

Hilcorp Energy (formerly ConocoPhillips Company)
Sunnyside Compressor Station
Full Compliance Evaluation (FCE)
On-Site Clean Air Act Evaluation

Inspection Date: 6/27/2022

Inspection Report Date: 7/19/2022

EPA Representatives: Alexis North, Young Joo Kim, Colin Lecortz, Katelyn Bergl

Company Representatives: Mitch Killough, Environmental Specialist
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Tribal Representatives: David Heermance, Meredith Breen, Andrew Switzer

Inspection Report Prepared By: Alexis North

Inspection Report Reviewed By: Scott Patefield **SCOTT PATEFIELD** Digitally signed by SCOTT PATEFIELD
Date: 2022.09.23 06:58:03 -06'00'

Last CAA Inspection: May 14, 2018

Applicable Rules: 40 C.F.R. Part 63, Subpart HH—National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities (MACT HH)
40 C.F.R. Part 63, Subpart ZZZZ—National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities (MACT ZZZZ) (area source)
40 C.F.R. Part 60, Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification, or Reconstruction Commenced After August 23, 2011, and on or Before September 18, 2015 (compressors)
Tribal minor new source review (# SMNSR-SU-000032-2019.002)

CAA Permit History:

1. September 26, 2006, operating permit the EPA issued to ConocoPhillips for the Sunnyside Compressor Station in accordance with the Title V Operating Permit Program at 40 CFR part 71 (Part 71).
2. February 4, 2010, Federal Compliance Agreement and Final Order (CAFO) between the EPA and ConocoPhillips. (Docket No.: CAA-08-2010-0007)
3. August 30, 2011, application from ConocoPhillips requesting a synthetic minor permit for the Sunnyside Compressor.

This facility was formally owned and operated by ConocoPhillips but as of August 1, 2017, was purchased by Hilcorp.

General Source Information

Parent Company Name: Hilcorp Energy
Facility Name: Sunnyside Compressor Station
Facility Location: Latitude 37.1194, Longitude -107.8372
EPA Region: 8
County, State: La Plata County, Colorado
Reservation & Tribe: Southern Ute Indian Tribe, Southern Ute Reservation
Responsible Official: Mitch Killough
SIC Code: 1311
ICIS Air ID: SU00000008067U0041

Areas of Concern

- Engine #1 onsite measured catalyst pressure drop higher than documented baseline (3.5 inches of water baseline, 5.9 inches of water measured onsite).
- Based on the data provided by Mr. Killough in a 9/1/22 email, it appears that Hilcorp is comparing monthly pressure drop readings to the pressure drop measured during the most recent quarterly tests, including from quarterly portable analyzer tests. Permit condition C.5.e specifically requires the actions in C.5.e.i – C.5.e.iii be taken “If the pressure drop reading exceeds ± 2 inches of water from the baseline pressure drop established during the most recent performance test”, where testing is considered to be a performance test if it meets the requirements outlined in Permit condition C.4.d.(i-v). Quarterly portable analyzer tests do not meet these requirements, and the pressure drop measured during these tests is therefore not an appropriate value to be used in determining deviations of monthly pressure drop readings.
- Hilcorp did not provide a description of corrective actions taken to address Inlet Catalyst Temperature Alarms pursuant to this permit
- When looking at the Inlet Catalyst Temperature Alarms submitted via email to EPA by Hilcorp on 9/1/2022, the low temperature alarms reading -13F began consistently on 5/4/2021. Engine 3 alarmed 146 times over 126 days before the issue was resolved. The documentation supplied by Hilcorp shows staff was not alerted to the alarms until 8/4/2021, three months after the issue began.
- At the time of this inspection report, EPA was unable to locate the 2021 emission inventory report.

Compliance Assistance

2018 Findings:

- If ASTM D6348 is going to be used for performance testing, the performance test protocol should be revised to assure that ASTM D6348-03 is used rather than ASTM D6348-12.
- Based on the information provided, it’s not clear whether all appropriate actions have been taken when engine pre-catalyst temperature falls below 405°F;
- It appears that a performance test was not conducted within 90 calendar days after engine #2 was rebuilt in 3/2017.
- When Hilcorp initially purchased Sunnyside they were late in submitting performance test results and failed to notify EPA of upcoming testing. This issue has since been resolved.
- Annual deviation reports indicate that the pressure drop across engine catalysts haven’t always met permit requirements. It’s not clear whether all appropriate actions have been taken when this has occurred. As of the date of this report the pressure drop data had not been provided to the EPA.
- The annual NSPS OOOO report was not submitted in 2018.
- Based on a review of the pressure drop data provided by Ms. Deal on 8/21/18, pressure drop readings exceeded the baseline pressure drop established during the most recent performance test (see Table 5, below) by ± 2 inches of water for engine C-13405/1 in 5/2016, 7/2016 through 9/2016, 11/2016 and 11/2017 through 5/2018;/or engine C-10664/2 no data was provided/or 12/2016; for C-115../2/1.from

11/2017 through 4/2018, and no data was provided for 1/2018; and for C-11100/8 in 12/2016, 12/2017, and 1/2018. Additionally, no performance test data are available/or engine C-10788/1 to compare the pressure drop readings that occurred from 1/2018 through 5/2018, and/or engine C-11542/1 for the pressure drop readings that occurred from 5/2016 through 8/2016.

- When monthly pressure drop readings exceeded the baseline pressure drop, it doesn't appear that any of the requirements contained in permit condition C. 5. (g) were fulfilled

Onsite Inspection Details

EPA et al. arrived onsite at 1:35 pm. Hilcorp staff walked inspection team through compressor station inlet (from roughly 50 wells), separations, compression, dehydration and plant outlet into Harvest Midstream gas plant. Sunnyside processes roughly 8-9 MCF per day of raw coalbed methane using three engines and a dehydration unit.

EPA noted the following onsite engine performance observations:

Engine ID	Engine Serial Number	Catalyst Pressure Drop (inches of water)	Inlet Catalyst Temperature (°F)	Engine RPM
Engine #1	C-10664/2	5.9	640	1006
Engine #2	C-11542/1	3.7	706	999
Engine #3	C-10788/1	2.5	714	1030

Hilcorp trucks out water removed from the gas at a rate of about 2 truckloads per week.

CAA Synthetic Minor Permit # SMNSR-SU-000032-2019.002 (Effective 10/8/2020)

Section I. Conditional Permit to Construct

C. Requirements for Engines

I. Construction and Operational Limits:

Engine Requirements	E001 (C-11100/8)	E002 (C-10664/2)	E003 (C-13405/1)	E004 (C-11542/1)
1. Op limits				
(a) 4-stroke lean burn	4SLB	4SLB	4SLB	4SLB
(b) Fired w/ natural gas	NG fired	NG fired	NG fired	NG fired
(c) 1,330 hp max	1,330 HP	1,330 HP	1,330 HP	1,330 HP
2. Emission limits				
NOx 5.28 lb/hr*	Last tested 2018	Passed	Passed	Passed
CO 1.27 lb/hr*	Last tested 2018	Passed	Passed	Passed
CH ₂ O 0.10 lb/hr*	Last tested 2018	Passed	Passed	Passed
3. Control & Ops				
(a) Install catalyst	Installed	Installed	Installed	Installed
(b)-(c) monitor catalyst temp between 450-1350F*	Installed- temps good	Installed- temps good	Installed- temps good	Installed- temps good
(d) catalyst pressure drop w/in +/- 2 inches of water	See Appendix A	See Appendix A	See Appendix A	See Appendix A

*See Appendix A for actual test results, catalyst exhaust temps and pressure drop.

4. Performance Testing

(a) NO_x, CO, CH₂O testing per Part 63 (CH₂O) and Part 60 (NO_x and CO) (i) within 90 days of startup of new engine, (ii) every 12 months for CH₂O, (iii) 90 days of catalyst replacement or (iv) engine rebuild.

Observation: In an email exchange between EPA (Katelyn Bergl) and Hilcorp (Mitch Killough), see Appendix C, the following engine rebuild/replacement activities were noted for each engine:

- E001 (C-11100/8)- Per engine testing, this engine was removed from service sometime in late 2018.
- E002 (C-10664/2)- Like-kind engine swap occurred in May 2018. Engine with serial No. C-13405 was replaced with C-10664. Cost of engine re-build did not exceed the 50% threshold when comparing the cost of the re-build to the cost of an entirely new engine.
- E003 (C-13405/1, now C-10788)- Like-kind engine swap occurred in 2017. Engine with serial No. C-13405 was swapped out with serial No. C-10788 in June 2017. Per the 7/3/2018 EPA inspection report date, Sunnyside Skid #3 is shown to have an engine re-build date of 6/25/2017, but is shown to be 6/23/2017 on a tag pulled from the unit. In addition, an email from Hilcorp's Jennifer Deal (5/30/2018) shows the rebuild date to be 6/7/2017. This table reflects a 6/23/2017 start-up date. Cost of engine re-build did not exceed the 50% threshold when comparing the cost of the re-build to the cost of an entirely new engine.
- E004 (C-11542/1)- No engine re-builds or replacements noted in Hilcorp records since March 2017.

5. Monitoring Requirements

(a) and (b) monitoring exhaust temp of each engine at the catalyst inlet.

Observation: Upon request, Hilcorp provided records of catalyst temperature alarms Appendix C, Item 5. A spot check of alarms and the Hilcorp work orders (Appendix C) demonstrated not every alarm results in a work order. Per Hilcorp, when an alarm is triggered, Hilcorp personnel are alerted to diagnose the issue immediately. **Hilcorp did not provide a description of corrective actions taken pursuant to this permit**

(c), (d) and (g) is pressure differential drop across the catalyst monitoring.

Observation: Upon request, Hilcorp provided all differential pressure drop monitoring in Appendix C, Item 6. **Based on the data provided by Mr. Killough in a 9/1/22 email, it appears that Hilcorp is comparing monthly pressure drop readings to the pressure drop measured during the most recent quarterly tests, including from quarterly portable analyzer tests. Permit condition C.5.e specifically requires the actions in C.5.e.i – C.5.e.iii be taken "If the pressure drop reading exceeds ± 2 inches of water from the baseline pressure drop established during the most recent performance test", where testing is considered to be a performance test if it meets the requirements outlined in Permit condition C.4.d.(i-v). Quarterly portable analyzer tests do not meet these requirements, and the pressure drop measured during these tests is therefore not an appropriate value to be used in determining deviations of monthly pressure drop readings.**

(e) Quarterly NO_x and CO using portable analyzer, see Appendix A.

(h) thru (k) is portable analyzer protocol approved July 12, 2016.

6. Recordkeeping

d. Records shall be kept of all temperature measurements required in this permit, as well as a description of any corrective actions taken pursuant to this permit.

Observations: At this time, only temperature deviations have been provided to the EPA. **Complete temperature measurement data or a description of corrective actions taken pursuant to this permit have not been provided at this time.**

Observation: As reported by Hilcorp in the CY2021 Deviation report, engine E003 “temperature sensing device was not operating properly” between 6/24/2021 and 9/28/2021. When looking at the Inlet Catalyst Temperature Alarms submitted via email to EPA by Hilcorp on 9/1/2022, the low temperature alarms reading -13F began consistently on 5/4/2021. Engine 3 alarmed 146 times over 126 days before the issue was resolved. The documentation supplied by Hilcorp shows staff was not alerted to the alarms until 8/4/2021, three months after the issue began.

e. Records shall be kept of all pressure drop measurements required in this permit, as well as a description of any corrective actions taken pursuant to this permit.

Observations: Pressure drop measurement data was provided upon request. Since 2018, there appear to have been several deviations of pressure drop data from the established baseline, as well as missing monthly data points. A description of corrective actions taken following deviations was not provided.

E. Requirements for Leak Detection and Repair (LDAR)

1. The Permittee shall implement a LDAR monitoring program for detecting emissions of volatile organic compound (VOC) emissions due to leaking equipment.

Observations: Hilcorp (and formerly ConocoPhillips) submits semiannual and annual reports of the LDAR monitoring that occurs at the facility.

2. The Permittee shall develop a written LDAR protocol that, at a minimum, specifies the following:

- (a) The use of an infrared camera for the detection of VOC leaks;
- (b) The technical procedures for monitoring with the infrared camera;
- (c) A schedule for conducting semiannual monitoring;
- (d) Monitoring of “equipment” per the approved LDAR protocol;
- (e) A definition of when a “leak” is detected;
- (f) A repair schedule for leaking equipment (including delay of repair); and
- (g) A recordkeeping format.

Observations: The LDAR protocol was submitted to EPA on 7/31/12.

4. LDAR protocols that have already been approved by the EPA may be used in lieu of new protocols unless the EPA determines it is necessary to require the submittal and approval of a new LDAR protocol.

5. The Permittee may submit a revised LDAR protocol at any time for EPA approval. The existing LDAR protocol will remain in effect until a revised LDAR protocol is approved by the EPA.

Observations: The LDAR protocol was submitted to EPA on 7/31/12. EPA or company is unable to find a copy of EPA’s approval. However, the 7/31/12 letter submitting the Argenta and Sunnyside Compressor Station LDAR protocol indicates the protocol submitted on 7/31/12 was the same as the Ute LDAR CDP LDAR protocol which was approved in a 5/24/12 email from EPA.

6. In the event that the EPA determines that the LDAR monitoring program is not meeting its intended goals, the Permittee shall submit a revised LDAR protocol upon request by the EPA.

Observations: EPA has not determined that the LDAR monitoring program is not meeting its intended goals.

7. Leak detection monitoring shall commence upon approval of the LDAR protocol by the EPA.

Observations: The LDAR protocol was submitted to EPA on 7/31/12. Based on LDAR reports submitted, LDAR monitoring is being conducted.

8. LDAR monitoring shall be conducted at least semi-annually in accordance with an approved LDAR protocol and shall be conducted a minimum of 5 calendar months apart.

Observations: Hilcorp submits semiannual and annual reports of the LDAR monitoring that is conducted. EPA reviews the reports as they are received.

9. The Permittee shall notify the EPA in writing at least 30 calendar days prior to any LDAR monitoring conducted. If monitoring cannot be performed on the scheduled date, the Permittee shall notify EPA at least 1 week prior to the scheduled date and reschedule the monitoring to satisfy the monitoring frequency requirements.

Observations: Hilcorp submits notices of LDAR monitoring to be conducted 30 calendar days beforehand.

10. The Permittee shall maintain a record of all EPA approved LDAR protocols.

11. The Permittee shall maintain a record of the results of all LDAR monitoring and any necessary equipment repairs due to VOC leaks.

Observations: Hilcorp (formerly ConocoPhillips) submits semiannually and annually the results of all LDAR monitoring. The LDAR reports identifies what and when inspections occurred, weather, findings and repairs in a large table and then individual reports on each finding.

G. Requirements for Reporting

1. Annual Emissions Reports

Reports summarizing actual emissions and submitted to the Region 8 Air Permitting group.

Report Date	Year	NO _x *	CO*	VOC*	PM*	SO ₂ *	CH ₂ O*	Benzene
Not Rcvd	2021							
3/9/21	2020	69.27	17.28	10.84	1.55	2.3	1.32	0.23
3/1/20	2019	69.59	17.36	10.84	1.55	2.31	1.32	0.23

*NO_x = nitrogen oxide; CO = carbon monoxide; VOC = volatile organic compound; PM = particulate matter; SO₂ = sulfur dioxide; CH₂O = formaldehyde

4. Deviation reports are due 30 days after discovery.

Observation: Hilcorp submits deviation reports when necessary.

ADDITIONAL CAA REQUIREMENTS

NSPS OOOO (Compressor Engines)

Compressor engines pre-date NSPS OOOO applicability.

MACT HH

Hilcorp Sunnyside is exempt from MACT HH emissions limitations due to their actual average emissions of

benzene are less than 0.9 megagrams per year.

MACT ZZZZ

Hilcorp Sunnyside is subject to area source, remote engine work practices outlined in MACT ZZZZ- Table 2d (see below):

Emissions

8. For each Non-emergency, non-black start 4SLB and 4SRB remote stationary RICE >500 HP You must meet the following requirement, except during periods of startup:
 - a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;⁶
 - b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and
 - c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary

Observation: Hilcorp has indicated that the engines at Sunnyside are considered remote designated engines in accordance with NESHAP ZZZZ practices. Laurie Ostrand's 2018 inspection verified the remote status and the implementation of a compliant engine maintenance program.

Appendix A: Sunnyside Engine Test Reports

						Permit Limit			Permit Limit Test Results						
Facility Name	Unit ID	Serial #	Date Test Notice Revd	Date Test Report Revd	Quarter	CO lb/hr	CH2O lb/hr	NOX lb/hr	Test Date	CO (lb/hr)	CH2O (lb/hr)	NOx (lb/hr)	Avg. Catalyst Temp. (°F)	Avg. Δ P (inches H ₂ O)	Average Load
Sunnyside	E003	C-10664/2	2/1/2022	5/2/2022	Q1	1.27		5.28	3/7/2022	0.18		0.68	682	3.5	65%
Sunnyside	E004	C-11542/1	2/1/2022	5/2/2022	Q1	1.27		5.28	3/7/2022	0.31		0.65	708	3.5	57%
Sunnyside	E002	C-10788/1	2/1/2022	5/2/2022	Q1	1.27		5.28	3/7/2022	0.11		0.54	709	3.8	62%
Sunnyside	E003	C-10664/2	10/15/2021	12/29/2021	Q4	1.27		5.28	11/16/2021	0.11		0.47	685	2.1	38%
Sunnyside	E004	C-11542/1	10/15/2021	12/29/2021	Q4	1.27		5.28	11/16/2021	0.11		0.34	705	2	33%
Sunnyside	E002	C-10788/1	10/15/2021	12/29/2021	Q4	1.27		5.28	11/16/2021	0.24		0.043	721	6.7	37%
Sunnyside	E002	C-10788/1	7/15/2021	11/23/2021	Q3	1.27	0.10	5.28	8/23/2021	0.39	0.06	1.41	738	3.8	82%
Sunnyside	E003	C-10664/2	7/15/2021	11/23/2021	Q3	1.27	0.10	5.28	8/23/2021	0.09	0.01	2.57	671	3.5	86%
Sunnyside	E004	C-11542/1	7/15/2021	11/23/2021	Q3	1.27	0.10	5.28	8/23/2021	0.05	0.04	1.75	731	3.5	82%
Sunnyside	E003	C-10664/2		6/4/2021	Q2	1.27		5.28	5/5/2021	0.07		0.074	636	3.4	65%
Sunnyside	E004	C-11542/1		6/4/2021	Q2	1.27		5.28	5/5/2021	0.3		0.68	714	3.5	58%
Sunnyside	E002	C-10788/1		6/4/2021	Q2	1.27		5.28	5/5/2021	0.13		0.58	722	3.8	60%
Sunnyside	E002	C-10788/1	1/13/2021	3/31/2021	Q1	1.27		5.28	2/16/2021	0.08		0.45	700	3.8	66%
Sunnyside	E003	C-10664/2	1/13/2021	3/31/2021	Q1	1.27		5.28	2/16/2021	0.06		0.56	677	3.4	70%
Sunnyside	E004	C-11542/1	1/13/2021	3/31/2021	Q1	1.27		5.28	2/16/2021	0.24		0.48	694	3.5	60%
Sunnyside	E002	C-10788/1	10/5/2020	1/15/2021	Q4	2.70	0.22	5.50	11/10/2020	0		0.01	706	3.8	61%
Sunnyside	E003	C-10664/2	10/5/2020	1/15/2021	Q4	1.27	0.10	5.28	11/10/2020	0.21		0.86	686	3.4	61%
Sunnyside	E004	C-11542/1	10/5/2020	1/15/2021	Q4	1.27	0.10	5.28	11/10/2020	0.22		0.92	702	3.5	66%
Sunnyside	E002	C-10788/1		9/24/2020	Q3	1.27	0.10	5.28	8/6/2020	0.04	0.05	1.72	738	3.8	82%
Sunnyside	E003	C-10664/2		9/24/2020	Q3	1.27	0.10	5.28	8/6/2020	0.09	0.04	2.47	709	1.93	77%
Sunnyside	E004	C-11542/1		9/24/2020	Q3	1.27	0.10	5.28	8/6/2020	0.22	0.05	3.39	730	2.67	77%
Sunnyside	E003	C-10664/2	4/7/2020	6/16/2020	Q2	1.27		5.28	4/28/2020	0.19		1.38	691	3.4	54%
Sunnyside	E004	C-11542/1	4/7/2020	6/16/2020	Q2	1.27		5.28	4/28/2020	0.39		0.82	701	3.5	52%
Sunnyside	E002	C-10788/1	4/7/2020	6/16/2020	Q2	1.27		5.28	4/28/2020	0.22		0.73	706	3.8	49%

Sunnyside	E003	C-10664/2	2/5/2020	4/7/2020	Q1	1.27		5.28	3/18/2020	0.17		0.98	718	3.8	50%
Sunnyside	E004	C-11542/1	2/5/2020	4/7/2020	Q1	1.27		5.28	3/18/2020	0.34		0.51	697	3.5	53%
Sunnyside	E002	C-10788/1	2/5/2020	4/7/2020	Q1	1.27		5.28	3/18/2020	0.18		0.62	718	3.8	50%
Sunnyside	E002	C-10788/1	6/18/2019	8/27/2019		1.27	0.1	5.28	8/9/2019	0.03	0.024	2.29	752	2.97	89%
Sunnyside	E003	C-10664/2	6/18/2019	8/27/2019		1.27	0.1	5.28	8/9/2019	0.06	0.03	1.64	705	8	89%
Sunnyside	E004	C-11542/1	6/18/2019	8/27/2019		1.27	0.1	5.28	8/9/2019	0.16	0.052	2.79	715	6.5	74%
Sunnyside	E003	C-10664/2	4/23/2019	5/21/2019		1.27		5.28	5/6/2019	0.04		1.71	724 pre	3.4	74%
Sunnyside	E004	C-11542/1	4/23/2019	5/21/2019		1.27		5.28	5/6/2019	0.23		1.37	698 pre	2	71%
Sunnyside	E002	C-10788/1	4/23/2019	5/21/2019		1.27		5.28	5/6/2019	0.07		1.35	634 pre	0.3	70%
Sunnyside	E003	C-10664/2		4/23/2019		1.27		5.28	3/6/2019	0.12		1.35	637 pre; 681 post	2.9	60%
Sunnyside	E004	C-11542/1		4/23/2019		1.27		5.28	3/6/2019	0.5		1.76	712 pre; 656 post	3.2	60%
Sunnyside	E002	C-10788/1		4/23/2019		1.27		5.28	3/19/2019	0.08		1.45	717 pre	3.7	65%
Sunnyside	E003	C-10664/2	11/1/2018	1/8/2019		1.27		5.28	12/4/2018	0.41		0.79	626 pre; 675 post	NR	60%
Sunnyside	E004	C-11542/1	11/1/2018	1/8/2019		1.27		5.28	12/4/2018	0.55		1.62	688 pre; 592 post	NR	60%
Sunnyside	E002	C-10788/1	11/1/2018	1/8/2019		1.27		5.28	12/4/2018	0.13		0.5	693 pre; NR post	NR	60%
Sunnyside	E004	C-11542/1	8/10/2018	10/9/2018		1.27	0.1	5.28	9/6/2018	0.4	0.073	2.85	724 pre; 666 post	2.9	87%
Sunnyside	E002	C-10788/1	8/10/2018	10/9/2018		1.27	0.1	5.28	9/6/2018	0.43	0.073	2.11	736 pre; 721 post	3	86%
Sunnyside	E001	C-11100/8	8/10/2018	10/9/2018		1.27	0.1	5.28	9/6/2018	0.45	0.072	2.51	not reported	3.2	92%
Sunnyside	E001 (Swing)	C-10664/2	6/15/2018	9/19/2018		1.27	0.1	5.28	8/7/2018	0.13	0.032	3.35	663 pre; 707 post	5.2	86%
Sunnyside	E004	C-11542/1		7/12/2018		1.27		5.28	6/5/2018	0.35		1.55	713 pre; 656 post	5.6	60%
Sunnyside	E001	C-11100/8		7/12/2018		1.27		5.28	6/5/2018	0.14		1.67	875 pre; NR post	5.2	60%
Sunnyside	E002	C-10664/2		7/12/2018		1.27		5.28	6/5/2018	0.36		0.84	703 pre; NR post	3.7	60%

Appendix B: Picture and IR MOVIE LOG

Date	File	Name	Comment
6/27/2022	MOV_2971.mp4	Sunnyside CS	Small leak at inlet separator.
6/27/2022	MOV_2792.mp4	Sunnyside CS	Dehy vent stack.
6/27/2022	DSCN004.jpg	Sunnyside CS	Sign photograph

APPENDIX C: Hilcorp Response Table to EPA's Sunnyside Records Request

Hilcorp Energy Corporation – Sunnyside Compressor Station CAA Inspection Document Request				
Item #	Permit Reference	Request	Time Frame	Format
1	C.1.a-d	The Permittee shall install and operate emission controls as specified in this permit on four (4) reciprocating internal combustion engines each meeting the following specifications (specifications contained in permit condition C.1.a-d)		
		See Table 1 for engine information requested.	N/A	Populated Table 1 (excel); attached to email
		Hilcorp Response: As requested, this spreadsheet has been filled out for all applicable units at the compressor station and is attached to the email response. There are a total of three compressor units at this site.		
2	C.6.a	Records shall be kept of specifications and maintenance requirements developed by the manufacturer, vendor, or Permittee for each engine, catalytic control system, temperature-sensing device, and pressure-measuring device.		
		Please provide records of specifications and maintenance requirements developed by the manufacturer, vendor, or Permittee for each engine, catalytic control system, temperature-sensing device, and pressure-measuring device.	August 1, 2017 – June 30, 2022	Word Document
		Hilcorp Response: This attachment provides a full overview of Hilcorp's Preventative Maintenance steps throughout each year. Customized to the SMNSR sites (3), the forms are completed at 1 month, 2 month, 4 month, and 6 month intervals in order to ensure that the engines and catalysts are constantly being monitored. Following the completion of each interval, the operator signs the form and emails the completed document to a dedicated EAM Tech so that the work order can be closed out.		
3	C.6.b	Records shall be kept of all calibration and maintenance conducted for each engine, catalytic control system, temperature-sensing device, and pressure-measuring device.		
		Please provide records of all calibration and maintenance conducted for each engine, catalytic control system, temperature-sensing device, and pressure-measuring device.	August 1, 2017 – June 30, 2022	Excel workbook
		Hilcorp Response: The attached excel workbook lists all work orders that have been generated for this station. Any calibration and maintenance records related to engines and catalysts would be found in these work orders. Refer to tabs 'EQ_Unit Data' and 'Sunnyside CDP_WO's' for all work orders for the requested time frame. When a work order is completed, the document is saved into a dedicated filing system and can be pulled at anytime. However, due to the size of the file for the requested time frame, Hilcorp can provide any of the list work orders at the request of the EPA. Refer to the Description column for the types of work orders.		
4	C.6.c	Records shall be kept that are sufficient to demonstrate that the fuel used for each engine is pipeline quality natural gas in all respects, with the exception of CO2 concentrations.		
		Please provide information sufficient to demonstrate that the fuel used for each engine is pipeline quality natural gas in all respects, with the exception of CO2 concentrations. Also provide annual engine fuel consumption for the dates specified.	August 1, 2017 – June 30, 2022	Excel workbooks(2); Fuel Composition Analysis - CDPs and 20220812_DR_Mkillough_HistoricalFuel
		Hilcorp Response: Refer to the tab 'SunnysideCDP_Total Fuel_RTU' in excel workbook titled Fuel Composition Analysis - CDPs for historical gas analyses associated with the fuel gas at the Argenta Compressor Station. Refer to the 'Fuel and Sales Volumes' tab in the excel workbook titled 20220812_DR_Mkillough_HistoricalFuel for historical fuel consumption.		el

5	C.6.d	Records shall be kept of all temperature measurements required in this permit, as well as a description of any corrective actions taken pursuant to this permit.		
		Please provide CPMS data for the engine exhaust temperature of each engine at the inlet to the catalyst bed for the time period specified, as well as a description of any corrective actions taken pursuant to this permit.	August 1, 2017 – June 30, 2022	Excel workbook
		Hilcorp Response: Refer to the attached excel workbook titled Sunnyside Inlet Catalyst Temp Alarms for the requested time period. Alarm notifications that were triggered are listed for each year. When an alarm is triggered, Hilcorp personnel are alerted to diagnose the issue immediately.		
6	C.6.e	Records shall be kept of all pressure drop measurements required in this permit, as well as a description of any corrective actions taken pursuant to this permit.		
		Please provide monthly readings for the pressure drop across the catalyst bed on each engine, as well as a description of any corrective actions taken pursuant to this permit.	August 1, 2017 – June 30, 2022	Excel workbook
		Hilcorp Response: The attached excel workbook titled Sunnyside DP Tracker includes readings from the requested time frame. In the event that a DP reading is shown to be out of compliance, Hilcorp personnel are alerted and required to inspect the instrumentation for any possible plugs that need to be addressed. If the Hilcorp representative determines that cleaning or blowing out the catalyst element will not suffice, the catalyst element will be replaced from the in-house inventory.		
7	C.3.g, C.6.g	The Permittee may rebuild an existing permitted engine or replace an existing permitted engine with an engine of the same horsepower rating, and configured to operate in the same manner as the engine being rebuilt or replaced. Records shall be kept of all catalyst replacements or repairs, engine rebuilds and engine replacements.		
		Please provide records of all catalyst replacements or repairs for the time period specified, including dates and reasons for replacement or repair. Please also provide the information requested in Table 1 above for all engine rebuild and replacement events.	August 1, 2017 – June 30, 2022	Excel workbooks(2); Table 1 - Compressor Engine Info and Catalyst Replacement Events
		Hilcorp Response: The attached Table 1 includes details regarding like-kind engine replacement events that have occurred during this requested time frame. In the event that an engine swing occurs, a notification is sent out internally within Hilcorp for approval. The engine swings are triggered when approaching runtime thresholds and were not due to engine failures. Catalysts are routinely checked during documented PM events. In the event that a catalyst begins fouling and replacement is needed, replacement will occur immediately. Documented catalyst replacement events are shown in the attached excel workbook titled Catalyst Replacement Events.		
8	C.6.h	Records shall be kept of each rebuilt or replaced engine break-in period, pursuant to the requirements of this permit, where an existing engine that has been rebuilt or replaced resumes operation without the catalyst control system, for a period not to exceed 200 operating hours.		
		Please provide date and time data for all engine break-in periods where an existing engine that has been rebuilt or replaced resumed operation without the catalyst control system.	August 1, 2017 – June 30, 2022	Populated Table 1 (excel); attached to email
		Hilcorp Response: Per engine swings, Hilcorp adheres to a 24-hour run period without the catalysts following the start-up. This is to ensure the pickling agent Waukesha Pearce puts in the replacement engines for weatherproofing is completely gone. In addition, this period is to ensure that the engines have not developed any other issues in transit that may damage the catalysts.		
9	C.6.i	Records shall be kept of each time any engine is shut down due to a deviation of the inlet temperature to the catalyst bed or pressure drop across the catalyst bed. The Permittee shall include in the record the cause of the problem, the corrective action taken, and the timeframe for bringing the pressure drop and inlet temperature range into compliance.		
		Please provide documentation of each engine shut down due to a deviation of the inlet temperature to the catalyst bed or pressure drop across the catalyst bed. Include in the response the cause of the problem, the corrective action taken, and the timeframe for bringing the pressure drop and inlet temperature range into compliance.	August 1, 2017 – June 30, 2022	Excel workbooks (3); Sunnyside Inlet Catalyst Temp Alarms, Sunnyside DP Tracker, Catalyst Replacement Events
		Hilcorp Response: In the event that a catalyst reading is shown to be out of compliance, Hilcorp personnel are alerted and required to inspect the instrumentation for any possible plugs that need to be addressed. If the alarm is determined to be caused by a 3rd party upset (or scheduled PM), weather event (i.e. freezing, rainfall), or false alarm, the unit will continue to run as long as the inlet catalyst temperature range and DP readings are compliant. However, for all other events, the catalyst is inspected completely for any issues or concerns. If a replacement is needed, a work order is generated and carried out immediately.		
10	D.2	Beginning with the effective date of this permit, records shall be kept of the date of installation of the controllers, the manufacturer specifications of the controllers or equivalent specifications developed by the Permittee or vendor, and all scheduled maintenance and repairs on the controllers.		
		Please provide documentation on the date of installation of pneumatic controllers, the manufacturer specifications of the controllers or equivalent specifications developed by the Permittee or vendor, and all scheduled maintenance and repairs on the controllers. Please also indicate the type of pneumatic controller installed.	August 1, 2017 – June 30, 2022	Excel documents (2); Argenta-Sunnyside-Ute CDPs_NSPS Review, Station WO's from Aug 2017 thru June 2022
		Hilcorp Response: Hilcorp does not have the install dates readily-available due to the sites having been acquired from ConocoPhillips in August 2017 and the original install dates most likely occurring prior to this acquisition. However, in one instance following the EPA inspection in June 2022, Hilcorp replaced an existing suction controller on Sunnyside Compressor Skid No. 1 with a Fisher I2P Suction Controller with a documented install date of 7/1/2022. Following the install of this controller, the controller was checked for leaks before placing back into service. The attached excel spreadsheet titled Argenta-Sunnyside-Ute CDPs_NSPS Review provides a listing of all pneumatic controllers, along with the sub-category in excel rows 17-83. It should be noted that Hilcorp voluntarily implemented monthly site-wide AVO surveys in November 2021 at the Sunnyside Compressor Station in order to routinely assess each pneumatic controller's operating condition on location. Refer to the 'AVO's' tab in the excel workbook titled Station WO's from Aug 2017 thru June 2022.		

Table 1 (Hilcorp Response Table- Item 1)

Site	Frame Serial No.	Frame Manufacture Date	Initial Compressor Install Date	Engine Manufacture Date	Engine Install Date
Sunnyside	F-17694	1/7/2002	1/13/2005	Oct-92	5/22/2018
Sunnyside	F-17695	1/7/2002	1/12/2005	Apr-95	3/15/2017
Sunnyside	F-17696	1/7/2002	9/29/2005	Feb-93	6/23/2017 (date swung engine started up; install occurred in May 2017)

Engine Serial No.	Engine Category	Maximum Engine Site Rating (hp)	Engine Rebuild and Replacement Events, August 1, 2017 – June 30, 2022
C-10664	Reciprocating (4SLB)	1,330	Like-kind engine swap occurred in May 2018. Engine with serial No. C-13405 was replaced with C-10664. Cost of engine re-build did not exceed the 50% threshold when comparing the cost of the re-build to the cost of an entirely new engine.
C-11542	Reciprocating (4SLB)	1,330	No engine re-builds or replacements noted in Hilcorp records since March 2017.
C-10788	Reciprocating (4SLB)	1,330	Like-kind engine swap occurred in 2017. Engine with serial No. C-13405 was swapped out with serial No. C-10788 in June 2017. Per the 7/3/2018 EPA inspection report date, Sunnyside Skid #3 is shown to have an engine re-build date of 6/25/2017, but is shown to be 6/23/2017 on a tag pulled from the unit. In addition, an email from Hilcorp's Jennifer Deal (5/30/2018) shows the rebuild date to be 6/7/2017. This table reflects a 6/23/2017 start-up date. Cost of engine re-build did not exceed the 50% threshold when comparing the cost of the re-build to the cost of an entirely new engine.

EMISSIONS CHECK REPORT

Sunnyside CDP

Technician:	WO#	DATE:	8/6/2020	
Location:	Sunnyside CDP	Area:	1	Run: 101
Unit #	#1 / 129	Annual Testing		
Engine:	Waukesha 7042GL	Mfr date:		
Serial #	C-10664/2	Catalyst:	XZS-RE-Full-354XH	
Hours:	5,064	Element:	RMTB-3016F-D-15HF-HFX1	
AFR:	MEC-L	Temp in/out	708	709
N₂ SETPOINT:	0.638	Pressure "H₂O		
Intake Manifold Temperature	124	Drop "H₂O	0	
Intake Manifold Pressure:	8.5	Timing:	10	
Engine RPM:	1110			
Horsepower in use:	903	<i>Unrated HP/Load available</i>	Rated:	1330
Fuel Consumption			Load	68%
scf/hr	9028	Pre-Converter	%	
Fuel Use, btu/hp-hr	9500	reduction		
% Oxygen in Exhaust, dry:	9.8		#DIV/0!	
NO_x in Exhaust, dry ppm:	185		#DIV/0!	
CO in Exhaust, dry ppm:	10			
Fuel Consumption (MMBtu/hr):	8.58			
Exhaust Flow (DSCFM):	2305.75			
E - NO_x (lb/MMBtu):	0.36			
E - CO (lb/MMBtu):	0.01			
NO_x (lb/hr):	3.06	13.38 TONS\YR	lb limit	5.28
CO (lb/hr):	0.10	0.44 TONS\YR		1.27
NO_x (g/bhp-hr):	1.54			
CO (g/bhp-hr):	0.05			

Compressor:	Ariel JGK-4			
Suction:	24	temp:	discharge	345
temp:				
FLOW:				

NOTES:

Replaced with new catalyst.

Parts:

New Catalytic Combustion S/Ns	
WO148399-2 and WO148399-4	

Sunnyside CDP SMNSR-SU-000032-2011.001				Unit Information				
PERMIT REQUIREMENTS								
DATE	TIME	UNIT	TEMPERATURE	Waukasha L7042GL	Waukasha L7042GL	Waukasha L7042GL	Waukasha L7042GL	Make/Model
2/1/2022	10:58 AM	3	404.7328	#1	#2	#3	#4	Engine Number - CSMART
2/14/2022	10:15 AM	3	418.1679	11639503	11639508	11639509	--	Equipment Number
2/22/2022	7:45 AM	3	388.9466	C-10664/2	C-11542/1	C-10788/1	--	Serial Number
2/23/2022	12:58 PM	3	307.3282	129	128	130	127	Unit Number
3/2/2022	9:15 AM	3	378.5344	Except during startups, not to exceed 30 minutes, the engine exhaust temperature of each engine, at the inlet to the catalyst bed, shall be maintained at all times the engines operate with an inlet temperature of at least 450° F and no more than 1,350°F.				
3/3/2022	1:45 PM	3	385.5878					
3/14/2022	11:45 AM	3	358.0458					
3/17/2022	10:45 AM	2	447.9243					
3/30/2022	7:45 AM	3	432.2748					
3/31/2022	8:00 AM	1	383.7912					
4/5/2022	9:30 AM	3	422.5344					
4/8/2022	1:45 PM	2	336.7827					
4/18/2022	4:45 AM	3	429.2519					
4/18/2022	5:15 AM	1	414.6825					
4/18/2022	5:15 AM	2	389.8352					
4/18/2022	6:45 AM	1	351.8925					
4/20/2022	12:00 PM	2	438.1868					
4/23/2022	8:00 PM	3	333.1908					
5/5/2022	8:45 AM	2	440.873					
5/10/2022	11:15 AM	3	442.0153					
5/10/2022	8:00 AM	3	394.9924					
5/24/2022	8:00 AM	1	435.5006					
5/24/2022	9:45 AM	3	369.4656					
5/26/2022	8:00 AM	2	403.2662					
6/2/2022	10:30 AM	4	98.6					
6/7/2022	10:00 AM	1	389.1636					
6/8/2022	12:45 PM	1	419.7192					
6/19/2022	12:05 PM	3	-257.9035					
6/12/2021	3:23 AM	3	-12.76336					
6/12/2021	5:53 AM	3	-13.77099					
6/12/2021	9:08 AM	3	-13.77099					
6/12/2021	1:08 PM	3	-13.43511					
6/12/2021	1:38 PM	3	-13.43511					
6/12/2021	2:38 PM	3	-13.43511					
6/12/2021	3:38 PM	3	-13.09924					
6/13/2021	10:08 AM	3	-13.77099					

Example Differential Pressure Monitoring (Hilcorp Response Table- Item 6)

Sunnyside CDP SMNSR-SU-000032-2011.001 I.5.g (i)(ii)(iii)						
SAP Functional Location: HZ-F1-SJN-FA00001-0A050484-CDP00001						
Differential Pressure (Compliance Test)						Notes and Comments
Date of Test	Compressor #1 E003 SN: C-13405/1	Compressor #3 Equip ID: 11639509 SN: C-10788/1	Compressor #2 Equip ID: 11639508 SN: C-11542/1	Compressor #4 E001 SN: C-11100/8	Replacement For Compressor #1 Equip ID: 11639503 SN: C-10664/2	
3/7/2022		3.8 (62.2%)	3.5 (56.7%)		3.5 (65.4%)	
6/28/2022	No longer on location	2.7 (61.2%)	3.9 (56.7%)	No Longer on location	4.3 (63.1%)	
January	No longer on location	☐ 3.8	☐ 3.5	No longer on location	☐ 3.4	☐
February		☐ 3.8	☐ 3.6		☐ 3.4	☐
March		☐ 3.8	☐ 3.6		☐ 3.6	☐
April		☐ 3.6	☐ 3.6		☐ 3.5	☐
May		☐ 3.4	☐ 3.5		☐ 3.5	☐
June		☐ 3.8	☐ 3.5		☐ 3.5	☐
July		☐ 3.4	☐ 3.9		☐ 4.5	☐
August		☐ 2.6	☐ 4.1		☐ 4.5	☐
September		☐	☐		☐	☐
October		☐	☐		☐	☐
November		☐	☐		☐	☐
December		☐	☐		☐	☐

Example of Work Orders Showing Temp and/or DP Addressed (Hilcorp Response Table- Items 5 & 6)

1	Type	Sched. Start Date	Sched. End Date	Work Order	Equipment	Status Code	Location
664	Preventive maintenance	12/01/21	12/01/21	4082617	11639509	C	SUNNYSIDE CDP
665	Preventive maintenance	12/20/21	12/20/21	4104632	11639503	C	SUNNYSIDE CDP
666	Preventive maintenance	12/31/21	12/31/21	3973935	11355680	C	SUNNYSIDE CDP
667	Preventive maintenance	01/05/22	01/05/22	4130329	10466078	CANC	SUNNYSIDE CDP
668	Preventive maintenance	01/10/22	01/10/22	4130488	11639509	C	SUNNYSIDE CDP
669	Preventive maintenance	01/10/22	01/10/22	4122836	11639508	C	SUNNYSIDE CDP
670	Preventive maintenance	01/27/22	01/27/22	4150105	11639503	C	SUNNYSIDE CDP
671	Preventive maintenance	01/31/22	01/31/22	4190119	11639508	C	SUNNYSIDE CDP
672	Preventive maintenance	01/31/22	01/31/22	4190120	11639509	C	SUNNYSIDE CDP
673	Preventive maintenance	02/05/22	02/05/22	4189966	10466078	CANC	SUNNYSIDE CDP
674	Preventive maintenance	02/21/22	02/21/22	4226354	11639503	C	SUNNYSIDE CDP
675	Preventive maintenance	02/21/22	02/21/22	4226353	11639503	CANC	SUNNYSIDE CDP
676	Preventive maintenance	03/05/22	03/05/22	4239305	10466078	CANC	SUNNYSIDE CDP
677	Preventive maintenance	03/09/22	03/09/22	4239473	11639508	C	SUNNYSIDE CDP
678	Preventive maintenance	03/09/22	03/09/22	4239474	11639509	C	SUNNYSIDE CDP
679	Corrective Maintenance	03/16/22	03/16/22	4284491	11639503	C	SUNNYSIDE CDP
680	Preventive maintenance	03/22/22	03/22/22	4269961	11639503	C	SUNNYSIDE CDP
681	Preventive maintenance	03/30/22	03/30/22	4281056	11639508	C	SUNNYSIDE CDP
682	Preventive maintenance	04/05/22	04/05/22	4287366	11639509	C	SUNNYSIDE CDP
683	Preventive maintenance	04/05/22	04/05/22	4287191	10466078	CANC	SUNNYSIDE CDP
684	Preventive maintenance	04/06/22	04/06/22	4329931	11639503	C	SUNNYSIDE CDP
685	Preventive maintenance	05/02/22	05/02/22	4343130	11639508	C	SUNNYSIDE CDP
686	Preventive maintenance	05/05/22	05/05/22	4356422	10466078	CANC	SUNNYSIDE CDP
687	Preventive maintenance	05/10/22	05/10/22	4356575	11639509	C	SUNNYSIDE CDP
688	Preventive maintenance	05/27/22	05/27/22	4387591	11639503	C	SUNNYSIDE CDP
689	Preventive maintenance	06/02/22	06/02/22	4415359	11639508	C	SUNNYSIDE CDP
690	Preventive maintenance	06/02/22	06/02/22	4415360	11639509	C	SUNNYSIDE CDP
691	Preventive maintenance	06/05/22	06/05/22	4415180	10466078	CANC	SUNNYSIDE CDP
692	Preventive maintenance	06/20/22	06/20/22	4571702	11639503	C	SUNNYSIDE CDP
1	Description	Equipment Description	Run	Mech #	Notes		
664	PPM,1M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK-4(#3)	RUN 0101	0152			
665	PPM,1M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK/4(#1)	RUN 0101	0152			
666	PPM,1Y,DOT,PRV INSPECTION	VLV,2"X3",RLF(PIPELINE) DOT	RUN 0101	HSJN-PRV01			
667	PPM,1M,DEHY INSPECTION	DEHYDRATOR,GLYCOL,W/REBOILER,ABSORBER	RUN 0101	0152	INAC EQUIP		
668	PPM,6M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK-4(#3)	RUN 0101	0152			
669	PPM,2M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK/4(#2)	RUN 0101	0152			
670	PPM,6M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK/4(#1)	RUN 0101	0152			
671	PPM,1M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK/4(#2)	RUN 0101	0152			
672	PPM,1M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK-4(#3)	RUN 0101	0152			
673	PPM,1M,DEHY INSPECTION	DEHYDRATOR,GLYCOL,W/REBOILER,ABSORBER	RUN 0101	0152	INAC EQUIP		
674	PPM,1M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK/4(#1)	RUN 0101	0152			
675	PPM,2.5Y,TOP END OVERHAUL	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK/4(#1)	RUN 0101	0152	PUSH OUT 6M PER J WORK		
676	PPM,1M,DEHY INSPECTION	DEHYDRATOR,GLYCOL,W/REBOILER,ABSORBER	RUN 0101	0152	INAC EQUIP		
677	PPM,6M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK/4(#2)	RUN 0101	0152			
678	PPM,2M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK-4(#3)	RUN 0101	0152			
679	SKIDX, Node 2, Suction controller/Inlet	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK/4(#1)	RUN 0101	0152			
680	PPM,2M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK/4(#1)	RUN 0101	0152			
681	PPM,1M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK/4(#2)	RUN 0101	0152			
682	PPM,1M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK-4(#3)	RUN 0101	0152			
683	PPM,1M,DEHY INSPECTION	DEHYDRATOR,GLYCOL,W/REBOILER,ABSORBER	RUN 0101	0152	INAC EQUIP		
684	PPM,1M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK/4(#1)	RUN 0101	0152			
685	PPM,2M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK/4(#2)	RUN 0101	0152			
686	PPM,1M,DEHY INSPECTION	DEHYDRATOR,GLYCOL,W/REBOILER,ABSORBER	RUN 0101	0152	NOT SCH'D / INAC EQUIP		
687	PPM,4M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK-4(#3)	RUN 0101	0152			
688	PPM,4M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK/4(#1)	RUN 0101	0152			
689	PPM,1M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK/4(#2)	RUN 0101	0152			
690	PPM,1M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK-4(#3)	RUN 0101	0152			
691	PPM,1M,DEHY INSPECTION	DEHYDRATOR,GLYCOL,W/REBOILER,ABSORBER	RUN 0101	0152	NOT SCH'D / INAC EQUIP		
692	PPM,1M,COMPRESSOR	PKG,CMP,WAUKESHA,L7042GL,ARIEL,JGK/4(#1)	RUN 0101	0152			