San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

MAR 2 5 2014

Rod Nahama
Midway Sunset Investors, LLC
602 H St, Suite 150
Bakersfield, CA 93304

Re: Notice of Preliminary Decision - Authority to Construct
Facility Number: S-7059
Project Number: S-1134490

Dear Mr. Nahama:

Enclosed for your review and comment is the District's analysis of Midway Sunset Investors, LLC's application for Authority to Construct permits for installation of a flare which will incinerate well casing gas and to lower the throughput limit of a storage tank, at the Midway Sunset Oil Field, within Section 2, Township 11N, Range 24W.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. After addressing all comments made during the 30-day public notice period, the District intends to issue the Authority to Construct. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. David Torii of Permit Services at (661) 392- 5620.

Sincerely,

David Warner
Director of Permit Services

DW:DBT/st

Enclosures

cc: Mike Tollstrup, CARB (w/ enclosure) via email
Gerardo C. Rios, EPA (w/enclosure) via email

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San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

New Flare

Facility Name:	Midway Sunset Investors, LLC	Date:	
Mailing Address:	602 H St, Suite 150 Bakersfield, CA 93304	Engineer:	David Torii
		Lead Engineer:	Rich Karrs
Contact Person:	Rod Nahama		
Telephone:	661-323-6546		
Application #(s):	S-7059-6-1 , '10-1 and '11-0		
Project #:	1134490		
Deemed Complete:	1/15/14		

I. Proposal

Midway Sunset Investors, LLC (MSI) has requested an Authority to Construct (ATC) permit for the installation of a flare which will incinerate casing gas from TEOR permit S-7059-10. To mitigate the flare's VOC emission increase, tank S-7059-5's throughput limit will be lowered.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2410	Prevention of Significant Deterioration (6/16/11) (N/A, see discussion in VII.C.9)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
Rule 4311	Flares (06/18/2009)
Rule 4623	Storage Of Organic Liquids (5/19/05)
Rule 4801	Sulfur Compounds (12/17/92)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice

Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The flare will be located at the Midway Sunset Oil Field, within Section 2, Township 11N, Range 24W. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Well vent vapors are collected from wells and sent to a 75 bbl phase separator (less than 100 bbl; therefore, exempt pursuant to SSP 2015) and are currently piped to the 1.2 MMBtu Petrotherm heater for use as fuel. In this project the well vent vapors will be authorized to also be incinerated in a flare. See process flow diagram in Appendix B

V. Equipment Listing

Pre-Project Equipment Description (see PTOs in Appendix C:

S-7059-6-0: 1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK

S-7059-10-0: TEOR OPERATION WITH UP TO 10 STEAM ENHANCED PRODUCTION WELLS WITH CASING GAS COLLECTION SYSTEM, 75 BBL PHASE SEPARATOR AND 1.2 MMBTU PERMIT EXEMPT PETROTHERM HEATER

Proposed ATCs:

S-7059-6-1: MODIFICATION OF 1,000 BBL. FIXED ROOF CRUDE OIL STORAGE TANK: LOWER ANNUAL THROUGHPUT

S-7059-10-1: MODIFICATION OF TEOR OPERATION WITH UP TO 10 STEAM ENHANCED PRODUCTION WELLS WITH CASING GAS COLLECTION SYSTEM, 75 BBL PHASE SEPARATOR AND 1.2 MMBTU PERMIT EXEMPT PETROTHERM HEATER: CONNECT TO FLARE S-7059-11

S-7059-11-0: 4.2 MMBTU/HR COANDA EFFECT FLARE

Post Project Equipment Description:

S-7059-6-1: 1,000 BBL. FIXED ROOF CRUDE OIL STORAGE TANK

S-7059-10-1: TEOR OPERATION WITH UP TO 10 STEAM ENHANCED PRODUCTION WELLS WITH CASING GAS COLLECTION SYSTEM, 75 BBL PHASE SEPARATOR, 1.2 MMBTU PERMIT EXEMPT PETROTHERM HEATER AND 100 MCF/DAY FLARE

S-7059-11-0: 100 MSCF/DAY COANDA EFFECT FLARE

VI. Emission Control Technology Evaluation

The new flare will have a coanda effect burner and operate in a smokeless manner. The sulfur content of the flared gas is restricted to 5 gr/100 scf by permit condition. A continuous pilot fired will be used. As required by Rule 4311 the flare will be equipped with a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device capable of continuously detecting at least one pilot flame or that the flare flame is present. The flame detection device shall be kept operational at all times except during flare maintenance when the flare is isolated from gas flow.

VII. General Calculations

Pursuant to determination 20 of District FYI 111 allowing a vapor control system to vent to a different permitted disposal device is not an NSR modification; therefore, calculations are not required for ATC S-7059-10-1.

A. Assumptions

Flare

- Higher heating value of the flared gas is 1000 Btu/scf.
- Daily flare throughput: 100,000 acf/day (100 MMBtu/day = 4.2 MMBtu/hr)
- Annual flare throughput: 36,500,000 acf/yr(36,500 MMBtu/yr)
- Sulfur content of the flared gas will not exceed 5 gr/100 scf.
- Pilot fuel consumption: 5 scf/hr
- Emissions from combustion of pilot gas are negligible

Tank S-7059-6

- TVP limit: 0.5 psia
- Pre-project throughput: 1000 bbl/day (District practice for grandfathered tanks)
- Post-project throughput: 200 bbl/day (applicant proposal)

B. Emission Factors

Pollutant	Emission Factor (lb/MMBtu)	Source
NOx	0.068	FYI-83
SOx*	5 gr-S/100 scf (0.0143 lb/MMBtu)	applicant
PM10	0.008	FYI-83/BACT
CO	0.37	FYI-83
VOC	0.0063	FYI-83

*(5.0 gr S/100scf)(1 scf/1000 Btu)(1 lb/7000 gr)(2 lb SO2/lb S)(10E6/MM) = 0.0143 lb-SOx/MMBtu

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Since the flare is a new emissions unit, PE1 = 0 for all pollutants.

PE1 Tank S-7059-6-0	
Daily Emissions (lb/day)	Annual Emissions (lb/year)
51.9	18,946

2. Post Project Potential to Emit (PE2)

PE2 Tank S-7059-6-1	
Daily Emissions (lb/day)	Annual Emissions (lb/year)
11.9	4346

See calculations in Appendix D

Flare

(0.068 lb-NOx/MMBtu)(100 MMBtu/day) = 6.8 lb-NOx/day
(0.068 lb-NOx/MMBtu)(36,500 MMBtu/yr) = 2482 lb-NOx/yr

Post Project Potential to Emit (PE2)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO_X	6.8	2482
SO_X	1.4	522
PM_{10}	0.8	292
CO	37	13,505
VOC	0.63	2300

116.67 lb-CO2e/MMbtu)(36,500 MMBtu/yr)(metric ton/2205 lb) = 1931 metric ton-CO2e/yr

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

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

The SSPE1 can be calculated by adding the PE1 from all units with valid ATCs or PTOs and the sum of the ERCs that have been banked at the source and which have not been used on-site ($Total_{ERC}$).

$SSPE1_{Total} = SSPE1_{Permit\ Unit} + Total_{ERC}$

SSPE1 (lb/year)					
Permit Unit	NO_X	SO_X	PM_{10}	CO	VOC
S-7059-1-0	0	0	0	0	19,414
S-7059-2-0	0	0	0	0	19,101
S-7059-4-0	0	0	0	0	19,414
S-7059-6-0	0	0	0	0	19,414
S-7059-7-0	0	0	0	0	194
S-7059-8-1	0	0	0	0	851
S-7059-10-0	0	0	0	0	150
SSPE1	0	0	0	0	78,538

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

The SSPE2 can be calculated by adding the PE2 from all units with valid ATCs or PTOs and the sum of the ERCs that have been banked at the source and which have not been used on-site ($Total_{ERC}$).

$SSPE2_{Total} = SSPE2_{Permit\ Unit} + Total_{ERC}$

SSPE2 (lb/year)					
Permit Unit	NO_X	SO_X	PM_{10}	CO	VOC
S-7059-1-0	0	0	0	0	19,414
S-7059-2-0	0	0	0	0	19,101
S-7059-4-0	0	0	0	0	19,414
S-7059-6-1	0	0	0	0	4346
S-7059-7-0	0	0	0	0	194
S-7059-8-1	0	0	0	0	851
S-7059-10-0	0	0	0	0	150
S-7059-11-0	2482	522	292	13,505	2300
SSPE2	2482	522	292	13,505	65,770

5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Rule 2201 Major Source Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE1	0	0	0	0	78,538 – 150*
SSPE2	2482	522	292	13,505	65,770 – 150*
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	n	n	n	n	y

*fugitive emissions from S-7059-10

This source is an existing Major Source for VOC emissions and will remain a Major Source for VOC.

Rule 2410 Major Source Determination:

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

PSD Major Source Determination (tons/year)							
	NO2	VOC	SO2	CO	PM	PM10	CO2e
Estimated Facility PE before Project Increase	0	39	0	0	0	0	0
PSD Major Source Thresholds	250	250	250	250	250	250	100,000
PSD Major Source ? (Y/N)	n	n	n	n	n	n	n

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

6. Baseline Emissions (BE)

The BE calculation (in lbs/year) is performed pollutant-by-pollutant for each unit within the project to determine the amount of offsets required.

Pursuant to District Rule 2201, BE = PE1 for:

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

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to District Rule 2201.

Since the flare is a new emissions unit, BE = PE1 = 0 for all pollutants.

Pursuant to Rule 2201, a Clean Emissions Unit is defined as an emissions unit that is "equipped with an emissions control technology with a minimum control efficiency of at least 95% or is equipped with emission control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application.

Tank S-7059-6 is equipped with PV vent, which meets the requirements for achieved-in-practice BACT. Therefore, BE=PE1..

7. SB 288 Major Modification

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

Since this facility is a major source for VOC, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
VOC	2300 + 4346 = 6646	50,000	n

Since none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute an SB 288 Major Modification.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted. Emission decreases may not cancel out the increases for this determination.

Step 1

For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project.

For existing emissions units, the increase in emissions is calculated as follows.

Emission Increase = PAE – BAE

Where: PAE = Projected Actual Emissions, and
BAE = Baseline Actual Emissions

If there is no increase in design capacity or potential to emit, the PAE is equal to the annual emission rate at which the unit is projected to emit in any one year, selected by the operator, within 5 years after the unit resumes normal operation (10 years for existing units with an increase in design capacity or potential to emit). If detailed PAE are not provided, the PAE is equal to the PE2 for each permit unit.

The BAE is calculated based on historical emissions and operating records for any 24 month period, selected by the operator, within the previous 10 year period (5 years for electric utility steam generating units). The BAE must be adjusted to exclude any non-compliant operation emissions and emissions that are no longer allowed due to lower applicable emission limits that were in effect when this application was deemed complete.

The applicant has provided the required historical and projected operation data for tank S-7059-6 (see Appendix E).

S-7059-6 Emission Increase = 19 – 19 = 0

The project's combined total emission increases are compared to the Federal Major Modification Thresholds in the following table.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?
NO_x*	Not a Major NOx Source	0	
VOC*	522 + 0	0	Y
PM_{10}	Not a Major PM10 Source	30,000	
$PM_{2.5}$	Not a Major PM2.5 Source	20,000	
SO_x	Not a Major SOx Source	80,000	

*If there is any emission increases in NO_x or VOC, this project is a Federal Major Modification and no further analysis is required.

Since there is an increase in VOC emissions, this project constitutes a Federal Major Modification, and no further analysis is required.

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

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

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

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

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

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

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

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

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

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

PSD Major Source Determination: Potential to Emit (tons/year)							
	NO2	VOC	SO2	CO	PM	PM10	CO2e
Total PE from New and Modified Units	1.2	3.3	0.3	6.7	0.1	0.1	2129
PSD Major Source threshold	250	250	250	250	250	250	100,000
New PSD Major Source?	n	n	n	n	n	n	n

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

10. Quarterly Net Emissions Change (QNEC)

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

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

a. Any new emissions unit with a potential to emit exceeding two pounds per day,
b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

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

a. New emissions units – PE > 2 lb/day

As seen in Section VII.C.2 above, the applicant is proposing to install a new flare with a PE greater than 2 lb/day for NO_X and CO. BACT is triggered for NO_X only since the PE is greater than 2 lbs/day. However BACT is not triggered for CO since the SSPE2 for CO is not greater than 200,000 lbs/year, as demonstrated in Section VII.C.5 above.

b. Relocation of emissions units – PE > 2 lb/day

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

c. Modification of emissions units – AIPE > 2 lb/day

AIPE = PE2 – HAPE

Where,

AIPE = Adjusted Increase in Permitted Emissions, (lb/day)
PE2 = Post-Project Potential to Emit, (lb/day)
HAPE = Historically Adjusted Potential to Emit, (lb/day)

HAPE = PE1 x (EF2/EF1)

Where,

PE1 = The emissions unit's PE prior to modification or relocation, (lb/day)
EF2 = The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1
EF1 = The emissions unit's permitted emission factor for the pollutant before the modification or relocation

AIPE = PE2 – (PE1 * (EF2 / EF1))

Tank S-7059-6-1:

AIPE = 11.9 – (51.9 * 1)
= 11.9 – 51.9
= -40 lb-VOC/day = 0

As demonstrated above, the AIPE is not greater than 2.0 lb/day for VOC emissions for the tank. Therefore BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does constitute an Federal Major Modification for VOC emissions. Therefore BACT is triggered for

VOC for all emissions units in the project for which there is an emission increase. Therefore, BACT is triggered for the flare for VOC.

2. BACT Guideline

BACT Guideline 1.4.2 applies to Waste Gas Flare – Incinerating Produced Gas (see Appendix F)

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

Pursuant to the attached Top-Down BACT Analysis (see Appendix F), BACT has been satisfied with the following:

NOx and VOC: Coanda effect burner

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE2	2482	522	292	13,505	>20,000
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	No	No	No	No	Yes

2. Quantity of Offsets Required

As seen above, the facility is an existing Major Source for VOC and the SSPE2 is greater than the offset thresholds. Therefore offset calculations will be required for this project.

The quantity of offsets in pounds per year for VOC is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = (Σ[PE2 – BE] + ICCE) x DOR, for all new or modified emissions units in the project,

Where,
PE2 = Post Project Potential to Emit, (lb/year)
BE = Baseline Emissions, (lb/year)

ICCE = Increase in Cargo Carrier Emissions, (lb/year)
DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 for:

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

otherwise,

BE = HAE

As calculated in Section VII.C.6 above, the BE for S-7059-6-0 is equal to its PE1 since the unit is Clean Emissions Unit. Also, there are no increases in cargo carrier emissions. Therefore offsets can be determined as follows:

Offsets Required (lb/year) = ([PE2 – BE] + ICCE) x DOR

PE2 (VOC) = 4346 + 2300 = 6646 lb/year
BE (VOC) = 18,946 lb/year
ICCE = 0 lb/year

Offsets Required (lb/year) = ([6646 – 18,946] + 0) x DOR
= 0

As demonstrated above, the amount of offsets is zero. Therefore, offsets will not be required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:
a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
c. Any project which results in the offset thresholds being surpassed, and/or
d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

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

As demonstrated in Sections VII.C.7 and VII.C.8, this project is a Federal Major Modification. Therefore, public noticing for Federal Major Modification purposes is required.

b. PE > 100 lb/day

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

c. Offset Threshold

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO_X	0	2482	20,000 lb/year	No
SO_X	0	522	54,750 lb/year	No
PM_{10}	0	292	29,200 lb/year	No
CO	0	13,505	200,000 lb/year	No
VOC	78,538	65,770	20,000 lb/year	No

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

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds					
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO_x	0	2482	2482	20,000 lb/year	No
SO_x	0	522	522	20,000 lb/year	No
PM_{10}	0	292	292	20,000 lb/year	No
CO	0	13,505	13,505	20,000 lb/year	No
VOC	78,538	65,770	0	20,000 lb/year	No

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

2. Public Notice Action

As discussed above, public noticing is required for this project for triggering a Federal Major Modification. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

Proposed Rule 2201 (DEL) Conditions:

Flare S-7059-11-0:

- The following emissions factors shall be used to calculate flare emissions (based on total gas combusted): NOx (as NO2): 0.068 lb/MMBtu; PM10: 0.008 lb/MMBtu; CO: 0.37 lb/MMBtu; or VOC: 0.063 lb/MMBtu. [District Rule 2201] N

- Sulfur content of flared gas shall not exceed 5.0 gr S/100 scf. [District Rule 2201] N

Tank S-7059-6-1:

- This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rules 2201 and4623] N

- Crude oil throughput shall not exceed 200 barrels per day based on a monthly average. [District Rules 2201 and 4623] N

E. Compliance Assurance

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201.

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following condition(s) are listed on the permit to operate:

S-7059-6-1:

Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rules 2201 and 4623] N

Permittee shall maintain monthly records of average daily crude oil throughput and shall submit such information to the APCO 30 days prior to the expiration date indicated in the Permit to Operate. [District Rules 2201 and 4623] N

The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623]

All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] N

S-7059-11-0:

The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 4311]

Records shall be kept of sulfur content of the flared gas as determined once every 24 months using ASTM D3246 Test Method or other approved method(s). [District Rule 2201] N

All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District inspection upon request. [District Rules 1070, 4311, and 4401] N

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Title I Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Section VIII above, this facility is a new major source and this project does constitute a Title I modification, therefore this requirement is applicable. MSI's compliance certification is included in Appendix G.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to install a produced gas incinerating flare.

Since the project will provide flaring capability to be used at the same location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Rule 2410 Prevention of Significant Deterioration (6/16/11)

As shown above in section VII.C.9 this project does not result in a PSD significant emission increase and is therefore not subject to the requirements of Rule 2410. No further discussion is required.

Rule 2520 Federally Mandated Operating Permits

Pursuant to their current operating permit, this facility is an existing major source; however, the facility has not received their Title V permit.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. However, no subparts of 40 CFR Part 60 apply to oil production operations served by a flare. Therefore, no further discussion is required.

Rule 4002 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63. However, no subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to oil production operations served by a flare.

Rule 4101 Visible Emissions

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity).

The flare is equipped with a Caoanda effect burner and is expected to operate without visible emissions as stated in the following ATC condition:

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

Rule 4102 Nuisance

Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

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

An HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project (**Appendix H**), the

total facility prioritization score including this project was less than or equal to one. Therefore, no future analysis is required to determine the impact from this project and compliance with the District's Risk Management Policy is expected.

Discussion of T-BACT

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

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot. It is assumed that all particulate emissions from gas combustion in the flare is PM_{10}.

$$0.008 \quad \frac{lb}{MMBtu} \times \frac{MMBtu}{8{,}578\,dscf} \times \frac{7{,}000\,grain}{lb} = \quad 0.007 \quad \frac{grain}{dscf}$$

Since 0.007 grain/dscf is less than 0.1 grain/dscf, compliance with this rule is expected.

Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for SO_2, NO_2, and combustion contaminants (defined as total PM in Rule 1020). This rule also limits combustion contaminants to ≤ 0.1 gr/scf. According to AP 42 (Table 1.4-2, footnote c), all PM emissions from natural gas and LPG combustion are less than 1 μm in diameter.

The following table compares the Flare's emissions with Rule 4301 limits.

Rule 4301 Limits			
Pollutant	Flare Emissions (lb/hr)	Rule 4301 Limits (lb/hr)	Compliant?
NO_2	0.3	140	Yes
SO_2	0.06	200	Yes
Total PM	0.03	200	Yes

Since none of the Rule 4301 limits are exceeded, compliance with Rule 4301 is expected. Since the proposed emission limits already placed on the flare permit are much more stringent, no additional conditions will be listed.

Rule 4311 Flares

The purpose of this rule is to limit the emissions of volatile organic compounds (VOC), oxides of nitrogen (NOx), and sulfur oxides (SOx) from the operation of flares. The provisions of this rule are applicable to operations involving the use of flares.

Section 4.0 of this rule specifies categories of flare operations that are exempt from the provisions of this rule. The flare in this project does not meet any of the provisions in Section 4.0 and is therefore not exempt from the requirements of this rule.

Section 5.0 outlines the requirements for flares as follows:

Section 5.1 Flares that are permitted to operate only during an emergency are not subject to the requirements of Sections 5.6 and 5.7.

The flare in this project is not designated or restricted to operate only during emergencies; therefore, the provisions of Section 5.1 are not applicable to the flare in this project.

Section 5.2 The flame shall be present at all times when combustible gases are vented through the flare.

Compliance with the provisions of Section 5.2 is expected. A permit condition will be included to ensure compliance.

Section 5.3 The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares.

Section 5.4 Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an alternative equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated.

The flare will be required to be equipped with either a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting the presence of at least one pilot flame or the flare flame..

Section 5.5 contains requirements for flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. The flare in this project uses a continuous pilot. A permit condition will be included to ensure compliance.

Section 5.6 contains requirements for open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. The requirements of this section shall not apply to Coanda effect flares. The flare will use a Coanda effect burner.

Section 5.7 outlines emissions standards for ground-level enclosed flares. The flare in this project is not a ground-level enclosed flare; therefore, the provisions of Section 5.7 are not applicable to the flare in this project.

Section 5.8 outlines the requirements for a flare minimization plan. Effective on and after July 1, 2011, flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere.

The proposed flare has a rating of less than 5.0 MMBtu/hr; therefore, this section does not apply.

Section 5.9 contains requirements for petroleum refinery SO_2 performance targets.

5.9.1 Effective on and after January 1, 2011, the operator of a petroleum refinery shall minimize sulfur dioxide flare emissions to less than 1.50 tons per million barrels of crude processing capacity, calculated as an average over one calendar year.

5.9.2 Effective on and after January 1, 2017, the operator of a petroleum refinery shall minimize sulfur dioxide flare emissions to less than 0.50 tons per million barrels of crude processing capacity, calculated as an average over one calendar year.

The facility in this project is not a petroleum refinery; therefore, the provisions of Section 5.9 are not applicable to the flare in this project.

Section 5.10, effective on and after July 1, 2011, the operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare.

The flare in this project is not subject to flare minimization requirements pursuant to Section 5.8. Therefore, the requirements of Section 5.10 are not applicable to the flare in this project.

Section 5.11 Effective on and after July 1, 2011, the operator of a petroleum refinery or a flare with a flaring capacity equal to or greater than 50 MMBtu/hr shall monitor the flare pursuant to Sections 6.6, 6.7, 6.8, 6.9, and 6.10.

The facility is not a petroleum refinery and the flare in this project is rated at less than 50 MMBtu/hr; therefore, the provisions of Section 5.11 are not applicable to the flare in this project.

Compliance with the requirements of Section 5.0 is expected. The following conditions will be included on the permit to ensure continued compliance with the provisions of this rule.

- The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311] Y

- The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311] Y

- Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311] Y

- The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 4311] Y

Section 6.1 outlines the recordkeeping requirements of the rule and requires the following records to be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request:

6.1.1 Copy of the compliance determination conducted pursuant to Section 6.4.1.

The flare in this project is not subject to the requirement of Section 5.6; therefore, the requirements of Section 6.4.1, and thus Section 6.1.1, are not applicable.

6.1.2 Copy of the source testing result conducted pursuant to Section 6.4.2.

The flare in this project is not subject to the requirement of Section 5.7; therefore, the requirements of Section 6.4.2, and thus Section 6.1.2, are not applicable.

6.1.3 For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation.

The flare in this project is not designated for use only as an emergency flare; therefore, the provisions of Section 6.1.3 are not applicable to the flare in this project.

6.1.4 Operators claiming an exemption pursuant to Section 4.3 shall record annual throughput, material usage, or other information necessary to demonstrate an exemption under that section.

The operator of the flare in this project is not claiming an exemption pursuant to Section 4.3; therefore, the provisions of Section 6.1.4 are not applicable to the flare in this project.

6.1.5 Effective on and after July 1, 2011, a copy of the approved flare minimization plan pursuant to Section 6.5.

The proposed flare is not required to have a FMP; therefore, this section does not apply.

6.1.6 Effective on and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2.

The proposed flare is not subject to section 6.2; therefore, this section does not apply.

6.1.7 Effective on and after July 1, 2011, where applicable, monitoring data collected pursuant to Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10.

The flare in this project is not subject to the requirements of Sections 5.10, 6.6, 6.7, 6.8, 6.9, or 6.10; therefore, the requirements of Section 6.1.7 are not applicable to the flare in this project.

Section 6.2 outlines the flare reporting requirements of the rule and requires the following:

6.2.1 Effective on and after July 1, 2011, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 of this rule shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time.

Section 6.2.2 requires the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period.

The proposed flare is not required to have a FMP; therefore, these sections do not apply.

Section 6.2.3 contains annual monitoring requirements and states: effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period.

The flare in this project is not subject to the requirements of Sections 5.10, 6.6, 6.7, 6.8, 6.9, or 6.10; therefore, the requirements of Section 6.2.3 are not applicable to the flare in this project.

Section 6.4 outlines the requirements for determining compliance with specific requirements of the rule.

6.4.1 Upon request, the operator of flares that are subject to Section 5.6 shall make available, to the APCO, the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5).

The flare in this project is not subject to Section 5.6; therefore, the provisions of Section 6.4.1 are not applicable to the flare in this project.

6.4.2 The operator of ground-level enclosed flares shall conduct source testing at least once every 12 months to demonstrate compliance with Section 5.7. The operator shall submit a copy of the testing protocol to the APCO at least 30 days in advance of the scheduled testing. The operator shall submit the source test results not later than 45 days after completion of the source testing.

The flare in this project is not subject to Section 5.7; therefore, the provisions of Section 6.4.1 are not applicable to the flare in this project.

Section 6.5 outlines the requirements for a flare minimization plan.

The proposed flare is not required to have a FMP; therefore, this section does not apply.

Section 6.6 outlines requirements for vent gas composition monitoring for a petroleum refinery flare or any flare that has a flaring capacity equal to or greater than 50 MMBtu per hour.

The flare in this project is not located at a petroleum refinery and is rated at less than 50 MMBtu per hour; therefore, the provisions of Section 6.6 are not applicable to the flare in this project.

Section 6.7 outlines requirements for pilot and purge gas monitoring for a petroleum refinery flare or any flare that has a flaring capacity equal to or greater than 50 MMBtu per hour.

The flare in this project is rated at less than 50 MMBtu per hour; therefore, the provisions of Section 6.7 are not applicable to the flare in this project.

Section 6.8 outlines the provisions for water seal monitoring for the a petroleum refinery flare or any flare that has a flaring capacity equal to or greater than 50 MMBtu per hour with a water seal.

The flare in this project is not located at a petroleum refinery and is rated at less than 50 MMBtu per hour and is not equipped with a water seal; therefore, the provisions of Section 6.8 are not applicable to the flare in this project.

Section 6.9 outlines general monitoring provisions for a petroleum refinery flare or any flare that has a flaring capacity equal to or greater than 50 MMBtu per hour.

The flare in this project is not located at a petroleum refinery and is rated at less than 50 MMBtu per hour; therefore, the provisions of Section 6.9 are not applicable to the flare in this project.

Section 6.10 requires video monitoring of flares located at a petroleum refinery.

The flare in this project is not located at a petroleum refinery; therefore, the provisions of Section 6.10 are not applicable to the flare in this project.

Compliance with the requirements of District Rule 4311 is expected. No further discussion is required.

Rule 4623

This rule applies to any tank with a capacity of 1,100 gallons or greater in which any organic liquid is placed, held, or stored.

Tank S-7059-6 is currently in compliance with this this rule and its proposed modification is not expected to affect compliance. Continued compliance with the requirements of this rule is expected.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

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

Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project.

Project specific impacts on global climate change were evaluated consistent with the adopted District policy – *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency.* The District's engineering evaluation (this document – Appendix I) demonstrates that the project includes Best Performance Standards (BPS) for each class and category of greenhouse gas emissions unit. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATC S-7059-6-1, '10-1 and '11-0 subject to the permit conditions on the attached draft ATCs in **Appendix J.**

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-7059-6-1	3020-05S C	42,000 gallons	$63
S-7059-10-1	3020-09S A	teor operation with 10 wells	$46.70
S-7059-11-0	3020-02 F	4.2 MMBtu/hr	$607

APPENDIX A
Quarterly Net Emissions Change (QNEC)

Quarterly Net Emissions Change (QNEC)

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

QNEC = PE2 - PE1, where:

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

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

$PE2_{quarterly}$ = $PE2_{annual}$ ÷ 4 quarters/year
$PE1_{quarterly}$ = $PE1_{annual}$ ÷ 4 quarters/year

Quarterly VOC NEC [QNEC]					
	PE2 (lb/yr)	PE2 (lb/qtr)	PE1 (lb/yr)	PE1 (lb/qtr)	QNEC (lb/qtr)
S-7059-6-1	4346	1087	19,414	4854	-3767
S-7059-10-1	150	38	150	38	0

S-7059-11-0 Quarterly VOC NEC [QNEC]					
	PE2 (lb/yr)	PE2 (lb/qtr)	PE1 (lb/yr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NOx	2482	621	0	0	621
SOx	522	131	0	0	131
PM10	292	73	0	0	73
CO	13,505	3376	0	0	3376
VOC	2300	575	0	0	575

Permit #: S-7059-6-1	**Last Updated**	
Facility: MIDWAY-SUNSET INVESTORS LLC	03/03/2014	TORID

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	4346.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	11.9
Quarterly Net Emissions Change (lb/Qtr)					
Q1:					-3767.0
Q2:					-3767.0
Q3:					-3767.0
Q4:					-3767.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-7059-10-1	Last Updated
Facility: MIDWAY-SUNSET INVESTORS LLC	03/03/2014 TORID

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	150.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Application Emissions

Permit #: S-7059-11-0 **Last Updated**
Facility: MIDWAY-SUNSET INVESTORS LLC 03/03/2014 TORID

Equipment Pre-Baselined: NO

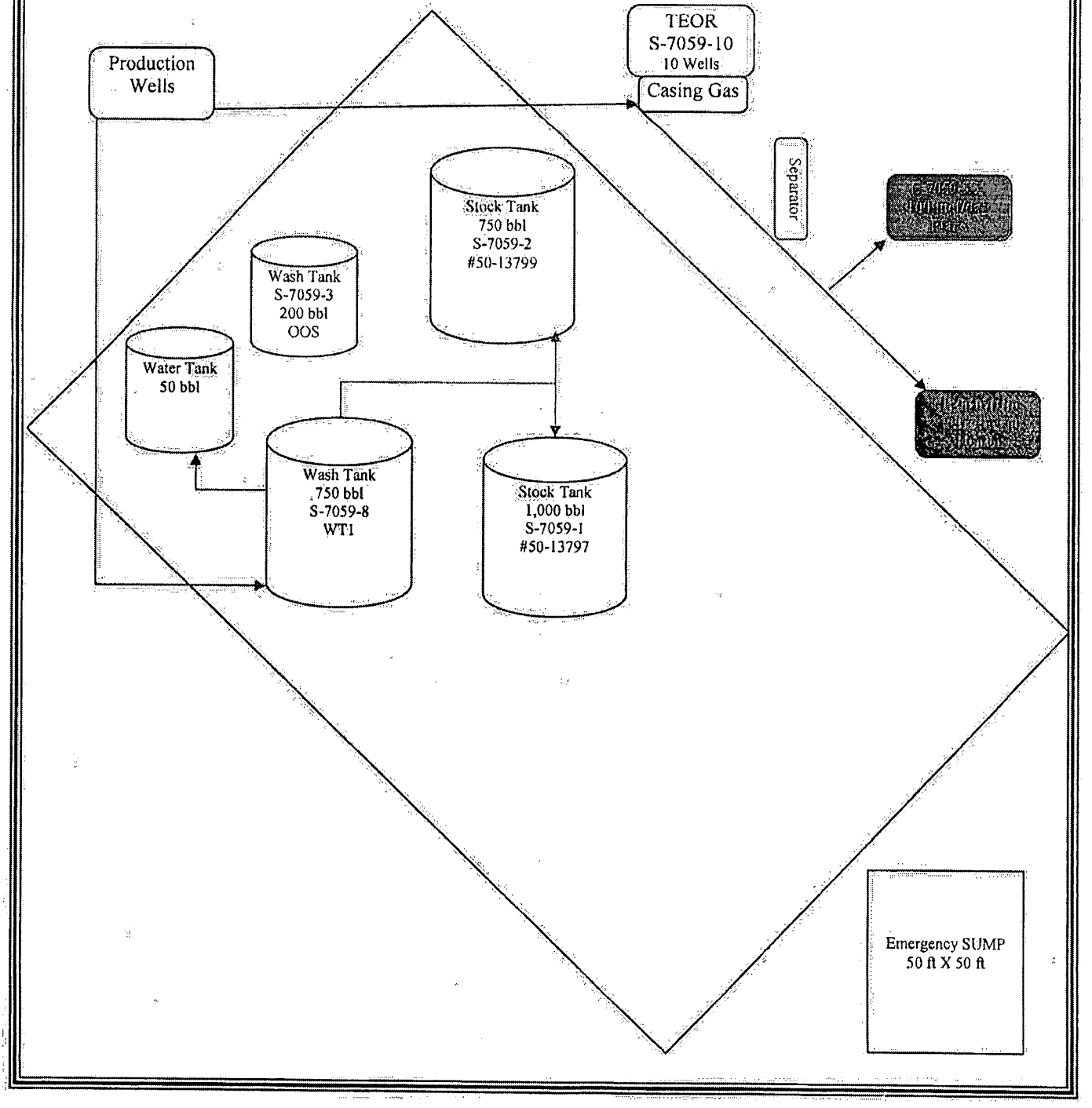
	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	2482.0	522.0	292.0	13505.0	2300.0
Daily Emis. Limit (lb/Day)	6.8	1.4	0.8	37.0	0.6
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	621.0	131.0	73.0	3376.0	575.0
Q2:	621.0	131.0	73.0	3376.0	575.0
Q3:	621.0	131.0	73.0	3376.0	575.0
Q4:	621.0	131.0	73.0	3376.0	575.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

APPENDIX B
Process Flow Diagram

Midway-Sunset Investors, LLC.

BUSINESS NAME: **Jamison Trust Lease S-7059**
SCALE: NONE

Facility Diagram



APPENDIX C
PTOs S-7059-6-0 and '10-0

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-7059-6-0 **EXPIRATION DATE:** 10/31/2014

SECTION: 02 **TOWNSHIP:** 11N **RANGE:** 24W

EQUIPMENT DESCRIPTION:
1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]
3. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623]
4. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623]
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623]
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623]
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623]
8. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]
9. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623]
10. To maintain status as small producer permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting or marketing of refined petroleum products. [District Rules 3020 and 4623]
11. Formerly S-1549-34.
12. Formerly S-1987-27-0.
13. Formerly S-2406-9-0.

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-7059-10-0 **EXPIRATION DATE:** 10/31/2014

SECTION: 2 **TOWNSHIP:** 11N **RANGE:** 24W

EQUIPMENT DESCRIPTION:
TEOR OPERATION WITH UP TO 10 STEAM ENHANCED PRODUCTION WELLS WITH CASING GAS COLLECTION SYSTEM, 75 BBL PHASE SEPARATOR AND 1.2 MMBTU PERMIT EXEMPT PETROTHERM HEATER

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No more than 10 steam-enhanced oil recovery wells shall be operated at all locations authorized by this permit. [District Rule 2201]
3. Total VOC emissions shall be reduced by at least 99% by vapor control system. [District Rule 4401]
4. Permittee shall determine VOC and sulfur content of TEOR gas upon startup and annually thereafter. Gas analysis shall be performed using ASTM D-3588. [District Rule 2201]
5. Vapors from steam enhanced wells and phase separator shall be incinerated in permit exempt 1.2 MMBtu Petrotherm heater. [District Rule 2201]
6. Fugitive VOC emissions from the TEOR operation shall not exceed 0.41 lb/day. [District Rule 2201]
7. Permittee shall inspect all components service quarterly for leaks with a portable hydrocarbon detection instrument to ensure compliance with the provisions of this permit. [District Rule 2201 and 4401]
8. Permittee shall implement an I&M program consistent with the requirements of Rule 4401. [District Rule 4401]
9. Permittee shall maintain records of the date and well identification where steam injection or well stimulation occurs, current list of all thermally enhanced production wells associated with this operation, leak inspection results, and accurate fugitive component counts of components in gas service and resulting emissions calculated using the emission factors in the CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999). [District Rules 2201 and 4401]
10. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401]
11. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401]
12. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4401 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Section 4.0 of Rule 4401. [District Rule 4401]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

13. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10)The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401]
14. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401]
15. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4401]

APPENDIX D
S-7059-6-1 PE2 Calculations

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-7059-6
facility tank I.D.	McFarland Stock
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.5
liquid bulk storage temperature, Tb (°F)	100
is this a constant-level tank? (yes, no)	no
will flashing losses occur in this tank (only if first-line tank)? (yes, no)	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	21.2
capacity of tank (bbl)	1,000
conical or dome roof? (c, d)	c
shell height of tank (feet)	16
average liquid height (feet)	10
are the roof and shell the same color? (yes,no)	yes
For roof color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	4
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	3
-----This row only used if shell is different color from roof-----	1

1006.7432

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		200
maximum annual fluid throughput (bbl)		73,000
-----This row only used if flashing losses occur in this tank------		200
-----This row only used if flashing losses occur in this tank------		73,000
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, Tax (°F)		77.65
daily minimum ambient temperature, Tan (°F)		53.15
daily total solar insulation factor, I (Btu/ft^2-day)		1648.9
atmospheric pressure, Pa (psia)		14.47
(psia)	99.0	0.9259
(psia)	88.2	0.6853
water vapor pressure at average liquid surface temperature (11a), Pva (psia)	93.6	0.7903
roof outage, Hro (feet)		0.2208
vapor space volume, Vv (cubic feet)		2195.89
paint factor, alpha		0.68
vapor density, Wv (lb/cubic foot)		0.0084
daily vapor temperature range, delta Tv (degrees Rankine)		49.04
vapor space expansion factor, Ke		0.1032

Results	lb/year	lb/day
Standing Storage Loss	696	1.91
Working Loss	3,650	10.00
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	**4,346**	**11.9**

Summary Table	
Permit Number	**S-7059-6**
Facility Tank I.D.	**McFarland Stock**
Tank capacity (bbl)	**1,000**
Tank diameter (ft)	**21.2**
Tank shell height (ft)	**16**
Conical or Dome Roof	**Conical**
Maximum Daily Fluid Throughput (bbl/day)	**200**
Maximum Annual Fluid Throughput (bbl/year)	**73,000**
Maximum Daily Oil Throughput (bbl/day)	**200**
Maximum Annual Oil Throughput (bbl/year)	**---**
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	**11.9**
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	**4,346**

APPENDIX E
PAE and BAE Data

BAE and PAE

Tank Input Data	
permit number (S-xxxx-xx-xx)	S-7059-6
facility tank I.D.	McFarland Stock
nearest city (1: Bakersfield, 2: Fresno, 3: Stockton)	1
tank ROC vapor pressure (psia)	0.1
liquid bulk storage temperature, Tb (°F)	100
is this a constant-level tank? (yes, no)	no
will flashing losses occur in this tank (only if first-line tank)? (yes, no)	no
breather vent pressure setting range (psi)	0.06
diameter of tank (feet)	21.2
capacity of tank (bbl)	1,000
conical or dome roof? (c, d)	c
shell height of tank (feet)	16
average liquid height (feet)	10
are the roof and shell the same color? (yes,no)	yes
For roof: color (1:Spec Al, 2:Diff Al, 3:Light, 4:Med, 5:Red, 6:White)	4
condition (1: Good, 2: Poor)	1
-----This row only used if shell is different color from roof-----	3
-----This row only used if shell is different color from roof-----	1

1006.7432

Liquid Input Data	A	B
maximum daily fluid throughput (bbl)		15
maximum annual fluid throughput (bbl)		5,475
-----This row only used if flashing losses occur in this tank-----		15
-----This row only used if flashing losses occur in this tank-----		5,475
molecular weight, Mw (lb/lb-mol)		100

Calculated Values	A	B
daily maximum ambient temperature, Tax (°F)		77.65
daily minimum ambient temperature, Tan (°F)		53.15
daily total solar insulation factor, I (Btu/ft^2-day)		1648.9
atmospheric pressure, Pa (psia)		14.47
(psia)	99.0	0.9259
(psia)	88.2	0.6653
water vapor pressure at average liquid surface temperature (Tla), Pva (psia)	93.6	0.7903
roof outage, Hro (feet)		0.2208
vapor space volume, Vv (cubic feet)		2195.89
paint factor, alpha		0.68
vapor density, Wv (lb/cubic foot)		0.0017
daily vapor temperature range, delta Tv (degrees Rankine)		49.04
vapor space expansion factor, Ke		0.1032

Results	lb/year	lb/day
Standing Storage Loss	139	0.38
Working Loss	55	0.15
Flashing Loss	N/A	N/A
Total Uncontrolled Tank VOC Emissions	194	0.5

Summary Table	
Permit Number	**S-7059-6**
Facility Tank I.D.	**McFarland Stock**
Tank capacity (bbl)	**1,000**
Tank diameter (ft)	**21.2**
Tank shell height (ft)	**16**
Conical or Dome Roof	**Conical**
Maximum Daily Fluid Throughput (bbl/day)	**15**
Maximum Annual Fluid Throughput (bbl/year)	**5,475**
Maximum Daily Oil Throughput (bbl/day)	**15**
Maximum Annual Oil Throughput (bbl/year)	**---**
Total Uncontrolled Daily Tank VOC Emissions (lb/day)	**0.5**
Total Uncontrolled Annual Tank VOC Emissions (lb/year)	**194**

APPENDIX F
BACT Analysis

Best Available Control Technology (BACT) Guideline 1.4.2
Last Update: 12/31/1998

Waste Gas Flare - Incinerating Produced Gas

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
CO	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable		
NOx	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable		
PM10	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable Pilot Light fired solely on LPG or natural gas.		
SOx	Steam assisted or Air-assisted or Coanda effect burner, when steam unavailable Pilot Light fired solely on LPG or natural gas.	Precombustion SOx scrubbing system (non-emergency flares only.)	
VOC	Steam assisted or Air-assisted or Coanda effect bumer, when steam unavailable		

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is requried for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

This is a Summary Page for this Class of Source. For background Information, see Permit Specific BACT Determinations on Details Page.

Top Down BACT Analysis for NOx and VOC emissions:

Step 1 - Identify All Control Technologies

Steam assisted or air-assisted or Coanda effect burner, when steam unavailable (Achieved in Practice)

Step 2 - Eliminate Technologically Infeasible Options

None eliminated.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Steam assisted or air-assisted or Coanda effect burner, when steam unavailable (Achieved in Practice)

Step 4 - Cost Effectiveness Analysis

Applicant has proposed the one remaining option from Step 1, Coanda effect burner. Therefore, a cost analysis is not required.

Step 5 - Select BACT

MSI is proposing a Coanda effect burner, therefore, BACT is satisfied.

APPENDIX G
Compliance Certification

Midway Sunset Investors, LLC.

February 20, 2014

Dave Tori

Mr. Leonard Scandura
Manager of Permit Services
San Joaquin Valley Unified APCD
34946 Flyover Court
Bakersfield, CA 93308

Subject: Compliance Certification – Jamison Trust Flare (S-7059)

Dear Mr. Scandura:

I hereby certify that all major Stationary Sources owned or operated by such person (or by any entity controlling, controlled by, or under common control with such person) in California, which are subject to emission limitations, are in compliance or on a schedule for compliance with all applicable emission limitations and standards.

Alternative siting analysis is required for any project, which constitutes a New Major Source or a Federal Major Modification.

The current project occurs at existing facilities. The applicant proposes to add a 100 mcf/day flare as a control device to reduce VOC emissions from the process.

Since the project will utilize existing equipment at the same location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Signature

Partner
Title

602 H Street, Suite 150 • Bakersfield, CA 93304 • (661) 323-6546 • (661) 323-0540 Fax

APPENDIX H
HRA

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	David Torii – Permit Services
From:	Kyle Melching – Technical Services
Date:	February 26, 2014
Facility Name:	Midway Sunset Investors, LLC
Location:	Section 2/T11N/R24W
Application #(s):	S-7059-6-1, 10-1, & 11-0
Project #:	S-1134490

A. RMR SUMMARY

RMR Summary			
Categories	**Waste Gas Flare (Unit 11-0)**	**Project Totals**	**Facility Totals**
Prioritization Score	**0.28**	0.28	<1.0
Acute Hazard Index	0.01	0.01	0.01
Chronic Hazard Index	0.00	0.00	0.00
Maximum Individual Cancer Risk	4.15E-07	4.15E-07	**4.15E-07**
T-BACT Required?	No		
Special Permit Conditions?	Yes		

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Unit # 11-0

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

B. RMR REPORT

I. Project Description

Technical Services received a request on February 20, 2014, to perform an Ambient Air Quality Analysis and a Risk Management Review for the installation of a flare which will incinerate casing gas from a TEOR operation (Unit -10). To mitigate the flare's VOC emission increase, tank S-7059-5's throughput limit will be lowered.

II. Analysis

Toxic emissions for this proposed unit were calculated using 2001 Ventura County's Air Pollution Control District's emission factors for Natural Gas Fired external combustion and on a refinery gas composition analysis from the 2005 report *FINAL REPORT Test of TDA's Direct Oxidation Process for Sulfur Recovery.* In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905-1, March 2, 2001), risks from the project were prioritized using the procedures in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEART's database. The prioritization score for the project was less than 1.0 (see RMR Summary Table); however, since the project required an AAQA, a Health Risk Assessment was performed for the project. AERMOD was used with point source parameters outlined below and concatenated 5-year meteorological data from Fellows to determine maximum dispersion factors at the nearest residential and business receptors. The dispersion factors were input into the HARP model to calculate the Chronic and Acute Hazard Indices and the Carcinogenic Risk.

The following parameters were used for the review:

Analysis Parameters Unit 11-0			
Source Type	Point*	**Location Type**	Rural
Stack Height (m)	5.33	**Closest Receptor (m)**	305
Stack Diameter. (m)	0.37	**Type of Receptor**	Residential/ Business
Stack Exit Velocity (m/s)	15.76	**Waste Gas Fuel Usage (mmscf/hr)**	0.0042
Stack Exit Temp. (°K)	1273	**Waste Gas Fuel Usage (mmscf/hr)**	36.79

*Stack parameters were derived using the Districts Open Flare Modeling Parameter Estimator

Technical Services performed modeling for criteria pollutants CO, NOx, SOx and PM_{10}; as well as a RMR. The emission rates used for criteria pollutant modeling were 1.54 lb/hr and 13,505 lb/yr CO, 0.28 lb/hr and 2,482 lb/yr NOx, 0.06 lb/hr and 522 lb/yr SOx, and 0.03 lb/hr and 292 lb/yr PM_{10}.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Unit 11-0	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO_x	Pass[1]	X	X	X	Pass
SO_x	Pass	Pass	X	Pass	Pass
PM_{10}	X	X	X	Pass[2]	Pass[2]
$PM_{2.5}$	X	X	X	Pass[2]	Pass[2]

*Results were taken from the attached PSD spreadsheet.
[1]The project was compared to the 1-hour NO2 National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.
[2]The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. *Conclusion*

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

The acute and chronic indices are below 1.0; and the maximum individual cancer risk associated with the project is **4.15E-07**; which is less than the 1 in a million threshold. In accordance with the District's Risk Management Policy, the project is approved **without** Toxic Best Available Control Technology (T-BACT).

To ensure that human health risks will not exceed District allowable levels; the permit conditions listed on Page 1 of this report must be included for this permit unit.

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

IV. *Attachments*

A. RMR request from the project engineer
B. Additional information from the applicant/project engineer
C. Flare Modeling Parameter Estimator
D. Prioritization score w/ toxic emissions summary
E. HARP Risk Report
F. Facility Summary
G. AAQA Summary
H. AERMOD Non-Regulatory Option Checklist

APPENDIX I
CEQA/BPS

BPS Analysis

Flare S-7059-11-0

The CEQA GHG significance threshold of 230 metric tonnesCO2e/year is exceeded for the flare; therefore, a top-down BPS analysis is required.

Step 1 - Identify BPS for Flare

1) -Incineration in existing engine, boiler, etc that creates useful work – provided that equipment is available and practically capable of incinerating vapors (see equipment specific BPS for standards and requirements for new fired equipment) and currently burning fossil fuel; or,

-Transfer to Sales Gas Line – provided that access to sales gas line infrastructure is available; or,
-Reinjection to Formation – provided that access to a disposal well is available.

The following options supersede the BPS requirements above if: a) equipment listed above is not available; or, b) gas cannot safely be transferred to equipment listed above; or, c) used to control emergency gas releases.

2) -Incineration in new Thermal Oxidizer – see equipment specific Thermal Oxidizer BPS for standards and requirements for new equipment; or,

-Incineration in New Flare with >98% TOC destruction efficiency, steam assist, air assist when steam is not available, or Coanda effect and equipped with non-continuous automatic electronic or ballistic ignition; or,

-Incineration in Existing Thermal Oxidizer or Flare

Step 2 – Eliminate Infeasible Options

The options listed above in option 1 are not available

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

2) -Incineration in new Thermal Oxidizer – see equipment specific Thermal Oxidizer BPS for standards and requirements for new equipment; or,

-Incineration in New Flare with >98% TOC destruction efficiency, steam assist, air assist when steam is not available, or Coanda effect and equipped with non-continuous automatic electronic or ballistic ignition; or,

-Incineration in Existing Thermal Oxidizer or Flare

Step 4 - Select BPS

Incineration in a Flare

APPENDIX J
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-7059-6-1 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: MIDWAY-SUNSET INVESTORS LLC
MAILING ADDRESS: 602 H ST, SUITE 150
BAKERSFIELD, CA 93304

LOCATION: HEAVY OIL WESTERN, CA
BAKERSFIELD, CA

SECTION: 02 **TOWNSHIP:** 11N **RANGE:** 24W

EQUIPMENT DESCRIPTION:
MODIFICATION OF 1,000 BBL. FIXED ROOF CRUDE OIL STORAGE TANK: LOWER ANNUAL THROUGHPUT

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rules 2201 and4623]
3. Crude oil throughput shall not exceed 200 barrels per day based on a monthly average. [District Rule 2201]
4. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rules 2201 and 4623]
5. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rules 2201 and 4623]
6. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rules 2201 and 4623]
7. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DRAFT

DAVID WARNER, Director of Permit Services

S-7059-6-1 : Mar 14 2014 11:53AM -- TORID : Joint Inspection NOT Required

8. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rules 2201 and 4623]
9. Permittee shall maintain monthly records of average daily crude oil throughput and shall submit such information to the APCO 30 days prior to the expiration date indicated in the Permit to Operate. [District Rules 2201 and 4623]
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623]
11. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623]
12. To maintain status as small producer permittee's crude oil production shall average less than 6,000 bbl/day from all operations within Kern County and permittee shall not engage in refining, transporting or marketing of refined petroleum products. [District Rules 3020 and 4623]
13. Formerly S-1549-34.
14. Formerly S-1987-27-0.
15. Formerly S-2406-9-0.

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-7059-10-1

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: MIDWAY-SUNSET INVESTORS LLC
MAILING ADDRESS: 602 H ST, SUITE 150
BAKERSFIELD, CA 93304

LOCATION: HEAVY OIL WESTERN, CA
BAKERSFIELD, CA

SECTION: 2 **TOWNSHIP:** 11N **RANGE:** 24W

EQUIPMENT DESCRIPTION:
MODIFICATION OF TEOR OPERATION WITH UP TO 10 STEAM ENHANCED PRODUCTION WELLS WITH CASING GAS COLLECTION SYSTEM, 75 BBL PHASE SEPARATOR AND 1.2 MMBTU PERMIT EXEMPT PETROTHERM HEATER: CONNECT TO FLARE S-7059-11

CONDITIONS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. No more than 10 steam-enhanced oil recovery wells shall be operated at all locations authorized by this permit. [District Rule 2201]
3. Total VOC emissions shall be reduced by at least 99% by vapor control system. [District Rule 4401]
4. Permittee shall determine VOC and sulfur content of TEOR gas upon startup and annually thereafter. Gas analysis shall be performed using ASTM D-3588. [District Rule 2201]
5. Vapors from steam enhanced wells and phase separator shall be incinerated in permit exempt 1.2 MMBtu Petrotherm heater or flare S-7059-11. [District Rule 2201]
6. Fugitive VOC emissions from the TEOR operation shall not exceed 0.41 lb/day. [District Rule 2201]
7. Permittee shall inspect all components service quarterly for leaks with a portable hydrocarbon detection instrument to ensure compliance with the provisions of this permit. [District Rule 2201 and 4401]
8. Permittee shall implement an I&M program consistent with the requirements of Rule 4401. [District Rule 4401]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director/APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-7059-10-1 : Mar 14 2014 11:53AM -- TORID : Joint Inspection NOT Required

9. Permittee shall maintain records of the date and well identification where steam injection or well stimulation occurs, current list of all thermally enhanced production wells associated with this operation, leak inspection results, and accurate fugitive component counts of components in gas service and resulting emissions calculated using the emission factors in the CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999). [District Rules 2201 and 4401]

10. {4266} The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401]

11. {4267} By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401]

12. {4268} In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, maintenance, process pressure relief device (PRD), component identification, record keeping, and notification requirements of Rule 4401 for all components containing or contacting VOC's at this facility except for those components specifically exempted in Section 4.0 of Rule 4401. [District Rule 4401]

13. {4269} The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10)The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401]

14. {4270} Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401]

15. {4271} All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4401]

16. ATC S-7059-11-0 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-7059-11-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: MIDWAY-SUNSET INVESTORS LLC
MAILING ADDRESS: 602 H ST, SUITE 150
BAKERSFIELD, CA 93304

LOCATION: HEAVY OIL WESTERN, CA
BAKERSFIELD, CA

SECTION: 2 **TOWNSHIP:** 11N **RANGE:** 24W

EQUIPMENT DESCRIPTION:
100 MSCF/DAY COANDA EFFECT FLARE

CONDITIONS

1. The flare flame shall be present at all times when combustible gases are vented through the flare. [District Rules 2201 and 4311]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of non-pilot gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201 and 4311]
4. Gas flow rate to flare, excluding pilot fuel, shall not exceed 100 Mscf per day. [District Rule 2201]
5. The following emissions factors shall be used to calculate flare emissions (based on total gas combusted): NOx (as NO2): 0.068 lb/MMBtu; PM10: 0.008 lb/MMBtu; CO: 0.37 lb/MMBtu; or VOC: 0.063 lb/MMBtu. [District Rule 2201]
6. Sulfur content of flared gas shall not exceed 5.0 gr S/100 scf. [District Rule 2201]
7. Flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services

S-7059-11-0 : Mar 24 2014 7:39AM -- TORID : Joint Inspection NOT Required

8. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting the presence of at least one pilot flame or the flare flame, shall be installed and operated. [District Rule 4311]
9. If the flare uses a flow-sensing automatic ignition system and does not use a continuous flame pilot, the flare shall use purge gas for purging. [District Rule 4311]
10. Permittee shall keep accurate daily records of flare gas volumes and sulfur content of flared gas and such records shall be retained for a period of 5 years and be made readily available for District inspection upon request. [District Rule 2201]
11. The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 4311]
12. Records shall be kept of sulfur content of the flared gas as determined once every 24 months using ASTM D3246 Test Method or other approved method(s). [District Rule 2201]
13. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District inspection upon request. [District Rules 1070, 4311, and 4401]
14. ATC S-7059-6-1 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]