

Bridgeton Landfill, LLC

13570 St. Charles Rock Road
Bridgeton, Missouri 63044

Ms. Charlene S. Fitch, P.E.
Chief Engineering Section
Missouri Department of Natural Resources
1738 East Elm Street
Jefferson City, Missouri 65101

August 13, 2013

Dear Ms. Fitch:

**North Quarry Contingency Plan – Part 1
Response to July 24, 2013 MDNR Comments
Bridgeton Landfill, Bridgeton, Missouri
Permit No. 0118912**

On July 24, 2013 we received your letter which provided comments on our June 27, 2013 submittal of the “Bridgeton Landfill North Quarry Contingency Plan – Part 1 (Plan).” Per the Agreed Order, our response to comments is due within 20 days of your letter which makes the due date August 13, 2013. This letter transmits a revised Plan and provides responses to your individual comments (your comments in italics and our responses in regular font).

COMMENT:

1. The Plan was submitted in draft form and was not signed and sealed by a Professional Engineer, registered in the State of Missouri, as required by the First Agreed Order.

Routinely, the Solid Waste Management Program (SWMP) would not review documents that fail to meet the compliance requirements set forth in an Agreed Order. Due to the Subsurface Smoldering Event (SSE) occurring at the Bridgeton Landfill and the need for timely implementation of a Plan, the SWMP has reviewed the "Draft" Plan submittal for compliance with the Missouri Solid Waste Management Law and regulations and the First Agreed Order, Case No. 13SL-CC01088. As submitted, the Plan is incomplete and not approvable as written. It includes unacceptable trigger criteria and timeframes for completion of work, and overall lacks sufficient detail/clarity which requires submission of additional or clarifying information.

Section 22.A. of the First Agreed Order stated the following would be addressed in Part 1:

- i) Establishment of trigger criteria for installation of additional Temperature Monitoring Probes (TMP) in the North Quarry, along with a plan and schedule for such installation, if triggered;*
- ii) Establishment of trigger criteria for installing Gas Interceptor Wells (GIW) within the North Quarry to control further migration of the SSE, along with a schedule for such well installation, if triggered; and*

- iii) *Establishment of trigger criteria for capping the North Quarry with an EVOH geomembrane cap, along with a schedule for such capping, if triggered.*

RESPONSE:

It was our understanding, consistent with discussions with the Attorney General's Office, that the proposed trigger evaluation would be submitted in DRAFT form for MDNR's review and feedback. It is not appropriate for a Professional Engineer to sign and seal a DRAFT document. However, the construction plans submitted as part of the Part 2 submission were signed and sealed by a Missouri Engineer consistent with the requirements of the Agreed Order.

We disagree that the Plan as submitted was incomplete. The Plan provided all of the information requested by Section 22.A of the Agreed Order and even went beyond the requirements of the Agreed Order by offering trigger criteria for establishment of an isolation break between the North Quarry and radiological materials contained in West Lake OU-1 Area 1 (which was not required until Part 2 of the Plan). We find that many of the comments that are included in your comment letter are requests that go beyond the Agreed Order's requirements for the Part I submittal. While we take the opportunity with this letter and Plan submittal to address certain of those comments—they are outside the requirements of the Agreed Order, and the Plan as submitted cannot be considered incomplete under the Agreed Order based on such additional matters.

We disagree that the as submitted Plan lacked sufficient detail/clarity. In reviewing your comments, we find that your stated "lack of detail" relates to items which are outside the requirements of Section 22.A of the Agreed Order. Regarding clarity—Table 1 of our Plan provided a clear and concise compilation of all of the requirements of Section 22.A of the Agreed Order, and as previously discussed, even went beyond the requirements by offering a trigger criterion for an isolation barrier.

That the Plan contains "unacceptable trigger criteria and timeframes for completion of work" is not a scientific fact. Our proposed trigger criteria and timelines are based on detailed examination of site-specific data as well as team experience at sites experiencing similar issues. In fact, MDNR has not raised any scientific basis for its dispute with the proposed criteria, nor has it identified flaws in our detailed evaluation of the criteria proposed. We remain open to continuing discussion with MDNR with the goal of achieving agreed trigger criteria, because that was the intent of the Plan as set forth in the Agreed Order and it is our goal to reach an agreed plan in an expedient manner. The Plan as submitted has provided substantial basis for the proposed criteria in compliance with the Agreed Order and the spirit of our discussions.

Trigger Values

Comment 1. The proposed trigger values of 220° F or two consecutive months of field-verified settlement front movement of 1.35 feet per month in the Plan - Part 1 are too high to be approved by the department given our understanding of subsurface smoldering events. As discussed, Republic Services views settlement as an indicator of the actual location of the SSE. However, the purpose of the Plan - Part 1 is to establish triggers that allow sufficient time for completion of work plans to prevent movement of the SSE into the North Quarry and may ultimately result in installation of an isolation break between the North Quarry and West Lake

Landfill Operable Unit 1, Area 1 as a final solution should other preventative measures fail. The following table details the department's Temperature and Carbon Monoxide (CO) criteria for Contingency Plan Action.

Note: The department agrees that physical characteristics such as vertical settlement data can provide confirmation of the actual location of an existing SSE, but it is not a predictor of an SSE.

Proposed Sentry Criteria ^{1,2}		Bridgeton Sanitary Landfill, North Quarry Isolation Break	
Indicator	Volume or/and Temperature	Isolation Break Required	Parameters
Carbon Monoxide (CO)			
CO levels in any gas extraction well or sentry monitoring well in the North Quarry.	>1,500 ppm	YES	CO result shall be repeatable and re-measured within 8 hours of receipt of the data. CO measurements shall be based on laboratory analysis and not field equipment. DNR and the fire authority shall be notified within 48 hours. Should any result exceed 1,500 ppm CO, the isolation break shall be constructed.
CO levels in two or more gas extraction wells and/or sentry monitoring well in the North Quarry.	>1,000 ppm	YES	Re-measure the initial CO result over 1,000 ppm within five days of receipt of the data. CO results greater than 1,000 ppm, but less than 1,500 ppm shall be re-measured 4 times for 4 weeks. DNR and the fire authority shall be notified within 5 days. Should all the retest exceed 1,000 ppm CO, the isolation break shall be constructed.
CO levels in any gas extraction well or sentry monitoring well in the North Quarry.	<1,000 ppm	No	No additional actions required. Continue monitoring per the First Agreed Order (Case No. 13SL-CC01088).
Temperature (°F)			
Any reportable temperature in a TMP at the sentry line ³ or in the North Quarry.	>200°F	YES	Temperature result shall be repeatable within 8 hours. DNR and the fire authority shall be notified within 48 hours. Should any temperature exceed 200°F in a TMP, the isolation break shall be constructed.
Any reportable temperature in a gas well located within the North Quarry.	>180°F	YES	Temperature result shall be repeatable within 8 hours. DNR and the fire authority shall be notified within 48 hours. Should any temperature exceed 180°F in a gas well, the isolation break shall be constructed.
Combination of CO + °F			
Any reportable temperature in a TMP or gas well at or past the sentry line exceeding 195°F and any gas well in the North Quarry exceeding 1,500 ppm CO.	>195°F + >1,500 ppm	YES	Temperature result shall be repeatable within 8 hours. DNR and the fire authority shall be notified within 48 hours. Should any temperature exceed 195°F in a gas well in the North Quarry and CO is detected above 1,500 ppm at the sentry line or North Quarry, the isolation break shall be constructed.
Any reportable temperature in a TMP less than 195°F or gas well located within the North Quarry or sentry line with CO less than 1,000 ppm.	<195°F + <1,500 ppm	No	Temperature(s) shall be collected weekly. Continue monitoring per the First Agreed Order (Case No. 13SL-CC01088).

¹ These criteria are in addition to the First Agreed Order of Preliminary Injunction (Case No. 13SL-CC01088) between the State of Missouri and the Bridgeton Sanitary Landfill, LLC.

² The temperature and CO levels for this matrix are for the establishment of a trigger value and not for the confirmation of a smoldering event.

³ The sentry line for this matrix is currently defined as TMP-1 through TMP-4 on the Well Layout Plan by SCS Engineers, date 1/10/2013.

RESPONSE:**Regarding Trigger Values for Northern Progression of SSE to the North Quarry**

As you note, settlement can provide confirmation of the actual location of an SSE, but is not a predictor of an SSE. Bridgeton Landfill agrees that settlement is not a predictor or detector of the potential presence of an SSE, and also represents that we are not attempting to predict or detect an SSE. That a subsurface reaction is occurring in the South Quarry is not debatable, it is occurring. However, in order to plan so that work is completed prior to the area of the work or the environment being impacted by the SSE, it is essential to know where the SSE is occurring, where it is moving, if it is diminishing or enlarging, and how fast it is moving. The settlement front was not to be used at the location of a proposed action, but as an indicator well in advance of an action. We feel that settlement provides the best indicator of these conditions.

Another strong indicator of location of an existing SSE is in situ temperature in the waste mass such as that obtained by the temperature monitoring probes (TMPs). The table provided in your comment letter affirms TMP temperatures as a trigger criterion. However, your proposed trigger value (200° F) is not representative of the location of the SSE, rather, it is a temperature that will occur at an unknown and uneven distance in warmed waste and/or water vapor ahead of the pyrolysis caused by the SSE.

Gas quality and temperature obtained at a gas extraction wellhead provide generalized, averaged data that is heavily influenced by wellfield operational issues (spacing and location, screen interval, available vacuum, etc.). As such, it is not very useful for determining the status, location, rate of movement, or direction of movement of an ongoing SSE (but can be very useful for detecting a potential or imminent but as yet undeveloped SSE, as discussed below).

The issues presented in the previous three paragraphs were the subject of detailed examination and analyses of site-specific data as presented in Appendix E of the Plan. MDNR has not yet provided any comments on the particular contents of Appendix E. We remain open to discussing with MDNR any technical concerns you may have regarding this evaluation.

Nevertheless, even though we believe the approach proposed in our DRAFT Plan was both scientifically supported and appropriately conservative, it is our goal to reach agreement with MDNR in order to allow us to have an agreed framework for action. As such, we will agree to eliminate settlement monitoring as a trigger criterion and use maximum TMP temperature of 200° F as the sole criterion for SSE movement toward the North Quarry. Section 5.2 and Table 1 of the revised Plan incorporate changes based on the above discussions.

Regarding Potential Occurrence of an Independent SSE in the North Quarry

Gas quality can be a good predictor of an as-yet unconfirmed and/or potentially-imminent subsurface reaction or SSE, and so it is appropriate for application in the North Quarry area where an SSE is not occurring. As noted above, the trigger criteria as proposed in the Plan were developed from a scientific evaluation of available data related to the emergence of the SSE in the South Quarry. However, to permit us to

move forward and reach agreement with MDNR in order to have an established framework, Bridgeton Landfill has modified the trigger values using values contained in the table provided in your comment letter. Section 5.3 and Table 1 of the revised Plan incorporates related changes.

Comment 2. Republic Services must provide an immediate verbal notification to the department should a triggering event occur and written notice must then be provided within 48 hours. For business hours call the SWMP Engineering Section Chief or Program Director at (573) 751-5401 and for afterhours, call the 24-hour Spill Line at (573) 634-2436. This notice is required to allow the department to participate in subsequent confirmatory re-sampling at our option or complete independent sampling. Validation of a temperature triggering event is required within 8 hours and carbon monoxide re-sampling must occur within 8 hours of receipt of a report indicating a trigger has been exceeded. The report on the re-sampling must be expedited with receipt within 48 hours, unless another timeframe has been agreed upon with the department.

RESPONSE:

Triggers are intended to provide adequate time to mobilize and perform major work activities with each activity having durations measured in months. Therefore, urgent and pressing notifications are not necessary. Rather, diligent confirmation and verification by Bridgeton Landfill that trigger criteria have been attained, followed by expedient notification, and—if desired—independent verification by MDNR is more appropriate.

Therefore, the revised Plan includes (Section 5) verification and notification timelines and procedures that address the MDNR's desire for rapid notification while not imposing an impossible compliance issue or opportunity for unnecessary or undue public concern. These procedures include notification of the SWMP Engineering Section Chief as requested.

Trigger Lines

Comment 1. Trigger Line 1, which is formed by an arc connecting TMP-6, -14, -13 and -5 is acceptable for triggering installation of a new row of enhanced GIWs and the North Phase 1 Enhanced Gas Collection and Control System (GCCS) installation including the EVOH capping system. A triggering event at Trigger Line 1 will be any temperature > 200° F at any of the TMPs in this line.

RESPONSE:

Section 5.1 and Table 1 of the Plan have been revised to include the information in your comment. As discussed in the revised Plan, cooling points may be installed in addition to, or in lieu of, new GIWs.

Comment 2. Although an engineering based explanation for placement of the new TMPs as detailed in Figure 4 of the Plan - Part 1 was provided based on the geology of the landfill, the department finds placement of the new TMP line at approximately half-way through the North Quarry to be unacceptable. The new TMPs must be located closer proximity to the existing TMP line formed by TMP-1, -2, -3 and -4.

Comment 3. The department questions placement of Trigger Line 2 at the existing line formed by TMP-1, -2, -3 and -4 which is located at the northern end of the "neck" between the two quarries. Upon installation of the new TMPs closer to the existing line of TMP-1, -2, -3 and -4, the new line of TMPs will serve as Trigger Line 2. A triggering event at Trigger Line 2 will be any temperature > 200° F at any of the TMPs in the new TMP line. This new Trigger Line 2 does away with the need for a separate Trigger Line 3, as the new Trigger Line 2 serves as the triggering point for installation of the remaining enhanced GCCS including the second part of the North Quarry cap and requires construction of the isolation break.

RESPONSE:

Bridgeton Landfill strongly believes that a third trigger line located half way through the North Quarry (triggering construction of the Isolation Barrier) is conservative, protective, and minimizes the ultimate need for Isolation Barrier construction and its related issues (airport concern, etc.). MDNR has not provided a scientific basis for objection to this trigger point or an explanation of why, given the available data, this would not serve as an appropriately conservative action line. Nevertheless, we have revised the trigger lines as you propose. We have, however, eliminated the use of TMPs at the new Trigger Line 2 location because the reduction in triggered maximum carbon monoxide value (from Bridgeton-proposed 3,000 ppm to MDNR-required 1,500 ppm) makes the use of TMPs irrelevant.

Enhanced Gas Collection and Control System (Including Capping of North Quarry)

Comment 1. The department understands that Republic Services' submission of the July 27th Plan-Part 2 and a subsequent filing on July 30th related to the GCCS will include an evaluation and explain the planned enhancements and whether additional vertical gas extraction wells will be installed in the North Quarry. The department remains concerned that overdraw of the GCCS at the facility is problematic as it may introduce oxygen into the waste mass that could result in additional Subsurface Oxidation (SSO) events. From our discussions regarding the department's July 3, 2013 letter on the GCCS, the department understands that Republic Services is closely watching this system and taking action, where needed. These actions have included de-watering and maintenance of gas extraction wells in the North Quarry with a focus on limiting oxygen intrusion into the waste mass.

RESPONSE:

Part 2 of the North Quarry Contingency Plan was submitted on July 27, 2013. Part 2 included (in Appendix C) a detailed assessment of the current North Quarry GCCS under existing conditions. The assessment concluded that the existing GCCS in the North Quarry is adequate for current conditions and could be operated without the threat of overdraw. Further, Bridgeton Landfill's response to the Department's earlier letter on its concern with overdraw, submitted on July 30, 2013 demonstrated that overdraw conditions are not responsible for the infrequent occurrences of elevated oxygen in gas wellheads.

Comment 2. Due to the continuing SSE and periodic pillowing of the interim cap, the department requests Republic Services provide an analysis of the facility's current flare capacity

and a determination of whether or not the current system has the ability to handle additional landfill gas should the SSE move into the North Quarry.

RESPONSE:

Part 2 of the North Quarry Contingency Plan was submitted on July 27, 2013. Part 2 included (in Appendix C) a design of a significant upgrade to the GCCS for the event where the SSE may become involved in the North Quarry. As part of the design contained in Part 2, an evaluation was made regarding the adequacy of the proposed flare configurations to handle the additional gas created by the effects of a North Quarry SSE.

Comment 3. In order to address public nuisance issues, the department has the right to require installation of the North Quarry cap sooner should odors again increase and be attributable to landfill fugitive emissions coming from the existing earthen cap.

RESPONSE:

The Department's Comment 3 is outside the scope of the North Quarry Contingency Plan as set forth in the Agreed Order, as such, no response is provided here.

Comment 4. Due to the continuing nature of the SSE, Republic Services must provide an evaluation of the current on-site soil resources and the logistical plans that are in place to ensure timely application of those soils to an SSE outbreak, if one were to occur.

RESPONSE:

This issue was addressed in the "Incident Management Plan" submitted to the MDNR in March 2013 which was listed in the Agreed Order as an Approved Work Plan. Bridgeton Landfill incorporates that approved document, by reference, in this response.

Construction Timeframes

Comment 1. The construction timeframes provided in the Plan - Part 1 and discussed during our meetings fail to provide for an adequate factor of safety to complete all contingent construction activities prior to the area potentially being affected by an expanding SSE. From discussions, the department understands the elapsed times for the different construction activities were intended to be cumulative rather than aggregated. In the next submission, please clearly identify the total number of days from start to finish for each listed project. It is the department's expectation that upon approval of the Plan contracts will be established to ensure that contingency actions can be timely implemented. Please provide justification and the assumptions used for determining the total number of days for completion of projects. Due to the unknown waste materials and velocity at which the SSE could travel through the North Quarry, the time frames must include a factor of safety that takes into account a shortened implementation time. As such, a SSE progression rate of no less than two (2) feet per day (based on observations of movement through the South Quarry) must be used.

RESPONSE:

As discussed in the revised Plan, and presented in new Appendix H, the average SSE movement rate toward the North Quarry over the past six months is 0.49 feet per day. We have therefore used an average rate of movement of 0.5 feet per day for SSE movement in the South Quarry to the “neck” area for construction timelines which are triggered by South Quarry monitoring.

For actions which are triggered by North Quarry monitoring, construction timelines are based on an average rate of SSE progression in the North Quarry of 2.0 feet per day, or four-times the current northern progression rate. For the Isolation Barrier, this allows at least 300 days to construct based on more than 600 feet from Trigger Line 2 to the closest cut slope of the Isolation Barrier. The actual construction schedule will be finalized after performance of an investigation and detailed design of the barrier; however, it will utilize a very expedient schedule which assumes rapid deployment of construction crews using previously-approved, shovel-ready construction plans.

Correspondingly, Section 5.0, Figures 3 and 4, and Table 1 of the revised Plan have been modified to provide timeframes based on these rates using the trigger line locations and trigger value revisions described previously.

Comment 2. Based upon the construction time frame provided and the proposed location of GIW Line 3, the department is concerned whether there is adequate time for installation. Please provide verification and the calculations and assumptions used to show the proposed installation timeframe is achievable. If not, Republic Services will need to install GIW Line 3 now.

RESPONSE:

See response to the Gas Interceptor Well comments provided below.

Gas Interceptor Wells

Comment 1. The department understands from Republic Services' statements during our meetings that proposed GIW Line 3 will build upon the established zone of influence from the existing two rows of GIWs and build on their heat and pressure removal capacity.

Comment 2. Should the existing two rows of GIWs fail, installation of another similar line of GIWs without additional measures is unapprovable by the department. If Republic Services proposes a third row of GIWs in this series, the GIW line must be enhanced with engineering components such as inert gas injection or a cooling system to actively remove the heat.

Comment 3. The enhancements must include evaluation of the GIW spacing and depth for adequate radius of influence. This evaluation must be submitted as part of the resubmittal.

Comment 4. During our meetings, Republic Services mentioned other possible enhancements, such as liquid injection. If Republic Services is still considering these options as viable, the department is open to their submission for consideration.

RESPONSE:

Although the Agreed Order specifically required installation of “additional interceptor wells within the North Quarry...”, based upon our recent meetings and discussions with you and your experts, Bridgeton Landfill proposes significant efforts beyond that requirement in an attempt to stall or prevent movement of the SSE into the North Quarry. We have elected to propose contingent use of cooling mechanisms and have evaluated the use of inert gas injection and the use of other cooling mechanisms.

Description and implementation schedule for use of cooling mechanisms are provided in Section 3.1 and 5.2 and presented on revised Table 1. Detailed design of these cooling mechanisms will be provided within a revised Part 2 of the Plan as required by the Agreed Order after receipt of MDNR comments on Part 2.

Temperature Monitoring Probes

Comment 1. During our meetings, the department discussed the current TMP locations and the need for adequate coverage in the neck for timely detection of SSE movement. Due to the varying topography of the quarry walls, Republic Services needs to install TMPs to ensure full coverage from the east side of the neck to the west side.

RESPONSE:

Bridgeton Landfill has elected to install three additional TMP locations in Trigger Line 1 to address this comment. These new TMPs will be installed as proposed on Table 1 contingent upon MDNR approval. See Figure 3 in the revised Plan for locations.

Comment 2. Appendix F refers to a procedure for checking resistivity to determine accuracy of temperature readings. Is the resistivity of these TMPs verified prior to installation? Is the resistivity then re-verified after TMP installation? Please provide a copy of the quality assurance and quality control procedures related to the thermocouple resistivity as part of the resubmittal.

Comment 3. On page 13 of the Plan - Part 1, Appendix F is said to contain the "procedures for reading and verifying TMP temperature readings." Appendix F did not contain detailed procedures for collection of temperature data.

RESPONSE:

Appendix F of the Plan has been revised to include reading verification, notification, and confirmation procedures for TMP readings. Resistivity checks were not part of the installation procedure.

Isolation Barrier

Comment 1. Due to its proposed general location, no portion of the isolation barrier required to be included in Part 2 of the Plan may be implemented until an evaluation of the barrier's final location is approved by the department and the U.S. Environmental Protection Agency. Therefore, such an evaluation must be submitted as a section of Part 2 and must detail how the proposed location between the North Quarry and West Lake Landfill Operable Unit 1, Area 1 is

suitable for construction of such an isolation barrier and that resulting excavated materials will be properly managed.

Comment 2. To determine the presence or absence of any radiologically impacted material within the proposed excavation lines, the plan must incorporate sufficient sampling/monitoring to ensure identification of such radiologically impacted material and must include a waste characterization component, i.e. types of waste present and quantities. Based on our discussions, Republic Services will be including work plan as part of its Part 2 submission to confirm geotechnical subsurface conditions in the area as well as to determine the presence of any radiologically impacted material.

RESPONSE:

Part 2 of the Plan, which was submitted on July 27, 2013, contained a detailed investigation plan called the Gamma Cone Penetration Test (GCPT) Work Plan. The GCPT had to presume a location and conceptual design for an isolation barrier in order to define the scope of the investigation area. After performance of the investigation, which will occur upon authorization by appropriate regulatory agencies that the investigation may move forward, a final design will be performed in accordance with the schedule presented on Table 1 of the GCPT Work Plan.

Isolated SSO-North Quarry

Comment 1. The department understands from our meetings that Section 5 of the Plan - Part 1 includes procedures for managing a localized SSO should one occur in the North Quarry. The procedures need to be clarified and timelines for contingent actions included.

RESPONSE:

The procedures, which are included in Appendix G of the Plan, have been revised for clarification as requested.

Comment 2. The department must be immediately notified whenever a localized SSO is suspected in the North Quarry by Bridgeton Landfill. For business hours call the SWMP Engineering Section Chief or Program Director at (573) 751-5401 and for afterhours, call the 24-hour Spill Line at (573) 634-2436. The department shall be provided an opportunity to observe confirmatory sampling, co-sample, and/or complete independent sampling.

RESPONSE:

The procedures included in revised Appendix G of the Plan provide procedures for notification, confirmatory sampling, co-sampling, and/or complete independent sampling.

Comment 3. Any triggering of sentry criteria in Table 1 for temperature and/or CO in the North Quarry shall require Republic Services to immediately provide verbal notification to the department and a written notice to the department within 48 hours. For business hours, call the SWMP Engineering Section Chief or Program Director at (573) 751-5401 and for after hours,

call the 24-hour Spill Line at (573) 634-2436. If such triggering is verified, construction of the isolation break must begin immediately.

RESPONSE:

Trigger criteria proposed by the MDNR, and trigger criteria proposed by Bridgeton Landfill are intended to provide adequate time to mobilize and perform major work activities with each activity having durations measured in months. Therefore, urgent and pressing notifications are not necessary. Rather, diligent confirmation and verification by Bridgeton Landfill that trigger criteria have been attained, followed by expedient notification, and—if desired—independent verification by MDNR is more appropriate.

Therefore, the revised Plan provides (Section 5) verification and notification timelines and procedures that address the MDNR's desire for rapid notification while not imposing an impossible compliance issue or opportunity for unnecessary or undue public concern. These procedures include notification of the SWMP Engineering Section Chief as requested.

Monitoring

Comment 1. Per Section 4.2 of the Plan - Part 1, Lab Gas Quality data must be submitted monthly so that timely detection of SSE movement can be made.

RESPONSE:

This section has been modified to require monthly submittal of lab data.

Comment 2. Page 19 of the Plan states if any GEW exhibits well head temperature > 160 °F monthly CO testing will be performed on the gas well. Due to the need for early detection of SSE movement, this limit must be lowered to 145 °F for wells in the North Quarry. Additional GEWs within the North Quarry that have temperatures greater than 145 °F shall be monitored and reported weekly until the temperatures drop below 140 °F.

RESPONSE:

Bridgeton Landfill maintains that temperatures greater than 145° F are not uncommon and are too low to serve as a trigger for laboratory testing. We continue to believe that the proposed approach does allow for early and accurate detection of SSE movement as indicators. Nevertheless, we are interested in reaching an agreed monitoring and trigger plan and, as such, this section has been modified to require monthly laboratory testing for carbon monoxide and weekly Draeger tube carbon monoxide and temperature readings for wells that exhibit temperatures over 145° F. The weekly collection of data and monthly collection of laboratory CO measurements will cease after the well temperatures are recorded below 140° F.

Leachate Collection System

Comment 1. An evaluation of the enhanced Leachate Collection System must be submitted to provide assurance that the infrastructure, storage, and pre-treatment and treatment capacities of the proposed upgraded system are sufficient to handle the increased leachate generation should the SSE reach the North Quarry. This evaluation must consider the existing non-functioning leachate collection sumps, e.g. LCS -1, -3 and -4 and the additional liquid they will produce once fully operational.

RESPONSE:

This issue is not appropriate for Part 1 of the Plan but will be evaluated and discussed in the Leachate Pretreatment Plan. Consistent with the requirements of the Agreed Order, the Leachate Pretreatment Plan will be submitted on September 1, 2013.

Comment 2. Please note, during our meetings, Republic Services indicated the department should anticipate receiving a construction plan for installation of four 1 million gallon leachate storage tanks by July 25th, followed by a leachate system evaluation and then a leachate pretreatment plan by September 1, 2013.

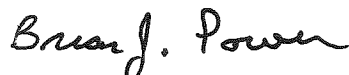
RESPONSE:

The construction plan for the installation of four 1 million gallon leachate tanks was submitted to the Department on July 25, 2013, though not required by the Agreed Order. Consistent with the requirements of the Agreed Order, the Leachate Pretreatment Plan will be submitted by September 1, 2013.

If you need additional information, please contact me at (618) 410-0157.

Sincerely,

Bridgeton Landfill, LLC



Brian Power
Environmental Manager

cc: Mr. Chris Nagel
Mr. Aaron Schmidt