TV Tracking #: 956 (Semi-Annual)

1. ☐ RECEIVED IN ENFORCEMENT: 07/30/2024

Air Liquide

Air Liquide Large Industries, U.S. LP
Rodeo Hydrogen Plant
1391 San Pablo Avenue
Rodeo, CA 94572

Certified Mail - Return Receipt Requested
Article Number:

July 30, 2024

Mr. Kelly Wee
Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
Attention: Title V Reports

Subject: **Air Liquide Large Industries US L.P.**
Rodeo Hydrogen Plant - Facility B7419
Title V Semi-Annual Monitoring Report
January 1, 2024 to June 30, 2024

Dear Mr. Wee:

Pursuant to Section I, Part F, of the Major Facility Review Permit ("Title V permit") for the Air Liquide Rodeo Hydrogen Plant, Air Liquide submits the enclosed Title V Semi-Annual Monitoring (SAM) report covering the 6-month time period from January 1, 2024 to June 30, 2024.

The enclosed SAM report lists each monitoring requirement from Section VII of the Title V permit and its compliance status during this semi-annual reporting period. In addition, permit conditions are referenced from Permit No. 32127 dated March 7, 2024 issued for the renewable feed and fuel project. This form is supplemented by Attachment A, which summarizes the content of the 10- and 30-day Title V deviation reports for all deviations that occurred during this semi-annual reporting period, including monitoring deviations.

If you have any questions, please contact me at (832) 948-4575 or by e-mail at jackie.sun@airliquide.com.

Sincerely,

Jackie Sun
Plant Engineer

Attachments

Title V
Semi-Annual Monitoring
Report Form

January 1, 2024 to June 30, 2024

Air Liquide Rodeo Hydrogen Plant
Title V Semi-Annual Monitoring Report

Site ID: B7419
Address: 1391 San Pablo Avenue
Rodeo, CA 94572

Date of Title V Permit: 9/27/2016 and Amended 4/10/2020
Date of NSR Permit(s) Issued Since Title V Permit Date: 3/7/2024
Reporting Period: 1/1/24 to 06/30/24

During the reporting period specifed above, all required monitoring of the applicable limits as listed in Section VII of the Title V Major Facility Review Permit was conducted, except where indicated below. If a "No" is indicated in the column "Monitoring Compliance (Y or N)," see Attachment A for the deviation details.

									Monitoring Compliance	
Item	**Type of Limit**	**Emission Limit Citation**	**FE[1] Y/N?**	**Future Effective Date**	**Emission Limits**	**Monitoring Requirements Citation**	**Monitoring Frequency[2] (P/C/N)**	**Monitoring Type**	**Yes or No[3]**	**If "No," Deviation Reference in Attachment A**
Permit Source: Table VII - All Sources										
1	SO2	BAAQMD Reg 9-1-301	Y		Ground level SO2 concentrations (0.5 ppm for 3 min; 0.25 ppm for 60 min; 0.05 ppm for 24 hr)	BAAQMD Reg 9-1-501 requires compliance w/ Reg 1-510	C	SO2 GLM operated and maintained by Phillips 66 Refinery	Yes	
2	H2S	BAAQMD Reg 9-2-301	N		Ground level H2S concentrations (0.06 ppm for 3 min; 0.03 for 60 min)	BAAQMD Reg 9-2-501	C	H2S GLM operated and maintained by Phillips 66 Refinery	Yes	
3	NH3	Condition 23181-A.2	Y		Ammonia solution less than 20% by weight	Condition 23181-A.2	P/E	Records	Yes	
Permit Source: Table VII A - S1 - Hydrogen Plant										
1	POC	BAAQMD Reg 8-10-301 SIP 8-10-301	Y		Abatement of emissions from process vessel depressurization is required until pressure is reduced to less than 1000 mm Hg	8-10-401.2 (SIP) & BAAQMD Reg 8-10-501 & 502 (non-SIP)	P/E	Records	Yes	
2	POC	Condition 23178-4	Y		Deaerator vent POC emissions < 4.35 lb/day	Condition 23178-9a	P/A	Source test	Yes	
3	POC	Condition 23178-6	Y		Fugitive mass emissions < 3,000 lb/yr	Condition 23178-18	P/Q	Inspection & calculations	Yes	
4	POC	Condition 23181-B.2d	Y		13.9 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	Annual Source Tests, inspection data & calculations	Yes	
5	Organic compounds	BAAQMD Reg 8-2-301	Y		Emission streams w/ 15 lb/day AND 300 ppm total carbon on a dry basis prohibited	Condition 23178-9a	P/A	Source test	Yes	
6	Throughput	Condition 23178-1	Y		120 MMscf H2/day, annual average	Condition 23178-1	P/D	Records	Yes	
7	NH3	BAAQMD Reg 7-303	N		5000 ppm	Condition 23178-9b	P/A	Source test	Yes	
8	NH3	Condition 23178-5	N		0.64 lb/hr	Condition 23178-9b	P/A	Source test	Yes	
9	NH3	Condition 23181-B.2g	N		26.9 tons per year for S1, S2, and S3	Condition 23181 part B.4	P/A	Source Tests & calculations	Yes	
10	Electrical production	Condition 23178-2	Y		< 12 MW	Condition 23178-2	C	Records	Yes	
11	Hydrogen production	Condition 23178-1	Y		120 MMscf H2/day, annual average	Condition 23178-1	C	Hydrogen flow monitoring	Yes	

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12	NOx	Condition 23181-B.2a	Y		30.9 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	CEM & calculations	Yes	
13	SO2	Condition 23181-B.2b	Y		5.0 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	CEM & calculations	Yes	
14	Opacity	BAAQMD Reg 6-1-301	N		Ringelmann 1 for no more than 3 minutes in any hour	None	N	None	Yes	
15	Opacity	SIP 6-301	Y		Ringelmann 1 for no more than 3 minutes in any hour	None	N	None	Yes	
16	FP	BAAQMD Reg 6-1-305	N		Prohibition of nuisance	None	N	None	Yes	
17	FP	SIP 6-305	Y		Prohibition of nuisance	None	N	None	Yes	
18	FP	BAAQMD Reg 6-1-310	N		0.15 grain/dscf	None	N	None	Yes	
19	FP	SIP 6-310	Y		0.15 grain/dscf	None	N	None	Yes	
20	PM10	Condition 23181-B.2c	Y		13.8 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	Annual Source Test at S2 & calculations	Yes	
21	CO	Condition 23181-B.2e	Y		46.2 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	CO CEM, Source Tests & calculations	Yes	
22	Sulfuric acid mist	Condition 23181-B.2f	Y		0.43 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	Annual Source Tests & calculations	Yes	
Permit Source: Table VII B - S2 - Hydrogen Plant Furnace										
1	Heat input	Condition 23179-2	Y		9,636,000 MMbtu (HHV) in any 12 months	Condition 23179-20	C	Fuel meters, fuel analyzers & records	Yes	
1a	Heat input	Condition 23179-2 *	Y		8,541,000 MMbtu (HHV) in any 12-months	Condition 23179-20	C	Fuel meters, fuel analyzers & records	Yes	
2	Heat input	Condition 23179-3	Y		1,072 MMbtu (HHV) during any clock hour	Condition 23179-20	C	Fuel meters, fuel analyzers & records	Yes	
3	Sulfur Content	Condition 23179-4	N		Fuel mixture burned shall not exceed 35 ppmv total sulfur content	Condition 23179-14	C	Fuel meters, fuel analyzers & records	Yes	
4	NOx	BAAQMD Reg 9-3-303	Y		125 ppmv	Condition 23179-13	C	CEM	Yes	

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5	Emission Limit	Condition 23179-5	Y		The following emission concentration limits from S2 shall not be exceeded. These limits shall not apply during startup periods not exceeding 24 hours (120 hours when drying refractory or during the first startup following catalyst replacement) and shutdown periods not exceeding 24 hours. The District may approve other startup and shutdown durations.	Condition 23179-13	C	CEM	Yes	
6	NOx	Condition 23179-5a	Y		5 ppmv @ 3% O2 on a clock hour basis except during startup, shutdown, or drying of refractory	Condition 23179-13	C	CEM	No	Deviation 1
7	NOx	Condition 23179-7a.1	Y		7.5 lb/clock hour except during startup, shutdown, or drying of refractory	Condition 23179-13	C	CEM	Yes	
8	NOx	Condition 23179-7b.1	Y		50 lb per clock hour	Condition 23179-13	C	CEM	Yes	
9	NOx	Condition 23179-10a	Y		28.1 tons per any consecutive 12 months	Condition 23179-13	C	CEM and calculations	Yes	
10	NOx	Condition 23181-B.2a	Y		30.9 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	CEM, annual source tests, and calculations	Yes	
11	NOx	40 CFR 60.102a(g)(2)(ii)	Y		60 ppmv, dry, @ 0% O2 on a 30-day rolling average basis	40 CFR 60.107a(c)	C	CEM	Yes	
12	CO	Condition 23179-5b			10 ppmv @ 3% O2 on a clock hour basis except during startup, shutdown, or drying of refractory	Condition 23179-19b	C	CEM	Yes	
13	CO	Condition 23179-7a.2	Y		9.1 lb/clock hour except during startup, shutdown, or drying of refractory	Condition 23179-19b	C	CEM	Yes	
14	CO	Condition 23179-10b	Y		34.2 tons per any consecutive 12 months	Condition 23179-19b	C	CEM and calculations	Yes	
15	CO	Condition 23181-B.2e	Y		46.2 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	CO CEM, Annual Source Tests & calculations	Yes	
16	SO2	Condition 23179-5e	Y		0.0012 lb/MMbtu on a clock hour basis except during startup, shutdown, or drying of refractory	Condition 23179-17	P/A	Source test	Yes	

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17	SO2	Condition 23179-7a.5	Y		1.5 lb/clock hour except during startup, shutdown, or drying of refractory	Condition 23179-14	C	Sulfur monitoring or CEM & calculations	Yes	
18	SO2	Condition 23179-10e	E		5.0 tons per any consecutive 12 months	Condition 23179-14	C	Sulfur monitoring or CEM & calculations	Yes	
19	SO2	Condition 23181-B.2b	Y		5.0 tons per year for S1, S2 & S3	Condition 23181-B.4	C	Sulfur monitoring or CEM & calculations	Yes	
20	SO2	40 CFR 60.102a (g)(1)(i)	Y		162 ppmv on a rolling 3 clock hour basis; 60 ppmdv on a rolling 365 calendar day basis	40 CFR 60.107a(a)(1)	C	Sulfur monitoring or CEM & calculations	Yes	
21	Sulfuric acid mist	Condition 23179-9	Y		0.098 lb/clock hour	Condition 23179-17	P/A	Source test	Yes	
22	Sulfuric acid mist	Condition 23179-12	Y		860 lb per any consecutive 12 months	Condition 23179-17	P/A	Annual Source Tests & calculations	Yes	
23	Sulfuric acid mist	Condition 23181-B.2f	Y		0.43 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	Annual Source Tests & calculations	Yes	
24	Sulfuric acid mist	Condition 23181-B.3	Y		2.35 lb/day for S1, S2 & S3	Condition 23181-B.4	P/A	Annual Source Tests & calculations	Yes	
25	POC	Condition 23179-5c	Y		0.0027 lb/MMbtu on a clock hour basis except during startup, shutdown, or drying of refractory	Condition 23179-17	P/A	Source test	Yes	
26	POC	Condition 23179-7a.3	Y		3.5 lb/clock hour except during startup, shutdown, or drying of refractory	Condition 23179-17	P/A	Source test	Yes	
27	POC	Condition 23179-10c	Y		11.5 tons per any consecutive 12 months	Condition 23179-17 & 28181-B.4.f	P/A	Source test	Yes	
28	POC	Condition 23181-B.2d	Y		13.9 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	Annual Source Tests, inspection data & calculations	Yes	
29	NH3	Condition 23179-6 & 21	N		10 ppmv @ 3% O2, 1-hr average	Condition 23179-17a	P/A	Source test	Yes	
30	NH3	N/A	N		None	Condition 23179-22	C	Monitoring of ammonia injection rates	Yes	
31	NH3	Condition 23179-8	N		6.5 lb/clock hour	Condition 23179-17a	P/A	Source test	Yes	

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32	NH3	Condition 23179-11	N		48,200 lb per any consecutive 12 months	Condition 23179-23	P/A or 4 times per year	Annual or Quarterly Source tests & calculations	Yes	
33	NH3	Condition 23181-B.2g	N		26.9 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	Source tests and calculations	Yes	
34	O2		Y		No limit	BAAQMD Reg 1-520.1	C	O2 Monitor	Yes	
35	Opacity	BAAQMD Reg 6-1-301	N		Ringelmann 1 for no more than 3 minutes in any hour	None	N	None	Yes	
36	Opacity	SIP 6-301	Y		Ringelmann 1 for no more than 3 minutes in any hour	None	N	None	Yes	
37	FP	BAAQMD Reg 6-1-305	N		Prohibition of nuisance (Visible Particles)	None	N	None	Yes	
38	FP	SIP 6-305	Y		Prohibition of nuisance	None	N	None	Yes	
39	FP	BAAQMD Reg 6-1-310.3	N		0.15 grain/dscf @ 6% O2	None for gaseous fired sources	N	None	Yes	
40	FP	SIP 6-310.3	Y		0.15 grain/dscf @ 6% O2	None for gaseous fired sources	N	None	Yes	
41	PM10	Condition 23179-5d			0.037 lb/MMbtu on a clock hour basis except during startup, shutdown, or drying of refractory	Condition 23179-17	P/A	Source test	Yes	
42	PM10	Condition 23179-7a.4	Y		4.8 lb/clock hour except during startup, shutdown, or drying of refractory	Condition 23179-17	P/A	Source test	Yes	
43	PM10	Condition 23179-10d	Y		13.8 tons per any consecutive 12 months	Condition 23179-17 & part 28181-B.4.f	P/A	Source test & calculations	Yes	
44	PM10	Condition 23181-B.2c	Y		13.8 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	Annual Source Test at S2 & calculations	Yes	
Permit Source: Table VII C - S3 - Hydrogen Plant Flare										
1	Opacity	BAAQMD Reg 6-1-301	N		Ringelmann 1 for no more than 3 minutes in any hour	Condition 23180, parts 8-10	P/E	Visible emissions monitoring	Yes	
2	Opacity	SIP 6-301	Y		Ringelmann 1 for no more than 3 minutes in any hour	Condition 23180, parts 8-10	P/E	Visible emissions monitoring	Yes	
3	FP	BAAQMD Reg 6-1-305	N		Prohibition of nuisance (Visible Particles)	None	N	None	Yes	

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4	FP	SIP 6-305	Y		Prohibition of nuisance	None	N	None	Yes	
5	FP	BAAQMD Reg 6-1-310.3	N		0.15 grain/dscf @ 6% O2	None for gaseous fired sources	N	None	Yes	
6	FP	SIP 6-310.3	Y		0.15 grain/dscf @ 6% O2	None for gaseous fired sources	N	None	Yes	
7	NOx	Condition 23180-4a	Y		2.8 tons per any consecutive 12 months	Condition 23180-5	P/M	Flow data & calculations	Yes	
8	NOx	Condition 23180-4c	Y		129 lb per any consecutive 60 minutes	Condition 23180-5	P/M	Flow data & calculations	Yes	
9	NOx	Condition 23181-B.2a	Y		30.9 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	CEM data & calculations	Yes	
10	POC	Condition 23181-B.2d	Y		13.9 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	Annual Source Tests, inspection data & calculations	Yes	
11	PM10	Condition 23181-B.2c	Y		13.8 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	Annual Source Test at S2 & calculations	Yes	
12	CO	Condition 23180-4b	Y		12.1 tons per any consecutive 12 months	Condition 23180-5	P/M	Flow data & calculations	Yes	
13	CO	Condition 23181-B.2e	Y		46.2 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	CO CEM, Annual Source Tests & calculations	Yes	
14	SO2	40 CFR 60.104(a)	Y		Burn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H2S) in excess of 230 mg/dscm (0.10 gr/dscf). The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this paragraph.	40 CFR 60.105(a)(4)(iv)	E	Records for fuel gas streams that are inherently low in sulfur as required by 60.107(e)	Yes	
15	SO2	Condition 23181-B.2b	Y		5.0 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	Sulfur monitoring or CEM & calculations	Yes	
16	Sulfuric acid mist	Condition 23181-B.2f	Y		0.43 tons per year for S1, S2 & S3	Condition 23181-B.4	P/A	Annual Source Tests & calculations	Yes	
17	NH3	Condition 23181-B.2g	N		26.9 tons per year for S1, S2, and S3	Condition 23181-B.4	P/A	Source tests and calculations	Yes	

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18	VE	40 CFR 60.18(c)(1) (Flare)	Y		No visible emissions except for 5 min in any two hours	40 CFR 60.18(f)(1)	P/E	Method 22	N/A	
19	Presence of flame	40 CFR 60.18(c)(2) (Flare)	Y		Flame present at all times	40 CFR 60.18(f)(2)	C	Thermocouple or equivalent device	Yes	
20	Velocity & heat content requirement	40 CFR 60.18(c)(3) (i) OR 40 CFR 60.18(c)(3) (ii) & (c)(4)(i) OR 40 CFR 60.18(c)(3) (ii) & (c)(4)(ii)			1) If flare is non-assisted & hydrogen content is ≥8% by volume, velocity must be < 122 ft/sec & less than Vmax, OR; 2) Steam/air assist flare must use gas w/ net HHV≥300 btu/scf and <1000 btu/scf; non-assist flare must use gas ≥200 btu/scf; all flare's velocity <60 ft/sec; OR 3) If net HHV of gas >1000 btu/scf velocity >60 ft/sec & <400 ft/sec .	40 CFR 60.18(f)(3), (4) & 5	C	Volume measurements gas analysis	N/A	
Permit Source: Table VII D - S4 - Cooling Tower										
1	Opacity	BAAQMD Reg 6-1-301	N		Ringelmann No. 1 for no more than 3 minutes/hour	None	N	None	Yes	
2	Opacity	SIP 6-301	Y		Ringelmann 1 for no more than 3 minutes in any hour	None	N	None	Yes	
3	FP	BAAQMD Reg 6-1-310	N		0.15 grain/dscf	None	N	None	Yes	
4	FP	SIP 6-310	Y		0.15 grain/dscf	None	N	None	Yes	
5	FP	BAAQMD Reg 6-1-311	N		40 lb/hr	None	N	None	Yes	
6	FP	SIP 6-311	Y		4.10 x P^0.67 lb/hr, where P is process weight, ton/hr	None	N	None	Yes	
7	PM	Condition 23414-2	Y		Dissolved solids < 3000 ppm	Condition 23414-6	P/M	Analysis total dissolved solids	Yes	
8	Organic compounds	BAAQMD Reg 8-2-301	Y		300 ppm as carbon and 15 lb organic compounds/day	Condition 23414-3	P/D	Visual inspection	Yes	
9	Organic compounds	BAAQMD Reg 8-2-301	Y		300 ppm as carbon and 15 lb organic compounds/day	Condition 23414-4	P/3 times per week	Analysis of chlorine content	Yes	
10	Organic compounds	BAAQMD Reg 8-2-301	Y		300 ppm as carbon and 15 lb organic compounds/day	Condition 23414-4	P/M	Analysis of VOC at inlet and return using EPA 8015	Yes	

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11	Organic compounds	BAAQMD Reg 8-2-301	Y		300 ppm as carbon and 15 lb organic compounds/day	Condition 23414-8	P/W, after indication of hydrocarbon leak	Estimate of daily VOC loss	Yes	
12	Chloroform	None			None	Condition 23414-5	P/M	Records of NaOCl usage	Yes	
Permit Source: Table VII AB - Components										
1	POC	BAAQMD Reg 8-18-301	Y		General equipment leak ≤ 100 ppm	BAAQMD Reg 8-18-401.2	P/Q	Inspection	Yes	
2	POC	BAAQMD Reg 8-18-302	Y		Valve leak ≤ 100 ppm	BAAQMD Reg 8-18-401.2	P/Q	Inspection	Yes	
3	POC	BAAQMD Reg 8-18-303	Y		Pump & compressor leak ≤ 500 ppm	BAAQMD Reg 8-18-401.2	P/Q	Inspection	Yes	
4	POC	BAAQMD Reg 8-18-304	Y		Connection leak ≤ 100 ppm	BAAQMD Reg 8-18-401.2e & Condition 23178-18	P/Q	Inspection	Yes	
5	POC	BAAQMD Reg 8-18-305	Y		Pressure relief valve leak ≤ 500 ppm	BAAQMD Reg 8-18-401.2	P/Q	Inspection	Yes	
6	POC	BAAQMD Reg 8-18-306.1	Y		Any essential equipment leak must be less than 10,000 ppm and mass emissions must be determined within 30 days of placing on the non-repairable list.	BAAQMD Reg 8-18-401.5, 8-18-401.9, 8-18-401.10	P/within 24 hours P/Q	Inspection, Records per 8-18-502.4	Yes	
7	POC	BAAQMD Reg 8-18-306.2	Y		Awaiting repair does not exceed the following: Valves: ≤ 0.15% PRD ≤ 0.5% Pump/Compressor ≤ 0.5%	BAAQMD Reg 8-18-401.5, 8-18-401.9	P/within 24 hours P/Q	Inspection	Yes	
8	POC	BAAQMD Reg 8-28-303	Y		Vent Pressure Relief Devices to an Abatement Device with at least 95% by weight control efficiency or Meet Prevention Measures Procedures	BAAQMD Reg 8-28-405	P/turn-around	None	Yes	

Air Liquide Rodeo Hydrogen Plant
Title V Semi-Annual Monitoring Report

Site ID: B7419
Address: 1391 San Pablo Avenue
Rodeo, CA 94572

Date of Title V Permit: 9/27/2016 and Amended 4/10/2020
Date of NSR Permit(s) Issued Since Title V Permit Date: 3/7/2024
Reporting Period: 1/1/24 to 06/30/24

During the reporting period specifed above, all required monitoring of the applicable limits as listed in Section VII of the Title V Major Facility Review Permit was conducted, except where indicated below. If a "No" is indicated in the column "Monitoring Compliance (Y or N)," see Attachment A for the deviation details.

									Monitoring Compliance	
Item	**Type of Limit**	**Emission Limit Citation**	**FE[1] Y/N?**	**Future Effective Date**	**Emission Limits**	**Monitoring Requirements Citation**	**Monitoring Frequency[2] (P/C/N)**	**Monitoring Type**	**Yes or No[3]**	**If "No," Deviation Reference in Attachment A**
9	POC	BAAQMD Reg 8-28-304	Y		PHA within 90 days & meet Prevention Measures Procedures. After 2nd release Vent Pressure Relief Devices to an Abatement Device with at least 95% by weight control efficiency.	BAAQMD Reg 8-28-405	P/release per 5 calendar year	None	Yes	
10	POC	40 CFR 60 Subpart VVa - 60.482-2a (b)(1)	Y		Pump leak less than 2,000 ppm	40 CFR 60.482-2a (a)(1)	P/M	Measure for leaks	Yes	
11	POC	40 CFR 60 Subpart VVa - 60.482-2a (b)(2)	Y		Pump leak Indicated by dripping liquid	40 CFR 60.482-2a (a)(2)	P/W	Visual Inspection	Yes	
12	POC	40 CFR 60 Subpart VVa - 60.482-2a (e)	Y		Designated “No detectable emissions” less than 500 ppm (Pumps)	40 CFR 60.482-2(e)(3)	P/A	Measure for leaks	Yes	
13	POC	40 CFR 60 Subpart VVa - 60.482-3a (f)	Y		Leak is failure of seal or barrier system (Compressor)	40 CFR 60.482-3a(d)-(f)	C	Sensor for detection of seal or barrier system failure	Yes	
14	POC	40 CFR 60 Subpart VVa - 60.482-7a (b)	Y		Valve leak < 500 ppm	40 CFR 60.482-7a (a)(1)	P/M unless 2 successive months w/o leak	Measure for leaks	Yes	
15	POC	40 CFR 60 Subpart VVa - 60.482-7a (c)(1)(i)	Y		Valve leak < 500 ppm; 2 successive months w/o leaking	40 CFR 60.482-7(c)	P/Q unless leak found, then monthly monitoring	Measure for leaks	Yes	
16	POC	40 CFR 60 Subpart VVa - 60.482-7a (f)	Y		Designated “No detectable emissions” < 500 ppm	40 CFR 60.482-7 (f)(3)	P/A	Measure for leaks	Yes	
17	POC	40 CFR 60 Subpart VVa - 60.482- 8a(a)	Y		Pumps & valves in heavy liquid service, Pressure Relief devices (light or heavy liquid), Flanges, Connectors leak shall be measured for leak in 5 days if detected by inspection	40 CFR 60.482-8a(a)	P/E	Visible, Audible, or olfactory Inspection	Yes	
18	POC	40 CFR 60 Subpart VVa - 60.482- 8a(b)	Y		Pressure Relief devices (liquid), Flanges, Connectors leak < 10,000 ppm	40 CFR 60.482-8a(a)	P/E	Measure for leaks	Yes	

Air Liquide Rodeo Hydrogen Plant
Title V Semi-Annual Monitoring Report

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Date of Title V Permit: 9/27/2016 and Amended 4/10/2020
Date of NSR Permit(s) Issued Since Title V Permit Date: 3/7/2024
Reporting Period: 1/1/24 to 06/30/24

During the reporting period specifed above, all required monitoring of the applicable limits as listed in Section VII of the Title V Major Facility Review Permit was conducted, except where indicated below. If a "No" is indicated in the column "Monitoring Compliance (Y or N)," see Attachment A for the deviation details.

									Monitoring Compliance	
Item	**Type of Limit**	**Emission Limit Citation**	**FE[1] Y/N?**	**Future Effective Date**	**Emission Limits**	**Monitoring Requirements Citation**	**Monitoring Frequency[2] (P/C/N)**	**Monitoring Type**	**Yes or No[3]**	**If "No," Deviation Reference in Attachment A**
19	POC	Condition 23178-6	Y		Fugitive emissions of POC from hydrogen plant components < 3,000 lb/yr	Condition 23178-18	P/Q	Method 21 & calculations	Yes	
20	TOC	Condition 23178-11b	Y		< 100 ppm of TOC (measured as C1) at new valves	Condition 23178-17	P/Q	Method 21	Yes	
21	TOC	Condition 23178-15	Y		< 100 ppm of TOC (measured as C1) at new pumps and/or compressors	Condition 23178-17	P/Q	Method 21	Yes	

1 FE = Federallly enforceable

2 Monitoring Frequency: P = Periodic; C = Continuous; N = None. Under Periodic, A = Annual; Q = Quarterly; M = Monthly; W = Weekly; D = Daily; H = Hourly; E = Per Event

3 Monitoring Compliance: Y = All required monitoring of the applicable limit was conducted; N = Not all required monitoring of the applicable limit was conducted. See noted deviation in Attachment A for details.

I certify under penalty of law that based on the information and belief formed after reasonable inquiry, the statements and information in this document and in all attachments and other materials are true, accurate and complete.

	Jackie Sun	Plant Engineer	
Signature of Responsible Official	**Print Name**	**Title**	**Date**

Title V
Semi-Annual Monitoring Report
Attachment A
Summary of Deviation

January 1, 2024 to June 30, 2024

Attachment A
Title V Semi-Annual Monitoring Report
Summary of Deviations

Facility: Air Liquide Rodeo Hydrogen Plant
Site ID: B7419

Date of Title V Permit: 9/27/2016 and Amended 4/10/2020
Reporting Period: 1/1/24 to 06/30/24

Title V deviations for this SAM reporting period are summarized below:

Item	Source / Tag #	Incident Date/Time	Event Description	Probable Cause	Corrective Action or Preventative Steps Taken	Deviation
1	S2	Start = 3/19/24 Discovery = 3/19/24 End = 3/19/24 Duration = 0 Stopped? = Yes	During the evening of 3/19/24 at 19:56, the ammonia system had an unexpected trip triggered from one of the dilution air blowers, C-106B, having an intermittent failure. The dampeners were note allowing sufficient flow throught to the vaporizer skid. The dampeners had to be opened wider to allow for more flow. C-106B was restarted at 20:02, and ammonia brought back in to bring the NOx 3% correction below 5 ppm @ 21:28; the hour average still exceeding 5 ppm for 21:00 - 22:00.	The initiating event was broken due to mechanical restrictions on dilution air flow.	Dilution air dampeners were opened wider, and the heater temperature set point was increased.	Conditions = 23179 paragraph 5a Rules = 1-522, 1-523 Other = N/A Previously Submitted = Yes RCA = 202247 (BD), 200248 (EE) NOV = N/A Monitoring Deviation? = No