IC Engine: (#9749)

Device ID #	**008183**	***Device Name***	**IC Engine: (#9749)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	9749
Model	817	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	Capacity limits: Orifice Plate @ 0.922"		

12 IC Engine: (#11230)

Device ID #	**008185**	***Device Name***	**IC Engine: (#11230)**
Rated Heat Input	0.380 MMBtu/Hour	*Physical Size*	41.80 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11230
Model	195	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	Engine use: Fire Pump Capacity limits: Orifice Plate @ 1.65" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

13 IC Engine: (#11512)

Device ID #	**008782**	***Device Name***	**IC Engine: (#11512)**
Rated Heat Input	0.500 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11512
Model	145	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	Engine use: Well Pump Capacity limits: Orifice Plate @ 0.922" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		

14 IC Engine: (#11441)

Device ID #	**101258**	***Device Name***	**IC Engine: (#11441)**
Rated Heat Input	0.450 MMBtu/Hour	*Physical Size*	49.50 Brake Horsepower
Manufacturer	Waukesha	*Operator ID*	11441
Model	140	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	Engine use: Out of Service Capacity limits: Orifice Plate @ 0.98" On line: 8,760 hr/yr Fuel parameters: Fuel HHV: 1,350 Btu/scf for NG, sulfur: % by vol: 0.0796		