PROPOSED

PERMIT TO OPERATE 8076-R11

AND

PART 70 OPERATING PERMIT 8076

HVI CAT CANYON, INC.

SOUTH CAT CANYON STATIONARY SOURCE

BLOCHMAN LEASE, CAT CANYON FIELD

6527 DOMINION ROAD
SANTA MARIA, CALIFORNIA 93454

OPERATOR

HVI CAT CANYON, INC.

OWNERSHIP

HVI CAT CANYON, INC.

SANTA BARBARA COUNTY
AIR POLLUTION CONTROL DISTRICT

June 2019

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ABBREVIATIONS/ACRONYMS

AP-42	USEPA's *Compilation of Emission Factors*
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
District	Santa Barbara County Air Pollution Control District
dscf	dry standard cubic foot
EU	emission unit
°F	degree Fahrenheit
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)
lb	pound
lbs/day	pounds per day
lbs/hr	pounds per hour
LACT	Lease Automatic Custody Transfer
LPG	liquid petroleum gas
MACT	Maximum Achievable Control Technology
MM	million
MRR	Monitoring, Recordkeeping and Reporting
MW	molecular weight
NG	natural gas
NSPS	New Source Performance Standards
O_2	oxygen
OCS	outer continental shelf
PM	Particulate Matter
PM_{10}	Particulate Matter 10 microns in diameter or less
$PM_{2.5}$	Particulate Matter 2.5 microns in diameter or less
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
RACT	Reasonably Available Control Technology
ROC	reactive organic compounds, same as "VOC" as used in this permit
RVP	Reid vapor pressure
SCAQMD	South Coast Air Quality Management District
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*

1.1.1 General: The Santa Barbara County Air Pollution Control District (District) is responsible for implementing all applicable federal, state and local air pollution requirements that 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.

The County is designated as a transitional nonattainment area for the state ozone ambient air quality standard and is designated a nonattainment area for the state PM_{10} ambient air quality standard. The County attains all federal air quality standards.

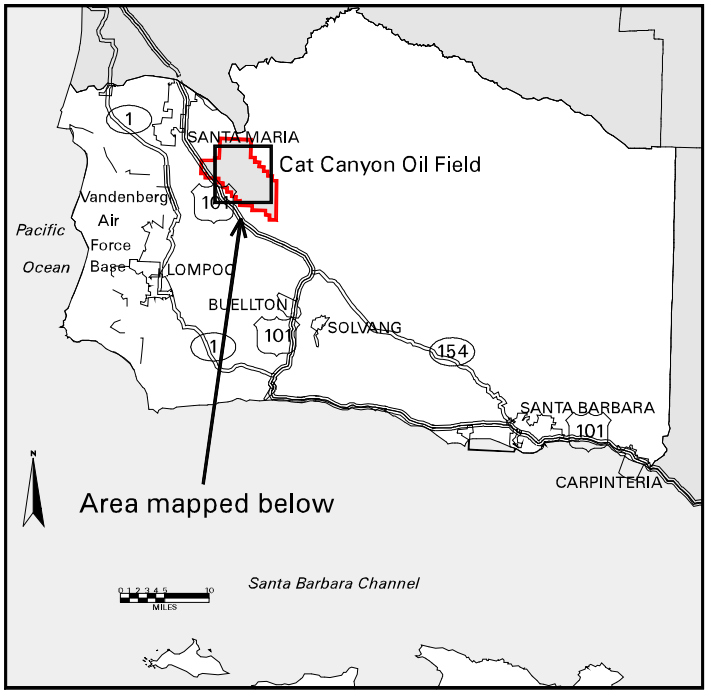
1.1.2 Part 70 Permitting: This is a combined permitting action that covers both the Federal Part 70 permit (*Part 70 Operating Permit No. 8076*) as well as the State Operating Permit (*Permit to Operate No. 8076)*. The initial Part 70 permit for the Blochman Lease was issued November 1, 2000 in accordance with the requirements of the District's Part 70 operating permit program. This permit is the eighth renewal of the Part 70 permit, and may include additional applicable requirements.

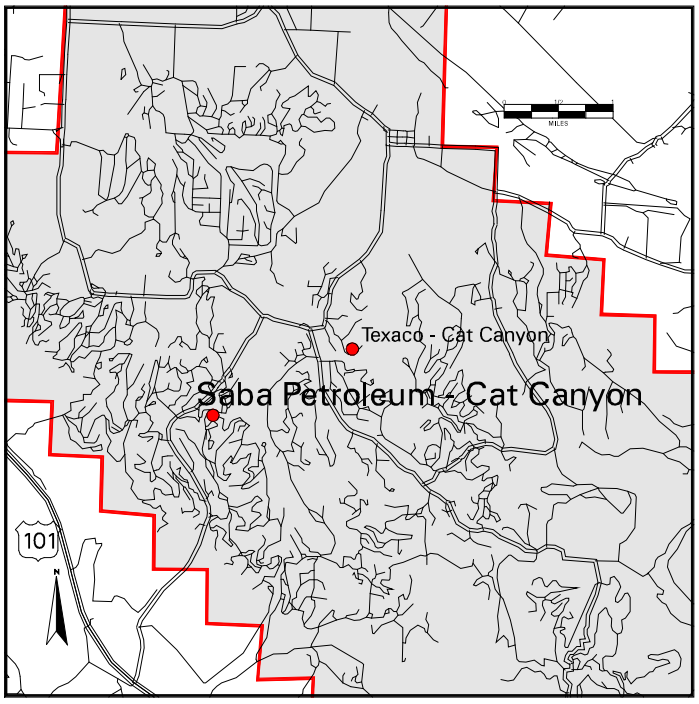
Blochman Lease facility (FID 3306) is a part of the HVI South Cat Canyon stationary source (SSID 2658), which is a major source for NO_x and CO. Conditions listed in this permit are based on federal, state or local rules and requirements.

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 permit 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. Next, 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 *(Tailoring Rule)* 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 are being updated to incorporate the revised definition.

Figure 1.1 Location Map for HVI South Cat Canyon





1.2 Facility Overview

1.2.1 Facility Overview: HVI Cat Canyon , Inc., ("HVI") is the owner and operator of Blochman Lease, located at 6527 Dominion Road, Santa Maria, California 93454. The facility is located in the Cat Canyon Oil Field, approximately two miles south of the Palmer Road and Cat Canyon Road intersection and six miles south-southeast of the city of Santa Maria in Santa Barbara County. For District regulatory purposes, the facility location is in the Northern Zone of Santa Barbara County[1]. Figure 1.1 shows the relative location of the facility within the county.

Blochman Lease was operational in September 1979 when its owner/operator Union Oil of California applied to the District for its first operating permit (ATC/PTO 4041). An operating permit was issued to Union Oil by the District in October 1979. In June 1993 the ownership of the Cat Canyon stationary source including Blochman Lease was transferred from Unocal to Saba Petroleum Corporation doing business as D&S Industrial Services. In January 2000, Greka assumed sole ownership of the facility. This permit renewal includes an update to reflect HVI as the owner and operator of the equipment subject to this permit. This was a business name change only; no transfer of ownership or operator occurred. As described below in Section 2.1, the entire production is piped to the central processing facility at Bell Lease.

1.2.2 Stationary Source Overview: Prior to August 2002, the HVI Cat Canyon Stationary Source was a Part 70 source consisting of Bell, Blochman, Dominion, UCB, Palmer-Stendl and an IC engines facility. In August 2002 HVI purchased nine leases within the Cat Canyon field from Vintage Petroleum which were incorporated into the existing HVI Part 70 Cat Canyon Stationary Source at that time. In November 2008, HVI sold two of the leases within the stationary source; the California Lease and United California Lease. As a result of this sale, the stationary source configuration was reorganized based on the stationary source definition in District Rule 201. The single source was split into the following three sources: the North Cat Canyon Stationary Source consisting of the Goodwin, Harbordt, Lloyd, Mortenson, and Security/Thomas Leases; the Central Cat Canyon Stationary Source consisting of the Porter Lease and the South Cat Canyon Stationary Source consisting of Bell, Blochman, Dominion, UCB, Palmer-Stendl, and the IC Engines Leases. Following this reorganization, only the South Cat Canyon Stationary Source (SSID2658) remained a Part 70 source. In January 2013 HVI transferred the UCB Lease, Dominion Lease, and one IC engine from the Cat Canyon IC Engine Facility to ERG Resources.

The stationary source now consists of the following facilities:

- Bell Lease (FID 3211)
- Blochman Lease (FID 3306)
- Palmer Stendl Lease (FID 3307)
- Cat Canyon IC Engines (FID 3831)

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

Oil and gas well production at the HVI South Cat Canyon stationary source, is produced by wells at Bell, Blochman and Palmer-Stendl Leases and is piped to the central processing facility at Bell Lease. The crude oil processed at Bell lease is sent off-site via pipelines or tanker trucks. Gas production from these wells is processed at Bell Lease and used by the boilers and heater treaters at Bell Lease, by the field combustion equipment throughout the HVI Cat Canyon leases, or piped to locations offsite.

Blochman Lease consists of the following systems:

- Oil & Gas Production wells and surface system
- Oil and gas separation system
- Gas gathering system
- Produced water (wastewater) injection system
- Vapor Recovery System (VRS)

1.2.3 Facility New Source Review Overview: The following is the permit history for this facility.

PERMIT	FINAL ISSUED	PERMIT DESCRIPTION
TRN O/O 8076	05/01/1993	Saba Petroleum Corporation, doing business as D&S Industrial Services, applied to the District and obtained a change of ownership status for this lease and several other former Unocal properties.
ATC/PTO 9664	12/30/1996	Drill an oil and gas well at Blochman Lease.
TRN O/O 8076-02	02/29/2000	Greka obtained ownership of Blochman Lease from Saba Petroleum.
PTO 13690	11/22/2011	New 2000 BBL bolted steel produced water (Injection) tank connected to vapor recovery system.

1.2.4 Significant Changes Since Issuance of Previous Permit Renewal: The number of wells subject to permit was increased from fourteen (14) to nineteen (19) consistent with the Department of Oil, Gas and Geothermal Resources records and District inspection records. These are not new wells but are corrections to the prior well count.

1.3 Emission Sources

Air pollution emissions from Blochman Lease are the result of oil and gas wells, pits and well cellars, and oil & gas piping components, such as valves and flanges. Section 4 of the permit provides the District's engineering analysis of these emission sources. Section 5 of the permit describes the allowable emissions from each permitted emissions unit and the entire Blochman Lease facility. It also lists the potential emissions from non-permitted emission units. The emission sources include:

- Oil and gas production wells (19 wells)
- Sump (1) and well cellars (19)
- Fugitive emission components
- Water injection tank

A list of all permitted equipment is provided in Attachment 10.5.

1.4 Emission Control Overview

Air quality emission controls are utilized on Blochman Lease for a number of emission units to reduce air pollution emissions. Additionally, the use of utility grid power allows Blochman Lease to operate a number of electrically driven pumps and compressors on site. The emission controls employed at the facility include:

- A Fugitive Hydrocarbon Inspection & Maintenance (I&M) program for detecting and repairing leaks of hydrocarbons from piping components, consistent with the requirements of Rule 331 to reduce ROC emissions by approximately 80 percent.

- Use of a vapor recovery unit, which effectively reduce ROC emissions from the water injection tank by 95 percent.

- A monitoring and maintenance program for well cellars, consistent with the requirements of Rule 344, to reduce ROC emissions by approximately by 70 percent.

1.5 Offsets/Emission Reduction Credit Overview

The HVI North Cat Canyon Stationary Source triggers the Regulation VIII offset thresholds for NO_x and ROC emissions. However, this source did not become subject to the emission offset requirements of Regulation VIII until adoption of revised Rule 802 in August 2016, therefore emission offsets are not required for the emissions associated with this permit. Any future increase in ROC or NO_x emissions will be evaluated for emission offsets.

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. All these requirements are enforceable by the public under CAAA. *(See Tables 3.4-1 and 3.4-2 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. The only insignificant emissions associated with this facility are solvent and surface coating operations used during maintenance operations.

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 51.166 or 52.21. The federal PTE does include all emissions from any insignificant emissions units. (*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. HVI 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. HVI 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 or before March 1st or on a more frequent schedule specified in the permit. Each certification is signed by a "responsible official" of the owner/operator company whose name and address is listed prominently in the Part 70 permit. (*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 also 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. (*see Section 4.9 and 5.5).*

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

Ms. Jeanette Boyer, Director of Compliance
HVI Cat Canyon, Inc.
6527 Dominion Road
Santa Maria, California 93454

2.0 Process Description

2.1 Summary

2.1.1 Process Summary: Blochman Lease is an oil and gas production facility. Oil, water and gas from production wells are piped to the Bell Lease for processing. Currently, Blochman lease consists only of oil/gas wells, miscellaneous processing equipment and a gas gathering system.

2.1.2 Production: There are 19 wells subject to permit at Blochman Lease. See Attachment 10.6 for a list of these wells. One of these was drilled in 1994. Oil and water emulsion and gas produced by the wells are piped to the central tank battery at the Bell Lease. The wells are not free flowing; artificial lift pumps are installed in all wells to assist in the crude oil emulsion production and are powered by internal combustion engines. The engines are permitted on PTO 8036. Each well is connected to a casing head gas header system. This system directs produced gas to the compressor plant at Bell Lease. A 9,894 square foot tertiary service sump (lower pond) is located on this lease to receive wastewater from Bell Lease.

2.1.3 Produced Water: Produced water is routed from Bell lease back to Blochman lease, temporarily stored in the 2,000 bbl water injection tank and then injected into a water injection well at Blochman Lease.

2.2 Drilling Activities

2.2.1 Drilling Program: A well drilling operation was conducted on Blochman Lease facility in 1994. There are currently no drilling operations at this facility.

2.2.2 Well Work-over Program: Well work-over programs have been conducted in the past on Blochman Lease. There are currently no well work-over operations at this facility.

2.3 Maintenance/Degreasing Activities

2.3.1 Paints and Coatings: Maintenance painting at the lease is conducted on an intermittent basis. Normally only touchup and equipment labeling or tagging is done with cans of spray paint.

2.3.2 Solvent Usage: Solvents not used for surface coating thinning may be used at the lease for daily operations. Usage may include cold solvent degreasing and wipe cleaning with rags.

2.4 Planned Process Turnarounds

Major pieces of equipment such as IC engines serving the oil well pumps or the injector pumps undergo maintenance as specified by the manufacturer. Maintenance of fugitive emissions critical components is carried out according to the requirements of Rule 331 *{Fugitive Emissions Inspection and Maintenance}*.

2.5 Other Processes

HVI has stated in its Part 70 application that no other processes exist that would be subject to permit.

2.6 Detailed Process Equipment Listing

Refer to Attachment 10.5 for the Equipment List.

3.0 Regulatory Review

This Section identifies the federal, state and local rules and regulations applicable to Blochman Lease.

3.1 Rule Exemptions Claimed

3.1.1 The following exemptions are claimed by HVI:

- District Rule 202.U: *(Solvent Application Equipment and Operations*): Specific solvent use for operations listed in this section of the rule are exemption from permit. An exemption from permit, however, does not necessarily grant relief from any applicable prohibitory rule unless specifically exempted by that prohibitory rule.

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)}:* Blochman Lease was constructed and permitted prior to the applicability of these regulations. However, all permit modifications as of July, 1979 are subject to District NSR requirements. Compliance with District Regulation VIII (*New Source Review*) ensures that future modifications to the facility will comply with these regulations.

3.2.2 40 CFR Part 60 *{New Source Performance Standards}:* None of the equipment in this permit is subject NSPS requirements.

3.2.3 40 CFR Part 61 *{NESHAP}:* None of the equipment in this permit is subject NESHAP requirements.

3.2.4 40 CFR Part 63 *{MACT}:* This facility is not currently subject to the provisions of this Subpart. On June 17, 1999, EPA promulgated Subpart HH, a National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Oil and Natural Gas Production and Natural Gas Transmission and Storage. Pursuant to this promulgation, information was submitted in June 2000 and supporting information in July 2000 indicating that the Bell, Blochman, and Palmer-Stendl Leases were exempt from the requirements of this MACT based on its black oil production. The MACT exemption holds for the South Cat Canyon stationary source, since black oil is produced at each of the leases comprising the source. The HVI South Cat Canyon stationary source is subject to general recordkeeping requirements as defined in condition 9.B.10.

3.2.5 40 CFR Part 63 *{MACT Standards}*: On August 27, 2003, EPA promulgated Subpart EEEE, a National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Organic Liquids Distribution (Non-Gasoline). The District has determined that none of the permitted facilities within the South Cat Canyon stationary source are subject to this MACT.

3.2.6 40 CFR Part 64 *{Compliance Assurance Monitoring}:* This rule became effective on April 22, 1998 and affects emission units at the source subject to a federally enforceable emission limit or standard that use a control device to comply with the emission standard, and either pre-control or post-control emissions exceed the Part 70 source emission thresholds (currently 100 TPY for any pollutant). Compliance with this rule was evaluated and it was determined that no emission units at this facility are currently subject to CAM.

3.2.7 40 CFR Part 70 *{Operating Permits}*: This Subpart is applicable to Blochman Lease. Table 3.4-1 lists the federally-enforceable District promulgated rules that are "generic" and apply to Blochman Lease. Table 3.4-2 lists the federally-enforceable District promulgated rules that are "unit-specific". These tables are based on data available from the District's administrative files and from HVI's Part 70 application for this permit. Table 3.4-4 includes the adoption dates of these rules.

In its Part 70 renewal permit application (Form I), HVI certified compliance with all existing District rules and permit conditions. This certification is also required of HVI semi-annually. Issuance of this permit and compliance with all its terms and conditions will ensure that HVI complies with the provisions of all applicable Subparts.

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 Blochman Lease 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 Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities (CCR Title 17, Section 95665 *et. Seq.*): This regulation establishes greenhouse gas emission standards for crude oil, condensate, and produced water separation and storage facilities. Based on the definitions of the regulation, this facility is subject to the requirements of this regulation. The separators and tanks at this facility satisfy the requirements of the CARB regulation through the use of a vapor collection system. This facility is exempt from the leak detection and repair (LDAR) requirements of the CARB regulation per section 95669(b)(1), which exempts components, including components found on tanks, separators, wells and pressure vessels, that are subject to local Air District LDAR requirements prior to January 1, 2018. This facility does not utilize circulation tanks for well stimulation treatments, centrifugal natural gas compressors, reciprocating gas compressors, natural gas powered pneumatic devices or

pumps, natural gas only wells, or well casing vents, and is therefore not subject to the CARB regulation standards and requirements for these equipment and processes.

3.4 Compliance with Applicable Local Rules and Regulations

3.4.1 Applicability Tables: In addition to Table 3.4-1 and Table 3.4-2, Table 3.4-3 lists the non-federally enforceable District promulgated rules that apply to Blochman Lease. Table 3.4-4 lists the adoption date of all rules applicable to this permit at the date of this permit's issuance.

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 Blochman Lease:

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 which 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. Fees for this facility are recovered under the cost reimbursement provisions of this rule.

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, HVI is operating in compliance with this rule.

Rule 303 - Nuisance: This rule prohibits HVI from causing a public nuisance due to the discharge of air contaminants. Based on the lease's location, the potential for public nuisance is small.

Rule 304 - Particulate Matter, Northern Zone: Blochman Lease is considered a Northern Zone source. This rule prohibits the discharge into the atmosphere from any source particulate matter in excess of 0.3 gr/scf. Emission units subject to this rule include the internal combustion engines, the boiler and the heater treater(s) on the lease. Compliance will be assured by requiring all combustion equipment to be maintained according to manufacturer maintenance schedules.

Rule 309 - Specific Contaminants: Under Section "A", no source may discharge sulfur compounds and combustion contaminants in excess of 0.2 percent as SO_2 (by volume) and 0.3 gr/scf (at 12% CO_2) respectively. Sulfur emissions due to combustion of field gas containing no more than 796 ppmv H_2S will comply with the SO_2 limit. All combustion equipment items have the potential to exceed the combustion contaminant limit if not properly maintained (see discussion on Rule 304 above for compliance).

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, however, all produced gas from Blochman Lease is sweet. As a result, it is expected that compliance with this rule will be achieved.

Rule 317 - Organic Solvents: This rule sets specific prohibitions against the discharge of emissions of both photo-chemically and non-photo-chemically 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. HVI is required to maintain records to ensure compliance with this rule.

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. HVI will be required to maintain records during maintenance operations to ensure compliance with this rule.

Rule 323.1 - Architectural Coatings: This rule sets standards for the application of surface coatings. The primary coating standard that will apply to the lease is for Industrial Maintenance Coatings that have a limit of 340 gram ROC per liter of coating, as applied. HVI is required to comply with the administrative requirements under Section F of the Rule for each container on the lease.

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

Rule 325 - Crude Oil Production and Separation: This rule, revised July 19, 2001, applies to equipment used in the production, gathering, storage, processing and separation of crude oil and gas prior to custody transfer. The primary requirements of this rule are under Sections D and E. Section D requires the use of vapor recovery systems on all tanks and vessels, including waste water tanks, oil/water separators and sumps. Section E requires that all produced gas be controlled at all times, except for wells undergoing routine maintenance. HVI has installed a vapor recovery system (VRS) on all equipment subject to this rule. All vessels and tanks and relief valves are connected to the VRS. Compliance with Section E is met by TVP analysis and by directing all scrubbed produced gas to the GCS and from there to the off-site pipeline. Compliance with this rule will also be verified by District inspections.

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. Compliance shall be based on site inspections.

Rule 331 - Fugitive Emissions Inspection and Maintenance: This rule applies to components in liquid and gaseous hydrocarbon service at oil and gas production fields. Ongoing compliance with the provisions of this rule will be assessed via the District-approved Fugitive I&M Plan, facility inspection by District personnel using an organic vapor analyzer and analysis of operator records.

Rule 343 - Petroleum Storage Tank Degassing: This rule applies to the degassing of any above-ground tank, reservoir or other container of more than 40,000 gallons capacity containing any organic liquid with a vapor pressure greater than 2.6 psia or between 20,000 gallons and 40,000 gallons capacity containing any organic liquid with a vapor pressure greater than 3.9 psia.

Rule 344 - Petroleum Sumps, Pits and Well Cellars: This rule applies to petroleum sumps, pits and well cellars at petroleum production sources, provided such sources have output exceeding 150 barrels per day. Blochman lease well cellars are subject to this rule. The compliance requirements of this rule are met since all the cellars are inspected weekly to check for spillage or leaks.

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 with this rule is met through appropriate recordkeeping of adhesive and sealant materials used in addition to site inspections. Also, exclusive use of adhesive and sealant contained in containers of 16 fluid ounces or less demonstrate compliance with this rule.

Rule 505 - Breakdown Conditions: This rule describes the procedures that HVI must follow when a breakdown condition occurs to any emissions unit associated with Blochman Lease.

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 603 - Emergency Episode Plans: Section "A" of this rule requires the submittal of *Stationary Source Curtailment Plan* for all stationary sources that can be expected to emit more than 100 tons per year of hydrocarbons, nitrogen oxides, carbon monoxide or particulate matter. A revised plan was submitted and approved by the District in April 2004.

Rule 810 - Federal Prevention of Significant Deterioration: This rule was adopted January 20, 2011 to incorporate 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.

Table 3.4-1 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	New equipment addition or 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 212: Emission Statements	All emission units	Administrative
RULE 301: Circumvention	All emission units	Any pollutant emission
RULE 303: Nuisance	All emission units	Emissions that can injure, damage or offend.
RULE 304: PM Concentration – North Zone	Each PM source	Emission of PM in effluent gas
RULE 317: Organic Solvents	Emission units using solvents	Solvents used in 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 323.1: 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 330: Surface Coating of Metal Parts	Emission units using metal parts coating	Surface coating used in maintenance operations.
RULE 353: Adhesives and Sealants	Emission units using adhesives and sealants	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	South Cat Canyon is a major source.
RULE 810: Federal Prevention of Significant Deterioration	New or modified emission units	South Cat Canyon is a major source.
REGULATION VIII: New Source Review	All emission units	Addition of new equipment or modification to existing

Generic Requirements	Affected Emission Units	Basis for Applicability
		equipment. Applications to generate ERC Certificates.
REGULATION XIII (RULES 1301-1305): Part 70 Operating Permits	All emission units	South Cat Canyon is a major source.

Table 3.4-2 Unit-Specific Federally-Enforceable District Rules

Unit-Specific Requirements	Affected Emission Units	Basis for Applicability
RULE 325: Crude Oil Production and Separation	Produced Gas Emissions from components	All pre-custody production and processing emission units
RULE 331: Fugitive Emissions Inspection & Maintenance	All components handling oil and gas	Components emit fugitive ROCs.
RULE 344: Petroleum sumps, cellars and pits	Well cellar units	Cellars at an oil production lease.

Table 3.4-3 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
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 or rule requirements are not complied with.
RULES 506-519: Variance Rules	All emission units	Administrative

Table 3.4-4 Adoption Dates of District Rules Applicable at Issuance of Permit

Rule No.	Rule Name	Adoption/Revision 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 18, 2008
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 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 Concentration - Northern Zone	October 23, 1978
Rule 309	Specific Contaminants	October 23, 1978
Rule 310	Odorous Organic Sulfides	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 No.	Rule Name	Adoption/Revision Date
Rule 323.1	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 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 344	Petroleum Sumps, Pits and Well Cellars	November 10, 1994
Rule 353	Adhesives and Sealants	June 21, 2012
Rule 360	Emissions from Oxides of Nitrogen from Large Water Heaters and Small Boilers	January 17, 2008
Rule 361	Small Boilers, Steam Generators and Process Heaters	January 17, 2008
Rule 505	Breakdown Conditions (Section A, B1 and D)	October 23, 1978
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 810	Federal Prevention of Significant Deterioration	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

3.5 Compliance History

This section contains a summary of the 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 are conducted on an annual basis at this facility. The inspection reports for the inspections conducted since the previous permit renewal were reviewed as part of the current permit renewal process. There were no enforcement actions issued as a result of the annual inspections. With the exception of the Notice of Violation listed below in section 3.5.2 there were no other significant issues identified during these inspections.

3.5.2 Violations: The following enforcement action was issued to HVI for Blochman Lease since the last permit renewal. This violation was discovered during an annual report review.

VIOLATION NUMBER	DATE ISSUED	DESCRIPTION
11399	1/26/20118	Fail to Conduct Rule 331 Inspections

3.5.3 Variances: No variances issued for this facility since the last permit renewal.

3.5.4 Hearing Board Actions: There are no significant historical Hearing Board actions.

4.0 Engineering Analysis

4.1 General

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

- 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 7/13/98 (ver. 1.1) was used to determine non-methane, non-ethane fraction of THC.

4.2 Fugitive Hydrocarbon Sources

4.2.1 General: Fugitive emissions from valves, fittings, flanges, seals, pumps, compressors and wellheads (casings) consist of reactive organic compounds (ROC) and a variety of hazardous air pollutants (HAPs) such as benzene and hexane.

4.2.2 Well Head Components: For oil wells at existing onshore sources without a detailed component count inventory, the District uses statistical models developed by the CARB/KVB to quantify emissions of fugitive ROC. District Policy and Procedure 6100.060.1996 (*Calculation of Fugitive Hydrocarbon Emissions at Oil and Gas Facilities by the CARB/KVB Method*, July 1996) is used as the basis for implementing the CARB/KVB methodology. The CARB/KVB Method uses statistical models based on the facility's gas/oil ratio and the number of active wells to determine the emission factor. Emission factors from the CARB/KVB Method were also used determining emissions from wellhead casings (i.e., piping and equipment associated with the underground casing) and from pumps and compressors.

A control efficiency of 80% was applied for all components due to the implementation of a Rule 331 inspection and maintenance program. The calculation methodology is:

$$ER = [(EF \times \#wells \div 24) \times (1 - CE) \times (HPP)]$$

Where:

ER	=	Emission rate (lb/period)
EF	=	ROC emission factor (lb/well-day)
# Wells	=	Number of active oil and gas wells (well)
CE	=	Control efficiency
HPP	=	Operating hours per time period (hrs/period)

Detailed emission calculations for fugitive emissions are shown in Attachments 10.1 and 10.2.

4.3 Tanks/Sumps/Well Cellars

4.3.1 Tanks: Blochman Lease has one 2,000 barrel capacity water injection tank. This tank is connected to a vapor recovery system. The detailed tank calculations for emissions are based on USEPA AP-42, Chapter 7.

4.3.2 Sumps and Well Cellars: Sumps and well cellars are used for collecting oil spills from the facility at various locations such as the wellhead stuffing boxes and test sites. Fugitive emissions from well cellars are credited a 70 percent control efficiency for maintaining the cellars per Rule 344 requirements. These emissions are estimated based District P&P 6100.060 (*Calculation of Fugitive Hydrocarbon Emissions at Oil and Gas Facilities by the CARB/KVB Method* - Modified for the Revised ROC Definition). These emissions units are classified as being in primary, secondary, tertiary or post-tertiary service. The calculation methodology is:

$$ER = [(EF \times SAREA \div 24) \times (1 - CE) \times (HPP)]$$

Where:

ER	=	emission rate (lb/period)
EF	=	ROC emission factor (lb/ft^2-day)
SAREA	=	unit surface area (ft^2)
CE	=	control efficiency
HPP	=	operating hours per time period (hrs/period)

Emission calculations are shown in Attachments 10.1 and 10.2.

4.4 Gas Gathering/Vapor Recovery Systems

4.4.1 GGS/VRS: Gas from the wellhead casings are gathered by a gas gathering system (GGS) and routes it to the vapor recovery system (VRS). ROC vapor from the water injection tank is also directly recovered via a 25 hp, electrically-driven vapor recovery compressor. Collected gases are piped to the Bell Lease gas compressors for further processing. A control efficiency of 95 percent is assigned to the gas gathering system, since it is a part of the Bell Lease vapor recovery system.

4.5 General Emission Sources

4.5.1 Surface Coating: Surface coating operations typically include normal touch up activities. Emissions are determined based on mass balance calculations assuming all solvents evaporate into the atmosphere. Emissions of PM/PM_{10}/$PM_{2.5}$ from paint over-spray are not calculated due to the lack of established calculation techniques.

4.5.2 Solvent Use: Solvent usage (not used as thinners for surface coating) occurring on Blochman Lease as part of normal daily operations includes laboratory use and wipe cleaning maintenance. Mass balance emission calculations are used assuming all the solvent used evaporates to the atmosphere.

4.5.3 Abrasive Blasting: Abrasive blasting with CARB certified sands may be performed as a preparation step prior to surface coating. Particulate matter is emitted during this process. A general emission factor of 0.01 pound PM per pound of abrasive is used (SCAQMD - Permit Processing Manual, 1989) to estimate emissions of PM and PM_{10} when needed for compliance evaluations. A $PM/PM_{10}/PM_{2.5}$ ratio of 1.0 is assumed.

4.6 NSPS/NESHAP/MACT

4.6.1 BACT: There are no emission units at Blochman Lease subject to best available control technology (BACT) or new source performance standards (NSPS).

4.6.2 MACT - Subpart HH: On June 17, 1999, EPA promulgated Subpart HH, a National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Oil and Natural Gas Production and Natural Gas Transmission and Storage. HVI submitted information in June 2000 and supporting information in July 2000 indicating the Cat Canyon source was exempt from the requirements of this MACT based on 'black oil' production. The HVI South Cat Canyon source, which includes Blochman Lease, is still exempt from the requirements of this MACT.

4.6.3 MACT - Subpart EEEE: On August 27, 2003, EPA promulgated Subpart EEEE, a National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Organic Liquids Distribution (Non-Gasoline). A District analysis determined that the requirements of this subpart are not applicable to oil and gas production facilities and thus do not apply to this facility.

4.6.4 Proposed MACT - Subpart DDDDD: Subpart DDDDD, Industrial, Commercial, and Institutional Boilers and Process Heaters. On September 13, 2004 EPA promulgated Subpart DDDDD, a National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Industrial, Commercial, and Institutional Boilers and Process Heaters. HVI has existing small, gaseous fueled heaters (under 10.000 MMBtu/hr) at this facility, however, the subpart does not specify any emission limits or work practice standards for this class of units. Thus, no DDDDD requirements apply.

4.7 Continuous Emissions Monitors (CEMs)/Process Monitoring/CAM

4.7.1 CEMS: There are no CEMs at this facility.

4.7.2 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, water injection mass flow 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. No process monitoring is required at Blochman Lease.

4.7.3 CAM: The HVI South Cat Canyon stationary source is a major source that is subject to the USEPA's Compliance Assurance Monitoring (CAM) rule (40 CFR 64). Any emissions unit with uncontrolled emissions potential exceeding major source emission thresholds for any pollutant is subject to CAM provisions. Compliance with this rule was evaluated and it was determined that no emission units at this facility are currently subject to CAM.

4.8 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 of this operating permit. However, no equipment listed in this permit is subject to source testing. At a minimum, the process streams below are required to be sampled and analyzed. Duplicate samples are required:

- Produced Oil/Wastewater: Sample taken at the wash tank. Analysis for API gravity and true vapor pressure. Samples shall be taken on an annual basis per the District approved *Rule 325 Sampling Plan*.

All sampling and analyses are required to be performed according to District approved procedures and methodologies. Typically, the appropriate ASTM methods are acceptable. However, TVP sampling methods for liquids with an API gravity under 20˚ require specialized procedures (see District Rule 325). It is important that all sampling and analysis be traceable by chain of custody procedures.

4.9 Part 70 Engineering Review: Hazardous Air Pollutant Emissions

Hazardous air pollutant (HAP) emissions for Blochman Lease are based on various HAP emission factors and the permitted operational limits and maximum facility design throughputs of this permit. HAP emission factors are shown in Table 4.9-1. Facility potential annual HAP emissions, based on the worst-case scenario listed in Section 5.3. Stationary Source potential annual HAP emissions are summarized in Table 5.3-3. These emissions are estimates only and do not constitute emission limitations.

4.9.1 Emission Factors for HAP Potential Emissions:

Fugitive Emissions: The HAP emission factors for fugitive emissions (including valves and fittings, well heads, compressors, pumps, pigging equipment, tanks, sumps/well cellars/pits and the loading rack) were obtained from Cat Canyon crude tank headspace testing (ENSR 1990). The emission factors were converted from lb/lb TOC to lb/lb ROC using the following District-approved ROC/TOC ratios:

Table 4.9-1. HAP Emission Factors

Source Type	ROC/TOC Ratio
Sumps and Well Cellars	0.606
Valves and fittings	0.391
Pumps	0.492
Wellheads	0.606

Compressors	0.262
Loading Racks	0.885
Fixed roof tanks (crude)	0.885
Pipeline Pig Launcher (gas)	0.308

Solvents/Coatings: The HAP emission factors for solvent usage and coating operations are based on the CARB *VOC Species Profile Number 802* for mineral spirits.

5.0 Emissions

5.1 General

Emissions calculations are divided into "permitted" and "exempt" categories. Permit exempt equipment is determined by District Rule 202. 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 estimated emissions from permit exempt equipment and also serves as the Part 70 list of insignificant emission. In order to accurately track the emissions from a facility, the District uses a computer database. 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:

- Reactive Organic Compounds (ROC)

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. Table 5.1-3 shows the permitted short-term emissions and Table 5.1-4 shows the permitted long-term emissions for each unit or operation. In the table, the last column indicates whether the emission limits are federally enforceable.

5.3 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 5.3. Potential HAP emissions, based on the worst-case scenario, are shown in Table 5.3-2. The stationary source wide HAP emissions are shown in Table 5.3-3.

5.4 Permitted Emission Limits - Facility Totals

The total potential-to-emit for all emission units associated with the facility was 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.

Daily Scenario:

- Fugitive components (wellheads, valves and fittings)
- Petroleum sump (1)
- Well cellars
- Water injection tank

Annual Scenario:

- Fugitive components (wellheads, valves and fittings)
- Petroleum sump (1)
- Well cellars
- Water injection tank

5.5 Part 70: Federal Potential to Emit for the Facility

For facilities subject to Part 70 Regulation, all emissions, except fugitive emissions, are counted in the federal definition of potential to emit. However, fugitives are counted in the Federal potential to emit if the facility is subject to any applicable NSPS or NESHAP requirement. Blochman Lease is not subject to any NSPS/NESHAP. All emissions from Blochman Lease are fugitive in nature. Thus, the federal PTE for this facility is zero.

5.6 Exempt Emission Sources/Part 70 Insignificant Emissions

Per Rule 202, maintenance activities such as painting and surface coating qualify for a permit exemption, but may contribute to facility emissions.

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. The following emission units are exempt from permit per Rule 202:

- Solvents/Surface coating operations used during maintenance operations.

Table 5.4 presents the estimated annual emissions from these exempt equipment items, including those exempt items not considered insignificant.

Table 5.1-1. Operating Equipment Description

Equipment Category	Description	ID#	Device Specifications					Usage Data							References
			Fuel	HHV (Btu/scf)	ppmv S	Size	Units	Capacity	Units	Emission Reduction %	hr	day	qtr	year	
Fugitive Components	Valves & Fittings	2883	--	--	--	19	well units	--	--	80%	1.00	24	2190	8760	A
	Wellheads	2884	--	--	--	19	well units	--	--	80%	1.00	24	2190	8760	
	Compressors	2883	--	--	--	19	well units	--	--	80%	1.00	24	2190	8760	
	Pumps	2883	--	--	--	19	well units	--	--	80%	1.00	24	2190	8760	
Sumps/Cellars/Pits	Sump - Lower Pond	100234	--	--	--	9,894	ft^2	--	--	70%	1.00	24	2190	8760	B
	Well Cellars	2885	--	--	--	684	ft^2	--	--	70%	1.00	24	2190	8760	
Tanks	Water Injection Tank	113927	--	--	--	690	--	2000	bbl	--	1.00	24	2190	8760	C

Table 5.1-2. Equipment Emission Factors

Equipment Category	Decsription	Emission Factors							References
		NOx	ROC	CO	SOx	PM	$PM_{2.5/10}$	Units	
Fugitive Components	Valves & Fittings	--	2.8053	--	--	--	--	lb/day-well	A
	Wellheads	--	0.0097	--	--	--	--	lb/day-well	
	Compressors	--	0.0679	--	--	--	--	lb/day-well	
	Pumps	--	0.0039	--	--	--	--	lb/day-well	
Sumps/Cellars/Pits	Sump - Lower Pond	--	0.0058	--	--	--	--	lb/ft^2-day	B
	Well Cellars	--	0.0941	--	--	--	--	lb/ft^2-day	
Tanks	Water Injection Tank				**See Table 10.2**				C

Table 5.1-3. Short Term Emission Limits

Equipment Category	Description	NOx	ROC	CO	SOx	PM	$PM_{2.5/10}$	Federal
		lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	Enforceability
Fugitive Components	Valves & Fittings	--	10.66	--	--	--	--	AE
	Wellheads	--	0.29	--	--	--	--	AE
	Compressors	--	0.01	--	--	--	--	AE
	Pumps	--	0.01	--	--	--	--	AE
Sumps/Cellars/Pits	Sump - Lower Pond	--	17.22	--	--	--	--	AE
	Well Cellars	--	19.31	--	--	--	--	AE
Tanks	Water Injection Tank	--	0.20	--	--	--	--	AE

Notes

FE = federally enforceable

AE = APCD-only enforceble

Table 5.1-4. Long Term Emission Limits.

Equipment Category	Description	NOx	ROC	CO	SOx	PM	$PM_{2.5/10}$	Federal Enforceability
		TPY	TPY	TPY	TPY	TPY	TPY	
Fugitive Components	Valves & Fittings	--	1.95	--	--	--	--	AE
	Wellheads	--	0.05	--	--	--	--	AE
	Compressors	--	0.00	--	--	--	--	AE
	Pumps	--	0.00	--	--	--	--	AE
Sumps/Cellars/Pits	Sump - Lower Pond	--	3.14	--	--	--	--	AE
	Well Cellars	--	3.52	--	--	--	--	AE
Tanks	Water Injection Tank	--	0.04	--	--	--	--	AE

Notes

FE = federally enforceable

AE = APCD-only enforceble

Table 5.2
Blockman Lease - Part 70 PTO 8076
Total Permitted Facility Emissions

A. Daily

Equipment Category	NOx	ROC	CO	SOx	PM	$PM_{2.5/10}$
Fugitive Components	--	10.97	--	--	--	--
Sumps/Cellars/Pits	--	36.53	--	--	--	--
Tanks	--	0.20	--	--	--	--
Totals (lb/day)	**0.00**	**47.70**	**0.00**	**0.00**	**0.00**	**0.00**

B. Annual

Equipment Category	NOx	ROC	CO	SOx	PM	$PM_{2.5/10}$
Fugitive Components	--	2.00	--	--	--	--
Sumps/Cellars/Pits	--	6.67	--	--	--	--
Tanks	--	0.04	--	--	--	--
Totals (TPY)	**0.00**	**8.71**	**0.00**	**0.00**	**0.00**	**0.00**

Table 5.3-1: Equipment HAP Emission Factors

Equipment Category	Description	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,3-Butadiene	1,3-Dichloropropene	Acetaldehyde	Acrolein	Arsenic	Barium	Benzene	Beryllium	Cadmium	Carbon tetrachloride	Chlorobenzene	Chloroform	Chromium	Cobalt	Dichlorobenzene	Ethylbenzene	Ethylene Dibromide	Ethylene Dichloride	Ethylidene Dichloride	Formaldehyde	Hexane	Manganese	Mercury	Methanol	Methylene chloride	Naphthalene	Nickel	PAHs (total)	Propylene Dichloride	Selenium	Styrene	Toluene	Vinyl chloride	Xylenes	Units
Fugitive Components	Valves & Fittings									9.36E-03								2.58E-07		3.30E-05	3.48E-04					5.63E-05		2.25E-05						0.003555		0.000261	lb/lb ROC
	Wellheads									6.04E-03								1.67E-07		2.13E-05	2.24E-04					3.63E-05		1.45E-05						0.002294		0.000168	lb/lb ROC
	Compressors									1.40E-02								3.85E-07		4.92E-05	5.19E-04					8.4E-05		3.36E-05						0.005305		0.000389	lb/lb ROC
	Pumps									7.44E-03								2.05E-07		2.62E-05	2.76E-04					4.47E-05		1.79E-05						0.002825		0.000207	lb/lb ROC
Sumps/Cellars/Pits	Sump - Lower Pond									6.04E-03								1.67E-07		2.13E-05	2.24E-04					3.63E-05		1.45E-05						2.29E-03		1.68E-04	lb/lb ROC
	Well Cellars									6.04E-03								1.67E-07		2.13E-05	2.24E-04					3.63E-05		1.45E-05						2.29E-03		1.68E-04	lb/lb ROC
Tanks	Water Injection Tank									4.14E-03								1.14E-07		1.46E-05	1.54E-04					2.49E-05		9.94E-06						1.57E-03		1.15E-04	lb/lb ROC
Solvent Usage	Maintenance (Wipe Cleaning)												2.60E-03						3.50E-03										3.50E-03						5.00E-03		3.82E-02	lb/lb ROC

Table 5.3-2: Facility HAP Emissions

Equipment Category	Description	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,3-Butadiene	1,3-Dichloropropene	Acetaldehyde	Acrolein	Arsenic	Barium	Benzene	Beryllium	Cadmium	Carbon tetrachloride	Chlorobenzene	Chloroform	Chromium	Cobalt	Dichlorobenzene	Ethylbenzene	Ethylene Dibromide	Ethylene Dichloride	Ethylidene Dichloride	Formaldehyde	Hexane	Manganese	Mercury	Methanol	Methylene chloride	Naphthalene	Nickel	PAHs (total)	Propylene Dichloride	Selenium	Styrene	Toluene	Vinyl chloride	Xylenes
Fugitive Components	Valves & Fittings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
	Wellheads	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	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Compressors	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	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Pumps	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	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sumps/Cellars/Pits	Sump - Lower Pond	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
	Well Cellars	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Tanks	Water Injection Tank	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	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solvent Usage	Maintenance (Wipe Cleaning)	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	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	SUB- TOTAL HAPS (tpy) =	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**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**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.00**	**0.01**

TOTAL HAPS (tpy) = 0.08

Table 5.3-3: Stationary Source HAP Emissions

Facility	FID	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,3-Butadiene	1,3-Dichloropropene	Acetaldehyde	Acrolein	Arsenic	Barium	Benzene	Beryllium	Cadmium	Carbon tetrachloride	Chlorobenzene	Chloroform	Chromium	Cobalt	Dichlorobenzene	Ethylbenzene	Ethylene dibromide	Ethylene dichloride	Ethylidene Dichloride	Formaldehyde	Hexane	Manganese	Mercury	Methanol	Methylene chloride	Naphthalene	Nickel	PAHs (total)	Propylene Dichloride	Selenium	Styrene	Toluene	Vinyl chloride	Xylenes	Total HAPS
Bell Lease	3211	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.04	0.00	0.01	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.39	0.87
Blockman Lease	3306	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.09
Palmer Stendl Lease	3307	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.04
Cat Canyon IC Engines	3831	0.00	0.00	0.06	0.00	0.26	0.25	0.00	0.00	0.15	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	1.93	0.00	0.00	0.00	0.29	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.06	0.00	0.03	3.08
Stationary Source Total HAPs (tpy) =		**0.00**	**0.00**	**0.06**	**0.00**	**0.26**	**0.25**	**0.00**	**0.00**	**0.40**	**0.00**	**0.00**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.00**	**0.01**	**0.00**	**0.00**	**1.94**	**0.09**	**0.00**	**0.00**	**0.29**	**0.00**	**0.05**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.20**	**0.00**	**0.44**	**4.09**

1. These are estimates only, and are not intended to represent emission limits.

Table 5.4 Estimated Permit Exempt Emissions

Equipment Category	Description	Exemption Claimed	Usage Data		Reference
Solvent Usage	Maintenance (Wipe Cleaning)	202.U	55	gal/yr	D
	Laboratory Use	202.N			

Equipment Category	Description	Emission Factor	Unit	NOx	ROC	CO	SOx	PM	PM10
Solvent Usage	Maintenance (Wipe Cleaning)	6.6	lb/gal	--	0.18	--	--	--	--
	Laboratory Use[1]			--	10	--	--	--	--
	Totals (TPY):			**0.00**	**10.18**	**0.00**	**0.00**	**0.00**	**0.00**

1. The 10 tpy emission limit represents a stationary source wide limit.

6.0 Air Quality Impact Analyses

6.1 Modeling

Air quality modeling was not required for this stationary source.

6.2 Increments

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

6.3 Monitoring

Air quality monitoring is not required for this stationary source.

6.4 Health Risk Assessment

The HVI South Cat Canyon stationary source is subject to the AB 2588 Air Toxics "Hot Spots". In March 2010, the Santa Barbara County Air Pollution Control District conducted an air toxics Health Risk Assessment (HRA) for HVI South Cat Canyon Field Oil and Gas Leases, using Hotspots Analysis and Reporting Program (HARP) software, Version 1.4a (Build 23.07.00). In March 2013, the District revised the HRA using HARP Version 1.4f (Build 23.11.01). Cancer risk, and chronic and acute non-cancer Hazard Index (HI) risk values were calculated and compared to significance threshold for cancer, and chronic and acute non-cancer risk adopted by the District's Board of Directors. The calculated risk values and applicable threshold are as follows (with the significant risks shown in bold):

	HVI South Cat Canyon Max Risks	Significance Threshold
Cancer risk	8.33/million	≥ 10 million
Chronic non-cancer risk	0.0336	≥ 1
Acute non-cancer risk	3.444	≥ 1

Based on these results, the operations at HVI South Cat Canyon Field Oil and Gas Leases presented a significant risk on a public roadway. For that reason, a Risk Reduction Audit and Plan (RRAP) were required. As a result of the audit, two engines were removed from service and depermitted and two engines were allowed to operate at a restricted number of well sites. These actions were taken to reduce the acute non-cancer risk below the significance threshold and were documented in ATC/PTO 14400. Full implementation of the RRAP resulted in a reduction in the acute non-cancer risk to 0.723.

7.0 CAP Consistency, Offset Requirements and ERCs

7.1 General

Santa Barbara County is in attainment of the federal ozone standard but is in nonattainment-transitional for the state eight-hour ozone ambient air quality standard. In addition, the County is in nonattainment of the state PM_{10} ambient air quality standards. The County is either in attainment or unclassified with respect to all other ambient 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 maintenance of the federal ambient air quality standards and progress towards attainment of the state ambient air quality standards. Under District regulations, any modifications at this stationary source that result in an emissions increase of any nonattainment pollutant exceeding 25 lbs/day must apply BACT (NAR). Additional increases may 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 $PM_{2.5}$).

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 March 2015 the District Board adopted the 2013 Clean Air Plan. The 2013 Plan provides a three-year update to the 2010 Clean Air Plan. As Santa Barbara County has yet to attain the state eight-hour ozone standard, the 2013 Clean Air Plan demonstrates how the District plans to attain that standard. The 2013 Clean Air Plan therefore satisfies all state triennial planning requirements.

7.3 Offset Requirements

The HVI South Cat Canyon Stationary Source triggers the Regulation VIII offset thresholds for NO_x and ROC emissions. However, this source did not become subject to the emission offset requirements of Regulation VIII until adoption of revised Rule 802 in August 2016, therefore emission offsets are not required for the emissions associated with this permit. Any future increase in ROC or NO_x emissions will be evaluated for emission offsets.

7.4 Emission Reduction Credits

Emission reduction credits, granted to HVI are detailed in revised DOI 006 issued to HVI by the District, in May 2003. The ERC's are based on IC Engine emission reductions at the Bell Lease Compressor Plant.

8.0 Lead Agency Permit Consistency

To the best of the District's knowledge, no other governmental agency's permit requires air quality mitigation for emissions pursuant to this permit issued to Blochman Lease.

9.0 Permit Conditions

This section lists the applicable permit conditions for Blochman Lease. 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.

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9.A Standard Administrative Conditions

The following federally-enforceable administrative permit conditions apply to Blochman Lease:

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 with sections 9.A, 9.B, or 9.C 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 conditions.

(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.

(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. *[Re: 40 CFR Part 70.6.(a)(6), District Rule 1303.D.1]*

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 working 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(g), 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.

(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 **Severability.** In the event that any condition herein is determined to be invalid, all other conditions shall remain in force. *[Re: District Rules 103 and 1303.D.1]*

A.6 **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 no later than 180 days 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.7 **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)]*

A.8 **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 seven (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.9 **Reporting Requirements/Compliance Certification.** The permittee shall submit compliance certification reports to the USEPA and the Control Officer every six months. 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. A paper copy, as well as, a complete PDF electronic copy of 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 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.10 **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(b)]*

A.11 **Recordkeeping Requirements**. The permittee shall maintain records of required monitoring information that 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;

(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.12 **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.

(d) Administrative Procedures: To reopen 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 cause to reopen exists. If the permit is reopened, and revised, it will be reissued with the expiration date that was listed in the permit before the re-opening. *[Re: 40 CFR 70.7(f), 40 CFR 70.6(a)]*

A.13 **Credible Evidence.** Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding. *[Re: 40 CFR 52.12(c)]*

9.B. Generic Conditions

The generic conditions listed below apply to all emission units, regardless of their category or emission rates. These conditions are federally enforceable. Compliance with these requirements is discussed in Section 3. 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).** HVI shall not discharge into the atmosphere from any single source of emission any 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 shall create nuisance conditions. No operations shall endanger health, safety or comfort, nor shall they damage any property or business. *[Re: District Rule 303]*

B.4 **Organic Solvents (Rule 317).** HVI shall comply with the emission standards listed in Section B of Rule 317. Compliance with this condition shall be based on compliance with Condition D.9 of this permit. *[Re: District Rule 317]*

B.5 **Metal Surface Coating Thinner and Reducer (Rule 322).** The use of photochemically reactive solvents as thinners or reducers in metal surface coatings is prohibited. Compliance with this condition shall be based on compliance with Condition D.9 of this permit and facility inspections. *[Re: District Rule 322]*

B.6 **Architectural Coatings (Rule 323.1).** HVI shall comply with the coating ROC content and handling standards listed in Section D of Rule 323 as well as the Administrative requirements listed in Section F of Rule 323. Compliance with this condition shall be based on compliance with Condition D.9 of this permit and facility inspections. *[Re: District Rule 323]*

B.7 **Disposal and Evaporation of Solvents (Rule 324).** HVI shall not dispose through atmospheric evaporation of more than one and a half gallons of any photochemically reactive solvent per day. Compliance with this condition shall be based on compliance with Condition D.9 of this permit and facility inspections. *[Re: District Rule 324]*

B.8 **Surface Coating of Metal Parts and Products (Rule 330).** HVI shall not apply any coating or specify the use of any coating on any metal part or product subject to the provisions of this Rule which, as applied, emits or may emit reactive organic compounds into the atmosphere in excess of the limits identified in section D of this rule. [*Re: District Rule 330*].

B.9 **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.10 **Oil and Natural Gas Production MACT.** HVI shall comply with the following General Recordkeeping ((40 CFR 63.10(b)(2)) MACT requirements:

(a) HVI shall maintain records of the occurrence and duration of each startup, shutdown, or malfunction of operation;

(b) Actions taken during periods of startup, shutdown, and malfunction when different from the procedures specified in HVI's startup, shutdown, and malfunction plan (SSMP);

(c) All information necessary to demonstrate conformance with HVI's SSMP when all actions taken during periods of startup, shutdown, and malfunction are consistent with the procedures specified in such plan;

(d) All required measurements needed to demonstrate compliance with a relevant standard, including all records with respect to applicability determination, and black oil documentation per 40 CFR 63.760;

(e) Any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements under this condition;

(f) HVI shall maintain records of SSM events indicating whether or not the SSMP was followed;

(g) HVI shall submit a semi-annual startup, shutdown, and malfunction report as specified in 40 CFR 63.10.d.5. The report shall be due by July 30th and January 30th. *[Re: 40 CFR 63, Subpart HH]*

9.C Requirements and Equipment Specific Conditions

This section includes non-generic federally-enforceable conditions, including emissions and operations limits. Monitoring, record keeping and reporting conditions are included in this section for each specific equipment group. This section may also contain other non-generic conditions.

C.1 **Fugitive Hydrocarbon Emissions Components.** The following equipment are included in this emissions unit category:

Table C.1-1 Fugitive Hydrocarbon Component List

District Device ID #	Name
	Oil Service Components
2883	Valves – Bellows Seal
2883	Valves – Accessible/Inaccessible
2883	Valves – Unsafe
2883	Valves - LEV Accessible/Inaccessible
2883	Valves - LEV Unsafe
2883	Flanges/Connections – Accessible/Inaccessible
2883	Flanges/Connections – Unsafe
2883	Compressor Seals – To Atm
2883	Compressor Seals – To VRU
2883	Relief Valves – To Atm
2883	Relief Valves – To VRU
2883	Pump Seals – Tandem
2883	Pump Seals – Single
2883	Exempt
2884	Wellheads — located at twenty one (20) well units
100236	Oil & Gas Traps (separator): 2 in number, 3' diam. by 13' high, each
100235	One Oil & Gas Separator: 4' diam. by 13' high
100237	Weigh Meters: 2 in number, 4' diam. by 5' high

(a) Emission Limits: Mass emissions from the gas/light liquid service and oil service components listed in Table C.1-1 shall not exceed the limits listed in Tables 5.1-3 and 5.1-4. Compliance with these limits shall be assessed through compliance with the monitoring, recordkeeping, and reporting (MRR) conditions listed in this permit.

(b) Operational Limits: Operation of the equipment listed in this section shall conform to the requirements listed in District Rule 331.D and E. Compliance with these limits shall be assessed through compliance with the monitoring, record keeping and reporting conditions in this permit. In addition HVI shall meet the following requirements:

1. *VRS Use.* The vapor recovery system (VRS) and the gas collection system (GCS) shall be in operation when the equipment items at the facility connected to these systems are in use. These systems include piping, valves,

and flanges associated with the systems. The systems shall be maintained and operated to minimize the release of emissions from all systems, including pressure relief valves and gauge hatches.

2. *Rule 331 I&M Program*. The District-approved *Fugitive I&M Plan* (August 2005) for Blochman Lease in the HVI Cat Canyon Stationary Source shall be implemented for the life of the project. The Plan, and any subsequent District approved revisions, is incorporated by reference as an enforceable part of this permit. *Within sixty (60) days of the issuance of this permit, HVI shall submit for District approval, a revised Fugitive I&M Plan for the South Cat Canyon Stationary source*.

3. *Rule 331 Exemption Request.* If HVI wishes to maintain or obtain the Rule 331 B.2.c exemption from the MRR requirements of Rule 331, then HVI shall submit an exemption request to the District which shall include a current inventory of all 1/2″ or smaller stainless steel tube fittings and a written statement certifying under penalty of perjury that all one-half inch and smaller stainless steel tube fittings have been inspected in accordance with the requirements of Rule 331 Section H.1 and found to be leak-free.

(c) Monitoring: The equipment listed in this section are subject to all the monitoring requirements listed in District Rule 331.F. The test methods in Rule 331.H shall be used, when applicable.

(d) Recordkeeping: All inspection and repair records shall be retained at the source for a minimum of five years. The equipment listed in this section is subject to all the recordkeeping requirements listed in District Rule 331.G. In addition, HVI shall record in an I&M Log the following:

(a) A record of leaking components found (including name, location, type of component);
(b) Date of leak detection;
(c) The ppmv reading;
(d) Date of repair attempt;
(e) Method of detection;
(f) Date of re-inspection;
(g) The ppmv reading after leak is repaired;
(h) A record of the total components inspected and the total number and percentage found leaking by component type;
(i) A record of leaks from critical components;
(j) A record of leaks from components that incur five repair actions within a continuous 12-month period;
(k) A record of component repair actions including dates of component re-inspections.

(e) Reporting: The equipment listed in this section is subject to all the reporting requirements listed in District Rule 331.G. 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. *[Re: District Rules 331 and 1303, 40 CFR 70.6]*

C.2 **Wells and Well Cellars.** The following equipment are included in this emissions category:

Table C.2-1 Wells and Well Cellar Equipment List

District Device ID #	Name
100234	Lower Pond (sump): tertiary w/w sump, surface area of 9894 ft^2.
100230	Oil & Gas Wells (19): 19 with well cellars with area of 36 ft^2

(a) Emission Limits: Mass emissions from the wells and well cellars listed in Table C.2-1 above shall not exceed the limits listed in Tables 5.1-3 and 5.1-4. Compliance with this condition shall be based on the operational, monitoring, recordkeeping and reporting conditions in this permit. *[Re: District ATC 9664]*

(b) Operational Limits: All process operations including gas gathering from the equipment listed in this section shall meet the requirements of District Rule 325.E and Rule 344, Sections D and E. For the well cellars, HVI shall comply with the requirements of Rule 344.D.3, at a minimum. Compliance with these limits shall be assessed through compliance with the monitoring, record keeping and reporting conditions in this permit.

(c) Monitoring: The equipment listed in this section is subject to all applicable monitoring requirements of District Rule 344.F. The test methods outlined in District Rule 344.I shall be used, when applicable.

1. For well cellars, HVI shall comply with the requirements of Rule 344.D, at a minimum. Also, HVI shall inspect the well cellars to ensure that the liquid depth and the oil/petroleum depth do not exceed the following:

(i) Liquid depth shall not exceed 50 percent of the depth of the well cellar;

(ii) Oil depth shall not exceed 2 inches unless the owner/operator has discovered the condition and the cellar is pumped within 7 days of discovery (if the cellar is inaccessible due to muddy conditions, it shall be pumped as soon as it is accessible).

(d) Recordkeeping: The cellar units are subject to all applicable recordkeeping requirements listed in District Rule 344.G. Specifically, HVI shall record, for each detection, the following information relating to detection of conditions which require pumping of a well cellar pursuant to Rule 344.D.3.c:

1. The date of the detection;

2. The name of the person and company performing the test or inspection;

3. The date and time the well cellar is pumped.

(e) Reporting: On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report shall list all the data required by the Semi-Annual Monitoring /Compliance Verification Reports condition listed below. *[Ref: District Rules 344 and 1303, 40 CFR 70.6]*

C.3 **Storage Tanks.** The following equipment items are included in this emissions category:

Table C.3-1

District Device ID #	Name, Plant ID Number (if applicable), Capacity, Dimensions, Process Rate
113927	Water injection tank, for produced water and injection, 2,000 bbl capacity

(a) Emission Limits: Mass emissions from the storage tank shall not exceed the emission limits listed for these items in Tables 5.1-3 and 5.1-4 of this permit. Compliance with these limits shall be assessed through compliance with the monitoring, recordkeeping and reporting (MRR) conditions listed in this permit.

(b) Operational Limits: Operation of the equipment listed in Table C.3-1 above shall conform to the requirements listed in District Rule 325, Rule 343, and Rule 346. Compliance with these limits shall be assessed through compliance with the MRR conditions listed in this permit. In addition, HVI shall meet the following:

1. *Tank ROC Emissions Control.* The vapor recovery/gas collection (VR/GC) system shall be connected to the subject tank listed above and operating during production or processing (including storage, holding or placement) of liquids and shall meet the requirement of Rule 325. The VR/GC system includes all associated piping, valves, and flanges. The VR/GC system shall be maintained and operated properly including a leak-free mode of operation and shall achieve a vapor removal efficiency of 95% or greater.

(c) Monitoring: Monitoring requirements for the equipment listed above are, as follows:

1. HVI shall visually inspect the tank roof, internal floating cover, and its closures/seals at least once every five (5) years, and shall perform a complete inspection of any roof or cover whenever the tank is emptied for non-operational reasons, whichever is more frequent.

(d) Recordkeeping: The records required below shall be maintained by the permittee for a minimum period of five (5) calendar years and shall be made available to the District personnel upon request.

1. The following records required to be maintained per District Rules 325, Section F (Recordkeeping):

(i) The type of liquid in the tank;

(ii) The maximum vapor pressure of the liquid in the tank;

(iii) The results of the inspections required by Section H of District Rule 325.

(e) Reporting: On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report shall list all the data required by the Semi-Annual Monitoring/Compliance Verification Reports condition of this permit. *[Re: District Rules 325, 343 and 1303, District ATC's 6677 and 10174, 40 CFR 70.6.(a)(3)]*

C.4 **Recordkeeping.** All records and logs required by this permit and any applicable District, state or federal rule or regulation shall be maintained for a minimum of five calendar years from the date of information collection or log entry at the lease. These records or logs shall be readily accessible and be made available to District upon request. *[Re: District Rule 1303, 40 CFR 70.6]*

C.5 **Semi-Annual Monitoring/Compliance Verification Reports.** Twice a year, HVI shall submit a compliance verification report to the District. A paper copy, as well as, a complete PDF electronic copy of these reports shall be submitted. Each report shall document compliance with all permit, rule or other statutory requirements during the prior two calendar quarters. The first report shall cover calendar quarters 1 and 2 (January through June) and shall be submitted no later than September 1. The second report shall cover calendar quarters 3 and 4 (July through December) and shall be submitted no later than March 1. Each report shall contain information necessary to verify compliance with the emission limits and other requirements of this permit (if applicable for that quarter). These reports shall be in a format approved by the District. Compliance with all limitations shall be documented in the submittals. All logs and other basic source data not included in the report shall be made available to the District upon request. The second report shall also include an annual report for the prior four quarters. Pursuant to Rule 212, a completed *District Annual Emissions Inventory* questionnaire. HVI may use the *Compliance Verification Report* in lieu of the *Emissions Inventory* questionnaire if the format of the CVR is acceptable to the District's Emissions Inventory Group and if HVI submits a statement signed by a responsible official stating that the information and calculations of emissions presented in the CVR are accurate and complete to best knowledge of the individual certifying the statement. The report shall include the following information:

(a) *Fugitive Hydrocarbons*. Rule 331 fugitive hydrocarbon I&M program data (quarterly data):

1. Inspection summary.

2. Record of leaking components.

3. Record of leaks from critical components.

4. Record of leaks from components that incur five repair actions within a continuous 12-month period.

5. Record of component repair actions including dates of component re-inspections.

6. An updated FHC I&M inventory due to change in component list or diagrams.

(b) *Storage Tanks.*

1. For each tank listed in Table C.3-1, a summary annual report consisting of the following:

(i) The type of liquid in each tank;

(ii) The maximum vapor pressure of the tank content under operating conditions;

(iii) The date each tank was degassed.

(c) *Wells and Well Cellars*.

1. The following information, for each detection of conditions which resulted in a pumping of any well cellar:

(i) The date of the detection;

(ii) The name of the person and company performing the test or inspection;

(iii) The date and time the well cellar was pumped.

(d) *General Reporting Requirements.*

1. A summary of each and every occurrence of non-compliance with the provisions of this permit, District rules, and any other applicable air quality requirement.

2. On an annual basis, the ROC and/or NO_x emissions from all permit exempt activities.

C.6 **Documents Incorporated by Reference.** The document listed below, including any District-approved updates thereof, is incorporated by reference herein and shall have the full force and effect of a permit condition. This document shall be implemented for the life of the project:

- *Fugitive Hydrocarbon Inspection and Maintenance Plan (August 2012)*
- *Rule 325 Sampling Plan (November 2003)*

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 **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 the District's analyses under which this permit is issued as documented in the Permit Analyses prepared for and issued with the permit.

D.2 **Equipment Maintenance.** All equipment permitted herein shall be properly maintained and kept in good working condition in accordance with the equipment manufacturer specifications at all times.

D.3 **Compliance.** Nothing contained within this permit shall be construed as allowing the violation of any local, state, or federal rules, regulations, air quality standards or increments.

D.4 **Conflict Between Permits.** The requirements or limits that are more protective of air quality shall apply if any conflict arises between the requirements and limits of this permit and any other permitting actions associated with the equipment permitted herein.

D.5 **Access to Records and Facilities.** As to any condition that requires for its effective enforcement the inspection of records or facilities by the District or its agents, the permittee shall make such records available or provide access to such facilities upon notice from the District. Access shall mean access consistent with California Health and Safety Code Section 41510 and Clean Air Act Section 114A.

D.6 **Odorous Organic Sulfides (Rule 310).** The permittee shall not discharge into the atmosphere H_2S and organic sulfides that result in a ground level impact beyond the permitted property boundary in excess of either 0.06 ppmv averaged over 3 minutes and 0.03 ppmv averaged over one hour. *[Re: District Rule 310]*

D.7 **Mass Emission Limitations.** Mass emissions for each equipment item associated with Blochman Lease shall not exceed the values listed in Tables 5.1-3 and 5.1-4 of this permit. Emissions for the entire facility shall not exceed the emissions limits, as listed in Table 5.2.

D.8 **External Combustion Units - Permits Required.**

(a) An ATC/PTO permit shall be obtained prior to installation of any grouping of Rule 360 applicable boilers or hot water heaters whose combined system design heat input rating exceeds 2.000 MMBtu/hr.

(b) An ATC permit shall be obtained prior to installation, replacement, or modification of any existing Rule 361 applicable boiler or water heater rated over 2.000 MMBtu/hr.

(c) An ATC shall be obtained for any size boiler or water heater if the unit is not fired on natural gas or propane.

D.9 **Solvent Usage.** Use of solvents for wipe cleaning maintenance and laboratory use shall conform to the requirements of District Rules 202, 317, and 324. On an annual basis, HVI shall monitor the following for each solvent used:

(a) Emission Limits: Mass emissions from the solvent usage shall not exceed the limits listed in Tables 5.1-3 and 5.1-4 of this permit. Compliance shall be based on the recordkeeping and reporting requirements of this permit. For short-term emissions, compliance shall be based on monthly averages.

(b) Operational Limits: Use of solvents for cleaning, degreasing, thinning and reducing shall conform to the requirements of District Rules 317 and 324. Compliance with these rules shall be assessed through compliance with the monitoring, recordkeeping and reporting conditions in this permit and facility inspections. In addition, HVI shall comply with the following:

1. *Containers.* Vessels or containers used for storing materials containing organic solvents shall be kept closed unless adding to or removing material from the vessel or container.

2. *Materials.* All materials that have been soaked with cleanup solvents shall be stored, when not in use, in closed containers that are equipped with tight seals.

3. *Solvent Leaks.* Solvent leaks shall be minimized to the maximum extent feasible or the solvent shall be removed to a sealed container and the equipment taken out of service until repaired. A solvent leak is defined as either the flow of three liquid drops per minute or a discernible continuous flow of solvent.

4. *Solvent Reclamation Plan*. HVI may submit a *Solvent Reclamation Plan* that describes the proper disposal of any reclaimed solvent. All solvent disposed of pursuant to the District approved Plan will not be assumed to have evaporated as emissions into the air and, therefore, will not be counted as emissions from the source. The Plan shall detail all procedures used for collecting, storing and transporting the reclaimed solvent. Further, the ultimate fate of these reclaimed solvents must be stated in the Plan.

(c) Monitoring: The monitoring shall meet the requirements of Rule 202.U.3 and be adequate to demonstrate compliance with Rule 202.N threshold.

(d) Recordkeeping: All monitoring data shall be recorded in a log. Any product sheets (MSDS or equivalent) detailing the constituents of all solvents shall be maintained in a readily accessible location on the facility. HVI shall record the amount used in gallons per

month, the percentage of ROC by weight (as applied), the solvent density, and whether the solvent is photochemically reactive. HVI shall also record the amount of surface coating used in gallons per month and the percentage of ROC by weight of the surface coating. HVI shall record in a log the amount of solvent reclaimed for District-approved disposal according to the District-approved *Solvent Reclamation Plan*.

(e) Reporting: On an annual basis, a report detailing the previous twelve month's activities shall be provided to the District. The report shall list all the data required by the Annual Compliance Report condition D.12.

D.10 **Process Stream Sampling and Analysis.** HVI shall sample analyze the process streams listed in Section 4.8 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. Compliance with this condition shall be assessed through compliance with the MRR conditions listed in this permit

D.11 **Permitted Equipment.** Only those equipment items listed in Attachment 10.5 are covered by the requirements of this permit and District Rule 201.E.2. *[Re: District Rule 201]*

D.12 **Annual Compliance Reporting.** In addition to its federally required semi-annual reporting, HVI shall also submit an annual report to the District, by March 1st of the following year containing the information listed below. A paper copy, as well as, a complete PDF electronic copy of these reports shall be submitted. 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. Except where noted, the annual compliance report shall include monthly summaries of the following information:

(a) *Solvent Usage.*

1. The volume (in gallons) of each non-photo-chemically reactive solvent used each month.

2. The density of each such solvent and the percentage of ROC by weight in each solvent.

3. The total weight (in pounds) of all "photo-chemically reactive" (per District Rule 102.FF) solvents used each month, and the number of days each month these were used.

4. The volume (in gallons) of surface coating used each month.

5. The percentage of ROC by weight of the surface coating used.

(b) *Adhesives and Sealants.*

1. All records of adhesives and sealants used in the facility including their ROC content, unless all such adhesives or sealants were contained in containers less than 16 ounces in size or all such materials were exempt from Rule 353 requirements pursuant to Rule 353.B.1

(c) *Mass Emissions.*

1. The annual emissions (TPY) from each permitted emissions unit for each criteria pollutant

2. The annual emissions (TPY) from each exempt emissions unit for each criteria pollutant

3. The annual emissions (TPY) totaled for each criteria pollutant

(d) *General Reporting Requirements.*

1. A brief summary of breakdowns and variances reported/obtained per Regulation V along with the excess emissions that accompanied each occurrence.

2. A summary of each use of CARB Certified equipment used at the facility. List the type of equipment used, CARB Registration Number, first date of use and duration of use and an estimate of the emissions generated.

D.13 **Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities.** The equipment permitted herein shall be operated in compliance with the California Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities regulation (CCR Title 17, Section 95665 *et. Seq*.).

D.14 **CARB GHG Regulation Recordkeeping.** The permittee shall maintain at least 5 years of records that document the following:

i. The number of crude oil or natural gas wells at the facility.

ii. A list identifying all pressure vessels, tanks, separators, sumps, and ponds at the facility, including the size of each tank and separator in units of barrels.
iii. The annual crude oil, natural gas, and produced water throughput of the facility.
iv. A list identifying all reciprocating and centrifugal natural gas compressors at the facility.
v. A count of all natural gas powered pneumatic devices and pumps at the facility.
vi. A copy of the *Best Practices Management Plan* designed to limit methane emissions from circulation tanks, if applicable.

D.15 **CARB GHG Regulation Reporting.** All throughput data and any updates to the information recorded pursuant to the *CARB GHG Regulation Recordkeeping* Condition above using District Annual Report Form ENF-108.

_____

AIR POLLUTION CONTROL OFFICER

_____

Date

NOTES:

(a) Permit Reevaluation Due Date: February 2022
(b) This permit supersedes Pt70 Permit to Operate 8076-R10

10.0 Attachments

10.1 Emission Calculation Documentation
10.2 Emission Calculation Spreadsheets
10.3 Fee Calculations
10.4 IDS Database Emission Tables
10.5 Equipment List
10.6 Well List

10.1 Emission Calculation Documentation

Blochman Lease

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 letters A-D refer to Table 5.2-1 and Table 5.2-2.

Reference A - Fugitive Components (*Valves, fittings etc., at the wellheads)*

- The maximum operating schedule is in units of hours.
- All safe to monitor components are credited an 80 percent control efficiency. Unsafe to monitor components (as defined in Rule 331) are considered uncontrolled.
- For existing onshore sources without a detailed component count inventory, the statistical models developed by the CARB/KVB were used. The CARB/KVB Method uses statistical models based on the facility's gas/oil ratio and the number of active wells to determine the emission factor (see Attachment 10.2).
- District Policy and Procedure 6100.060.1996 (*Calculation of Fugitive Hydrocarbon Emissions at Oil and Gas Facilities by the CARB/KVB Method*, July 1996) is used as the basis for implementing the CARB/KVB methodology (see Attachment 10.2).
- Emission factors from the CARB/KVB Method were also used determining fugitive emissions from wellheads casing (i.e., piping and equipment associated with the underground casing) and from pumps and compressors (see Attachment 10.2).

In order to determine the applicable fugitive hydrocarbon (FHC) emission factors for equipment in a facility, the following definitions are provided specific to this methodology:

1. Gas to Oil Ratio (GOR): The volume ratio of gas to liquid crude oil produced by the facility wells in units of standard cubic feet per day (scfd) of gas to barrel per day (bbl/day) of crude oil.
2. Wells Heads: Well piping and pumping equipment located above the underground oil and gas well casing.
3. Permitted Wells: All oil and gas producing wells not abandoned (e.g. not plugged with concrete to block the well). Permitted wells do not include wastewater re-injection wells.

To calculate FHC emissions from an oil and gas facility, the CARB/KVB method requires the following data listed in Table 10.1-1. From this data, Facility Model Numbers can be determined from Table 10.1-2.

Table 10.1-1 Data Required

Parameter	Units
1. The total gas production from the facility	SCF/day
2. The total dry crude oil production and API gravity of the crude produced by the facility	bbl/day and ˚ API
3. The total gas production divided by the total dry oil produced. (Gas oil Ratio (GOR))	SCF/bbl
4. The number of permitted oil and gas production wells that are serviced by the facility. Do not count waste water re-injection, or abandoned (plugged) wells	Number of wells
5. The types, quantities and characteristics of the following equipment at the facility:	
5.1 Pumps (facility has them or not)	Yes/No
5.2 Compressors (facility has them or not)	Yes/No

Table 10.1-2 Facility Model Numbers

Model #1	Number of wells on the lease is less than 10 and the GOR is less than 500.
Model #2:	Number of wells on the lease is between 10 and 50 and the GOR is less than 500.
Model #3	Number of wells on the lease is greater than 50 and the GOR is less than 500.
Model #4:	Number of wells on the lease is less than 10 and the GOR is greater than or equal to 500.
Model #5:	Number of wells on the lease is between 10 and 50 and the GOR is greater than or equal to 500.
Model #6:	Number of wells on the lease is greater than 50 and the GOR is greater than or equal to 500.

Emission Factors: "Uncontrolled" ROC emission factors are provided in Table 10.1-3 and Table 10.1-4 for valves and fittings based on the lease model number. Table 10.1-5 provides emission factors for wellheads, pumps and compressors. All emission factors listed in Tables 10.1-3 through 10.1-5 are for ROC emission factors. The methane and ethane constituents have been removed. Control efficiencies are provided in Table 10.1-6.

Table 10.1-3 Valve Emission Factors

Lease Model	ROC Emission Factor by Service Type (Lb/day-well)*10^{-4}			
	Gas	**Liquid**	**Mixture**	**Condensate**
Model #1	14,171.70	0.982	748.355	0
Model #2	6,807.46	0.971	190.993	0
Model #3	62.177	0.260	154.327	0
Model #4	44,784.90	1.215	303.513	0
Model #5	8,293.50	0.509	334.359	0
Model #6	16,839.20	0.084	239.978	0

Table 10.1-4 Fitting Emission Factors

Lease Model	ROC Emission Factor by Service Type (lb/day-well)*10^{-4}			
	Gas	**Liquid**	**Mixture**	**Condensate**
Model #1	8,483.620	323.495	1,139.750	0.000
Model #2	5,788.960	0.000	302.830	0.000
Model #3	166.743	9.719	496.834	0.099
Model #4	20,399.100	0.001	920.142	0.000
Model #5	17,547.300	29.052	1,847.850	0.000
Model #6	24,890.200	0.000	115.139	0.243

Table 10.1-5 Emission Factors for Wellheads, Pumps, and Compressors

Active (Not abandoned) Oil Wells	0.0097 lb-ROC/well-day
If Facility Uses Pumps	0.0028 lb-ROC/well-day
If Facility Uses Compressors	0.0680 lb-ROC/well-day

Table 10.1-6 Standard Control Efficiency

Equipment Category	Type of Control	ROC Control Efficiency (% by wt.)
Fugitive components	Fugitive inspection and maintenance program implemented per Rule 331	80

Reference B - Sumps/Well Cellars

- Maximum operating schedule is in units of hours.
- Emission calculation methodology for sumps, and cellars based on the CARB/KVB report Emissions Characteristics of Crude Oil Production Operations in California (1/83).
- Calculations of cellars and sump emissions are based on surface area of emissions unit as supplied by the applicant.
- All well cellars are credited with an ROC control efficiency of 70 % for complying with Rule 344 requirements.
- Maximum surface area of each cellar does not exceed 36 sq. ft. (i.e., a square cellar not exceeding 6 ft. by 6 ft.)

Reference C- Storage Tanks

- The maximum operating schedule is in units of hours.
- The hourly/daily/annual emissions scenario is based on the following assumption:
- Emissions occur 24 hours/day and 365 days/year.
- Emission factors are based on the USEPA's AP-42, Section 7 guidelines.

Reference D - Solvents

- All solvents not used to thin surface coatings are included in this equipment category.
- Exempt solvent emissions (per Rule 202.U.3) are assumed to be based on 55 gallons of solvent use (maximum expected) at the facility with 6.6 lb. of ROC per gallon of solvent.
- Emissions from exempt solvent use, per Rule 202.N shall not exceed 10 tons per year.

10.2 Emission Calculation Spreadsheets

FUGITIVE HYDROCARBON CALCULATIONS - CARB/KVB METHOD

Page 1 of 2

ADMINISTRATIVE INFORMATION			
Attachment:			
Company:	Greka Oil and Gas, Inc.	Version:	fhc-kvb5.xls
Facility:	Blockman Lease	Date:	24-Oct-00
Processed by:	JJM		
Date:	3/21/2019		
Path & File Name:			
\\sbcapcd.org\shares\Groups\ENGR\WP\Oil&Gas\Major Sources\SSID 02658 Greka South Cat Canyon\03306 Blochman\Part 70 PTO 8076 (2019)\[Blockman FHC KVB			

Reference: CARB speciation profiles #s 529, 530, 531, 532

Data	Value	Units
Number of Active Wells at Facility	19	wells
Facility Gas Production		scf/day
Facility Dry Oil Production		bbls/day
Facility Gas to Oil Ratio (if > 500 then default to 501)	501	scf/bbl
API Gravity	20	degrees API
Facility Model Number	5	dimensionless
No. of Steam Drive Wells with Control Vents	0	wells
No. of Steam Drive Wells with Uncontrol Vents	0	wells
No. of Cyclic Steam Drive Wells with Control Vents	0	wells
No. of Cyclic Steam Drive Wells with Uncontrol Vents	0	wells
Composite Valve and Fitting Emission Factor	2.8053	lb/day-well

Lease Model	Valve ROG Emission Factor Without Ethane	Fitting ROG Emission Factor Without Ethane	Composite ROG Emission Factor Without Ethane	
1	1.4921	0.9947	2.4868	lbs/day-well
2	0.6999	0.6092	1.3091	lbs/day-well
3	0.0217	0.0673	0.0890	lbs/day-well
4	4.5090	2.1319	6.6409	lbs/day-well
5	0.8628	1.9424	2.8053	lbs/day-well
6	1.7079	2.5006	4.2085	lbs/day-well

Model #1: Number of wells on lease is less than 10 and the GOR is less than 500.
Model #2: Number of wells on lease is between 10 and 50 and the GOR is less than 500.
Model #3: Number of wells on lease is greater than 50 and the GOR is less than 500.
Model #4: Number of wells on lease is less than 10 and the GOR is greater than 500.
Model #5: Number of wells on lease is between 10 and 50 and the GOR is greater than 500.
Model #6: Number of wells on lease is greater than 50 and the GOR is greater than 500.

ROC Emission Calculation Summary Results Table
Reactive Organic Compounds[c]

	lbs/hr	lbs/day	tons/year
Valves and Fittings[a]	0.44	10.66	1.95
Sumps, Wastewater Tanks and Well Cellars[b]	1.32	31.64	5.77
Oil/Water Separators [b]	0.00	0.00	0.00
Pumps/Compressors/Well Heads[a]	0.01	0.31	0.06
Enhanced Oil Recovery Fields	0.00	0.00	0.00
Total Facility FHC Emissions (ROC)	**1.78**	**42.61**	**7.78**

a: Emissions amount reflect an 80% reduction due to Rule 331 implementation.
b: Emissions reflect control efficiencies where applicable.
c: Due to rounding, the totals may not appear correct

Emission Calculation by Emission Unit

Pumps, Compressors, and Well Heads Uncontrolled Emission Calculations

Number of Wells	19	wells
Wellhead emissions	0.1843	ROC (lb/well-day)
FHC from Pumps	0.0741	ROC (lb/well-day)
FHC from Compressors	1.2901	ROC (lb/well-day)
Total:	1.5485	ROC (lb/well-day)

Sumps, Uncovered Wastewater Tanks, and Well Cellars

Efficiency Factor: (70% for well cellars, 0% for uncovered WW tanks, sumps and pits)

Unit Type/Emissions Factor

	Heavy Oil Service	Light Oil Service	
Primary	0.0941	0.138	(lb ROC/ft^2-day)
Secondary	0.0126	0.018	(lb ROC/ft^2-day)
Tertiary	0.0058	0.0087	(lb ROC/ft^2-day)

Surface Area and Type (emissions in lbs/day)

Description/Name	Number	Area (ft^2)	Primary	Secondary	Tertiary
Well Cellars	14	504	14.23		
				0.00	
Sump - Lower Pond		9,894			17.22
(a) A 70% reduction is applied for implementation of Rule 344 (*Sumps, Pits, and Well Cellars*).			14.23	0.00	17.22

Covered Wastewater Tanks

Efficiency Factor: 85%

Surface Area and Type (emissions in lbs/day)

Description/Name	Number	Area (ft^2)	Primary	Secondary	Tertiary
			0.00		
				0.00	
					0.00
			0.00	0.00	0.00

Covered Wastewater Tanks Equipped with Vapor Recovery

Efficiency Factor: 95%

Surface Area and Type (emissions in lbs/day)

Description/Name	Number	Area (ft^2)	Primary	Secondary	Tertiary
			0.00		
				0.00	
Water Injection Tank		690			0.20
			0.00	0.00	0.20

Oil/Water Separators

Efficiency Factor: varies (85% for cover, 95% for VRS, 0% for open top)

Emissions Factor: 560 (lb ROC/MM Gal)

Type (emissions in lbs/day)

Description/Name	TP-MM Gal	Equipped with Cover	Equipped with VRS	Open Top	Total lb/day
		0.0			
			0.0		
				0.0	
		0.0	0.0	0.0	0.0

10.3 Fee Calculations

Permit fees for the Blochman Lease are based on equipment rating, pursuant to District Rule 210.I.B.2 and Schedule A.

NOTE: all work performed with respect to implementing the requirements of the Part 70 Operating Permit program, including federal permit processing and federal permit compliance monitoring are assessed on a cost reimbursement basis pursuant to District Rule 210.I.C.

FEE STATEMENT

PT-70/Reeval No. 08076 - R11

FID: 03306 Blochman Lease / SSID: 02658

Santa Barbara County
Air Pollution Control District

Device Fee

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
002883	Valves & Fittings	A1.a	1.000	70.99	Per equipment	No	1	1.000	70.99	0.00	0.00	70.99
002884	Oil and Gas Wellheads	A1.a	1.000	70.99	Per equipment	No	19	1.000	1,348.81	0.00	0.00	1,348.81
100234	Lower Pond Sump	A6	555.072	4.07	Per 1000 gallons	No	1	1.000	2,259.14	0.00	0.00	2,259.14
100235	Oil and Gas Separator	A6	1.000	4.07	Per 1000 gallons	Min	1	1.000	70.53	0.00	0.00	70.53
100236	Oil and Gas Traps	A1.a	1.000	70.99	Per equipment	No	2	1.000	141.98	0.00	0.00	141.98
100237	Weigh Meters	A1.a	1.000	70.99	Per equipment	No	2	1.000	141.98	0.00	0.00	141.98
113927	Water Injection Tank	A6	84.000	4.07	Per 1000 gallons	No	1	1.000	341.88	0.00	0.00	341.88
388884	Vapor Recovery Unit	A2	25.000	36.80	Per total rated hp	No	1	1.000	920.00	0.00	0.00	920.00
	Device Fee Sub-Totals =								**$5,295.31**	**$0.00**	**$0.00**	
	Device Fee Total =											**$5,295.31**

Fee Statement Grand Total = $5,295

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.

10.4 IDS Database Emission Tables

PERMIT POTENTIAL TO EMIT

	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$
lb/day		47.70					
lb/hr							
TPQ							
TPY		8.71					

FACILITY POTENTIAL TO EMIT

	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$
lb/day		47.70					
lb/hr							
TPQ							
TPY		8.71					

STATIONARY SOURCE POTENTIAL TO EMIT

	NO_x	ROC	CO	SO_x	PM	PM_{10}	$PM_{2.5}$
lb/day	298.11	400.32	291.64	90.70	3.39	3.39	3.39
lb/hr							
TPQ							
TPY	54.40	72.28	48.90	16.56	1.63	1.63	1.63

Notes:
(1) Emissions in these tables are from IDS.
(2) Because of rounding, values in these tables shown as 0.00 are less than 0.005, but greater than zero.

10.5 Equipment List

PT-70/Reeval 08076 R11 / FID: 03306 Blochman Lease / SSID: 02658

A PERMITTED EQUIPMENT

1 Valves & Fittings

Device ID #	**002883**	***Device Name***	**Valves & Fittings**
Rated Heat Input		*Physical Size*	19.00 Wells
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Valves, fittings and flanges, not directly associated with other permitted equipment items, which emit fugitive hydrocarbon emissions		

2 Oil and Gas Wellheads

Device ID #	**002884**	***Device Name***	**Oil and Gas Wellheads**
Rated Heat Input		*Physical Size*	19.00 Wells
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3 Well Cellars

Device ID #	**002885**	***Device Name***	**Well Cellars**
Rated Heat Input		*Physical Size*	684.00 Square Feet Cellar Area
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	19 wells have well cellars 6' square for 36 SF each.		

4 Lower Pond Sump

Device ID #	**100234**	***Device Name***	**Lower Pond Sump**
Rated Heat Input		*Physical Size*	9894.00 Square Feet Sump Area
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Covered sump with surface area of 9894 square feet and volume of 13,216 barrels (or 555,072 gallons), used to separate oil from water by utilizing a number of weirs		

5 Oil and Gas Separator

Device ID #	**100235**	***Device Name***	**Oil and Gas Separator**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	4 feet diameter by 13 feet height, located at Blochman Well #12, connected to gas collection system (and vapor recovery)		

6 Oil and Gas Traps

Device ID #	**100236**	***Device Name***	**Oil and Gas Traps**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Each 3' dia. by 13' height, connected to gas collection system (and vapor recovery)		

7 Weigh Meters

Device ID #	**100237**	***Device Name***	**Weigh Meters**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Each 4' dia. by 13' feet height, connected to gas collection system (and vapor recovery)		

8 Water Injection Tank

Device ID #	**113927**	***Device Name***	**Wash Tank**
Rated Heat Input		*Physical Size*	2000.00 BBL
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	2,000 bbl tank connected to vapor recovery		

9 Vapor Recovery Unit

Device ID #	**388884**	***Device Name***	**Vapor Recovery Unit**
Rated Heat Input		*Physical Size*	25.00 Brake Horsepower
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Vapor Recovery Unit Compressor		

10.6 Well List

Attachment 10.6. Permitted Wells.

CA Well Results [Active Wells only]

County:Santa Barbara 083 Field:Cat Canyon Operator Code:G3515 Lease:Blochman

District	Operator Name	Field Name	API #	Lease Name	Well	Well Status	Pool WellType	Section	Township	Range	Base Meridian	Area Code	Area Name	Latitude	Longitude
3	Greka Oil & Gas, Inc.	Cat Canyon	08301586	Blochman	1	I	OG	26	09N	33W	SB	21	West	34.828864	-120.321118
3	Greka Oil & Gas, Inc.	Cat Canyon	08301587	Blochman	4	A	OG	26	09N	33W	SB	21	West	34.8290111	-120.3272736
3	Greka Oil & Gas, Inc.	Cat Canyon	08301592	Blochman	10	I	OG	26	09N	33W	SB	21	West	34.829746	-120.3272094
3	Greka Oil & Gas, Inc.	Cat Canyon	08301593	Blochman	11	A	OG	26	09N	33W	SB	21	West	34.829339	-120.322835
3	Greka Oil & Gas, Inc.	Cat Canyon	08322238	Blochman	21H	A	OG	26	09N	33W	SB	21	West	34.8348313	-120.329274
3	Greka Oil & Gas, Inc.	Cat Canyon	08322258	Blochman	320H	A	OG	26	09N	33W	SB	21	West	34.8295033	-120.3293395
3	Greka Oil & Gas, Inc.	Cat Canyon	08322259	Blochman	300H	I	OG	26	09N	33W	SB	21	West	34.8348291	-120.3291265
3	Greka Oil & Gas, Inc.	Cat Canyon	08322264	Blochman	315H	A	OG	26	09N	33W	SB	21	West	34.8313885	-120.3292882
3	Greka Oil & Gas, Inc.	Cat Canyon	08322271	Blochman	305H	A	OG	26	09N	33W	SB	21	West	34.8322924	-120.325022
3	Greka Oil & Gas, Inc.	Cat Canyon	08301594	Blochman	12	A	OG	26	09N	33W	SB	21	West	34.8332827	-120.32724
3	Greka Oil & Gas, Inc.	Cat Canyon	08301596	Blochman	14	I	OG	26	09N	33W	SB	21	West	34.8313386	-120.3293677
3	Greka Oil & Gas, Inc.	Cat Canyon	08301597	Blochman	15	A	OG	26	09N	33W	SB	21	West	34.8331396	-120.3293729
3	Greka Oil & Gas, Inc.	Cat Canyon	08301598	Blochman	16	A	OG	26	09N	33W	SB	21	West	34.8294586	-120.3254298
3	Greka Oil & Gas, Inc.	Cat Canyon	08301599	Blochman	18	A	OG	26	09N	33W	SB	21	West	34.8313317	-120.3249974
3	Greka Oil & Gas, Inc.	Cat Canyon	08301600	Blochman	20	I	OG	26	09N	33W	SB	21	West	34.8349554	-120.3271636
3	Greka Oil & Gas, Inc.	Cat Canyon	08301601	Blochman	21	I	OG	26	09N	33W	SB	21	West	34.834924	-120.3292981
3	Greka Oil & Gas, Inc.	Cat Canyon	08301602	Blochman	23	I	OG	26	09N	33W	SB	21	West	34.8349254	-120.3227982
3	Greka Oil & Gas, Inc.	Cat Canyon	08301603	Blochman	24	I	OG	26	09N	33W	SB	21	West	34.829483	-120.32264
3	Greka Oil & Gas, Inc.	Cat Canyon	08320116	Blochman	29	I	OG	26	09N	33W	SB	21	West	34.8314127	-120.3239153

1. This table represents the number of active and idle oil and gas wells at this facility as reported by the DOGGR.
2. Section (S), Township (T) and Range, (R) is a surveyed rectangular land grid system that covers most of the United States. A township is the measure of units north or south of a baseline, the horizontal line where the survey began. A Range is the measure of units east or west of a meridian, the vertical line where the survey began. Each Township/Range is thirty-six square miles, measuring 6 miles by 6 miles, and contains 36 one-mile square sections. In California, there are three base and meridians, Humboldt, Mount Diablo, and San Bernardino.