

**Environmental  
Protection Agency**

John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Scott J. Nally, Director

Re: Port Clinton Landfill  
Groundwater  
Notice of Violation

July 10, 2012

Mr. John Logsdon  
Port Clinton Landfill, Inc.  
530 North Camp Road  
Port Clinton, Ohio 43452

Dear Mr. Logsdon:

The owner/operator is currently required to perform ground water detection monitoring activities at the facility.

This letter documents the results of the June 5-6, 2012, Operating Facility Ground Water Inspection (OFGWI) at the facility. This represents the sixth ground water inspection performed at the facility. Previous ground water inspections were performed in June 1998, June 2000, December 2003, June 2006 and June 2009.

A representative from the Ohio Environmental Protection Agency (Ohio EPA), Division of Drinking and Ground Waters (DDAGW) was present during the inspection. Ground water sampling activities were performed by representatives of CEC, Inc. of Columbus and Toledo, Ohio. This inspection included the observation of CEC's sampling procedures and surficial construction of the ground water monitoring wells and piezometers.

Attached to this letter is the inspection form. This form summarizes the inspection of the surficial well/piezometer constructions and also summarizes the inspection of the equipment and procedures used during the sampling event.

### COMMENTS

#### Violations

1. **The owner/operator is in violation of OAC Rule 3745-27-10(B)(3)(e), regarding the maintenance of the ground water monitoring wells and piezometers. During the June 5-6, 2012, inspection, maintenance issues were noted at BW-1, BW-2, BW-6, BW-7, DBW-1, MW-4, MW-18, MW-26, MW-27, MW-29, MW-31 and PW. To regain compliance with the requirements of this rule, the owner/operator needs to respond accordingly.**

*OAC Rule 3745-27-10(B)(3)(e) states, "The monitoring wells, piezometers, and other measurement, sampling, and analytical devices shall be operated and maintained to perform to design specifications throughout the life of the monitoring program."*

During the inspection, the following maintenance issues were noted for the monitoring wells/piezometers.

- BW-1: The protective casing does not have a weep hole.
- BW-2: The protective casing does not have a weep hole and the piezometer does not have a concrete pad.
- BW-6: The protective casing does not have a weep hole and the concrete pad is badly cracked.
- BW-7: The protective casing does not have a weep hole and the concrete pad is badly cracked.
- DBW-1: The piezometer either lacks a concrete pad or the concrete pad is buried.
- MW-4: There is an annular gap between the concrete pad and the steel protective casing.
- MW-18: There is an annular gap between the concrete pad and the steel protective casing.
- MW-26: The concrete pad is lower than the surrounding ground surface.
- MW-27: The concrete pad is lower than the surrounding ground surface.
- MW-29: The concrete pad is lower than the surrounding ground surface.
- MW-31: There is severe erosion underneath the concrete pad.
- PW: The piezometer does not have an inside well cap.

To regain compliance with the requirements of OAC Rule 3745-27-10(B)(3)(e), the owner/operator needs to adequately address each of the issues above and submit appropriate documentation of the work performed to Ohio EPA.

### **More Information Needed to Determine Compliance**

2. **More information is needed to determine compliance with OAC Rule 3745-27-10(C)(1)(a) regarding adherence to the SAP. To assure compliance with this rule, the Sampling & Analysis Plan (SAP) needs to be revised to clearly document the procedures for sample withdrawal being followed in the field.**

OAC Rule 3745-27-10(C)(1)(a) requires that the SAP document the sampling and analysis procedures that shall be utilized in the ground water monitoring program.

Currently, the owner/operator uses dedicated submersible pumps to purge and sample most of the ground water monitoring wells, but also uses dedicated bladder pumps to purge and sample a few monitoring wells.

The use of these submersible and bladder pumps, are documented within the SAP. However, section (C)(2)(c)(ii) of the SAP, regarding sample withdrawal, specifically documents the use of the submersible pumps, but does not appropriately document the use of bladder pumps.

To assure compliance with the requirements of OAC Rule 3745-27-10(C)(1)(a), section (C)(2)(c)(ii) of the SAP needs to be revised to document the current use of bladder pumps.

### Recommendations

3. **Ohio EPA recommends that the Ground Water Detection Monitoring Plan (GWDMP) be revised to document that the sampling crew will have a copy of the SAP in the field during ground water sampling events.**

During the inspection, the ground water samplers had a copy of the SAP in the field. Ohio EPA concurs with this procedure as it should help the sampling crew to consistently follow the SAP. However, the GWDMP does not document that this procedure will be followed.

4. **Ohio EPA recommends that the SAP portions of the GWDMP be revised to state that any deviations from the SAP and the reasons for the deviations will be documented on the field information log.**

The SAP does not document that any necessary deviations from the SAP during sampling events will be documented on the field information log. No deviations from the SAP were necessary during the inspection.

However, for a better understanding of the field procedures, Ohio EPA recommends that the SAP be revised to state that any deviations from the SAP and the reasons for the deviations will be documented on the field information log.

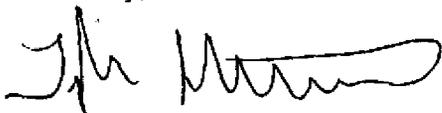
The owner/ operator needs to immediately take the necessary measures to return to compliance with Ohio's environmental laws. Within 14 days of receipt of this letter, the owner/operator is requested to provide documentation to this office including the steps taken to abate the violation cited above. Documentation of steps taken to return to compliance includes written correspondence, updated policies, and photographs, as appropriate, and may be submitted via the postal service or electronically to [tyler.madeker@epa.ohio.gov](mailto:tyler.madeker@epa.ohio.gov).

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Please be advised that violations cited above will continue until the violations have been properly abated. Failure to comply with Chapter 3734 of the Ohio Revised Code and rules promulgated thereunder may result in a civil penalty of up to \$10,000 per day for each violation. It is imperative that you return to compliance. If circumstances delay the abatement of violations, the owner/operator is requested to submit written correspondence of the steps that will be taken by date certain to attain compliance.

If you have any questions, please contact Ken Brock at the Ohio EPA Northwest District Office at (419) 373-3143. Any written correspondence should be sent to the attention of Tyler Madeker, Division of Materials and Waste Management, Ohio EPA Northwest District Office, 347 North Dunbridge Road, Bowling Green, Ohio 43402.

Sincerely,



Tyler Madeker, R.S.  
Environmental Specialist  
Division of Materials and Waste Management

/cg

Enclosure

pc: Jim Adams, Republic Services, Inc. w/ attachment  
Joe Montello, Republic Services, Inc. w/ attachment  
Dave Vossmer, Republic Services, Inc. w/ attachment  
Tom Covrett, CEC Inc. w/ attachment  
File: DMWM-SW, Ottawa County, Port Clinton Landfill, Groundwater  
w/ attachment

ec: Mike Reiser, DMWM-NWDO  
Habib Kaake, DMWM-NWDO  
Ken Brock, DDAGW-NWDO  
Tim Fishbaugh, DDAGW-NWDO  
id: 5-11615

## GROUND WATER INSPECTION CHECKLIST

Site/Facility Name: <b>Port Clinton Landfill</b>		Date: <b>June 5-6, 2012</b>		
Site/Facility Address: <b>530 North Camp Rd., Port Clinton</b>		Ohio EPA ID#: <b>62-00-03</b>		
Site/Facility Status (circle one): <b>Operating</b> Closed		District: <b>NWDO</b>		
Client Division/Program (check applicable)  DSIWM                  DHWM  MSW <u>  X  </u> Interim Standards (65-90 to 94) Ind _____                  Final Standards (54-90 to 100) Res _____                  CA/IGWMP (54-01) _____ CDD _____		DERR                                  DSW  Remedial Response _____ VAP _____		
Site/Facility Contact, Name & Title: <b>John Logsdon, Landfill Manager</b>				
Client Division Contact: <b>Tyler Madeker</b>		DDAGW Geologist: <b>Ken Brock</b>		
Names and company affiliations of facility or consulting personnel performing field monitoring and sampling activities: 1. <b>Dave Benecke, Chelsea Fleming, CEC, Inc.</b> 2. _____				
<b>Documentation Reviewed Prior to Field Inspection</b>				
<b>Ground Water Sampling and Analysis Plan</b>				
If the ground water sampling and analysis plan (SAP) has previously been reviewed by DDAGW, it need not be formally reviewed again prior to the field inspection. However, it should be consulted during completion of the office portion of the ground water field inspection form. If DDAGW has not previously reviewed the SAP, a formal review of the document should be requested by the client division and completed as a separate project prior to the field inspection.				
1. Has the current SAP been formally reviewed by DDAGW?		Yes <u>  X  </u> No	If yes, document date: <b>June 2010</b> Approval date (if applicable):	
2. The current SAP is: (circle one)		<b>a stand alone document?</b>	If another document, specify:	
		<b>included in another document?</b>		
3. Sampling and analysis procedures are often modified through correspondence between the regulated entity and Ohio EPA. A new, revised SAP may not be generated as part of this process. If the current SAP has been modified through correspondence between the Ohio EPA and the regulated entity, please list in the space below, the dates of the correspondence and the modifications that were documented and approved.				
<b>June 2010: Multiple revisions with modifications too complex to list herein</b>				
<b>Other Sources of Documentation</b>				
The key document for review prior to observing field activities is the Sampling and Analysis Plan; however, it may be necessary to review other documents to establish the evaluation basis for the inspection. Which of the following documents were reviewed by Ohio EPA to determine the applicable monitoring and sampling requirements?				
<b>Document:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Comments:</b>
1. Approved Permit?		X		If yes, date approved:
2. Approved Closure Plan?		X		If yes, date approved:
3. Final enforcement actions between AGO/Ohio EPA and facility?			X	If yes, date signed:
4. Current GWDMP?	X			If yes, document date: <b>June 2010</b>
5. Current GWQAP?			X	If yes, document date:
6. Current GWCMP?			X	If yes, document date:
7. Previous Ohio EPA inspection?	X			If yes, inspection date: <b>6/98, 6/00, 12/03, 6/06, 6/09</b>

### Monitoring Well System

Maintenance & Sampling Information:	Yes	No	NA	Comments:
1. Do the actual number, locations, and depths of the wells sampled correspond to the SAP or other governing document?	X			
2. Are the wells maintained properly? (Please refer to the attached <i>Ground Water Monitoring Well Inspection Form</i> )		X		See Comment No. 1
3. Are there bumper guards around the wells ?	X	X		Around most of the wells
4. Are there additional monitoring wells or piezometers present at the site that are not currently used as part of the ground water monitoring program?	X			
a) If so, were they also inspected during this visit?	X			
b) If inspected, are they constructed/maintained properly? If inspected, please include these wells on the attached <i>Ground Water Monitoring Well Inspection Form</i> . If not inspected, please indicate why in the Comments column.		X		See Comment No. 1
5. Additional comments				

Please note that for the purposes of this inspection, the terms **A monitoring well** and **A well** include piezometers (used to collect water level elevation data only) required by the SAP or other governing document.

### Sampling & Analysis Plan Requirements and Field Procedures

Completing the "SAP Requirement" section of the checklist is not meant to constitute a formal review of an already reviewed and approved SAP. It is meant to prepare the DDAGW geologist for the field inspection, where the implementation of the SAP is reviewed and evaluated. The main purpose of the field inspection (along with a review of monitoring well maintenance) is to address whether the procedures and techniques required by the SAP were properly implemented. The questions posed here are not intended to encompass every detail that may be contained in a SAP. The comments column can be used to document, as necessary, any observations regarding SAP implementation not explicitly addressed by the questions. While the DDAGW geologist can comment if the approved procedures are inadequate to ensure collection of representative ground water samples and protection of human health and the environment, these comments would be considered **Recommendations**.

Well Identification: Specify well numbers where ground water purging and sampling procedures were observed by Ohio EPA.	Wells: MW-1, MW-41, MW-17, MW-11						
	SAP Requirement?			Field Instrumentation			Comments:
	Yes	No	N/A	Yes	No	N/A	
1. Does the person performing the sampling have a copy of the most current SAP with him/her in the field or is one available at the site?		X		X			See Comment No. 3
2. Measuring ground water levels/elevations (and surface water levels/elevations, if applicable), including:							
a) Measuring ground water levels (and if applicable, surface water levels) within a 24-hour period?	X			X			
b) Measuring ground water levels prior to purging and sampling?	X			X			
c) Measuring ground water levels (and if applicable, surface water levels) to an accuracy of at least 0.01 ft?	X			X			

	SAP Requirement?			Field Instrumentation			Comments:
	Yes	No	N/A	Yes	No	N/A	
<b>2. Measuring ground water levels/elevations, cont. :</b>	X			X			
d) Using a reference point established at the top of each well casing (and at each surface water sampling point, if applicable) to measure each water level?	X			X			
e) Procedures for documenting and measuring both dense non-aqueous phase liquid (DNAPL) and light non-aqueous phase liquid (LNAPL)?	X		X	X			SAP says visual
f) Is the total depth for each well measured? If so, does it match the total depth of the well documented on the well log? If not, what is the facility's schedule for measuring and evaluating total depths?	X					X	When pumps removed
g) Type(s) of device(s) used to measure water levels and total depths?	SAP: Elec. Meter			Field: Elec. Meter			
h) Are water levels used for determining ground water flow direction recorded on the field form with well purging and sampling information or on a separate field form?	SAP: Same form			Field: Same form			
<b>3. Well Purging (Generic to all methods):</b>	SAP: Sub pump			Field: Sub pump			
a) Specify purging method(s) used for each well observed.	SAP: Sub pump			Field: Sub pump			
(1) Volumetric Purge?	Yes			Yes			
(2) Low Flow?	NA			NA			
(3) Minimum/No Purge?	NA			NA			
(4) Purge to Dryness	Yes			Yes			
(5) Other: _____	NA			NA			
b) Type of equipment used to purge each well observed. (Type /material) (Note: Specify particular type of pump or bailer)	SAP: Sub pump			Field: Sub pump			
c) Is purging equipment dedicated?	X			X			
d) If equipment is not dedicated, was the equipment properly decontaminated?			X			X	
e) If bailers are used, specify the type of cord used with the bailer.	SAP: Stainless/teflon/PVC			Field: NA			
<b>4. For Volumetric Purging:</b>	X			X			
a) Was the volume of water in the well column determined?	X			X			
b) Was the purging performed in a manner that minimizes mixing and aeration of the water column?	X			X			
c) Were all SAP field stabilization parameters obtained to properly determine when purging is adequate?				X			
(1) List stabilization parameters obtained:	SAP: pH, temp, cond			Field: pH, temp, cond			
(2) Were stabilization parameters taken every 1 to 2 well volumes?	X			X			
(3) Was it demonstrated that three consecutive measurements were within their respective stabilization criteria?	X			X			
d) Were samples obtained immediately after purging?	X	X		X	X		Yes for high yield, no if well dry

	SAP Requirement?			Field Instrumentation			Comments:
	Yes	No	N/A	Yes	No	N/A	
<b>5. For Low-Flow Purging:</b>			X			X	
a) Was water level drawdown measured during purging?							
b) Was it demonstrated that drawdown stabilized?			X			X	
c) Specify location of pump.	SAP: NA			Field: NA			
d) What was the purging rate?	SAP: NA			Field: NA			
e) <u>Were all SAP field stabilization parameters obtained to properly determine when purging is adequate?</u>			X			X	
(1) List stabilization parameters obtained:	SAP: NA			Field: NA			
(2) Were stabilization parameters taken every 3 to 5 minutes?			X			X	
(3) Was it demonstrated that three consecutive measurements were within their respective stabilization criteria?			X			X	
f) Were samples obtained immediately after purging?			X			X	
<b>6. For Minimum/No Purge:</b>			X			X	
a) If the pump was not dedicated, was the pump placed far enough in advance so that the effect of the pump installation has completely dissipated?							
b) Specify the location of the pump.	SAP: NA			Field: NA			
c) <u>Were steps taken to prevent stagnant water from entering the well?</u>			X			X	
(1) Was drawdown measured during purging?			X			X	
(2) Was the amount of drawdown no more than the distance from the top of the screen and the position of the pump intake within the screen, minus a 2 foot safety margin maintained?			X			X	
(3) If other, specify .	SAP: NA			Field: NA			
<b>7. For Purging to Dryness: Were samples taken as soon as sufficient water was available?</b>	X			X			
<b>8. Field parameters for ground water, surface water, and/or leachate, including:</b>	X		X	X		X	Ground water yes, surface water NA
a) Are field analyses of temperature, pH, and specific conductance performed?							
b) Are field parameters checked after purging and before sampling?	X			X			
<b>9. Ground water (and if applicable, surface water or leachate) sample collection, including:</b>	SAP: See above			Field: See above			See Comment No. 2
a) Specify sample collection methods and equipment used:							
b) Is the ground water sampling equipment dedicated?	X			X			
c) If applicable, is the well sampling order from least to most contaminated?	X		X	X		X	Dedicated equipment
d) Are sample containers filled in order of parameter volatilization sensitivity, e.g., VOCs, SVOCs, total metals?	X			X			
e) If bailers are used, samples collected in a manner that minimizes aeration of the well water column?			X			X	Not currently used

	SAP Requirement?			Field Instrumentation			Comments:
	Yes	No	N/A	Yes	No	N/A	
	<b>9. Ground water sample collection, cont. :</b>	SAP: various if used			Field: NA		
d) Specify type of cord or wire used with sampling bailers:							
g) If used, are bladder pumps operated in a manner that prevents sample aeration and minimizes sample turbidity?	X			X			
h) Are pumps (all types) operated at a rate low enough to prevent sample aeration and minimize sample turbidity?	X			X			
<b>10. Calibration of field monitoring and analytical equipment:</b>	X			X			
a) Is each device calibrated to its manufacturer's specifications?							
b) Is each device calibrated prior to use in accordance with the SAP?				X			
c) Are all calibration procedures and/or equipment maintenance (and the date(s) performed) documented on field forms or in a field log book?	X			X			
<b>11. Equipment decontamination, including:</b>							X
a) If applicable, is all non-dedicated monitoring, purging, and sampling equipment decontaminated between sampling locations in accordance with the SAP?							
b) Is clean or decontaminated sampling equipment placed on the ground or in other potentially contaminated areas prior to use?	X				X		
c) Are all decontamination fluids contained and disposed in accordance with the SAP?							X
<b>12. Purge water disposal, including:</b>	X			X			
a) If previous monitoring results indicate that a well has not been contaminated, is all purge water disposed in an area where it cannot affect purging or sampling activities at any sampling location during the ongoing event?							
b) If previous monitoring results indicate that a well has been contaminated, or if the ground water is known to be contaminated, is all purge water properly contained, stored, transported, and disposed per applicable federal, state, and local laws?	X					X	
<b>13. Field sample preparation, including:</b>	X			X			
a) <u>Sample containers and handling:</u>							
(1) Are all sample containers pre-cleaned and provided by the laboratory?							
(2) Are any samples field filtered prior to being transferred to their appropriate containers?		X			X		
(3) Are samples transferred directly from the sampling device to their appropriate containers in a manner that minimizes agitation and aeration?	X			X			

	SAP Requirement?			Field Instrumentation			Comments:
	Yes	No	N/A	Yes	No	N/A	
<b>13. Field sample preparation, cont. :</b>	X			X			
(4) Are VOC sample containers completely filled to form a meniscus and capped in a prompt manner to minimize volatilization?	X			X			
(5) Are VOC containers checked for air bubbles after filling and capping?	X			X			
<b>b) Sample preservation (per SW-846, Revision 1, 12/96, Chapter 2, Table 2-36):</b>	X	X		X	X		Alk, Sulfate, TDS – yes  Nitrate/Nitrate gets H2SO4 as required
(1) To the extent applicable, are samples for all organic parameters, PCBs, chromium VI, phenols, coliform bacteria, oil and grease, pesticides, specific conductance, alkalinity, COD, cyanide, nitrate/nitrite, phosphorous, sulfate, sulfide, TDS, TOC, and/or turbidity immediately placed in a cooler with ice for preservation at 4° C?	X			X			
(2) Are VOC samples field-acidified to pH < 2 with HCl?	X			X			
(3) To the extent applicable, are samples for metals and/or radiological parameters (gross alpha, gross beta, radium); endrin; lindane; methoxychlor; toxaphene; 2,4-D; and/or 2,4,5-TP Silvex field-acidified to pH < 2 with HNO <sub>3</sub> ?	X			X			
(4) To the extent applicable, are samples for phenols, oil and grease, ammonia, COD, nitrate/nitrite, phosphorous, TOX, and/or TOC field-acidified to pH < 2 with H <sub>2</sub> SO <sub>4</sub> ?	X			X			
(5) Are CN samples field-preserved pH > 12/50% w/NaOH?			X			X	
<b>c) Sample labeling:</b>	X			X			
(1) Unique sample (field) identification number that clearly associates the sample and the sampling location?	X			X			
(2) Facility/site name?	X			X			
(3) Sample type (matrix) and date and time of collection?		X			X		
(4) Parameters and analyses requested?	X			X			
(5) Sample preservatives?	X			X			
(6) Name or initials of sampler and company affiliation?	X			X			
(7) Is an indelible pen or marker used to complete sample labels?		X		X			
(8) Are sample labels secured and protected to ensure legibility when delivered to the laboratory?	X			X			
<b>14. Field Quality Assurance/Quality Control (QA/QC), including:</b>	X			X			
a) Use of standard procedures that ensure the validity and reliability of field and laboratory data, as well as representative analytical results?	X			X			

	SAP Requirement?			Field Instrumentation			Comments:
	Yes	No	N/A	Yes	No	N/A	
<b>14. Field Quality Assurance/Quality Control, cont. :</b>		X				X	See Comment No. 4
b) Documentation of all deviations from SAP-required procedures?							
c) Collection of the following QA/QC samples in accordance with the SAP:							
(1) Duplicate samples?	X			X			
(2) Field blanks?	X	X			X		Optional
(3) Equipment blanks?	X	X			X		Optional
(4) Trip blanks?	X	X		X			Optional
d) Collection of all necessary laboratory QA/QC samples (e.g., matrix spike, matrix spike duplicate)?	X	X			X		Lab-specific
<b>15. Chain-of-Custody (COC) procedures, including:</b>				X			
a) Are all SAP-required COC procedures followed? (If not, explain why.)							
b) Are standardized COC forms used to establish a complete custody record from the field to the laboratory for all samples?	X			X			
c) Is the following field and laboratory information properly documented on the COC form to provide effective sample tracking and to ensure that samples are not misidentified; are properly preserved; and are properly analyzed?							
(1) Address and contact information for the site/facility, laboratory, and, if applicable, all consulting firms performing sampling?	X			X			
(2) Unique sample (field) identification numbers that clearly associate the sampling location and sample?	X			X			
(3) Sample type (matrix) and date and time of collection?	X			X			
(4) Requested parameters, or a reference for the requested parameters?	X			X			
(5) Requested analytical methods, or a reference for the requested analytical methods?	X			X			
(6) Types of sampling containers used, or a reference for the types of sampling containers used?		X		X			Documented on field forms
(7) Types of sample preservatives used, or a reference for the types of sample preservatives used?	X			X			
(8) Sample shipping information, including but not limited to the transporter(s), tracking #(s), and delivery time frame(s)?	X			X			
(9) Legible names (printed) and signatures of all field and laboratory personnel relinquishing and/or receiving the samples and inclusive dates and times of possession that provide a complete record of sample custody? (Names and signatures of commercial shipping personnel are not required.)	X			X			
d) Are custody seals (signed by the sampler) placed on sample coolers prior to shipment to indicate if the cooler has been opened or tampered with during shipment?	X			X			SAP says if necessary

	SAP Requirement?			Field Instrumentation			Comments
	Yes	No	N/A	Yes	No	N/A	
16. Is the following sampling and water level elevation information properly documented on field forms or in a field log book for each well, surface water, or leachate sampling location observed?		X			X		
a) Monitoring program (detection, assessment, or compliance) identified?							
b) Correct reference to well identification number or specific well location?	X			X			
c) Static ground water level (elevation), associated measurement technique, date, and time?	X			X			
d) Surface water level (elevation), associated measurement technique, date, and time?	X			X			
e) Total depth and associated measurement technique for each well?	X					X	Not this event
f) Presence and thickness of immiscible layers and associated measurement technique?			X			X	
g) Well purging procedures and all associated SAP-required information?	X			X			
h) Field analyses procedures and all associated SAP-required information?	X			X			
i) Sampling procedures and all associated SAP-required information?	X			X			
j) Field observations, including but not limited to unusual sample characteristics (appearance, odor, etc.), unusual well recharge rates, apparent well damage, potential contamination sources, and unusual climatic conditions?	X			X			
k) Equipment malfunction(s)?		X				X	
l) Any deviations from the SAP and explanation of why such modifications were necessary?		X				X	
m) Sampling team personnel and company affiliation?	X			X			
17. Are copies of all field forms (and/or field log book), COC forms, and sample shipping documents stored at the site/facility as part of the operating record?		X		X			After report
Have all discrepancies between the SAP and the field implementation been described in the "Comment" section? Comments should include specific monitoring well (or other sampling) locations where deviations from the SAP and/or other regulatory requirements were observed.							
Additional Comments & Notes:							

# GROUND WATER MONITORING WELL FIELD INSPECTION FORM

## Port Clinton Landfill

June 5-6, 2012

Well Identification Number:	BW-1	BW-2	BW-4	BW-5	BW-6	BW-7	BW-8	BW-10
Correct location?	Yes							
Clearly and correctly labeled?	Yes							
Locked prior to arrival at well location?	Yes							
Ground water depth:	Not Obs.	Not Obs.	11.29	4.64	3.13	3.73	Not Obs.	Not Obs.
Well total depth:	Not Meas							
<b>For above ground completions:</b>								
a) Protective outer casing present?	Yes							
(1) Condition?	Good							
(2) Locking cap? Condition?	Yes							
(3) Weep hole present?	No	No	Yes	Yes	No	No	Yes	Yes
(4) Standing water between protective casing & well casing?	No							
b) Surface seal/apron present?	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
(1) Condition?	Good	Good	Good	Good	Cracked	Cracked	Good	Good
(2) Poned surface water?	No							
<b>For flush mount completions:</b>								
a) Well vault present?	NA							
(1) Condition?	NA							
(2) Covered with bolted vault lid?	NA							
(3) Standing water in vault? Covering top of inner casing?	NA							
b) Surface seal/apron present?	NA							
(1) Condition?	NA							
(2) Raised at least slightly above grade and sloped away from the top of the vault?	NA							
(3) Poned surface water on top of vault lid?	NA							
<b>Well (inner) Inner well casing condition?</b>	Good							
a) Material?	2" PVC							
b) Survey reference mark?	Yes							
c) Cap present?	Yes							
d) If the completion is flush mount, is the cap expandable and locking?	NA							
e) Condition of casing and cap?	Good							

**Additional Comments:** The steel protective casings of BW-1, BW-2, BW-6 and BW-7 did not have weep holes. BW-2 did not have a concrete pad and BW-6 and BW-7 had badly cracked concrete pads.

# GROUND WATER MONITORING WELL FIELD INSPECTION FORM

## Port Clinton Landfill

June 5-6, 2012

Well Identification Number:	DBW-1	MW-1	MW-4	MW-11	MW-17	MW-18	MW-19	MW-24
Correct location?	Yes							
Clearly and correctly labeled?	Yes							
Locked prior to arrival at well location?	Yes							
Ground water depth:	6.67	8.30	5.60	8.48	7.66	6.24	10.84	12.46
Well total depth:	Not Meas							
<b>For above ground completions:</b>								
a) Protective outer casing present?	Yes							
(1) Condition?	Good							
(2) Locking cap? Condition?	Yes							
(3) Weep hole present?	Yes							
(4) Standing water between protective casing & well casing?	No							
b) Surface seal/apron present?	Buried?	Yes						
(1) Condition?	?	Good	Ann gap	Good	Good	Ann gap	Good	Good
(2) Ponded surface water?	No							
<b>For flush mount completions:</b>								
a) Well vault present?	NA							
(1) Condition?	NA							
(2) Covered with bolted vault lid?	NA							
(3) Standing water in vault? Covering top of inner casing?	NA							
b) Surface seal/apron present?	NA							
(1) Condition?	NA							
(2) Raised at least slightly above grade and sloped away from the top of the vault?	NA							
(3) Ponded surface water on top of vault lid?	NA							
<b>Well (inner) Inner well casing condition?</b>								
a) Material?	4" PVC	2" PVC						
b) Survey reference mark?	Yes							
c) Cap present?	Yes							
d) If the completion is flush mount, is the cap expandable and locking?	NA							
e) Condition of casing and cap?	Good							

**Additional Comments:** It could not be discerned whether DBW-1 has a concrete pad (if it does, it is buried). At MW-4 and MW-18, there is an annular gap between the concrete pad and the steel protective casing.

# GROUND WATER MONITORING WELL FIELD INSPECTION FORM

## Port Clinton Landfill

June 5-6, 2012

Well Identification Number:	MW-25	MW-26	MW-27	MW-29	MW-31	MW-33	MW-37	MW-38
Correct location?	Yes							
Clearly and correctly labeled?	Yes							
Locked prior to arrival at well location?	Yes							
Ground water depth:	12.40	9.87	8.08	5.32	7.84	9.13	Not Obs.	Not Obs.
Well total depth:	Not Meas							
<b>For above ground completions:</b>								
a) Protective outer casing present?	Yes							
(1) Condition?	Good							
(2) Locking cap? Condition?	Yes							
(3) Weep hole present?	Yes							
(4) Standing water between protective casing & well casing?	No							
b) Surface seal/apron present?	Yes							
(1) Condition?	Good	Low	Low	Low	Eroded	Good	Good	Good
(2) Ponded surface water?	No							
<b>For flush mount completions:</b>								
a) Well vault present?	NA							
(1) Condition?	NA							
(2) Covered with bolted vault lid?	NA							
(3) Standing water in vault? Covering top of inner casing?	NA							
b) Surface seal/apron present?	NA							
(1) Condition?	NA							
(2) Raised at least slightly above grade and sloped away from the top of the vault?	NA							
(3) Ponded surface water on top of vault lid?	NA							
<b>Well (inner) Inner well casing condition?</b>	Good							
a) Material?	2" PVC							
b) Survey reference mark?	Yes							
c) Cap present?	Yes							
d) If the completion is flush mount, is the cap expandable and locking?	NA							
e) Condition of casing and cap?	Good							

**Additional Comments:** The concrete pads at MW-26, MW-27 and MW-29 are low (lower than surrounding ground surface). The concrete pad at MW-31 has severe erosion underneath.

# GROUND WATER MONITORING WELL FIELD INSPECTION FORM

## Port Clinton Landfill

June 5-6, 2012

Well Identification Number:	MW-39	MW-40	MW-41	MW-42	PW		
Correct location?	Yes	Yes	Yes	Yes	Yes		
Clearly and correctly labeled?	Yes	Yes	Yes	Yes	Yes		
Locked prior to arrival at well location?	Yes	Yes	Yes	Yes	Yes		
Ground water depth:	Not Obs.	Not Obs.	6.23	10.49	8.10		
Well total depth:	Not Meas						
<b>For above ground completions:</b>							
a) Protective outer casing present?	Yes	Yes	Yes	Yes	Yes		
(1) Condition?	Good	Good	Good	Good	Good		
(2) Locking cap? Condition?	Yes	Yes	Yes	Yes	Yes		
(3) Weep hole present?	Yes	Yes	Yes	Yes	Yes		
(4) Standing water between protective casing & well casing?	No	No	No	No	No		
b) Surface seal/apron present?	Yes	Yes	Yes	Yes	Yes		
(1) Condition?	Good	Good	Good	Good	Good		
(2) Ponded surface water?	No	No	No	No	No		
<b>For flush mount completions:</b>							
a) Well vault present?	NA	NA	NA	NA	NA		
(1) Condition?	NA	NA	NA	NA	NA		
(2) Covered with bolted vault lid?	NA	NA	NA	NA	NA		
(3) Standing water in vault? Covering top of inner casing?	NA	NA	NA	NA	NA		
b) Surface seal/apron present?	NA	NA	NA	NA	NA		
(1) Condition?	NA	NA	NA	NA	NA		
(2) Raised at least slightly above grade and sloped away from the top of the vault?	NA	NA	NA	NA	NA		
(3) Ponded surface water on top of vault lid?	NA	NA	NA	NA	NA		
<b>Well (inner) Inner well casing condition?</b>							
a) Material?	2" PVC	2" PVC	2" PVC	2" PVC	10" PVC		
b) Survey reference mark?	Yes	Yes	Yes	Yes	Yes		
c) Cap present?	Yes	Yes	Yes	Yes	No		
d) If the completion is flush mount, is the cap expandable and locking?	NA	NA	NA	NA	NA		
e) Condition of casing and cap?	Good	Good	Good	Good	Good		

Additional Comments: PW does not have an inner well cap.