Operation and Maintenance Report

Clarkstown Sanitary Landfill

January-December 2016

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 2016

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

Prepared by: Michael V. Pantliano Date: 1/3/17

Checked by: Ed Schwetz Date: 1/9/17

Project Manager: Michael V. Pantliano

Revised: 1/10/17

Contents

Tables

Graphs

Figures (At Back of Report Following Conclusions)

Appendices (At Back of Report Following Figures)

This page is intentionally left blank.

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 2016 for the Clarkstown Sanitary Landfill (the Landfill), located in West Nyack, Rockland County, New York (Figure 1). The reporting period has been changed based on the recommendation to transition the reporting period from April through March to January-December to coincide with the calendar year. January through March 2016 was presented in the prior report and a summary of the reported activity is included herein.

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. 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 blockage 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-1.

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	14	27	17
February	60	45	0
March	128	30	0
April	90	50	15
May	15	30	10

June	10	5	0
July	120	0	0
August	75	0	0
September	60	90	0
October	60	0	0
November	60	30	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 grade (8 of the 28 new well heads were replaced in the fall of 2016). 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 conditionsIf 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.The LFG extraction wells were not screened in December 2016 due to the flare operation and weather.

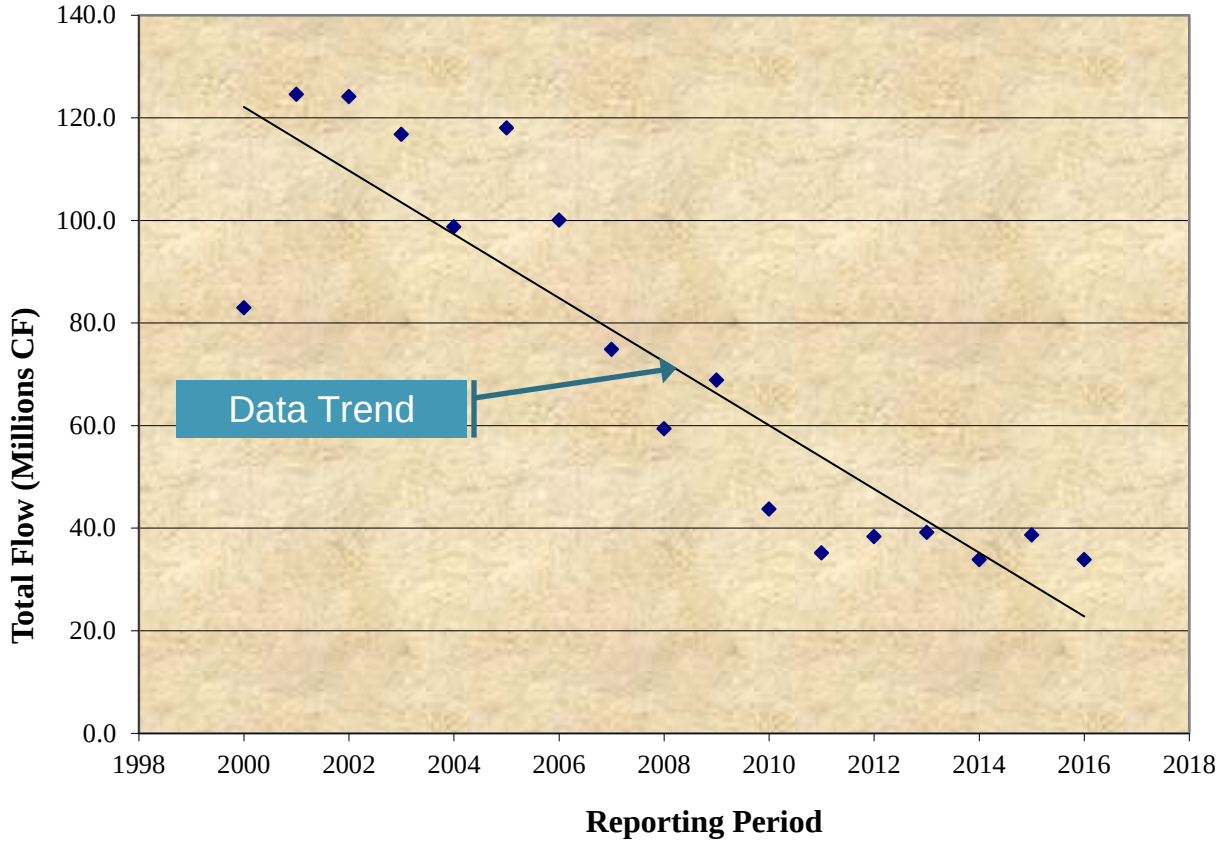
4.1 Quantitative Analysis of Gas Recovery

For the 2016 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 2016 was approximately 36.5 million cubic feet. Total operating time was 1,154 hours (31.5% uptime). The system operation during this period shows a slight decrease in operation time versus the previous year, which ran 33% 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 six 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

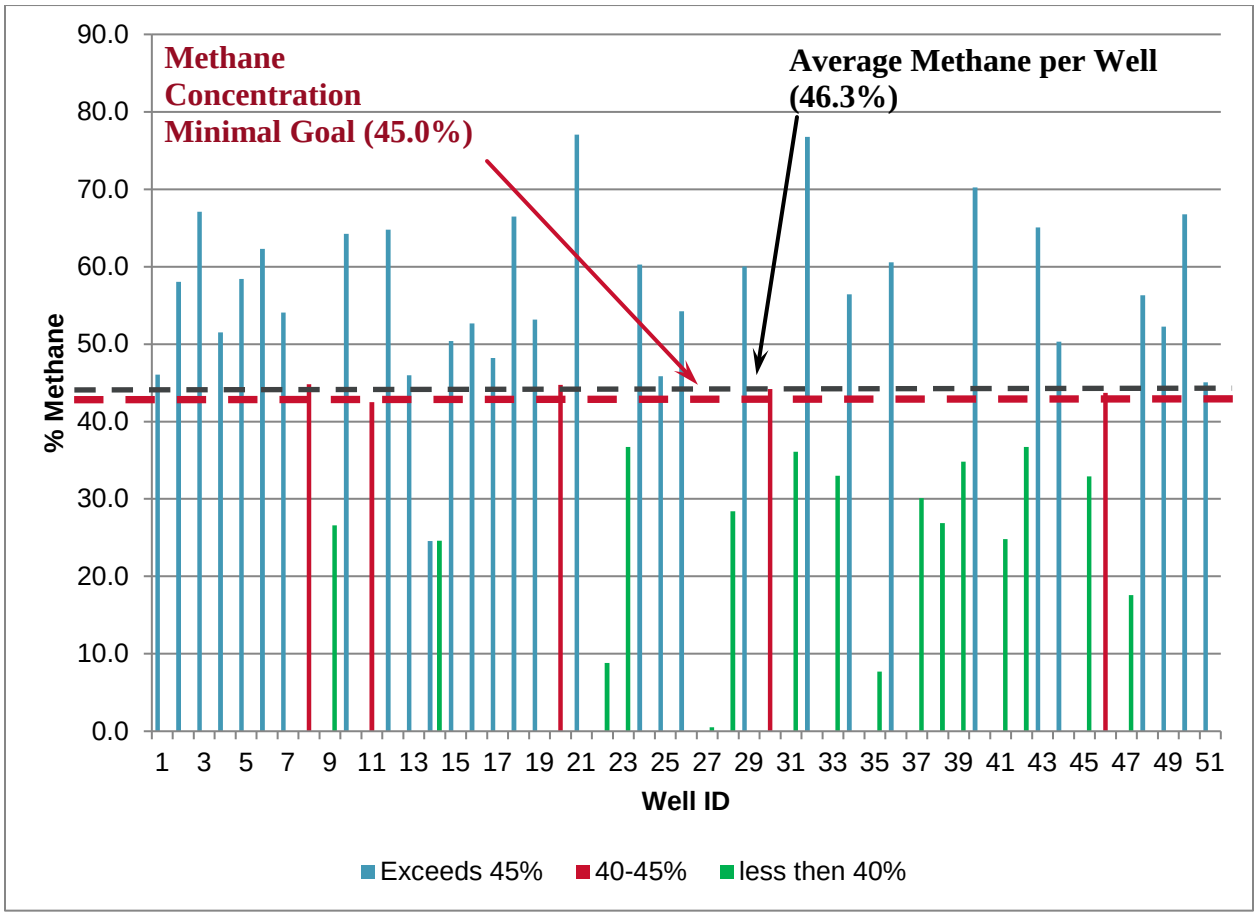
LFG quality is monitored at each of the 52 gas extraction and at the flare station. Optimal gas quality consists of a high methane concentration (greater then 45%) and low carbon dioxide, oxygen and nitrogen levels. Methane is required to sustain the flaring of the gas. The primary reason to burn LFG 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 46.3% (down from 47.1 the previous year) and the median was 47.2%. Twenty-one wells had an average methane concentration below the 45% methane goal. Five of the twenty-three wells were within 5% of the goal (>40%). The remaining eighteen wells had average methane concentrations less then 40%. Thirteen of the eighteen 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 15 years, the data suggest that the methane production along the perimeter of the Landfill is diminishing at a consistent rate. 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 then expected (Figure 9). GE-35 had an average methane percentage of 7.7%; much lower than expected. This well is located on the steepest slope of the landfill and it was suspected that the well may have been

impacted by differential settlement. An investigation conducted during October 2016 suggest the well is intact.

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 2016

Month	Average Methane in Well Field (%)	Average Methane at Flare (%)	Difference
January	46.3	32.4	13.9
February	48	32.8	15.2
March	52.2	30.2	23
April		35.2	
May	50.1	34.7	15.4
June	47	34.1	12.9
July	57.8	33.8	24
August	47.3	33.8	13.5
September	41.5	35.8	5.7
October	36.8	35.7	1.1
November	45.5	36.4	9.1
December		35.2	

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 then 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 and monthly basis.

The following graph (Graph 4-3) illustrates methane removal at the Landfill; it is an approximation based on field measurements. During the 2016 monitoring period, HDR estimates 13.8 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 histoirically 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

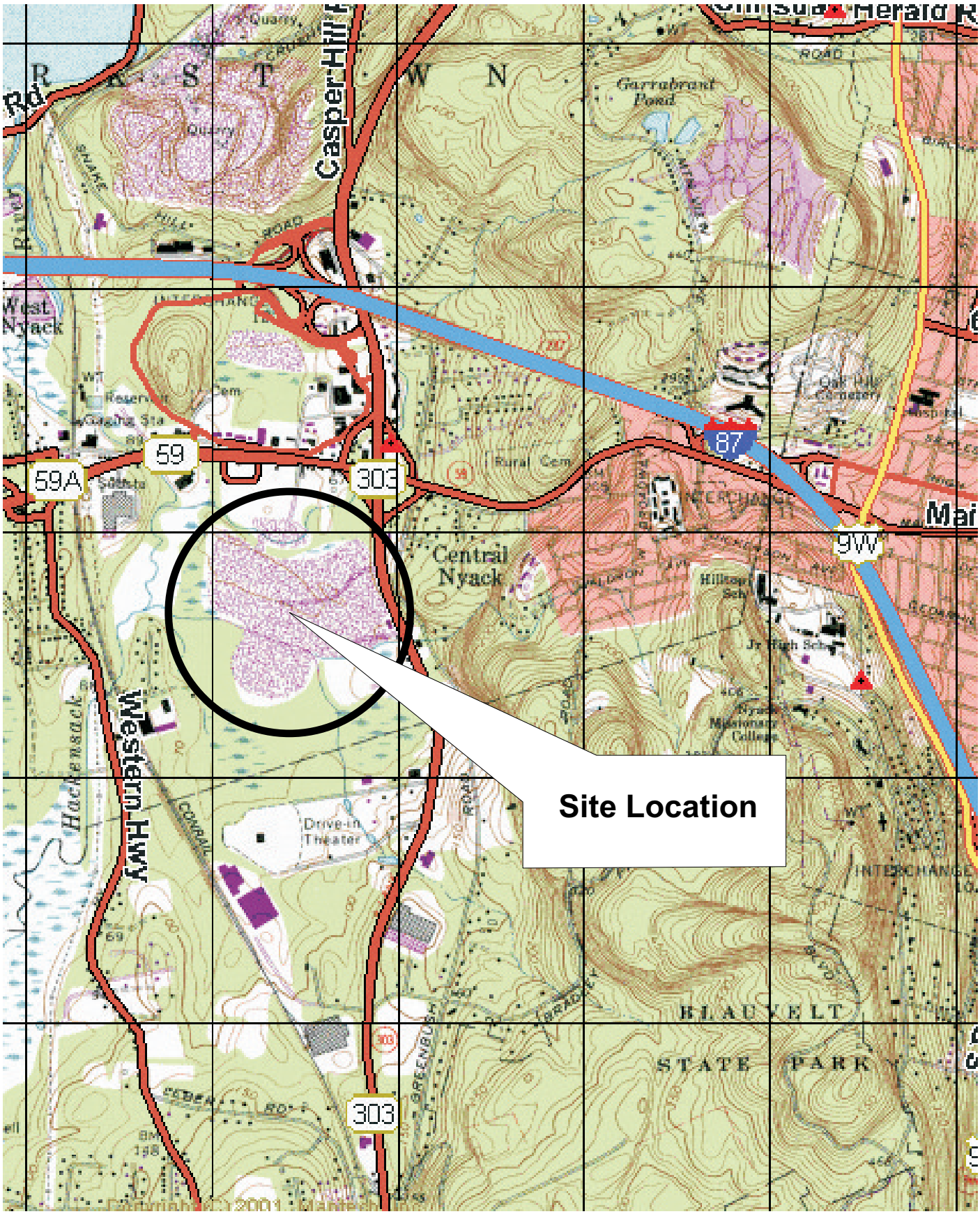
Leachate from each collection chamber is pumped to the leachate collection storage tanks located along Route 59. The leachate does not feed into the tank, but rather feeds directly into a pump station located adjacent to the tanks. The leachate is then pumped into the local sewer system managed by the 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.

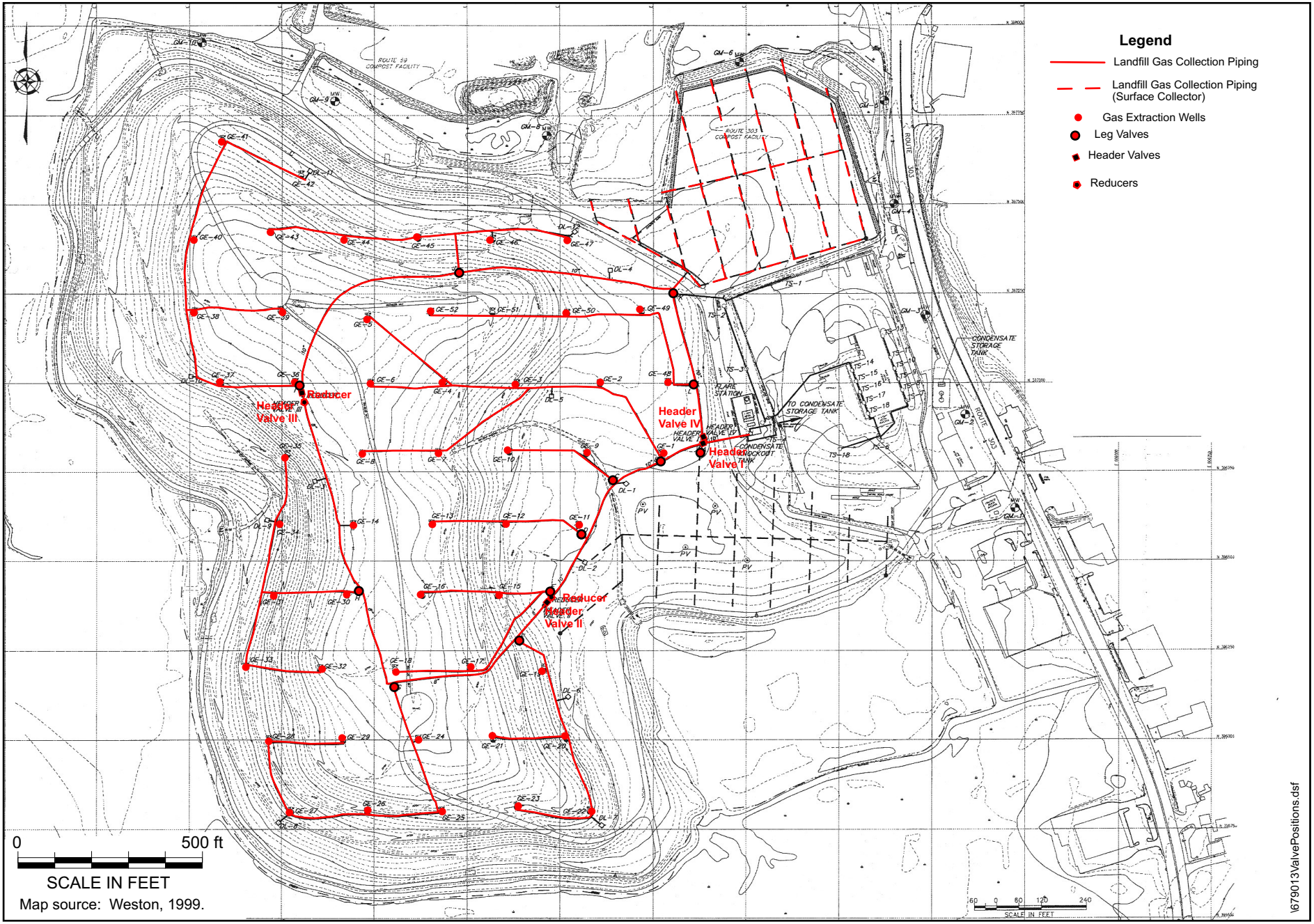
The difference between the methane compositions at the well field versus the methane composition at the flare continues to be noted. HDR will continue to evaluate the composition between the landfill gas extraction wells and the leg valves to identify any locations that explains the discrepancy between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

Figures

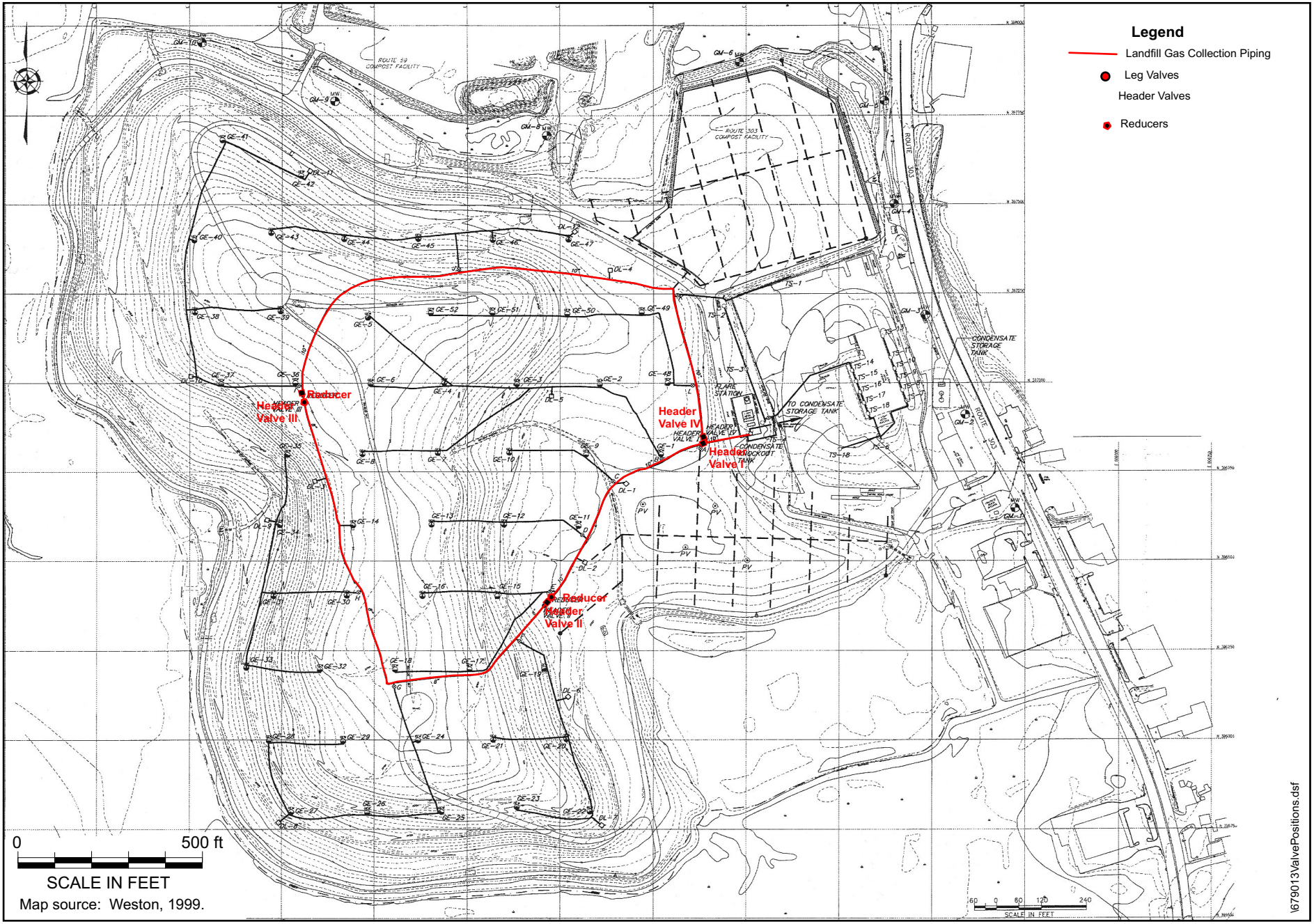


Source: US Quadrangle Nyack, NY 1967, Photorevised 1979

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

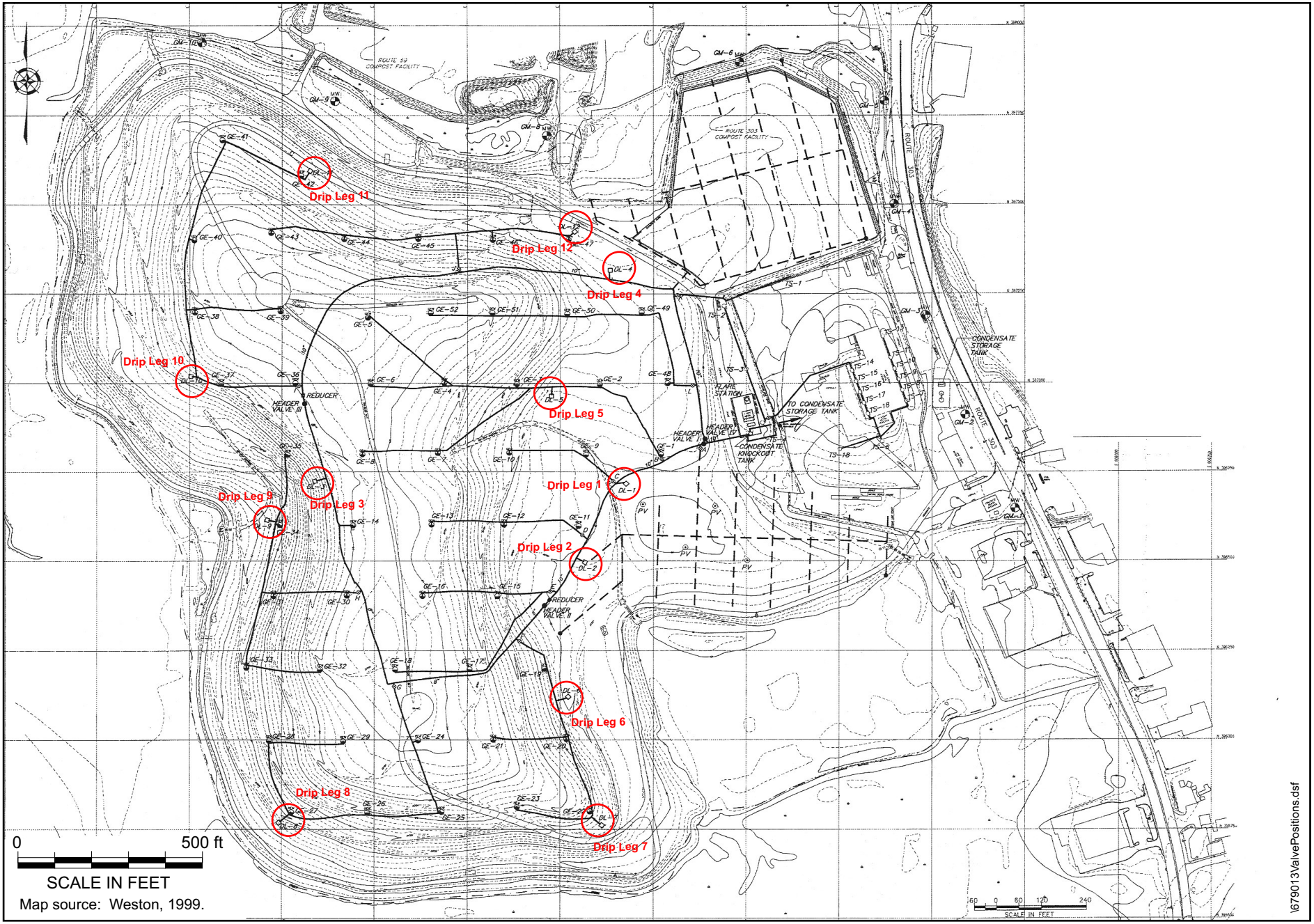


Henningson, Durham & Richardson
Architecture and Engineering, P.C.
in association with HDR Engineering, Inc.
404 Airport Executive Park
Nanuet ,NY

Landfill Gas Header Pipe
Clarkstown Landfill
West Nyack, NY 10994

Figure 3

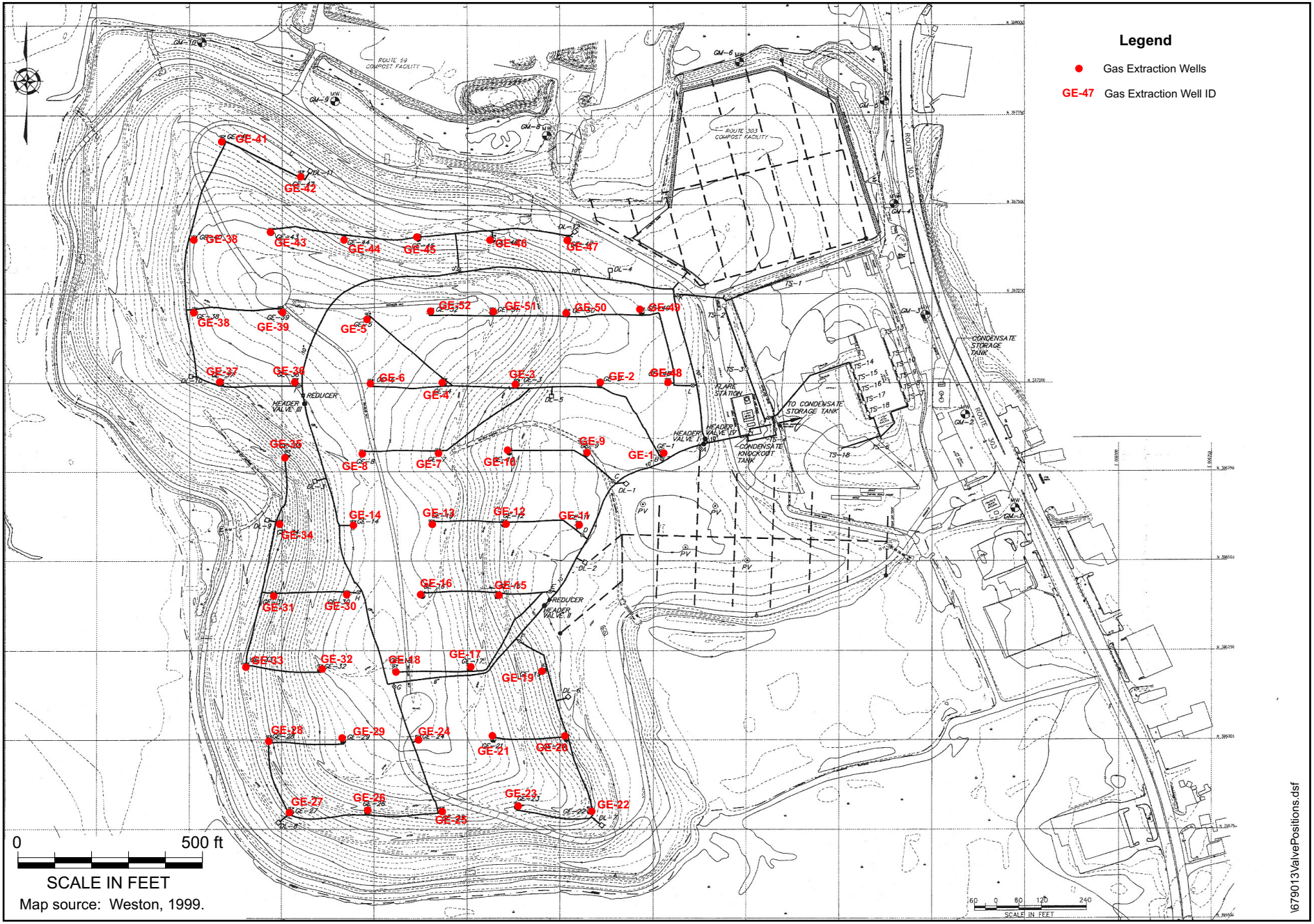
Henningson, Durham & Richardson Architecture and Engineering, P.C. in association with HDR Engineering, Inc. 404 Airport Executive Park Nanuet ,NY	Surface Collector Network Clarkstown Landfill West Nyack, NY 10994	Figure 4



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

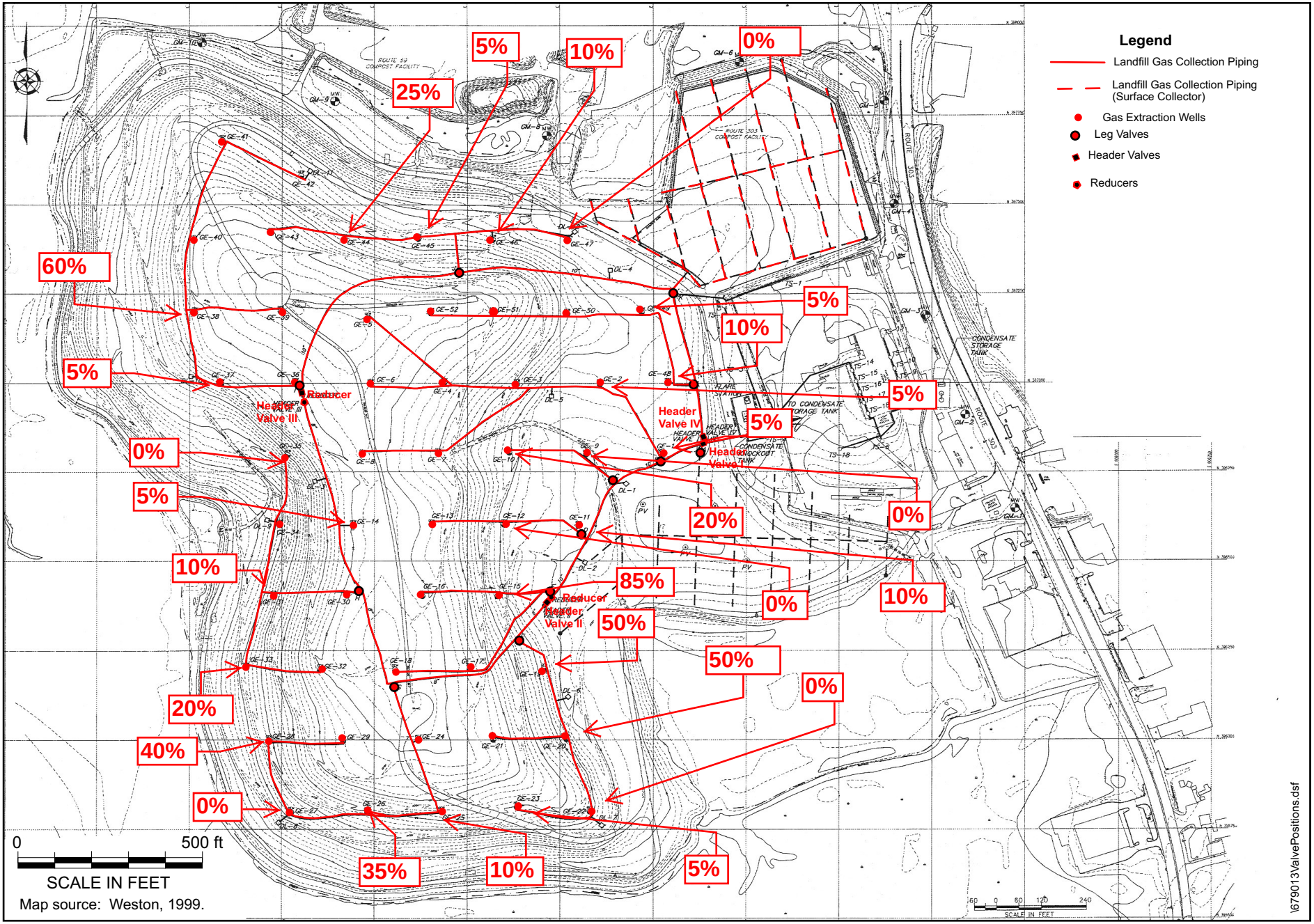
Figure 5



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

Gas Extraction Wells
Clarkstown Landfill
West Nyack, NY 10994

Figure 6



Henningson, Durham & Richardson Architecture and Engineering, P.C. in association with HDR Engineering, Inc. 404 Airport Executive Park Nanuet ,NY	Well Head Valve Settings Clarkstown Landfill West Nyack, NY 10994	Figure 7

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

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: 1/8/2016 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:
4 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
5 Use "NS" (Not Satisfactory) where problems are noted.
6 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 2/29/2016 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:
7 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
8 Use "NS" (Not Satisfactory) where problems are noted.
9 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 3/18/2016 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:
10 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
11 Use "NS" (Not Satisfactory) where problems are noted.
12 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 4/28/2016 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:
13 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
14 Use "NS" (Not Satisfactory) where problems are noted.
15 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 5/25/2016 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:
16 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
17 Use "NS" (Not Satisfactory) where problems are noted.
18 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 6/24/2016 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:
19 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
20 Use "NS" (Not Satisfactory) where problems are noted.
21 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 7/30/2016 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:
22 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
23 Use "NS" (Not Satisfactory) where problems are noted.
24 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 8/29/2016 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:
25 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
26 Use "NS" (Not Satisfactory) where problems are noted.
27 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 9/26/2016 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:
28 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
29 Use "NS" (Not Satisfactory) where problems are noted.
30 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 10/26/2016 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:
31 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
32 Use "NS" (Not Satisfactory) where problems are noted.
33 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 11/22/2016 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:
34 Use a check in the box to indicate that the specific item in the area has been inspected and no problems were noted.
35 Use "NS" (Not Satisfactory) where problems are noted.
36 For boxes checked NS, provide, on Form DP-1, a description of the deficiency. Attach additional sheets, as necessary.

Date: 12/20/2016 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: 1/8/2016 Inspector's Initials: MTP

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: 1/8/2016 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: 4/28/2016 Inspector's Initials: MTP

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: 2/29/2016 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: 2/29/2016 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: 3/18/2016 Inspector's Initials: MTP

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: 3/18/2016 Inspector's Initials: MTP

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: 4/28/2016 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: 5/25/2016 Inspector's Initials: MTP

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: 5/25/2016 Inspector's Initials: MTP

FORM DP-3
DESCRIPTION OF DEFICIENCIES AND PROBLEMS
CLARKSTOWN LANDFILL

REFERENCE INSPECTION FORM NO: 3 **RFW NOTIFICATION REFERRAL NO.:_____**

LOCATION: Various areas across the site

PROBLEM/DEFICIENCY IDENTIFICATION:
Grass is about waist high through the landfill, some trees are growing along the back near GE 35
ACTION TAKEN:
None
RECOMMENDATIONS:
Get the grounds crew to mow lawns and cut down the trees.

Date: 5/25/2016 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: 6/24/2016 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: 6/24/2016 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: 7/30/2016 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: 7/30/2016 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: 8/29/2016 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:
The vault doors for the above mentioned were replaced with doors from wells that were upgraded NFA needed.
RECOMMENDATIONS:
None this deficiency is closed

Date: 8/29/2016 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: 9/26/2016 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: 10/26/2016 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: 11/22/2016 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: 12/20/2016 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										
		1/8/2016	58.6	23.9	1.8	15.7	-14.7	0.102	36	15% Open	Closed 5%
		2/29/2016	37.7	14.7	6.6	44.6	-14.2	0.071	49	10% Open	
		3/18/2016	70.4	22.9	0.1	6.6	-12.8	0.021	55	10% Open	
		5/26/2016	64	22.8	0.1	13.1	-14.7	0.099	89	5% Open	Closed to 5%
		6/24/2016	56.6	22.7	2.1	19.7	-14	0.027	75	5% Open	Closed to 5%
		7/30/2016	37.8	16.7	5.7	43	-1.1	0.092	73	5% Open	
		8/29/2016	34.3	17.2	1.9	49	-15.4	0.012	75	5% Open	
		9/26/2016	24.8	13.3	9.9	52.4	-15.3	0.111	71	5% Open	
		10/26/2016	44.3	25.1	0	29.1	-16.5	0.239	45	5% Open	
		11/22/2016	43.6	19.6	3.2	34.4	-12.8	0.112		5% Open	
	2										
		1/8/2016	66.1	28.1	0.6	5.2	-2.6	0.006	50	5% Open	
		2/29/2016	64.4	26	0.5	8.5	-0.8	0.105	55	5% Open	Air leaking
		3/18/2016	67.8	27	0	5.2	-2.6	0.024	55	5% Open	
		5/26/2016	65.4	26.5	0	8.1	-2.6	0.12	78	5% Open	
		6/24/2016	65	27.1	1	6.3	-2.3	0.079	71	5% Open	
		7/30/2016	60.6	27.7	0.4	16.3	-11.6	0.057	72	5% Open	
		8/29/2016	47.4	28.5	0.8	38.2	-1.1	0.019	71	5% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		9/26/2016	48.3	27.5	1.5	22.7	-1.3	0.054	60	5% Open	
		10/26/2016	47.2	29	0	24.6	1.8	0.08	52	5% Open	
		11/22/2016	55.6	27.7	0.6	19.4	-2.9	0.068		5% Open	
	3										
		1/8/2016	71	25.6	0.8	2.6	-13.9	0.114	53	100% Open	
		2/29/2016	65	24	0.4	10.2	-9.2	0.1	54	100% Open	
		3/18/2016	75.2	24.6	0	5.2	-10.4	0.065	59	100% Open	
		5/26/2016	75.1	23.2	0.3	1.4	-13.8	0.19	83	100% Open	
		6/24/2016	72.3	23.4	0.8	4.7	-12.9	0.049	77	100% Open	
		7/30/2016	70.5	24.9	0.6	3.9	-2.8	0.11	75	100% Open	
		8/29/2016	63.1	25.4	0.6	10.2	-11	0.073	72	100% Open	
		9/26/2016	61	25.1	1.8	16.1	-11.5	0.2	70	100% Open	
		10/26/2016	55.2	25.3	0	19.3	-15.4	0.06	57	100% Open	
		11/22/2016	66.2	24.6	0.7	9.3	-11.2	0.113		100% Open	
	4										
		1/8/2016	69.8	28.2	0.7	1	-14.4	0.018	51	100% Open	
		2/29/2016	2.7	1.3	6.6	80.4	-11.6	0.068	50	100% Open	
		3/18/2016	40.4	16.9	6	36.7	-5.2	-0.003	55	100% Open	
		5/26/2016	61.5	21.5	2.5	14.5	-8	0.59	80	100% Open	
		6/24/2016	71	23.2	0.8	4.7	-7.8	0.049	77	100% Open	
		7/30/2016	69.4	22.6	0.8	7.2	-6.4	0.017	85	100% Open	
		8/29/2016	66	24.9	0.1	9.8	-7.4	0.019	80	100% Open	
		9/26/2016	54.2	25.1	0.9	22.2	-8.3	0.08	69	100% Open	
		10/26/2016	36.9	22.9	0.1	35.4	-9	0.111	49	100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		11/22/2016	59.8	23.4	0.9	15.6	-7.8	0.144		100% Open	
	5										
		1/8/2016	57.2	26.5	1.4	14.9	-13.3	0.04	71	100% Open	
		2/29/2016	56.6	26.8	0.7	15.9	-10.6	0.018	74	100% Open	Concrete Pad Rising
		3/18/2016	64.3	27.1	0.1	8.5	-14.4	0.239	72	100% Open	
		5/26/2016	61.1	25.2	0	13.7	-13.435	0.35	86	100% Open	
		6/24/2016	59.9	25.3	0	12.2	-12.5	0.201	79	100% Open	
		7/30/2016	62.1	25.2	0	12.7	-9	0.031	84	100% Open	
		8/29/2016	55	24.8	0	19.2	10.4	0.073	81	100% Open	
		9/26/2016	56.8	25.2	0.5	18.2	4.1	0.075	74	100% Open	
		10/26/2016	52.1	26.1	0	22	-15.1	0.017	72	100% Open	
		11/22/2016	57.8	25.3	0.1	16.3	-5.9	0.124		100% Open	
	6										
		1/8/2016								100% Open	Water pooled in vault
		2/29/2016								100% Open	Water pooled in vault
		3/18/2016								100% Open	
		5/26/2016								100% Open	Water pooled in vault
		6/24/2016								100% Open	Water pooled in vault
		7/30/2016								100% Open	Water pooled in vault
		8/29/2016	69.2	26.5	0	14.5	11.3	0.01	78	100% Open	Well head replaced
		9/26/2016	66.5	25.3	0.1	6.8	-15.2	0.01	71	100% Open	
		10/26/2016	51.2	25	0	23.8	-16.2	0.117	51	100% Open	
		11/22/2016	62.3	25.6	0	15	-6.7	0.045		100% Open	
	7										

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		1/8/2016	61.9	22	0.3	15.8	-14.4	0.002	52	100% Open	
		2/29/2016	40.3	18.5	1.6	39.5	-13	0.071	53	100% Open	
		3/18/2016	66	21.7	0	12.3	-10.6	0.013	55	100% Open	
		5/26/2016	64.1	20.1	0	15.8	-14.2	0.057	78	100% Open	
		6/24/2016	65.3	19	0.6	15.7	-13.5	0.76	75	100% Open	
		7/30/2016	65.4	22.6	0.8	7.2	-6.4	0.017	85	100% Open	
		8/29/2016	49	17.7	0.7	30.2	-13.1	0.026	80	100% Open	
		9/26/2016	48.6	19.6	0.7	31	-15.3	0.006	72	100% Open	
		10/26/2016	32.9	19.2	0.6	45.8	-16.4	0.117	51	100% Open	
		11/22/2016	54.2	19.7	0.6	24.3	-13.2	0.164		100% Open	
	8										
		1/8/2016	48.3	21.1	0.7	29.9	-14.4		80	100% Open	
		2/29/2016	44.9	19.9	1.5	34.6	-13.4			100% Open	
		3/18/2016	54.8	21.2	0	24	-15.4			100% Open	
		5/26/2016	46.6	19	0	31.4	-14.4			100% Open	
		6/24/2016	57.1	19.1	0.3	28.3	-12.7			100% Open	
		7/30/2016								100% Open	
		8/29/2016	38.9	16.1	1.1	43.9	1.5	0.024	84	100% Open	Well head replaced
		9/26/2016	40	19.5	0.1	41.1	-15.4	0.007	67	100% Open	
		10/26/2016	32.5	19	0	18.1	-16.4	0.16	50	100% Open	
		11/22/2016	43	18.5	0.3	32.7	-11.5	##########		100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
C											
	9										
		1/8/2016	0.2	0.1	25.5	79.2	-1.8	0.009	37	10% Open	
		2/29/2016	32.8	12.8	10.3	43.9	0.9	0.027	49	10% Open	
		3/18/2016	47.1	18	4.5	30.5	-7.4	0.025	56	10% Open	
		5/26/2016	0.6	0.2	18.6	80.6	-2	0.082	91	0% Open	
		6/24/2016	0.7	0.7	18.4	80.3	-1.6	0.023	76	0% Open	
		7/30/2016	62.6	25.9	2.2	8.5	-12.4	0.046	77	0% Open	
		8/29/2016	60.3	27.7	1.3	11.4	0	0.052	76	0% Open	
		9/26/2016	5	29	16.3	75.6	-0.7	0.112	68	0% Open	
		10/26/2016	9.3	1.5	3.3	94.5	-0.8	0.093	47	0% Open	
		11/22/2016	23	14.2	10	58.5	-2.9	0.068		0% Open	
	10										
		1/8/2016	69.2	30.5	0.2	0.1	-3.1			20% open	
		2/29/2016	63.1	27.8	1.8	2.8	-1			20% open	Air leaking
		3/18/2016	69.9	30	0	0.1	-2.9		50	20% open	
		5/26/2016	71.6	28.2	0	0.2	-3.5		60	20% open	
		6/24/2016	72.1	27.7	0.1	0.1	-8.6		70	20% open	
		7/30/2016	71.1	28.6	0.2	6.2	-10.9			20% open	
		8/29/2016	68.2	28.1	0	2.4	1.6			20% open	
		9/26/2016	61.8	27.4	0.3	9.3	-1.8		70	20% open	
		10/26/2016	36.3	21.6	1.9	41.5	-1.6	0.041		20% open	
		11/22/2016	63.5	26.9	0.4	10	-4.1	0.041		20% open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
D											
	11										
		1/8/2016	54.6	25.3	0.2	1939	-2.1	0.003	46	10% Open	
		2/29/2016	44.2	22.9	0.4	27.3	-1.1	0.042	52	10% Open	
		3/18/2016	51.2	23.8	0	2.5	-2.8	0.035	55	10% Open	
		5/26/2016	51	23.1	0	25.9	-2.1	0.075	76	10% Open	
		6/24/2016	50.2	24.1	0	25.6	-10.1	0.129	75	10% Open	
		7/30/2016	43	24.7	0.4	34.2	-11.9	0.038	65	10% Open	
		8/29/2016	31.2	24.4	0.8	43.8	-0.6	0.031	72	10% Open	
		9/26/2016	38.3	25.2	0	42.1	-1.2	0.097	67	10% Open	
		10/26/2016	31.1	24.5	0.2	52.5	-1.3	0.098	53	10% Open	
		11/22/2016	40.8	24.3	0.2	37.4	-4.5	0.078		10% Open	
	12										
		1/8/2016	66.1	29.9	1.2	2.8	-14.4	0.075	37	0% Open	
		2/29/2016	51.9	24.2	3.9	6.5	-10.3	0.123	47	0% Open	
		3/18/2016	70.6	29.2	0.1	0.1	-12.6	0.053	56	0% Open	
		5/26/2016	72	27.9	0	0.1	-14.4	0.043	78	0% Open	
		6/24/2016	66.8	27	0.2	4.4	-1.1	0.156	78	0% Open	
		7/30/2016	67.3	24.7	0.4	34.2	-1.1		75	0% Open	
		8/29/2016	63.6	27.6	0	8.3	-14.1	0.207	74	0% Open	
		9/26/2016	66.3	29.8	0.1	1.2	-14	0.101	68	0% Open	
		10/26/2016	58.6	28.5	8.3	1.9	10.7	0.083	43	0% Open	
		11/22/2016	65.8	27.6	1.5	8.4	-5.7	0.118		0% Open	
	13										

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		1/8/2016	46.2	24.9	0.2	28.7	-5.9	0.037	59	100% Open	
		2/29/2016	51.3	22.6	0.6	24.7	-1.7	0.117	64	100% Open	
		3/18/2016	54.4	22.3	0	23.3	-6.4	0.132	67	100% Open	
		5/26/2016	49.7	20.6	0	29.7	-5.6	0.2	93	100% Open	
		6/24/2016	46.4	21.2	0.3	32.2	4.4	0.185	78	100% Open	
		7/30/2016	44.7	21.7	0	33.6	-1.1	0.053	84	100% Open	
		8/29/2016	43.7	23.2	0	32.2	-3.7	0.093	79	100% Open	
		9/26/2016	38.3	23	0.4	37.9	-4.4	0.09	77	100% Open	
		10/26/2016	41.1	23.1	0	36.3	-4.7	0.061	67	100% Open	
		11/22/2016	43.9	22.1	0.1	33.7	-2.5	0.114		100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
E											
	15										
		1/8/2016	56	24.6	0.8	18.6	-13.9			85% Open	
		2/29/2016	45.3	21.8	1.4	21.3	-10			85% Open	
		3/18/2016	65.9	23.9	0.1	10.1	-12.9			85% Open	
		5/26/2016	64.5	23.2	0	12.3	-14			85% Open	
		6/24/2016	58.8	21	0.5	15.8	-1.1			85% Open	
		7/30/2016	60.1	23.3	0.1	16.5	-12.1			85% Open	
		8/29/2016	48.5	24.5	0	27.2	-12.9			85% Open	
		9/26/2016	39.3	24.3	0.2	36.2	-14			85% Open	
		10/26/2016	21.7	21.3	0.8	56.2	-11.9			85% Open	
		11/22/2016	48.8	22.9	0.3	27.4	-11			85% Open	
	16										
		1/8/2016	59.5	19.2	0.1	21.2	-14.4	0.001	55	100% Open	
		2/29/2016	34.3	10.7	6.4	29.6	-11.7			100% Open	
		3/18/2016	65.7	18.6	0.1	16.6	-15.4	0.013	63	100% Open	
		5/26/2016	65.9	17.1	0	17	-14.2	0.177	87	100% Open	
		6/24/2016	62.6	17	0.5	19.2	-13.6	0.348	79	100% Open	
		7/30/2016	61.2	16.3	0.4	21.4	-12.5			100% Open	
		8/29/2016	50.7	17.3	0	31.6	-15.1	0.035	83	100% Open	
		9/26/2016	45.6	17	6.8	36.2	-15.3	0.017	78	100% Open	
		10/26/2016	34	16.3	0	49.4	-16.3	0.114	68	100% Open	
		11/22/2016	53.3	16.8	1.2	296.1	-14.5	0.138		100% Open	
	17										

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		1/8/2016	68.6	11.8	4.8	14.8	-14.4			100 % Open	
		2/29/2016	44.3	16.3	3.7	36.5	-11.1	0.072	55	100 % Open	
		3/18/2016	76.2	11.9	2	9.8	-15.5		20	100 % Open	
		5/26/2016	65.4	9.5	3.8	21.3	-14.3			100 % Open	
		6/24/2016	48.5	6	10.1	48.5	-1.4			100 % Open	
		7/30/2016	31	5.2	10.9	52.9	-12.5			100 % Open	
		8/29/2016	37.3	7	8.9	51.2	-15.9			100 % Open	
		9/26/2016	47.9	6	6.8	35.6	-15.6			100 % Open	
		10/26/2016	36.9	8.9	3	45.6	-16.9			100 % Open	
		11/22/2016	44.5	7.1	7.3	42.5	-12.8			100 % Open	
	18										
		1/8/2016	70.1	16.5	1.2	12.2	-14.5			100% Open	
		2/29/2016	73	16.2	2.7	11.4	-9.9			100% Open	
		3/18/2016	80.7	17.1	0	2.2	-15.5			100% Open	
		5/26/2016	82	16	0	2	-14.2			100% Open	Leaking Air
		6/24/2016	75	13.8	0.4	7	-1.3			100% Open	Leaking Air
		7/30/2016	71.1	15.3	10.9	52.9	-12.5			100% Open	
		8/29/2016	49.6	13.5	2.4	34.6	15.6			100% Open	
		9/26/2016	37.1	12.9	3.9	30.4	-15.7			100% Open	
		10/26/2016								100% Open	
		11/22/2016	62.9	14.3	3.5	25.4	-5.6			100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
F											
	19										
		1/8/2016	62.7	25.6	0.5	11.2	-9.6			50% Open	
		2/29/2016								50% Open	
		3/18/2016	64.7	22.1	1.8	11.4	-6.7			50% Open	
		5/26/2016	63.7	22.5	0.2	13.6	-7.5			50% Open	
		6/24/2016	52.5	12.2	0	22.8	-7.1			50% Open	
		7/30/2016	63.9	25.1	0.6	10.4	-6.8			50% Open	
		8/29/2016	49.5	24.9	0.2	25	-6.9			50% Open	
		9/26/2016	46.1	26.3	0	27.6	-7.7			50% Open	
		10/26/2016	32.6	24.1	1	42.3				50% Open	
		11/22/2016	51.4	22.5	0.3	23.6	-7.2			50% Open	
	20										
		1/8/2016	54.9	28.7	0.1	16.3	-6.4			50% Open	
		2/29/2016								50% Open	
		3/18/2016	56.2	26.8	1.3	15.7	-6.7			50% Open	
		5/26/2016	49.6	26.6	0.1	23.7	-7.6			50% Open	
		6/24/2016	42.4	21.6	3.2	23.8	-7			50% Open	
		7/30/2016	51	26.8	0	22.2	-6.8			50% Open	
		8/29/2016	37.8	21	1.1	41.5	-5.5			50% Open	
		9/26/2016	40.3	27.6	0.5	31.3	-7.8			50% Open	
		10/26/2016	36.6	28.6	0.6	34				50% Open	
		11/22/2016	43	25.4	0.9	29.4	-6.9			50% Open	
	21										

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		1/8/2016	82.9	17.1	0	0	-7.5		110	100% Open	
		2/29/2016	68.1	15.2	2.4	12.3	-5.4			100% Open	
		3/18/2016	82.7	17.2	0	0.1	-8.8			100% Open	
		5/26/2016	84.3	15.6	0	0.1	-7.7			100% Open	
		6/24/2016	82.9	15	0.1	1.2	-5.3			100% Open	
		7/30/2016	82.7	15.7	0.1	1.5	-6.4			100% Open	
		8/29/2016	77.8	14.3	0.1	6.6	8.6			100% Open	
		9/26/2016	75.4	15	0	8.7	-8.8			100% Open	
		10/26/2016	61.7	15.4	0.1	22.6	-4.2			100% Open	
		11/22/2016	77.5	15.2	0.1	6.8	4			100% Open	
	22										
		1/8/2016	13.2	14.9	9.2	67.7	-1			5% Open	Hose Damaged
		2/29/2016	23.2	25.8	0.1	51.9	-0.3			5% Open	Hose Damaged/Air Leaking
		3/18/2016	0.5	0.2	10.9	88.4	-0.9			5% Open	
		5/26/2016	0.3	0	19	80.7	-0.8			0% Open	Hose Damaged, Leaking air. Closed to 0%
		6/24/2016	0.3	0	19.9	80.9	11.6			0% Open	Hose Damaged, Leaking air. Closed to 0%
		7/30/2016								0% Open	
		8/29/2016	16.4	23.2	0	61.2	-9	0.019	84	0% Open	Well head replaced
		9/26/2016	13.2	21.3	0.1	64.7	-1	0.031	84	0% Open	
		10/26/2016								0% Open	
		11/22/2016	7.6	11.1	0.9	71.9	0.2	0.025		0% Open	
	23										
		1/8/2016	36.9	26.3	0.2	36.6	-4.7			40% Open	
		2/29/2016	42.3	24.3	5.8	27.3	-3.5			40% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		3/18/2016	43.2	28.4	0	31.4	-5.1			40% Open	
		5/26/2016	35.7	23.1	0.1	41.1	-5.1			5% Open	Closed to 5%
		6/24/2016	38.8	23.2	0	38.4	7.7			5% Open	Closed to 5%
		7/30/2016	37.3	23.1	0.3	39.3	-8.5			5% Open	
		8/29/2016	31.4	21.4	0	46.9	-5.4			5% Open	
		9/26/2016	30.5	23.8	0	45.5	-5.5			5% Open	
		10/26/2016								5% Open	
		11/22/2016	34.7	22.9	0.1	42.3	-3.4			5% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
G											
	24										
		1/8/2016	75.1	21.4	0.6	22.9	-13			100% Open	
		2/29/2016	64.3	17.8	3.5	18.6	-10			100% Open	
		3/18/2016	77.4	20.6	0.9	1.1	-14.4			100% Open	
		5/26/2016	79.5	19.6	0.6	0.1	-13.1			100% Open	Leaking Air
		6/24/2016	65.4	18.8	0.9	6	-0.1			100% Open	Leaking Air
		7/30/2016	53.7	16	4	24.3	-2			100% Open	
		8/29/2016	60.5	17.3	1.8	24.2	-14.6			100% Open	
		9/26/2016	51.2	19.7	1.6	24.7	-14.3			100% Open	
		10/26/2016	32	14.9	0	53.4	-15.2			100% Open	
		11/22/2016	57.1	17.7	1.5	22.4	-9.9			100% Open	
	25										
		1/8/2016	44.5	22.1	0.8	32.6	-12.8			10% Open	
		2/29/2016	56.2	20.1	1.3	23.2	-9.8			10% Open	Air leaking
		3/18/2016	46.1	20.8	0.4	32.7	-14.3		80	10% Open	
		5/26/2016	39.3	19.6	0.2	40.9	-13.2		80	10% Open	Leaking Air
		6/24/2016	40.4	14.4	0.2	39.8	-0.1		80	10% Open	Leaking Air
		7/30/2016								10% Open	
		8/29/2016	55.7	19	0.3	40.5	-14.1			10% Open	
		9/26/2016	39.6	22.8	0.4	37.2	-14.6			10% Open	
		10/26/2016								10% Open	
		11/22/2016	43.8	19	0.3	39.6	-10.5			10% Open	
	26										

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		1/8/2016	55.8	24.4	0.4	19.4	-9.5			35% Open	Air leaking
		2/29/2016								35% Open	Air leaking/Damaged port
		3/18/2016	61.7	22.1	0	16.2	-10.5		100	35% Open	
		5/26/2016	55.9	20.3	0	23.8	-9.4			35% Open	Leaking Air
		6/24/2016	52.4	12.7	1.3	26.9				35% Open	Leaking Air
		7/30/2016								35% Open	.
		8/29/2016								35% Open	
		9/26/2016	48.6	22.8	0.3	27.8	-9.3			35% Open	
		10/26/2016								35% Open	
		11/22/2016	52.3	18.6	0.5	26.1	-9.4			35% Open	
	27										
		1/8/2016	0.1	0.1	19.9	79.9	-1.6			0% Open	
		2/29/2016								0% Open	
		3/18/2016	0.1	0	12.2	87.7	-1.9			0% Open	
		5/26/2016	0.6	0.2	10.6	88.6	-1.5			0% Open	
		6/24/2016	0.3	0	13.4	85.7	-1.2			0% Open	
		7/30/2016								0% Open	
		8/29/2016								0% Open	
		9/26/2016	0.9	0.2	18.1	80.7	-1.2			0% Open	
		10/26/2016								0% Open	
		11/22/2016	0.6	0.1	14	85	-1.3			0% Open	
	28										
		1/8/2016	31.2	23.5	0	45.3	-8.7		60	100% Open	
		2/29/2016								100% Open	Air Leaking

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		3/18/2016	30.8	21.4	0	47.8	-9.9		70	100% Open	
		5/26/2016	26.7	19.5	0	53.8	-9		80	40% Open	Leaking Air, Closed to 40%
		6/24/2016	24.5	16.2	0	56.7	-0.7		80	40% Open	Leaking Air, Closed to 40%
		7/30/2016								40% Open	
		8/29/2016	29	20.2	0.4	50.8	-2.3	0.022	82	40% Open	Well head replaced
		9/26/2016	31.3	21.8	5.9	47.3	-2.6			40% Open	
		10/26/2016								40% Open	
		11/22/2016	27.9	19.4	1.6	52.5	-3.7	0.022		40% Open	
	29										
		1/8/2016	60.4	10.1	4.3	25.2	-12.7			100% Open	
		2/29/2016	64	11.6	3.2	19.9	-10.3			100% Open	
		3/18/2016	74.9	11	2.6	11.5	-14.1			100% Open	
		5/26/2016	64.2	8.4	4.6	22.8	-12.9			100% Open	
		6/24/2016	66.4	10	3.1	19	-0.2			100% Open	
		7/30/2016								100% Open	
		8/29/2016	45.4	11.5	2.4	33.4	-13.7			100% Open	
		9/26/2016	49	12.1	2.6	35	-12.9			100% Open	
		10/26/2016								100% Open	
		11/22/2016	56.3	10.5	3.2	27.5	-9.9			100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
H											
	30										
		1/8/2016	45.4	19.1	0.7	34.8	-13.1	0.077	53	100% Open	
		2/29/2016	36.9	17.3	13	48.8	-9	0.225	60	100% Open	
		3/18/2016	53.7	18.5	0.2	27.6	-14.7	0.037	59	100% Open	
		5/26/2016	47.9	16.4	0	35.6	-13.3	0.149	85	100% Open	
		6/24/2016	47.9	16.3	0.3	35.9	-12.7			100% Open	
		7/30/2016								100% Open	
		8/29/2016	40.7	17.2	0.3	42.3	14.3	0.023	83	100% Open	
		9/26/2016	38.7	17.4	0.6	44	-14.7	0.024	71	100% Open	
		10/26/2016								100% Open	
		11/22/2016	43.8	16.8	0.3	39.5	-6.6	0.065		100% Open	
	31										
		1/8/2016	53.9	24.6	0.7	20.8	-13.5			100% Open	
		2/29/2016								100% Open	Air Leaking
		3/18/2016	44.4	21.2	0.6	33.8	-14.8			100% Open	
		5/26/2016	41.3	20.3	0.2	38.2	-13.9			100% Open	Leaking Air
		6/24/2016	39.8	22.6	0	37.6	-11.4			100% Open	Leaking Air
		7/30/2016								100% Open	
		8/29/2016	33.3	20.6	0.8	44.9				10% Open	Well head replaced
		9/26/2016	32.3	20.9	0.2	31.3	-15.1			10% Open	
		10/26/2016	25.5	16.1	0	59.1				10% Open	
		11/22/2016	34.4	20.1	0.2	42.2	-13.5			10% Open	
	32										

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		1/8/2016	63.6	12.5	0.1	23.8	-2.2	0.01	49	100% Open	
		2/29/2016	78.6	11.9	0	8.8	0.8	0.032	50	100% Open	
		3/18/2016	87.7	11.1	0	1.2	-3	0.035	58	100% Open	
		5/26/2016	90.1	9.8	0	0.1	-2.3	0.151	95	100% Open	
		6/24/2016	59.6	7.1	5.3	26.3	-10.9	0.104	81	100% Open	
		7/30/2016								100% Open	
		8/29/2016	84.6	9	0.6	5.8	-12.8	0.066	86	100% Open	
		9/26/2016	63.6	12.3	0.7	22.7	-14.2	0.023	69	100% Open	
		10/26/2016								100% Open	
		11/22/2016	74.5	9.6	1.7	13.8	-10.1	0.086		100% Open	
	33										
		1/8/2016	37.8	22.6	0.7	38	-4.2		40	20% Open	Hose Repaired
		2/29/2016								20% Open	Hose Damaged/Air Leaking
		3/18/2016	29.1	20.5	0.4	50	-4.2			20% Open	
		5/26/2016	24.9	18.2	0.2	56.3	-4			20% Open	Hose Damaged, Leaking air.
		6/24/2016	25.6	16.4	0.5	55.7	-4.8			20% Open	Hose Damaged, Leaking air.
		7/30/2016								20% Open	
		8/29/2016								20% Open	
		9/26/2016	47	23.4	0.2	31.3	-15.1			20% Open	
		10/26/2016	37.1	24.2	0	39.6	-16			20% Open	
		11/22/2016	33.7	20.6	0.2	45.7	-10			20% Open	
	34										
		1/8/2016	64.9	29	0.2	5.9	-13.3			100% Open	
		2/29/2016								100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		3/18/2016	64.9	27.2	0.5	7.4	-14.5		110	100% Open	
		5/26/2016	64.5	26.6	0	8.9	-13.5			100% Open	
		6/24/2016	66.9	23.6	0	7.9	-14.1			100% Open	
		7/30/2016								100% Open	
		8/29/2016								100% Open	
		9/26/2016	37.9	28.8	0	13	-14.7			100% Open	
		10/26/2016	48.8	21	0.1	20.1	-15.9			100% Open	
		11/22/2016	54.5	25	0.1	12.5	-14.6			100% Open	
	35										
		1/8/2016	0.1	0.1	20.5	79.3	-0.5			0% Open	Repaired
		2/29/2016	0.6	0.4	19.4	79.6	0.1			0% Open	
		3/18/2016	0.4	0.2	18.7	80.9	-0.3			0% Open	
		5/26/2016	0.5	0.4	17.4	82	-0.3			0% Open	Hose Damaged, Leaking Air
		6/24/2016	0.7	0.2	18.2	80.7	-0.3			0% Open	Hose Damaged, Leaking Air
		7/30/2016								0% Open	
		8/29/2016	16.6	24.4	0.1	58.9	0.3	0.006	82	0% Open	Well head replaced
		9/26/2016	20.2	24.8	0.3	35.3	0.6	-12	67	0% Open	
		10/26/2016	13	27	0	0.1	-0.6	0.072	49	0% Open	
		11/22/2016	10.2	15.4	7.2	51.4	-0.1	0.003		0% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
I											
	36										
		1/8/2016	65.1	23.2	1.4	10.3	-13.8		75	100% Open	
		2/29/2016	46.5	28.4	4	21.1	-2.8			100% Open	
		3/18/2016	71.4	24.7	0	3.9	-15		80	100% Open	
		5/26/2016	71.5	23.4	0	5.1	-13.6		80	100% Open	
		6/24/2016	51.3	30	0	20.3	-12.4		80	100% Open	
		7/30/2016								100% Open	
		8/29/2016								100% Open	
		9/26/2016								100% Open	
		10/26/2016								100% Open	
		11/22/2016	61.4	26.7	0	12.7	-13			100% Open	
	37										
		1/8/2016	39.6	18.6	8.5	36	-1.2		80	20% Open	
		2/29/2016	34.2	14.6	6.7	44.5	-2.4			20% Open	
		3/18/2016	28.3	12.4	8.7	50.6	-1.9		100	20% Open	
		5/26/2016	29.7	11.4	10.6	48.3	-1.2			5% Open	Closed to 5%
		6/24/2016	28.1	10.2	9.3	45.9	-1.7			5% Open	Closed to 5%
		7/30/2016								5% Open	
		8/29/2016								5% Open	
		9/26/2016								5% Open	
		10/26/2016								5% Open	
		11/22/2016	28.9	10.8	10	47.1	-1.5			5% Open	
	38										

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		1/8/2016	4.5	2.9	18.9	73.3	-0.9		50	100% Open	
		2/29/2016								100% Open	
		3/18/2016	23.4	8.7	8.4	59.5	-1.4		60	100% Open	
		5/26/2016	28.2	9.6	9.3	52.9	-0.7		90	5% Open	Closed to 5%
		6/24/2016	25.5	8.3	10.7	54.6	-0.3		90	5% Open	Closed to 5%
		7/30/2016	34.2	10.5	8.9	46.5	-0.4			5% Open	
		8/29/2016								5% Open	
		9/26/2016	24.8	11.1	7.4	56.7	-0.9			5% Open	
		10/26/2016								5% Open	
		11/22/2016	28.2	9.9	9.1	52.7	-0.6			5% Open	
	39										
		1/8/2016	0.3	0.1	20.4	79.2	-0.8			100% Open	
		2/29/2016	63.6	22.5	4.8	9.1	-0.3			100% Open	
		3/18/2016	28.8	11.3	7.6	52.3	-1.5			100% Open	
		5/26/2016	30.3	10.6	8.3	50.8	-0.8			25% Open	Closed to 25%
		6/24/2016	31.3	11.2	7.4	51.6	-0.7			25% Open	Closed to 25%
		7/30/2016	36.2	11.2	7.7	44.3	-0.4			25% Open	
		8/29/2016								25% Open	
		9/26/2016	26	11.5	7.3	55	-2.8			25% Open	
		10/26/2016								25% Open	
		11/22/2016	31	11.1	7.7	50.4	-1.2			25% Open	
	40										
		1/8/2016	10.8	5	16.9	67.3	-0.8		90	100% Open	
		2/29/2016								100% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		3/18/2016	71.2	21.7	0	7.1	-1.4		90	100% Open	
		5/26/2016	71.5	19.8	0	8.7	-0.7		120	100% Open	
		6/24/2016	68.1	21.2	0	7.6	-0.8		90	100% Open	
		7/30/2016	73.2	20.7	0	6.1	-0.4			100% Open	
		8/29/2016								100% Open	
		9/26/2016	73.3	18.9	0	7.8	-2.9			100% Open	
		10/26/2016								100% Open	
		11/22/2016	71.5	20.2	0	1.6	-1.2			100% Open	
	41										
		1/8/2016	0.1	0	20.4	79.5	-0.7			100% Open	
		2/29/2016								100% Open	
		3/18/2016	0.4	0.1	12.2	87.3	-1.3		90	100% Open	
		5/26/2016	0.3	0	11.5	88	-0.6		90	50% Open	Closed to 50%
		6/24/2016	0.2	0	14.6	87.3	-0.4		90	50% Open	Closed to 50%
		7/30/2016	70.9	20.5	0	8.6	-0.6			50% Open	
		8/29/2016								50% Open	
		9/26/2016	50	20	0.2	29.2	-0.8			50% Open	
		10/26/2016								50% Open	
		11/22/2016	30.4	10.1	6.6	53.3	-0.6			50% Open	
	42										
		1/8/2016	0.1	0.1	20.1	79.7	-0.7			100% Open	
		2/29/2016								100% Open	
		3/18/2016	44.3	21.6	0	34.1	-1.4		100	100% Open	
		5/26/2016	43.5	20.5	0	36.2	-0.6			50% Open	Closed to 50%

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		6/24/2016	38.7	19.6	0.5	39.3	-0.2			50% Open	Closed to 50%
		7/30/2016								50% Open	
		8/29/2016								50% Open	
		9/26/2016	26.3	22.6	0	51.3	-0.8			50% Open	
		10/26/2016								50% Open	
		11/22/2016	36.2	20.9	0.2	42.3	-0.5			50% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
J											
	43										
		1/8/2016	60.3	22.6	0.7	16.4	-13.9		80	100% Open	Air leaking
		2/29/2016								100% Open	Hose Damaged/Air Leaking
		3/18/2016	68.5	22.5	0.6	8.4	-4.6		80	100% Open	
		5/26/2016	68.5	20.5	0.1	10.9	-13		90	100% Open	Hose Damaged, Leaking air.
		6/24/2016	62.6	19.5	0	13.7	-11.9		90	100% Open	Hose Damaged, Leaking air.
		7/30/2016								100% Open	
		8/29/2016								100% Open	
		9/26/2016	62	21.7	0	16.3	-13.1			100% Open	
		10/26/2016								100% Open	
		11/22/2016	64.4	20.6	0	13.6	-12.7			100% Open	
	44										
		1/8/2016	52.1	25.3	0	22.6	-3.7		60	25% Open	
		2/29/2016								25% Open	
		3/18/2016	56.2	22.7	0	21.1	-4.3		65	25% Open	
		5/26/2016	54.2	20.2	0	25.6	-3.7		70	25% Open	
		6/24/2016	51.3	19.5	0	24.6	-3.1		70	25% Open	
		7/30/2016								25% Open	
		8/29/2016								25% Open	
		9/26/2016	40.8	22.4	0.4	36.3	-4.6			25% Open	
		10/26/2016								25% Open	
		11/22/2016	48.8	20.7	0.1	28.8	-3.8			25% Open	
	45										

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		1/8/2016	34.4	22.6	0.1	42.9	-1.2		60	10% Open	
		2/29/2016								10% Open	
		3/18/2016	36.6	21.1	0.3	42	-1.8		60	10% Open	
		5/26/2016	38.1	19.8	0	42.1	-1		70	5% Open	Closed to 5%
		6/24/2016	37.5	17.9	0	44.8	-0.6		70	5% Open	Closed to 5%
		7/30/2016								5% Open	
		8/29/2016								5% Open	
		9/26/2016	20.2	19.7	0.7	56.1	-1.3			5% Open	
		10/26/2016								5% Open	
		11/22/2016	31.9	19.1	0.2	47.7	-1			5% Open	
	46										
		1/8/2016	45.8	25.9	1	27.3	-9.7	0.093	44	10% Open	
		2/29/2016	43.2	23.4	0.7	32.7	-6.9	0.046	49	10% Open	
		3/18/2016	49.6	23.4	0.2	26.8	-10.1	0.006	54	10% Open	
		5/26/2016	48.3	22.3	0	29.4	-10	0.076	84	10% Open	
		6/24/2016	50.5	22.7	0.1	26.3	-9.3	0.053	73	10% Open	
		7/30/2016								10% Open	
		8/29/2016	39.8	23.6	0.1	35.8	-9.8	0.041	75	10% Open	
		9/26/2016	39.4	25.6	0	36.1	-10.3	0.018	70	10% Open	
		10/26/2016	35.7	24.1	0.9	38.9	-11.3	0.135	49	10% Open	
		11/22/2016	42.7	23.7	0.2	33.3	-10.1	0.0646		10% Open	
	47										
		1/8/2016	22.4	22	0.8	54.8	-8.7	0.08	46	0% Open	
		2/29/2016	30.8	21.3	0.4	48.5	-6.4	0.065	50	0% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		3/18/2016	16.4	19.4	0.1	64	-8.4	0.002	54	0% Open	
		5/26/2016	20.5	20.2	0.1	59.2	-7.7	0.093	79	0% Open	
		6/24/2016	17.8	21.7	0.4	60.5	7.6	0.067	72	0% Open	
		7/30/2016								0% Open	
		8/29/2016	14.4	21.1	0.7	63.9	8.1	0.02	72	0% Open	
		9/26/2016	15.1	22.3	0.4	62.2	-8.3	0.01	67	0% Open	
		10/26/2016	9.8	18.7	0.5	71.7	-8.4	0.146	51	0% Open	
		11/22/2016	15.5	20.8	0.4	63.5	-1.7	0.0672		0% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
L											
	48										
		1/8/2016	58.3	30.8	0.5	10.4	-5.6	0.044	37	10% Open	
		2/29/2016	61.1	26.7	0.6	9.4	-2.2	0.175	51	10% Open	
		3/18/2016	66.5	28.9	0	4.6	-5.1	0.007	54	10% Open	
		5/26/2016	62.8	27.8	0	9.4	-4.8	0.102	89	10% Open	
		6/24/2016	65	27.7	0	8.2	4.3	0.196	76	10% Open	
		7/30/2016	63.4	29.1	0.3	8.7	-9.9	0.055	82	10% Open	
		8/29/2016	54.6	28.9	0	16	-2	0.186	76	10% Open	
		9/26/2016	47.3	26.6	1.9	24	-2.9	0.068	71	10% Open	
		10/26/2016	31.8	31.3	1.8	12.6	-4.1	0.142	50	10% Open	
		11/22/2016	54.2	28.6	0.7	13.2	-3.2	##########		10% Open	
	49										
		1/8/2016	64	29.3	0.7	6	-1.9	0.004	49	5% Open	
		2/29/2016	71.8	28.9	0.1	0.1	0.2	0.005	50	5% Open	
		3/18/2016	53.5	28.4	0.5	17.6	-1.6	-0.002	54	5% Open	
		5/26/2016	62	28.9	0	9.1	-1.6	0.098	76	5% Open	
		6/24/2016	58.4	29.2	0.6	11.5	1.4	0.047	71	5% Open	
		7/30/2016	51.6	30	0.1	18.3	-12.1	0.07	76	5% Open	
		8/29/2016	40.4	28.4	0.2	31.6	-0.4	0.098	73	5% Open	
		9/26/2016	45.8	29.6	1	27.7	-0.8	0.071	69	5% Open	
		10/26/2016	36.5	30	0	33.5	-0.9	0.075	53	5% Open	
		11/22/2016	49.1	29.4	0.3	22	-2.4	0.0765		5% Open	
	50										

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		1/8/2016	64.3	28.1	0	7.6	-5.8	0.02	41	100% Open	
		2/29/2016	69.3	25.9	0	4.6	-2.8	0.041	51	100% Open	
		3/18/2016	68	26.7	0	5.3	-5.1	0.001	55	100% Open	
		5/26/2016	66.9	24.9	0	8.3	-4.6	0.056	89	100% Open	
		6/24/2016	66.6	27.8	0.1	6.4	4.3	0.042	78	100% Open	
		7/30/2016	67.4	24.9	0.5	2.3	-9.9	0.06	77	100% Open	
		8/29/2016	69.1	24.1	0	6.2	-2.1	0.075	77	100% Open	
		9/26/2016	61.8	23.8	2.4	13.2	-0.1	0.092	72	100% Open	
		10/26/2016	65.7	25.3	1.1	7	-4	0.151	48	100% Open	
		11/22/2016	66.3	25.1	0.7	7.2	-2.7	##########		100% Open	
	51										
		1/8/2016	55.2	24.4	0	25.4	-5.2	0.112	66	100% Open	
		2/29/2016	41.9	20.4	0.7	37	-2.5	0.184	68	100% Open	
		3/18/2016	58.4	22.6	0.1	18.2	-4.1	0.086	54	100% Open	
		5/26/2016	53.7	20.4	0.6	25.3	-4.2	0.137	83	100% Open	
		6/24/2016	37.7	21.7	0	21	3.9	0.16	77	100% Open	
		7/30/2016	55.1	19.3	0.8	24.8	6.3	0.063	85	100% Open	
		8/29/2016	43.3	20.5	0.6	35	-2	0.032	79	100% Open	
		9/26/2016	39.8	23.3	0.5	37.3	2.9	0.033	73	100% Open	
		10/26/2016	31.4	20.9	0	47.7	-3.8	0.034	67	100% Open	
		11/22/2016	43.5	21	0.4	31.9	0.5	0.0765		100% Open	
	52										
		1/8/2016								0% Open	
		2/29/2016								0% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
		3/18/2016								0% Open	
		5/26/2016								0% Open	Well Head damaged, needs to be replaced.
		6/24/2016								0% Open	Well Head damaged, needs to be replaced.
		7/30/2016								0% Open	Well Head damaged, needs to be replaced.
		8/29/2016	56.8	24.7	0.1	17.9	-1.5	0.223	81	0% Open	Well head replaced
		9/26/2016	39	24.9	0.8	16.4	-2.1	0.108	75	0% Open	
		10/26/2016	44.1	26.1	0.8	18.7	-2	0.124	56	0% Open	
		11/22/2016	46.6	25.2	0.6	17.7	-1.9	##########		0% Open	

Zone	Well ID	Date	CH4	CO2	O2	Bal	SP	DP	Temp	Valve Position	Comments
None											
	14										
		1/8/2016	30	21.2	1.2	37.6	-3	0.036	48	10% Open	
		2/29/2016	32.5	19.2	0.2	48.2	-0.8	0.055		10% Open	
		3/18/2016	31.2	20.9	0	47.9	-3.6	0.014	55	10% Open	
		5/26/2016	25.8	19	0	55.2	-3	0.143	85	5% Open	Closed to 5%
		6/24/2016	26.4	18.5	0.6	54.5	2.5	0.075	75	5% Open	Closed to 5%
		7/30/2016								5% Open	
		8/29/2016	23.1	19.5	0	57.5	1.3	0.009	82	5% Open	
		9/26/2016	20	18.5	0.7	61.1	-2.2	0.02	66	5% Open	
		10/26/2016	15	18.6	0.1	66.8	-2.4	0.084	53	5% Open	
		11/22/2016	22.1	18.8	0.3	59	-0.8	0.066		5% Open	

D

Flare Data Sheets

Flare Data

Date	Time	CH4	CO2	O2	Balance	Comments
4/28/2016	715	35.2	15.4	4.9	44.7	DL-1 purge 89 gal, DL-5 purge 47 gal, DL-10 purge 16 g
5/26/2016		34.9	16.1	5.9	43.1	DL-1 purge 17 gal, DL-5 purge 31 gal, DL-10 purge 9 gal
5/26/2016	1445	34.5	14.4	6.5	44.6	
6/24/2016	700	33.3	15.3	7.3	44.5	DL-1 purge 10 gal, DL-5 purge 5 gal, DL-10 purge 0 gal
6/24/2016	1130	34.9	14.9	6.8	44.1	
7/16/2016	1015	33.8	16.2	5.9	41.7	DL-5 120 gal
8/16/2016	910	33.8	15.7	4.9	45.7	DL-5 75 gal
9/16/2016	800	34.3	27.6	0.2	41.3	DL-1 60 gal DL-5 90 gal
9/16/2016	1130	37.2	19	3.6	40.2	
10/28/2016	815	35.7	17.2	2.9	41	DL-5 60 gallons
11/15/2016	1230	36.4	16.2	5.5	41.4	DL-5 60 gallons, 30 gallons DL-1
12/20/2016	800	35.2	17.9	7.1	44.2	

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
1/4/2016	1140	On	12638	15.7	1418	566	400.3	Ignitor replaced, Restart
1/7/2016	844	Off	12643	17	1410	617	400.5	FF restart
1/8/2016	715	off	12644	17.1	1395	624	400.5	
1/11/2016	710	Off	12653	18.1		643	400.8	FF
1/13/2016	807	Off	12654	17.2	1319	618	400.8	FF, Restart
1/15/2016	724	Off	12662	17.3	1350	628	401.1	FF, Restart
1/19/2016	826	Off	12683				401.8	FF
1/21/2016	1147	off	12683		1335	622	401.8	ff restart
1/25/2016	718	Off	12688					FF
1/26/2015	657	Off	12689	17.1	1355	616	402	FF restart
	707	Off	12698	17.8	1323	625	402.4	FF, restart
2/1/2016	712	Off	12713	17.6	1459	637	402.9	FF, Restart
2/3/2016	717	Off	12719				403.1	FF
2/4/2016	720	Off	12720	16.1	1420	578	403.1	FF, Restart
2/8/2016	1337	Off	12724	16.3	1484	599	403.2	FF, Restart
2/10/2016	836	Off						FF
2/12/2016	838	Off	12739				403.7	FF
2/15/2016	708	Off	12739				403.7	FF
2/16/2016	723	Off	12739	16.5	1329	607	403.7	FF, Restart
3/2/2016	850	Off	12763	16.6	1353	579	404.5	FF, Restart
3/4/2016	825	Off	12771				404.7	FF
3/10/2016	803	Off	12771	16	1415	560	404.8	FF, Restart
3/14/2016	822	Off	12780	16.5	1011	596	405	FF restart
3/15/2016	925	On	12793	15.2	1432	532	405.4	
3/18/2016	712	Off	12801	17	1391	621	405.7	FF Restart
3/21/2016	731	On	12811	16.6	1418	608	406	FF restart
3/24/2016	800	Off	12829	0	57	0	406.8	FF
3/25/2016	855	Off	12829	16.2	1384	586	406.8	FF restart
3/28/2016	1006	off	12838	16.5	1387	605	406.9	FF restart
3/31/2016	8000	Off	12845	17.2	1262	616	407.2	FF Restart
4/1/2016	800	on	12858	15.2	1431	544	407.6	
4/7/2016	600	Off	12862	17.4	1420	635	407.8	FF Restart
4/14/2016	853	Off	12876	15.7	1432	560	408.2	FF Restart
4/15/2016	726	Off	12884				408.5	FF
4/18/2016	723	Off	12885	16.1	1412	589	408.5	FF restart
4/20/2016	720	Off	12907				409.2	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
4/21/2016	713	Off	12907	17.9	1190	636	409.2	FF,
4/22/2016	707	On	12919	15.5	1427	556	409.6	
4/25/2016	735	Off	12929	16.2	1381	578	409.9	FF restart
4/27/2016	701	Off	12951				410.6	FF
4/28/2016	735	Off	12951				410.6	FF
4/29/2016	803	Off	12951				410.6	ff
5/3/2016	730	Off	12952	16.3	1519	603	410.7	FF Restart
5/5/2016	720	Off	12962	16.7	1447	614	411	FF
5/9/2016	832	Off	12972				411.4	FF
5/10/2016	800	Off	12972				411.4	FF
5/11/2016	703	Off	12972	17.7	1244	635	411.4	FF Restart
5/12/2016	800	off	12981				411.7	FF
5/13/2016	731	Off	12981	16.4	1483	609	411.7	FF, Restart
5/17/2016	705	Off	13000	19.3		675	412.3	FF
5/19/2016	1037	Off	13000	16.3	1418	587	412.3	FF Restart
5/23/2016	700	Off	13006	17.1	1209	621	412.5	FF, Restart
5/26/2015	656	Off	13015	18.1	1406	629	412.8	FF
5/27/2016	703	Off	13024				413.1	FF
5/31/2016	755	Off	13024	15.7	1448	576	413.1	FF, restart
6/1/2016	804	Off	13032				413.4	FF
6/2/2016	802	Off	12032	16.8	1359	585	413.4	FF, restart
6/6/2016	1200	Off	13040	15.6	1641	572	413.6	FF, restart
6/9/2016	650	Off	13054				414.1	FF
6/10/2016	703	Off	13055	17.7	616		414.1	FF, Restart
6/13/2016	920	Off	13064	16.6	1383	595	414.4	FF, Restart
6/16/2016	745	Off	13070	16.3	1120	589	414.6	FF Restart
6/20/2016	714	Off	13079	16.6	1362	593	414.9	FF, Restart
6/22/2016	911	Off	13081	15.4	1355	563	415	FF, Restart
6/27/2016	812	Off	13088	15.9	1594	580	415.2	FF restart
6/29/2016	724	On	13107	15.1	1438	548	415.8	
7/1/2016	720	Off	13116	16.4	1352	586	416.2	FF, Restart
7/5/2016	800	Off	13118	15.6	1439	573	416.2	FF, restart
7/7/2016	707	Off	13126	15.6	1424	577	416.4	FF, Restart
7/8/2016	748	Off	13135				416.7	FF
7/11/2016	753	Off	13136	16.4	1274	585	416.7	FF, restart
7/13/2016	809	Off	13144	16.2	1423	600	417	FF, restart

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
7/15/2016	718	Off	13145	14.9	1413	563	417	FF, restart
7/18/2016	735	Off	13154	15.8	1471	582	417.3	FF, restart
7/19/2016	708	Off	13163				417.6	FF
7/20/2016	659	Off	13163	16.9	1187	613	417.6	Restart
7/22/2016	820	Off	13173	15.5	1422	560	417.9	FF restart
7/25/2016	740	Off	13192	16.4	1363	595	418.6	FF, Restart
7/29/2016	844	Off	13211	15.3	1392	560	419.2	FF, Restart
8/1/2016	705	Off	13220	15.5	1032	571	419.4	FF, restart
8/3/2016	742	Off	13230	17.5	1105	609	419.7	FF, restart
8/5/2016	713	Off	13239	15.8	1347	564	420	FF, restart
8/8/2016	730	Off	13259				420.7	FF
8/9/2016	714	Off	13259	16.2	973	578	420.7	FF, Restart
8/15/2016	757	Off	13288	15.6	1136	567	421.5	FF, Restart
8/18/2016	949	Off	13297	14.5	1390	534	421.8	FF, Restart
8/19/2016	724	On	13305	14.5	1445	528	422	
8/22/2015	718	Off	13315	15.1	1264	550	422.3	FF, Restart
8/24/2016	737	Off	13325	15.2	1441	542	422.6	FF,Restart
8/26/2016	830	On	13346	13.9	1436	506	423.2	
8/31/2016	914	Off	13363	15.9	1173	577	423.8	FF, restart
9/2/2016	745	Off	13381				424.3	FF
9/6/2016	704	Off	13381	15.2	1335	554	424.3	Restart
9/8/2016	734	Off	13391	15.9	1268	564	434.6	FF, Restart
9/12/2016	712	Off	13400	16.3	1230	574	424.9	FF, Restart
9/14/2016	940	Off	13410	16.4	1426	590	425.2	FF, Restart
9/19/2016	715	Off	13427	15.6	1333	564	425.7	FF, Restart
9/22/2016	711	Off	13437	16.3	1379	576	426	FF, restart
9/26/2016	704	Off	13447	16.4	1310	580	426.3	FF, restart
9/28/2016	728	Off	13467	0	57	0	427	FF
9/30/2016	722	Off	13467	17	1288	584	427	Restart
10/4/2016	716	Off	13477	17.6	562	598	427.3	FF restart
10/6/2016	619	Off	13487	15.5	1418	567	427.6	FF, Restart
10/10/2016	714	Off	13497	16.5	1168	595	427.9	FF, restart
10/12/2016	700	off	13506	16.9	1358	618	428.2	FF, restart
10/14/2016	706	Off	13526	0	47	0	428.8	FF
10/17/2016	700	Off	13526	16.5	1321	595	428.8	Restart
10/20/2016	824	Off	13536	17.5	1337	627	429.2	FF restart

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
10/24/2016	844	Off	13566	15.2	1413	546	430.1	FF restart
11/1/2016	703	Off	13583	17	1288	609	430.6	FF, Restart
11/2/2016	715	Off	13593	16.7	1318	587	430.9	FF, Restart
11/7/2016	725	off	13613	18	1203	583	431.5	FF, Restart
11/8/2016	1507	On	13630	14.5	1416	521	432.1	
11/9/2016	1430	On	13639	15	1418	525	432.3	
11/17/2016	631	Off	13668	0	41	0	433.3	FF
11/21/2016	940	Off	13668	17.5	1606	634	433.3	Restart
1/23/2016	820	Off	13675				433.5	
11/30/2016	1036	Off	13675				433.5	FF, Restart on site
12/2/2016	731	Off	13691	0	28	0	434	FF
12/6/2016	725	On	13691	15.3	1411	553	434	FF, restart on site
12/13/2016	654	Off	13732				435	FF
12/14/2016	741	Off	13723	17.1	1205	618	435	Restart
12/19/2016	710	Off	13742	0	25	0	435.6	FF
12/21/2016	735	On	13751	15.1	1431	541	435.9	
12/27/2016	753	Off	13760	15.8	1352	571	436.2	FF restart
12/28/2016	1127	Off	13770	0	47	0	436.4	FF
12/29/2016	708	Off	13770	17.3	1200	601	436.4	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	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: 1/8/2016 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:
4 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
5 Use "NS" (Not Satisfactory) where problems are noted.
6 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: 2/29/2016 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:
7 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
8 Use "NS" (Not Satisfactory) where problems are noted.
9 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: 3/18/2016 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:
10 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
11 Use "NS" (Not Satisfactory) where problems are noted.
12 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: 4/28/2016 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)	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	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:
13 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
14 Use "NS" (Not Satisfactory) where problems are noted.
15 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: 5/26/2016 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:
16 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
17 Use "NS" (Not Satisfactory) where problems are noted.
18 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: 6/24/2016 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:
19 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
20 Use "NS" (Not Satisfactory) where problems are noted.
21 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: 7/30/2016 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:
22 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
23 Use "NS" (Not Satisfactory) where problems are noted.
24 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: 8/29/2016 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:
25 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
26 Use "NS" (Not Satisfactory) where problems are noted.
27 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: 9/26/2016 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:
28 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
29 Use "NS" (Not Satisfactory) where problems are noted.
30 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: 10/26/2016 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:
31 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
32 Use "NS" (Not Satisfactory) where problems are noted.
33 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: 11/22/2016 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:
34 Use a check in the box to indicate that the specific item number in the area has been inspected and no problems were noted.
35 Use "NS" (Not Satisfactory) where problems are noted.
36 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: 12/20/2016 Inspector's Initials: MVP

G

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: 1/8/2016 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: 2/29/2016 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: 3/18/2016 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: 4/28/2016 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: 5/26/2016 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: 6/24/2016 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: 7/30/2016 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: 8/29/2016 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: 9/26/2016 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: 10/26/2016 Inspector's Initials: MVP

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: 11/22/2016 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: 12/20/2016 Inspector's Initials: MVP