Operation and Maintenance Report

Clarkstown Sanitary Landfill

January-December 2017

West Nyack NY

PREPARED FOR:

TOWN OF CLARKSTOWN
DEPT.OF ENVIRONMENTAL CONTROL
20 MAPLE AVE.
NEW CITY, NY 10956

Report Verification

PROJECT: **Clarkstown Sanitary Landfill; Landfill Gas Management**
Town of Clarkstown, Department of Environmental Control
West Nyack, New York
NYSDEC Inactive Hazardous Waste Site No. 344001

TITLE: **Operation and Maintenance Report**
Clarkstown Sanitary Landfill; January-December 2017

This document has been reviewed for accuracy and quality commensurate with the intended application.

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1 Introduction

The purpose of this annual report is to provide an operation and maintenance (O&M) summary for the period of January through December 2017 for the Clarkstown Sanitary Landfill (the Landfill), located in West Nyack, Rockland County, New York (Figure 1).

The Landfill, which is located approximately 1,000 feet south of Route 59, is bounded on the east side by New York State Route 303, and on the north, south and west sides by buffer wetlands. The Landfill property encompasses approximately 100 acres.

The Landfill had been in operation since the 1940s and operated up to December 31, 1990. The Landfill was closed under an Order on Consent issued by New York State Department of Environmental Conservation (NYSDEC). The Landfill is a listed inactive Hazardous Waste Class 2 site (Site No. 344001). The Operation and Maintenance Manual indicates that the United State Environmental Protection Agency (USEPA) has listed the site on the National Priority List (NPL). This information was included in previous O&M Reports; however, this Site has never been listed on the USEPA NPL registry.

In 1996, the Town of Clarkstown (the Town) began to cap the Landfill and build a gas collection system, which was designed to evacuate and combust methane gas from the capped Landfill. Construction of the Landfill cap and gas collection system was completed in February 1999.

The Town retained the services of Henningson, Durham & Richardson Architecture and Engineering, P.C., in association with HDR Engineering, Inc. (HDR) to assist in the O&M activities at the Landfill. HDR performed routine inspections and maintenance of the Landfill to comply with the Clarkstown Sanitary Landfill Operation & Maintenance Manual, dated October 1999.

2 Landfill Gas System Monitoring, Balancing, and Maintenance

The Landfill gas (LFG) system (Figure 2) was designed to collect, transport and incinerate gas generated at the capped Landfill. The system is constructed of a main header pipe, horizontal surface collection areas, and 10 extraction legs with 52 corresponding extraction wells. The entire system comprises approximately 18,000 linear feet of high density polyethylene (HDPE) pipe of varying diameter. This section provides a description of the monitoring and maintenance of the LFG system, which includes the following:

- LFG System Collection Piping
- LFG Surface Collector Network
- LFG Drip Leg Assemblies
- LFG System Wellheads, Vaults and Valves

Maintenance logs for the LFG system (FS-3) are included as Appendix A of this report.

2.1 LFG System Collection Piping

The header pipe (Figure 3) is constructed of a HDPE pipe that encircles the eastern and central portion of the Landfill in a circular or 'ring' shape. Four isolation (header) valves and two in-line pipe reducers are located along the length of the header pipe. The eastern and northern sections of the ring are constructed with ten-inch diameter HDPE and are reduced to an eight-inch diameter main along the southern and western sections. The collection piping is located above the geo-membrane and below the final cover. It is typically buried 18 to 24 inches below the existing grade of the Landfill.

The operation and maintenance of collection piping consists of inspection of leg vaults and valves, header vaults and valves, drip legs and well head vaults. Well head static pressures are used to identify condensate accumulation and/or blockage.

2.2 LFG System Surface Collector Networks

The two LFG surface collectors (Figure 4) are composed of a series of perforated six-inch diameter HDPE pipes that are located at the northeast and southeast corners of the Landfill. The perforated six-inch diameter HDPE pipes have been installed in gravel-filled trenches spaced 100 feet apart. The northeast surface collection gallery is regulated by Leg Valve K. The valve at Leg K is currently 5% open. The southeast collector is regulated by Leg Valve A which is currently 25% open.

The design of the southeast surface collector is unclear in part because one set of as-built drawings show the system in place and another as-built drawing set does not shows it. The presence of passive vents located in the same area as the surface collector would suggest the surface collector is not in place. However, the presence of Leg Valve A suggests otherwise. If the surface collector is in place, the prevailing thought is that the surface collector would draw ambient air via the passive collectors.

Methane at Leg A is approximately 10-30%. The presence of the valve and the elevated methane composition suggests the surface collector is present. Therefore, HDR is managing the gas in this area under the assumption that the surface collector is in place.

2.3 LFG Drip Leg Assemblies

There are 12 drip leg assemblies (Figure 5) located at the Landfill. Some areas along the gas collection piping experience restrictions in air flow caused by the accumulation of condensate in low lying areas of the gas collecting piping. These locations are near Drip Legs 1, 5, and 10. These areas are checked monthly as they require regular maintenance. The affected locations are monitored and condensate is removed from the line during monthly site visits. It should be noted that it is common for condensate to accumulate and landfill gas lines and these issues are not unique to this landfill.

Drip Leg 1 is located in the vicinity of Leg Valve C, which services two gas extraction wells (GE-9 and GE-10). The drip leg is located immediately off the ten-inch diameter header main, which serves as a major artery for the collection piping. Drip Leg 5 is located along Leg B, between GE-2 and GE-3. Six gas extraction wells are located up-gradient of the drip leg (GE-3 through GE-8). All six of these wells are located along the northern crest of the Landfill, which is a major collection area of LFG. Drip Leg 10 is along Leg I, between GE-37 and GE-38, which services the north-west portion corner of the Landfill.

At each restricted location, the collection leg was tapped and fitted with a pipe-sleeve and tee. A PVC riser pipe and valve were connected to this sleeve/tee. The modification to the Landfill collection pipe is used exclusively to remove condensate. During each monthly site visit, each location was inspected for the presence of condensate (positive vs. negative pressure). If positive pressure or minimal negative pressure is noted, condensate is removed by utilizing a submersible or peristaltic pump. Such methodology has proven to be highly effective in removal of condensate plugs in the collection pipe.

Table 2-1 below illustrates the locations, dates and approximate volumes of condensate purged from the riser pipes during this reporting period. The data presented in Table 2-1 show that condensate accumulation is greatest at DL-5.

Table 2-1: Volume of Condensate Removed From Drip Legs

Date	DL-1	DL-5	DL-10
	Volume purged (gallons)	Volume purged (gallons)	Volume purged (gallons)
January	140	20	5
February	0	120	0
March	0	0	0
April	20	150	0
May	0	60	0
June	0	120	0
July	0	180	0

August	20	120	0
September	0	180	0
October	40	180	0
November	0	120	0
December	0	0	0

2.4 System Wellheads, Vaults and Valves

The 52 LFG extraction wells (Figure 6) were inspected during each site visit. Gas extraction well monitoring and inspections of each well were conducted to identify indications of leakage, liquid pooling and hazardous conditions in the surrounding area. Deficiencies were reported on Form DP-(1-3), which are included as Appendix B.

Settlement of the well head vaults is an ongoing issue at the Landfill. The Town has undertaken steps to evaluate the well head construction and design, and in conjunction with HDR, has removed well heads and well head vaults from 28 locations and replaced them with new Accu-Flo well heads that are located above surface. The new well heads are no longer located in a sub-grade vault, thus eliminating the slip/trip /fall hazard from the Landfill. The new well heads are clearly visible and easy to access. Additionally, the wells heads are designed to allow users to measure differential pressures, which have been utilized to calculate the flow rate for each new well.

There are twenty-four wells and valves that are still located within the vaults, which are constructed of heavy-duty fiberglass. Over the years, some of the vaults at the Landfill have experienced minimal to moderate amounts of damage, typically noted around the lip of the vault and/or the vault covers. The damage to these vaults is largely cosmetic and does not affect the performance or operation of the LFG collection piping or wells.

Leg valves are monitored on a bi-annual basis (twice/year) for valve settings, gas composition and indications of differential settlement or fatigue. Originally, a ¼-inch valve and sample tube was tapped into the collection piping immediately up-gradient of each leg valve. The set-up is used to confirm suction pressure in each leg. To better evaluate performance and to optimize gas collection at the Landfill, HDR removed the tubing and placed a compression cap over each valve. During site inspections, the cap can be removed and a barbed fitting is connected to the valve. LFG measurements are now collected from each leg valve, which is useful in evaluating LFG production and is beneficial in balancing the well field, especially as the LFG production continues to decrease over time.

2.5 LFG Monitoring For System Control

All of the LFG extraction wells are measured for gas composition and pressures. Each well is fitted with a valve that may be adjusted based upon corresponding gas and pressure readings. This process is referred to as “well balancing” and is performed on a monthly basis. The goal for well balancing is to optimize system operations by determining the equilibrium for each well where the methane extraction is equal to the methane production. The monthly well balancing field summary report is provided as Appendix C.

Figure 7 is a map illustrating the LFG collection system with notations for each gas extraction well that has been entirely or partially closed as of December 2016. As illustrated in Figure 7, the well valves that have been entirely or partially closed are primarily located around the perimeter of the Landfill, or in lower lying areas as expected. The number of these wells has increased over time, suggesting methane production is diminishing. Gas collection, gas concentration and volumes are discussed in Section 4.

3 Landfill Gas Handling System

This section provides a description of the monitoring and maintenance of the LFG flare control system. The system consists of three components: a LFG control system, a LFG blower assembly, and an enclosed LFG ground flare.

3.1 LFG Control System

Currently, the flare is programmed to operate for 10 hours per day with the scheduled down time during the overnight hours. The gas extraction rate exceeds the gas production rate at the Landfill. By cycling operating times, HDR is attempting to balance of LFG production with extraction occurring during times when the adjacent transfer and co-joining recycling facility are active.

On occasion, the flare has failed to automatically restart in the morning; typically two or three attempts were needed to restart the flare successfully. The failed restarts are a result of either an insufficient volume of methane available to sustain a flame or a pilot fail (either pilot flame blow out or an empty pilot flame fuel tank).

Despite the fact that the system is now automated, it will not attempt to restart a second time as the failed restart will trigger an alarm condition (flame fail) and the flare station then needs to be reset manually. Due to these operational controls, regular site visits by HDR (2-4 times per week) are necessary to ensure that the flare operates on a regular basis. The control system also provides safety shutdowns for emergency conditions. The safety shutdowns include:

- High Lower Explosive Limit (one for each of four combustible detectors inside the building & gas analyzer cabinet)
- Blower Overload (one for each blower)
- High Oxygen Content in LFG
- Low Methane Content in LFG
- Flame Failure
- Pilot Failure
- High Flame Temperature
- Low Flame Temperature
- Low LFG Flow
- Shutdown Valve Fail Closed
- Shutdown Valve Fail Open
- High Liquid Level in Condensate Tank

The LFG control system receives signals from the sensors and detectors to monitor the operation of the enclosed ground flare. Malfunction of sensing/detecting devices will trigger alarms and shut down the system. The alarm shutdowns are logged by the system.

As noted in previous reports, the Gas Analysis Cabinet (GAC) methane detector has not been operating properly. Two deficiencies have been identified with this unit:

The temperature transmitter has been malfunctioning.

The oxygen sensor has been malfunctioning.

HDR has been monitoring the gas makeup from a flare sampling port. The data show that the gas is under control and the flare itself is operating properly and within manufacturer's guidelines. This monitoring precludes the need to repair the GAC detector at this time.

3.2 Blower Assembly

The blower assembly is located in a "Butler" building, which is open on the north side to facilitate adequate ventilation. The blower assembly consists of two explosion-proof, spark-proof centrifugal vacuum blowers (Blower 301 and 302). Each blower has a separate pre-filtration system (demister filters) and inlet and outlet isolation valves. The blower assembly is mounted on a steel skid, which is centrally located within the building. The blower's starter is located outside of the blower assembly at the flare station control panel. The system is currently operated using one blower (Blower 302).

Four lower explosive limit (LEL) sensors are located at the corners of the skid and are checked and calibrated annually. Since the LEL sensors were replaced in March 2015 they have been operating normally and are calibrated annually using an MSA ultima calibrator.

The inlet isolation valve is used to control flow. The valve on the operating blower is positioned to provide an average flow of 550-650 cubic feet per minute (CFM). The outlet valve for the operating blower is fully open. The valves (inlet and outlet) for the offline Blower 301 were both closed during operation of Blower 302.

3.3 Enclosed LFG Ground Flare

The enclosed LFG ground flare consists of a combustor assembly, an insulated stack, a pilot gas assembly, three thermocouples, a flame arrestor, a shut down valve, and three electrically actuated intake louvers. The system is currently operating using Thermocouple Two as a temperature monitor set to 1440 degrees Fahrenheit. Two of the three louvers are offline and closed. This provides better temperature control of the system by reducing overcompensation by the louver/actuator controls.

4 Landfill Gas System Overall Gas Evaluation

Typically, LFG is composed of methane, carbon dioxide, nitrogen, and, to a much lesser extent, oxygen. Typical LFG concentrations for methane (35%-60%), carbon dioxide (35%-60%), nitrogen (3%-12%), and oxygen (0%-5%) are expected at most landfills. Methane and carbon dioxide are produced through the bacteriological breakdown of organic matter under anaerobic conditions. If concentrations of these gases increase above expected values, it is often an indication that intrusion of ambient air into the gas extraction system is occurring. Nitrogen and oxygen intrusion typically occur when the gas extraction system is operating at extraction rates that are greater than the methane production rates. During monthly well balancing, gas extraction well valves are set to optimize methane concentrations and minimize oxygen and nitrogen concentrations.

LFG data is collected from each gas extraction well using a Landtec GEM™ 2000 meter (GEM 2000). The GEM 2000 measures the percentage of methane, carbon dioxide, and oxygen present in the LFG. The remaining gas is reported as “balance” gas and typically consists of nitrogen with low percentages (typically <1%) of trace gases. The meter is also used to measure suction pressure and differential pressure (on upgraded wells only) at applicable gas extraction wells and leg valves. LFG is also monitored at the flare station and perimeter monitoring wells using the GEM 2000.

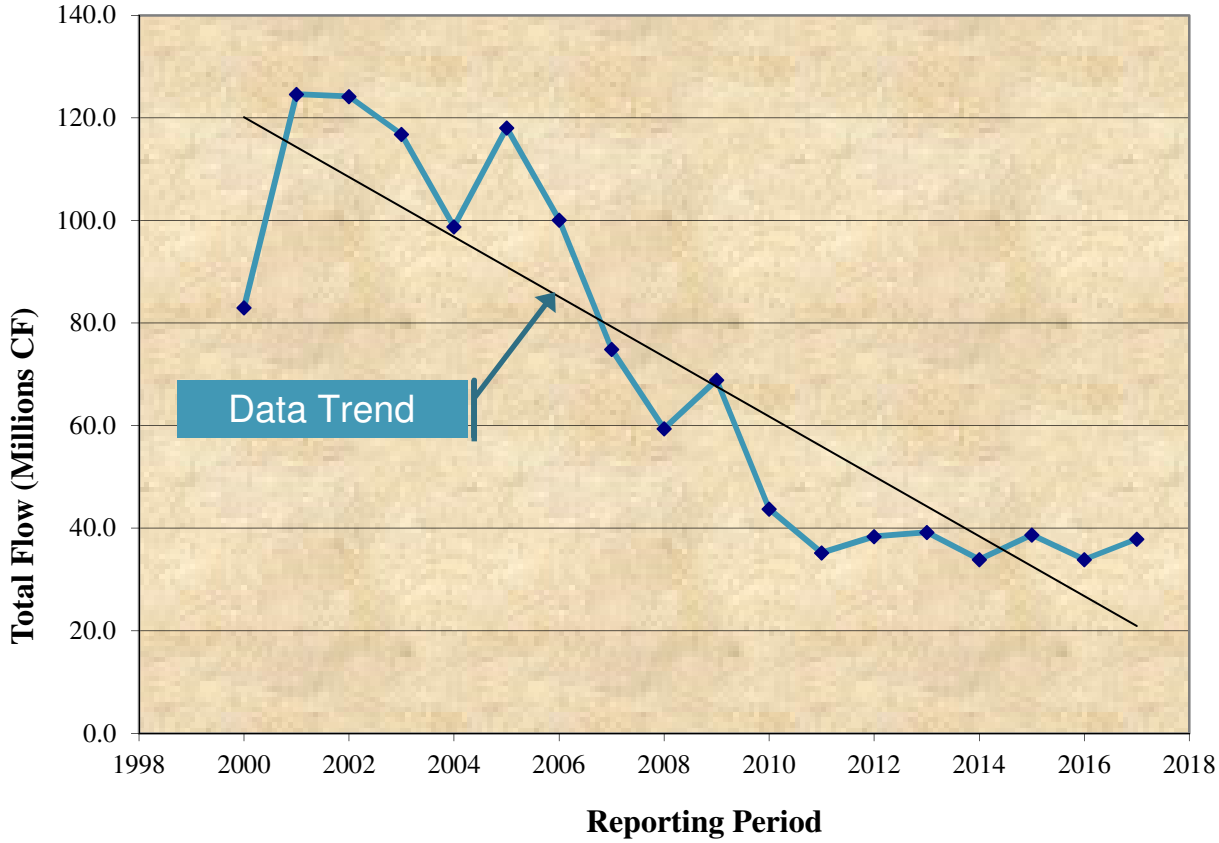
4.1 Quantitative Analysis of Gas Recovery

For the 2017 period, HDR maintained a log sheet at the flare station to record the gas flow rate, cumulative and daily gas extraction volumes, flare temperatures, blower amperage and cumulative blower run-time. The raw data sheets are included in this report as Appendix D.

The total LFG recovered in 2017 was approximately 38.0 million cubic feet (up from 36.5 reported in 2016). Total operating time was 1,853 hours (50% uptime – based on 10 hour operation cycle). The system operation during this period shows an increase in operation time versus the previous year, which ran 31% of the time.

Graph 4-1 illustrates the volume of landfill gas removed on an annual basis. The graph illustrates the decreasing trend in the volume of gas removed from the Landfill over the past 17 years. The graph shows landfill gas removal has become asymptotic over the past seven years. This is the typical and expected result of continued landfill gas removal.

Graph 4-1: Gas Volume Extraction Trends



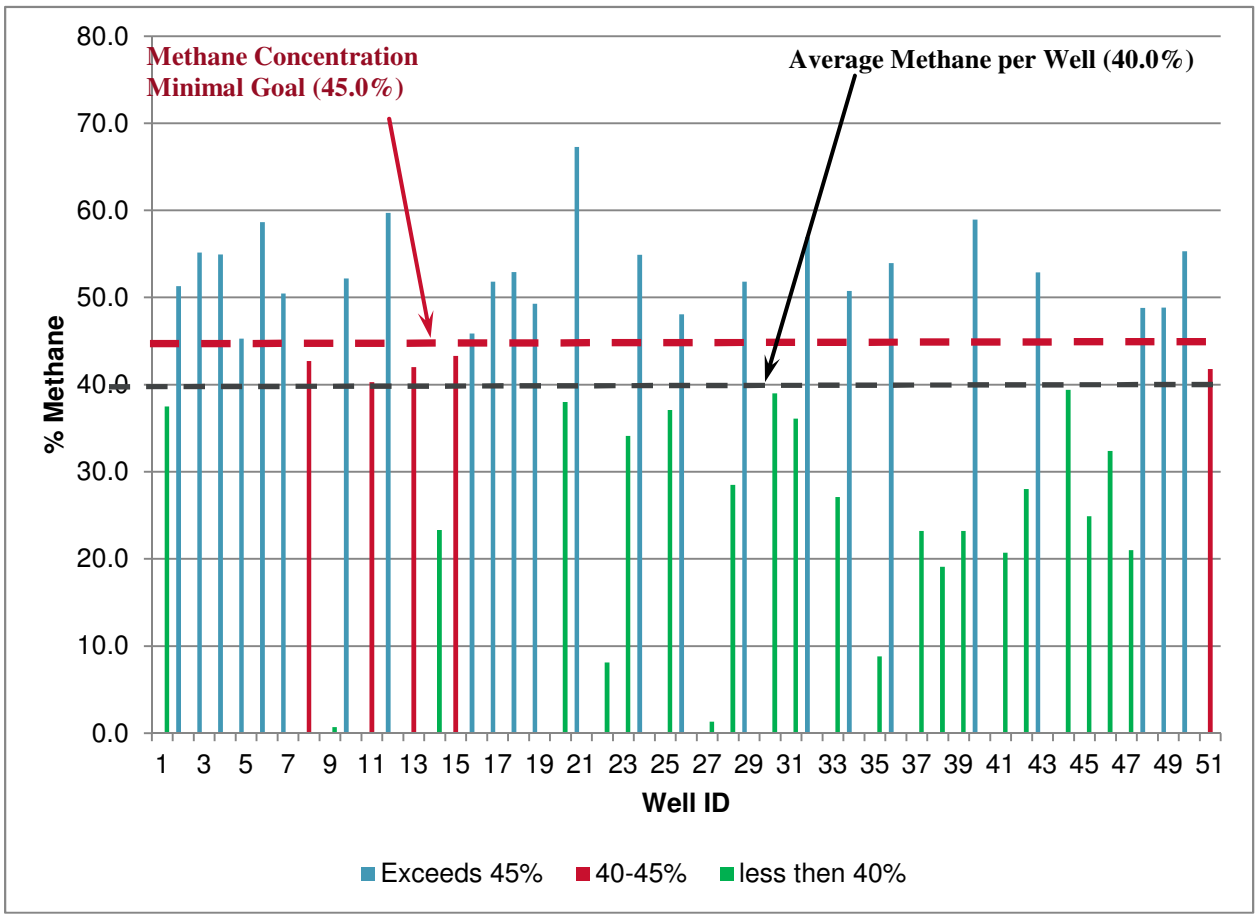
4.2 Qualitative Analysis of Gas Recovery

LFG quality is monitored at each of the 52 gas extraction and at the flare station. Optimal gas quality consists of a high methane concentration (greater than 45%) and low carbon dioxide, oxygen and nitrogen levels. Methane is required to sustain the flaring of the gas. The primary reason to burn LFG is public safety. Additionally, methane is a greenhouse gas with a global warming potential more than 20 times that of carbon dioxide.

The efficient combustion of LFG can be inhibited by carbon dioxide. Therefore, low levels of carbon dioxide are desired. Low oxygen at the well heads is also desirable because it is an indication that ambient air intrusion is not occurring and high concentrations of oxygen would increase the potential for LFG to exhibit flammable conditions outside of the flare station. Typically, LFG that is extracted from the Landfill is low in oxygen (<5%) and cannot support combustion.

At the flare station, oxygen is introduced and controlled by the flare actuator and louvers for ensuring optimum burning conditions. Nitrogen has no effect on the system operation; however, the presence of nitrogen in excess of 10% would suggest ambient air intrusion may be occurring. The gas quality averages for each well are illustrated in the graph below.

Graph 4-2 Average Methane Concentrations per Extraction Well



The average methane composition during this period was 40.0% (down from 46.3 the previous year). Twenty-seven wells had an average methane concentration below the 45% methane goal. Five of the twenty-seven wells were within 5% of the goal (>40%). The remaining twenty-two wells had average methane concentrations less than 40%. Seventeen of the twenty two wells are located along the perimeter of the Landfill or low lying areas and diminishing methane is expected to be greater in these areas over time.

Over the past 17 years, the data suggest that the methane production along the perimeter of the Landfill is diminishing. Despite limited flows (valve settings), methane production and accumulation along the Landfill perimeter remains low in concentration.

The five wells with methane levels below their expected values are GE-14, GE-35, GE-37, GE-38, and GE-39. These wells are located proximate to each other and may suggest an area where the production of methane is lower than expected (Figure 9).

The majority of wells have reported concentrations that are greater than expected. Table 4-2 summarizes the average monthly methane composition measured at the extraction wells. That data is compared to the average monthly methane composition measured at the flare station.

Table 4-1 Summary of Extraction Well Measurements 2017

Month	Average Methane in Well Field (%)	Average Methane at Flare (%)	Difference
January	39.8	34.5	5.3
February	38.9	37.1	1.8
March	34	35.8	1.8
April	50.1	32.9	17.2
May	44.9	36.8	8.1
June	45.3	37.5	7.8
July	40.2	38.3	1.9
August	43.2	37.5	5.7
September	37.3	34.7	2.6
October	36.3	31	5.3
November	35.7	35	0.7
December	42.1	38.6	3.5

Based on the data presented in this table there is a measurable difference between the average percent methane in the well field versus the average percent methane measured at the flare station (Appendix E).

The variance is likely due to the absence of methane levels from the surface collectors (A and K). Typically the percent methane from the horizontal legs is 15-30% lower in methane composition then what is measured in the well field.

The surface collectors are located at a relatively flat portion of the Landfill where historic land filling was significantly less than the majority of the remaining Landfill areas. The leg valves for the surface collectors (A and K) are set at 25 and 5% open, respectively. However, both legs are a short distance from the flare and are more impacted by the suction of the blowers than most other leg valves located further from the header pipe. The end result is Landfill gases are removed from these areas in greater volume, especially at start-up, which likely contributes to failed restarts at the flare station.

Another source of intrusion may be occurring at well heads where damaged sample ports and flexible hoses have been observed. At these damaged areas, it is common to observe ambient air being drawn into the gas extraction system. Typically, these breaches are small and temporarily sealed with duct tape until more permanent remedies are in place (new well head risers).

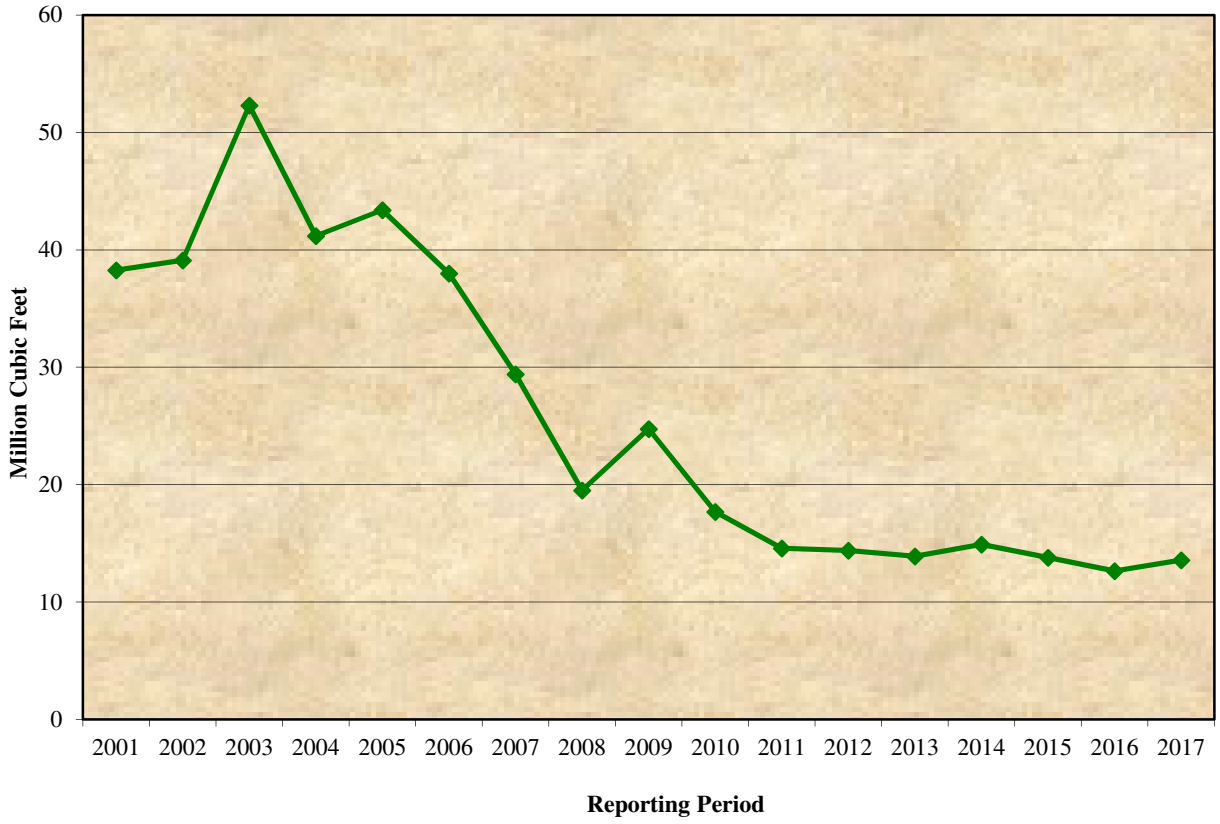
Any discrepancies that exist between Landfill gases in the well field versus the flare station are further believed to be attributed to a combination of factors including the following: individual well head valve settings, time of day observing flares operation, and lag time attributed to the distance from individual wells to the flare. Most of the poorest methane producing wells and surface collectors are located closest to the flare station. Ultimately, the greatest amount of vacuum is being placed on the poorest producing section of the Landfill. This has been augmented by restricting flow through valves to the optimal extent.

Due to the fact that the data is collected on a monthly basis, the actual percentage or total methane removed as the gas composition recorded does not necessarily reflect the actual gas composition throughout the entire run cycle over a daily, monthly, or annual period.

However, the readings are consistently recorded throughout well balancing and are consistent relative with one another. Therefore, they can be used to approximate methane removal on a comparative daily, monthly and annual basis.

The following graph (Graph 4-3) illustrates methane removal at the Landfill; it is an approximation based on field measurements. During the 2017 monitoring period, HDR estimates 13.6 million cubic feet of methane were removed. The graphs illustrate the decreasing rate of methane removal from the Landfill over the past 16 reporting periods. The graph also show the trends is approaching asymptotic conditions over the past six years.

Graph 4-3 Annual Methane Removal over Time



4.3 Off-Site Landfill Gas Monitoring

An evaluation of off-site monitoring wells is presented in a separate document.

5 Other Landfill Gas Systems

This section provides the inspection/maintenance reports for:

- LFG Knockout Tank
- Aboveground LFG Condensate Storage Tank
- Landfill Final Cover System
- Leachate Collection System

5.1 LFG Knockout Tank

Historically, condensate has not been observed at the knockout tank or the condensate pump station. Drip legs are located at the low points at each leg (except Leg L) and along the eastern edge of the Landfill (DL-1), leaving condensate from the surface collectors, GE-1, GE-2 and Leg L as the only areas that are not influenced by any of the drip leg assemblies. Most of these areas are relatively flat and historically there appears to be minimal amount of historic fill placed in this area. The anticipated development and accumulation of condensate is minimal; therefore, little to no condensate would be expected in the knockout tank. The exceptions are GE-50, GE-51, and GE-52 (Leg L). These three wells are located along the east slope and top of the Landfill where condensate is anticipated to develop and accumulate at greater frequency and volume. Based upon grade change and well location, accumulation and blockage would most likely occur between wells GE-50 and GE-49.

5.2 Aboveground LFG Condensate Storage Tank

For several years, no condensate has been observed in the storage tank as discussed in Section 2.3 of this report.

5.3 Landfill Final Cover System

Final cover inspection was performed quarterly in accordance with the inspection procedures for the final cover described on the checklist and Form FCS-1 in Appendix F. During routine well-balancing, the Landfill cap is also inspected for drainage and erosion (Appendix F).

The Landfill is designed with a system of berms, dikes, and drainage ditches. Eight drainage basins are located at the Landfill. The Landfill cap has been vegetated. Drainage at the Landfill has been adequate with no reported instances of erosion or ponding during this reporting period. However, several areas of the Landfill have been noted to be ‘soft’, particularly in the areas between GE-36 and GE-37, the area around GE-4 and the area between GE-3, GE-2 and GE-10.

The Town has negotiated to have solar panels installed on the Landfill cap along the eastern side of the Landfill. The solar panel field occupies roughly 15% of the landfill footprint. This area shall continue to be maintained by the Town of Clarkstown.

The Landfill is surrounded by an access road (Appendix G). A second road is located along the crest of the Landfill. During monthly site visits, HDR inspects the roads for potholes, ponding, settlement or erosion and documents the inspections on Roadway Inspection Sheets (Appendix F).

5.4 Leachate Collection System

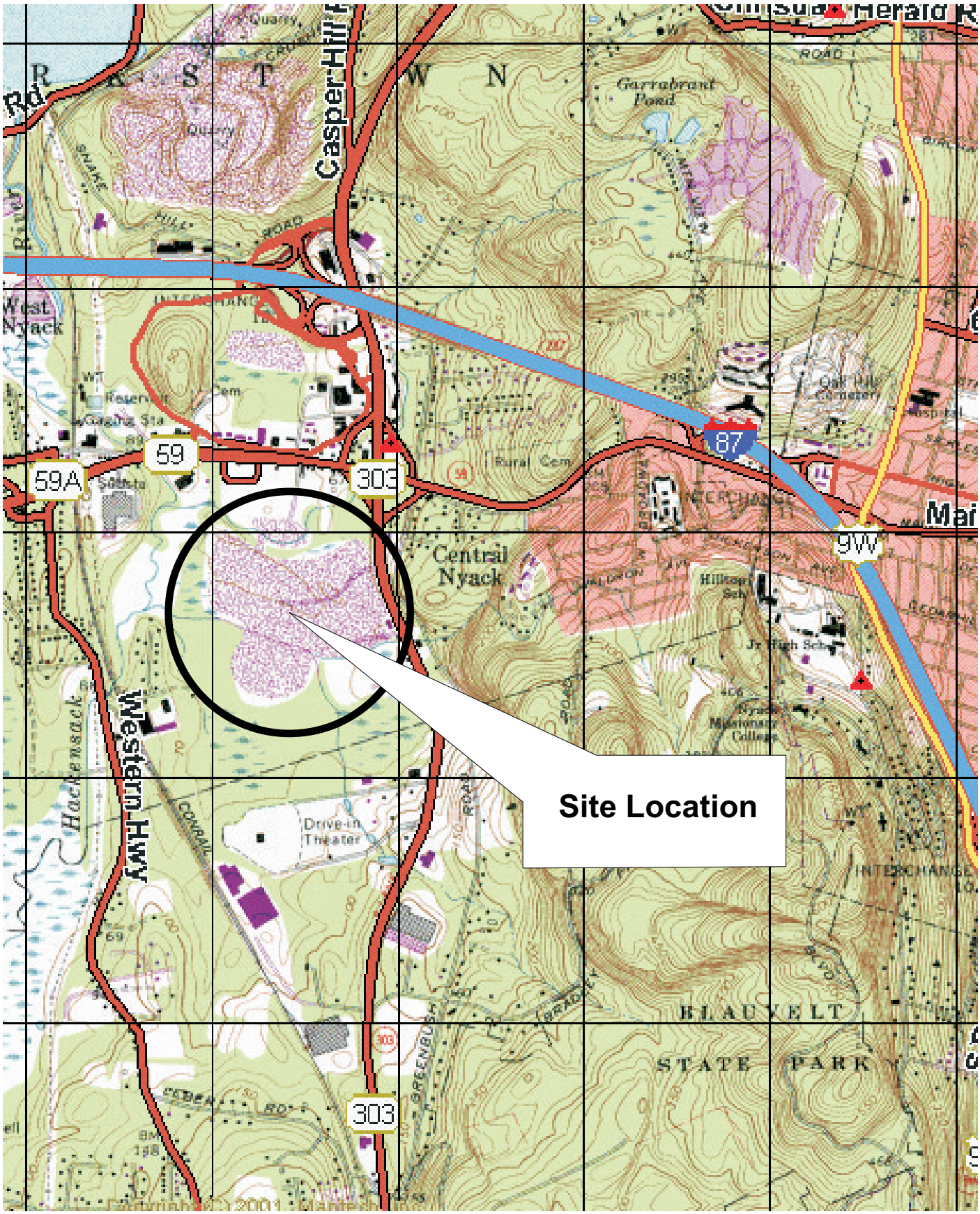
Leachate from each collection chamber is pumped to the leachate collection storage tanks located along Route 59. The leachate does not feed into the tank, but rather feeds directly into a pump station located adjacent to the tanks. The leachate is then pumped into the local sewer system managed by the Rockland County Sewer District #1. The Town installed a flow meter at the discharge end of the leachate line and into the sewer pump house in November 2016. To date, zero flow has been recorded. An inspection of each leachate station shows low levels of liquids in the collection chamber. Landfill leachate is expected to diminish with time. Therefore the observations are expected.

6 Conclusions

Landfill operations have been effective in managing LFG and leachate during this reporting period. The levels of methane at the Landfill continue to diminish with time. Diminishing levels are most evident around the perimeter of the Landfill. The Town continues to invest in upgrading and improving the LFG collection system. Anticipated work next year will include additional upgrades to some of the gas extraction well heads throughout the Landfill cap.

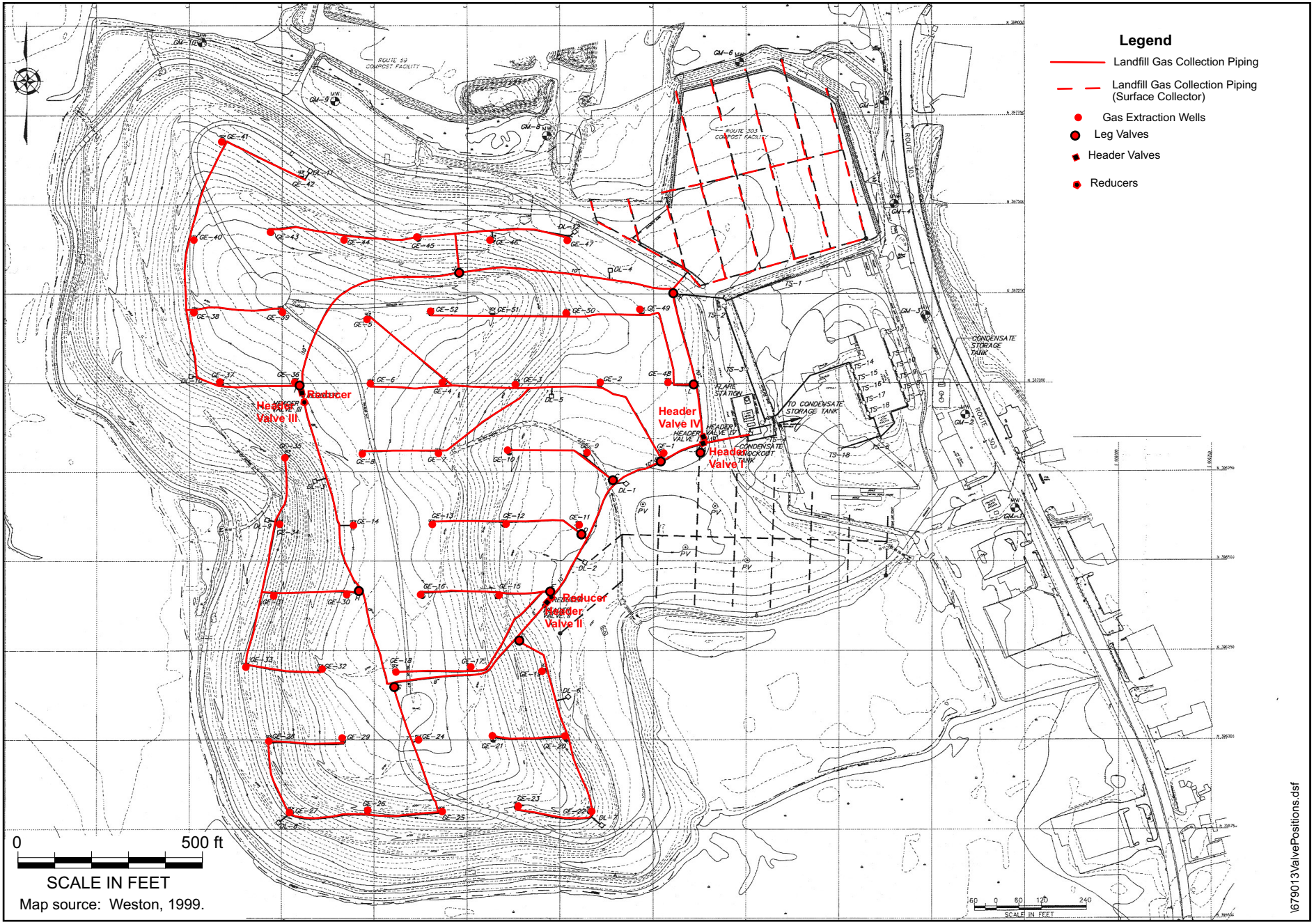
The difference between the methane compositions at the well field versus the methane composition at the flare continues to be noted. HDR will continue to evaluate the composition between the landfill gas extraction wells and the leg valves to identify any locations that explains the discrepancy between the gas field and the flare station.

Figures

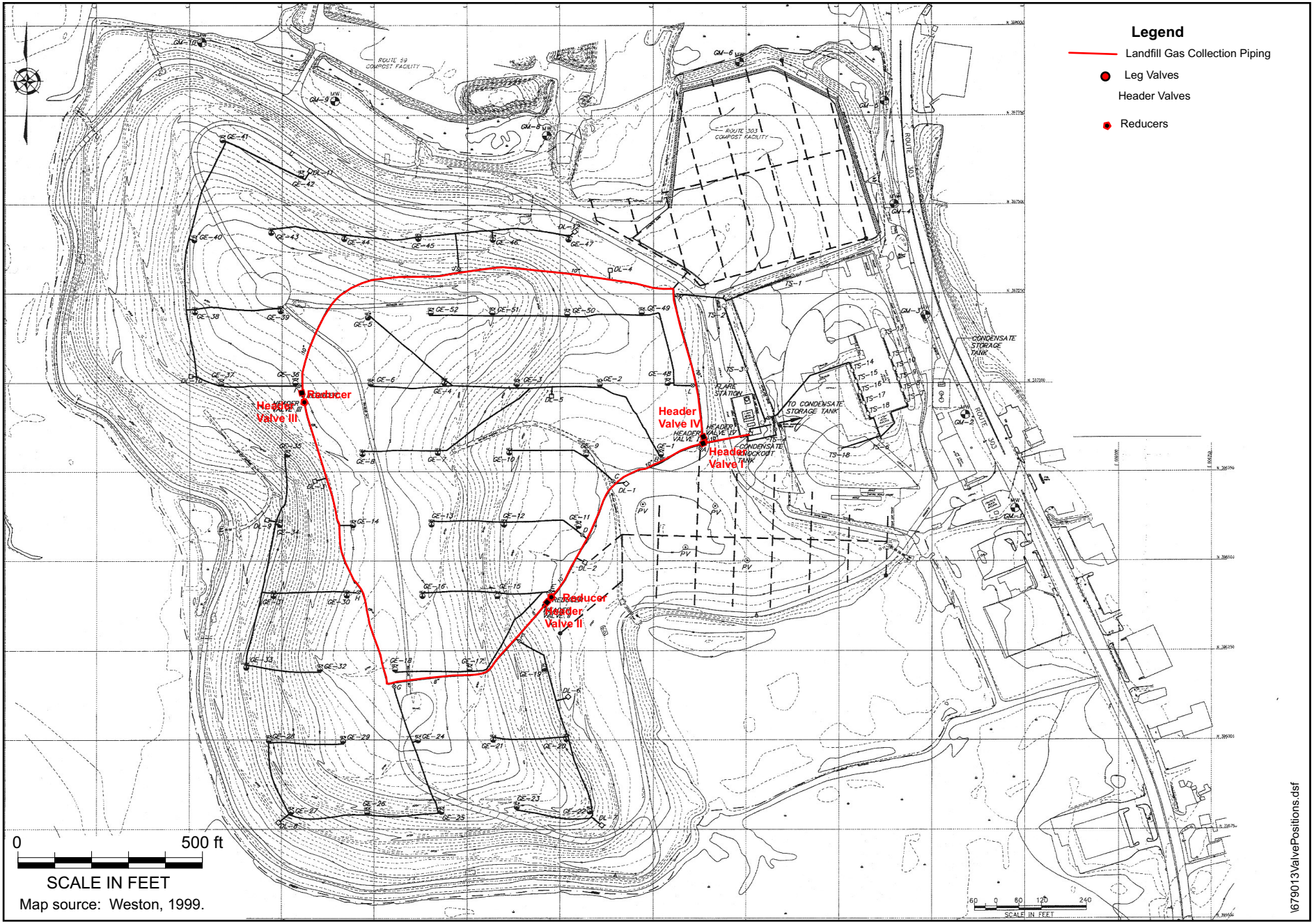


Source: US Quadrangle Nyack, NY 1967, Photorevised 1979

HDR Henningson, Durham & Richardson Architecture and Engineering, P.C. in association with HDR Engineering, Inc. 404 Airport Executive Park Nanuet ,NY	Clarkstown Landfill Location Clarkstown Landfill West Nyack, NY 10994	Figure 1



Henningson, Durham & Richardson Architecture and Engineering, P.C. in association with HDR Engineering, Inc. 404 Airport Executive Park Nanuet ,NY	Landfill Gas Collection Network Clarkstown Landfill West Nyack, NY 10994	Figure 2



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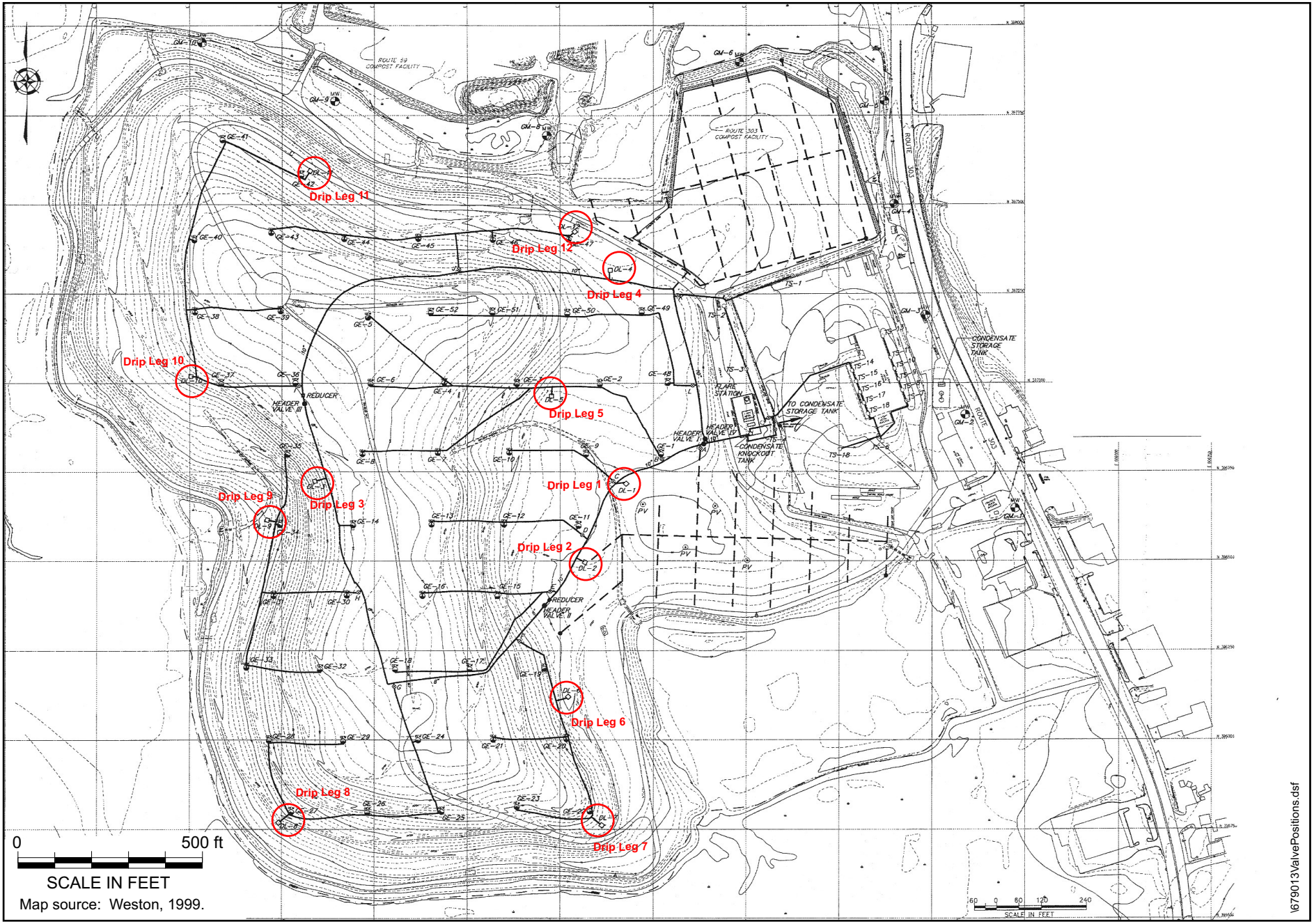
in association with HDR Engineering, Inc.
404 Airport Executive Park
Nanuet ,NY

Landfill Gas Header Pipe
Clarkstown Landfill
West Nyack, NY 10994

Figure 3

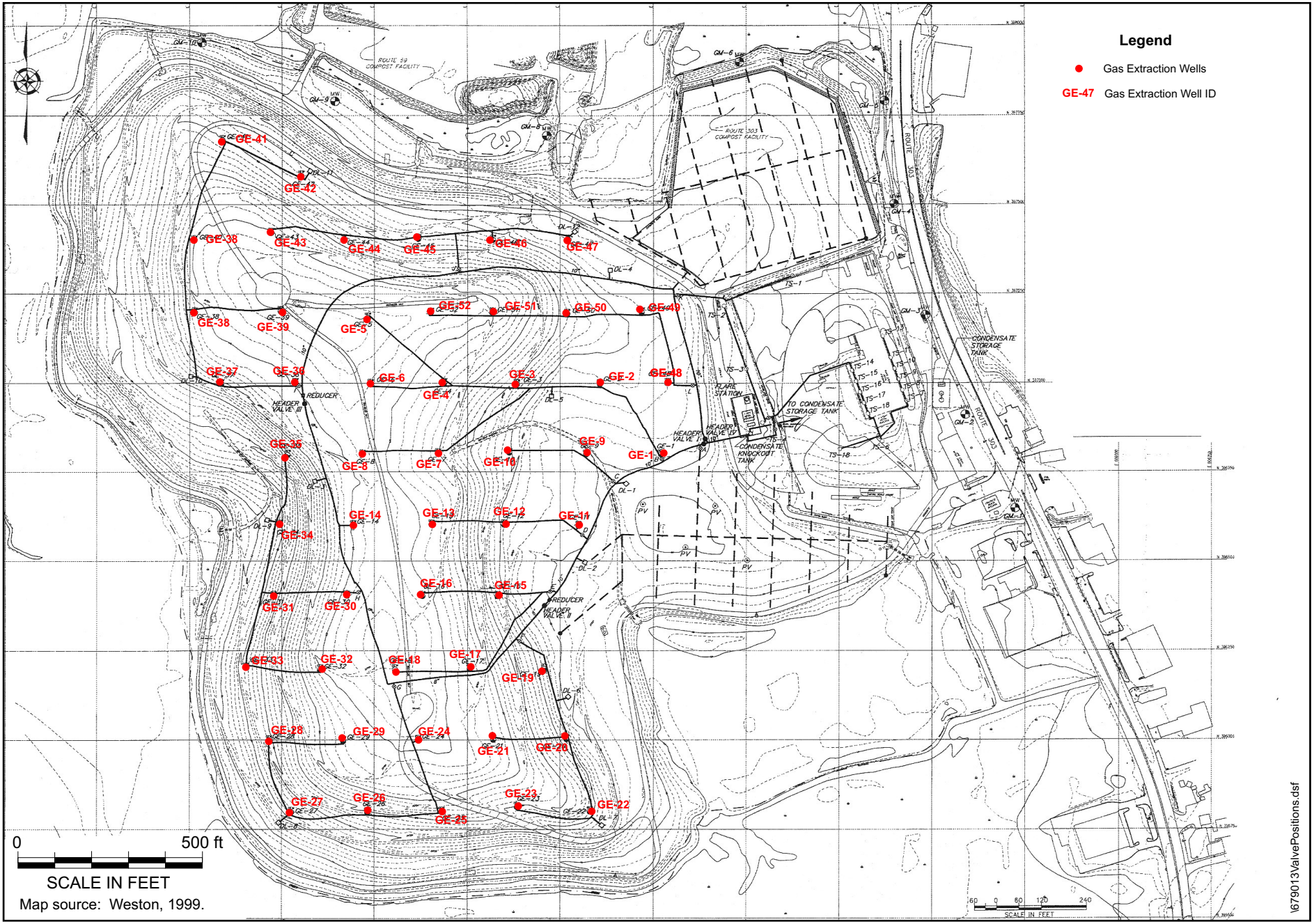
Henningson, Durham & Richardson Architecture and Engineering, P.C. in association with HDR Engineering, Inc. 404 Airport Executive Park Nanuet ,NY	Surface Collector Network Clarkstown Landfill West Nyack, NY 10994	Figure 4



Henningson, Durham & Richardson
Architecture and Engineering, P.C.
in association with HDR Engineering, Inc.
404 Airport Executive Park
Nanuet ,NY

Drip Leg Assembly Locations
Clarkstown Landfill
West Nyack, NY 10994

Figure 5



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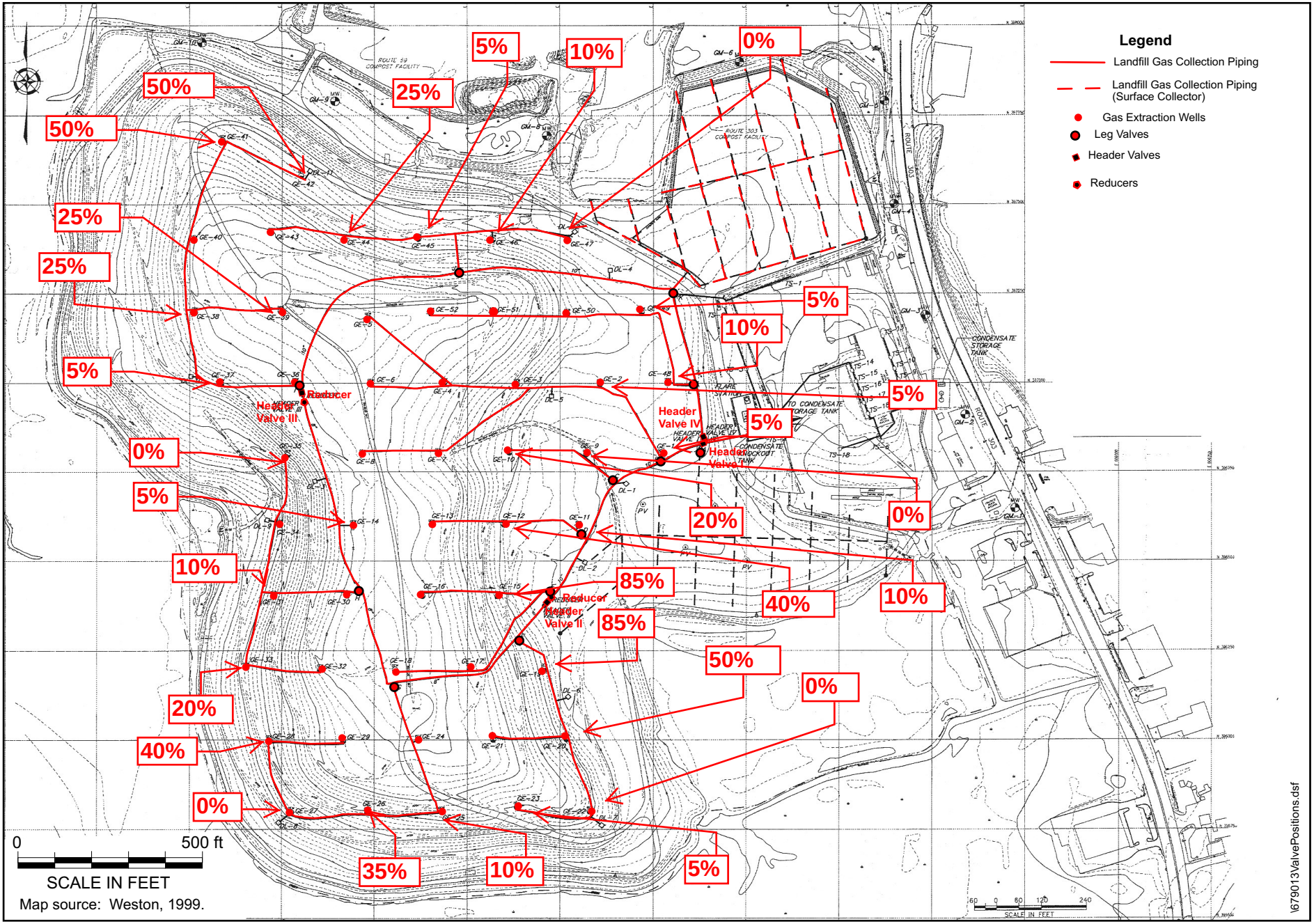
404 Airport Executive Park
Nanuet ,NY

Gas Extraction Wells
Clarkstown Landfill
West Nyack, NY 10994

Figure 6



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Well Head Valve Settings
Clarkstown Landfill
West Nyack, NY 10994

Figure 7

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Localized Area of Low Methane Readings
Clarkstown Landfill
West Nyack, NY 10994

Figure 8

A

FS-3 Forms

FORM FS-3
INSPECTION CHECKLIST – MONTHLY TASKS
LANDFILL GAS SYSTEM

Item	Inspection Item	Check Box
Gas Extraction Wells, Visually inspect or improper operation during monthly well balancing. Check for:		
1	Settlement of the well, vault, or surrounding cover	NS
2	Leakage of air or gas either in or around the well	X
3	Liquids pooling in the wellhead vaults	X
4	Condensate accumulating in the flexible connection between well and pipe manifold	X
5	Stress and/or ripping of the liner boots due to landfill settlement	X
Gas Collection Piping, Visually inspect valve and valve vaults for damage or improper operation. Check for:		
6	Settlement of the vault, or surrounding cover	NS
7	Leakage of air or gas either in or around the vault	X
8	Liquids pooling in the vault	X
9	Improper slope as a result of settlement	X
10	Landfill surface above buried pipe manifold for any signs of differential settlement	X
11	Any possibility of line blockage or breakage	X
Knockout Tank and Surrounding Area – Visually Inspect and Note:		
12	Any settling or buoyant rising	X
Surface Collectors:		
13	Visually inspect collector areas for signs of excessive differential settlement	X
14	Investigate any possibility of blockage or breakage as a result of condensate accumulation and/or freezing	X
Aboveground Condensate Storage Tank		
15	Inspect anchor bolts for firmness and integrity	X
Enclosed Ground Flare		
16	Inspect and periodically clean out the flame arrestor	X

Notes:
1 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 1/30/2017 Inspector's Initials: MTP

FORM FS-3
INSPECTION CHECKLIST – MONTHLY TASKS
LANDFILL GAS SYSTEM

Item	Inspection Item	Check Box
Gas Extraction Wells, Visually inspect or improper operation during monthly well balancing. Check for:		
1	Settlement of the well, vault, or surrounding cover	NS
2	Leakage of air or gas either in or around the well	X
3	Liquids pooling in the wellhead vaults	X
4	Condensate accumulating in the flexible connection between well and pipe manifold	X
5	Stress and/or ripping of the liner boots due to landfill settlement	X
Gas Collection Piping, Visually inspect valve and valve vaults for damage or improper operation. Check for:		
6	Settlement of the vault, or surrounding cover	NS
7	Leakage of air or gas either in or around the vault	X
8	Liquids pooling in the vault	X
9	Improper slope as a result of settlement	X
10	Landfill surface above buried pipe manifold for any signs of differential settlement	X
11	Any possibility of line blockage or breakage	X
Knockout Tank and Surrounding Area – Visually Inspect and Note:		
12	Any settling or buoyant rising	X
Surface Collectors:		
13	Visually inspect collector areas for signs of excessive differential settlement	X
14	Investigate any possibility of blockage or breakage as a result of condensate accumulation and/or freezing	X
Aboveground Condensate Storage Tank		
15	Inspect anchor bolts for firmness and integrity	X
Enclosed Ground Flare		
16	Inspect and periodically clean out the flame arrestor	X

Notes:
1 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 2/28/2017 Inspector's Initials: MVP

FORM FS-3
INSPECTION CHECKLIST – MONTHLY TASKS
LANDFILL GAS SYSTEM

Item	Inspection Item	Check Box
Gas Extraction Wells, Visually inspect or improper operation during monthly well balancing. Check for:		
1	Settlement of the well, vault, or surrounding cover	NS
2	Leakage of air or gas either in or around the well	X
3	Liquids pooling in the wellhead vaults	X
4	Condensate accumulating in the flexible connection between well and pipe manifold	X
5	Stress and/or ripping of the liner boots due to landfill settlement	X
Gas Collection Piping, Visually inspect valve and valve vaults for damage or improper operation. Check for:		
6	Settlement of the vault, or surrounding cover	NS
7	Leakage of air or gas either in or around the vault	X
8	Liquids pooling in the vault	X
9	Improper slope as a result of settlement	X
10	Landfill surface above buried pipe manifold for any signs of differential settlement	X
11	Any possibility of line blockage or breakage	X
Knockout Tank and Surrounding Area – Visually Inspect and Note:		
12	Any settling or buoyant rising	X
Surface Collectors:		
13	Visually inspect collector areas for signs of excessive differential settlement	X
14	Investigate any possibility of blockage or breakage as a result of condensate accumulation and/or freezing	X
Aboveground Condensate Storage Tank		
15	Inspect anchor bolts for firmness and integrity	X
Enclosed Ground Flare		
16	Inspect and periodically clean out the flame arrestor	X

Notes:
1 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 3/9/2017 Inspector's Initials: MVP

FORM FS-3
INSPECTION CHECKLIST – MONTHLY TASKS
LANDFILL GAS SYSTEM

Item	Inspection Item	Check Box
Gas Extraction Wells, Visually inspect or improper operation during monthly well balancing. Check for:		
1	Settlement of the well, vault, or surrounding cover	NS
2	Leakage of air or gas either in or around the well	X
3	Liquids pooling in the wellhead vaults	X
4	Condensate accumulating in the flexible connection between well and pipe manifold	X
5	Stress and/or ripping of the liner boots due to landfill settlement	X
Gas Collection Piping, Visually inspect valve and valve vaults for damage or improper operation. Check for:		
6	Settlement of the vault, or surrounding cover	NS
7	Leakage of air or gas either in or around the vault	X
8	Liquids pooling in the vault	X
9	Improper slope as a result of settlement	X
10	Landfill surface above buried pipe manifold for any signs of differential settlement	X
11	Any possibility of line blockage or breakage	X
Knockout Tank and Surrounding Area – Visually Inspect and Note:		
12	Any settling or buoyant rising	X
Surface Collectors:		
13	Visually inspect collector areas for signs of excessive differential settlement	X
14	Investigate any possibility of blockage or breakage as a result of condensate accumulation and/or freezing	X
Aboveground Condensate Storage Tank		
15	Inspect anchor bolts for firmness and integrity	X
Enclosed Ground Flare		
16	Inspect and periodically clean out the flame arrestor	X

Notes:
1 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 4/14/2017 Inspector's Initials: MVP

FORM FS-3
INSPECTION CHECKLIST – MONTHLY TASKS
LANDFILL GAS SYSTEM

Item	Inspection Item	Check Box
Gas Extraction Wells, Visually inspect or improper operation during monthly well balancing. Check for:		
1	Settlement of the well, vault, or surrounding cover	NS
2	Leakage of air or gas either in or around the well	X
3	Liquids pooling in the wellhead vaults	X
4	Condensate accumulating in the flexible connection between well and pipe manifold	X
5	Stress and/or ripping of the liner boots due to landfill settlement	X
Gas Collection Piping, Visually inspect valve and valve vaults for damage or improper operation. Check for:		
6	Settlement of the vault, or surrounding cover	NS
7	Leakage of air or gas either in or around the vault	X
8	Liquids pooling in the vault	X
9	Improper slope as a result of settlement	X
10	Landfill surface above buried pipe manifold for any signs of differential settlement	X
11	Any possibility of line blockage or breakage	X
Knockout Tank and Surrounding Area – Visually Inspect and Note:		
12	Any settling or buoyant rising	X
Surface Collectors:		
13	Visually inspect collector areas for signs of excessive differential settlement	X
14	Investigate any possibility of blockage or breakage as a result of condensate accumulation and/or freezing	X
Aboveground Condensate Storage Tank		
15	Inspect anchor bolts for firmness and integrity	X
Enclosed Ground Flare		
16	Inspect and periodically clean out the flame arrestor	X

Notes:
1 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 5/5/2017 Inspector's Initials: MVP

FORM FS-3
INSPECTION CHECKLIST – MONTHLY TASKS
LANDFILL GAS SYSTEM

Item	Inspection Item	Check Box
Gas Extraction Wells, Visually inspect or improper operation during monthly well balancing. Check for:		
1	Settlement of the well, vault, or surrounding cover	NS
2	Leakage of air or gas either in or around the well	X
3	Liquids pooling in the wellhead vaults	X
4	Condensate accumulating in the flexible connection between well and pipe manifold	X
5	Stress and/or ripping of the liner boots due to landfill settlement	X
Gas Collection Piping, Visually inspect valve and valve vaults for damage or improper operation. Check for:		
6	Settlement of the vault, or surrounding cover	NS
7	Leakage of air or gas either in or around the vault	X
8	Liquids pooling in the vault	X
9	Improper slope as a result of settlement	X
10	Landfill surface above buried pipe manifold for any signs of differential settlement	X
11	Any possibility of line blockage or breakage	X
Knockout Tank and Surrounding Area – Visually Inspect and Note:		
12	Any settling or buoyant rising	X
Surface Collectors:		
13	Visually inspect collector areas for signs of excessive differential settlement	X
14	Investigate any possibility of blockage or breakage as a result of condensate accumulation and/or freezing	X
Aboveground Condensate Storage Tank		
15	Inspect anchor bolts for firmness and integrity	X
Enclosed Ground Flare		
16	Inspect and periodically clean out the flame arrestor	X

Notes:
1 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 6/22/2017 Inspector's Initials: MVP

FORM FS-3
INSPECTION CHECKLIST – MONTHLY TASKS
LANDFILL GAS SYSTEM

Item	Inspection Item	Check Box
Gas Extraction Wells, Visually inspect or improper operation during monthly well balancing. Check for:		
1	Settlement of the well, vault, or surrounding cover	NS
2	Leakage of air or gas either in or around the well	X
3	Liquids pooling in the wellhead vaults	X
4	Condensate accumulating in the flexible connection between well and pipe manifold	X
5	Stress and/or ripping of the liner boots due to landfill settlement	X
Gas Collection Piping, Visually inspect valve and valve vaults for damage or improper operation. Check for:		
6	Settlement of the vault, or surrounding cover	NS
7	Leakage of air or gas either in or around the vault	X
8	Liquids pooling in the vault	X
9	Improper slope as a result of settlement	X
10	Landfill surface above buried pipe manifold for any signs of differential settlement	X
11	Any possibility of line blockage or breakage	X
Knockout Tank and Surrounding Area – Visually Inspect and Note:		
12	Any settling or buoyant rising	X
Surface Collectors:		
13	Visually inspect collector areas for signs of excessive differential settlement	X
14	Investigate any possibility of blockage or breakage as a result of condensate accumulation and/or freezing	X
Aboveground Condensate Storage Tank		
15	Inspect anchor bolts for firmness and integrity	X
Enclosed Ground Flare		
16	Inspect and periodically clean out the flame arrestor	X

Notes:
1 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 7/27/2017 Inspector's Initials: MVP

FORM FS-3
INSPECTION CHECKLIST – MONTHLY TASKS
LANDFILL GAS SYSTEM

Item	Inspection Item	Check Box
Gas Extraction Wells, Visually inspect or improper operation during monthly well balancing. Check for:		
1	Settlement of the well, vault, or surrounding cover	NS
2	Leakage of air or gas either in or around the well	X
3	Liquids pooling in the wellhead vaults	X
4	Condensate accumulating in the flexible connection between well and pipe manifold	X
5	Stress and/or ripping of the liner boots due to landfill settlement	X
Gas Collection Piping, Visually inspect valve and valve vaults for damage or improper operation. Check for:		
6	Settlement of the vault, or surrounding cover	NS
7	Leakage of air or gas either in or around the vault	X
8	Liquids pooling in the vault	X
9	Improper slope as a result of settlement	X
10	Landfill surface above buried pipe manifold for any signs of differential settlement	X
11	Any possibility of line blockage or breakage	X
Knockout Tank and Surrounding Area – Visually Inspect and Note:		
12	Any settling or buoyant rising	X
Surface Collectors:		
13	Visually inspect collector areas for signs of excessive differential settlement	X
14	Investigate any possibility of blockage or breakage as a result of condensate accumulation and/or freezing	X
Aboveground Condensate Storage Tank		
15	Inspect anchor bolts for firmness and integrity	X
Enclosed Ground Flare		
16	Inspect and periodically clean out the flame arrestor	X

Notes:
1 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 8/25/2017 Inspector's Initials: MVP

FORM FS-3
INSPECTION CHECKLIST – MONTHLY TASKS
LANDFILL GAS SYSTEM

Item	Inspection Item	Check Box
Gas Extraction Wells, Visually inspect or improper operation during monthly well balancing. Check for:		
1	Settlement of the well, vault, or surrounding cover	NS
2	Leakage of air or gas either in or around the well	X
3	Liquids pooling in the wellhead vaults	X
4	Condensate accumulating in the flexible connection between well and pipe manifold	X
5	Stress and/or ripping of the liner boots due to landfill settlement	X
Gas Collection Piping, Visually inspect valve and valve vaults for damage or improper operation. Check for:		
6	Settlement of the vault, or surrounding cover	NS
7	Leakage of air or gas either in or around the vault	X
8	Liquids pooling in the vault	X
9	Improper slope as a result of settlement	X
10	Landfill surface above buried pipe manifold for any signs of differential settlement	X
11	Any possibility of line blockage or breakage	X
Knockout Tank and Surrounding Area – Visually Inspect and Note:		
12	Any settling or buoyant rising	X
Surface Collectors:		
13	Visually inspect collector areas for signs of excessive differential settlement	X
14	Investigate any possibility of blockage or breakage as a result of condensate accumulation and/or freezing	X
Aboveground Condensate Storage Tank		
15	Inspect anchor bolts for firmness and integrity	X
Enclosed Ground Flare		
16	Inspect and periodically clean out the flame arrestor	X

Notes:
1 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 9/29/2017 Inspector's Initials: MVP

FORM FS-3
INSPECTION CHECKLIST – MONTHLY TASKS
LANDFILL GAS SYSTEM

Item	Inspection Item	Check Box
Gas Extraction Wells, Visually inspect or improper operation during monthly well balancing. Check for:		
1	Settlement of the well, vault, or surrounding cover	NS
2	Leakage of air or gas either in or around the well	X
3	Liquids pooling in the wellhead vaults	X
4	Condensate accumulating in the flexible connection between well and pipe manifold	X
5	Stress and/or ripping of the liner boots due to landfill settlement	X
Gas Collection Piping, Visually inspect valve and valve vaults for damage or improper operation. Check for:		
6	Settlement of the vault, or surrounding cover	NS
7	Leakage of air or gas either in or around the vault	X
8	Liquids pooling in the vault	X
9	Improper slope as a result of settlement	X
10	Landfill surface above buried pipe manifold for any signs of differential settlement	X
11	Any possibility of line blockage or breakage	X
Knockout Tank and Surrounding Area – Visually Inspect and Note:		
12	Any settling or buoyant rising	X
Surface Collectors:		
13	Visually inspect collector areas for signs of excessive differential settlement	X
14	Investigate any possibility of blockage or breakage as a result of condensate accumulation and/or freezing	X
Aboveground Condensate Storage Tank		
15	Inspect anchor bolts for firmness and integrity	X
Enclosed Ground Flare		
16	Inspect and periodically clean out the flame arrestor	X

Notes:
1 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 10/27/2017 Inspector's Initials: MVP

FORM FS-3
INSPECTION CHECKLIST – MONTHLY TASKS
LANDFILL GAS SYSTEM

Item	Inspection Item	Check Box
Gas Extraction Wells, Visually inspect or improper operation during monthly well balancing. Check for:		
1	Settlement of the well, vault, or surrounding cover	NS
2	Leakage of air or gas either in or around the well	X
3	Liquids pooling in the wellhead vaults	X
4	Condensate accumulating in the flexible connection between well and pipe manifold	X
5	Stress and/or ripping of the liner boots due to landfill settlement	X
Gas Collection Piping, Visually inspect valve and valve vaults for damage or improper operation. Check for:		
6	Settlement of the vault, or surrounding cover	NS
7	Leakage of air or gas either in or around the vault	X
8	Liquids pooling in the vault	X
9	Improper slope as a result of settlement	X
10	Landfill surface above buried pipe manifold for any signs of differential settlement	X
11	Any possibility of line blockage or breakage	X
Knockout Tank and Surrounding Area – Visually Inspect and Note:		
12	Any settling or buoyant rising	X
Surface Collectors:		
13	Visually inspect collector areas for signs of excessive differential settlement	X
14	Investigate any possibility of blockage or breakage as a result of condensate accumulation and/or freezing	X
Aboveground Condensate Storage Tank		
15	Inspect anchor bolts for firmness and integrity	X
Enclosed Ground Flare		
16	Inspect and periodically clean out the flame arrestor	X

Notes:
1 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 11/17/2017 Inspector's Initials: MVP

FORM FS-3
INSPECTION CHECKLIST – MONTHLY TASKS
LANDFILL GAS SYSTEM

Item	Inspection Item	Check Box
Gas Extraction Wells, Visually inspect or improper operation during monthly well balancing. Check for:		
1	Settlement of the well, vault, or surrounding cover	NS
2	Leakage of air or gas either in or around the well	X
3	Liquids pooling in the wellhead vaults	X
4	Condensate accumulating in the flexible connection between well and pipe manifold	X
5	Stress and/or ripping of the liner boots due to landfill settlement	X
Gas Collection Piping, Visually inspect valve and valve vaults for damage or improper operation. Check for:		
6	Settlement of the vault, or surrounding cover	NS
7	Leakage of air or gas either in or around the vault	X
8	Liquids pooling in the vault	X
9	Improper slope as a result of settlement	X
10	Landfill surface above buried pipe manifold for any signs of differential settlement	X
11	Any possibility of line blockage or breakage	X
Knockout Tank and Surrounding Area – Visually Inspect and Note:		
12	Any settling or buoyant rising	X
Surface Collectors:		
13	Visually inspect collector areas for signs of excessive differential settlement	X
14	Investigate any possibility of blockage or breakage as a result of condensate accumulation and/or freezing	X
Aboveground Condensate Storage Tank		
15	Inspect anchor bolts for firmness and integrity	X
Enclosed Ground Flare		
16	Inspect and periodically clean out the flame arrestor	X

Notes:
1 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 12/22/2017 Inspector's Initials: MVP

B

DP-1Forms

FORM DP-1
DESCRIPTION OF DEFICIENCIES AND PROBLEMS
CLARKSTOWN LANDFILL

REFERENCE INSPECTION FORM NO: 1 **RFW NOTIFICATION REFERRAL NO.:_____**

LOCATION: GE

PROBLEM/DEFICIENCY IDENTIFICATION:
Many of the vaults are experiencing the effects of settling.
ACTION TAKEN:
Some vault lids remain open because the pipe is at a greater elevation then the vault. Open vault door are causing breakdown of PVC sampling ports, and in some cases the flexible hose. Damaged ports have been sealed temporarily with duct tape.
RECOMMENDATIONS:
Replace with new above grade well heads (eliminate vaults).

Date: 1/31/2017 Inspector's Initials: MTP

FORM DP-1
DESCRIPTION OF DEFICIENCIES AND PROBLEMS
CLARKSTOWN LANDFILL

REFERENCE INSPECTION FORM NO: 1 **RFW NOTIFICATION REFERRAL NO.:_____**

LOCATION: GE

PROBLEM/DEFICIENCY IDENTIFICATION:
Many of the vaults are experiencing the effects of settling.
ACTION TAKEN:
Some vault lids remain open because the pipe is at a greater elevation then the vault. Open vault door are causing breakdown of PVC sampling ports, and in some cases the flexible hose. Damaged ports have been sealed temporarily with duct tape.
RECOMMENDATIONS:
Replace with new above grade well heads (eliminate vaults).

Date: 2/28/2017 Inspector's Initials: MVP

FORM DP-1
DESCRIPTION OF DEFICIENCIES AND PROBLEMS
CLARKSTOWN LANDFILL

REFERENCE INSPECTION FORM NO: 1 **RFW NOTIFICATION REFERRAL NO.:_____**

LOCATION: GE

PROBLEM/DEFICIENCY IDENTIFICATION:
Many of the vaults are experiencing the effects of settling.
ACTION TAKEN:
Some vault lids remain open because the pipe is at a greater elevation then the vault. Open vault door are causing breakdown of PVC sampling ports, and in some cases the flexible hose. Damaged ports have been sealed temporarily with duct tape.
RECOMMENDATIONS:
Replace with new above grade well heads (eliminate vaults).

Date: 2/28/2017 Inspector's Initials: MVP

FORM DP-1
DESCRIPTION OF DEFICIENCIES AND PROBLEMS
CLARKSTOWN LANDFILL

REFERENCE INSPECTION FORM NO: 1 **RFW NOTIFICATION REFERRAL NO.:_____**

LOCATION: GE

PROBLEM/DEFICIENCY IDENTIFICATION:
Many of the vaults are experiencing the effects of settling.
ACTION TAKEN:
Some vault lids remain open because the pipe is at a greater elevation then the vault. Open vault door are causing breakdown of PVC sampling ports, and in some cases the flexible hose. Damaged ports have been sealed temporarily with duct tape.
RECOMMENDATIONS:
Replace with new above grade well heads (eliminate vaults).

Date: 3/09/20167 Inspector's Initials: MVP

FORM DP-2
DESCRIPTION OF DEFICIENCIES AND PROBLEMS
CLARKSTOWN LANDFILL

REFERENCE INSPECTION FORM NO: 2 **RFW NOTIFICATION REFERRAL NO.:_____**

LOCATION: Various vaults across the site (Valve F, Valve H, Valve J, drip leg vault by GE-34, and GE-8,)

PROBLEM/DEFICIENCY IDENTIFICATION:
Vault door is damaged
ACTION TAKEN:
None
RECOMMENDATIONS:
Replace door (reuse from vaults that are replaced).

Date: 4/14/2017 Inspector's Initials: MTP

FORM DP-1
DESCRIPTION OF DEFICIENCIES AND PROBLEMS
CLARKSTOWN LANDFILL

REFERENCE INSPECTION FORM NO: 1 **RFW NOTIFICATION REFERRAL NO.:_____**

LOCATION: GE

PROBLEM/DEFICIENCY IDENTIFICATION:
Many of the vaults are experiencing the effects of settling.
ACTION TAKEN:
Some vault lids remain open because the pipe is at a greater elevation then the vault. Open vault door are causing breakdown of PVC sampling ports, and in some cases the flexible hose. Damaged ports have been sealed temporarily with duct tape.
RECOMMENDATIONS:
Replace with new above grade well heads (eliminate vaults).

Date: 5/5/2017 Inspector's Initials: MVP

FORM DP-1
DESCRIPTION OF DEFICIENCIES AND PROBLEMS
CLARKSTOWN LANDFILL

REFERENCE INSPECTION FORM NO: 1 **RFW NOTIFICATION REFERRAL NO.:_____**

LOCATION: GE

PROBLEM/DEFICIENCY IDENTIFICATION:
Many of the vaults are experiencing the effects of settling.
ACTION TAKEN:
Some vault lids remain open because the pipe is at a greater elevation then the vault. Open vault door are causing breakdown of PVC sampling ports, and in some cases the flexible hose. Damaged ports have been sealed temporarily with duct tape.
RECOMMENDATIONS:
Replace with new above grade well heads (eliminate vaults).

Date: 6/22/2017 Inspector's Initials: MVP

FORM DP-1
DESCRIPTION OF DEFICIENCIES AND PROBLEMS
CLARKSTOWN LANDFILL

REFERENCE INSPECTION FORM NO: 1 **RFW NOTIFICATION REFERRAL NO.:_____**

LOCATION: GE

PROBLEM/DEFICIENCY IDENTIFICATION:
Many of the vaults are experiencing the effects of settling.
ACTION TAKEN:
Some vault lids remain open because the pipe is at a greater elevation then the vault. Open vault door are causing breakdown of PVC sampling ports, and in some cases the flexible hose. Damaged ports have been sealed temporarily with duct tape.
RECOMMENDATIONS:
Replace with new above grade well heads (eliminate vaults).

Date: 7/27/2017 Inspector's Initials: MVP

FORM DP-1
DESCRIPTION OF DEFICIENCIES AND PROBLEMS
CLARKSTOWN LANDFILL

REFERENCE INSPECTION FORM NO: 1 **RFW NOTIFICATION REFERRAL NO.:_____**

LOCATION: GE

PROBLEM/DEFICIENCY IDENTIFICATION:
Many of the vaults are experiencing the effects of settling.
ACTION TAKEN:
Some vault lids remain open because the pipe is at a greater elevation then the vault. Open vault door are causing breakdown of PVC sampling ports, and in some cases the flexible hose. Damaged ports have been sealed temporarily with duct tape.
RECOMMENDATIONS:
Replace with new above grade well heads (eliminate vaults).

Date: 8/25/2017 Inspector's Initials: MVP

FORM DP-1
DESCRIPTION OF DEFICIENCIES AND PROBLEMS
CLARKSTOWN LANDFILL

REFERENCE INSPECTION FORM NO: 1 **RFW NOTIFICATION REFERRAL NO.:_____**

LOCATION: GE

PROBLEM/DEFICIENCY IDENTIFICATION:
Many of the vaults are experiencing the effects of settling.
ACTION TAKEN:
Some vault lids remain open because the pipe is at a greater elevation then the vault. Open vault door are causing breakdown of PVC sampling ports, and in some cases the flexible hose. Damaged ports have been sealed temporarily with duct tape.
RECOMMENDATIONS:
Replace with new above grade well heads (eliminate vaults).

Date: 9/29/2017 Inspector's Initials: MVP

FORM DP-1
DESCRIPTION OF DEFICIENCIES AND PROBLEMS
CLARKSTOWN LANDFILL

REFERENCE INSPECTION FORM NO: 1 **RFW NOTIFICATION REFERRAL NO.:_____**

LOCATION: GE

PROBLEM/DEFICIENCY IDENTIFICATION:
Many of the vaults are experiencing the effects of settling.
ACTION TAKEN:
Some vault lids remain open because the pipe is at a greater elevation then the vault. Open vault door are causing breakdown of PVC sampling ports, and in some cases the flexible hose. Damaged ports have been sealed temporarily with duct tape.
RECOMMENDATIONS:
Replace with new above grade well heads (eliminate vaults).

Date: 10/27/2017 Inspector's Initials: MVP

FORM DP-1
DESCRIPTION OF DEFICIENCIES AND PROBLEMS
CLARKSTOWN LANDFILL

REFERENCE INSPECTION FORM NO: 1 **RFW NOTIFICATION REFERRAL NO.:_____**

LOCATION: GE

PROBLEM/DEFICIENCY IDENTIFICATION:
Many of the vaults are experiencing the effects of settling.
ACTION TAKEN:
Some vault lids remain open because the pipe is at a greater elevation then the vault. Open vault door are causing breakdown of PVC sampling ports, and in some cases the flexible hose. Damaged ports have been sealed temporarily with duct tape.
RECOMMENDATIONS:
Replace with new above grade well heads (eliminate vaults).

Date: 11/17/2017 Inspector's Initials: MVP

FORM DP-1
DESCRIPTION OF DEFICIENCIES AND PROBLEMS
CLARKSTOWN LANDFILL

REFERENCE INSPECTION FORM NO: 1 **RFW NOTIFICATION REFERRAL NO.:_____**

LOCATION: GE

PROBLEM/DEFICIENCY IDENTIFICATION:
Many of the vaults are experiencing the effects of settling.
ACTION TAKEN:
Some vault lids remain open because the pipe is at a greater elevation then the vault. Open vault door are causing breakdown of PVC sampling ports, and in some cases the flexible hose. Damaged ports have been sealed temporarily with duct tape.
RECOMMENDATIONS:
Replace with new above grade well heads (eliminate vaults).

Date: 12/22/2017 Inspector's Initials: MVP

C

Well Balancing Forms

Extraction Well Data Summary

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
B											
	1										
		1/31/2017	19.7	10.1	13.2	57.1	-18.3	0.007	28	5% Open	
		2/24/2017	29.3	10.1	11.9	49.6	-18.6	0.166	66	5% Open	
		3/9/2017	33.8	13.4	9.9	32	-20.1	0.041	60	5% Open	
		4/14/2017	64	21.5	0.6	15.5	-13.6	0.134	60	5% Open	
		5/5/2017	48.7	17.7	0	29.3	-11.5	0.029	65	5% Open	
		6/22/2017	52.7	21.4	0	25.8	-12.7	0.032	78	5% Open	
		7/27/2017	34.6	28.2	6.2	38.7	-11.2	0.041	88	5% Open	
		8/25/2017	45.8	16.5	0.1	24.6	-16.5	0.028	74	5% Open	
		9/29/2017	27.3	11.3	11.5	45.8	-18.2	0.069	71	5% Open	
		10/27/2017	28.5	12.6	10.7	46.4	-16.3	0.071	72	5% Open	
		11/17/2017	26	14.5	8.9	47.2	-15.9	0.189	62	5% Open	
		12/22/2017	22.7	11.4	9.6	46.2	-14.1	0.139	38	5% Open	
	2										
		1/31/2017	49.6	27.7	0.2	22.6	-2	0.064	43	5% Open	
		2/24/2017	48.1	26.7	1.8	23.9	-2.7	0.024	66	5% Open	
		3/9/2017	42.3	25	1.2	31.7	-3	0.018	56	5% Open	
		4/14/2017	65.4	25.4	0.1	9	-3.5	0.036	51	5% Open	
		5/5/2017	57.3	32.6	0.2	5.8	-4.1	0.058	70	5% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		6/22/2017	61.1	30.8	0	4.7	-7.2	0.072	82	5% Open	
		7/27/2017	52.4	27.6	0	18.9	-9.2	0.062	88	5% Open	
		8/25/2017	62.6	27.9	0.3	5.5	-6.8	0.061	77	5% Open	
		9/29/2017	46.6	26.5	1.4	26	-3	0.045	70	5% Open	
		10/27/2017	42.6	21.6	1.3	35.7	-12.5	0.125	71	5% Open	
		11/17/2017	40.6	28.7	4.8	41.5	-11.6	0.131	59	5% Open	
		12/22/2017	45.6	24	3.1	24.9	-15.1	0.173	36	5% Open	
	3										
		1/31/2017	52.8	21.4	4	21.9	-11.7	0.027	43	100% Open	
		2/24/2017	63.9	24	1.1	11.5	-17.4	0.197	66	100% Open	
		3/9/2017	42.4	24.7	1.5	10.7	-17.1	0.07	59	100% Open	
		4/14/2017	71.6	21.3	0.2	6.1	-14.6	0.314	58	100% Open	
		5/5/2017	66.3	21.6	0	12.5	-11.3	0.117	71	100% Open	
		6/22/2017	59.8	27.3	0.1	14.3	-11.8	0.172	85	100% Open	
		7/27/2017	47	21	0	31.3	-10.6	0.114	90	100% Open	
		8/25/2017	51.6	21.6	0.4	18.1	-10.4	0.208	71	100% Open	
		9/29/2017	52.1	22.9	2.1	14.8	-16.6	0.114	70	100% Open	
		10/27/2017	48.7	21.7	3.4	15.4	-14.3	0.098	74	100% Open	
		11/17/2017	52.7	18.5	4.2	16.4	-11.3	0.136	62	100% Open	
		12/22/2017	50.9	22.6	0.9	15.1	-14.7	0.113	38	100% Open	
	4										
		1/31/2017								100% Open	All Ports Frozen
		2/24/2017	53.1	19.9	3.5	23.1	-18	0.036	64	100% Open	
		3/9/2017	44.4	19	2.3	39.3	-13.6	0.097	53	100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		4/14/2017	62.5	18.7	3.5	15.4	-9.2	0.156	58	100% Open	
		5/5/2017	68.9	21.7	0	7.9	-6.6	0.276	70	100% Open	
		6/22/2017	69.2	22.6	0	8.3	-5.2	0.315	83	100% Open	
		7/27/2017	51.5	12.8	0	35.9	-4.2	0.215	90	100% Open	
		8/25/2017	61.5	18.7	0	9.2	-6.1	0.189	73	100% Open	
		9/29/2017	47.6	20	2.5	31.1	-14.7	0.118	71	100% Open	
		10/27/2017	51	18.6	0	35.8	-15.2	0.093	77	100% Open	
		11/17/2017	49.6	17.6	1.4	37.8	-12.6	0.176	63	100% Open	
		12/22/2017	45.2	15.1	2.8	30.5	-14.2	0.091	39	100% Open	
	5										
		1/31/2017	44.7	24.4	2.4	28	-11.7	0.004	54	100% Open	
		2/24/2017	32.7	26.8	0.4	20.4	-6.8	0.315	75	100% Open	
		3/9/2017	50.5	25.4	1	23.3	-16.6	0.195	73	100% Open	
		4/14/2017	68.2	26.4	0.1	4.8	-12.8	0.218	53	100% Open	
		5/5/2017	47.6	24.7	0	22.6	-14.3	0.155	70	100% Open	
		6/22/2017	45.8	27.3	0	26.1	-12.8	0.199	82	100% Open	
		7/27/2017	41	22.6	0.1	36.1	-9.4	0.113	90	100% Open	
		8/25/2017	44.6	21.5	0.1	30.5	-11.4	0.175	71	100% Open	
		9/29/2017	41.5	25.1	1.5	23.6	-12	0.198	75	100% Open	
		10/27/2017	39.1	24.2	1	26.7	-15.1	0.113	71	100% Open	
		11/17/2017	42.5	25.7	0.9	27.6	-12.1	0.158	62	100% Open	
		12/22/2017	44.8	21.3	2.4	22.5	-14.1	0.083	40	100% Open	
	6										
		1/31/2017	57.7	26.3	2.1	14	-13.1	0.006	35	100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		2/24/2017	69.1	28.2	0.9	2.2	-18	0.036	62	100% Open	
		3/9/2017	61.9	26.8	4.4	4.3	-16.3	0.211	56	100% Open	
		4/14/2017	58.7	30.1	0.2	6.1		0.051	55	100% Open	
		5/5/2017	55.2	25.5	0	18.6	-14.2	0.21	72	100% Open	
		6/22/2017	59.2	21.8	0	17.6	-11.9	0.175	83	100% Open	
		7/27/2017	51.7	12.6	0	16.5	-8.6	0.114	88	100% Open	
		8/25/2017	55.2	20.5	0.1	18.6	-10.5	0.214	70	100% Open	
		9/29/2017	61.3	27.4	2.3	7	-16	0.076	70	100% Open	
		10/27/2017	58.4	23.2	0	18.9		0.157	72	100% Open	
		11/17/2017	62.1	24	0	14.8	-12.6	0.231	61	100% Open	
		12/22/2017	52.3	24.6	1.8	5.9	-14.2	0.113	37	100% Open	
	7										
		1/31/2017	43.1	23.8	0.7	35.5	-12.8	0.054		100% Open	
		2/24/2017	50.9	19.4	1.2	28.8	-17.4	0.194	63	100% Open	
		3/9/2017	44.8	20.2	1.8	33.1	-15.9	0.198	56	100% Open	
		4/14/2017	60.2	19.4	0.1	17.7		0.211	54	100% Open	
		5/5/2017	60.1	18.7	0.1	20.6	-14.3	0.156	68	100% Open	
		6/22/2017	58.3	21.6	0	18.4	-11.2	0.133	84	100% Open	
		7/27/2017	52.3	21.6	0	19.5	-10.7	0.115	88	100% Open	
		8/25/2017	50	18.7	0.1	17.6	-14.6	0.218	72	100% Open	
		9/29/2017	47	21.4	1.1	32.8	-15.3	0.201	71	100% Open	
		10/27/2017	44.3	26.8	2.7	31.5	-14.6	0.189	73	100% Open	
		11/17/2017	42.6	21.7	1.9	32.6	-12.6	0.164	62	100% Open	
		12/22/2017	44.9	21.3	1.4	30.5	-14.1	0.125	36	100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
	8										
		1/31/2017	34.2	19.6	2.4	43.8	-0.7	0.035		100% Open	
		2/24/2017	37.4	19.5	0.7	42.2	-16.9	0.048	59	100% Open	
		3/9/2017	33.5	18.5	3.2	48.3	-15	0.076	53	100% Open	
		4/14/2017	45.1	18.5	0	33.7	-15	0.048	55	100% Open	
		5/5/2017	55.3	17.7	0.1	26.5	-14.3	0.075	71	100% Open	
		6/22/2017	56.4	16.2	0	25.3	-11.4	0.067	81	100% Open	
		7/27/2017	44.5	22.9	0	33.8	-9.5	0.045	90	100% Open	
		8/25/2017	50.3	15.3	0	24.6	-12.5	0.051	70	100% Open	
		9/29/2017	34.5	19	2.4	44.8	-10.4	0.067	73	100% Open	
		10/27/2017	41.4	17.6	1.2	34.6	-9.7	0.111	72	100% Open	
		11/17/2017	39.9	15.2	1.1	31.7	-11.2	0.181	60	100% Open	
		12/22/2017	32.6	16.3	0.9	38.7	-14	0.084	39	100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
C											
	9										
		1/31/2017	0.1	0.3	21.2	78.4	-1.1	0.011	31	0% Open	
		2/24/2017	1.2	0.7	18.6	79.1	-1	0.029	70	5% Open	
		3/9/2017	1.3	0.6	15.1	81.4	-2.1	0.015	57	5% Open	
		4/14/2017	0.4	0.1	17.9	81.4	-0.9	0.011	58	5% Open	
		5/5/2017	0.6	0.6	16.9	83.1	-2.1	0.003	72	5% Open	
		6/22/2017	0.2	0.4	17.5	85.1	-3.1	0.001	86	5% Open	
		7/27/2017	0.1	0.2	18.6	88.1	-1.1	0.001	86	5% Open	
		8/25/2017	0.4	0.2	16.4	86.2	-2.8	0.052	71	5% Open	
		9/29/2017	0.8	0.4	18.2	79.1	-2	0.023	73	5% Open	
		10/27/2017	1.1	2.4	17.5	78.2	-1.6	0.009	77	0% Open	
		11/17/2017	0.5	3.2	14.5	81.5	-0.9	0.006	58	0% Open	
		12/22/2017	0.9	1.3	17.5	81	-0.9	0.038	36	0% Open	
	10										
		1/31/2017	51.6	25.8	3.2	19.2	-1.3		40	20% open	
		2/24/2017	53	23.3	2.8	21	-1.6			20% open	
		3/9/2017	41.1	24.1	1.4	34.4	-3.3			20% open	
		4/14/2017	68.3	26.3	0	3.1	-0.41			20% open	
		5/5/2017	66.2	25.4	0	8.6	-9.5			20% open	
		6/22/2017	60.9	28.2	0.8	16.8	-5.6			20% open	
		7/27/2017	44.1	17.8	5.8	25.8	-3.2			20% open	
		8/25/2017	55.2	19.5	0.2	17.5	-4.4			20% open	
		9/29/2017	48.6	24.2	2.4	24.3	-2.1			20% open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		10/27/2017	45.7	23.6	1.9	25.7	-3.1			20% open	
		11/17/2017	44.6	21.5	0.7	22.6	-2.5			20% open	
		12/22/2017	46.2	24.9	3.3	24.7	-1.1			20% open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
D											
	11										
		1/31/2017	41.8	22.3	1.2	34.7	-1.2	0.01	42	10% Open	
		2/24/2017	35	24.2	1.2	42.8	-2	0.098	66	10% Open	
		3/9/2017	26.2	18.1	8.3	47.3	0.9	0.041	53	10% Open	
		4/14/2017	50.2	20.6	0	27.7	-3.1	0.135	59	10% Open	
		5/5/2017	49.9	22.8	0	27.8	-11.4	0.041	70	10% Open	
		6/22/2017	51	26.2	0	21.5	-10.6	0.032	82	10% Open	
		7/27/2017	45.2	24.7	1.2	23.8	-7.5	0.024	88	10% Open	
		8/25/2017	48.7	24.3	1.5	22.6	-11.5	0.073	73	10% Open	
		9/29/2017	34.2	21.3	3.5	41.4	-0.9	0.049	70	10% Open	
		10/27/2017	35.5	18.2	1.1	42.6	-0.5	0.049	71	10% Open	
		11/17/2017	34.8	17.7	0.9	35.7	-0.9	0.024	63	10% Open	
		12/22/2017	32.5	26.7	1.8	40	-1.1	0.069	39	10% Open	
	12										
		1/31/2017	60.5	25.9	2.3	11.3	-15.7	0.007	32	0% Open	
		2/24/2017	54.4	26.6	0.7	6.9	-15	0.053	64	40% Open	
		3/9/2017	54.7	25.3	1.2	17.8	-14.6	0.142	54	40% Open	
		4/14/2017	69.4	25.4	0	3.9	-12.7	0.062	58	40% Open	
		5/5/2017	71.1	25.4	0	4.6	-1	0.168	71	40% Open	
		6/22/2017	71.8	20.1	0.3	7.8	-0.9	0.174	84	40% Open	
		7/27/2017	65	12.5	3.4	17.5	-1.3	0.192	89	40% Open	
		8/25/2017	66.4	12.8	0.6	8.9	-1.6	0.153	71	40% Open	
		9/29/2017	55.2	25.6	1.3	11.5	-15.5	0.073	72	40% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		10/27/2017	51.6	26.4	2.4	12.7	-13.8	0.115	73	40% Open	
		11/17/2017	52	21.9	1.1	13	-11.6	0.131	60	40% Open	
		12/22/2017	45.2	17.9	11.6	30.5	-12.7	0.076	38	40% Open	
	13										
		1/31/2017	39.4	23.7	1.6	35.4	-5.4	0.072	50	100% Open	
		2/24/2017	45.6	17.6	5.7	30.6	-14.6	0.034	68	100% Open	
		3/9/2017	38.3	21.1	1.9	39			39	100% Open	
		4/14/2017	51.3	21.3	0	28.1	-4.8	0.071	57	100% Open	
		5/5/2017	40.7	17.7	0.5	27.7	-5.1		74	100% Open	
		6/22/2017	39.9	18.2	0.1	26.9	-3.2	0.117	86	100% Open	
		7/27/2017	38.5	16.1	0.1	32	-4.1	0.231	90	100% Open	
		8/25/2017	42.5	16.5	0.2	38.6	-2.1	0.098	72	100% Open	
		9/29/2017	41.2	20.7	3.2	34.6	-10.7	0.049	71	100% Open	
		10/27/2017	41.5	18.7	2.2	33.6	-8.7	0.062	74	100% Open	
		11/17/2017	40.6	16.4	1.8	30.5	-7.7	0.052	61	100% Open	
		12/22/2017	42.5	21.6	2.6	31.8	-8.9	0.065	37	100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
E											
	15										
		1/31/2017	47.3	21.5	1.8	29.5	-15.5			85% Open	
		2/24/2017	44.7	22.1	3.3	29.9	-14.2			85% Open	
		3/9/2017	24.7	20.2	0.7	54.7	-14.4			85% Open	
		4/14/2017	61.9	25.7	0	15.8	-13.6			85% Open	
		5/5/2017	57.3	15.5	0.3	28	-0.9			85% Open	
		6/22/2017	52.7	16.2	0.1	32.5	-1.1			85% Open	
		7/27/2017	48.3	21.5	3.4	29.6	-2.4			85% Open	
		8/25/2017	53.7	15.7	0	31.6	-2.5			85% Open	
		9/29/2017	37.5	21.1	1.8	38	-15.3			85% Open	
		10/27/2017	41.1	20.5	0.9	36.4	-14.2			85% Open	
		11/17/2017	39.3	18.7	1.3	34.6	-11.5			85% Open	
		12/22/2017	14.9	22.7	41.8	29.9	-13.8			85% Open	
	16										
		1/31/2017	51.8	19.9	1.7	26.7	-18.5	0.029	49	100% Open	
		2/24/2017	26	4.3	14.3	32.9	-15.4			100% Open	
		3/9/2017	39.7	16.9	5	39.3	-16.9	0.02	60	100% Open	
		4/14/2017	58.7	16.2	0	21.6			59	100% Open	
		5/5/2017	54.5	16.7	0.2	28.7	-12.5	0.005	73	100% Open	
		6/22/2017	58.7	17.4	0	32.7	-11.2	0.268	82	100% Open	
		7/27/2017	52.1	22.5	0	33.8	-9.3	0.211	90	100% Open	
		8/25/2017	52.4	16.8	0.2	36.8	-12.5	0.187	73	100% Open	
		9/29/2017	40	13.5	6.5	32.5	-14.5	0.034	70	100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		10/27/2017	39.5	12.5	5.5	31.4	-12.5	0.045	75	100% Open	
		11/17/2017	41	11.6	4.7	32.5	-10.9	0.105	64	100% Open	
		12/22/2017	41.4	22.6	1.4	41.6	-13.9	0.83	37	100% Open	
	17										
		1/31/2017	71.2	14	1.7	13.2	-12.1			100 % Open	
		2/24/2017	77	15.4	1.9	7.1	-11.5			100 % Open	
		3/9/2017	30.1	6.6	10.3	53.8	-16.7			100 % Open	
		4/14/2017	66.2	8.7	2.1	18.9	-13.6			100 % Open	
		5/5/2017	41.7	5.2	8.5	46.1	-1.1			100 % Open	
		6/22/2017	45.1	3.6	9.3	47.1	-1.8			100 % Open	
		7/27/2017	41.5	4.5	11.6	52.5	-0.9			100 % Open	
		8/25/2017	40.5	4.8	12.4	40.6	-1.1			100 % Open	
		9/29/2017	59.1	12.1	4.4	24.7	-12.8			100 % Open	
		10/27/2017	55.1	13.5	3.8	25.3	-11			100 % Open	
		11/17/2017	52.5	12.6	2.6	24	-10.9			100 % Open	
		12/22/2017	59.7	11.3	7.5	16.3	-13.7			100 % Open	
	18										
		1/31/2017	55.2	15	4.7	25.1	-18.8			100% Open	
		2/24/2017	37.7	11.8	3.2	39.4	-14.9			100% Open	
		3/9/2017	36.6	13.2	3.2	49.7	-17.6			100% Open	
		4/14/2017	73.2	13.3	0.1	11.5	-15.1			100% Open	
		5/5/2017	68	11.8	0.2	21.5	-1.1			100% Open	
		6/22/2017	68	11.8	0.2	21.5	-1.7			100% Open	
		7/27/2017	61.4	11.7	0.1	31.6	-1.4			100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		8/25/2017	58.2	13.6	0.5	20.5	-2.1			100% Open	
		9/29/2017	43.1	13.2	3.8	38.5	-16.2			100% Open	
		10/27/2017	46.4	12.6	2.8	31.5	-14.6			100% Open	
		11/17/2017	44.1	14.7	3.5	29.9	-11.8			100% Open	
		12/22/2017	45.2	13.7	2.9	37.9	-13.6			100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
F											
	19										
		1/31/2017	53.5	23.8	0.3	22.6	-9.1			50% Open	
		2/24/2017	50	23.3	1.1	25.9	-8.6			50% Open	
		3/9/2017	39.2	20.3	0.7	39.2	-10.7			50% Open	
		4/14/2017	64.2	21.6	0	13.6	-6.8			50% Open	
		5/5/2017	50.7	15.4	0	35.8	-6.8			50% Open	
		6/22/2017	58.2	13.8	0	27.6	-6.8			50% Open	
		7/27/2017	51.5	14.3	0.5	29.4	-5.4			50% Open	
		8/25/2017	55.2	11.5	0.2	25.6	-5.2			50% Open	
		9/29/2017	46.5	22.3	0.6	39.7	-9.3			50% Open	
		10/27/2017	44.7	21.5	0.4	35.6	-7.8			50% Open	
		11/17/2017	41.7	21.5	0.6	34.7	-11.8			50% Open	
		12/22/2017	39.9	19.4	3.6	33.6	-12.7			50% Open	
	20										
		1/31/2017	40.4	27.3	1.4	31	-9.2			50% Open	
		2/24/2017	38.7	27.2	0.4	33.3	-8.7			50% Open	
		3/9/2017	24.7	26.8	0.6	37.8	-10.9			50% Open	
		4/14/2017	48.7	23.3	0	21.8	-6.6			50% Open	
		5/5/2017	43.6	17.8	2.1	36.8	-6.7			50% Open	
		6/22/2017	41.7	18.5	3.6	41.1	-7.1			50% Open	
		7/27/2017	46.2	17.5	2.6	35.2	-6.3			50% Open	
		8/25/2017	39.5	17.6	2	38.6	-6.2			50% Open	
		9/29/2017	35	26.8	0.7	34.1	-9.5			50% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		10/27/2017	33.4	24.6	0.6	32.6	-8.1			50% Open	
		11/17/2017	32.6	21.4	1	28.6	-10.4			50% Open	
		12/22/2017	33.4	21.7	4.9	39.6	-10.5			50% Open	
	21										
		1/31/2017	73.4	17.1	1.1	8.4	-10.8			100% Open	
		2/24/2017	74	15.9	0.9	8.9	-10.7			100% Open	
		3/9/2017	63	15.8	1.8	18.6	-11.3			100% Open	
		4/14/2017	76.2	16.6	0	5.9	-7.5			100% Open	
		5/5/2017	70	19	0	8.8	-6.1			100% Open	
		6/22/2017	71.5	16.2	0	12.5	-7.1			100% Open	
		7/27/2017	66.5	14.2	0.3	19.8	-5.5			100% Open	
		8/25/2017	66.4	12.8	0.2	17.6	-6.2			100% Open	
		9/29/2017	69.8	16.1	1.1	12.4	-9.8			100% Open	
		10/27/2017	65.1	14.6	0.7	9.8	-10.5			100% Open	
		11/17/2017	71.5	8.9	0	18.5	-8.8			100% Open	
		12/22/2017	45.7	11.4	5.5	34.7	-0.5			100% Open	
	22										
		1/31/2017	16	24.8	0.6	58.6	-1.2	0.104	48	0% Open	
		2/24/2017	15.3	22.3	1.1	61.5	-0.5	0.02	60	0% Open	
		3/9/2017	10.7	23.2	0.4	65.9	-0.5	0.023	59	10% Open	
		4/14/2017	0.7	0.1	16.7	81.3	-0.5	0.048	60	10% Open	
		5/5/2017	0.3	0.1	16.6	75.1	-12.5	0.041	72	10% Open	
		6/22/2017	0.2	0.2	17.8	71.4	-11.2	0.009	84	10% Open	
		7/27/2017	0.1	0.1	18.8	77.3	-12.7	0.003	84	10% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		8/25/2017	0.3	0.5	16.2	71.5	-10.5	0.01	71	10% Open	
		9/29/2017	15.1	23.1	0.5	62.1	-0.5	0.067	72	10% Open	
		10/27/2017	16.3	18.6	3.5	67.5	-0.3	0.037	71	0% Open	
		11/17/2017	17.5	15.8	4.2	71.9	-1	0.058	63	0% Open	
		12/22/2017	11.8	18.6	3.2	64.1	-0.4	0.073	39	0% Open	
	23										
		1/31/2017	29.5	26.6	0.1	43.9	-6.4			5% Open	
		2/24/2017	29	24.6	1.7	49	-5			5% Open	
		3/9/2017	31.2	24	1.5	42.7	-4.8			5% Open	
		4/14/2017	41	22.1	0	33.7	-5.6			5% Open	
		5/5/2017	37.7	12.6	0	50	-2.3			5% Open	
		6/22/2017	42.7	11.5	0	47.6	-2.1			5% Open	
		7/27/2017	39.9	12.6	0.3	46.5	-3.3			5% Open	
		8/25/2017	43.6	10.4	0.1	48.6	-1.5			5% Open	
		9/29/2017	29.6	25	1.4	44.9	-5			5% Open	
		10/27/2017	22.6	24.5	2.1	46.9	-6.1			5% Open	
		11/17/2017	21.5	22.6	1.5	42.6	-5.8			5% Open	
		12/22/2017	37.1	21.4	1.5	36.5	-1.1			5% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
G											
	24										
		1/31/2017	56.4	18	4.2	21.4	-18			100% Open	
		2/24/2017	50.5	15.6	2.7	43.8	-14.9			100% Open	
		3/9/2017	45.3	16.7	4.2	34.2				100% Open	
		4/14/2017	80.3	17.6	0.2	0.1	-12.9			100% Open	
		5/5/2017	66.1	16.5	0.7	12.6	-0.1			100% Open	
		6/22/2017	60.2	16.3	0.5	23.7	-0.3			100% Open	
		7/27/2017	50.4	17.5	1.3	25.6	-0.5			100% Open	
		8/25/2017	58.4	15.4	0.9	31.5	-0.4			100% Open	
		9/29/2017	50.7	16.7	3.8	32.8				100% Open	
		10/27/2017	51.2	15.7	2.7	34.9	-6.2			100% Open	
		11/17/2017	48.7	14.2	1.6	33.6	-5.4			100% Open	
		12/22/2017	42.1	16.4	5.5	23.1	-2.3			100% Open	
	25										
		1/31/2017	34.4	22.7	0.9	42.1	-18			10% Open	Air leaking
		2/24/2017	33.6	21.6	1.4	44.7	-14.3			10% Open	
		3/9/2017	32.6	20.1	2.3	45.2	-15.2			10% Open	
		4/14/2017	44.5	15.5	0.3	38.8	-12.8			10% Open	
		5/5/2017	39.7	12.5	0.1	44.7	-0.1			10% Open	
		6/22/2017	42.3	11.6	0	42.8	-0.3			10% Open	
		7/27/2017	41.7	10.3	0.2	38.6	-0.4			10% Open	
		8/25/2017	40.6	10	0	58.7	-0.1			10% Open	
		9/29/2017	33.5	21.3	1.4	43.8	-14.9			10% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		10/27/2017	33.5	21.3	1.4	43.8	-6.6			10% Open	
		11/17/2017	36.7	24.7	1.3	42.6	-6.2			10% Open	
		12/22/2017	29.9	12.5	9.7	44.5	-12.1			10% Open	
	26										
		1/31/2017	45.2	21.2	2.7	30.9	-11.3			35% Open	Air leaking
		2/24/2017	46.7	21.7	0.4	31.1	-9.7			35% Open	
		3/9/2017	42.6	20.7	0.7	33.9	-12.4			35% Open	
		4/14/2017	54.7	24.1	0.1	19.6	-8.8			35% Open	
		5/5/2017	51.7	13.6	0.5	44.2	-8.8			35% Open	
		6/22/2017	56.3	12.5	0.2	31.5	-9.1			35% Open	
		7/27/2017	51.2	11.6	0.7	27.5	-8.8			35% Open	
		8/25/2017	54.2	27.5	0.1	32.6	-8.8			35% Open	
		9/29/2017	44.7	21.1	1.4	32.6	-11.5			35% Open	
		10/27/2017	42.6	18.7	1.1	33.4	-6.1			35% Open	
		11/17/2017	44.7	16.9	1.5	32.7	-7.5			35% Open	
		12/22/2017	39.6	19.5	5.5	32.1	-10.5			35% Open	
	27										
		1/31/2017	0.1	0.4	19.5	80.1	-1.6			0% Open	
		2/24/2017	0.8	0.4	16.7	81.3	-0.9			0% Open	
		3/9/2017	1.8	0.7	13.4	84	-1.1			0% Open	
		4/14/2017	0.7	0.1	12.5	85.2	-2.1			0% Open	
		5/5/2017	0.3	0.1	11.5	88.7	-0.9			0% Open	
		6/22/2017	1.3	0.5	10.2	84.1	-1.3			0% Open	
		7/27/2017	0.3	1.6	16.4	80.2	-1.6			0% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		8/25/2017	4.7	1.3	16.8	79.3	-1.1			0% Open	
		9/29/2017	1	0.7	16.4	82	-1.4			0% Open	
		10/27/2017	0.5	2.3	17.8	80.1	-1.1			0% Open	
		11/17/2017	1.2	2.5	16.9	79.4	-0.9			0% Open	
		12/22/2017	1.6	0.7	14.3	80.5	-0.6			0% Open	
	28										
		1/31/2017	33.3	23.4	1.6	41.8	-3.1	0.012	41	40% Open	
		2/24/2017	33.7	21.1	3.7	41	-2.4	0.021	60	40% Open	
		3/9/2017	32.2	2.1	6.1	40.7	-2.7	0.016	36	40% Open	
		4/14/2017	27.3	17	0.1	55.2		0.072	55	40% Open	
		5/5/2017	21.1	17.5	0	61.4	-0.5	0.021	66	40% Open	
		6/22/2017	26.2	15.4	0.1	62	-1.2	0.021	86	40% Open	
		7/27/2017	20.4	14.8	0.5	60.1	-2.5	0.034	89	40% Open	
		8/25/2017	24.5	12.7	0	58.2	-2.1	0.036	73	40% Open	
		9/29/2017	32.6	15.5	3.6	40.7	-3	0.009	69	40% Open	
		10/27/2017	38.7	16.5	4.1	44.7	-2.8	0.025	77	40% Open	
		11/17/2017	36.5	15.5	5.2	46.8	-1.6	0.034	61	40% Open	
		12/22/2017	20.1	19.4	8.1	36.3	-1.8			40% Open	
	29										
		1/31/2017	52.8	10.5	4.4	32.4	-17.8			100% Open	
		2/24/2017	36.4	12.3	2.4	20.2	-13.9			100% Open	
		3/9/2017	46.6	13.1	2.3	38.6	-15.1			100% Open	
		4/14/2017	58.2	7.6	3.2	28.5	-11.7			100% Open	
		5/5/2017	65.2	8.8	2	21.5	-0.1			100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		6/22/2017	65.2	8.8	2	21.5	-0.1			100% Open	
		7/27/2017	61.4	6.7	1	34.8	-0.2			100% Open	
		8/25/2017	61.7	6.8	1	24.6	-0.5			100% Open	
		9/29/2017	45.7	12.4	2.9	30.2	-14.8			100% Open	
		10/27/2017	42.7	11.4	1.8	33.6	-12.5			100% Open	
		11/17/2017	41.5	10.4	1.2	31.5	-11.6			100% Open	
		12/22/2017	45.5	11.3	5.4	38.2	-12.5	0.58	38	100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
H											
	30										
		1/31/2017	35.3	18.3	2	44.4	-18.2	0.002	44	100% Open	
		2/24/2017	37.3	17.2	2.1	43.8	-14.9	0.034	63	100% Open	
		3/9/2017	28.9	15.6	4.1	51.3	-16.6	0.146	55	100% Open	
		4/14/2017	48.2	13.3	0	58.7	-14.1	0.024	58	100% Open	
		5/5/2017	44.7	15.4	0.1	41.3	-13.5	0.009	70	100% Open	
		6/22/2017	45.7	12.8	0	43.4	-12.7	0.007	82	100% Open	
		7/27/2017	41.6	14.4	0.1	44.9	-11.5	0.011	88	100% Open	
		8/25/2017	44.2	11.6	0.1	45.7	-13.6	0.006	72	100% Open	
		9/29/2017	33.3	16.9	2.6	46.4	-16.4	0.074	71	100% Open	
		10/27/2017	32.5	14.6	3.2	44.2	-15.4	0.098	75	100% Open	
		11/17/2017	34.7	14.3	2.8	41.6	-14.6	0.112	62	100% Open	
		12/22/2017	38.6	40.2	2.5	28.5	-9.9			100% Open	
	31										
		1/31/2017	31.2	21.6	1.3	46	-18.7			10% Open	
		2/24/2017	38.4	19.9	1	40.7	-16.7			10% Open	
		3/9/2017	28.4	19.1	3.2	41.5	-18.6			10% Open	
		4/14/2017	42.1	16.5	0	36.7	-14			10% Open	
		5/5/2017	40.9	20.4	0	33.9	-12.6			10% Open	
		6/22/2017	41.6	18.6	0	40.9	-11.5			10% Open	
		7/27/2017	46.9	17.6	0	41.2	-14.7			10% Open	
		8/25/2017	42.5	17.5	0	41.7	-13.6			10% Open	
		9/29/2017	33	21	1.7	41.6	-16.9			10% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		10/27/2017	30.4	22.7	2.1	42	-15			10% Open	
		11/17/2017	31.5	16.5	1.8	41.5	-14.3			10% Open	
		12/22/2017	21.5	20.4	2.5	49.6	-0.9	0.045	36	10% Open	
	32										
		1/31/2017	66.6	14.2	1.2	18.1	-17.9	0.012	34	100% Open	
		2/24/2017	62.2	14.1	1.1	22.2	-13.7			100% Open	
		3/9/2017	30.3	13.9	1.3	34.3	-16			100% Open	
		4/14/2017	89.5	7.6	0	0.6	-1.7			100% Open	
		5/5/2017	55.2	8.8	1.1	36.1	-12.7			100% Open	
		6/22/2017	57.3	3.6	0.8	38.2	-11.5			100% Open	
		7/27/2017	55.2	5.7	0.2	44.5	-16.4			100% Open	
		8/25/2017	60.5	4.5	0.2	40	-10.7			100% Open	
		9/29/2017	53.1	14.2	1.1	24.8	-15.3	0.008		100% Open	
		10/27/2017	51.6	12	0	28.5	-14.7	0.014	74	100% Open	
		11/17/2017	55.4	16.8	0	27.5	-14.6	0.126	62	100% Open	
		12/22/2017	55.2	17.6	0.9	45.1	-1.2			100% Open	
	33										
		1/31/2017	37.3	22.1	0.7	50	-2.1	0.038	40	20% Open	
		2/24/2017	31.8	19.6	4.1	43.6	-1.2	0.069	61	20% Open	
		3/9/2017	29.1	19.9	2.8	48.8	-1.6	0.043	58	20% Open	
		4/14/2017	24.9	16.5	0	58.3	-3.7	0.066	61	20% Open	
		5/5/2017	24.1	14.3	0.1	58.9	-5.2	0.048	71	20% Open	
		6/22/2017	26.3	13.3	0.5	58.7	-6	0.039	84	20% Open	
		7/27/2017	21.3	15.7	0.2	60.3	-5	0.041	90	20% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		8/25/2017	21.6	12.6	1.8	55.9	-7.8	0.044	75	20% Open	
		9/29/2017	32.8	20.4	2.4	46.8	-1.5	0.067	73	20% Open	
		10/27/2017	33	12.6	3.7	51.2	-7.6	0.041	71	20% Open	
		11/17/2017	32	11.5	2.5	50.4	-12.5	0.056	62	20% Open	
		12/22/2017	20.9	13.6	7.7	52.6	-2.3			20% Open	
	34										
		1/31/2017	47.4	26.7	1.4	21.6	-18.4			100% Open	
		2/24/2017	49.1	24.6	1	24.6	-14.7			100% Open	
		3/9/2017	48.3	25.4	0.7	25.9	-16.6			100% Open	
		4/14/2017	66.2	21.1	0	13.7	-12.8			100% Open	
		5/5/2017	61.7	21.7	0	17.4	-12.4			100% Open	
		6/22/2017	58.5	24.6	0	16.5	-11.6			100% Open	
		7/27/2017	47.9	23.4	2.1	22.6	-12.8			100% Open	
		8/25/2017	60	21.3	0	17.9	-12.5			100% Open	
		9/29/2017	46.1	25.4	0.9	23.7	-17			100% Open	
		10/27/2017	41.6	22.6	1	32.5	-14.6			100% Open	
		11/17/2017	40.5	21.7	1.1	33.5	-12.6			100% Open	
		12/22/2017	38.6	20.5	6.8	29.4	-12.5			100% Open	
	35										
		1/31/2017	22.5	19.2	7	51.3	-0.2	-0.065	29	0% Open	
		2/24/2017	12.4	8.2	12.3	69.3	-0.4	0.008	64	0% Open	
		3/9/2017	16.3	13.2	8.4	62.2	-0.6			0% Open	
		4/14/2017	0.5	0.2	16.2	73.5	-0.4	0.009		0% Open	
		5/5/2017	0.6	0.9	14.5	73.2	-0.2			0% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		6/22/2017	1.3	3.8	7.5	76.4	-1.2			0% Open	
		7/27/2017	0.5	4.4	8.8	88.2	-2.5			0% Open	
		8/25/2017	4.9	2.6	14	67.5	-2.5			0% Open	
		9/29/2017	16.9	13.7	9.1	61	-0.3	0.032		0% Open	
		10/27/2017	15.2	14.3	10.4	58.5	-0.1	0.021		0% Open	
		11/17/2017	14.7	12.4	11.6	60.2	-0.1	0.024		0% Open	
		12/22/2017	12.8	1.7	10.5	64.2	-0.6	0.032	38	0% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
1											
	36										
		1/31/2017								100% Open	No Vault Hook
		2/24/2017								100% Open	Vault closed
		3/9/2017								100% Open	
		4/14/2017	72.3	21.5	0	3.9	-12.1			100% Open	
		5/5/2017	52	26.5	0.1	24.5	-11.5			100% Open	
		6/22/2017	47.7	23.3	0.5	26.6	-9.8			100% Open	
		7/27/2017	49.1	22.3	0.4	27.5	-10.2			100% Open	
		8/25/2017	48.6	15.5	1.4	34.2	-7.5			100% Open	
		9/29/2017								100% Open	
		10/27/2017								100% Open	
		11/17/2017								100% Open	
		12/22/2017								100% Open	
	37										
		1/31/2017	28.9	17.3	9.4	44.2	-1.1		60	5% Open	
		2/24/2017	15.2	7.4	14.2	63.2	-4.8			5% Open	
		3/9/2017	17.9	9.4	14	57.9	-1.2			5% Open	
		4/14/2017	48.9	9.8	8.8	26.5	-1.1			5% Open	
		5/5/2017	27.1	12.5	6.9	58.7	-1.1			5% Open	
		6/22/2017	24.8	9.7	7.6	58.7	-2.3			5% Open	
		7/27/2017	25.5	10.2	8.3	60.1	-1.6			5% Open	
		8/25/2017	21.6	12.4	8.2	52.8	-2.5			5% Open	
		9/29/2017	21	11.6	12.6	54.1	-4.5			5% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		10/27/2017	19.5	12	11.2	57.8	-3.6			5% Open	
		11/17/2017	17.8	11.4	13.5	60.2	-4.1			5% Open	
		12/22/2017	15.6	7.8	15.3	62.7	-2.1			5% Open	
	38										
		1/31/2017	17.5	9.6	12.5	60.4	-0.6		40	5% Open	
		2/24/2017	15	6.7	13.5	64.9	-1			5% Open	
		3/9/2017	13.2	6.1	13.7	66.9	-1.2			5% Open	
		4/14/2017	31.1	7.6	7.5	56.2	-0.5			5% Open	
		5/5/2017	24.6	7.6	4.9	64.2	-0.2			5% Open	
		6/22/2017	23.5	8.8	5.1	61.9	-0.8			5% Open	
		7/27/2017	18.4	9.2	11.1	59.9	-1.3			5% Open	
		8/25/2017	25.7	7.8	4.9	65.9	-1.4			5% Open	
		9/29/2017	15.1	7.6	12.9	63.2	-1			5% Open	
		10/27/2017	13.5	6.2	14.7	65.2	-2.4			5% Open	
		11/17/2017	14.7	4.7	13.5	62.5	-4.1			5% Open	
		12/22/2017	15.4	6.2	13.7	62.5	-1.8			5% Open	
	39										
		1/31/2017	19.7	10.7	11	58.7	-1.6			25% Open	
		2/24/2017	17.4	7.8	11.1	63.8	-1.4			25% Open	
		3/9/2017	13.9	6.6	12.1	67.4	-1.6			25% Open	
		4/14/2017	35.5	7.6	6.4	48.3	-0.6			25% Open	
		5/5/2017	32.3	15.7	6.1	48.5	-0.6			25% Open	
		6/22/2017	30.9	16.7	5.5	37.7	-0.4			25% Open	
		7/27/2017	29.1	17.6	4.2	41.8	-0.2			25% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		8/25/2017	32	12.7	3.5	41.1	-0.6			25% Open	
		9/29/2017	16.3	8.2	11.3	63.1	-1.6			25% Open	
		10/27/2017	15.4	7.6	14.6	66.2	-1.1			25% Open	
		11/17/2017	16.4	8	12.5	62.1	-3.8			25% Open	
		12/22/2017	15.8	6.8	12.6	65.4	0.9			25% Open	
	40										
		1/31/2017	62.8	22.2	0	15.1	-0.6		80	100% Open	
		2/24/2017	58.3	18.9	0.7	40.3	-0.9			100% Open	
		3/9/2017	54.9	19	3	16.9	-1.2			100% Open	
		4/14/2017	75.4	15.5	0.2	7.2	-6			100% Open	
		5/5/2017	66.1	20.6	0	13.8	-0.5			100% Open	
		6/22/2017	62.1	18.4	3.1	12.5	-1.1			100% Open	
		7/27/2017	58.3	17.5	4.4	16.4	-2.5			100% Open	
		8/25/2017	60.2	17.6	4.8	16.7	-0.9			100% Open	
		9/29/2017	56.4	20.5	1.1	24.6	-1			100% Open	
		10/27/2017	51.5	18.7	0.6	22.5	-0.6			100% Open	
		11/17/2017	52.6	15.8	1.3	24.7	-0.9			100% Open	
		12/22/2017	52.4	17.5	2.6	24.8	-1.4			100% Open	
	41										
		1/31/2017	42.8	17.8	2.1	37.4	-0.5			50% Open	
		2/24/2017	40.6	18.3	0.7	40.3	-0.9			50% Open	
		3/9/2017	31.5	17.5	1.6	49.4	-1			50% Open	
		4/14/2017	0.1	0.1	12.9	85.1	-0.7			50% Open	
		5/5/2017	0.1	0.1	17.8	81.9	-0.2			50% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		6/22/2017	0.5	0.9	16.7	79.8	-1.1			50% Open	
		7/27/2017	0.4	0.4	17.5	80	-2			50% Open	
		8/25/2017	1.7	12	15.8	80	-1			50% Open	
		9/29/2017	37.5	17.6	1.4	41.4				50% Open	
		10/27/2017	34.6	15.4	1.1	46.7	-1.3			50% Open	
		11/17/2017	36.7	14.6	1.4	44.2	-1.4			50% Open	
		12/22/2017	42.6	15.8	2.4	41.6	-1.3			50% Open	
	42										
		1/31/2017	21.3	21.8	0	57	-0.5			50% Open	
		2/24/2017	18.6	20.4	0.6	60.7	-1			50% Open	
		3/9/2017	14.1	18.1	0.6	67.2	-1.2			50% Open	
		4/14/2017	44.5	16.8	0.1	41.4	-0.7			50% Open	
		5/5/2017	37.7	17.8	3.2	44.2	-0.2			50% Open	
		6/22/2017	42.6	15.5	4.6	40.5	-1.1			50% Open	
		7/27/2017	41.4	17.6	5.1	38.7	-2.1			50% Open	
		8/25/2017	45.7	17.6	5.5	32.6	-1			50% Open	
		9/29/2017	16.2	20.3	0.3	62	-1.6			50% Open	
		10/27/2017	15.4	21.6	0.1	66.8	-1.1			50% Open	
		11/17/2017	16.7	25.7	0	62.5	-0.5			50% Open	
		12/22/2017	15.4	18.5	0.1	62.1	-1.5			50% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
J											
	43										
		1/31/2017	49.1	22.5	1	27.6	-15.7	0.578	57	100% Open	Air leaking
		2/24/2017	48.5	19.9	2.4	29.1	-14.7			100% Open	
		3/9/2017	49.4	20.8	1.1	28.7	-15.9	0.189	69	100% Open	
		4/14/2017	68.5	12.1	0	16.7	-14.1		55	100% Open	
		5/5/2017	61.1	24.3	0	14.6	-12.5	0.312	70	100% Open	
		6/22/2017	58.7	21.6	0	18.1	-3.8	0.166	82	100% Open	
		7/27/2017	48.6	20.2	11.5	17.9	-4.1	0.133	90	100% Open	
		8/25/2017	60.3	18.5	0	21.2	-4.4	0.159	71	100% Open	
		9/29/2017	48.1	21.3	1.4	29.1		0.281	75	100% Open	
		10/27/2017	47.5	24.5	1.1	32	-16.5	0.167	76	100% Open	
		11/17/2017	44.6	21.7	0.4	33.1	-14.5	0.218	61	100% Open	
		12/22/2017	46.5	21.5	0.1	33.6	-1.5	0.274	34	100% Open	
	44										
		1/31/2017	33.8	22.8	0.1	43.4	-4.6		60	25% Open	
		2/24/2017	34	20.8	0.7	44.2	-3.7			25% Open	
		3/9/2017	31.6	20.5	0.7	47.2	-5.2			25% Open	
		4/14/2017	51.7	13.5	0	35.3	-3.3			25% Open	
		5/5/2017	50.5	21.6	0	25.5	-2.1			25% Open	
		6/22/2017	48.3	17.9	0	27.1	-3.6			25% Open	
		7/27/2017	40.5	16.5	1.1	32.7	-1.8			25% Open	
		8/25/2017	47.5	16.3	0	26.5	-4.6			25% Open	
		9/29/2017	32.1	21.1	0.4	44.3	-5.3		67	25% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		10/27/2017	31.6	22.4	0.5	46.7	-4.4		70	25% Open	
		11/17/2017	32	23.6	0	47.9	-12.3		68	25% Open	
		12/22/2017	33.5	18.9	0	47.3	-1.5		41	25% Open	
	45										
		1/31/2017	20.1	21.6	0.4	57.9	-1.9		50	5% Open	
		2/24/2017	13.4	18.7	2	65.7	-1.3			5% Open	
		3/9/2017	12.8	18.9	1.5	66.8	-1.7			5% Open	
		4/14/2017	40.6	21.5	0	35.3	0.9			5% Open	
		5/5/2017	36.5	32.5	3.1	31.8	-0.3			5% Open	
		6/22/2017	34.6	29.7	5.6	27.6	-0.6			5% Open	
		7/27/2017	25.4	18.4	7.9	38.7	-1.7			5% Open	
		8/25/2017	35.1	21.7	0.9	42.7	-1.3			5% Open	
		9/29/2017	15.3	19.4	1.1	63.7	-2			5% Open	
		10/27/2017	16.5	21.6	2	64.9	-1.9			5% Open	
		11/17/2017	11.8	21.4	7.9	68.2	-2.3			5% Open	
		12/22/2017	32.7	24.7	1.4	61.5	-1.2			5% Open	
	46										
		1/31/2017	31.6	23.1	1.3	44.1	-10.2	-0.068	36	10% Open	
		2/24/2017	7.8	14.2	3.5	74.8	-8.8	0.079	64	10% Open	
		3/9/2017	8	15.1	3.9	73	-4.3	0.022	55	10% Open	
		4/14/2017	42.4	18.7	0	38.6	-9.6	0.077	57	10% Open	
		5/5/2017	61.3	21.5	0	17.5	-7.7	0.018	72	10% Open	
		6/22/2017	57.5	24.8	0	21.3	-8.8	0.176	86	10% Open	
		7/27/2017	55.2	21.6	1.3	24.9	-7.6	0.211	89	10% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		8/25/2017	58	22.9	0	21.2	-8.1	0.0119	73	10% Open	
		9/29/2017	16.2	17.3	2.7	63.7	0.8	0.032	70	10% Open	
		10/27/2017	15.5	16.8	3.2	64.8	-1.2	0.115	71	10% Open	
		11/17/2017	16.2	17.4	2.4	65.7	-1.9	0.128	66	10% Open	
		12/22/2017	18.7	17.8	2.1	67.2	-1.1	0.044	38	10% Open	
	47										
		1/31/2017	8.7	16.8	4.6	70	-8	-0.168	38	0% Open	
		2/24/2017	32.3	21.9	0.6	45.4	-12.1	0.019	61	0% Open	
		3/9/2017	30.3	21.3	1.2	47.6	-12.8	0.041	53	0% Open	
		4/14/2017	21.9	15.5	0	66.3	-8.1	0.019	59	0% Open	
		5/5/2017	11.4	17.8	1.1	72.5	-8.8	0.075	70	0% Open	
		6/22/2017	14.3	16.9	0.7	68.2	-7.5	0.092	83	0% Open	
		7/27/2017	11.4	14.6	1.3	63.7	-8	0.088	90	0% Open	
		8/25/2017	16.7	3.8	1.2	64.9	-8.3	0.099	71	0% Open	
		9/29/2017	22.7	19.8	2	54.2	-12.6	0.041	72	0% Open	
		10/27/2017	24.7	17.6	1.8	56.7	-11.4	0.076	73	0% Open	
		11/17/2017	25	17.6	1.8	56.7	-11.4	0.076	62	0% Open	
		12/22/2017	21.5	17.8	2.5	53.8	-6.7	0.072	34	0% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
L											
	48										
		1/31/2017	49.2	30.5	0.4	19.9	-4.8	0.015	35	10% Open	
		2/24/2017	48.6	26.7	2	22.1	-5.5	0.043	72	10% Open	
		3/9/2017	50	27.6	1.1	21.2	-6	0.023	58	10% Open	
		4/14/2017	61.8	21.6	0	17.9	-5.1	0.048	60	10% Open	
		5/5/2017	48.3	22.5	0.3	7.6	-5	0.037	71	10% Open	
		6/22/2017	51.6	21.3	0.2	8.4	-4	0.038	82	10% Open	
		7/27/2017	42.6	20.3	1.7	9.9	-4.2	0.009	82	10% Open	
		8/25/2017	50.4	20.5	0	7.9	-5.1	0.067	70	10% Open	
		9/29/2017	50.1	28.7	1	21	-6.2	0.15	72	10% Open	
		10/27/2017	51.4	31.4	0.9	26.3	-3.8	0.179	70	10% Open	
		11/17/2017	25.3	31.4	0.9	26.3	-3.8	0.179	63	10% Open	
		12/22/2017	56.8	22.1	1	15.4	-6.6	0.114	36	10% Open	
	49										
		1/31/2017	45.4	28.7	0.6	25.3	-1.1	0.036	39	5% Open	
		2/24/2017	37.8	25.6	0.9	35.7	-1.6	0.023	64	5% Open	
		3/9/2017	36.7	25.3	2.9	35.1	-1.7	0.011	58	5% Open	
		4/14/2017	62.8	26.2	0	7.7	-2.1	0.039	61	5% Open	
		5/5/2017	57.4	31.4	0.2	12.5	-3.2	0.033	70	5% Open	
		6/22/2017	61.2	27.5	0	17.5	-4.1	0.067	81	5% Open	
		7/27/2017	59.9	26.8	0.8	24.5	-4.1	0.135	88	5% Open	
		8/25/2017	55.2	15.7	0.5	28.6	-3.7	0.066	72	5% Open	
		9/29/2017	41.5	26.5	1.4	32.5	-2	0.043	73	5% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		10/27/2017	42.7	25.7	0.7	31.6	-2.4	0.114	70	5% Open	
		11/17/2017	41	25.7	0.7	31.6	-2.4	0.114	61	5% Open	
		12/22/2017	41.3	22.6	1.3	27.6	-5.6	0.048	33	5% Open	
	50										
		1/31/2017	47.9	22.6	3.6	26	-4.9	0.002	29	100% Open	
		2/24/2017	61.4	24.7	1.1	12.1	-5.5	0.012	67	100% Open	
		3/9/2017	61.2	25.1	0.7	12.4	-5.9	0.023	57	100% Open	
		4/14/2017	55.3	24.9	0	15.7	-5.5	0.011	63	100% Open	
		5/5/2017	62.1	23.9	0	7.1	-4.5	0.049	73	100% Open	
		6/22/2017	64.7	22.5	0	12.7	-3.9	0.051	84	100% Open	
		7/27/2017	48.6	15.1	0.2	21	-3.1	0.018	90	100% Open	
		8/25/2017	52.9	18.4	0.1	27.5	-3.3	0.109	70	100% Open	
		9/29/2017	55.7	24.2	1.5	16.4	-6	0.009	74	100% Open	
		10/27/2017	52.6	21.5	0.9	18.6	-5.1	0.062	77	100% Open	
		11/17/2017	41.8	22.6	1.1	15.9	-4.4	0.061	67	100% Open	
		12/22/2017	52.5	21	1	15.3	-5.5	0.031	36	100% Open	
	51										
		1/31/2017	37.1	20.6	2.2	40.1	-4.3	0.033	54	100% Open	
		2/24/2017	44.9	21.3	1.1	32.8	-4.8	0.139	72	100% Open	
		3/9/2017	41.9	21.2	0.5	36.2	-5.2	0.124	71	100% Open	
		4/14/2017	42.7	21.4	0	32.7	-4.1	0.006	58	100% Open	
		5/5/2017	36.6	25	0.5	20.4	-4.4	0.187	69	100% Open	
		6/22/2017	41.8	22.6	1	32.7	-3.9	0.187	86	100% Open	
		7/27/2017	44.6	17.6	3.2	34.7	-4.1	0.213	89	100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		8/25/2017	40.9	20.3	0.9	38.2	-3.3	0.21	72	100% Open	
		9/29/2017	41.2	21.5	1.3	36.2	-6	0.125	75	100% Open	
		10/27/2017	40.6	20.3	0.9	33.7	-5.1	0.132	74	100% Open	
		11/17/2017	42.5	20.6	1.1	32.5	-4.6	0.167	67	100% Open	
		12/22/2017	42.4	18.7	0.3	37.5	-4.9	0.116	36	100% Open	
	52										
		1/31/2017	56.5	27.9	0.4	15.2	-1.9	0.16	39	100% Open	
		2/24/2017	56.8	26.3	0.8	15.4	-2.2	0.103	63	100% Open	
		3/9/2017	52.8	26.2	2.3	-2.4	-2.4	0.258	56	100% Open	
		4/14/2017	60.5	18.5	0	17.9	-5.5	0.135	56	100% Open	
		5/5/2017	61.1	20	0	17.5	-4	0.213	70	100% Open	
		6/22/2017	65.5	16.4	0	9.7	-4	0.235	88	100% Open	
		7/27/2017	60	15.3	0.3	10.1	-4.3	0.197	91	100% Open	
		8/25/2017	52	17.3	0.1	28.9	-3.9	0.267	74	100% Open	
		9/29/2017	55.3	26.7	1.3	10	-2.5	0.186	77	100% Open	
		10/27/2017	52	18.9	0.87	14.6	-5.1	0.099	71	100% Open	
		11/17/2017	51.5	17.4	2.3	11.4	-3.7	0.087	63	100% Open	
		12/22/2017	47.6	24.5	1.1	8.8	-2.7	0.211	38	100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
None											
	14										
		1/31/2017	19.8	21.2	0.7	58.4	-2.6	0.005	39	5% Open	
		2/24/2017	34.3	17.4	1.7	46.3	-15.4	0.071	62	5% Open	
		3/9/2017	16.7	18.8	1.6	62.9	-2.3	0.22	54	5% Open	
		4/14/2017	26.4	16.9	0	54.9	-2.7	0.217	55	5% Open	
		5/5/2017	25.2	16.6	1.1	62.3	-3.2	0.215	69	5% Open	
		6/22/2017	19.6	24.6	3.7	54.5	-1.8	0.217	88	5% Open	
		7/27/2017	15.7	32.5	5.9	55.7	-1.5	0.223	90	5% Open	
		8/25/2017	21.6	21.8	5.8	53.1	-2.7	0.221	72	5% Open	
		9/29/2017	23.9	19.3	1.2	55.4	-7.6	0.143	71	5% Open	
		10/27/2017	21.6	18.4	2.3	56.1	-6.9	0.076	72	5% Open	
		11/17/2017	25.7	16.2	1.8	55.2	-5.8	0.077	62	5% Open	
		12/22/2017	25.4	19.5	0.9	52.1	-6.1	0.049	38	5% Open	

D

Flare Data Sheets

Flare Data

Date	Time	CH4	CO2	O2	Balance	Comments
1/31/2017		32.4	18.1	5.4	44.1	DL-1 purge 140 gal, DL-5 purge 20 gal, DL-10 purge 5 g
1/31/2017	1530	37.6	20.8	3.5	38.2	
2/24/2017	1330	37.1	20.2	7.9	34.8	DL-5 purged 120 gal
3/9/2017	1100	35.8	18.3	5.2	40.7	
4/14/2017	730	32.9	19.8	6.2	41.6	DL-1 purged 20 gal DL-5 purged 150 gal
5/5/2017	815	36.8	18.2	4.9	42.7	DL-5 purged 60 gal
6/22/2017	745	37.5	19.2	5.5	41.6	DL-5 purged 120 gal
7/27/2017	715	38.3	18	4.9	42.3	DL-5 purged 180 gal
8/25/2017	730	37.5	19.4	5.1	40.7	DL-1 purged 20 gal DL-5 purged 120 gal
9/29/2017	830	34.7	19.1	6.2	40.8	DL-5 purged 180 gal
10/27/2017	815	31	19.3	6.1	42.1	DL-1 purged 40 gal DL-5 purged 180 gal
11/17/2017	750	35	18.4	4.9	41.8	DL-5 120 gal
12/22/2017	915	38.6	20.1	5.6	41.5	

E

Flare Log Sheets

Clarkstown Landfill
Daily Flare Operation Log
West Nyack, NY

		301/302			Panel Display			
Date	Time	Flare Operation (On/Off)	Hour meter	Amps	Temperature	Flow	Total Flow (10^6 CF)	Comments
1/3/2017	705	Off	13790	17	1162	607	437	FF restart
1/9/2017	733	Off	13810				437.6	FF
1/10/2017	708	Off	13810	17	1226	586	437.6	Restart
1/16/2017	708	Off	13840	17.9	1252	594	438.5	FF Restart
1/19/2017	703	Off	13850	15.5	1345	557	438.9	FF Restart
1/24/2017	746	Off	13860	13.5	1428	466	439.2	FF Restart
1/27/2016	700	Off	13870	16.1	914	566	439.4	FF Restart
1/31/2017	717	Off	13880	18.6	1339	633	439.7	FF restart
2/2/2017	826	Off	13888	17.9	1124	615	440	FF
2/6/2017	746	Off	13897	17.6	1355	605	440.2	FF, Restart
2/8/2017	742	On	13917	15.1	1436	531	440.9	
2/13/2017	730	Off	13927	16.2	1405	549	441.1	FF restart
2/16/2017	710	Off	13936	15	1441	544	441.4	FF restart
2/21/2017	709	Off	13946	17.4	1058	601	441.7	FF, Restart
2/22/2017	1130	On	13960	14.5	1412	492	442.2	
2/27/2016	1300	Off	13975	18.1		611	442.6	FF
2/28/2017	715	Off	13975	16.6	1317	575	442.6	Restart
3/3/2017	736	Off	14005	0	10	0	443.4	FF (ran 3 days)
3/6/2017	721	Off	14005	17.7	1076	606	443.4	Restart
3/8/2017	747	Off	14005	17.1	1424	612	443.4	Restart
3/13/2017	738	Off	14024	18.6	948	618	444	FF
3/15/2017	757	Off	14044	0	15	0	444.6	FF, Recover (ran 2 days)
3/17/2017	831	Off	14044	19.6		663	444.6	
3/21/2017	813	Off	14044	15.8	1387	571	444.6	FF, restart
3/22/2017	726	Off	14053	15.8	1300	549	444.9	FF, restart
3/24/2017	828	Off	14062	18.9	1290	651	445.2	FF, restart
3/27/2017	744	Off	14081	15.7	1441	534	445.7	FF Restart
3/29/2017	704	Off	14100	0	44	0	446.2	FF
4/4/2017	907	On	14111	13	1413	425	446.5	Restarted 4.3.17
4/6/2017	710	Off	14119	16.2	1215	552	446.7	FF, restart
4/10/2017	719	Off	14138				447.2	FF
4/17/2017	723	On	14158	14.1	1427	508	447.8	FF, Restart at 0700
4/19/2017	712	Off	14168	17.7		607	448.1	FF, restart failed (4x)
4/21/2017	715	On	14178	15.8	1154	538	448.3	Restarted 4/20/17
4/24/2017	751	Off	14198	0	95	0	448.9	FF, restart failed (2x)

Clarkstown Landfill
Daily Flare Operation Log
West Nyack, NY

		301/302			Panel Display			
Date	Time	Flare Operation (On/Off)	Hour meter	Amps	Temperature	Flow	Total Flow (10^6 CF)	Comments
5/1/2017	743	Off	14198	16.8	1394	605	448.9	FF, Restart
5/2/2017	700	Off	14207	15.3	1373	532	449.1	
5/3/2017	703	Off	14217	0	60	0	449.4	FF, rest
5/8/2017	707	Off	14217	12.5	1224	383	449.4	
5/15/2017	916	Off	14236	15.1	1341	530	449.9	
5/23/2017	701	Off	14253	17.2	1373	601	450.3	
5/30/2017	702	Off	14273	16	1304	557	450.9	Flame Fail Restart
5/31/2017	1532	On	14292	12.9	1351	436	451.4	
6/2/2017	9:32	Off	14293	15.5	1308	549	451.4	
6/5/2017	708	Off	14301	16.3	1310	568	451.7	FF restart
6/9/2017	713	Off	14321	16.2	1304	572	452.2	FF Restart
6/12/2017	735	Off	14331	16.3	1349	569	452.5	FF Restart
6/20/2017	729	Off	14351	13.9	1422	500	453	FF Restart
6/26/2017	817	Off	14388	16	1330	561	454.1	FF, Restart
6/28/2017	711	Off	14397	16.2	1121	576	454.3	FF, restart
7/5/2017	704	Off	14407	15	1387	534	454.6	FF, Restart
7/6/2017	716	On	14417	15.1	1454	535	454.9	
7/10/2017	724	Off	14447	15.9	1270	554	455.7	FF, Restart
7/11/2017	751	Off	14457	14	1420	503	456	FF, Restart
7/17/2017	741	Off	14466	14.5	1418	522	456.3	FF, Restart
7/19/2017	720	Off	14476	14.8	1425	531	456.5	FF, Restart
7/24/2017	703	Off	14485	15.6	1410	568	456.8	FF, Restart
7/28/2017	927	Off	14495	13.7	1433	509	457.2	FF, Restart
7/31/2017	709	Off	14506	15.3	1397	553	457.4	FF Restart
8/2/2017	720	Off	14526	0	107	0	458	FF
8/7/2016	704	Off	14526	15.6	1403	557	458	Restart
8/9/2017	719	Off	14546	0	43	0	458.6	FF
8/10/2017	800	Off	14546	16.9	916	595	458.6	Restart
8/14/2017	705	Off	14555	15.9	1266	588	458.9	FF Restart
8/17/2017	800	Off	14575	16.8	1264	583	459.5	FF, Restart
8/21/2017	702	Off	14594	15	1205	579	460.1	FF, Restart
8/23/2017	811	Off	14604	15.2	1399	556	460	
8/28/2017	708	Off	14613	16.6	1341	596	460.7	FF, Restart
8/30/2017	714	Off	14623	15.9	1516	584	461	FF Restart
9/1/2017	704	Off	14633	16.7	1114	603	461.3	FF

Clarkstown Landfill
Daily Flare Operation Log
West Nyack, NY

		301/302			**Panel Display**			
Date	Time	Flare Operation (On/Off)	Hour meter	Amps	Temperature	Flow	Total Flow (10^6 CF)	Comments
9/5/2017	715	Off	14642	16.1	1310	577	461.7	FF, Restart
9/7/2017	720	Off	14652	16.5	1312	581	462	
9/11/2017	711	Off	14662	16.3	1355	578	462.3	FF, restart
9/13/2017	713	Off	14682	16.3	1300	576	462.9	
9/15/2017	704	Off	14692	16.4	1201	580	463.2	FF, restart
9/18/2017	710	Off	14702	16.9	1341	599	463.5	FF, Restart
9/20/2017	708	Off	14712	16.4	1171	584	463.8	FF, Restart
9/22/2017	835	Off	14722	17	916	614	464.2	FF, restart
9/24/2017	720	Off	14730	16.9	1363	590	464.4	FF, Restart
10/2/2017	716	Off	14749	18.4	1368	638	464.5	FF, Restart
10/4/2017	655	Off	14759	18.7	1256	655	465.3	FF, restart
10/6/2017	830	Off	14778	0	69	0	466	FF, rest flare
10/9/2017	700	Off	147781	16.6	1332	607	466	Restart
10/11/2017	733	Off	14788	16.7	1299	593	466.3	FF, restart
10/13/2017	705	Off	14797				466.6	FF
10/16/2017	757	Off	14798	15.4	1417	553	466.6	Restart
10/18/2017	713	Off	14807	16.7	1238	599	466.9	
10/20/2017	704	Off	14817	16.6	1357	599	467.2	FF, Restart
10/23/2017	743	Off	14827	17.1	1130	611	467.6	FF, restart
10/30/2017	731	Off	14856				468.5	Pilot Fail
11/1/2017		Off	14856				468.5	Gas tanks switched out in PM
11/2/2017	715	Off	14856	16.9	1344	596	468.5	
11/7/2017	705	Off	14876				469.2	FF wont restart (>5 attempts)
11/8/2017	735	Off	14876	17.4	1366	608	469.2	FF
11/13/2017	720	Off	14885	17	1393	590	469.4	Restart
11/15/2017	709	Off	14894	17.6	1277	616	469.4	ff restart
11/17/2017	715	Off	14912				470.4	FF
11/20/2017	702	Off	14913	18.4		626	470.4	FF, Restart
11/27/2017	743	Off	14932	16.8	1397	591	471	FF Restart
11/29/2017	720	Off	14940	17.4	1371	605	471.3	FF, Restart
12/4/2017	706	Off	14950	18.8	1216	645	471.6	FF, Restart
12/7/2017	717	Off	14980	0		0	472.6	FF Rest
12/11/2017	705	Off	14980	17.7	1244	612	472.6	Restart
12/18/2017	710	Off	15000	17.4	1394	607	473.3	FF restart
12/27/2017	707	Off	15019			647	473.9	FF, restart

F

FCS-1 Forms

FORM FCS-1
FINAL COVER SYSTEM INSPECTION CHECKLIST
CLARKSTOWN LANDFILL

Item No.	Item Title	Drainage Area Number*							
		DA-1	DA-2	DA-3	DA-4	DA-5	DA-6	DA-7	DA-8
Vegetated Cover									
1	Vegetative Growth (grass height, undesirable species)	X	X	X	X	X	X	X	X
2	Sparse Vegetation/Die-Outs	X	X	X	X	X	X	X	X
Protective Soil Cover and Cap Components									
1	Erosion Damage	X	X	X	X	X	X	X	X
2	Animal Burrowing	X	X	X	X	X	X	X	X
3	Settlement/Subsidence	X	X	X	X	X	X	X	X
4	Surface Water Ponding	X	X	X	X	X	X	X	X
5	Extensive Die-Out	X	X	X	X	X	X	X	X
6	Slope Stability	X	X	X	X	X	X	X	X
7	Seepage	X	X	X	X	X	X	X	X
8	Vandalism	X	X	X	X	X	X	X	X

Notes:
1 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency/problem. Attach additional sheets as necessary.
* Refer to Figure 2-4 for delineations of inspection areas.

Date: 1/30/2017 Inspector's Initials: MTP

FORM FCS-1
FINAL COVER SYSTEM INSPECTION CHECKLIST
CLARKSTOWN LANDFILL

Item No.	Item Title	Drainage Area Number*							
		DA-1	DA-2	DA-3	DA-4	DA-5	DA-6	DA-7	DA-8
Vegetated Cover									
1	Vegetative Growth (grass height, undesirable species)	X	X	X	X	X	X	X	X
2	Sparse Vegetation/Die-Outs	X	X	X	X	X	X	X	X
Protective Soil Cover and Cap Components									
1	Erosion Damage	X	X	X	X	X	X	X	X
2	Animal Burrowing	X	X	X	X	X	X	X	X
3	Settlement/Subsidence	X	X	X	X	X	X	X	X
4	Surface Water Ponding	X	X	X	X	X	NS	X	X
5	Extensive Die-Out	X	X	X	X	X	X	X	X
6	Slope Stability	X	X	X	X	X	X	X	X
7	Seepage	X	X	X	X	X	X	X	X
8	Vandalism	X	X	X	X	X	X	X	X

Notes:
1 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency/problem. Attach additional sheets as necessary.
* Refer to Figure 2-4 for delineations of inspection areas.

Date: 2/28/20167 Inspector's Initials: MVP

FORM FCS-1
FINAL COVER SYSTEM INSPECTION CHECKLIST
CLARKSTOWN LANDFILL

Item No.	Item Title	Drainage Area Number*							
		DA-1	**DA-2**	**DA-3**	**DA-4**	**DA-5**	**DA-6**	**DA-7**	**DA-8**
Vegetated Cover									
1	Vegetative Growth (grass height, undesirable species)	X	X	X	X	X	X	X	X
2	Sparse Vegetation/Die-Outs	X	X	X	X	X	X	X	X
Protective Soil Cover and Cap Components									
1	Erosion Damage	X	X	X	X	X	X	X	X
2	Animal Burrowing	X	X	X	X	X	X	X	X
3	Settlement/Subsidence	X	X	X	X	X	X	X	X
4	Surface Water Ponding	X	X	X	X	X	NS	X	X
5	Extensive Die-Out	X	X	X	X	X	X	X	X
6	Slope Stability	X	X	X	X	X	X	X	X
7	Seepage	X	X	X	X	X	X	X	X
8	Vandalism	X	X	X	X	X	X	X	X

Notes:
1 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency/problem. Attach additional sheets as necessary.
* Refer to Figure 2-4 for delineations of inspection areas.

Date: 3/09/2017 Inspector's Initials: MVP

FORM FCS-1
FINAL COVER SYSTEM INSPECTION CHECKLIST
CLARKSTOWN LANDFILL

Item No.	Item Title	Drainage Area Number*							
		DA-1	**DA-2**	**DA-3**	**DA-4**	**DA-5**	**DA-6**	**DA-7**	**DA-8**
Vegetated Cover									
1	Vegetative Growth (grass height, undesirable species)	X	X	X	X	X	X	X	X
2	Sparse Vegetation/Die-Outs	X	X	X	X	X	X	X	X
Protective Soil Cover and Cap Components									
1	Erosion Damage	X	X	X	X	X	X	X	X
2	Animal Burrowing	X	X	X	X	X	X	X	X
3	Settlement/Subsidence	X	X	X	X	X	X	X	X
4	Surface Water Ponding	X	X	X	X	X	X	X	X
5	Extensive Die-Out	X	X	X	X	X	X	X	X
6	Slope Stability	X	X	X	X	X	X	X	X
7	Seepage	X	X	X	X	X	X	X	X
8	Vandalism	X	X	X	X	X	X	X	X

Notes:
1 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency/problem. Attach additional sheets as necessary.
* Refer to Figure 2-4 for delineations of inspection areas.

Date: 4/14/2017 Inspector's Initials: MVP

FORM FCS-1
FINAL COVER SYSTEM INSPECTION CHECKLIST
CLARKSTOWN LANDFILL

Item No.	Item Title	Drainage Area Number*							
		DA-1	**DA-2**	**DA-3**	**DA-4**	**DA-5**	**DA-6**	**DA-7**	**DA-8**
Vegetated Cover									
1	Vegetative Growth (grass height, undesirable species)	NS	NS	NS	NS	NS	NS	NS	NS
2	Sparse Vegetation/Die-Outs	X	X	X	X	X	X	X	X
Protective Soil Cover and Cap Components									
1	Erosion Damage	X	X	X	X	X	X	X	X
2	Animal Burrowing	X	X	X	X	X	X	X	X
3	Settlement/Subsidence	X	X	X	X	X	X	X	X
4	Surface Water Ponding	X	X	X	X	X	X	X	X
5	Extensive Die-Out	X	X	X	X	X	X	X	X
6	Slope Stability	X	X	X	X	X	X	X	X
7	Seepage	X	X	X	X	X	X	X	X
8	Vandalism	X	X	X	X	X	X	X	X

Notes:
1 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency/problem. Attach additional sheets as necessary.
* Refer to Figure 2-4 for delineations of inspection areas.

Date: 5/5/2017 Inspector's Initials: MVP

FORM FCS-1
FINAL COVER SYSTEM INSPECTION CHECKLIST
CLARKSTOWN LANDFILL

Item No.	Item Title	Drainage Area Number*							
		DA-1	DA-2	DA-3	DA-4	DA-5	DA-6	DA-7	DA-8
Vegetated Cover									
1	Vegetative Growth (grass height, undesirable species)	X	X	X	X	X	X	X	X
2	Sparse Vegetation/Die-Outs	X	X	X	X	X	X	X	X
Protective Soil Cover and Cap Components									
1	Erosion Damage	X	X	X	X	X	X	X	X
2	Animal Burrowing	X	X	X	X	X	X	X	X
3	Settlement/Subsidence	X	X	X	X	X	X	X	X
4	Surface Water Ponding	X	X	X	X	X	X	X	X
5	Extensive Die-Out	X	X	X	X	X	X	X	X
6	Slope Stability	X	X	X	X	X	X	X	X
7	Seepage	X	X	X	X	X	X	X	X
8	Vandalism	X	X	X	X	X	X	X	X

Notes:
1 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency/problem. Attach additional sheets as necessary.
* Refer to Figure 2-4 for delineations of inspection areas.

Date: 6/22/2017 Inspector's Initials: MVP

FORM FCS-1
FINAL COVER SYSTEM INSPECTION CHECKLIST
CLARKSTOWN LANDFILL

Item No.	Item Title	Drainage Area Number*							
		DA-1	DA-2	DA-3	DA-4	DA-5	DA-6	DA-7	DA-8
Vegetated Cover									
1	Vegetative Growth (grass height, undesirable species)	X	X	X	X	X	X	X	X
2	Sparse Vegetation/Die-Outs	X	X	X	X	X	X	X	X
Protective Soil Cover and Cap Components									
1	Erosion Damage	X	X	X	X	X	X	X	X
2	Animal Burrowing	X	X	X	X	X	X	X	X
3	Settlement/Subsidence	X	X	X	X	X	X	X	X
4	Surface Water Ponding	X	X	X	X	X	NS	X	X
5	Extensive Die-Out	X	X	X	X	X	X	X	X
6	Slope Stability	X	X	X	X	X	X	X	X
7	Seepage	X	X	X	X	X	X	X	X
8	Vandalism	X	X	X	X	X	X	X	X

Notes:
1 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency/problem. Attach additional sheets as necessary.
* Refer to Figure 2-4 for delineations of inspection areas.

Date: 7/27/2017 Inspector's Initials: MVP

FORM FCS-1
FINAL COVER SYSTEM INSPECTION CHECKLIST
CLARKSTOWN LANDFILL

Item No.	Item Title	Drainage Area Number*							
		DA-1	DA-2	DA-3	DA-4	DA-5	DA-6	DA-7	DA-8
Vegetated Cover									
1	Vegetative Growth (grass height, undesirable species)	X	X	X	X	X	X	X	X
2	Sparse Vegetation/Die-Outs	X	X	X	X	X	X	X	X
Protective Soil Cover and Cap Components									
1	Erosion Damage	X	X	X	X	X	X	X	X
2	Animal Burrowing	X	X	X	X	X	X	X	X
3	Settlement/Subsidence	X	X	X	X	X	X	X	X
4	Surface Water Ponding	X	X	X	X	X	NS	X	X
5	Extensive Die-Out	X	X	X	X	X	X	X	X
6	Slope Stability	X	X	X	X	X	X	X	X
7	Seepage	X	X	X	X	X	X	X	X
8	Vandalism	X	X	X	X	X	X	X	X

Notes:
1 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency/problem. Attach additional sheets as necessary.
* Refer to Figure 2-4 for delineations of inspection areas.

Date: 8/25/2017 Inspector's Initials: MVP

FORM FCS-1
FINAL COVER SYSTEM INSPECTION CHECKLIST
CLARKSTOWN LANDFILL

Item No.	Item Title	Drainage Area Number*							
		DA-1	DA-2	DA-3	DA-4	DA-5	DA-6	DA-7	DA-8
Vegetated Cover									
1	Vegetative Growth (grass height, undesirable species)	X	X	X	X	X	X	X	X
2	Sparse Vegetation/Die-Outs	X	X	X	X	X	X	X	X
Protective Soil Cover and Cap Components									
1	Erosion Damage	X	X	X	X	X	X	X	X
2	Animal Burrowing	X	X	X	X	X	X	X	X
3	Settlement/Subsidence	X	X	X	X	X	X	X	X
4	Surface Water Ponding	X	X	X	X	X	NS	X	X
5	Extensive Die-Out	X	X	X	X	X	X	X	X
6	Slope Stability	X	X	X	X	X	X	X	X
7	Seepage	X	X	X	X	X	X	X	X
8	Vandalism	X	X	X	X	X	X	X	X

Notes:
1 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency/problem. Attach additional sheets as necessary.
* Refer to Figure 2-4 for delineations of inspection areas.

Date: 9/29/2017 Inspector's Initials: MVP

FORM FCS-1
FINAL COVER SYSTEM INSPECTION CHECKLIST
CLARKSTOWN LANDFILL

Item No.	Item Title	Drainage Area Number*							
		DA-1	**DA-2**	**DA-3**	**DA-4**	**DA-5**	**DA-6**	**DA-7**	**DA-8**
Vegetated Cover									
1	Vegetative Growth (grass height, undesirable species)	X	X	X	X	X	X	X	X
2	Sparse Vegetation/Die-Outs	X	X	X	X	X	X	X	X
Protective Soil Cover and Cap Components									
1	Erosion Damage	X	X	X	X	X	X	X	X
2	Animal Burrowing	X	X	X	X	X	X	X	X
3	Settlement/Subsidence	X	X	X	X	X	X	X	X
4	Surface Water Ponding	X	X	X	X	X	NS	X	X
5	Extensive Die-Out	X	X	X	X	X	X	X	X
6	Slope Stability	X	X	X	X	X	X	X	X
7	Seepage	X	X	X	X	X	X	X	X
8	Vandalism	X	X	X	X	X	X	X	X

Notes:
1 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency/problem. Attach additional sheets as necessary.
* Refer to Figure 2-4 for delineations of inspection areas.

Date: 10/27/2017 Inspector's Initials: MVP

FORM FCS-1
FINAL COVER SYSTEM INSPECTION CHECKLIST
CLARKSTOWN LANDFILL

Item No.	Item Title	Drainage Area Number*							
		DA-1	DA-2	DA-3	DA-4	DA-5	DA-6	DA-7	DA-8
Vegetated Cover									
1	Vegetative Growth (grass height, undesirable species)	X	X	X	X	X	X	X	X
2	Sparse Vegetation/Die-Outs	X	X	X	X	X	X	X	X
Protective Soil Cover and Cap Components									
1	Erosion Damage	X	X	X	X	X	X	X	X
2	Animal Burrowing	X	X	X	X	X	X	X	X
3	Settlement/Subsidence	X	X	X	X	X	X	X	X
4	Surface Water Ponding	X	X	X	X	X	NS	X	X
5	Extensive Die-Out	X	X	X	X	X	X	X	X
6	Slope Stability	X	X	X	X	X	X	X	X
7	Seepage	X	X	X	X	X	X	X	X
8	Vandalism	X	X	X	X	X	X	X	X

Notes:
1 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency/problem. Attach additional sheets as necessary.
* Refer to Figure 2-4 for delineations of inspection areas.

Date: 11/17/2017 Inspector's Initials: MVP

FORM FCS-1
FINAL COVER SYSTEM INSPECTION CHECKLIST
CLARKSTOWN LANDFILL

Item No.	Item Title	Drainage Area Number*							
		DA-1	DA-2	DA-3	DA-4	DA-5	DA-6	DA-7	DA-8
Vegetated Cover									
1	Vegetative Growth (grass height, undesirable species)	X	X	X	X	X	X	X	X
2	Sparse Vegetation/Die-Outs	X	X	X	X	X	X	X	X
Protective Soil Cover and Cap Components									
1	Erosion Damage	X	X	X	X	X	X	X	X
2	Animal Burrowing	X	X	X	X	X	X	X	X
3	Settlement/Subsidence	X	X	X	X	X	X	X	X
4	Surface Water Ponding	X	X	X	X	X	NS	X	X
5	Extensive Die-Out	X	X	X	X	X	X	X	X
6	Slope Stability	X	X	X	X	X	X	X	X
7	Seepage	X	X	X	X	X	X	X	X
8	Vandalism	X	X	X	X	X	X	X	X

Notes:
1 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
2 Use "NS" (Not Satisfactory) where problems are noted.
3 For boxes checked NS, provide, on Form DP-1, a description of the deficiency/problem. Attach additional sheets as necessary.
* Refer to Figure 2-4 for delineations of inspection areas.

Date: 12/22/2017 Inspector's Initials: MVP

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AR-1 Forms

FORM AR-1

INSPECTION CHECKLIST FORM

ACCESS ROADS

CLARKSTOWN LANDFILL, WEST NYACK, NEW YORK

Description	Status/Comments
Perimeter Access Road: Eastern Side (Compost access roads)	
- *Potholes*	X
- *Condition of asphalt/gravel*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
- *Ruts*	X
Perimeter Access Road: Remainder	
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
Access Road Across Top of Landfill	X
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Uneven settlement*	X
- *Ponding of water*	X

Notes:

- Use a check in the status/comments box to indicate that the specific item in the area has been inspected and no problems were noted.
- Use "NS" (Not Satisfactory) in the status box where problems are noted.
- For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 1/30/2017 Inspector's Initials: MTP

FORM AR-1

INSPECTION CHECKLIST FORM

ACCESS ROADS

CLARKSTOWN LANDFILL, WEST NYACK, NEW YORK

Description	Status/Comments
Perimeter Access Road: Eastern Side (Compost access roads)	
- *Potholes*	X
- *Condition of asphalt/gravel*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
- *Ruts*	X
Perimeter Access Road: Remainder	
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
Access Road Across Top of Landfill	X
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Uneven settlement*	X
- *Ponding of water*	X

Notes:

- Use a check in the status/comments box to indicate that the specific item in the area has been inspected and no problems were noted.
- Use "NS" (Not Satisfactory) in the status box where problems are noted.
- For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 2/28/2017 Inspector's Initials: MTP

FORM AR-1

INSPECTION CHECKLIST FORM

ACCESS ROADS

CLARKSTOWN LANDFILL, WEST NYACK, NEW YORK

Description	Status/Comments
Perimeter Access Road: Eastern Side (Compost access roads)	
- *Potholes*	X
- *Condition of asphalt/gravel*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
- *Ruts*	X
Perimeter Access Road: Remainder	
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
Access Road Across Top of Landfill	X
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Uneven settlement*	X
- *Ponding of water*	X

Notes:

- Use a check in the status/comments box to indicate that the specific item in the area has been inspected and no problems were noted.
- Use "NS" (Not Satisfactory) in the status box where problems are noted.
- For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 3/09/2017 Inspector's Initials: MVP

FORM AR-1

INSPECTION CHECKLIST FORM

ACCESS ROADS

CLARKSTOWN LANDFILL, WEST NYACK, NEW YORK

Description	Status/Comments
Perimeter Access Road: Eastern Side (Compost access roads)	
- *Potholes*	X
- *Condition of asphalt/gravel*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
- *Ruts*	X
Perimeter Access Road: Remainder	
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
Access Road Across Top of Landfill	X
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Uneven settlement*	X
- *Ponding of water*	X

Notes:

- Use a check in the status/comments box to indicate that the specific item in the area has been inspected and no problems were noted.
- Use "NS" (Not Satisfactory) in the status box where problems are noted.
- For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 4/14/2017 Inspector's Initials: MVP

FORM AR-1

INSPECTION CHECKLIST FORM

ACCESS ROADS

CLARKSTOWN LANDFILL, WEST NYACK, NEW YORK

Description	Status/Comments
Perimeter Access Road: Eastern Side (Compost access roads)	
- *Potholes*	X
- *Condition of asphalt/gravel*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
- *Ruts*	X
Perimeter Access Road: Remainder	
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
Access Road Across Top of Landfill	X
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Uneven settlement*	X
- *Ponding of water*	X

Notes:

- Use a check in the status/comments box to indicate that the specific item in the area has been inspected and no problems were noted.
- Use "NS" (Not Satisfactory) in the status box where problems are noted.
- For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 5/5/2016 Inspector's Initials: MVP

FORM AR-1

INSPECTION CHECKLIST FORM

ACCESS ROADS

CLARKSTOWN LANDFILL, WEST NYACK, NEW YORK

Description	Status/Comments
Perimeter Access Road: Eastern Side (Compost access roads)	
- *Potholes*	X
- *Condition of asphalt/gravel*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
- *Ruts*	X
Perimeter Access Road: Remainder	
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
Access Road Across Top of Landfill	X
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Uneven settlement*	X
- *Ponding of water*	X

Notes:

- Use a check in the status/comments box to indicate that the specific item in the area has been inspected and no problems were noted.
- Use "NS" (Not Satisfactory) in the status box where problems are noted.
- For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 6/22/2017 Inspector's Initials: MVP

FORM AR-1

INSPECTION CHECKLIST FORM

ACCESS ROADS

CLARKSTOWN LANDFILL, WEST NYACK, NEW YORK

Description	Status/Comments
Perimeter Access Road: Eastern Side (Compost access roads)	
- *Potholes*	X
- *Condition of asphalt/gravel*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
- *Ruts*	X
Perimeter Access Road: Remainder	
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
Access Road Across Top of Landfill	X
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Uneven settlement*	X
- *Ponding of water*	X

Notes:

- Use a check in the status/comments box to indicate that the specific item in the area has been inspected and no problems were noted.
- Use "NS" (Not Satisfactory) in the status box where problems are noted.
- For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 7/27/2017 Inspector's Initials: MVP

FORM AR-1

INSPECTION CHECKLIST FORM

ACCESS ROADS

CLARKSTOWN LANDFILL, WEST NYACK, NEW YORK

Description	Status/Comments
Perimeter Access Road: Eastern Side (Compost access roads)	
- *Potholes*	X
- *Condition of asphalt/gravel*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
- *Ruts*	X
Perimeter Access Road: Remainder	
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
Access Road Across Top of Landfill	X
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Uneven settlement*	X
- *Ponding of water*	X

Notes:

- Use a check in the status/comments box to indicate that the specific item in the area has been inspected and no problems were noted.
- Use "NS" (Not Satisfactory) in the status box where problems are noted.
- For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 8/25/2017 Inspector's Initials: MVP

FORM AR-1

INSPECTION CHECKLIST FORM

ACCESS ROADS

CLARKSTOWN LANDFILL, WEST NYACK, NEW YORK

Description	Status/Comments
Perimeter Access Road: Eastern Side (Compost access roads)	
- *Potholes*	X
- *Condition of asphalt/gravel*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
- *Ruts*	X
Perimeter Access Road: Remainder	
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
Access Road Across Top of Landfill	X
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Uneven settlement*	X
- *Ponding of water*	X

Notes:

- Use a check in the status/comments box to indicate that the specific item in the area has been inspected and no problems were noted.
- Use "NS" (Not Satisfactory) in the status box where problems are noted.
- For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 9/29/2017 Inspector's Initials: MVP

FORM AR-1

INSPECTION CHECKLIST FORM

ACCESS ROADS

CLARKSTOWN LANDFILL, WEST NYACK, NEW YORK

Description	Status/Comments
Perimeter Access Road: Eastern Side (Compost access roads)	
- *Potholes*	X
- *Condition of asphalt/gravel*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
- *Ruts*	X
Perimeter Access Road: Remainder	
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
Access Road Across Top of Landfill	X
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Uneven settlement*	X
- *Ponding of water*	X

Notes:

- Use a check in the status/comments box to indicate that the specific item in the area has been inspected and no problems were noted.
- Use "NS" (Not Satisfactory) in the status box where problems are noted.
- For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 10/27/2017 Inspector's Initials: MVP

FORM AR-1

INSPECTION CHECKLIST FORM

ACCESS ROADS

CLARKSTOWN LANDFILL, WEST NYACK, NEW YORK

Description	Status/Comments
Perimeter Access Road: Eastern Side (Compost access roads)	
- *Potholes*	X
- *Condition of asphalt/gravel*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
- *Ruts*	X
Perimeter Access Road: Remainder	
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
Access Road Across Top of Landfill	X
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Uneven settlement*	X
- *Ponding of water*	X

Notes:

- Use a check in the status/comments box to indicate that the specific item in the area has been inspected and no problems were noted.
- Use "NS" (Not Satisfactory) in the status box where problems are noted.
- For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 11/17/2017 Inspector's Initials: MVP

FORM AR-1

INSPECTION CHECKLIST FORM

ACCESS ROADS

CLARKSTOWN LANDFILL, WEST NYACK, NEW YORK

Description	Status/Comments
Perimeter Access Road: Eastern Side (Compost access roads)	
- *Potholes*	X
- *Condition of asphalt/gravel*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
- *Ruts*	X
Perimeter Access Road: Remainder	
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Guard rails*	X
- *Uneven settlement*	X
- *Ponding of water*	X
Access Road Across Top of Landfill	X
- *Potholes*	X
- *Evidence of debris and/or obstructions*	X
- *Uneven settlement*	X
- *Ponding of water*	X

Notes:

- Use a check in the status/comments box to indicate that the specific item in the area has been inspected and no problems were noted.
- Use "NS" (Not Satisfactory) in the status box where problems are noted.
- For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 12/22/2017 Inspector's Initials: MVP