Annual Operation, Maintenance, and Monitoring Report

January 2023 through December 2023
Former Holtz Krause Landfill

City of Wausau

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1. Introduction

GHD Services, Inc. (GHD) has prepared this Operation, Maintenance, and Monitoring (OM&M) Report (Report) for the former Holtz Krause Landfill (Site) in Wausau, Wisconsin, on behalf of the City of Wausau. This Report presents the results of OM&M activities at the Site from January 2023 through December 2023 as required by the Operation and Maintenance (O&M) Plan.

Since 1995, the City of Wausau has operated the landfill gas system, maintained the cap, measured settlement, and monitored groundwater at and near the landfill. Under the September 25, 2012 Purchase Agreement, Marathon County purchased the landfill property and the Holtz Krause Steering Committee developed the landfill into a soccer complex. Figure 1.1 shows the landfill, soccer complex, and gas extraction system components.

The September 25, 2012 Purchase Agreement states that the City of Wausau will continue to operate and maintain the landfill gas collection system and landfill cap outside the soccer field area. The Parks department, serving the County and City, is responsible for operation and maintenance of the soccer complex, which includes the irrigation system, under-drains, field turf, concession building, maintenance building, parking lots, and championship field lights. As part of the 2012 Agreement, the Holtz Krause Steering Committee is to provide $54,000 in funds to the County for the purpose of funding the future replacement of the flare which would likely occur after the flare is 15 to 20 years old (i.e., 2028 to 2033).

This report provides the results of the OM&M performed that is the responsibility of the City of Wausau (landfill gas collection system OM&M, site inspections, and landfill cover areas outside of the soccer complex).

1.1 Site Description

The Holtz Krause Landfill and vicinity is a 64 acre site that operated between 1957 and 1980. The Site is located at the end of East Kent Street, east of Grand Avenue. This landfill received approximately 2.0 million cubic yards (CY) of waste including municipal solid waste, non-combustible waste, demolition material, and wood waste.

The landfill is surrounded by a wetland (south), single residence, Curling Club (west), cemetery (northwest), cell tower (north), and railroad operations (north and east).

In 2013, construction of the soccer complex and modifications and repairs of the gas extraction system were completed. The landfill gas collection system now consists of the following:

– 32 landfill gas extraction wells housed in flush-mounted vaults
– Header pipe, control valves, and condensate drainage system
– Landfill gas flare consisting of blower skid, flare, controls, and other associated equipment
– 13 landfill gas monitoring probes

The landfill cover system consists of the following (from ground surface):

– A vegetative layer consisting of 6 to 8 inches of topsoil and 3 feet of rooting zone soil
– Primary barrier layer consisting of a 40-mil very low density polyethylene (VLDPE) geomembrane liner
– Secondary barrier layer consisting of 2 feet of compacted clay
– The 1982 soil cover (0 to 2 feet thick)

The soccer field utilities are installed entirely above the liner within the rooting zone. These include the irrigation system, under drains, storm drains, water, sanitary and electrical. The landfill gas header piping is installed below the liner.

1.2 Objectives, Requirements, Scope, and Limitations

As required in the O&M Plan for the Site, and as modified by prior approval of the Wisconsin Department of Natural Resources (WDNR), the City is responsible for the following OM&M items:

- Weekly inspections of the flare station from April through September
- Every other week inspections of the flare station from October through March
- Twice monthly monitoring of landfill gas composition at the flare station from November through February
- Monthly monitoring of landfill gas composition at the flare station from March through October
- Semi-annual preventative maintenance of the flare station
- Monitoring and inspection of landfill gas extraction wells (gas composition, flow rate, header vacuum, and well condition) by the WDNR-approved revised monitoring schedule provided in Table 1.1, and as follows:
  - Annual monitoring for extraction wells that are always off (wells EW-1, EW-2, EW-8, EW-9, EW-11, EW-13, EW-14, EW-15, EW-19, EW-22, EW-23, EW-24, EW-35, and EW-38), with the monitoring round split between the months of June and July.
  - Quarterly monitoring (February/March, May, August, and October/November) for extraction wells that are always on (wells EW-3, EW-4, EW-7, EW-10, EW-18, EW-20, EW-30, EW-31, EW-33, EW-36, and EW-37).
  - Monthly monitoring (April through September) and quarterly monitoring (October through March) for wells that are not consistently on or off (wells EW-5, EW-6, EW-12, EW-17, EW-21, EW-32, and EW-34).
- Quarterly gas probe monitoring
- Monthly general Site inspections

Results of the OM&M items noted above are presented in the following sections.

2. Gas Extraction System and Flare Station

2.1 Overview and System Components

The landfill gas extraction system consists of the following components:

- 32 gas extraction wells housed in flush-mounted vaults
- Header pipe, control valves, and condensate drainage system
- Landfill gas flare consisting of blower skid, flare, controls, and other associated equipment
- 13 gas monitoring probes

Through the use of a blower at the flare station, vacuum is applied to the landfill gas extraction wells via the header pipe network to extract landfill gas from the landfill and transfer it to the flare station. At the flare station, extracted landfill gas is supplied to a candlestick flare for combustion and destruction. Landfill gas condensate that accumulates in the header piping or at the flare station drains to the City of Wausau sanitary sewer via a condensate sump and drip leg.

Gas monitoring probes are installed around the perimeter of the landfill to allow monitoring of soil gas for any potential landfill gas migration beyond the landfill limits.

The components of the gas extraction system are shown on Figure 1.1.

2.2 Flare Station OM&M

The required flare station OM&M consists of the following:

– Weekly inspection of the flare station operation from April through September
– Every other week inspections of the flare station operation from October through March
– Twice weekly remote flare station monitoring
– Twice monthly monitoring of flare station landfill gas composition from November through February
– Monthly monitoring of flare station landfill gas composition from March through October
– Semi-annual preventative maintenance of flare station

Weekly and every other week flare station inspections consist of recording all current operating conditions (flow rate, oxygen content, gas/flare temperatures, gas pressures, header vacuum, system hours, etc.) listed on the “Weekly Flare Station Inspection Form” (included in the O&M Plan). A summary of inspection results are presented in Table 2.1. Weekly and every other week flare inspection forms from the reporting period are included in Appendix A.

In addition to on-Site inspections, the flare station was monitored at least twice per week via the remote (internet) connection to verify operation. Any issues or shutdowns discovered during remote monitoring were logged and are detailed in Section 2.2.1.

Monitoring of landfill gas composition (percent each: methane, carbon dioxide, and oxygen) was completed a minimum of one time per month from April to September, and a minimum of two times per month from October to March. The results of landfill gas monitoring at the flare station are presented in Tables 2.1 and 2.2.

Semi-annual flare station maintenance consists of performing all flare manufacturer specified inspections and preventative maintenance. The semi-annual inspection and maintenance events were performed by GHD on behalf of the City of Wausau in April 2023 and October 2023. The semi-annual maintenance reports are included in Appendix B.

Prior to the April 2023 semi-annual maintenance visit, the flare station operator interface (touchscreen) was noted to be operating erratically and requiring frequent power cycling to restore normal operation. A replacement touchscreen was procured by GHD and installed in conjunction with the April 2023 semi-annual maintenance visit.

2.2.1 Unscheduled Flare Station Shutdowns

During the reporting period (January 2023 through December 2023), the flare station experienced 9 unscheduled shutdowns. Details of the shutdowns are as follows:

– July 24, 2023: The flare station shut down due to a low flow rate shutdown. The flare was restarted on July 24, 2023.
– August 6, 2023: The flare station shut down due to a low flow rate shutdown. The flare was restarted on August 7, 2023.
– August 13, 2023: The flare station shut down due to a low flow rate shutdown. The flare was restarted on August 14, 2023.

- August 16, 2023: The flare station shut down due to a low flow rate shutdown. The flare was restarted on August 18, 2023.
- August 21, 2023: The flare station shut down due to a low flow rate shutdown. The flare was restarted on August 21, 2023.
- September 1, 2023: The flare station shut down due to a thermocouple malfunction. The system power was cycled, PLC reset, and the flare station was restarted on September 4, 2023.
- September 24, 2023: The flare shut down due to a power failure resulting from a thunderstorm. The flare was restarted on September 25, 2023, following power restoration.
- October 16, 2023: The flare shut down due to a power failure resulting from a thunderstorm. The flare was restarted on October 16, 2023, following power restoration.
- October 19, 2023: During the semi-annual maintenance visit, the PLC digital input card was noted to have failed, preventing the flare from operating in automatic control. A replacement card was installed on October 20, 2023 and the flare was subsequently restarted.

The flare station operated for 8,459 of the 8,760 available hours (97-percent) during the reporting period.

2.3 Gas Extraction Well Monitoring

The gas extraction well monitoring schedule was modified in 2018 according to the WDNR-approved revised monitoring schedule provided in Table 1.1. Wells which are always off are monitored annually in June and July. Wells which are always on are monitored quarterly. Wells which operate intermittently are monitored on a monthly basis April through September, and on a quarterly basis October through March. Gas extraction well measurements consist of monitoring the landfill gas concentration, flow rate, and vacuum at each gas extraction well. Additionally, at the time of monitoring, the condition of each well is inspected and evaluated. Any maintenance needs found are then completed, as necessary. The wells within each monitoring category were further modified per recommendations in the "2022 Annual Operation, Maintenance, and Monitoring Report" that were approved by the WDNR via email on June 21, 2023.

During gas well monitoring, extraction well flow rates were adjusted based upon the composition of landfill gas within the individual wells. Wells were adjusted to supply landfill gas to the flare station with a nominal methane concentration of 30-percent. Landfill gas was extracted from the wellfield at approximately 67 cubic feet per minute (cfm) during the reporting period.

Results of the gas extraction well monitoring are presented in Table 2.2.

2.4 Gas Probe Monitoring

Landfill gas probe monitoring is conducted on a quarterly basis at the thirteen gas probes installed around the perimeter of the Site. Locations of the gas probes are presented on Figure 1.1. Monitoring at each probe consisted of measuring the gas composition (methane, carbon dioxide, oxygen, and balance) and static pressure. Probes were purged for a minimum of 210 seconds before a final measurement was recorded.

Gas probe monitoring results are presented in Table 2.3. Methane was non-detect at all probes during the reporting period monitoring events, indicating that the gas extraction system has been effective at controlling landfill gas migration from the Site.

2.5 Landfill Gas Condensate

Landfill gas condensate, collected in the landfill gas header and at the flare station, gravity drains to a drip leg near the flare station before draining to the City of Wausau sanitary sewer. Landfill gas condensate is not required to be sampled by the WDNR, and is only sampled at the direction/discretion of the City of Wausau Wastewater Treatment Facility.

3. Landfill Cover

In accordance with the O&M Plan, the City was responsible for completing general Site inspections on a monthly basis. Any issues identified in monthly inspections were then reported to the responsible party (i.e. County for soccer complex/field issues, City for landfill areas outside of the soccer complex, etc.).

The Site inspections focused on the following main components:

– Landfill cover area
– Landfill gas extraction wells
– Landfill gas monitoring probes
– Flare station area
– Access roads/paths associated with the Site

Inspections are completed on the “Landfill Site Inspection” form previously provided in the Site O&M Plan. Copies of the monthly inspection forms are provided in Appendix C.

General maintenance items completed during the reporting period included:

– Site mowing as necessary
– Replacement of wellhead vault covers as necessary

4. Conclusions

Based upon the OM&M activities performed in the reporting period, the following conclusions are made:

– The flare station provided consistent, reliable operation throughout the reporting period with 97-percent up-time from January 1, 2023 through December 31, 2023.
– The flare station controls allowed landfill gas extraction amounts to closely match landfill production (approximately 67 cfm at 27 to 37-percent methane). This resulted in minimal amounts of oxygen within the landfill waste, ensuring the landfill remains in anaerobic gas production and limiting the potential for subsurface fires.
– Landfill gas monitoring probes were all non-detect for methane during the reporting period, indicating that landfill gas extraction rates are sufficient to prevent off-Site gas migration.
– The general Site was noted to be in good condition throughout the reporting period, with no significant concerns.

5. Recommendations

Based upon the conclusions presented in Section 4, it is recommended that the operation, maintenance, and monitoring schedules for the Site be continued as currently approved.

Tables

Table 1.1

Revised Gas Extraction Well Monitoring Schedule
Holtz Krause Closed Landfill - Wausau, Wisconsin

Well Condition	Total Number of Wells	1st Quarter (Feb/Mar)	April	May	June	July	August	September	4th Quarter (Oct/Nov)
Wells Always Off (Annual Monitoring) (June: EW-1, 2, 8, 9, 22, 23, and 24) (July: EW-11, 13, 14, 15, 19, 35, and 38)	14				Half Round (June wells)	Half Round (July wells)			
Wells Always On (Quarterly Monitoring) (EW-3, 4, 7, 10, 18, 20, 30, 31, 33, 36, and 37)	11	X		X			X		X
Wells with Intermittent Operation (Monthly/Quarterly monitoring) (EW-5, 6, 12, 17, 21, 32, and 34)	7	X	X	X	X	X	X	X	X

Table 2.1

Flare Station Operational Data
January 2023 through December 2023
Holtz Krause Closed Landfill - Wausau, Wisconsin

Date	Header Pressure (in H_2O)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Flow Rate (scfm)	Inlet Gas Temp (^oF)	Flare Temp (^oF)	Status (on/off)	System Hours (hours)
1/3/2023	-2.3	NR	NR	NR	72	51	1,446	on	78,875
1/10/2023	-2.9	35.4	30.9	0.5	66	50	1,452	on	79,021
1/17/2024	-3.4	NR	NR	NR	65	50	1,372	on	79,210
1/24/2023	-3.8	33.5	30.1	0.6	66	50	1,136	on	79,378
1/31/2023	-3.1	NR	NR	NR	72	48	1,325	on	79,545
2/7/2023	-4.0	33.0	29.7	0.6	66	49	1,260	on	79,715
2/14/2023	-2.9	NR	NR	NR	73	49	1,329	on	79,882
2/21/2023	-5.0	31.8	29.7	0.7	65	48	1,244	on	80,051
2/28/2023	-4.6	NR	NR	NR	66	48	1,384	on	80,219
3/7/2023	-4.6	NR	NR	NR	72	48	1,303	on	80,386
3/14/2023	-4.1	NR	NR	NR	72	47	1,229	on	80,554
3/21/2023	-4.1	NR	NR	NR	70	47	1,351	on	80,721
3/28/2023	-3.9	31.1	29.7	0.7	73	48	1,319	on	80,890
4/4/2023	-4.8	NR	NR	NR	69	47	1,448	on	81,058
4/11/2023	-3.6	31.5	28.8	0.5	69	48	1,340	on	81,220
4/18/2023	-5.2	NR	NR	NR	70	48	1,289	on	81,388
4/25/2023	-4.4	NR	NR	NR	66	48	1,142	on	81,555
5/2/2023	-4.4	NR	NR	NR	72	49	1,288	on	81,723
5/9/2023	-4.5	29.4	28.7	0.6	67	50	1,067	on	81,892
5/16/2023	-2.3	NR	NR	NR	67	51	1,319	on	82,060
5/23/2023	-3.8	NR	NR	NR	68	52	1,122	on	82,228
5/30/2023	-3.7	NR	NR	NR	69	53	1,232	on	82,396
6/6/2023	-3.5	29.4	28.8	0.5	71	55	1,384	on	82,564
6/13/2023	-3.1	NR	NR	NR	70	55	1,346	on	82,732
6/20/2023	-4.3	NR	NR	NR	67	56	1,125	on	82,900
6/27/2023	-4.1	NR	NR	NR	68	57	1,268	on	83,068
7/3/2023	-3.8	NR	NR	NR	67	58	1,162	on	83,211
7/11/2023	-4.7	27.4	28.9	0.5	72	59	1,146	on	83,403
7/18/2023	-3.8	NR	NR	NR	70	59	1,028	on	83,572
7/25/2023	-3.5	NR	NR	NR	68	60	1,031	on	83,718
8/1/2023	-3.1	NR	NR	NR	69	61	1,056	on	83,876
8/8/2023	-3.1	28.8	28.8	0.5	68	62	1,145	on	84,022

Table 2.1

Flare Station Operational Data
January 2023 through December 2023
Holtz Krause Closed Landfill - Wausau, Wisconsin

Date	Header Pressure (in H_2O)	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Flow Rate (scfm)	Inlet Gas Temp (^oF)	Flare Temp (^oF)	Status (on/off)	System Hours (hours)
8/15/2023	-3.1	NR	NR	NR	62	62	1,173	on	84,154
8/22/2023	-3.0	NR	NR	NR	63	62	1,235	on	84,272
8/28/2023	-2.7	NR	NR	NR	61	62	1,080	on	84,407
9/5/2023	-3.0	NR	NR	NR	68	63	1,286	on	84,518
9/12/2023	-3.1	32.0	30.0	0.5	65	62	1,348	on	84,666
9/19/2023	-3.1	NR	NR	NR	69	61	1,292	on	84,833
9/25/2023	-2.6	NR	NR	NR	69	62	1,400	on	84,963
10/3/2023	-3.0	33.2	30.5	0.5	69	61	1,264	on	85,154
10/9/2023	-2.3	NR	NR	NR	68	61	1,304	on	85,303
10/18/2023	-2.2	NR	NR	NR	65	60	1,321	on	85,504
10/24/2023	-1.7	NR	NR	NR	60	60	1,320	on	85,627
10/31/2023	-2.2	NR	NR	NR	63	58	1,442	on	85,795
11/7/2023	-4.5	34.1	30.6	0.5	68	58	1,203	on	85,942
11/14/2023	-3.8	NR	NR	NR	69	57	1,217	on	86,133
11/21/2023	-2.3	37.5	32.0	0.4	66	56	1,260	on	86,302
11/28/2023	-3.9	NR	NR	NR	63	54	1,121	on	86,469
12/5/2023	-3.5	35.8	31.4	0.5	61	54	1,272	on	86,637
12/12/2023	-4.4	NR	NR	NR	60	53	1,345	on	86,803
12/19/2023	-3.3	36.0	31.9	0.5	70	53	1,356	on	86,950
12/27/2023	-3.5	NR	NR	NR	63	52	1,333	on	87,165

Table 2.2

Landfill Gas Data
January 2023 through December 2023
Holtz Krause Closed Landfill - Wausau, Wisconsin

ID	Date	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Temp (^{o}F)	Flow Rate (scfm)	Header Pressure (in. H_2O)	Status (on/off)
Flare	1/10/2023	35.4	30.9	0.5	50	66	-2.9	On
Flare	1/24/2023	33.5	30.1	0.6	50	66	-3.8	On
Flare	2/7/2023	33.0	29.7	0.6	49	66	-4.0	On
Flare	2/21/2023	31.8	29.7	0.7	48	65	-5.0	On
Flare	3/28/2023	31.1	28.9	0.5	48	73	-3.9	On
Flare	4/11/2023	31.5	28.8	0.5	48	69	-3.6	On
Flare	5/9/2023	29.4	28.7	0.6	50	67	-4.5	On
Flare	6/6/2023	29.4	28.8	0.5	55	71	-3.5	On
Flare	7/11/2023	27.4	28.9	0.5	59	72	-4.7	On
Flare	8/8/2023	28.8	28.8	0.5	62	68	-3.1	On
Flare	9/12/2023	32.0	30.0	0.5	62	65	-3.1	On
Flare	10/3/2023	33.2	30.5	0.5	60	65	-2.2	On
Flare	11/7/2023	34.1	30.6	0.5	58	68	-4.5	On
Flare	11/21/2023	37.5	32.0	0.4	56	66	-2.3	On
Flare	12/5/2023	35.8	31.4	0.5	54	61	-3.5	On
Flare	12/19/2023	36.0	31.9	0.5	53	70	-3.5	On
EW-01	6/6/2023	6.4	20.1	0.4	62	0	-3.0	Off
EW-02	6/6/2023	13.5	23.0	0.4	59	0	-3.0	Off
EW-03	3/28/2023	38.1	28.7	0.2	47	4	-2.2	On
EW-03	5/9/2023	35.6	28.1	0.3	48	4	-3.9	On
EW-03	8/8/2023	37.6	29.7	0.2	56	6	-2.6	On
EW-03	10/19/2023	43.7	32.3	0.3	53	10	-1.6	On
EW-04	3/28/2023	27.0	26.3	0.4	46	1	-2.7	On
EW-04	5/9/2023	26.8	25.9	0.4	48	20	-3.9	On
EW-04	8/8/2023	26.7	27.0	0.5	64	5	-2.5	On
EW-04	10/19/2023	31.1	29.3	0.4	57	4	-1.6	On
EW-05	3/28/2023	19.0	24.3	0.2	44	0	-2.8	Off
EW-05	4/11/2023	18.9	23.2	0.2	48	0	-2.3	Off
EW-05	5/9/2023	14.7	22.7	0.5	50	0	-3.9	Off
EW-05	6/6/2023	16.6	22.6	0.2	56	0	-2.9	Off
EW-05	7/11/2023	17.1	23.0	0.3	57	0	-3.9	Off
EW-05	8/8/2023	22.5	23.6	0.5	63	5	-2.4	On
EW-05	9/12/2023	28.0	24.7	0.5	59	0	-2.3	On
EW-05	10/19/2023	31.2	26.0	0.4	56	2	-1.7	On
EW-06	3/28/2023	23.7	26.9	0.2	47	0	-2.6	Off
EW-06	4/11/2023	23.6	25.7	0.2	51	29	-2.2	On
EW-06	5/9/2023	20.2	25.7	0.2	50	3	-3.8	On
EW-06	6/6/2023	19.1	25.0	0.2	58	0	-2.9	Off
EW-06	7/11/2023	18.7	25.2	0.4	60	0	-3.9	Off

Table 2.2

Landfill Gas Data
January 2023 through December 2023
Holtz Krause Closed Landfill - Wausau, Wisconsin

ID	Date	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Temp (^oF)	Flow Rate (scfm)	Header Pressure (in. H_2O)	Status (on/off)
EW-06	8/8/2023	22.4	25.7	0.3	64	5	-2.4	On
EW-06	9/12/2023	25.8	26.6	0.3	58	2	-2.2	On
EW-06	10/19/2023	29.3	27.7	0.3	56	4	-1.5	On
EW-07	3/28/2023	30.1	27.2	0.4	45	0	-2.7	On
EW-07	5/9/2023	32.1	26.8	0.8	52	7	-3.7	On
EW-07	8/8/2023	29.6	28.0	0.4	63	6	-2.3	On
EW-07	10/19/2023	30.9	28.8	0.3	56	7	-1.6	On
EW-08	6/6/2023	9.2	20.8	0.3	64	0	-2.9	Off
EW-09	6/6/2023	13.8	22.3	0.3	59	0	-2.9	Off
EW-10	3/28/2023	29.9	28.2	0.2	43	0	-2.6	On
EW-10	5/9/2023	28.8	27.2	0.3	49	6	-3.9	On
EW-10	8/8/2023	27.7	27.3	0.4	61	5	-2.5	On
EW-10	10/19/2023	30.1	28.5	0.4	55	3	-1.6	On
EW-11	7/11/2023	0.7	17.9	0.5	66	0	-3.9	Off
EW-12	3/28/2023	17.1	26.1	0.1	42	0	-2.7	Off
EW-12	4/11/2023	17.4	25.0	0.3	46	0	-2.5	Off
EW-12	5/9/2023	16.0	24.7	0.5	49	0	-3.8	Off
EW-12	6/6/2023	17.5	24.9	0.3	62	0	-3.0	Off
EW-12	7/11/2023	19.3	25.8	0.5	62	0	-3.7	Off
EW-12	8/8/2023	21.4	26.3	0.4	65	6	-2.5	On
EW-12	9/12/2023	24.1	27.1	0.4	60	0	-2.3	On
EW-12	10/19/2023	25.9	28.3	0.1	56	0	-1.6	On
EW-13	7/11/2023	1.6	19.2	0.8	64	0	-3.1	Off
EW-14	7/11/2023	10.1	19.7	0.5	62	0	-3.7	Off
EW-15	7/11/2023	0.8	16.7	0.8	60	0	-3.6	Off
EW-17	3/28/2023	21.5	25.7	0.2	39	0	-2.7	On
EW-17	4/11/2023	25.4	23.8	1.3	52	0	-2.4	On
EW-17	5/9/2023	2.0	1.9	19.6	50	0	-3.8	Off
EW-17	6/6/2023	40.0	26.3	0.3	62	0	-2.8	On
EW-17	7/11/2023	27.3	26.0	0.4	58	5	-3.6	On
EW-17	8/8/2023	31.1	27.3	0.3	64	4	-2.4	On
EW-17	9/12/2023	36.0	28.9	0.4	58	0	-1.9	On
EW-17	10/19/2023	38.2	30.3	0.1	57	0	-1.5	On
EW-18	3/28/2023	41.2	31.8	0.4	43	0	-2.8	On
EW-18	5/9/2023	38.0	31.0	0.2	51	3	-3.8	On

Table 2.2

Landfill Gas Data
January 2023 through December 2023
Holtz Krause Closed Landfill - Wausau, Wisconsin

ID	Date	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Temp (^{o}F)	Flow Rate (scfm)	Header Pressure (in. H_2O)	Status (on/off)
EW-18	8/8/2023	45.1	33.1	0.2	67	3	-2.3	On
EW-18	10/19/2023	48.1	35.1	0.4	57	0	-1.5	On
EW-19	7/11/2023	0.1	0.1	21.2	67	0	-1.7	Off
EW-20	3/28/2023	44.7	35.4	0.3	48	17	-2.5	On
EW-20	5/9/2023	42.9	34.0	0.4	50	16	-3.7	On
EW-20	8/8/2023	39.9	34.5	0.3	59	16	-2.3	On
EW-20	10/19/2023	43.1	36.6	0.2	55	16	-1.5	On
EW-21	3/28/2023	27.5	27.2	0.2	33	0	-3.1	On
EW-21	4/11/2023	26.5	25.6	0.4	49	0	-2.4	On
EW-21	5/9/2023	22.0	24.7	0.9	50	5	-3.9	On
EW-21	6/6/2023	21.4	25.2	0.6	58	6	-2.9	On
EW-21	7/11/2023	20.2	25.8	0.9	61	5	-3.7	On
EW-21	8/8/2023	22.4	26.5	0.6	68	6	-2.4	On
EW-21	9/12/2023	26.1	28.4	0.5	60	16	-2.4	On
EW-21	10/19/2023	30.2	29.7	0.2	57	23	-1.6	On
EW-22	6/6/2023	6.1	20.2	0.2	62	0	-3.0	Off
EW-23	6/6/2023	0.0	1.1	20.7	64	0	-2.9	Off
EW-24	6/6/2023	7.7	20.9	0.5	63	0	-2.9	Off
EW-30	3/28/2023	25.7	32.1	0.5	42	0	-2.9	On
EW-30	5/9/2023	25.3	30.8	0.2	47	29	-3.8	On
EW-30	8/8/2023	23.2	30.8	0.5	64	5	-2.3	On
EW-30	10/19/2023	35.5	34.3	0.4	54	8	-1.5	On
EW-31	3/28/2023	32.1	33.1	0.4	44	0	-2.4	On
EW-31	5/9/2023	31.6	32.2	0.2	49	5	-3.9	On
EW-31	8/8/2023	27.0	31.1	0.5	63	5	-2.3	On
EW-31	10/19/2023	35.0	34.0	0.3	54	4	-1.7	On
EW-32	3/28/2023	1.7	3.3	18.6	45	0*	-1.7	Off
EW-32	4/11/2023	14.8	22.0	0.3	59	0	-2.4	Off
EW-32	5/9/2023	11.3	21.7	1.7	53	0	-3.8	Off
EW-32	6/6/2023	0.5	1.4	19.2	66	0	-2.4	Off
EW-32	7/11/2023	10.4	24.0	0.5	68	0	-3.6	Off
EW-32	8/8/2023	0.0	0.1	20.6	71	0	-2.3	Off
EW-32	9/12/2023	0.3	0.7	21.3	63	0	-2.3	Off
EW-32	10/19/2023	28.6	31.0	0.5	54	0	-1.5	Off
EW-33	3/28/2023	26.3	32.4	0.2	40	15	-1.6	On
EW-33	5/9/2023	21.8	30.5	0.2	47	0	-3.7	On

Table 2.2

Landfill Gas Data
January 2023 through December 2023
Holtz Krause Closed Landfill - Wausau, Wisconsin

ID	Date	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Temp (^oF)	Flow Rate (scfm)	Header Pressure (in. H_2O)	Status (on/off)
EW-33	8/8/2023	23.3	31.5	0.4	64	5	-2.6	On
EW-33	10/19/2023	33.2	34.2	0.3	55	3	-1.7	On
EW-34	3/28/2023	15.9	26.4	0.2	36	0	0.1	Off
EW-34	4/11/2023	3.1	3.6	18.0	49	0	-0.2	Off
EW-34	5/9/2023	0.0	0.1	21.2	52	0	-1.2	Off
EW-34	6/6/2023	0.7	2.7	18.8	67	0	-0.3	Off
EW-34	7/11/2023	0.3	1.2	20.3	67	0	-0.5	Off
EW-34	8/8/2023	1.0	2.7	18.7	71	0	-0.2	Off
EW-34	9/12/2023	1.8	3.1	19.7	60	0	-0.2	Off
EW-34	10/19/2023	37.3	34.2	0.2	51	0	0.0	Off
EW-35	7/11/2023	1.8	3.2	18.8	64	0	-0.5	Off
EW-36	3/28/2023	37.5	31.8	0.2	41	0	-1.5	On
EW-36	5/9/2023	29.8	29.2	0.2	50	19	-2.9	On
EW-36	8/8/2023	28.2	30.3	0.2	71	5	-0.8	On
EW-36	10/19/2023	34.4	33.9	0.1	57	19	0.0	On
EW-37	3/28/2023	38.7	35.1	0.2	40	0	-1.5	On
EW-37	5/9/2023	33.3	33.5	0.2	48	0	-2.6	On
EW-37	8/8/2023	31.8	35.4	0.1	80	5	-1.8	On
EW-37	10/19/2023	42.1	38.1	0.2	55	2	0.0	On
EW-38	7/11/2023	0.8	5.6	12.8	64	0	-3.5	Off

Notes:
* - Sample port frozen

Table 2.3

Landfill Gas Probe Data
January 2023 through December 2023
Holtz Krause Closed Landfill - Wausau, Wisconsin

ID	Date	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Static Pressure (in. H_2O)
GP-1S	3/7/2023	0.0	0.1	21.2	-0.2
GP-1S	5/23/2023	0.0	0.4	20.2	0.0
GP-1S	8/24/2023	0.0	0.1	20.8	0.0
GP-1S	10/3/2023	0.0	6.3	13.0	-0.1
GP-1D	3/7/2023	0.0	0.1	21.3	-0.3
GP-1D	5/23/2023	0.0	0.1	20.5	-0.1
GP-1D	8/24/2023	0.0	1.6	19.1	-0.1
GP-1D	10/3/2023	0.0	1.0	19.4	-0.1
GP-2	3/7/2023	0.0	0.5	21.6	0.0
GP-2	5/23/2023	0.0	0.8	19.8	0.0
GP-2	8/24/2023	0.0	1.1	20.1	0.0
GP-2	10/3/2023	0.0	0.9	20.1	-0.1
GP-3S	3/7/2023	0.0	0.1	21.8	-0.2
GP-3S	5/23/2023	0.0	0.2	20.4	0.0
GP-3S	8/24/2023	0.0	1.2	19.6	0.0
GP-3S	10/3/2023	0.0	1.3	19.5	-0.1
GP-3D	3/7/2023	0.0	0.1	21.8	-0.2
GP-3D	5/23/2023	0.0	0.1	20.6	-0.1
GP-3D	8/24/2023	0.0	0.6	20.2	-0.1
GP-3D	10/3/2023	0.0	0.3	20.6	-0.1
GP-5	3/7/2023	0.0	1.5	20.8	0.0
GP-5	5/23/2023	0.0	0.1	20.4	0.0
GP-5	8/24/2023	0.0	0.1	20.7	0.0
GP-5	10/3/2023	0.0	0.1	20.8	-0.1
GP-6	3/7/2023	0.0	0.1	20.6	-0.1
GP-6	5/23/2023	0.0	0.2	20.4	0.0
GP-6	8/24/2023	0.0	0.9	20.0	0.0
GP-6	10/3/2023	0.0	0.7	20.5	-0.1
GP-7R	3/7/2023	0.0	0.4	21.7	0.0
GP-7R	5/23/2023	0.0	0.1	20.6	0.0
GP-7R	8/24/2023	0.0	0.9	20.1	0.0
GP-7R	10/3/2023	0.0	0.8	20.5	-0.1
GP-10	3/7/2023	0.0	0.5	20.8	0.0
GP-10	5/23/2023	0.0	0.4	19.9	0.0
GP-10	8/24/2023	0.0	0.6	20.5	0.0
GP-10	10/3/2023	0.0	0.8	20.3	-0.1

Table 2.3

Landfill Gas Probe Data
January 2023 through December 2023
Holtz Krause Closed Landfill - Wausau, Wisconsin

ID	Date	Methane (%)	Carbon Dioxide (%)	Oxygen (%)	Static Pressure (in. H_2O)
GP-11	3/7/2023	0.0	1.2	20.5	0.0
GP-11	5/23/2023	0.0	0.5	19.9	0.0
GP-11	8/24/2023	0.0	3.8	16.5	0.1
GP-11	10/3/2023	0.0	5.2	15.5	-0.1
GP-12	3/7/2023	0.0	0.1	20.2	-0.1
GP-12	5/23/2023	0.0	2.1	17.7	0.0
GP-12	8/24/2023	0.0	4.3	16.9	0.0
GP-12	10/3/2023	0.0	2.9	17.5	-0.1
GP-13	3/7/2023	0.0	0.1	20.3	0.0
GP-13	5/23/2023	0.0	0.4	20.1	0.0
GP-13	8/24/2023	0.0	2.1	18.8	0.0
GP-13	10/3/2023	0.0	1.4	19.4	-0.1
GP-14	3/7/2023	0.0	0.5	20.4	0.0
GP-14	5/23/2023	0.0	1.5	19.3	0.0
GP-14	8/24/2023	0.0	3.5	17.4	0.1
GP-14	10/3/2023	0.0	3.0	17.4	-0.1

Figure

Paper Size ANSI A

0 70 140 210 280 350

Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983 HARN
Grid: NAD 1983 HARN WISCRS Marathon County Feet

N

GHD

CITY OF WAUSAU
FORMER HOLTZ KRAUSE LANDFILL
WAUSAU, WISCONSIN

SITE PLAN

Project No. **11228677-24**
Revision No. **-**
Date **02/01/2024**

FIGURE 1.1

O:\GIS\PROJECTS\11228000s\11228677\GIS\Maps\Deliverables\RPT\RPT003\11228677_RPT003_001_SitePlan.mxd
Print date: 01 Feb 2024 - 17:21

Data source: Imagery WROC 2020. Created by: rjcoy

Appendices

Appendix A

Weekly Flare Station Inspection Forms

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Tester (Initials)	KSF	KSF	KSF	KSF
Date	1/3/2023	1/10/2023	1/17/2023	1/24/2023
Time	10:00 AM	10:00 AM	10:00 AM	10:00 AM
Sky Conditions	Clear	Cloudy	Cloudy	Cloudy
Ambient Temperature, deg F	25	30	35	25
Inlet Temperature, deg F (GHS-TI-301)	48	48	48	47
Demister Inlet Valve Position, % Open (GHS-HV-301)	100	100	100	100
LFG Vacuum, In WC (GHS-PI-301)	4	4	4	4
Demister Filter Delta P (GHS-PDI-301)	0.3	0.3	0.3	0.3
Blower 301 Inlet Valve Position, % Open (GHS-FCV-301)	100	100	100	100
Discharge Pressure, In WC (GHS-PI-302)	0.4	0.3	0.2	0.2
Discharge Temperature, deg F (GHS-TI-302)	46	56	58	56
Propane Pilot Supply Pressure, In WC (GHS-PI-101)	8	8	9	8
Flame Arrester Inlet Pressure, In WC (FLR-PI-301)	1.3	1.3	1.3	1.3
Flame Arrester Outlet Pressure, In WC (FLR-PI-301)	1.0	1.0	1.0	1.0
Flame Arrester Delta P, In WC (FLR-PI-301)	0.3	0.3	0.3	0.3
Blower 301 Frequency, Hz (CP-YIC-2)	14.1	14.9	16	16
Blower 301 Current, Amps (CP-YIC-2)	3.9	3.8	3.8	3.7
YIC-1 From Main Menu Screen				
ANALOG DATA MENU				
* **PROCESS OVERVIEW**				
Inlet Vacuum, In WC	2.3	2.9	3.4	3.8
Inlet Temp, DegF	51	50	50	50
Oxygen, %	0.2	0.2	0.4	0.6
Blower Speed, %	14	15	16	17
Blower Vibration, In/Sec	0	0	0	0
CP Temp, DegF	73	70	75	75
FLR Flame Temp, DegF	1446	1452	1372	1136
FLR Flow Press, In WC	0.1	1	0.1	1.1
FLR Flow Temp, DegF	60	59	62	60
Flow Rate, SCFM	72	66	65	66
* **BACK**				
* **BLOWER DATA**				
Status, Run/Stop	Run	Run	Run	Run
Run Time, Hr	78875	79021	79210	79378
Speed, %	14	15	16	17
Vibration, In/Sec	0.0	0.0	0.0	0.0
Outlet Temp, DegF	60	59	62	60
* **BACK**				
* **FLARE DATA**				
Flow Rate, SCFM	72	66	66	66
Flame Temp, DegF	1424	1482	1381	1108
BLR Speed, %	14	15	16	17
Flow Pressure, In WC	0.1	0.9	0.1	1.1
Hour Meter	78868	79035	79203	79731

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Run Clock	On	On	On	On
Pilot	Off	Off	Off	Off
SD Valve	Open	Open	Open	Open
Flame	On	On	On	On
Relight	Off	Off	Off	Off
Pilot	Ready	Ready	Ready	Ready
Vac Ramp	Off	Off	Off	Off
Forced Flow	Off	Off	Off	Off
* **BACK**				
* **FLOW DATA**				
Flow Rate, SCFM	71	66	65	66
Today's Total, MMSCF	0.04	0.03	0.03	0.03
This Month's Total, MMSCF	0.20	0.90	1.61	2.31
Total Flow, MMSCF	377.33	378.03	378.74	379.45
Flow Press, In WC	0.1	1	0.1	0.9
Flow Temp, DegF	60	59	62	60
Flow Delta P, In WC	0.44	0.37	0.36	0.37
* **7 DAY FLOW HISTORY**				
Yesterday's Flow, MMSCF	0.04	0.03	0.03	0.03
2 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
3 Day's Ago Flow, MMSCF	0.11	0.10	0.10	0.11
4 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
5 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
6 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
7 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
* **BACK**				
* **RESETTABLE FLOW**				
Resettable Total Flow, MMSCF	377.33	378.03	378.74	379.45
Reset Time	0	0	0	0
Reset Date	0	0	0	0
* **BACK & * BACK**				

	Adequate	Needs Work
Check Propane and Nitrogen Cylinders and change/fill if necessary	X	
Inspect Blower, Flare and Demister Structures for Loose Bolts/Cracks	X	
Drain Demister (if necessary)	X	
Clean Demister Filter Material (if dP indicates it is necessary)	X	
Lubricate Grease Fittings (as necessary)	X	
Test Alarm Lights on Panel by pushing "RUN" and "Alarm/Shutdown" Lamps	X	
Check if any shutdowns/alarms need re-setting (note which ones in comments section)	X	
Drain Flare Stack Condensate (if necessary)		X

Comments: Drained Condensate

Signature: Kevin S. Fabel

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Tester (Initials)	KSF	KSF	KSF	KSF
Date	1/31/2023	2/7/2023	2/14/2023	2/21/2023
Time	10:00 AM	10:00 AM	10:00 AM	10:00 AM
Sky Conditions	Clear	Cloudy	Clear	Cloudy
Ambient Temperature, deg F	-10	35	35	20
Inlet Temperature, deg F (GHS-TI-301)	44	46	46	45
Demister Inlet Valve Position, % Open (GHS-HV-301)	100	100	100	100
LFG Vacuum, In WC (GHS-PI-301)	3	5	4	5
Demister Filter Delta P (GHS-PDI-301)	0.3	0.3	0.3	0.3
Blower 301 Inlet Valve Position, % Open (GHS-FCV-301)	100	100	100	100
Discharge Pressure, In WC (GHS-PI-302)	0.2	0.2	0.2	0.2
Discharge Temperature, deg F (GHS-TI-302)	44	58	57	51
Propane Pilot Supply Pressure, In WC (GHS-PI-101)	9	9	11	9
Flame Arrester Inlet Pressure, In WC (FLR-PI-301)	1.5	1.3	1.4	1.3
Flame Arrester Outlet Pressure, In WC (FLR-PI-301)	1.2	1.0	1.1	1.0
Flame Arrester Delta P, In WC (FLR-PI-301)	0.3	0.3	0.3	0.3
Blower 301 Frequency, Hz (CP-YIC-2)	15.3	17.2	15.1	18.1
Blower 301 Current, Amps (CP-YIC-2)	3.9	3.8	3.8	3.9
YIC-1 From Main Menu Screen				
ANALOG DATA MENU				
* **PROCESS OVERVIEW**				
Inlet Vacuum, In WC	3.1	4.0	2.9	5.0
Inlet Temp, DegF	48	49	49	48
Oxygen, %	0	0.5	0.2	0.3
Blower Speed, %	16	18	16	20
Blower Vibration, In/Sec	0	0	0	0
CP Temp, DegF	50	74	75	64
FLR Flame Temp, DegF	1325	1260	1329	1244
FLR Flow Press, In WC	0.1	0.1	0.4	0.6
FLR Flow Temp, DegF	50	61	59	57
Flow Rate, SCFM	72	66	73	65
* **BACK**				
* **BLOWER DATA**				
Status, Run/Stop	Run	Run	Run	Run
Run Time, Hr	79545	79715	79882	80051
Speed, %	16	18	16	20
Vibration, In/Sec	0.0	0	0.0	0.0
Outlet Temp, DegF	51	61	58	57
* **BACK**				
* **FLARE DATA**				
Flow Rate, SCFM	72	66	65	65
Flame Temp, DegF	1283	1270	1323	1266
BLR Speed, %	16	18	16	20
Flow Pressure, In WC	0.1	0.1	0.5	0.6
Hour Meter	79540	79708	79875	80043

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Run Clock	On	On	On	On
Pilot	Off	Off	Off	Off
SD Valve	Open	Open	Open	Open
Flame	On	On	On	On
Relight	Off	Off	Off	Off
Pilot	Ready	Ready	Ready	Ready
Vac Ramp	Off	Off	Off	Off
Forced Flow	Off	Off	Off	Off
* **BACK**				
* **FLOW DATA**				
Flow Rate, SCFM	72	66	73	65
Today's Total, MMSCF	0.04	0.03	0.03	0.03
This Month's Total, MMSCF	3.02	0.61	1.32	2.04
Total Flow, MMSCF	380.17	380.87	381.59	382.31
Flow Press, In WC	0.1	0.1	0.5	0.6
Flow Temp, DegF	50	61	59	57
Flow Delta P, In WC	0.43	0.37	0.46	0.36
* **7 DAY FLOW HISTORY**				
Yesterday's Flow, MMSCF	0.04	0.03	0.03	0.03
2 Day's Ago Flow, MMSCF	0.10	0.1	0.10	0.10
3 Day's Ago Flow, MMSCF	0.10	0.1	0.10	0.10
4 Day's Ago Flow, MMSCF	0.10	0.11	0.10	0.10
5 Day's Ago Flow, MMSCF	0.10	0.1	0.10	0.10
6 Day's Ago Flow, MMSCF	0.10	0.1	0.10	0.10
7 Day's Ago Flow, MMSCF	0.10	0.1	0.10	0.10
* **BACK**				
* **RESETTABLE FLOW**				
Resettable Total Flow, MMSCF	380.17	380.87	381.59	382.31
Reset Time	-	-	-	-
Reset Date	-	-	-	-
* **BACK & * BACK**				

	Adequate	Needs Work
Check Propane and Nitrogen Cylinders and change/fill if necessary	X	
Inspect Blower, Flare and Demister Structures for Loose Bolts/Cracks	X	
Drain Demister (if necessary)	X	
Clean Demister Filter Material (if dP indicates it is necessary)	X	
Lubricate Grease Fittings (as necessary)	X	
Test Alarm Lights on Panel by pushing "RUN" and "Alarm/Shutdown" Lamps	X	
Check if any shutdowns/alarms need re-setting (note which ones in comments section)	X	
Drain Flare Stack Condensate (if necessary)		X

Comments: Drained Condensate

Signature: Kevin S. Fabel

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Tester (Initials)	KSF	KSF	KSF	KSF
Date	2/28/2023	3/7/2023	3/14/2023	3/21/2023
Time	10:00 AM	10:00 AM	10:00 AM	10:00 AM
Sky Conditions	Clear	Clear	Clear	Clear
Ambient Temperature, deg F	30	35	20	25
Inlet Temperature, deg F (GHS-TI-301)	46	46	44	44
Demister Inlet Valve Position, % Open (GHS-HV-301)	100	100	100	100
LFG Vacuum, In WC (GHS-PI-301)	5	5	4	4
Demister Filter Delta P (GHS-PDI-301)	0.3	0.3	0.3	0.3
Blower 301 Inlet Valve Position, % Open (GHS-FCV-301)	100	100	100	100
Discharge Pressure, In WC (GHS-PI-302)	0.3	0.3	0.2	0.2
Discharge Temperature, deg F (GHS-TI-302)	56	58	52	50
Propane Pilot Supply Pressure, In WC (GHS-PI-101)	12	10	18	9
Flame Arrester Inlet Pressure, In WC (FLR-PI-301)	1.3	1.4	1.4	1.3
Flame Arrester Outlet Pressure, In WC (FLR-PI-301)	1.0	1.1	1.1	1.0
Flame Arrester Delta P, In WC (FLR-PI-301)	0.3	0.3	0.3	0.3
Blower 301 Frequency, Hz (CP-YIC-2)	17.2	17.3	16.6	16.5
Blower 301 Current, Amps (CP-YIC-2)	3.8	3.7	3.7	3.8
YIC-1 From Main Menu Screen				
ANALOG DATA MENU				
* **PROCESS OVERVIEW**				
Inlet Vacuum, In WC	4.6	4.6	4.1	4.1
Inlet Temp, DegF	48	48	47	47
Oxygen, %	0.4	0.7	0	0.2
Blower Speed, %	19	19	18	18
Blower Vibration, In/Sec	0	0	0	0
CP Temp, DegF	75	74	58	64
FLR Flame Temp, DegF	1384	1303	1229	1351
FLR Flow Press, In WC	0.9	0.1	0.1	0.1
FLR Flow Temp, DegF	60	57	51	55
Flow Rate, SCFM	66	72	72	70
* **BACK**				
* **BLOWER DATA**				
Status, Run/Stop	Run	Run	Run	Run
Run Time, Hr	80219	80386	80554	80721
Speed, %	19	19	18	18
Vibration, In/Sec	0.0	0.0	0.0	0.0
Outlet Temp, DegF	60	57	51	55
* **BACK**				
* **FLARE DATA**				
Flow Rate, SCFM	66	72	72	70
Flame Temp, DegF	1380	1381	1197	1416
BLR Speed, %	19	19	18	18
Flow Pressure, In WC	0.9	0.1	0.1	0.1
Hour Meter	80212	80379	80547	80714

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Run Clock	On	On	On	On
Pilot	Off	Off	Off	Off
SD Valve	Open	Open	Open	Open
Flame	On	On	On	On
Relight	Off	Off	Off	Off
Pilot	Ready	Ready	Ready	Ready
Vac Ramp	Off	Off	Off	Off
Forced Flow	Off	Off	Off	Off
* **BACK**				
* **FLOW DATA**				
Flow Rate, SCFM	66	73	72	70
Today's Total, MMSCF	0.03	0.03	0.03	0.03
This Month's Total, MMSCF	2.75	0.61	1.32	2.03
Total Flow, MMSCF	383.02	383.73	384.45	385.15
Flow Press, In WC	0.9	0.1	0.1	0.1
Flow Temp, DegF	60	57	51	55
Flow Delta P, In WC	0.38	0.45	0.43	0.42
* **7 DAY FLOW HISTORY**				
Yesterday's Flow, MMSCF	0.03	0.03	0.03	0.03
2 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.11
3 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
4 Day's Ago Flow, MMSCF	0.11	0.10	0.10	0.10
5 Day's Ago Flow, MMSCF	0.10	0.10	0.11	0.10
6 Day's Ago Flow, MMSCF	0.10	0.10	0.11	0.10
7 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
* **BACK**				
* **RESETTABLE FLOW**				
Resettable Total Flow, MMSCF	383.02	383.73	384.45	385.15
Reset Time	-	-	-	-
Reset Date	-	-	-	-
* **BACK & * BACK**				

	Adequate	Needs Work
Check Propane and Nitrogen Cylinders and change/fill if necessary	X	
Inspect Blower, Flare and Demister Structures for Loose Bolts/Cracks	X	
Drain Demister (if necessary)	X	
Clean Demister Filter Material (if dP indicates it is necessary)	X	
Lubricate Grease Fittings (as necessary)	X	
Test Alarm Lights on Panel by pushing "RUN" and "Alarm/Shutdown" Lamps	X	
Check if any shutdowns/alarms need re-setting (note which ones in comments section)	X	
Drain Flare Stack Condensate (if necessary)		X

Comments: Drained Condensate

Signature: Kevin S. Fabel

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Tester (Initials)	KSF	KSF	KSF	KSF
Date	3/28/2023	4/4/2023	4/11/2023	4/18/2023
Time	10:00 AM	10:00 AM	10:00 AM	10:00 AM
Sky Conditions	Clear	Cloudy	Clear	Clear
Ambient Temperature, deg F	30	35	65	35
Inlet Temperature, deg F (GHS-TI-301)	45	45	48	46
Demister Inlet Valve Position, % Open (GHS-HV-301)	100	100	100	100
LFG Vacuum, In WC (GHS-PI-301)	4	6	4	4
Demister Filter Delta P (GHS-PDI-301)	0.3	0.3	0.3	0.3
Blower 301 Inlet Valve Position, % Open (GHS-FCV-301)	100	100	100	100
Discharge Pressure, In WC (GHS-PI-302)	0.2	0.2	0.2	0.2
Discharge Temperature, deg F (GHS-TI-302)	52	54	63	48
Propane Pilot Supply Pressure, In WC (GHS-PI-101)	10	8	14	10
Flame Arrester Inlet Pressure, In WC (FLR-PI-301)	1.4	1.4	1.0	1.0
Flame Arrester Outlet Pressure, In WC (FLR-PI-301)	1.1	1.1	0.7	0.7
Flame Arrester Delta P, In WC (FLR-PI-301)	0.3	0.3	0.3	0.3
Blower 301 Frequency, Hz (CP-YIC-2)	16.3	17.4	15.6	17.9
Blower 301 Current, Amps (CP-YIC-2)	3.8	3.8	3.9	3.9
YIC-1 From Main Menu Screen				
ANALOG DATA MENU				
* **PROCESS OVERVIEW**				
Inlet Vacuum, In WC	3.9	4.8	3.6	5.2
Inlet Temp, DegF	48	47	48	48
Oxygen, %	0.4	0.4	0.7	0
Blower Speed, %	18	20	16	21
Blower Vibration, In/Sec	0	0	0	0
CP Temp, DegF	72	72	82	71
FLR Flame Temp, DegF	1319	1448	1340	1289
FLR Flow Press, In WC	0.1	0.1	1.3	1
FLR Flow Temp, DegF	57	59	65	53
Flow Rate, SCFM	73	69	69	70
* **BACK**				
* **BLOWER DATA**				
Status, Run/Stop	Run	Run	Run	Run
Run Time, Hr	80890	81058	81220	81388
Speed, %	18	20	16	21
Vibration, In/Sec	0.0	0.0	0.0	0.0
Outlet Temp, DegF	57	59	65	53
* **BACK**				
* **FLARE DATA**				
Flow Rate, SCFM	73	68	69	71
Flame Temp, DegF	1284	1439	1323	1242
BLR Speed, %	18	20	16	21
Flow Pressure, In WC	0.1	0.1	1.3	1
Hour Meter	80883	81051	81213	81381

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Run Clock	On	On	On	On
Pilot	Off	Off	Off	Off
SD Valve	Open	Open	Open	Open
Flame	On	On	On	On
Relight	Off	Off	Off	Off
Pilot	Ready	Ready	Ready	Ready
Vac Ramp	Off	Off	Off	Off
Forced Flow	Off	Off	Off	Off
* **BACK**				
* **FLOW DATA**				
Flow Rate, SCFM	73	68	69	71
Today's Total, MMSCF	0.04	0.03	0.04	0.03
This Month's Total, MMSCF	2.74	0.30	0.99	1.69
Total Flow, MMSCF	385.87	386.58	387.27	387.98
Flow Press, In WC	0.1	0.1	1.3	1.1
Flow Temp, DegF	57	59	65	53
Flow Delta P, In WC	0.45	0.39	0.41	0.42
* **7 DAY FLOW HISTORY**				
Yesterday's Flow, MMSCF	0.04	0.03	0.04	0.03
2 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
3 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
4 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
5 Day's Ago Flow, MMSCF	0.10	0.11	0.08	0.10
6 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
7 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
* **BACK**				
* **RESETTABLE FLOW**				
Resettable Total Flow, MMSCF	385.87	386.59	387.27	387.98
Reset Time	-	-	-	-
Reset Date	-	-	-	-
* **BACK & * BACK**				

	Adequate	Needs Work
Check Propane and Nitrogen Cylinders and change/fill if necessary	X	
Inspect Blower, Flare and Demister Structures for Loose Bolts/Cracks	X	
Drain Demister (if necessary)	X	
Clean Demister Filter Material (if dP indicates it is necessary)	X	
Lubricate Grease Fittings (as necessary)	X	
Test Alarm Lights on Panel by pushing "RUN" and "Alarm/Shutdown" Lamps	X	
Check if any shutdowns/alarms need re-setting (note which ones in comments section)	X	
Drain Flare Stack Condensate (if necessary)	X	

Comments:

Signature: Kevin S. Fabel

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Tester (Initials)	KSF	KSF	KSF	KSF
Date	4/25/2023	5/2/2023	5/9/2023	5/16/2023
Time	10:00 AM	10:00 AM	10:00 AM	10:00 AM
Sky Conditions	Clear	Clear	Clear	Clear
Ambient Temperature, deg F	45	45	50	65
Inlet Temperature, deg F (GHS-TI-301)	46	47	49	50
Demister Inlet Valve Position, % Open (GHS-HV-301)	100	100	100	100
LFG Vacuum, In WC (GHS-PI-301)	4	4	4	3
Demister Filter Delta P (GHS-PDI-301)	0.3	0.3	0.3	0.3
Blower 301 Inlet Valve Position, % Open (GHS-FCV-301)	100	100	100	100
Discharge Pressure, In WC (GHS-PI-302)	0.2	0.2	0.2	0.2
Discharge Temperature, deg F (GHS-TI-302)	48	50	56	55
Propane Pilot Supply Pressure, In WC (GHS-PI-101)	12	8	10	12
Flame Arrester Inlet Pressure, In WC (FLR-PI-301)	1	1.0	1.0	1.0
Flame Arrester Outlet Pressure, In WC (FLR-PI-301)	0.7	0.7	0.7	0.7
Flame Arrester Delta P, In WC (FLR-PI-301)	0.3	0.3	0.3	0.3
Blower 301 Frequency, Hz (CP-YIC-2)	16.6	16.9	16.7	13.4
Blower 301 Current, Amps (CP-YIC-2)	3.8	3.8	3.8	3.7
YIC-1 From Main Menu Screen				
ANALOG DATA MENU				
* **PROCESS OVERVIEW**				
Inlet Vacuum, In WC	4.4	4.4	4.5	2.3
Inlet Temp, DegF	48	49	50	51
Oxygen, %	0.1	0	0.2	0.1
Blower Speed, %	18	19	19	13
Blower Vibration, In/Sec	0	0	0	0
CP Temp, DegF	73	71	78	80
FLR Flame Temp, DegF	1142	1288	1067	1319
FLR Flow Press, In WC	0.1	0.1	1.3	1.3
FLR Flow Temp, DegF	52	54	57	56
Flow Rate, SCFM	66	72	67	67
* **BACK**				
* **BLOWER DATA**				
Status, Run/Stop	Run	Run	Run	Run
Run Time, Hr	81555	81723	81892	82060
Speed, %	18	19	19	13
Vibration, In/Sec	0.0	0.0	0.0	0.0
Outlet Temp, DegF	52	54	57	56
* **BACK**				
* **FLARE DATA**				
Flow Rate, SCFM	67	72	67	67
Flame Temp, DegF	1159	1294	1036	1314
BLR Speed, %	18	19	19	13
Flow Pressure, In WC	0.1	0.1	0.3	1.3
Hour Meter	81548	81717	81717	82053

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WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Run Clock	On	On	On	On
Pilot	Off	Off	Off	Off
SD Valve	Open	Open	Open	Open
Flame	On	On	On	On
Relight	Off	Off	Off	Off
Pilot	Ready	Ready	Ready	Ready
Vac Ramp	Off	Off	Off	Off
Forced Flow	Off	Off	Off	Off
* **BACK**				
* **FLOW DATA**				
Flow Rate, SCFM	67	71	67	67
Today's Total, MMSCF	0.03	0.03	0.04	0.03
This Month's Total, MMSCF	2.40	0.10	0.1	1.52
Total Flow, MMSCF	388.68	389.39	389.39	390.81
Flow Press, In WC	0.1	0.1	1.3	1.3
Flow Temp, DegF	52	54	57	56
Flow Delta P, In WC	0.37	0.43	0.38	0.38
* **7 DAY FLOW HISTORY**				
Yesterday's Flow, MMSCF	0.03	0.03	0.03	0.03
2 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
3 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
4 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
5 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
6 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
7 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
* **BACK**				
* **RESETTABLE FLOW**				
Resettable Total Flow, MMSCF	388.68	389.39	389.39	390.81
Reset Time	-	-	-	-
Reset Date	-	-	-	-
* **BACK & * BACK**				

	Adequate	Needs Work
Check Propane and Nitrogen Cylinders and change/fill if necessary	X	
Inspect Blower, Flare and Demister Structures for Loose Bolts/Cracks	X	
Drain Demister (if necessary)	X	
Clean Demister Filter Material (if dP indicates it is necessary)	X	
Lubricate Grease Fittings (as necessary)	X	
Test Alarm Lights on Panel by pushing "RUN" and "Alarm/Shutdown" Lamps	X	
Check if any shutdowns/alarms need re-setting (note which ones in comments section)	X	
Drain Flare Stack Condensate (if necessary)	X	

Comments: Turned off heat trace for year…Turned on A/C.

Signature: Kevin S. Fabel

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Tester (Initials)	KSF	KSF	KSF	KSF
Date	5/23/2023	5/30/2023	6/6/2023	6/13/2023
Time	10:00 AM	10:00 AM	10:00 AM	10:00 AM
Sky Conditions	Clear	Clear	Cloudy	Cloudy
Ambient Temperature, deg F	70	75	70	55
Inlet Temperature, deg F (GHS-TI-301)	52	54	55	55
Demister Inlet Valve Position, % Open (GHS-HV-301)	100	100	100	100
LFG Vacuum, In WC (GHS-PI-301)	4	4	4	3
Demister Filter Delta P (GHS-PDI-301)	0.3	0.3	0.4	0.3
Blower 301 Inlet Valve Position, % Open (GHS-FCV-301)	100	100	100	100.2
Discharge Pressure, In WC (GHS-PI-302)	0.2	0.2	0.2	0.2
Discharge Temperature, deg F (GHS-TI-302)	60	61	62	56
Propane Pilot Supply Pressure, In WC (GHS-PI-101)	14	16	8	8
Flame Arrester Inlet Pressure, In WC (FLR-PI-301)	1.0	1.1	1.1	1
Flame Arrester Outlet Pressure, In WC (FLR-PI-301)	0.7	0.8	0.8	0.7
Flame Arrester Delta P, In WC (FLR-PI-301)	0.3	0.3	0.3	0.3
Blower 301 Frequency, Hz (CP-YIC-2)	15.7	15.5	15.5	15
Blower 301 Current, Amps (CP-YIC-2)	3.8	3.8	3.7	3.7
YIC-1 From Main Menu Screen				
ANALOG DATA MENU				
* **PROCESS OVERVIEW**				
Inlet Vacuum, In WC	3.8	3.7	3.5	3.1
Inlet Temp, DegF	52	53	55	55
Oxygen, %	0.4	0.5	0.4	0
Blower Speed, %	17	16	16	15
Blower Vibration, In/Sec	0	0	0	0
CP Temp, DegF	91	82	82	78
FLR Flame Temp, DegF	1122	1232	1384	1346
FLR Flow Press, In WC	1.3	1.3	1.4	1.4
FLR Flow Temp, DegF	60	63	64	59
Flow Rate, SCFM	68	69	71	70
* **BACK**				
* **BLOWER DATA**				
Status, Run/Stop	Run	Run	Run	Run
Run Time, Hr	82228	82396	82564	82732
Speed, %	17	16	16	15
Vibration, In/Sec	0.0	0.0	0.0	0.0
Outlet Temp, DegF	60	63	64	59
* **BACK**				
* **FLARE DATA**				
Flow Rate, SCFM	67	69	70	70
Flame Temp, DegF	1117	1253	1379	1351
BLR Speed, %	17	16	16	15
Flow Pressure, In WC	1.3	1.3	1.4	1.4
Hour Meter	82221	82389	82558	82725

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Run Clock	On	On	On	On
Pilot	Off	Off	Off	Off
SD Valve	Open	Open	Open	Open
Flame	On	On	On	On
Relight	Off	Off	Off	Off
Pilot	Ready	Ready	Ready	Ready
Vac Ramp	Off	Off	Off	Off
Forced Flow	Off	Off	Off	Off
* **BACK**				
* **FLOW DATA**				
Flow Rate, SCFM	68	68	70	70
Today's Total, MMSCF	0.30	0.03	0.03	0.03
This Month's Total, MMSCF	2.22	2.93	0.5	1.21
Total Flow, MMSCF	391.52	392.22	392.93	393.63
Flow Press, In WC	1.3	1.3	1.4	1.4
Flow Temp, DegF	60	63	64	59
Flow Delta P, In WC	0.39	0.40	0.43	0.42
* **7 DAY FLOW HISTORY**				
Yesterday's Flow, MMSCF	0.03	0.03	0.04	0.03
2 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
3 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
4 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
5 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
6 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
7 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
* **BACK**				
* **RESETTABLE FLOW**				
Resettable Total Flow, MMSCF	391.52	392.22	392.93	393.63
Reset Time	-	-	-	-
Reset Date	-	-	-	-
* **BACK & * BACK**				

	Adequate	Needs Work
Check Propane and Nitrogen Cylinders and change/fill if necessary	X	
Inspect Blower, Flare and Demister Structures for Loose Bolts/Cracks	X	
Drain Demister (if necessary)	X	
Clean Demister Filter Material (if dP indicates it is necessary)	X	
Lubricate Grease Fittings (as necessary)	X	
Test Alarm Lights on Panel by pushing "RUN" and "Alarm/Shutdown" Lamps	X	
Check if any shutdowns/alarms need re-setting (note which ones in comments section)	X	
Drain Flare Stack Condensate (if necessary)	X	

Comments:

Signature: Kevin S. Fabel

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Tester (Initials)	KSF	KSF	KSF	KSF
Date	6/20/2023	6/27/2023	7/3/2023	7/11/2023
Time	10:00 AM	10:00 AM	10:00 AM	10:00 AM
Sky Conditions	Clear	Clear	Clear	Clear
Ambient Temperature, deg F	80	70	80	70
Inlet Temperature, deg F (GHS-TI-301)	57	58	60	60
Demister Inlet Valve Position, % Open (GHS-HV-301)	100	100	100	100
LFG Vacuum, In WC (GHS-PI-301)	4	4	4	4
Demister Filter Delta P (GHS-PDI-301)	0.3	0.3	0.3	0.3
Blower 301 Inlet Valve Position, % Open (GHS-FCV-301)	100	100	100	100
Discharge Pressure, In WC (GHS-PI-302)	0.2	0.2	0.2	0.1
Discharge Temperature, deg F (GHS-TI-302)	64	60	66	62
Propane Pilot Supply Pressure, In WC (GHS-PI-101)	12	8	16	10
Flame Arrester Inlet Pressure, In WC (FLR-PI-301)	1.0	1.0	1.1	1.3
Flame Arrester Outlet Pressure, In WC (FLR-PI-301)	0.7	0.7	0.9	1.0
Flame Arrester Delta P, In WC (FLR-PI-301)	0.3	0.3	0.2	0.3
Blower 301 Frequency, Hz (CP-YIC-2)	16.4	16.3	15.8	17.1
Blower 301 Current, Amps (CP-YIC-2)	3.7	3.7	3.7	3.8
YIC-1 From Main Menu Screen				
ANALOG DATA MENU				
* **PROCESS OVERVIEW**				
Inlet Vacuum, In WC	4.3	4.1	3.8	4.7
Inlet Temp, DegF	56	57	58	59
Oxygen, %	0.5	0.2	0.5	0.4
Blower Speed, %	18	18	17	20
Blower Vibration, In/Sec	0	0	0	0
CP Temp, DegF	85	79	85	79
FLR Flame Temp, DegF	1125	1268	1162	1146
FLR Flow Press, In WC	1.3	1.3	1.3	1.5
FLR Flow Temp, DegF	66	64	66	65
Flow Rate, SCFM	67	68	67	72
* **BACK**				
* **BLOWER DATA**				
Status, Run/Stop	Run	Run	Run	Run
Run Time, Hr	82900	83068	83211	83403
Speed, %	18	18	17	20
Vibration, In/Sec	0.00	0.00	0.00	0.00
Outlet Temp, DegF	66	64	66	65
* **BACK**				
* **FLARE DATA**				
Flow Rate, SCFM	67	67	67	71
Flame Temp, DegF	1099	1185	1185	1157
BLR Speed, %	18	18	17	20
Flow Pressure, In WC	1.3	1.3	1.3	1.5
Hour Meter	82893	83061	83204	83396

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Run Clock	On	On	On	On
Pilot	Off	Off	Off	Off
SD Valve	Open	Open	Open	Open
Flame	On	On	On	On
Relight	Off	Off	Off	Off
Pilot	Ready	Ready	Ready	Ready
Vac Ramp	Off	Off	Off	Off
Forced Flow	Off	Off	Off	Off
* **BACK**				
* **FLOW DATA**				
Flow Rate, SCFM	67	66	67	72
Today's Total, MMSCF	0.03	0.03	0.03	0.03
This Month's Total, MMSCF	1.91	2.62	0.2	1.01
Total Flow, MMSCF	394.33	395.04	395.64	396.46
Flow Press, In WC	1.3	1.3	1.3	1.5
Flow Temp, DegF	66	64	66	65
Flow Delta P, In WC	0.39	0.38	0.39	0.44
* **7 DAY FLOW HISTORY**				
Yesterday's Flow, MMSCF	0.03	0.03	0.03	0.03
2 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
3 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
4 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
5 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
6 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.10
7 Day's Ago Flow, MMSCF	0.10	0.10	0.09	0.10
* **BACK**				
* **RESETTABLE FLOW**				
Resettable Total Flow, MMSCF	394.33	395.04	395.64	396.46
Reset Time	-	-	-	-
Reset Date	-	-	-	-
* **BACK & * BACK**				

	Adequate	Needs Work
Check Propane and Nitrogen Cylinders and change/fill if necessary	X	
Inspect Blower, Flare and Demister Structures for Loose Bolts/Cracks	X	
Drain Demister (if necessary)	X	
Clean Demister Filter Material (if dP indicates it is necessary)	X	
Lubricate Grease Fittings (as necessary)	X	
Test Alarm Lights on Panel by pushing "RUN" and "Alarm/Shutdown" Lamps	X	
Check if any shutdowns/alarms need re-setting (note which ones in comments section)	X	
Drain Flare Stack Condensate (if necessary)	X	

Comments:

Signature: Kevin S. Fabel

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Tester (Initials)	KSF	KSF	KSF	KSF
Date	7/18/2023	7/25/2023	8/1/2023	8/8/2023
Time	10:00 AM	10:00 AM	10:00 AM	10:00 AM
Sky Conditions	Clear	Clear	Clear	Clear
Ambient Temperature, deg F	70	80	70	70
Inlet Temperature, deg F (GHS-TI-301)	60	61	63	64
Demister Inlet Valve Position, % Open (GHS-HV-301)	100	100	100	100
LFG Vacuum, In WC (GHS-PI-301)	4	4	4	4
Demister Filter Delta P (GHS-PDI-301)	0.3	0.3	0.4	0.3
Blower 301 Inlet Valve Position, % Open (GHS-FCV-301)	100.0	100	100	100
Discharge Pressure, In WC (GHS-PI-302)	0.2	0.2	0.2	0.2
Discharge Temperature, deg F (GHS-TI-302)	63	66	64	67
Propane Pilot Supply Pressure, In WC (GHS-PI-101)	12	11	8	12
Flame Arrester Inlet Pressure, In WC (FLR-PI-301)	1.2	1.1	1.2	1.1
Flame Arrester Outlet Pressure, In WC (FLR-PI-301)	0.9	0.8	0.9	0.8
Flame Arrester Delta P, In WC (FLR-PI-301)	0.3	0.3	0.3	0.3
Blower 301 Frequency, Hz (CP-YIC-2)	15.9	15.5	15.7	14.8
Blower 301 Current, Amps (CP-YIC-2)	3.7	3.8	4.0	3.7
YIC-1 From Main Menu Screen				
ANALOG DATA MENU				
* **PROCESS OVERVIEW**				
Inlet Vacuum, In WC	3.8	3.5	3.1	3.1
Inlet Temp, DegF	59	60	61	62
Oxygen, %	0.3	0.6	1.1	0.6
Blower Speed, %	17	16	16	15
Blower Vibration, In/Sec	0	0	0	0
CP Temp, DegF	82	83	95	86
FLR Flame Temp, DegF	1028	1031	1056	1145
FLR Flow Press, In WC	1.4	1.4	1.4	1.3
FLR Flow Temp, DegF	66	68	73	69
Flow Rate, SCFM	70	68	69	68
* **BACK**				
* **BLOWER DATA**				
Status, Run/Stop	Run	Run	Run	Run
Run Time, Hr	83572	83718	83876	84022
Speed, %	17	16	16	15
Vibration, In/Sec	0.0	0.0	0.0	0.0
Outlet Temp, DegF	66	68	73	69
* **BACK**				
* **FLARE DATA**				
Flow Rate, SCFM	70	69	69	68
Flame Temp, DegF	1000	1030	1092	1149
BLR Speed, %	17	16	16	15
Flow Pressure, In WC	1.4	1.4	1.4	1.3
Hour Meter	83565	83710	83869	84015

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Run Clock	On	On	On	On
Pilot	Off	Off	Off	Off
SD Valve	Open	Open	Open	Open
Flame	On	On	On	On
Relight	Off	Off	Off	Off
Pilot	Ready	Ready	Ready	Ready
Vac Ramp	Off	Off	Off	Off
Forced Flow	Off	Off	Off	Off
* **BACK**				
* **FLOW DATA**				
Flow Rate, SCFM	70	69	69	68
Today's Total, MMSCF	0.03	0.03	0.04	0.03
This Month's Total, MMSCF	1.73	2.35	0	0.58
Total Flow, MMSCF	397.15	397.79	398.46	399.04
Flow Press, In WC	1.4	1.4	1.4	1.4
Flow Temp, DegF	66	68	73	69
Flow Delta P, In WC	0.42	0.41	0.42	0.40
* **7 DAY FLOW HISTORY**				
Yesterday's Flow, MMSCF	0.03	0.03	0.40	0.04
2 Day's Ago Flow, MMSCF	0.10	0.05	0.10	0.06
3 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.09
4 Day's Ago Flow, MMSCF	0.10	0.10	0.07	0.09
5 Day's Ago Flow, MMSCF	0.10	0.10	0.08	0.09
6 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.09
7 Day's Ago Flow, MMSCF	0.10	0.10	0.10	0.09
* **BACK**				
* **RESETTABLE FLOW**				
Resettable Total Flow, MMSCF	397.12	397.79	398.46	399.04
Reset Time	-	-	-	-
Reset Date	-	-	-	-
* **BACK & * BACK**				

	Adequate	Needs Work
Check Propane and Nitrogen Cylinders and change/fill if necessary	X	
Inspect Blower, Flare and Demister Structures for Loose Bolts/Cracks	X	
Drain Demister (if necessary)	X	
Clean Demister Filter Material (if dP indicates it is necessary)	X	
Lubricate Grease Fittings (as necessary)	X	
Test Alarm Lights on Panel by pushing "RUN" and "Alarm/Shutdown" Lamps	X	
Check if any shutdowns/alarms need re-setting (note which ones in comments section)	X	
Drain Flare Stack Condensate (if necessary)	X	

Comments: Drained Condensate

Signature: Kevin S. Fabel

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Tester (Initials)	KSF	KSF	KSF	KSF
Date	8/15/2023	8/22/2023	8/28/2023	9/5/2023
Time	10:00 AM	10:00 AM	10:00 AM	10:00 AM
Sky Conditions	Clear	Cloudy	Cloudy	Clear
Ambient Temperature, deg F	60	75	60	80
Inlet Temperature, deg F (GHS-TI-301)	63	63	64	64
Demister Inlet Valve Position, % Open (GHS-HV-301)	100	100	100	100
LFG Vacuum, In WC (GHS-PI-301)	4	4	3	3
Demister Filter Delta P (GHS-PDI-301)	0.3	0.3	0.3	0.3
Blower 301 Inlet Valve Position, % Open (GHS-FCV-301)	100	100	100.0	100
Discharge Pressure, In WC (GHS-PI-302)	0.3	0.2	0.2	0.2
Discharge Temperature, deg F (GHS-TI-302)	60	65	62	68
Propane Pilot Supply Pressure, In WC (GHS-PI-101)	10	8	8	8
Flame Arrester Inlet Pressure, In WC (FLR-PI-301)	0.9	1.0	0.8	1.0
Flame Arrester Outlet Pressure, In WC (FLR-PI-301)	0.6	0.7	0.5	0.7
Flame Arrester Delta P, In WC (FLR-PI-301)	0.3	0.3	0.3	0.3
Blower 301 Frequency, Hz (CP-YIC-2)	14.2	14.4	13.8	14.7
Blower 301 Current, Amps (CP-YIC-2)	3.7	3.7	3.7	3.9
YIC-1 From Main Menu Screen				
ANALOG DATA MENU				
* **PROCESS OVERVIEW**				
Inlet Vacuum, In WC	3.1	3.0	2.7	3.0
Inlet Temp, DegF	62	62	62	63
Oxygen, %	0.3	0.3	0.2	0.3
Blower Speed, %	14	14	13	15
Blower Vibration, In/Sec	0	0	0	0
CP Temp, DegF	79	81	80	85
FLR Flame Temp, DegF	1173	1235	1080	1286
FLR Flow Press, In WC	1.1	1.2	1.1	1.4
FLR Flow Temp, DegF	65	68	65	71
Flow Rate, SCFM	62	63	61	68
* **BACK**				
* **BLOWER DATA**				
Status, Run/Stop	Run	Run	Run	Run
Run Time, Hr	84154	84272	84407	84518
Speed, %	14	14	13	15
Vibration, In/Sec	0.0	0.0	0.0	0.0
Outlet Temp, DegF	65	68	65	71
* **BACK**				
* **FLARE DATA**				
Flow Rate, SCFM	62	63	61	68
Flame Temp, DegF	1173	1211	1068	1285
BLR Speed, %	14	14	13	15
Flow Pressure, In WC	1.1	1.2	1.1	1.4
Hour Meter	84147	84265	84400	84491

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Run Clock	On	On	On	On
Pilot	Off	Off	Off	Off
SD Valve	Open	Open	Open	Open
Flame	On	On	On	On
Relight	Off	Off	Off	Off
Pilot	Ready	Ready	Ready	Ready
Vac Ramp	Off	Off	Off	Off
Forced Flow	Off	Off	Off	Off
* **BACK**				
* **FLOW DATA**				
Flow Rate, SCFM	62	63	61	68
Today's Total, MMSCF	0.03	0.03	0.03	0.03
This Month's Total, MMSCF	1.11	1.58	2.11	0.1
Total Flow, MMSCF	399.56	400.03	400.56	400.99
Flow Press, In WC	1.1	1.2	1.1	1.4
Flow Temp, DegF	65	68	65	71
Flow Delta P, In WC	0.33	0.34	0.31	0.41
* **7 DAY FLOW HISTORY**				
Yesterday's Flow, MMSCF	0.03	0.03	0.03	0.03
2 Day's Ago Flow, MMSCF	0.02	0.09	0.09	0.00
3 Day's Ago Flow, MMSCF	0.09	0.09	0.08	0.00
4 Day's Ago Flow, MMSCF	0.10	0.06	0.10	0.05
5 Day's Ago Flow, MMSCF	0.07	0.00	0.09	0.09
6 Day's Ago Flow, MMSCF	0.10	0.08	0.09	0.05
7 Day's Ago Flow, MMSCF	0.10	0.09	0.06	0.09
* **BACK**				
* **RESETTABLE FLOW**				
Resettable Total Flow, MMSCF	399.56	400.03	400.56	400.99
Reset Time	-	-	-	-
Reset Date	-	-	-	-
* **BACK & * BACK**				

	Adequate	Needs Work
Check Propane and Nitrogen Cylinders and change/fill if necessary	X	
Inspect Blower, Flare and Demister Structures for Loose Bolts/Cracks	X	
Drain Demister (if necessary)	X	
Clean Demister Filter Material (if dP indicates it is necessary)	X	
Lubricate Grease Fittings (as necessary)	X	
Test Alarm Lights on Panel by pushing "RUN" and "Alarm/Shutdown" Lamps	X	
Check if any shutdowns/alarms need re-setting (note which ones in comments section)	X	
Drain Flare Stack Condensate (if necessary)	X	

Comments:

Signature: Kevin S. Fabel

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Tester (Initials)	KSF	KSF	KSF	KSF
Date	9/12/2023	9/19/2023	9/25/2023	10/3/2023
Time	10:00 AM	10:00 AM	10:00 AM	10:00 AM
Sky Conditions	Clear	Clear	Cloudy	Clear
Ambient Temperature, deg F	50	60	60	60
Inlet Temperature, deg F (GHS-TI-301)	63	62	63	62
Demister Inlet Valve Position, % Open (GHS-HV-301)	100	100	100	100
LFG Vacuum, In WC (GHS-PI-301)	3	3.5	3	4
Demister Filter Delta P (GHS-PDI-301)	0.3	0.3	0.3	0.3
Blower 301 Inlet Valve Position, % Open (GHS-FCV-301)	100	100	100	100.0
Discharge Pressure, In WC (GHS-PI-302)	0.2	0.2	0.2	0.3
Discharge Temperature, deg F (GHS-TI-302)	60	59	58	62
Propane Pilot Supply Pressure, In WC (GHS-PI-101)	11	8	8	12
Flame Arrester Inlet Pressure, In WC (FLR-PI-301)	1.0	1.0	1.0	1.1
Flame Arrester Outlet Pressure, In WC (FLR-PI-301)	0.7	0.7	0.7	0.8
Flame Arrester Delta P, In WC (FLR-PI-301)	0.3	0.3	0.3	0.3
Blower 301 Frequency, Hz (CP-YIC-2)	14.7	14	14.2	14.7
Blower 301 Current, Amps (CP-YIC-2)	3.8	3.7	3.8	3.7
YIC-1 From Main Menu Screen				
ANALOG DATA MENU				
* **PROCESS OVERVIEW**				
Inlet Vacuum, In WC	3.1	3.0	2.6	3.0
Inlet Temp, DegF	62	61	62	61
Oxygen, %	0.1	0	0.2	0
Blower Speed, %	15	15	14	15
Blower Vibration, In/Sec	0	0	0	0
CP Temp, DegF	78	78	82	78
FLR Flame Temp, DegF	1348	1292	1400	1264
FLR Flow Press, In WC	1.3	1.4	1.4	1.4
FLR Flow Temp, DegF	64	64	62	65
Flow Rate, SCFM	65	69	69	69
* **BACK**				
* **BLOWER DATA**				
Status, Run/Stop	Run	Run	Run	Run
Run Time, Hr	84666	84833	84963	85154
Speed, %	15	15	14	15
Vibration, In/Sec	0.0	0.0	0.0	0.0
Outlet Temp, DegF	64	64	62	65
* **BACK**				
* **FLARE DATA**				
Flow Rate, SCFM	65	69	69	69
Flame Temp, DegF	1257	1288	1361	1245
BLR Speed, %	15	15	14	15
Flow Pressure, In WC	1.2	1.4	1.4	1.4
Hour Meter	84638	84806	84936	85127

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Run Clock	On	On	On	On
Pilot	Off	Off	Off	Off
SD Valve	Open	Open	Open	Open
Flame	On	On	On	On
Relight	Off	Off	Off	Off
Pilot	Ready	Ready	Ready	Ready
Vac Ramp	Off	Off	Off	Off
Forced Flow	Off	Off	Off	Off
* **BACK**				
* **FLOW DATA**				
Flow Rate, SCFM	65	70	69	68
Today's Total, MMSCF	0.03	0.03	0	0.03
This Month's Total, MMSCF	0.69	1.34	1.88	0.19
Total Flow, MMSCF	401.57	402.23	402.72	403.48
Flow Press, In WC	1.3	1.4	1.4	1.4
Flow Temp, DegF	64	64	62	65
Flow Delta P, In WC	0.37	0.42	0.40	0.40
* **7 DAY FLOW HISTORY**				
Yesterday's Flow, MMSCF	0.03	0.03	0.00	0.03
2 Day's Ago Flow, MMSCF	0.09	0.09	0.09	0.09
3 Day's Ago Flow, MMSCF	0.06	0.09	0.09	0.09
4 Day's Ago Flow, MMSCF	0.06	0.09	0.09	0.09
5 Day's Ago Flow, MMSCF	0.09	0.10	0.09	0.10
6 Day's Ago Flow, MMSCF	0.09	0.09	0.10	0.10
7 Day's Ago Flow, MMSCF	0.10	0.09	0.10	0.09
* **BACK**				
* **RESETTABLE FLOW**				
Resettable Total Flow, MMSCF	401.57	402.23	402.72	403.48
Reset Time	-	-	-	-
Reset Date	-	-	-	-
* **BACK & * BACK**				

	Adequate	Needs Work
Check Propane and Nitrogen Cylinders and change/fill if necessary	X	
Inspect Blower, Flare and Demister Structures for Loose Bolts/Cracks	X	
Drain Demister (if necessary)	X	
Clean Demister Filter Material (if dP indicates it is necessary)	X	
Lubricate Grease Fittings (as necessary)	X	
Test Alarm Lights on Panel by pushing "RUN" and "Alarm/Shutdown" Lamps	X	
Check if any shutdowns/alarms need re-setting (note which ones in comments section)	X	
Drain Flare Stack Condensate (if necessary)	X	

Comments: Drained Condensate

Signature: Kevin S. Fabel

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Tester (Initials)	KSF	KSF	KSF	KSF
Date	10/9/2023	10/18/2023	10/24/2023	10/31/2023
Time	10:00 AM	10:00 AM	10:00 AM	10:00 AM
Sky Conditions	Clear	Clear	Cloudy	Clear
Ambient Temperature, deg F	45	50	55	30
Inlet Temperature, deg F (GHS-TI-301)	60	58	60	56
Demister Inlet Valve Position, % Open (GHS-HV-301)	100	100	100	100
LFG Vacuum, In WC (GHS-PI-301)	3	3	2	2
Demister Filter Delta P (GHS-PDI-301)	0.3	0.3	0.3	0.2
Blower 301 Inlet Valve Position, % Open (GHS-FCV-301)	100.0	100	100	100
Discharge Pressure, In WC (GHS-PI-302)	0.2	0.2	0.2	0.2
Discharge Temperature, deg F (GHS-TI-302)	58	56	68	58
Propane Pilot Supply Pressure, In WC (GHS-PI-101)	9	10	10	8
Flame Arrester Inlet Pressure, In WC (FLR-PI-301)	1	1.0	0.8	0.7
Flame Arrester Outlet Pressure, In WC (FLR-PI-301)	0.7	0.7	0.5	0.4
Flame Arrester Delta P, In WC (FLR-PI-301)	0.3	0.3	0.3	0.3
Blower 301 Frequency, Hz (CP-YIC-2)	13.8	13.4	14.1	13.5
Blower 301 Current, Amps (CP-YIC-2)	3.7	3.7	3.6	3.7
YIC-1 From Main Menu Screen				
ANALOG DATA MENU				
* **PROCESS OVERVIEW**				
Inlet Vacuum, In WC	2.3	2.2	1.7	2.2
Inlet Temp, DegF	61	60	60	58
Oxygen, %	0	0	0.1	0
Blower Speed, %	13	13	10	12
Blower Vibration, In/Sec	0	0	0	0
CP Temp, DegF	73	76	78	71
FLR Flame Temp, DegF	1304	1321	1320	1442
FLR Flow Press, In WC	0.2	0.6	0.2	0.1
FLR Flow Temp, DegF	62	61	70	63
Flow Rate, SCFM	68	65	60	63
* **BACK**			.	
* **BLOWER DATA**				
Status, Run/Stop	Run	Run	Run	Run
Run Time, Hr	85303	85504	85627	85795
Speed, %	13	13	10	12
Vibration, In/Sec	0	0	0	0
Outlet Temp, DegF	62	61	70	63
* **BACK**				
* **FLARE DATA**				
Flow Rate, SCFM	69	65	60	63
Flame Temp, DegF	1304	1360	1283	1457
BLR Speed, %	13	13	10	12
Flow Pressure, In WC	0.2	0.6	0.2	0.1
Hour Meter	85276	85477	85505	85665

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Run Clock	On	On	On	On
Pilot	Off	Off	Off	Off
SD Valve	Open	Open	Open	Open
Flame	On	On	On	On
Relight	Off	Off	Off	Off
Pilot	Ready	Ready	Ready	Ready
Vac Ramp	Off	Off	Off	Off
Forced Flow	Off	Off	Off	Off
* **BACK**				
* **FLOW DATA**				
Flow Rate, SCFM	68	65	60	63
Today's Total, MMSCF	0.03	0.03	0.03	0.03
This Month's Total, MMSCF	0.75	1.54	2.04	2.7
Total Flow, MMSCF	404.07	404.85	405.33	406.00
Flow Press, In WC	0.2	0.6	0.2	0.1
Flow Temp, DegF	62	61	70	64
Flow Delta P, In WC	0.40	0.37	0.31	0.34
* **7 DAY FLOW HISTORY**				
Yesterday's Flow, MMSCF	0.04	0.03	0.03	0.03
2 Day's Ago Flow, MMSCF	0.10	0.06	0.10	0.10
3 Day's Ago Flow, MMSCF	0.09	0.09	0.09	0.10
4 Day's Ago Flow, MMSCF	0.09	0.10	0.06	0.09
5 Day's Ago Flow, MMSCF	0.09	0.10	0.05	0.10
6 Day's Ago Flow, MMSCF	0.10	0.09	0.09	0.10
7 Day's Ago Flow, MMSCF	0.09	0.09	0.09	0.09
* **BACK**				
* **RESETTABLE FLOW**				
Resettable Total Flow, MMSCF	404.07	404.95	405.33	406.00
Reset Time	-	-	-	-
Reset Date	-	-	-	-
* **BACK & * BACK**				

	Adequate	Needs Work
Check Propane and Nitrogen Cylinders and change/fill if necessary	X	
Inspect Blower, Flare and Demister Structures for Loose Bolts/Cracks	X	
Drain Demister (if necessary)	X	
Clean Demister Filter Material (if dP indicates it is necessary)	X	
Lubricate Grease Fittings (as necessary)	X	
Test Alarm Lights on Panel by pushing "RUN" and "Alarm/Shutdown" Lamps	X	
Check if any shutdowns/alarms need re-setting (note which ones in comments section)	X	
Drain Flare Stack Condensate (if necessary)	X	

Comments: Drained Condensate

Signature: Kevin S. Fabel

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Tester (Initials)	KSF	KSF	KSF	KSF
Date	11/7/2023	11/14/2023	11/21/2023	11/28/2023
Time	10:00 AM	10:00 AM	10:00 AM	10:00 AM
Sky Conditions	Clear	Clear	Clear	Clear
Ambient Temperature, deg F	35	35	30	10
Inlet Temperature, deg F (GHS-TI-301)	56	54	54	50
Demister Inlet Valve Position, % Open (GHS-HV-301)	100	100	100	100
LFG Vacuum, In WC (GHS-PI-301)	3	2	2	2.5
Demister Filter Delta P (GHS-PDI-301)	0.3	0.3	0.3	0.3
Blower 301 Inlet Valve Position, % Open (GHS-FCV-301)	100	100	100	100
Discharge Pressure, In WC (GHS-PI-302)	0.2	0.1	0.1	0.1
Discharge Temperature, deg F (GHS-TI-302)	64	60	58	51
Propane Pilot Supply Pressure, In WC (GHS-PI-101)	10	10	10	9
Flame Arrester Inlet Pressure, In WC (FLR-PI-301)	0.9	1.0	0.9	0.9
Flame Arrester Outlet Pressure, In WC (FLR-PI-301)	0.6	0.7	0.6	0.6
Flame Arrester Delta P, In WC (FLR-PI-301)	0.3	0.3	0.3	0.3
Blower 301 Frequency, Hz (CP-YIC-2)	16.7	14.7	13.6	15.9
Blower 301 Current, Amps (CP-YIC-2)	3.7	3.7	3.7	3.8
YIC-1 From Main Menu Screen				
ANALOG DATA MENU				
* **PROCESS OVERVIEW**				
Inlet Vacuum, In WC	4.5	3.8	2.3	3.9
Inlet Temp, DegF	58	57	56	54
Oxygen, %	0.4	0.1	0.2	0
Blower Speed, %	18	15	13	17
Blower Vibration, In/Sec	0	0	0	0
CP Temp, DegF	72	73	74	56
FLR Flame Temp, DegF	1203	1217	1260	1121
FLR Flow Press, In WC	0.1	0.1	0.1	0.1
FLR Flow Temp, DegF	68	64	63	57
Flow Rate, SCFM	68	69	66	63
* **BACK**				
* **BLOWER DATA**				
Status, Run/Stop	Run	Run	Run	Run
Run Time, Hr	85942	86133	86302	86469
Speed, %	18	15	13	17
Vibration, In/Sec	0	0	0	0
Outlet Temp, DegF	68	64	63	57
* **BACK**				
* **FLARE DATA**				
Flow Rate, SCFM	61	70	66	62
Flame Temp, DegF	1178	1213	1255	1262
BLR Speed, %	18	15	13	17
Flow Pressure, In WC	0.1	0.1	0.1	0.1
Hour Meter	85665	86003	86172	86339

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Run Clock	On	On	On	On
Pilot	Off	Off	Off	Off
SD Valve	Open	Open	Open	Open
Flame	On	On	On	On
Relight	Off	Off	Off	Off
Pilot	Ready	Ready	Ready	Ready
Vac Ramp	Off	Off	Off	Off
Forced Flow	Off	Off	Off	Off
* **BACK**				
* **FLOW DATA**				
Flow Rate, SCFM	61	70	66	62
Today's Total, MMSCF	0.03	0.03	0.04	0.03
This Month's Total, MMSCF	57.00	1.23	1.89	2.56
Total Flow, MMSCF	406.66	407.33	408.01	408.65
Flow Press, In WC	0.1	0.1	0.1	0.1
Flow Temp, DegF	68	64	63	57
Flow Delta P, In WC	0.32	0.41	0.39	0.33
* **7 DAY FLOW HISTORY**				
Yesterday's Flow, MMSCF	0.03	0.03	0.04	0.03
2 Day's Ago Flow, MMSCF	0.10	0.10	0.09	0.09
3 Day's Ago Flow, MMSCF	0.10	0.10	0.09	0.10
4 Day's Ago Flow, MMSCF	0.09	0.09	0.10	0.10
5 Day's Ago Flow, MMSCF	0.10	0.09	0.10	0.09
6 Day's Ago Flow, MMSCF	0.10	0.09	0.09	0.09
7 Day's Ago Flow, MMSCF	0.09	0.10	0.10	0.09
* **BACK**				
* **RESETTABLE FLOW**				
Resettable Total Flow, MMSCF	406.66	407.33	408.01	408.65
Reset Time	-	-	-	-
Reset Date	-	-	-	-
* **BACK & * BACK**				

	Adequate	Needs Work
Check Propane and Nitrogen Cylinders and change/fill if necessary	X	
Inspect Blower, Flare and Demister Structures for Loose Bolts/Cracks	X	
Drain Demister (if necessary)	X	
Clean Demister Filter Material (if dP indicates it is necessary)	X	
Lubricate Grease Fittings (as necessary)	X	
Test Alarm Lights on Panel by pushing "RUN" and "Alarm/Shutdown" Lamps	X	
Check if any shutdowns/alarms need re-setting (note which ones in comments section)	X	
Drain Flare Stack Condensate (if necessary)	X	

Comments: Drained Condensate

Signature: Kevin S. Fabel

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Tester (Initials)	KSF	KSF	KSF	KSF
Date	12/5/2023	12/12/2023	12/19/2023	12/27/2023
Time	10:00 AM	10:00 AM	10:00 AM	10:00 AM
Sky Conditions	Clear	Clear	Clear	Clear
Ambient Temperature, deg F	25	20	15	30
Inlet Temperature, deg F (GHS-TI-301)	52	50	50	51
Demister Inlet Valve Position, % Open (GHS-HV-301)	100	100	100	100
LFG Vacuum, In WC (GHS-PI-301)	3	3	3	3
Demister Filter Delta P (GHS-PDI-301)	0.3	0.3	0.3	0.3
Blower 301 Inlet Valve Position, % Open (GHS-FCV-301)	100	100	100	100
Discharge Pressure, In WC (GHS-PI-302)	0.2	0.2	0.2	0.2
Discharge Temperature, deg F (GHS-TI-302)	59	54	52	57
Propane Pilot Supply Pressure, In WC (GHS-PI-101)	8	8	9	8
Flame Arrester Inlet Pressure, In WC (FLR-PI-301)	0.9	0.8	1.0	1.0
Flame Arrester Outlet Pressure, In WC (FLR-PI-301)	0.6	0.5	0.7	0.7
Flame Arrester Delta P, In WC (FLR-PI-301)	0.3	0.3	0.3	0.3
Blower 301 Frequency, Hz (CP-YIC-2)	15.1	15.7	15.4	15.2
Blower 301 Current, Amps (CP-YIC-2)	3.7	3.7	3.7	3.7
YIC-1 From Main Menu Screen				
ANALOG DATA MENU				
* **PROCESS OVERVIEW**				
Inlet Vacuum, In WC	3.5	4.4	3.3	3.5
Inlet Temp, DegF	54	53	53	52
Oxygen, %	0.2	0.1	0	0.3
Blower Speed, %	16	18	16	16
Blower Vibration, In/Sec	0	0	0	0
CP Temp, DegF	73	68	65	73
FLR Flame Temp, DegF	1272	1345	1356	1333
FLR Flow Press, In WC	0.1	0.1	0.1	0.1
FLR Flow Temp, DegF	64	60	58	62
Flow Rate, SCFM	61	60	70	63
* **BACK**				
* **BLOWER DATA**				
Status, Run/Stop	Run	Run	Run	Run
Run Time, Hr	86637	86803	86950	87165
Speed, %	16	18	16	16
Vibration, In/Sec	0	0	0	0
Outlet Temp, DegF	64	60	58	62
* **BACK**				
* **FLARE DATA**				
Flow Rate, SCFM	61	61	70	63
Flame Temp, DegF	1269	1310	1382	1332
BLR Speed, %	16	18	16	16
Flow Pressure, In WC	0.1	0.1	0.1	0.1
Hour Meter	86507	86675	86843	87035

* ***PUSH BUTTON***

WEEKLY FLARE STATION INSPECTION FORM

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Run Clock	On	On	On	On
Pilot	Off	Off	Off	Off
SD Valve	Open	Open	Open	Open
Flame	On	On	On	On
Relight	Off	Off	Off	Off
Pilot	Ready	Ready	Ready	Ready
Vac Ramp	Off	Off	Off	Off
Forced Flow	Off	Off	Off	Off
* **BACK**				
* **FLOW DATA**				
Flow Rate, SCFM	61	61	70	63
Today's Total, MMSCF	0.03	0.03	0.03	0.03
This Month's Total, MMSCF	0.38	1.04	1.69	2.45
Total Flow, MMSCF	409.31	409.97	410.63	411.38
Flow Press, In WC	0.1	0.1	0.1	0.1
Flow Temp, DegF	64	60	58	62
Flow Delta P, In WC	0.32	0.31	0.42	0.34
* **7 DAY FLOW HISTORY**				
Yesterday's Flow, MMSCF	0.03	0.03	0.03	0.03
2 Day's Ago Flow, MMSCF	0.09	0.09	0.09	0.09
3 Day's Ago Flow, MMSCF	0.10	0.09	0.10	0.10
4 Day's Ago Flow, MMSCF	0.10	0.09	0.09	0.09
5 Day's Ago Flow, MMSCF	0.09	0.09	0.10	0.09
6 Day's Ago Flow, MMSCF	0.09	0.10	0.10	0.10
7 Day's Ago Flow, MMSCF	0.10	0.09	0.09	0.09
* **BACK**				
* **RESETTABLE FLOW**				
Resettable Total Flow, MMSCF	409.31	409.97	410.63	411.38
Reset Time	-	-	-	-
Reset Date	-	-	-	-
* **BACK & * BACK**				

	Adequate	Needs Work
Check Propane and Nitrogen Cylinders and change/fill if necessary	X	
Inspect Blower, Flare and Demister Structures for Loose Bolts/Cracks	X	
Drain Demister (if necessary)	X	
Clean Demister Filter Material (if dP indicates it is necessary)	X	
Lubricate Grease Fittings (as necessary)	X	
Test Alarm Lights on Panel by pushing "RUN" and "Alarm/Shutdown" Lamps	X	
Check if any shutdowns/alarms need re-setting (note which ones in comments section)	X	
Drain Flare Stack Condensate (if necessary)	X	

Comments: Drained Condensate

Signature: Kevin S. Fabel

* ***PUSH BUTTON***

Appendix B

Semi-Annual Flare Station Maintenance Reports

SEMI-ANNUAL INSPECTION AND MAINTENANCE FORM
FORMER HOLTZ KRAUSE LANDFILL

Inspector: Tom Hobday

The following items will be performed semi-annually by City personnel or an outside vendor:

Item	*Date Performed*	*Comments*
BLOWER/FLARE SYSTEM		
- Check igniter gap (should be 0.1" - regap if necessary).	4/6/2023	re-gapped
- Verify that the spark is at the tip of the igniter.	4/6/2023	good spark
- Inspect igniter wiring for heat damage, worn insulation and frayed wires.	4/6/2023	wiring in good shape
- Test pilot switch to verify pilot lights and it doesn't blow out.	4/6/2023	strong winds, still showing good strong flame
- Check thermocouple voltage to verity the temperature reading.	4/6/2023	0.9 mv @ 45 deg F, ok 23.5 mv @ 1090 deg F, good
- Test blower and safety shutoff operation. The blower contactor/blower start operation and safety shutoff valves shall be fully tested.	4/6/2023	breaker to off, vfd fault works
- Zero out all pressure, differential pressure, and vacuum gauges	4/6/2023	all zeroed to atmosphere
- Check all components on the "set point sheet" to verify they have not changed. Make adjustments, if necessary.	4/6/2023	All ok, logged on set point form
- Verify flow transmitter calibration (via differential pressure).	4/6/2023	0.0" @ 0 cfm 0.46" diff @ 73 cfm, calibration ok
- Calibrate oxygen sensor.	4/6/2023	sensor is fine
- Remove demister sump clean-out cover and remove any accumulated debris	4/6/2023	sump is clean and dry
- If pressure drop across the demister reaches two times (2X) the original value, remove demister element for inspection. (pressure wash element as necessary).	4/6/2023	element is clean and dry
- Test demister condensate level switch (close level switch hand valve, and add water via tee to verify operation)	4/6/2023	filled switch housing with water, works as it should
- Test the pilot fail shutdown (turn off propane supply)	4/6/2023	works
- Test the high outlet temperature shutdown while the flare is operating. (adjust PLC setpoint)	4/6/2023	adjusted PLC setpoint, works

SEMI-ANNUAL INSPECTION AND MAINTENANCE FORM
FORMER HOLTZ KRAUSE LANDFILL

Inspector: Tom Hobday

The following items will be performed semi-annually by City personnel or an outside vendor:

Item	*Date Performed*	*Comments*
- Test the oxygen safety shutdown while the flare is operating. (open O2 lines to atm.)	4/6/2023	opened valve to atmosphere, shutdown works
- Test the low flow safety shutdown. (throttle blower inlet valve while in vacuum control)	4/6/2023	throttled valve to reduce flow, works
- Test Blower Vibration alarm and shut down (adjust PLC setpoint)	4/6/2023	lowered timer, tapped sensor, shutdown works.
- Test the inlet valve fail close shutdown while flare is operating. (closed nitrogen supply)	4/6/2023	closed nitrogen tank, works
- Test the high inlet temperature failure (adjust PLC setpoint)	4/6/2023	adjusted PLC setpoint, works
- Test the high vacuum shutdown (adjust PLC setpoint)	4/6/2023	adjusted PLC setpoint, works
- Test the low temperature shutdown. (adjust PLC setpoint)	N/A	This is a non user-programmable set-point. Unable to get the flare to produce a low enough temp to test.
- Inspect transmitter housings and piping. Replace O-rings, if necessary.	4/6/2023	all ok
- Inspect and clean the solenoid valve.	4/6/2023	working well
- Visually inspect for arcing contractor points. Check switches and contactors (annual).	4/6/2023	nothing arcing
- Re-torque all electrical components. Double check at the thermocouple leads and the main power feed going to the blower (annual).	4/6/2023	leads tight
- Check for loose bolts on structure and flanges. Tighten, as necessary.	4/6/2023	all ok
- Remove, inspect, and clean if necessary air conditioner filter (semi-annually)	4/6/2023	
- Remove and inspect flame arrestor element (annually - or based on diff. pressure).	4/6/2023	Removed/inspected element. Clean and dry
- Grease blower bearings - remove old grease, re-pack bearing per manufacturer specifications	4/6/2023	completed, bearings in ok condition

SEMI-ANNUAL INSPECTION AND MAINTENANCE FORM
FORMER HOLTZ KRAUSE LANDFILL

Inspector: Tom Hobday

The following items will be performed semi-annually by City personnel or an outside vendor:

Item	*Date Performed*	*Comments*
BLOWER/FLARE SYSTEM		
- Check igniter gap (should be 0.1" - regap if necessary).	10/19/2023	gap is correct
- Verify that the spark is at the tip of the igniter.	10/19/2023	good spark, strong flame
- Inspect igniter wiring for heat damage, worn insulation and frayed wires.	10/19/2023	wiring in good shape
- Test pilot switch to verify pilot lights and it doesn't blow out.	10/19/2023	good flame
- Check thermocouple voltage to verity the temperature reading.	10/19/2023	0.6 mv @ 60 deg F, ok 29.3 mv @ 1320 deg F, ok
- Test blower and safety shutoff operation. The blower contactor/blower start operation and safety shutoff valves shall be fully tested.	10/19/2023	turned off breaker, alarm functions
- Zero out all pressure, differential pressure, and vacuum gauges	10/19/2023	all zeroed
- Check all components on the "set point sheet" to verify they have not changed. Make adjustments, if necessary.	10/19/2023	set points good, adjusted gas composition numbers
- Verify flow transmitter calibration (via differential pressure).	10/19/2023	0.0" @ 0 cfm 0.61" diff @ 67 cfm, calibration ok
- Calibrate oxygen sensor.	10/19/2023	
- Remove demister sump clean-out cover and remove any accumulated debris	10/19/2023	sump is clean, slightly damp
- If pressure drop across the demister reaches two times (2X) the original value, remove demister element for inspection. (pressure wash element as necessary).	10/19/2023	element is clean, some powdery yellow dust
- Test demister condensate level switch (close level switch hand valve, and add water via tee to verify operation)	10/19/2023	added water, works
- Test the pilot fail shutdown (turn off propane supply)	10/19/2023	closed pilot fuel, works
- Test the high outlet temperature shutdown while the flare is operating. (adjust PLC setpoint)	10/19/2023	adjusted PLC setpoint, works

SEMI-ANNUAL INSPECTION AND MAINTENANCE FORM
FORMER HOLTZ KRAUSE LANDFILL

Inspector: Tom Hobday

The following items will be performed semi-annually by City personnel or an outside vendor:

Item	*Date Performed*	*Comments*
- Test the oxygen safety shutdown while the flare is operating. (open O2 lines to atm.)	10/19/2023	opened valve to atmosphere, shutdown works
- Test the low flow safety shutdown. (throttle blower inlet valve while in vacuum control)	10/19/2023	throttled valve to reduce flow, works
- Test Blower Vibration alarm and shut down (adjust PLC setpoint)	10/19/2023	adjusted timer, tapped sensor, works.
- Test the inlet valve fail close shutdown while flare is operating. (closed nitrogen supply)	10/19/2023	closed nitrogen tank, bled residual pressure, works
- Test the high inlet temperature failure (adjust PLC setpoint)	10/19/2023	adjusted PLC setpoint, works
- Test the high vacuum shutdown (adjust PLC setpoint)	10/19/2023	adjusted PLC setpoint, works
- Test the low temperature shutdown. (adjust PLC setpoint)	N/A	This is a non user-programmable set-point. Unable to get the flare to produce a low enough temp to test.
- Inspect transmitter housings and piping. Replace O-rings, if necessary.	10/19/2023	all ok
- Inspect and clean the solenoid valve.	10/19/2023	working as it should
- Visually inspect for arcing contractor points. Check switches and contactors (annual).	10/19/2023	all ok
- Re-torque all electrical components. Double check at the thermocouple leads and the main power feed going to the blower (annual).	10/19/2023	re-torqued all upper cabinet leads
- Check for loose bolts on structure and flanges. Tighten, as necessary.	10/19/2023	all good
- Remove, inspect, and clean if necessary air conditioner filter (semi-annually)	NA	AC turned to off, heat trace turned on
- Remove and inspect flame arrestor element (annually - or based on diff. pressure).	10/19/2023	Removed/inspected element. Clean and dry
- Grease blower bearings - remove old grease, re-pack bearing per manufacturer specifications	10/19/2023	completed, previous grease was somewhat dark/dirty on inlet side.

DAILY FLARE STATION DATA LOG

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

Tester	T. Hobday		T. Hobday	
Date	4/6/23		10/19/23	
Time	12:00		13:00	
Sky Conditions	clear		cloudy/ light rain	
Ambient Temperature, deg F	31° F		50° F	
Inlet Temperature, deg F (GHS-TI-301)	46° F		59° F	
Demister Inlet Valve Position, % Open (GHS-HV-301)	100%		100 %	
LFG Vacuum, In WC (GHS-PI-301)	6"		2"	
Demister Filter Delta P (GHS-PDI-301)	0.3"		0.3"	
Blower 301 Inlet Valve Position, % Open (GHS-FCV-301)	100%		100 %	
Discharge Pressure, In WC (GHS-PI-302)	0.0"		0.0"	
Discharge Temperature, deg F (GHS-TI-302)	54° F		58° F	
Propane Pilot Supply Pressure, In WC (GHS-PI-101)	9"		9"	
Flame Arrester Inlet Pressure, In WC (FLR-PI-301)	1.2"		1.5"	
Flame Arrester Outlet Pressure, In WC (FLR-PI-301)	1.0"		1.2"	
Flame Arrester Delta P, In WC (FLR-PI-301)	0.2"		0.3"	
Blower 301 Frequency, Hz (CP-YIC-2)	19.4 Hz		13.6 Hz	
Blower 301 Current, Amps (CP-YIC-2)	3.8 A		3.7 A	

* ***PUSH BUTTON***

DAILY FLARE STATION DATA LOG

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

YIC-1 From Main Menu Screen	4/6/23		10/19/23	
ANALOG DATA MENU				
* **PROCESS OVERVIEW**				
Inlet Vacuum, In WC	6.2"		2.3"	
Inlet Temp, DegF	48°F		60°F	
Oxygen, %	0.0%		0.0%	
Blower Speed, %	23%		13%	
Blower Vibration, In/Sec	0.00"/sec		0.00"/sec	
CP Temp, DegF	66°F		75°F	
FLR Flame Temp, DegF	1253°F		1327°F	
FLR Flow Press, In WC	0.1"		0.9"	
FLR Flow Temp, DegF	60°F		63°F	
Flow Rate, SCFM	72 cfm		66 cfm	
* **BACK**				
* **BLOWER DATA**				
Status, Run/Stop	Run		Run	
Run Time, Hr	81,110 hrs		85,532 hrs	
Speed, %	23%		13%	
Vibration, In/Sec	0.00"/sec		0.00"/sec	
Outlet Temp, DegF	60°F		63°F	
* **BACK**				
* **FLARE DATA**				
Flow Rate, SCFM	72 cfm		66 cfm	
Flame Temp, DegF	1250°F		1385°F	
BLR Speed, %	23%		13%	
Flow Pressure, In WC	0.1"		1.0"	
Hour Meter	81,103 hrs		85,505 hrs	
Run Clock	On		On	
Pilot	Off		Off	

* ***PUSH BUTTON***

DAILY FLARE STATION DATA LOG

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

	4/6/23		10/19/23	
SD Valve	Open		Open	
Flame	On		On	
Relight	Off		Off	
Pilot	Ready		Ready	
Vac Ramp	Off		Off	
Forced Flow	Off		Off	
* **BACK**				
* **FLOW DATA**				
Flow Rate, SCFM	73 cfm		66 cfm	
Today's Total, MMSCF	0.0504605		0.0495490	
This Month's Total, MMSCF	0.502038		1.637711	
Total Flow, MMSCF	386.804		404.953	
Flow Press, In WC	0.1"		0.9"	
Flow Temp, DegF	60°F		63°F	
Flow Delta P, In WC	0.46"		0.37"	
* **7 DAY FLOW HISTORY**				
Yesterday's Flow, MMSCF	0.0504605		0.0495490	
2 Day's Ago Flow, MMSCF	0.1026675		0.0920145	
3 Day's Ago Flow, MMSCF	0.0965480		0.0566763	
4 Day's Ago Flow, MMSCF	0.1047219		0.0879622	
5 Day's Ago Flow, MMSCF	0.0997839		0.0910891	
6 Day's Ago Flow, MMSCF	0.1030774		0.0959928	
7 Day's Ago Flow, MMSCF	0.1055587		0.0930812	
* **BACK**				
* **RESETTABLE FLOW**				
Resettable Total Flow, MMSCF	3.86804e		4.04953e	
Reset Time	0:0:0		0:0:0	
Reset Date	0/00/00		0/00/00	
* **BACK**				

* ***PUSH BUTTON***

DAILY FLARE STATION DATA LOG

Project # 1728 Project Name: Holtz Krause (Min 30 SCFM, Max 200 SCFM)

* BACK				

* ***PUSH BUTTON***

FLARE SYSTEM SETPOINTS

All Setpoints depend on Biogas Pressure and Flow

Project # 1728 Project Name: Holtz Krause Initials: T. Hobday

Description	Setpoint	DATE	Setpoint	DATE
SETPOINT MENU				
* **VACUUM/FLOW**				
Vacuum/Flow	Flow	4/6/23	Flow	10/19/23
* **MANUAL/AUTO**				
Min % Speed	10 %	4/6/23	10 %	10/19/23
Auto/Manual	Auto	↓	Auto	↓
Manual % Speed	20%	↓	20 %	↓
* **BACK**				
* **VACUUM CONTROL**				
* **SETPOINTS**				
Setpoint, In WC	2.9"	4/6/23	2.6"	10/19/23
Ramp Incriment, In WC	4.0"	↓	4.0"	↓
* **BACK**				
* **PID SPs**				
Gain	2.50	4/6/23	2.50	10/19/23
Sample Rate, Sec	0.50 sec	↓	0.50 sec	↓
Derative, Sec	0.01 sec	↓	0.01 sec	↓
Reset, Sec/Min	0.50 sec	↓	0.50 sec	↓
Deadband, In WC	0.50"	↓	0.5"	↓
* **BACK**				
* **BACK**				
* **FLOW CONTROL**				
* **SETPOINTS**				
Flow Control Setpoint, SCFM	70 cfm	4/6/23	65 cfm	10/19/23
* **BACK**				
* **PID SETPOINTS**				
Gain	0.80	4/6/23	0.08	10/19/23
Sample Rate, Sec	0.70 sec	↓	0.70 sec	↓
Derative, Sec	0.01 sec	↓	0.01 sec	↓
Reset, Sec/Min	1.10 sec	↓	1.10 sec	↓
Deadband, SCFM	5 cfm	↓	5 cfm	↓
* **BACK**				
* **BACK**				
* **BACK**				
* **FLARE MENU**				

FLARE SYSTEM SETPOINTS

All Setpoints depend on Biogas Pressure and Flow

Project # 1728 Project Name: Holtz Krause Initials: T. Hobday

* START SPs				
Pilot Enable, Secs	120 sec	4/6/23	120 sec	10/19/23
Pilot On Squence, Secs	10 sec	↓	10 sec	↓
Pilot Off Squence, Secs	3 sec	↓	3 sec	↓
Delay Blower Start, Secs	3 sec	↓	3 sec	↓
Delay Shutdown Valve Open, Secs	3 sec	↓	3 sec	↓
* BACK				
* PILOT				
FLR Pilot Assumed on Above This Temp, DegF	250°F	4/6/23	250°F	10/19/23
* BACK				
* FLR RUN CLOCK				
Start Time of Day, Hr.Min	0.00	4/6/23	0.00	10/19/23
On Cycle Duration, Mins	1440	↓	1440	↓
Off Cycle Duration, Mins	1	↓	1	↓
Cycles per Day	1	↓	1	↓
* BACK				
* BACK				
* FLOW CALC				
CH4%	36.4%	4/6/23	36.4%	10/19/23
O2%	0.1%	↓	0.1%	↓
CO2%	31.1%	↓	31.1%	↓
Elevation, Ft	1,225'	↓	1,225'	↓
Manual Input	0.975	↓	0.975	↓
* BACK				
* OXYGEN CALIBRATION				
* BACK				
* ALARMS & SHUTDOWNS				
* INLET MENU				
* HIGH VACUUM				
Alarm SP, In WC	52.0"	4/6/23	52.0"	10/19/23
Alarm Delay, Sec	45 sec	↓	45 sec	↓
Shutdown SP, In WC	55.0"	↓	55.0"	↓
Shutdown Delay, Sec	45 sec	↓	45 sec	↓
* BACK				
* INLET TEMPERATURE				
Alarm SP, DegF	98°F	4/6/23	98°F	10/19/23

FLARE SYSTEM SETPOINTS

All Setpoints depend on Biogas Pressure and Flow

Project # 1728 Project Name: Holtz Krause Initials: T. Hobday

Alarm Delay, Sec	45 sec	4/6/23	45 sec	10/19/23
Shutdown SP, DegF	100° F	↓	100° F	↓
Shutdown Delay, Sec	45 sec	↓	45 sec	↓
* **BACK**				
* **BACK**				
* **FLT-301 COND LEVEL**				
Shutdown Delay, Sec	35 sec	4/6/23	35 sec	10/19/23
* **BACK**				
* **BLOWER MENU**				
* **VIBRATION**				
Alarm SP, In/S	0.18 "/sec	4/6/23	0.18 "/sec	10/19/23
Alarm Delay, Sec	45 sec	↓	45 sec	↓
Shutdown SP, In/S	0.20 "/sec	↓	0.20 "/sec	↓
Shutdown Delay, Sec	45 sec	↓	45 sec	↓
* **BACK**				
* **HIGH OUTLET GAS TEMP**				
Alarm SP, DegF	170° F	4/6/23	170° F	10/19/23
Alarm Delay, Sec	45 sec	↓	45 sec	↓
Shutdown SP, DegF	174° F	↓	174° F	↓
Shutdown Delay, Sec	45 sec	↓	45 sec	↓
* **BACK**				
* **BACK**				
* **FLARE MENU**				
* **HIGH FLAME TEMP**				
Alarm SP, DegF	\		\	
Alarm Delay, Sec				
Shutdown SP, DegF				
Shutdown Delay, Sec				
* **BACK**				
* **LOW FLAME TEMP**				
Alarm SP, DegF	150° F	4/6/23	150° F	10/19/23
Alarm Delay, Sec	45 sec	↓	45 sec	↓
Shutdown SP, DegF	200° F	↓	200° F	↓
Shutdown Delay, Sec	45 sec	↓	45 sec	↓
* **BACK**				
* **HIGH FLOW RATE**				

FLARE SYSTEM SETPOINTS

All Setpoints depend on Biogas Pressure and Flow

Project # 1728 Project Name: Holtz Krause Initials: T. Hobday

Alarm SP, SCFM	220 cfm	4/6/23	220 cfm	10/19/23
Alarm Delay, Sec	45 sec	↓	45 sec	↓
* **BACK**				
* **LOW FLOW RATE**				
Alarm SP, SCFM	35 cfm	4/6/23	35 cfm	10/19/23
Alarm Delay, Sec	35 sec	|	35 sec	|
Shutdown SP, SCFM	30 cfm	|	30 cfm	|
Shutdown Delay, Sec	35 sec	↓	35 sec	↓
* **BACK**				
* **FLARE RELIGHT**				
Relight Delay, Secs	600 sec	4/6/23	600 sec	10/19/23
Number of Relight Attempts	3	↓	3	↓
* **BACK**				
* **BACK**				
* **OXYGEN SENSOR**				
* **HIGH OXYGEN OE-301**				
Alarm SP, %	3.5%	4/6/23	3.5%	10/19/23
Alarm Delay, Sec	120 sec	|	120 sec	|
Shutdown SP, %	5.0%	|	5.0%	|
Shutdown Delay, Sec	120 sec	↓	120 sec	↓
* **BACK**				
* **BACK**				
* **UTILITY OUTAGE RESTART DELAY**				
System Restart Delay, Secs	600 sec	4/6/23	600 sec	10/19/23
* **BACK**				
* **PANEL TEMP**				
Low Temp Alarm SP, degF	35°F	4/6/23	35°F	10/19/23
Low Temp Alarm Delay, Sec	120 sec	|	120 sec	|
High Temp Alarm SP, degF	120°F	|	120°F	|
High Temp Alarm Delay, Sec	120 sec	↓	120 sec	↓
* **BACK**				
* **BACK**				
* **BACK**				

Appendix C

Monthly Site Inspection Forms

LANDFILL SITE INSPECTION
FORMER HOLTZ KRAUSE LANDFILL

Inspector Kevin Faber

Date: 1.10.23

Item	*Yes*	*No*	*Comments*
Cover intact and free of erosion?	(y)	n	
Vegetation cover intact?	(y)	n	
Is cover free of surface water ponding?	(y)	n	
Is cover free of exposed refuse?	(y)	n	
Is cover free of leachate seeps?	(y)	n	
Is cover free of animal burrows?	(y)	n	
Is cover free of noxious weeds?	(y)	n	
Is cover in need of mowing?	y	(n)	
Evidence of settlement of fill?	y	(n)	
Nuisance odors present?	y	(n)	
On-site access road drivable?	(y)	n	
Fence around flare secured?	(y)	n	
Evidence of trespassers or encroachment?	y	(n)	
Illegal disposal/dumping present?	y	(n)	
Gas wells free of damage?	(y)	n	
Water mon wells secured/free of damage?	(y)	n	
Gas probes secured/free of damage?	(y)	n	
Flare station modem operational?	(y)	n	

Comments:

About 8" of snow on site

LANDFILL SITE INSPECTION
FORMER HOLTZ KRAUSE LANDFILL

Inspector Kevin Faber

Date: 2.14.23

Item	*Yes*	*No*	*Comments*
Cover intact and free of erosion?	(y)	n	
Vegetation cover intact?	(y)	n	
Is cover free of surface water ponding?	(y)	n	
Is cover free of exposed refuse?	(y)	n	
Is cover free of leachate seeps?	(y)	n	
Is cover free of animal burrows?	(y)	n	
Is cover free of noxious weeds?	(y)	n	
Is cover in need of mowing?	y	(n)	
Evidence of settlement of fill?	y	(n)	
Nuisance odors present?	y	(n)	
On-site access road drivable?	(y)	n	
Fence around flare secured?	(y)	n	
Evidence of trespassers or encroachment?	y	(n)	
Illegal disposal/dumping present?	y	(n)	
Gas wells free of damage?	(y)	n	
Water mon wells secured/free of damage?	(y)	n	
Gas probes secured/free of damage?	(y)	n	
Flare station modem operational?	(y)	n	

Comments:

Warm weather lately. Snow ~ 4" on site

LANDFILL SITE INSPECTION
FORMER HOLTZ KRAUSE LANDFILL

Inspector: Kevin Faber

Date: 3.28.23

Item	*Yes*	*No*	*Comments*
Cover intact and free of erosion?	(y)	n	
Vegetation cover intact?	(y)	n	
Is cover free of surface water ponding?	(y)	n	
Is cover free of exposed refuse?	(y)	n	
Is cover free of leachate seeps?	(y)	n	
Is cover free of animal burrows?	(y)	n	
Is cover free of noxious weeds?	(y)	n	
Is cover in need of mowing?	y	(n)	
Evidence of settlement of fill?	y	(n)	
Nuisance odors present?	y	(n)	
On-site access road drivable?	(y)	n	
Fence around flare secured?	(y)	n	
Evidence of trespassers or encroachment?	y	(n)	
Illegal disposal/dumping present?	y	(n)	
Gas wells free of damage?	(y)	n	
Water mon wells secured/free of damage?	(y)	n	
Gas probes secured/free of damage?	(y)	n	
Flare station modem operational?	(y)	n	

Comments:

Did EW monitoring - Still 4-6" of snow on-site. EW wells melted for most.

LANDFILL SITE INSPECTION
FORMER HOLTZ KRAUSE LANDFILL

Inspector Kevin Faber

Date: 4.11.23

Item	*Yes*	*No*	*Comments*
Cover intact and free of erosion?	(y)	n	
Vegetation cover intact?	(y)	n	
Is cover free of surface water ponding?	(y)	n	
Is cover free of exposed refuse?	(y)	n	
Is cover free of leachate seeps?	(y)	n	
Is cover free of animal burrows?	(y)	n	
Is cover free of noxious weeds?	(y)	n	
Is cover in need of mowing?	y	(n)	
Evidence of settlement of fill?	y	(n)	
Nuisance odors present?	y	(n)	
On-site access road drivable?	(y)	n	
Fence around flare secured?	(y)	n	
Evidence of trespassers or encroachment?	y	(n)	
Illegal disposal/dumping present?	y	(n)	
Gas wells free of damage?	(y)	n	
Water mon wells secured/free of damage?	(y)	n	
Gas probes secured/free of damage?	(y)	n	
Flare station modem operational?	(y)	n	

Comments:

Record High 86° Today

LANDFILL SITE INSPECTION
FORMER HOLTZ KRAUSE LANDFILL

Inspector: Kevin Fasel

Date: 5.9.23

Item	*Yes*	*No*	*Comments*
Cover intact and free of erosion?	(y)	n	
Vegetation cover intact?	(y)	n	
Is cover free of surface water ponding?	(y)	n	
Is cover free of exposed refuse?	(y)	n	
Is cover free of leachate seeps?	(y)	n	
Is cover free of animal burrows?	(y)	n	
Is cover free of noxious weeds?	(y)	n	
Is cover in need of mowing?	y	(n)*	
Evidence of settlement of fill?	y	(n)	
Nuisance odors present?	y	(n)	
On-site access road drivable?	(y)	n	
Fence around flare secured?	(y)	n	
Evidence of trespassers or encroachment?	y	(n)	
Illegal disposal/dumping present?	y	(n)	
Gas wells free of damage?	(y)	n	
Water mon wells secured/free of damage?	(y)	n	
Gas probes secured/free of damage?	(y)	n	
Flare station modem operational?	(y)	n	

Comments:

WDNR Inspection last week. 100% Compliance

Cover should be mowed in next month

LANDFILL SITE INSPECTION
FORMER HOLTZ KRAUSE LANDFILL

Inspector: Kevin Fabel

Date: 6.6.23

Item	*Yes*	*No*	*Comments*
Cover intact and free of erosion?	(y)	n	
Vegetation cover intact?	(y)	n	
Is cover free of surface water ponding?	(y)	n	
Is cover free of exposed refuse?	(y)	n	
Is cover free of leachate seeps?	(y)	n	
Is cover free of animal burrows?	(y)	n	
Is cover free of noxious weeds?	(y)	n	
Is cover in need of mowing?	y	(n)	
Evidence of settlement of fill?	y	(n)	
Nuisance odors present?	y	(n)	
On-site access road drivable?	(y)	n	
Fence around flare secured?	(y)	n	
Evidence of trespassers or encroachment?	y	(n)	
Illegal disposal/dumping present?	y	(n)	
Gas wells free of damage?	(y)	n	
Water mon wells secured/free of damage?	(y)	n	
Gas probes secured/free of damage?	(y)	n	
Flare station modem operational?	(y)	n	

Comments:

Cover recently mowed. Looks Good.

LANDFILL SITE INSPECTION
FORMER HOLTZ KRAUSE LANDFILL

Inspector: Kevin Faber

Date: 7.11.23

Item	*Yes*	*No*	*Comments*
Cover intact and free of erosion?	(y)	n	
Vegetation cover intact?	(y)	n	
Is cover free of surface water ponding?	(y)	n	
Is cover free of exposed refuse?	(y)	n	
Is cover free of leachate seeps?	(y)	n	
Is cover free of animal burrows?	(y)	n	
Is cover free of noxious weeds?	(y)	n	
Is cover in need of mowing?	y	(n)	
Evidence of settlement of fill?	y	(n)	
Nuisance odors present?	y	(n)	
On-site access road drivable?	(y)	n	
Fence around flare secured?	(y)	n	
Evidence of trespassers or encroachment?	y	(n)	
Illegal disposal/dumping present?	y	(n)	
Gas wells free of damage?	(y)	n	
Water mon wells secured/free of damage?	(y)	n	
Gas probes secured/free of damage?	(y)	n	
Flare station modem operational?	(y)	n	

Comments:

Fields in good shape - Very Dry Summer.

LANDFILL SITE INSPECTION
FORMER HOLTZ KRAUSE LANDFILL

Inspector Kevin Fabel

Date: 8.8.23

Item	*Yes*	*No*	*Comments*
Cover intact and free of erosion?	(y)	n	
Vegetation cover intact?	(y)	n	
Is cover free of surface water ponding?	(y)	n	
Is cover free of exposed refuse?	(y)	n	
Is cover free of leachate seeps?	(y)	n	
Is cover free of animal burrows?	(y)	n	
Is cover free of noxious weeds?	(y)	n	
Is cover in need of mowing?	y	(n)	
Evidence of settlement of fill?	y	(n)	
Nuisance odors present?	y	(n)	
On-site access road drivable?	(y)	n	
Fence around flare secured?	(y)	n	
Evidence of trespassers or encroachment?	y	(n)	
Illegal disposal/dumping present?	y	(n)	
Gas wells free of damage?	(y)	n	
Water mon wells secured/free of damage?	(y)	n	
Gas probes secured/free of damage?	(y)	n	
Flare station modem operational?	(y)	n	

Comments:

Dry Summer Continues. Summer Rain 4-5" below normal.

LANDFILL SITE INSPECTION
FORMER HOLTZ KRAUSE LANDFILL

Inspector: Kevin Fabel

Date: 9.12.23

Item	*Yes*	*No*	*Comments*
Cover intact and free of erosion?	(y)	n	
Vegetation cover intact?	(y)	n	
Is cover free of surface water ponding?	(y)	n	
Is cover free of exposed refuse?	(y)	n	
Is cover free of leachate seeps?	(y)	n	
Is cover free of animal burrows?	(y)	n	
Is cover free of noxious weeds?	(y)	n	
Is cover in need of mowing?	y	(n)	
Evidence of settlement of fill?	y	(n)	
Nuisance odors present?	y	(n)	
On-site access road drivable?	(y)	n	
Fence around flare secured?	(y)	n	
Evidence of trespassers or encroachment?	y	(n)	
Illegal disposal/dumping present?	y	(n)	
Gas wells free of damage?	(y)	n	
Water mon wells secured/free of damage?	(y)	n	
Gas probes secured/free of damage?	(y)	n	
Flare station modem operational?	(y)	n	

Comments:

Dry Conditions continue

LANDFILL SITE INSPECTION
FORMER HOLTZ KRAUSE LANDFILL

Inspector: Kevin Faber

Date: 10.19.23

Item	*Yes*	*No*	*Comments*
Cover intact and free of erosion?	(y)	n	
Vegetation cover intact?	(y)	n	
Is cover free of surface water ponding?	(y)	n	
Is cover free of exposed refuse?	(y)	n	
Is cover free of leachate seeps?	(y)	n	
Is cover free of animal burrows?	(y)	n	
Is cover free of noxious weeds?	(y)	n	
Is cover in need of mowing?	y	(n)	
Evidence of settlement of fill?	y	(n)	
Nuisance odors present?	y	(n)	
On-site access road drivable?	(y)	n	
Fence around flare secured?	(y)	n	
Evidence of trespassers or encroachment?	y	(n)	
Illegal disposal/dumping present?	y	(n)	
Gas wells free of damage?	(y)	n	
Water mon wells secured/free of damage?	(y)	n	
Gas probes secured/free of damage?	(y)	n	
Flare station modem operational?	(y)*	n	PLC Card Malfunction

Comments:

Tom Holiday GHD here for Semi-Annual Maintenance Visit. While on-site PLC Card Malfunctioned preventing operation in Auto Mode. New Card ordered & replaced 10/23.

LANDFILL SITE INSPECTION
FORMER HOLTZ KRAUSE LANDFILL

Inspector: Kevin Faber

Date: 11.14.23

Item	*Yes*	*No*	*Comments*
Cover intact and free of erosion?	(y)	n	
Vegetation cover intact?	(y)	n	
Is cover free of surface water ponding?	(y)	n	
Is cover free of exposed refuse?	(y)	n	
Is cover free of leachate seeps?	(y)	n	
Is cover free of animal burrows?	(y)	n	
Is cover free of noxious weeds?	(y)	n	
Is cover in need of mowing?	y	(n)	
Evidence of settlement of fill?	y	(n)	
Nuisance odors present?	y	(n)	
On-site access road drivable?	(y)	n	
Fence around flare secured?	(y)	n	
Evidence of trespassers or encroachment?	y	(n)	
Illegal disposal/dumping present?	y	(n)	
Gas wells free of damage?	(y)	n	
Water mon wells secured/free of damage?	(y)	n	
Gas probes secured/free of damage?	(y)	n	
Flare station modem operational?	(y)	n	

Comments:

No Snow on Site

LANDFILL SITE INSPECTION
FORMER HOLTZ KRAUSE LANDFILL

Inspector: Kevin Faber

Date: 12.28.23

Item	*Yes*	*No*	*Comments*
Cover intact and free of erosion?	(y)	n	
Vegetation cover intact?	(y)	n	
Is cover free of surface water ponding?	(y)	n	
Is cover free of exposed refuse?	(y)	n	
Is cover free of leachate seeps?	(y)	n	
Is cover free of animal burrows?	(y)	n	
Is cover free of noxious weeds?	(y)	n	
Is cover in need of mowing?	y	(n)	
Evidence of settlement of fill?	y	(n)	
Nuisance odors present?	y	(n)	
On-site access road drivable?	(y)	n	
Fence around flare secured?	(y)	n	
Evidence of trespassers or encroachment?	y	(n)	
Illegal disposal/dumping present?	y	(n)	
Gas wells free of damage?	(y)	n	
Water mon wells secured/free of damage?	(y)	n	
Gas probes secured/free of damage?	(y)	n	
Flare station modem operational?	(y)	n	

Comments:

Still no snow on Site.
Warmest December on Record
Avg Temp #11°F above Average.

ghd.com

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