San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

January 30, 2023

Mr. Glen Mears
Plains Marketing LP
3600 Bowman Ct
Bakersfield, CA 93308

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
Facility Number: S-1199
Project Number: S-1221478

Dear Mr. Mears:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The facility has proposed to modify an existing 19.95 MMBtu/hr natural gas-fired pipeline heater (permit unit S-1199-6) to replace the burner nozzles and modify the control instruments/PLS programming in order to comply with the 9 ppmv @ 3% O_2 NOx emission limit of District Rule 4306.

The notice of preliminary decision for this project has been posted on the District's website (www.valleyair.org). After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authority to Construct with a Certificate of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Nick Peirce, Permit Services Manager, at (209) 557-6400.

Sincerely,

Brian Clements
Director of Permit Services

Enclosures

cc: Courtney Graham, CARB (w/enclosure) via email
cc: Gerardo Rios, EPA (w/enclosure) via EPS

Samir Sheikh
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: (661) 392-5500 FAX: (661) 392-5585

www.valleyair.org www.healthyairliving.com

San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Modification of Natural Gas-Fired Pipeline Heater for Rule 4306 Compliance

Facility Name:	Plains Marketing LP	Date:	January 25, 2023
Mailing Address:	3600 Bowman Ct Bakersfield, CA 93308	Engineer:	Zeferino Aleman
		Lead Engineer:	Dustin Brown
Contact Person:	Glen Mears		
Telephone:	(661) 345-8166		
E-Mail:	GAMears@paalp.com		
Application #:	S-1199-6-12		
Project #:	S-1221478		
Deemed Complete:	August 25, 2022		

I. Proposal

Plains Marketing LP has submitted an Authority to Construct (ATC) application to modify an existing 19.95 MMBtu/hr natural gas-fired pipeline heater with a Pro-Fire model NTD21ONGX-15S-6P ultra low-NOx burner and manual flue gas recirculation (FGR) system operating under current PTO S-1199-6-11. The facility is proposing to replace the burner nozzles and modify the control instruments/PLS programming to lower the NOx emissions from 15 ppmv @ 3% O_2 (equivalent to 0.018 lb/MMBtu) to 9 ppmv @ 3% O_2 (equivalent to 0.011 lb/MMBtu). The proposed change is being requested such that this unit complies with the latest requirements of District Rule 4306 *Boilers, Steam Generators, and Process Heater – Phase 3.* The unit is currently in compliance with District Rule 4320 *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr* and will remain in compliance by continuing to pay an annual emissions fee. The project will not result in any increase in emissions.

Plains Marketing LP received their Title V Permit on December 31, 2004. This modification can be classified as a Title V significant modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Plains Marketing LP must apply to administratively amend their Title V permit.

The current PTO and draft ATC are included in Appendix A and B, respectively.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (8/15/19)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (8/15/19)

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 4305	Boilers, Steam Generators, and Process Heaters – Phase 2 (8/21/03)
Rule 4306	Boilers, Steam Generators, and Process Heaters – Phase 3 (12/17/20)
Rule 4320	Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (12/17/20)
Rule 4351	Boilers, Steam Generators and Process Heaters – Phase 1 (8/21/03)
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 facility is located at 2311 Basic School Rd (Pentland Pump Station) in Maricopa, CA. 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

Plains Marketing LP operates a natural gas-fired pipeline heater used to heat crude oil transferred through the pipeline. The heater is used to provide heat to keep the viscosity of the oil at an acceptable level. The heater combusts gas to directly heat up crude oil stored in the tanks.

Within this project, the facility has proposed to replace the burner nozzles and modify the control instruments/PLS programming to achieve NOx emissions of less than 9 ppmvd @ 3% O_2. There will be no other changes to their facility or method of operation as a result of this project.

V. Equipment Listing

Pre-Project Equipment Description:

S-1199-6-11: 19.95 MMBTU/HR BROACH FORCED DRAFT NATURAL GAS-FIRED PIPELINE HEATER WITH A PRO-FIRE MODEL NTD210NGX-15S-6P ULTRA LOW NOX BURNER AND MANUAL FLUE GAS RECIRCULATION (FGR)

Proposed Modification:

Replace the burner nozzles and modify the control instruments/PLS programming in order to achieve NOx emissions of less than 9 ppmvd @ 3% O_2.

S-1199-6-12: MODIFICATION OF 19.95 MMBTU/HR BROACH FORCED DRAFT NATURAL GAS-FIRED PIPELINE HEATER WITH A PRO-FIRE MODEL NTD210NGX-15S-6P ULTRA LOW NOX BURNER AND MANUAL FLUE GAS RECIRCULATION (FGR): REPLACE BURNER NOZZLES AND MODIFY THE CONTROL INSTRUMENTS/PLS PROGRAMMING TO ACHIEVE NOX EMISSIONS OF 9 PPMV @ 3% O2 FOR RULE 4306 COMPLIANCE

Post-Project Equipment Description:

S-1199-6-12: 19.95 MMBTU/HR BROACH FORCED DRAFT NATURAL GAS-FIRED PIPELINE HEATER WITH A PRO-FIRE MODEL NTD210NGX-15S-6P ULTRA LOW NOX BURNER AND MANUAL FLUE GAS RECIRCULATION (FGR)

VI. Emission Control Technology Evaluation

Emissions from natural gas-fired units include NO_X, CO, VOC, PM_{10}, and SO_X.

NO_X is the major pollutant of concern when burning natural gas. NO_X formation is either due to thermal fixation of atmospheric nitrogen in the combustion air (thermal NO_X) or due to conversion of chemically bound nitrogen in the fuel (fuel NO_X). Due to the low fuel nitrogen content of natural gas, nearly all NO_X emissions are thermal NO_X. Formation of thermal NO_X is affected by four furnace zone factors: (1) nitrogen concentration, (2) oxygen concentration, (3) peak temperature, and (4) time of exposure at peak temperature.

Low-NO_X burners reduce NO_X formation by producing lower flame temperatures (and longer flames) than conventional burners. Conventional burners thoroughly mix all the fuel and air in a single stage just prior to combustion, whereas low-NO_X burners delay the mixing of fuel and air by introducing the fuel (or sometimes the air) in multiple stages. Generally, in the first combustion stage, the air-fuel mixture is fuel rich. In a fuel rich environment, all the oxygen will be consumed in reactions with the fuel, leaving no excess oxygen available to react with nitrogen to produce thermal NO_X. In the secondary and tertiary stages, the combustion zone is maintained in a fuel-lean environment. The excess air in these stages helps to reduce the flame temperature so that the reaction between the excess oxygen with nitrogen is minimized.

Flue gas recirculation (FGR) reduces NO_X emissions by recirculating a percentage of the exhaust gas back into the wind box. This reduces the oxygen concentration in the air-fuel mixture and regulates the combustion process, lowering the combustion temperature. The lowered availability of oxygen in conjunction with lowered combustion temperature reduces the formation of NO_X.

VII. General Calculations

A. Assumptions

- To streamline emission calculations, $PM_{2.5}$ emissions are assumed to be equal to PM_{10} emissions
- Prior to and after this modification, this unit will only be fired on PUC-regulated natural gas (current permit limit and proposed by the applicant)

- Maximum operating schedule for this unit will be 24 hours/day and 8,760 hours/year (current permit limit and proposed by the applicant)
- Natural gas heating value: 1,000 Btu/scf (District Practice)
- F-Factor for natural gas: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B)

B. Emission Factors

Pre-Project Emission Factors:

The current permit for this unit contains emission factors for all pollutants. The pre-project emissions factors are summarized in the table below:

Pre-Project Natural Gas Combustion Emission Factors			
Pollutant	lb/MMBtu	ppmv (@ 3% O_2)	Source
NO_X	0.018	15	Current Permit
SO_X	0.00285	--	District Policy APR-1720 (12/20/01) and Current Permit
PM_{10}	0.003	--	District Practice[1]
CO	0.059	80	Current Permit
VOC	0.0055	--	Current Permit

Startup/Shutdown (each limited to 2 hours per occurrence and 8 hours/day)

Pre-Project Natural Gas Combustion Emission Factors			
Pollutant	lb/MMBtu	ppmv (@ 3% O_2)	Source
NO_X	0.10	83	Current Permit
CO	0.084[2]	115	Current Permit

Post-Project Emission Factors:

For the unit, after replacing the burner nozzles and modifying the control instruments/PLS programming, the emission factors for NO_X were proposed by the applicant. For the VOC and CO emission factors, the applicant has proposed to utilize the same emission factors that is on the current permit. The PM_{10} emission factor is taken from current District practice

[1] The current permit limits the PM10 emissions from the existing unit to 0.0076 lb/MMBtu. Based on information in the facility files, a source for the existing PM10 emission limit could not be found and it has been included on the permit for this unit since 2010. District policy APR 1110, Use of Revised Generally Accepted Emission Factors, states that existing emission factors should be revised at the time of permit modification if better emission data has become available since the time of the previous permitting action. Based on numerous source test results and current District practice, the PM10 emissions from units fired on PUC-quality natural gas are not expected to exceed 0.003 lb/MMBtu. Based on this current District practice, the revised emission factor of 0.003 lb/MMBtu more appropriately represents the current PM10 emissions from natural gas-fired units. Therefore, in accordance with District Policy APR 1110, the pre-project emission factor will be revised and re-established using the updated PM10 emission factor.

[2] The current permit incorrectly listed the CO emission limit as 0.84 lb/MMBtu; therefore, the CO emission limit has been corrected to reflect 115 ppmv @ 3% O_2 (equivalent to 0.084 lb/MMBtu).

for natural gas fuel combustion in pipeline heaters. The SO_X emission factor is based on District Policy APR-1720. The emission factors are summarized in the following table:

Post-Project Natural Gas Combustion Emission Factors			
Pollutant	lb/MMBtu	ppmv (@ 3% O_2)	Source
NO_X	0.011	9	Manufacturer
SO_X	0.00285		District Policy APR-1720 (12/20/01) and Current Permit
PM_{10}	0.003	--	District Practice
CO	0.059	80	Current Permit/Proposed by Applicant
VOC	0.0055	--	Current Permit/Proposed by Applicant

Startup/Shutdown (each limited to 2 hours per day)

Post-Project Natural Gas Combustion Emission Factors			
Pollutant	lb/MMBtu	ppmv (@ 3% O_2)	Source
NO_X	0.1	83	Current Permit
CO	0.084	115	Current Permit

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Daily PE1:

The current permit for this unit limits total duration of startup and shutdown time to 8 hr/day. Therefore, the NO_X, CO, VOC, PM_{10} and SO_X daily PE values will be calculated using the pre-project emission factors listed above, the maximum heat input rating of the burner, and the maximum hours of operation during any given day.

For NO_X and CO, the unit is expected to operate 16 hrs/day at steady state conditions and 8 hrs/day in startup/shutdown mode. Therefore:

PE (lb/day) = [$EF_{@Steady\ State}$ (lb/MMBtu) x Burner Rating (MMBtu/hr) x 16 (hr/day)] + [$EF_{SU/SD}$ (lb/MMBtu) x Burner Rating (MMBtu/hr) x 8 (hr/day)]

For SO_X, PM_{10}, and VOC, the unit is expected to operate at the steady state emission limits at all times, including during startup/shutdown. Therefore:

PE (lb/day) = EF (lb/MMBtu) x Burner Rating (MMBtu/hr) x 24 (hr/day)

Pollutant	Emission Factor (lb/MMBtu)	Burner Rating (MMBtu/hr)	Operating Hours (hr/day)	Daily PE1 (lb/day)
NO_X (steady state)	0.018	19.95	16	5.7
NO_X (startup/shutdown)	0.10	19.95	8	16.0
SO_X	0.00285	19.95	24	1.4
PM_{10}	0.003	19.95	24	1.4
CO (steady state)	0.059	19.95	16	18.8
CO (startup/shutdown)	0.084	19.95	8	13.4
VOC	0.0055	19.95	24	2.6

Annual PE1:

The current permit for this unit limits total duration of startup and shutdown time to 2,920 hr/year. Therefore, the NO_X, CO, VOC, PM_{10} and SO_X annual PE values will be calculated using the pre-project emission factors listed above, the maximum heat input rating of the burner, and the maximum hours of operation during any given year.

For NO_X and CO, the unit is expected to operate 5,840 hrs/year at steady state conditions and 2,920 hrs/year in startup/shutdown mode. Therefore:

PE (lb/year) = [$EF_{@Steady\ State}$ (lb/MMBtu) x Burner Rating (MMBtu/hr) x 5,840 (hr/year)] + [$EF_{SU/SD}$ (lb/MMBtu) x Burner Rating (MMBtu/hr) x 2,920 (hr/year)]

For SO_X, PM_{10}, and VOC, the unit is expected to operate at the steady state emission limits at all times, including during startup/shutdown. Therefore:

PE (lb/year) = EF (lb/MMBtu) x Burner Rating (MMBtu/hr) x 8,760 (hr/year)

Pollutant	Emission Factor (lb/MMBtu)	Burner Rating (MMBtu/hr)	Operating Hours (hr/year)	Annual PE1 (lb/year)
NO_X (steady state)	0.018	19.95	5,840	2,097
NO_X (startup/shutdown)	0.10	19.95	2,920	5,825
SO_X	0.00285	19.95	8,760	498
PM_{10}	0.003	19.95	8,760	524
CO (steady state)	0.059	19.95	5,840	6,874
CO (startup/shutdown)	0.084	19.95	2,920	4,893
VOC	0.0055	19.95	8,760	961

The total PE1 from this unit is summarized below:

Pollutant	Daily PE1 (lb/day)	Annual PE1 (lb/year)
NO_X	21.7	7,922
SO_X	1.4	498
PM_{10}	1.4	524
CO	32.2	11,767
VOC	2.6	961

2. Post-Project Potential to Emit (PE2)

Daily PE2:

The NO_X, CO, VOC, PM_{10} and SO_X daily PE values will be calculated using the post-project emission factors listed above, the maximum heat input rating of the burner, and the maximum hours of operation during any given day.

For NO_X and CO, the unit is expected to operate 16 hrs/day at steady state conditions and 8 hrs/day in startup/shutdown mode. Therefore:

PE (lb/day) = [$EF_{@Steady\ State}$ (lb/MMBtu) x Burner Rating (MMBtu/hr) x 16 (hr/day)] + [$EF_{SU/SD}$ (lb/MMBtu) x Burner Rating (MMBtu/hr) x 8 (hr/day)]

For SO_X, PM_{10}, and VOC, the unit is expected to operate at the steady state emission limits at all times, including during startup/shutdown. Therefore:

PE (lb/day) = EF (lb/MMBtu) x Burner Rating (MMBtu/hr) x 24 (hr/day)

Pollutant	Emission Factor (lb/MMBtu)	Burner Rating (MMBtu/hr)	Operating Hours (hr/day)	Daily PE2 (lb/day)
NO_X (steady state)	0.011	19.95	16	3.5
NO_X (startup/shutdown)	0.1	19.95	8	16.0
SO_X	0.00285	19.95	24	1.4
PM_{10}	0.003	19.95	24	1.4
CO (steady state)	0.059	19.95	16	18.8
CO (startup/shutdown)	0.084	19.95	8	13.4
VOC	0.0055	19.95	24	2.6

Annual PE2:

The NO_X, CO, VOC, PM_{10} and SO_X annual PE values will be calculated using the post-project emission factors listed above, the maximum heat input rating of the burner, and the maximum hours of operation during any given year.

For NO_X and CO, the unit is expected to operate 5,840 hrs/year at steady state conditions and 2,920 hrs/year in startup/shutdown mode. Therefore:

PE (lb/year) = [$EF_{@Steady\ State}$ (lb/MMBtu) x Burner Rating (MMBtu/hr) x 5,840 (hr/year)] + [$EF_{SU/SD}$ (lb/MMBtu) x Burner Rating (MMBtu/hr) x 2,920 (hr/year)]

For SO_X, PM_{10}, and VOC, the unit is expected to operate at the steady state emission limits at all times, including during startup/shutdown. Therefore:

PE (lb/year) = EF (lb/MMBtu) x Burner Rating (MMBtu/hr) x 8,760 (hr/year)

Pollutant	Emission Factor (lb/MMBtu)	Burner Rating (MMBtu/hr)	Operating Hours (hr/year)	Annual PE2 (lb/year)
NO_X (steady state)	0.011	19.95	5,840	1,282
NO_X (startup/shutdown)	0.1	19.95	2,920	5,825
SO_X	0.00285	19.95	8,760	498
PM_{10}	0.003	19.95	8,760	524
CO (steady state)	0.059	19.95	5,840	6,874
CO (startup/shutdown)	0.084	19.95	2,920	4,893
VOC	0.0055	19.95	8,760	961

The total PE2 from this unit is summarized below:

Pollutant	Daily PE2 (lb/day)	Annual PE2 (lb/year)
NO_X	19.5	7,107
SO_X	1.4	498
PM_{10}	1.4	524
CO	90.5	11,767
VOC	2.6	961

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.

As shown above, the proposed modification does not result in an increase in potential emissions for any criteria pollutant. The SSPE1 values listed in the table below for this facility were taken from engineer evaluation performed for project S-1143805.

SSPE1 (lb/year)					
Permit Unit	**NO_X**	**SO_X**	**PM_{10}**	**CO**	**VOC**
SSPE1	**8,233**	**509**	**1,342**	**12,001**	**>20,000**

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

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

As discussed above, the only expected change in emissions from this facility are from the proposed modifications to the existing unit to lower the NOx emissions to comply with Rule 4306. The SSPE2 is summarized in the table below:

SSPE2 (lb/year)					
Permit Unit	**NO_X**	**SO_X**	**PM_{10}**	**CO**	**VOC**
SSPE1	**8,233**	**509**	**1,342**	**12,001**	**>20,000**
S-1199-6-11 (current PTO)	-7,922	-498	-524	-33,059	-961
S-1199-6-12 (new ATC)	7,107	498	524	33,059	961
SSPE2	**7,418**	**509**	**1,342**	**12,001**	**>20,000**

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), pursuant to the Clean Air Act, Title 3, Section 302, US Codes 7602(j) and (z)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 70.2

For this project, the decrease in emissions for the facility is due to the modification of the existing pipeline heater (permit unit S-1199-6). Thus:

Rule 2201 Major Source Determination (lb/year)						
	NO_X	**SO_X**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**VOC**
SSPE1	8,233	509	1,342	1,342	12,001	>20,000
SSPE2	7,418	509	1,342	1,342	12,001	>20,000
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No	Yes

Note: PM2.5 assumed to be equal to PM10

As shown in the table above, 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 listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). Therefore, the PSD Major Source threshold is 100 tons per year (tpy) for any regulated NSR pollutant.

PSD Major Source Determination (tons/year)						
	NO_2	**VOC**	**SO_2**	**CO**	**PM**	**PM_{10}**
Estimated Facility PE before Project Increase	4.1	<100[3]	0.3	6.0	0.7	0.7
PSD Major Source Thresholds	100	100	100	100	100	100
PSD Major Source?	No	No	No	No	No	No

As shown above, the facility is not an existing PSD major source for any regulated NSR pollutant expected to be emitted at this facility.

[3] Refer to Rule 2410 Major Source Determination of Project S-1143805.

6. Baseline Emissions (BE)

The BE calculation (in lb/year) is performed pollutant-by-pollutant basis to determine the amount of offsets required. As discussed below, this project is exempt from offsets pursuant to Rule 2201, Section 4.6.8. Therefore, BE calculations are not required and will not be performed as a part of this project.

7. SB 288 Major Modification

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

As shown above, this facility is not a major source for NO_X, SO_X, PM_{10} or CO emissions. Therefore, this project cannot constitute an SB 288 major modification for these pollutants.

Since this facility is a major source for VOC emissions, 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	961	50,000	No

Since the SB 288 Major Modification Threshold for VOC emissions was not surpassed with this project, this project does not constitute an SB 288 Major Modification.

8. Federal Major Modification / New Major Source

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.

As defined in 40 CFR 51.165, Section (a)(1)(v) and part D of Title I of the CAA, a Federal Major Modification is any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act. The significant net emission increase threshold for each criteria pollutant is included in Rule 2201.

As demonstrated above, this facility is not a major source for NO_X, SO_X, and PM_{10} emissions. In addition, in accordance with Rule 2201, Section 3.18, there are no Federal Major Modification thresholds for CO emissions. Therefore, this project cannot constitute a

Federal Major Modification and no further analysis is required for NO_X, SO_X, PM_{10}, and CO emissions.

However, this facility is a Major Source for VOC emissions. Therefore, further analysis is required to determine if this project is a Federal Major Modification for VOC.

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted. In step 1, emission decreases can not cancel out the increases. Step 2 allows consideration of the project's net emissions increase as described in 40 CFR 51.165 and the Federal Clean Air Act Section 182 (e), as applicable.

Step 1: Project Emissions Increase

For modified existing emissions units, according to 40 CFR 51.165(a)(2)(ii)(C), the project's emission increase for each pollutant is equal to the sum of the differences between the projected actual emissions (PAE) and the baseline actual emissions (BAE). Please note that in step 1, since the District is classified as extreme non-attainment for ozone, no NOx and VOC emission decreases associated with the proposed project shall be accounted for.

Project Emissions Increase = $\sum$(PAE – BAE)

As described in 40 CFR 51.165(a)(1)(xxviii)(B), when using historical data and company's expected business activity to determine PAE, the portion of the emissions after the project that the existing unit could have accommodated (Unused Baseline Capacity, UBC) before the project (during the same 24-month baseline period used to determine BAE) and that are unrelated to the particular project (including emissions increases due to product demand growth) are to be excluded.

Otherwise, according to 40 CFR 51.165(a)(1)(xxvii)(B)(4), when determining PAE, in lieu of using the method described in 40 CFR 51.165 (a)(1)(xxviii)(B)(1)-(3), *Projected Actual Emissions*, the owner/operator may elect to use emissions unit's Potential to Emit. If appropriate projected actual emissions are not provided by the applicant, then the emissions unit's Potential to Emit is used to calculate the emissions increase.

Since the project proponent has not provided information required to calculate PAE, the District will use the PE2 to calculate the emissions increase:

Project Emissions Increase = $\sum$(PE2 – BAE)

<u>Projected Actual Emissions (PAE)</u>

Plains Marketing LP has indicated that they want the ability to use this pipeline heater operation up to its full potential to emit. Therefore, the Projected Actual Emissions (PAE) will be set to equal to the post project annual PE2 value calculated above.

PAE = 961 lb-VOC/year

Baseline Actual Emissions (BAE)

For emission units (other than electric utility steam generating units), according to according to 40 CFR 51.165(a)(1)(xxxv)(B), the BAE are calculated as the average, in tons/year, at which the emissions unit actually emitted during any 24-month period selected by the operator within the previous 10-year period.

The pipeline heater being modified in this project is their primary heater. Therefore, the facility has elected to utilize years 2020 and 2021 as the 24-month period in determining the BAE.

Based on the fuel usage rates for this unit provided to the District by Plains Marketing LP as a part of their annual emission inventory statements, the average fuel usage rate for the most recent 24-month period (2020 and 2021) is summarized below:

Year	Fuel Usage (MMscf/year)
2021	6
2020	6
Average	6

Using a natural gas heating value of 1,000 Btu/scf and the VOC emission factor listed above, the BAE for this unit is as follows:

BAE = Avg Fuel Usage (MMscf/yr) x Heating Value (Btu/scf) x EF (lb-VOC/MMBtu)
BAE = 6 MMscf/yr x 1,000 Btu/scf x 0.0055 lb-VOC/MMBtu
BAE = 33 lb-VOC/year

Project Emissions Increase

Project Emissions Increase = PE2 – BAE
Project Emissions Increase = 961 lb-VOC/year – 33 lb-VOC/year

Project Emissions Increase = 928 lb-VOC/year

Conclusion

In conclusion, the project's combined total VOC emission increases are summarized and 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?**
VOC	928	0	Yes

Since there is an increase in VOC emissions, this project constitutes a Federal Major Modification. The federal offset quantity required for this project is discussed below.

Federal Offset Quantity Calculation

In accordance with the Clean Air Act, Section 182(e)(2), the offset requirements of this part shall not be applicable in areas designated as Extreme non-attainment to a modification of an existing source if such modification consists of installation of equipment required to comply with an applicable attainment implementation plan or permit.

The District is designated as Extreme non-attainment for $PM_{2.5}$. As discussed above, the proposed project is to replace the burner nozzles and modify the control instruments/PLS programming. These modifications are being done to bring the unit in to compliance with District Rule 4306, was adopted as a part of the District's 2018 $PM_{2.5}$ Attainment Plan for further reductions of nitrogen oxides (NO_X) and particulate matter ($PM_{2.5}$) emissions. Since this project involves the installation of equipment to comply with District Rule 4306 and the 2018 $PM_{2.5}$ Attainment Plan, this project is not subject to federal offset requirements pursuant to CAA Section 182(e)(2).

Therefore,

VOC FOQ = 0 lb/year

New Major Source

As demonstrated above, this facility is not becoming a Major Source as a result of this project, therefore, this facility is not a New Major Source pursuant to 40 CFR 51.165 a(1)(iv)(A)(3).

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

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The pollutants which must be addressed in the PSD applicability determination for sources located in the SJV and which are emitted in this project are: (See 52.21 (b) (23) definition of significant)

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10

I. Project Emissions Increase - New Major Source Determination

The post-project potentials to emit from all new and modified units are compared to the PSD major source thresholds to determine if the project constitutes a new major source subject to PSD requirements.

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)(iii). The PSD Major Source threshold is 250 tons per year (tpy) for any regulated NSR pollutant.

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO_2	VOC	SO_2	CO	PM	PM_{10}
Total PE from New and Modified Units	3.6	0.5	0.3	6.0	0.3	0.3
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	No	No	No	No	No	No

As shown in the table above, the potential to emit for the project, by itself, does not exceed any PSD major source threshold. Therefore, Rule 2410 is not applicable and no further analysis 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 E.

VIII. Compliance Determination

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

Pursuant to District Rule 2201, Section 4.1, 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 Adjusted Increase in Permitted Emissions (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 discussed in Section I above, there are no new emissions units associated with this project. Therefore, BACT for new units with PE > 2 lb/day purposes is not triggered.

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))

The AIPE for this unit is summarized in the following table:

Pollutant	PE2 (lb/day)	PE1 (lb/day)	EF2 (lb/MMBtu)	EF1 (lb/MMBtu)	AIPE (lb/day)
NOx	12.4	15.2	0.011	0.018	0
SOx	1.4	1.4	0.00285	0.00285	0
PM10	1.4	1.4	0.003	0.003	0
CO	90.5	90.5	0.059	0.059	0
VOC	2.6	2.6	0.0055	0.0055	0

As demonstrated above, the AIPE is not greater than 2.0 lb/day for any pollutant. 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 a Federal Major Modification for VOC emissions. Therefore, BACT is triggered for VOC for the unit being modified in this project.

2. BACT Guideline

Per District Policy APR 1305, Section IX, "A top-down BACT analysis shall be performed as a part of the Application Review for each application subject to the BACT requirements pursuant to the District's NSR Rule." For source categories or classes covered in the BACT Clearinghouse, relevant information under each of the steps may be simply cited from the Clearinghouse without further analysis.

The District does not currently have an active BACT guideline in its BACT clearinghouse that applies to process heaters in this size range. Therefore, a project specific top-down BACT analysis will be performed for the purposes of this project.

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 D), BACT has been satisfied with the following:

VOC: Natural Gas-Firing

The following condition will be included on the ATC as a mechanism to assure continued compliance with the BACT requirements:

- The unit shall only be fired on PUC-regulated natural gas. [District Rules 2201 and 4320]

B. Offsets

1. Offset Applicability

Pursuant to District Rule 2201, Section 4.5, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals 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	7,418	509	1,342	12,001	>20,000
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets Triggered?	No	No	No	No	Yes

2. Quantity of District Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for VOC emissions only. However, per District Rule 2201, Section 4.6.8, for existing facilities, the installation or modification of an emission control technique performed solely for the purpose of compliance with the requirements of District, State or Federal air pollution control laws, regulations, or orders shall be exempt from offset requirements for all air pollutants, provided all of the following conditions are met:

- There shall be no increase in the physical or operational design of the existing facility, except for those changes to the design needed for the installation or modification of the emission control technique itself;
- There shall be no increase in the permitted rating or permitted operating schedule of the permitted unit;
- There shall be no increase in emissions from the stationary source that will cause or contribute to any violation of a National Ambient Air Quality Standard, Prevention of Significant Deterioration increment, or Air Quality Related Value in Class I areas; and
- The project shall not result in an increase in permitted emissions or potential to emit of more than 25 tons per year of NO_X, or 25 tons per year of VOC, or 15 tons per year of SO_X, or 15 tons per year of PM_{10}, or 50 tons per year of CO.

Plains Marketing LP is proposing to replace the burner nozzles and modify the control instruments/PLS programming. After this change, the pipeline heater will be operating in compliance with applicable requirements of District Rule 4306. The modification does not result in an increase in the permitted rating of the pipeline and the applicant is not proposing to increase its physical or operational design. In addition, as shown in the table below, the project does not result in an increase in emissions from the facility.

Pollutant	Daily PE1 (lb/day)	Daily PE2 (lb/day)	Annual PE1 (lb/year)	Annual PE2 (lb/year)
NOx	21.7	19.5	7,922	7,107
SOx	1.4	1.4	498	498
PM10	1.4	1.4	524	524
CO	32.2	32.2	11,767	11,767

VOC	2.6	2.6	961	961

Therefore, the proposed modification meets all of the criteria listed above and is exempt from the offset requirements of this rule.

C. Public Notification

1. Applicability

Pursuant to District Rule 2201, Section 5.4, 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,
d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant, and/or
e. Any project which results in a Title V significant permit modification

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 Section VII.C.7 of this evaluation, this project is a Federal Major Modification. Therefore, public noticing is required for this project for Federal Major Modification purposes.

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

Public notification is required if the pre-project Stationary Source Potential to Emit (SSPE1) is increased to a level exceeding the offset threshold levels. The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

Offset Thresholds				
Pollutant	**SSPE1 (lb/year)**	**SSPE2 (lb/year)**	**Offset Threshold**	**Public Notice Required?**
NO_X	8,233	7,418	20,000 lb/year	No
SO_X	509	509	54,750 lb/year	No
PM_{10}	1,342	1,342	29,200 lb/year	No
CO	12,001	12,001	200,000 lb/year	No
VOC	>20,000	>20,000	20,000 lb/year	No

As demonstrated 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	**SSPE2 (lb/year)**	**SSPE1 (lb/year)**	**SSIPE (lb/year)**	**SSIPE Public Notice Threshold**	**Public Notice Required?**
NO_x	7,418	8,233	-815	20,000 lb/year	No
SO_x	509	509	0	20,000 lb/year	No
PM_{10}	1,342	1,342	0	20,000 lb/year	No
CO	12,001	12,001	0	20,000 lb/year	No
VOC	>20,000	>20,000	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.

e. Title V Significant Permit Modification

As shown in the Discussion of Rule 2520 below, this project constitutes a Title V significant modification. Therefore, public noticing for Title V significant modifications is required for this project.

2. Public Notice Action

As discussed above, public noticing is required for this project for Federal Major Modification and Title V significant modification purposes. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB),

Environmental Protection Agency (EPA), and a public notice will be electronically published on the District's website 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:

- The unit shall only be fired on PUC-regulated natural gas. [District Rules 2201 and 4320]

- Except during start-up and shutdown, emissions rates from the unit shall not exceed any of the following emission limits: 9 ppmv NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.003 lb-PM10/MMBtu, 80 ppmv CO @ 3% O2 or 0.059 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306]

- During start-up and shutdown, emissions from the unit shall not exceed any of the following limits: 83 ppmv NOx @ 3% O2 or 0.1 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.003 lb-PM10/MMBtu, 115 ppmv CO @ 3% O2 or 0.84 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306]

- Duration of start-up and shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. [District Rules 2201, 4305, and 4306]

- The total duration of startup and shutdown time shall not exceed either of the following limits: 8.0 hours per day or 2,920 hours per year. [District Rules 2201, 4305, and 4306]

- All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]

- Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, and 4306]

E. Compliance Assurance

1. Source Testing

This pipeline heater is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters, Phase 2*, District Rule 4306, *Boilers, Steam Generators and Process*

Heaters, Phase 3, and District Rule 4320*, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5 MMBtu/hr*. Source testing requirements, in accordance with District Rules 4305, 4306, and 4320, will be discussed in Section VIII of this evaluation.

2. Monitoring

This pipeline heater is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters, Phase 2*, District Rule 4306, *Boilers, Steam Generators and Process Heaters, Phase 3,* and District Rule 4320*, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5 MMBtu/hr*. Monitoring requirements, in accordance with these rules will be discussed in more detail in Section VIII of this evaluation.

3. Recordkeeping

This pipeline heater is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters, Phase 2*, District Rule 4306, *Boilers, Steam Generators and Process Heaters, Phase 3,* and District Rule 4320*, Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5 MMBtu/hr*. Recordkeeping, in accordance with these rules will be discussed in more detail in Section VIII of this evaluation.

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

Rule 2410 Prevention of Significant Deterioration

As shown in Section VII.C.9 above, this project does not result in a new PSD major source or PSD major modification. No further discussion is required.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. Section 3.29 defines a significant permit modification as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

Section 3.20.5 states that a minor permit modification is a permit modification that is not a major modification, as defined in Rule 2201. As discussed above, this project triggers a Federal Major Modification. As a result, the proposed project constitutes a Significant Modification to the Title V Permit pursuant to Section 3.29.

As discussed above, the facility has applied for a Certificate of Conformity (COC) and the District will forward to EPA, for a 45-day review period, this application review which includes the proposed modified Title V permit [i.e. proposed ATC(s)] and the compliance certification form which demonstrates compliance with the minor permit modification requirements in Section 11.4. Therefore, the facility must apply to modify their Title V permit with an administrative amendment,

prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment application. The following conditions will be included on the ATC and will assure compliance with the requirements of Rule 2520:

- {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201]

- {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4]

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. 40 CFR Part 60, Subpart Dc applies to Small Industrial-Commercial-Industrial Steam Generators between 10 MMBtu/hr and 100 MMBtu/hr (post-6/9/89 construction, modification or, reconstruction).

The unit being modified in this project is a pipeline oil heater. Oil is heated directly by the low NOx burner without the use of water or steam. Therefore, this unit is not a steam generating unit and Subpart Dc does not apply to this pipeline heater.

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 natural gas-fired pipeline heaters.

Rule 4101 Visible Emissions

Rule 4101 states that 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). As the pipeline heater will be fired solely on natural gas, visible emissions are not expected to exceed Ringelmann 1 or 20% opacity. The following condition will be included on the ATC as a mechanism to assure ongoing compliance:

- 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]

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. The following condition will be added to the permit to further assure compliance with this rule.

- No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification of an existing source shall not result in an increase in cancer risk greater than the District's significance level (20 in a million) and shall not result in acute and/or chronic risk indices greater than 1.

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

Rule 4201 Particulate Matter Concentration

Section 3.0 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.

The maximum particulate matter concentration for this natural gas-fired pipeline heater at dry standard conditions can be calculated as follows:

F-Factor: 8,578 dscf/MMBtu at 60 °F
PM_{10} Emission Factor: 0.003 lb-PM_{10}/MMBtu (From Section VII.B)
Percentage of PM as PM_{10} in Exhaust: 100%

$$Grain\ Loading\ (GL) = \left(\frac{0.003\ lb-PM}{MMBtu} \times \frac{7{,}000\ grain}{lb-PM}\right) \div \left(\frac{8{,}578\ ft^3}{MMBtu}\right)$$

$GL = 0.002\ grain/dscf < 0.1\ grain/dscf$

Therefore, the following condition will be listed on the permit as a mechanism to ensure compliance:

- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

District Rule 4301 Fuel Burning Equipment

Rule 4301 limits air contaminant emissions from fuel burning equipment as defined in the rule. Section 3.1 defines fuel burning equipment as "any furnace, boiler, apparatus, stack, and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer".

Section 5.0 gives the requirements of the rule.

A person shall not discharge into the atmosphere combustion contaminants exceeding in concentration at the point of discharge, 0.1 grain per cubic foot of gas calculated to 12% of carbon dioxide at dry standard conditions.

A person shall not build, erect, install or expand any non-mobile fuel burning equipment unit unless the discharge into the atmosphere of contaminants will not and does not exceed any one or more of the following rates:

- 200 pound per hour of sulfur compounds, calculated as sulfur dioxide (SO_2)
- 140 pounds per hour of nitrogen oxides, calculated as nitrogen dioxide (NO_2)
- Ten pounds per hour of combustion contaminants as defined in Rule 1020 and derived from the fuel.

District Rule 4301 Limits (lb/hr)			
Unit	**NO_2**	**Total PM**	**SO_2**
S-1199-6-12	0.011 lb/MMBtu x 19.95 MMBtu/hr = 0.22	0.003 lb/MMBtu x 19.95 MMBtu/hr = 0.06	0.00285 lb/MMBtu x 19.95 MMBtu/hr = 0.06
Rule Limit (lb/hr)	140	10	200

The particulate emissions from the unit will not exceed 0.1 gr/dscf at 12% CO_2 or 10 lb/hr. Further, the emissions of SOx and NOx will not exceed 200 lb/hr or 140 lb/hr, respectively. Therefore, continued compliance with the requirements of this rule is expected.

District Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2

This unit is natural gas-fired with a maximum heat input of 19.95 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4305, the unit is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2.*

In addition, the unit is also subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3* and District Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater Than 5.0 MMBtu/hr.*

Since the emissions limits of District Rules 4306 and 4320 and all other requirements of these rules are equivalent or more stringent than District Rule 4305 requirements, compliance with District Rules 4306 and 4320 requirements will satisfy requirements of District Rule 4305.

Therefore, compliance with District Rule 4305 requirements is expected and no further discussion is required.

District Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3

This rule limits NOx, CO, SO_2 and PM_{10} emissions from boilers, steam generators and process heaters rated greater than 5 MMBtu/hr. This rule also provides a compliance option of payment of fees in proportion to the actual amount of NOx emitted over the previous year.

The unit in this project is rated at 19.95 MMBtu/hr heat input and therefore, is subject to this rule.

Section 5.1 NOx and CO Emission Limits

Section 5.1 requires that except for units subject to Section 5.2, NO_X and carbon monoxide (CO) emissions shall not exceed the limits specified in the following table. All ppmv emission limits specified in this section are referenced at dry stack gas conditions and 3.00 percent by volume stack gas oxygen.

With a maximum heat input of 19.95 MMBtu/hr, the applicable NO_X emission limit category is listed in Section 5.1, Table 2, Category A, from District Rule 4306. In addition, units shall not be operated in a manner to which exceeds a carbon monoxide (CO) emissions limit of 400 ppmv.

Table 2: Tier 2 NOx and CO Limits

Category	NO_X Limits	CO Limits
A.5 Units with a total rated heat input > 5.0 MMBtu/hr to ≤ 20.0 MMBtu/hr, except for Categories C through E unit	9 ppmv @ 3% O_2or 0.011 lb/MMBtu	400 ppmv @ 3% O_2

The proposed unit is subject to Category A.5 of the emission limits specified in Table 2 of Section 5.1 as this unit is not operated as a low use unit and is not located at a refinery or wastewater treatment plant.

The applicant has proposed the following emission limits:

the proposed NO_x emission factor is 9 ppmvd @ 3% O_2 (0.011 lb/MMBtu), and
the proposed CO emission factor is 80 ppmvd @ 3% O_2 (0.059 lb/MMBtu)

Therefore, compliance with Section 5.2 of District Rule 4306 is expected.

The following condition will be included on the permit to assure continued compliance with the NO_X and CO requirements of this rule:

- Except during start-up and shutdown, emissions rates from the unit shall not exceed any of the following emission limits: 9 ppmv NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.003 lb-PM10/MMBtu, 80 ppmv CO @ 3% O2 or 0.059 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306]

Section 5.2, Low Use

Section 5.2 specifies requirements for units with maximum annual heat input limits of less than 9 billion Btu's per calendar year. Plains Marketing LP is proposing to operate this unit with annual heat input greater than 9 billion Btu's per calendar year. Therefore, the proposed unit is not subject to the requirements of this section.

Section 5.3, Startup and Shutdown Provisions

Section 5.3 states that on and after the full compliance deadline in Section 7.1, the applicable emission limits of Sections 5.1, 5.2.2 and 5.2.3 shall not apply during start-up or shutdown provided an operator complies with the requirements specified in Sections 5.3.1 through 5.3.4.

5.3.1 The duration of each start-up or each shutdown shall not exceed two hours, except as provided in Section 5.3.3.

5.3.2 The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown.

5.3.3 Notwithstanding the requirement of Section 5.3.1, an operator may submit an application for a Permit to Operate condition to allow more than two hours for each start-up or each shutdown provided the operator meets all of the conditions in specified in Sections 5.3.3.1 through 5.3.3.3.

5.3.4 Permit to Operate (PTO) modifications solely to include start-up or shutdown conditions may be exempt from Best Available Control Technology (BACT) and emission offset requirements if the PTO modifications meet the requirements of Rule 2201 (New or Modified Stationary Source Review Rule) Section 4.2 (BACT Exemptions) and Rule 2201 Section 4.6 (Offset Exemptions).

The currently permitted pipeline heater uses low NO_X burners to control emissions. The low NO_X burners will be utilized the entire time the process heater is operated, including at time of start-up and shutdown. The applicant has proposed the following: startup and shutdown durations of two hours each, NO_X emission limit of 83 ppmv NOx @ 3% O_2 and CO emission limit of 115 ppmv @ 3% O_2 during start-up and shutdown, and two start-ups and shutdowns per day. Therefore, for standard operation and start-up and shutdown, permit conditions will be listed on the permit as follows:

- During start-up and shutdown, emissions from the unit shall not exceed any of the following limits: 83 ppmv NOx @ 3% O2 or 0.1 lb-NOx/MMBtu, 0.00285 lb-

SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 115 ppmv CO @ 3% O2 or 0.84 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306]

- Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. [District Rules 2201, 4305, and 4306]

- The total duration of startup and shutdown time shall not exceed either of the following limits: 8.0 hours per day or 2,920 hours per year. [District Rules 2201, 4305, and 4306]

Section 5.4, Monitoring Provisions

Section 5.4.1 specifies requirements for units that simultaneously fire gaseous and liquid fuels. Plains Marketing LP is not proposing to fire this unit simultaneously on gaseous and liquid fuels. Therefore, the requirements of this section are not applicable.

Section 5.4.2 requires that permit units subject to District Rule 4306, Section 5.1 emissions limits shall either install and maintain Continuous Emission Monitoring (CEM) equipment for NO_X, CO and O_2, or install and maintain APCO-approved alternate monitoring.

The applicant has proposed to continue using pre-approved alternate monitoring scheme E (pursuant to District Policy SSP-1105, Alternate Monitoring), which requires monitoring of the Flue Gas Recirculation (FGR) valve settings. The following conditions were taken from the current permit and will be listed on the ATC in order to ensure compliance with the requirements of the proposed alternate monitoring plan:

- {2958} The flue gas recirculation valve(s) setting shall be monitored at least on a weekly basis. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last week. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4305 and 4306]

- {2659} The acceptable settings for the flue gas recirculation valve(s) shall be established by source testing this unit or other representative units per Rule 4306 and as approved by the District. The normal range/level shall be that for which compliance with applicable NOx and CO emissions rates have been demonstrated through source testing at a similar firing rate. [District Rules 4305 and 4306]

- {2961} Normal range or level for the flue gas recirculation valve(s) settings shall be re-established during each source test required by this permit. [District Rules 4305 and 4306]

- {2962} If the flue gas recirculation valve(s) setting is less than the normal range/level, the permittee shall return the flue gas recirculation valve(s) setting to the normal range/level as soon as possible, but no longer than 1 hour of operation after detection. If the flue gas recirculation valve(s) setting is not returned to the normal range/level

within 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour, and conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the applicable emission limits at the new flue gas recirculation valve(s) setting. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviation are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306]

- {2963} The permittee shall maintain records of the date and time of flue gas recirculation valve(s) settings, the observed setting, and the firing rate at the time of the flue gas recirculation valve(s) setting measurements. The records must also include a description of any corrective action taken to maintain the flue gas recirculation valve(s) setting within the acceptable range. [District Rules 4305 and 4306]

Sections 5.7.2 and 5.7.3 specify monitoring requirements for units that are subject to the low use requirements specified in Section 5.5. As discussed above, the proposed unit is not subject to the low use requirements of Section 5.5. Therefore, the requirements of Sections 5.7.2 and 5.7.3 are not applicable to this unit.

Section 5.7.4 allows units operated at seasonal sources and subject to 40 CFR 60 Subpart Db to install a parametric monitoring system in lieu of a CEMS. The unit being modified in this project is not operated at a seasonal source. Therefore, this unit is not subject to the requirements of this section.

Section 5.7.6 outlines requirements for monitoring SOx emissions. The following condition will be listed on the permit in order to ensure compliance with the requirements:

- The unit shall only be fired on PUC-regulated natural gas. [District Rules 2201, 4306, and 4320]

- Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081, 4306, and 4320]

Section 5.5, Compliance Determination

Section 5.5.1 requires that the operator of any unit shall have the option of complying with either the applicable heat input (lb/MMBtu) emission limits or the concentration (ppmv) emission limits specified in Section 5.1. The emission limits selected to demonstrate compliance shall be specified in the source test proposal pursuant to Rule 1081 (Source Sampling). Therefore, the following condition will be listed on the permit as follows:

- The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306]

Section 5.5.2 requires that all emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. Therefore, the following condition will be listed on the permit as follows:

- All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306]

Section 5.5.4 requires that for emissions monitoring pursuant to Sections 5.4.2 and 6.3.1 using a portable NO_X analyzer as part of an APCO approved Alternate Emissions Monitoring System, emission readings shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15-consecutive-minute sample reading or by taking at least five (5) readings evenly spaced out over the 15-consecutive-minute period.

The applicant does not use a portable analyzer to satisfy the monitoring requirements of District Rule 4306; therefore, Section 5.5.4 is not applicable.

Section 5.5.5 requires that for emissions source testing performed pursuant to Section 6.3.1 for the purpose of determining compliance with an applicable standard or numerical limitation of this rule, the arithmetic average of three (3) 30-consecutive-minute test runs shall apply. If two (2) of three (3) runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. Therefore, the following condition will be listed on the permit as follows:

- For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306]

Section 6.1, Recordkeeping

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.4 shall be maintained for five calendar years and shall be made available to the APCO upon request. Failure to maintain records or information contained in the records that demonstrate noncompliance with the applicable requirements of this rule shall constitute a violation of this rule.

The following conditions will be listed on the permit as a mechanism to assure continued compliance:

- Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081, 4306, and 4320]

- All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 2201, 4305, 4306, and 4320]

Section 6.1.2 requires that the operator of any unit that is subject to the requirements of Section 5.2 shall record the amount of fuel use at least on a monthly basis. Since the unit is not subject to the requirements listed in Section 5.2, it is not subject to Section 6.1.2 requirements.

Section 6.1.3 requires that the operator of a unit subject to Section 5.2.1 or 6.3.1 shall maintain records to verify that the required tune-up and the required monitoring of the operational characteristics have been performed. The unit is not subject to Section 6.1.3. Therefore, the requirements of this section do not apply to this unit.

Section 6.1.4 requires that the operator of a unit with startup or shutdown provisions keep records of the duration of the startup or shutdowns. The facility has proposed the use of startup and shutdown provisions, thus, the requirements of this section apply to this unit. The following permit condition will be listed on the permit as follows:

- Daily records of start-up and shutdown durations shall be maintained. [District Rules 2201, 4305, 4306, and 4320]

Section 6.2, Test Methods

Section 6.2 identifies the following test methods as District-approved source testing methods for the pollutants listed:

Test Methods		
Pollutant	**Units**	**Test Method Required**
NO_X	ppmv	EPA Method 7E or ARB Method 100
NO_X	lb/MMBtu	EPA Method 19
CO	ppmv	EPA Method 10 or ARB Method 100
Stack Gas O_2	%	EPA Method 3 or 3A, or ARB Method 100
Stack Gas Velocities	ft/min	EPA Method 2
Stack Gas Moisture Content	%	EPA Method 4

The following conditions will be listed on the permit as a mechanism to assure continued compliance:

- Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]

- NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306]

- CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306]

- Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306]

- Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rules 4306 and 4320]

Section 6.3, Compliance Testing

Section 6.3.1 requires that these units be tested to determine compliance with the applicable requirements of section 5.1 not less than once every 12 months. Upon demonstrating compliance on two consecutive compliance source tests, the following source test may be deferred for up to thirty-six months.

The following conditions will be listed on the permit to assure continued compliance with this section:

- Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, and 4306]

- Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]

- The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

In addition, since the applicant has proposed to use pre-approved Alternate Monitoring “E” monitoring the flue gas recirculation (FGR) valve settings, Section 6.3.1 requires that the operator shall comply with the following:

- During the 36-month source testing interval, the owner/operator shall have the unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rule 4306]

- If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rule 4306]

Section 6.4, Emission Control Plan (ECP)

Section 6.4.1 requires that the operator of any unit shall submit to the APCO for approval an Emissions Control Plan according to the compliance schedule in Section 7.0 of District Rule 4306.

The applicant is proposing to operate the heater in compliance with the emissions limits listed in Section 5.2, Tables 1 and 2 of this rule and with the periodic monitoring and source testing requirements. Therefore, the application provided as a part of this project is considered their emission control plan and the applicant will not be required to submit an additional Emission Control Plan (ECP) for this unit. No further discussion is required.

Section 7.0, Compliance Schedule

Section 7.1 indicates that an operator of a unit must be in compliance with both the ATC deadline and compliance deadlines listed in Tables 1 and 2 of Section 5.1.

The applicant has proposed to operate this unit in compliance with the emissions limits listed in Section 5.2, Tables 1 and 2, of this rule and with the periodic monitoring and source testing requirements. Therefore, the compliance schedule requirements are satisfied and no further discussion is required.

Conclusion

Conditions will be incorporated into the ATC permit as a mechanism to ensure compliance with each section of this rule. Therefore, compliance with District Rule 4306 requirements is expected.

Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters greater than 5.0 MMBtu/hr

This rule limits NOx, CO, SO_2 and PM_{10} emissions from boilers, steam generators and process heaters rated greater than 5 MMBtu/hr. This rule also provides a compliance option of payment of fees in proportion to the actual amount of NOx emitted over the previous year.

The unit in this project is rated at 19.95 MMBtu/hr heat input and therefore, is subject to this rule.

Section 5.0 Requirements

Section 5.1 states that an operator of a unit subject to this rule shall comply with all applicable requirements of the rule and one of the following, on a unit-by-unit basis:

5.1.1 Operate the unit to comply with the emission limits specified in Sections 5.2 and 5.4; or
5.1.2 Pay an annual emissions fee to the District as specified in Section 5.3 and comply with the control requirements specified in Section 5.4; or
5.1.3 Comply with the applicable Low-use Unit requirements of Section 5.5.

The unit currently complies with the requirements of 5.1.2 in lieu of complying with Section 5.2 Table 2. The operator will continue to pay an annual emissions fee to the District as specified in Section 5.3 of the rule. The following condition will be included on the permit to ensure compliance with the annual fee requirement.

- Pursuant to Rule 4320, the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]

Section 5.1 NOx and CO Emissions Limits

Section 5.2 specifies the following:

5.2.1 On and after the indicated Compliance Deadline, units shall not be operated in a manner which exceeds the applicable NO_x emissions limit specified in Table 1 (until December 31, 2023) and Table 2 (on and after December 31, 2023). Units shall not be operated in a manner to which exceeds a carbon monoxide (CO) emissions limit of 400 ppmv.

5.2.2 No unit fired on liquid fuel shall be operated in a manner to exceed emissions of 40 ppmv NO_x and 400 ppmv CO.

5.2.3 All ppmv emission limits specified in this section are referenced at dry stack gas conditions and 3.00 percent by volume stack gas oxygen. Emission concentrations shall be corrected to 3.00 percent oxygen in accordance with section 8.1.

The proposed 19.95 MMBtu/hr natural gas-fired pipeline heater falls under Category A.5 of Table 2 and it is summarized in the table below.

Table 2 (Tier 2 NO_x Emission Limits) requirements will apply on and after December 31, 2023 as specified in the table below.

Table 2: Tier 2 NOx Emission Limits				
Category	NO_X Limits	Emission Control Plan	Authority to Construct	Compliance Deadline
A. Units with a total rated heat input > 5.0 MMBtu/hr to ≤ 20.0 MMBtu/hr, except for Categories C through E units				
5. All other units	5 ppmv or 0.0061 lb/MMBtu	May 1, 2022	May 1, 2022	December 31, 2023

The heater will comply with Section 5.1.2 in lieu of complying with emission limits required in Section 5.2. Therefore, this section is not applicable and no further discussion is required.

Section 5.3 Annual Fee Calculation

Annual Fees are required if the unit will not be meeting the emission limits in Section 5.2 of this rule. Section 5.3 states that beginning in January 1, 2025, an operator with units that will comply with the requirements of Section 5.1.2 in lieu of complying with Section 5.2 Table 2 shall pay a total annual emission fee to the District based on total NOx emissions from those units. The operator shall pay the total annual fee to the District, no later than July 1 of each year, for the emissions of the previous calendar year and payments shall continue annually until the unit is either permanently removed from use in the San Joaquin Valley Air Basin and the Permit to Operate is surrendered or the operator demonstrates compliance with applicable NOx emissions limits shown in Table 3 and the applicable NOx emission limit in Table 2.

As discussed above, the operator of the unit associated with this project currently complies with the requirements of 5.1.2 and they will continue to do so. The following condition will be retained on the ATC.

- Pursuant to Rule 4320, the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]

Section 5.4 Particulate Matter Control Requirements

Section 5.4.1 states that to limit particulate matter emissions, an operator shall comply with one of the options listed in the rule.

Section 5.4.1.1 provides option for the operator to comply with the rule by firing the unit exclusively on PUC-quality gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases.

Section 5.4.1.2 provides option for the operator to comply with the rule by limiting the fuel sulfur content to no more than five (5) grains of total sulfur per hundred (100) standard cubic feet.

Section 5.4.1.3 provides option for the operator to comply with the rule by installing and properly operating an emissions control system that reduces SO2 emissions by at least 95% by weight; or limit exhaust SO2 to less than or equal to 9 ppmv corrected to 3 % O2.

The pipeline heater will be fired exclusively on PUC-quality natural gas. Therefore, compliance with this section of the rule is expected and the following condition will be included on the permit:

- The unit shall only be fired on PUC-regulated natural gas. [District Rules 2201, 4306, and 4320]

Section 5.5 Low Use

Section 5.5 specifies requirements for units with maximum annual heat input limits of less than 1.8 billion BTUs per calendar year. The applicant is proposing to operate this pipeline heater as a full time unit with a heat input greater than 1.8 billion Btu per calendar year; therefore, the proposed unit is not subject to the requirements of this section.

Section 5.6 Startup and Shutdown Provisions

Section 5.6 states that on and after the full compliance deadline in Section 5.0, the applicable emission limits of Sections 5.2 Table 1 and 5.5.2 shall not apply during start-up or shutdown provided an operator complies with the requirements specified in Sections 5.6.1 through 5.6.5

The applicant has opted to comply with Rule 4320 via an annual emissions fee in lieu of complying with the emissions limits. Therefore, startup and shutdown limits are not warranted.

Section 5.7 Monitoring Provisions

Section 5.7.1 requires that the operator of any unit subject to District Rule 4320, Section 5.2 emissions limits shall install and maintain an operational APCO approved Continuous Emission Monitoring System (CEMS) for NO_X, CO and O_2, or implement an APCO-approved Alternate Monitoring System.

The operator is proposing to comply with Section 5.1.2 in lieu of compliance with the NOx and CO emission limits of this Rule. Therefore, NOx and CO monitoring is not applicable.

Section 5.7.2 and 5.7.3 specify monitoring requirements for units that are subject to the low use requirements specified in Section 5.5. As discussed above, the proposed pipeline heater is not subject to the low use requirements of Section 5.5. Therefore, the requirements of Sections 5.7.2 and 5.7.3. are not applicable to this unit.

Section 5.7.4 allows units operated at seasonal sources and subject to 40 CFR 60 Subpart Db to install a parametric monitoring system in lieu of CEMS. The proposed pipeline heater in this project is not operated at a seasonal source. Therefore, this unit is not subject to the requirements of this section.

Section 5.7.6 outlines requirements for monitoring SO_x emissions. The following conditions will be listed on the permit in order to ensure compliance with the requirements:

- The unit shall only be fired on PUC-regulated natural gas. [District Rules 2201, 4306, and 4320]

- Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081, 4306, and 4320]

Section 5.8 Compliance Determination

Section 5.8.1 requires that the operator of any unit shall have the option of complying with either the applicable heat input (lb/MMBtu) emission limits or the concentration (ppmv) emission limits specified in Section 5.2.

The operator is proposing to comply with Section 5.1.2 in lieu of compliance with the NOx and CO emission limits of this Rule. Therefore, NOx and CO compliance determination is not applicable.

Section 6.1 Recordkeeping

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.5 shall be maintained for five calendar years and shall be made available to the APCO upon request. Failure to maintain records or information contained in the records that demonstrate noncompliance with the applicable requirements of this rule shall constitute a violation of this rule.

The following conditions will be listed on the permit:

- Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081, 4306, and 4320]

- Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. [District Rules 1070 and 4320]

- All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 2201, 4305, 4306, and 4320]

Section 6.1.2 requires that the operator of any unit subject to Section 5.5 shall record the amount of fuel use at least on a monthly basis for each unit. Since the unit is not subject to the requirements listed in Section 5.5, it is not subject to Section 6.1.2 requirements.

Section 6.1.3 requires that the operator of any unit subject to Section 5.5.1 or 6.3.1 shall maintain records to verify that the required tune-up and the required monitoring of the operational characteristics of the unit have been performed. The unit is not subject to Section 6.1.3. Therefore, the requirements of this section do not apply to this unit.

Section 6.1.4 requires that the operator of a unit with startup or shutdown provisions keep records of the duration of the startup or shutdowns. The unit is subject to Section 6.1.4.

Therefore, the following condition will be listed on the permit:

- Daily records of start-up and shutdown durations shall be maintained. [District Rules 2201, 4305, 4306, and 4320]

Section 6.1.5 requires that the operator of any unit fired on liquid fuel during PUC-quality natural gas curtailment periods pursuant to Section 5.4.2 shall record the sulfur content of the fuel, amount of fuel used, and duration of the natural gas curtailment period. The facility has not proposed the use of curtailment fuels; therefore, the requirements of this section do not apply.

Section 6.2 Test Methods and Section 6.3 Compliance Testing

The operator is proposing to comply with Section 5.1.2 in lieu of compliance with the NOx and CO emission limits of this Rule. Therefore, NOx and CO compliance testing is not applicable.

Section 6.4, Emission Control Plan (ECP)

Section 6.4.1 requires that the operator of any unit shall submit to the APCO for approval an Emissions Control Plan according to the compliance schedule in Section 7.0 of District Rule 4320.

The operator is proposing to comply with Section 5.1.2 in lieu of compliance with the NOx and CO emission limits of this Rule. Therefore, the application provided as a part of this project is considered their emission control plan and the applicant will not be required to submit an additional Emission Control Plan for this unit. No further discussion is required.

Section 7.0, Compliance Schedule

Section 7.0 indicates that an operator must be in compliance with both the ATC deadline and compliance deadlines listed in Table 1 of Section 5.2.

The applicant has proposed to operate this pipeline heater in compliance with the requirements of Section 5.1.2. Therefore, the compliance schedule requirements are satisfied and no further discussion is required.

Conclusion

Conditions will be incorporated into the ATC permit as a mechanism to ensure compliance with each section of this rule. Therefore, compliance with District Rule 4320 requirements is expected.

District Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1

This rule applies to boilers, steam generators, and process heaters at NO_X Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties. The facility in this project is not a NO_X Major Source; therefore, the provisions of this rule do not apply.

Rule 4801 Sulfur Compounds

Section 3.1 states that a person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding a concentration of two-tenths (0.2) percent by volume calculated as sulfur dioxide (SO_2) at the point of discharge on a dry basis averaged over 15 consecutive minutes.

Using the ideal gas equation, the sulfur compound emissions are calculated as follows:

$$\text{Volume } SO_2 = \frac{n\,RT}{P}$$

With:

N = moles SO_2
T (Standard Temperature) = 60°F = 520°R
P (Standard Pressure) = 14.7 psi
R (Universal Gas Constant) = $\frac{10.73 \text{psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot {}^\circ\text{R}}$
EPA F-Factor: 8,578 dscf/MMBtu at 60 °F

$$\frac{0.00285\ lb - SO_x}{MMBtu} x\ \frac{MMBtu}{8{,}578\ dscf} x\ \frac{1\ lb - mol}{64\ lb} x\ \frac{10.73\ psi \cdot ft^3}{lb \cdot mol \cdot {}^\circ R} x\ \frac{520{}^\circ R}{14.7\ psi} x\ \frac{1{,}000{,}000\ parts}{million} = \frac{2.0\ parts}{million}$$

$Sulfur\ Concentration\ = \frac{2.0\ parts}{million}$ < 2,000 ppmv (or 0.2%)

Therefore, compliance with District Rule 4801 requirements 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 prepared or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project.

On December 17, 2009, the District's Governing Board adopted a policy, APR 2005, *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency,* for addressing GHG emission impacts when the District is Lead Agency under CEQA and approved the District's guidance document for use by other agencies when addressing GHG impacts as lead agencies under CEQA. Under this policy, the District's determination of significance of project-specific GHG emissions is founded on the principal that projects with GHG emission reductions consistent with AB 32 emission reduction targets are considered to have a less than significant impact on global climate change. Consistent with District Policy 2005, projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, would be determined to have a less than significant individual and cumulative impact for GHG emission.

The California Air Resources Board (ARB) adopted a Cap-and-Trade regulation as part one of the strategies identified for AB 32. This Cap-and-Trade regulation is a statewide plan, supported by a CEQA compliant environmental review document, aimed at reducing or mitigating GHG emissions from targeted industries. Facilities subject to the Cap-and-Trade regulation are subject to an industry-wide cap on overall GHG emissions. Any growth in emissions must be accounted for under that cap such that a corresponding and equivalent reduction in emissions must occur to allow any increase. Further, the cap decreases over time, resulting in an overall decrease in GHG emissions.

Under District policy APR 2025, *CEQA Determinations of Significance for Projects Subject to ARB's GHG Cap-and-Trade Regulation*, the District finds that the Cap-and-Trade is a regulation plan approved by ARB, consistent with AB32 emission reduction targets, and supported by a CEQA compliant environmental review document. As such, consistent with District Policy 2005, projects complying with Cap-and-Trade requirements are determined to have a less than significant individual and cumulative impact for GHG emissions.

The GHG emissions increases associated with this project result from the combustion of fossil fuel(s), other than jet fuel, delivered from suppliers subject to the Cap-and-Trade regulation. Therefore, as discussed above, consistent with District Policies APR 2005

and APR 2025, the District concludes that the GHG emissions increases associated with this project would have a less than significant individual and cumulative impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing or former use. Furthermore, the District determined that the activity will not have a significant effect on the environment. Therefore, the District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15301 (Existing Facilities), and finds that the project is exempt per the common sense exemption that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit is based on a case-by-case analysis of a particular project's potential for litigation risk, which in turn may be based on a project's potential to generate public concern, its potential for significant impacts, and the project proponent's ability to pay for the costs of litigation without a letter of credit, among other factors.

The criteria pollutant emissions and toxic air contaminant emissions associated with the proposed project are not significant, and there is minimal potential for public concern for this particular type of facility/operation. Therefore, an Indemnification Agreement and/or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue ATC S-1199-6-12 subject to the permit conditions on the attached draft ATC in Appendix B.

X. Billing Information

Annual Permit Fees			
Permit Number	**Fee Schedule**	**Fee Description**	**Annual Fee**
S-1199-6-12	3020-02-H	19,950 kBtu/hr	$1,238

Appendices

A: Current PTO S-1199-6-11
B: Draft ATC S-1199-6-12
C: Emission Profile
D: Top Down BACT Analysis
E: Quarterly Net Emissions Change

APPENDIX A
Current PTO S-1199-6-11

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1199-6-11 **EXPIRATION DATE:** 05/31/2027

SECTION: SE10 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:
19.95 MMBTU/HR BROACH FORCED DRAFT NATURAL GAS-FIRED PIPELINE HEATER WITH A PRO-FIRE MODEL NTD210NGX-15S-6P ULTRA LOW NOX BURNER AND MANUAL FLUE GAS RECIRCULATION (FGR)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Except during start-up and shutdown, emissions rates from the unit shall not exceed any of the following emission limits: 15 ppmv NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 80 ppmv CO @ 3% O2 or 0.059 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit
5. During start-up and shutdown, emissions from the unit shall not exceed any of the following limits: 83 ppmv NOx @ 3% O2 or 0.1 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 115 ppmv CO @ 3% O2 or 0.84 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit
6. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit
7. The total duration of startup and shutdown time shall not exceed either of the following limits: 8.0 hours per day or 2,920 hours per year. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
8. The flue gas recirculation valve(s) setting shall be monitored at least on a weekly basis. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last week. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
9. The acceptable settings for the flue gas recirculation valve(s) shall be established by source testing this unit or other representative units per Rule 4305 and as approved by the District. The normal range/level shall be that for which compliance with applicable NOx and CO emissions rates have been demonstrated through source testing at a similar firing rate. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
10. Normal range or level for the flue gas recirculation valve(s) settings shall be re-established during each source test required by this permit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

11. If the flue gas recirculation valve(s) setting is less than the normal range/level, the permittee shall return the flue gas recirculation valve(s) setting to the normal range/level as soon as possible, but no longer than 1 hour of operation after detection. If the flue gas recirculation valve(s) setting is not returned to the normal range/level within 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour, and conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the applicable emission limits at the new flue gas recirculation valve(s) setting. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
12. The permittee shall maintain records of the date and time of flue gas recirculation valve(s) settings, the observed setting, and the firing rate at the time of the flue gas recirculation valve(s) setting measurements. The records must also include a description of any corrective action taken to maintain the flue gas recirculation valve(s) setting within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
13. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
14. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
15. During the 36-month source testing interval, the owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rule 4306] Federally Enforceable Through Title V Permit
16. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rule 4306] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
19. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

24. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and 4320] Federally Enforceable Through Title V Permit

26. Daily records of start-up and shutdown durations shall be maintained. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

APPENDIX B
ATC S-1199-6-12

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1199-6-12 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: PLAINS MARKETING LP
MAILING ADDRESS: ATTN: DEBBIE CARDELL
3600 BOWMAN CT
BAKERSFIELD, CA 93308

LOCATION: PENTLAND PUMP STATION
2311 BASIC SCHOOL RD
MARICOPA, CA 93252

SECTION: SE10 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:
MODIFICATION OF 19.95 MMBTU/HR BROACH FORCED DRAFT NATURAL GAS-FIRED PIPELINE HEATER WITH A PRO-FIRE MODEL NTD210NGX-15S-6P ULTRA LOW NOX BURNER AND MANUAL FLUE GAS RECIRCULATION (FGR): REPLACE BURNER NOZZLES AND MODIFY THE CONTROL INSTRUMENTS/PLS PROGRAMMING TO ACHIEVE NOX EMISSIONS OF 9 PPMV @ 3% O2 FOR RULE 4306 COMPLIANCE

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. 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] Federally Enforceable Through Title V Permit
5. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit

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.

Samir Sheikh, Executive Director / APCO

Brian Clements, Director of Permit Services
S-1199-6-12 : Jan 25 2023 9:47AM -- ALEMANZ : Joint Inspection NOT Required

6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

7. The unit shall only be fired on PUC-regulated natural gas. [District Rules 2201, 4306, and 4320] Federally Enforceable Through Title V Permit

8. Except during start-up and shutdown, emissions rates from the unit shall not exceed any of the following emission limits: 9 ppmv NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.003 lb-PM10/MMBtu, 80 ppmv CO @ 3% O2 or 0.059 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

9. During start-up and shutdown, emissions from the unit shall not exceed any of the following limits: 83 ppmv NOx @ 3% O2 or 0.1 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 115 ppmv CO @ 3% O2 or 0.84 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

10. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

11. The total duration of startup and shutdown time shall not exceed either of the following limits: 8.0 hours per day or 2,920 hours per year. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

12. The flue gas recirculation valve(s) setting shall be monitored at least on a weekly basis. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last week. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

13. The acceptable settings for the flue gas recirculation valve(s) shall be established by source testing this unit or other representative units per Rule 4306 and as approved by the District. The normal range/level shall be that for which compliance with applicable NOx and CO emissions rates have been demonstrated through source testing at a similar firing rate. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

14. Normal range or level for the flue gas recirculation valve(s) settings shall be re-established during each source test required by this permit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

15. If the flue gas recirculation valve(s) setting is less than the normal range/level, the permittee shall return the flue gas recirculation valve(s) setting to the normal range/level as soon as possible, but no longer than 1 hour of operation after detection. If the flue gas recirculation valve(s) setting is not returned to the normal range/level within 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour, and conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the applicable emission limits at the new flue gas recirculation valve(s) setting. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of the date and time of flue gas recirculation valve(s) settings, the observed setting, and the firing rate at the time of the flue gas recirculation valve(s) setting measurements. The records must also include a description of any corrective action taken to maintain the flue gas recirculation valve(s) setting within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

18. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

19. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. During the 36-month source testing interval, the owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rule 4306] Federally Enforceable Through Title V Permit

21. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rule 4306] Federally Enforceable Through Title V Permit

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

24. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

30. Pursuant to Rule 4320, the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

31. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. [District Rules 1070 and 4320] Federally Enforceable Through Title V Permit

32. Daily records of start-up and shutdown durations shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

33. Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081, 4306, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

34. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

APPENDIX C
Emission Profile

Application Emissions

Permit #: S-1199-6-12	**Last Updated**
Facility: PLAINS MARKETING LP	01/12/2023 ALEMANZ

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	7107.0	498.0	524.0	11767.0	961.0
Daily Emis. Limit (lb/Day)	19.5	1.4	1.4	90.5	2.6
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	-203.0	0.0	0.0	0.0	0.0
Q2:	-204.0	0.0	0.0	0.0	0.0
Q3:	-204.0	0.0	0.0	0.0	0.0
Q4:	-204.0	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:					

APPENDIX D
Top Down BACT Analysis

Top-Down BACT Analysis for 19.95 MMBtu/hr Natural Gas-Fired Process Heater (Oil Heater)

The District's BACT Clearinghouse previously included guideline 1.8.5, which applied to non-refinery process heaters that were rated less than 20 MMBtu/hr. However, guideline 1.8.5 has been rescinded and is currently being revised and updated under a separate project. Therefore, a project-specific BACT analysis will be performed using information from the proactive revision of BACT Guideline 1.8.5 to evaluate BACT requirements for VOC emissions from the 19.95 MMBtu/hr natural gas-fired pipeline oil process heater

1. BACT Analysis for VOC Emissions:

VOC emissions result from the incomplete combustion of various elements in the natural gas fuel.

a. Step 1 - Identify all control technologies

As discussed above, the SJVUAPCD BACT Clearinghouse previously contained guideline 1.8.5, which identified BACT requirements for process heaters rated at less than 20 MMBtu/hr and firing on natural gas fuel or propane as a backup fuel. The BACT guideline was rescinded due to the fact that it has been more than 5 years since the guideline was last revised. As mentioned earlier, this BACT guideline is being proactively updated under a separate project. Information to evaluate BACT requirements for VOC emissions will be taken from that proactive analysis as well as other District rule requirements.

However, Rule 4320 does not specify any requirements for VOC emissions. In addition, District Rule 4320 Section 3.7 indicates that PUC-quality natural gas is a high methane gas with at least 80% methane by volume. Because PUC-quality natural gas is mostly composed of methane, an exempt non-VOC compound, combustion of natural gas generally does not result in significant VOC emissions.

Therefore, the use of PUC-quality natural gas is considered to be BACT for VOC emissions for the purposes of this project:

1) PUC-quality natural gas

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for VOC emissions from this class and category of source have been found.

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

1) PUC-Quality Natural Gas (Achieved in Practice)

d. Step 4 - Cost Effectiveness Analysis

The only option listed above has been identified as achieved in practice. Therefore, the option is required and is not subject to a cost analysis.

e. Step 5 - Select BACT

Pursuant to the above BACT Analysis, BACT for VOC emissions from the process heater is the use of PUC-quality natural gas as fuel. The applicant has proposed to use only PUC-quality natural gas (regulated by the PUC or FERC) as fuel. Therefore, the BACT requirements for VOC emissions from the modification of the existing 19.95 MMBtu/hr pipeline oil heater will be satisfied.

APPENDIX F
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.1 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$PE2_{quarterly} = PE2_{annual} \div 4$ quarters/year

$PE1_{quarterly} = PE1_{annual} \div 4$ quarters/year

Quarterly NEC [QNEC]			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
NO_X	1,776.8	1,980.5	-203.7
SO_X	124.5	124.5	0
PM_{10}	131.0	131.0	0
CO	2,941.8	2,941.8	0
VOC	240.3	240.3	0