Ohio | Environmental Protection Agency
John R. Kasich, **Governor**
Mary Taylor, **Lt. Governor**
Scott J. Nally, **Director**

Re: Operating Facility Ground Water Inspection
Notice of Violation
Celina Landfill, Mercer County

June 21, 2012

Mr. Adam Burleson
Operations Manager
Celina Landfill
6141 Depweg Road
Celina, Ohio 45822

Dear Mr. Burleson:

This correspondence documents the results of the May 30, 2012, Operating Facility Ground Water Inspection (OFGWI) at the Celina Sanitary Landfill (Facility). This represents the sixth ground water inspection performed at the Facility. Previous ground water inspections were performed in March 1998, September 2000, September 2003, October 2006, and September 2009. The Facility is required to maintain a ground water detection monitoring program.

Ken Brock from the Division of Drinking and Ground Waters (DDAGW) was present during the inspection. Ground water sampling activities were performed by a representative of Brown and Caldwell of Columbus, Ohio. This inspection included the observation of Brown and Caldwell's sampling procedures and surficial construction of the wells in the ground water monitoring network.

Attached to this letter is the inspection form. This form summarizes the inspection of the surficial well construction of the observed monitoring wells and piezometers 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 May 30, 2012 inspection, maintenance issues were noted at A-3, E-1, F-1, L-1R, PW-1 and C-4. To regain compliance with the requirements of this rule, the owner/operator needs to respond accordingly.**

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347 North Dunbridge Road
Bowling Green, OH 43402-9398

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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.

A-3:	The concrete pad sits several inches below the surrounding ground surface.
E-1:	The concrete pad at E-1 is cracked.
F-1:	The concrete pad and protective casing is loose.
L-1R:	The well does not have an inner well cap.
PW-1:	The protective casing does not have a weep hole, the concrete pad is severely cracked and the well does not have an inner well cap.
C-4:	The protective casing does not have a weep hole and the concrete pad and protective casing is loose.

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.

Recommendations

2. **Ohio EPA recommends that the Sampling & Analysis Plan (SAP) portions of the Ground Water Detection Monitoring Plan (GWDMP) and Ground Water Quality Assessment Plan (GWQAP) 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 sampler 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 SAP portions of the GWDMP and GWQAP do not document that this procedure will be followed.

3. **Ohio EPA recommends that the SAP portions of the GWDMP and GWQAP be revised to state that the sampling crew will avoid placing the sample bottles on potentially contaminated surfaces.**

   It is generally good practice to avoid placing the sample bottles on potentially contaminated surfaces (i.e., dirty truck bed, on the ground, etc.) and the field crew followed this practice during the inspection. However, the GWDMP and GWQAP do not state that this practice will be followed.

The owner/operator of the Celina Landfill 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 violations 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 jeremy.scoles@epa.ohio.gov.

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 me by telephone at (419) 373-3079 or by e-mail at jeremy.scoles@epa.ohio.gov.

Sincerely,

Jeremy Scoles, RS
Environmental Supervisor
Division of Materials and Waste Management

/cg

Enclosures

pc: Michelle Kimmel, Mercer County Health Department
Joseph Montello, Republic Services
Nathan Taylor, Republic Services
Joseph Warburton, Brown and Caldwell
File: DMWM-SW, Mercer County, Celina Landfill, Ground Water

ec: Mary Wright, Tim Fishbaugh, Ken Brock, Mike Reiser
ID# 5-11587

GROUND WATER INSPECTION CHECKLIST

Site/Facility Name: **Celina Landfill**	Inspection Date: **May 30, 2012**
Site/Facility Address: **6141 Depweg Road** Site/Facility Status (circle one): (Operating) Closed	Ohio EPA ID#: **54-00-01** District: **NWDO**
Client Division/Program (check applicable) DSIWM DHWM MSW__X_____ 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: **Adam Burleson**	
Client Division Contact: **Jeremy Scoles**	DDAGW Geologist: **Ken Brock**
Names and company affiliations of facility or consulting personnel performing field monitoring and sampling activities: 1. **Joe Warburton – Brown & Caldwell** 2.	

Documentation Reviewed Prior to Field Inspection

Ground Water Sampling and Analysis Plan

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 X No	If yes, document date: **September 2006** Approval date (if applicable):
2. The current SAP is: (circle one)	(a stand alone document?) included in another document?	If another document, specify:

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.

September 2006: Multiple revisions with modifications too complex to list herein

Other Sources of Documentation

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?

Document:	Yes	No	N/A	Comments:
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: **September 2006**
5. Current GWQAP?	X			If yes, document date: **March 2011**
6. Current GWCMP?			X	If yes, document date:
7. Previous Ohio EPA inspection?	X			If yes, inspection date: **3/98, 9/00, 9/03, 10/06, 9/09**

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 *Ground Water Monitoring Well Inspection Form*)		X		See Comment No. 1
3. Are there bumper guards around the wells ?	X	X		Guards around most 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 *Ground Water Monitoring Well Inspection Form*. 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 Amonitoring well@ and Awell@ 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 ASAP 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 Arecommendations@.

Well Identification: Specify well numbers where ground water purging and sampling procedures were observed by Ohio EPA.	**Wells:** G-1, G-2, B-1, B-2						
	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. 2
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	
2. Measuring ground water levels/elevations, cont. : **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	SAP required, but not at this time
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	Collected when dedicated pumps removed and when bailed wells are bailed dry
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			
3. Well Purging (Generic to all methods): **a)** Specify purging method(s) used for each well observed.	**SAP:** Ded pump/bailers			**Field:** Ded pump/bailers			
(1) Volumetric Purge?	Yes			Yes			Volumetric usually purged dry
(2) Low Flow?	Yes			Yes			
(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:** Ded pump/bailers			**Field:** Ded pump/bailers			
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:** Doesn't spec			**Field:** Nylon			
4. For Volumetric Purging: **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 1 2 well volumes?	X			X			SAP says at least 4 measurements will be taken
(3) Was it demonstrated that three consecutive measurements were within their respective stabilization criteria?	X	X		X	X		Yes – when applicable
d) Were samples obtained immediately after purging?	X	X		X	X		Within 24 hours

	SAP Requirement?			Field Instrumentation			Comments:
	Yes	No	N/A	Yes	No	N/A	
5. For Low-Flow Purging: a) Was water level drawdown measured during purging?	X			X			
b) Was it demonstrated that drawdown stabilized?	X			X			
c) Specify location of pump.	**SAP:** Doesn't spec			**Field:** Within screen			
d) What was the purging rate?	**SAP:** Low			**Field:** Low			
e) 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 3 to 5 minutes?	X	X		X	X		Frequency varies – depends on when water level stabilizes
(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			
6. For Minimum/No Purge: 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?			X			X	
b) Specify the location of the pump.	**SAP:**			**Field:**			
c) Were steps taken to prevent stagnant water from entering the well?			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:**			**Field:**			
7. For Purging to Dryness: Were samples taken as soon as sufficient water was available?	X			X			Within 24 hours
8. Field parameters for ground water, surface water, and/or leachate, including: a) Are field analyses of temperature, pH, and specific conductance performed?	X			X			
b) Are field parameters checked after purging and before sampling?	X			X			
9. Ground water (and if applicable, surface water or leachate) sample collection, including: a) Specify sample collection methods and equipment used:	**SAP:** See above			**Field:** See above			
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	All 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						Not observed

	SAP Requirement?			Field Instrumentation			Comments:
	Yes	No	N/A	Yes	No	N/A	
9. Ground water sample collection, cont. : f) Specify type of cord or wire used with sampling bailers:	**SAP:** Doesn't spec			**Field:** Not obs.			
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			
10. Calibration of field monitoring and analytical equipment: a) Is each device calibrated to its manufacturer's specifications?	X			X			
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			
11. Equipment decontamination, including: a) If applicable, is all non-dedicated monitoring, purging, and sampling equipment decontaminated between sampling locations in accordance with the SAP?						X	
b) Is clean or decontaminated sampling equipment placed on the ground or in other potentially contaminated areas prior to use?		X		X			**See Comment No. 3**
c) Are all decontamination fluids contained and disposed in accordance with the SAP?						X	
12. Purge water disposal, including: 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?	X			X			
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			
13. Field sample preparation, including: a) <u>Sample containers and handling</u>: *(1)* Are all sample containers pre-cleaned and provided by the laboratory?	X			X			
(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	
13. Field sample preparation, cont. : *(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) Sample preservation (per SW-846, Revision 1, 12/96, Chapter 2, Table 2-36): *(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_3?	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_2SO_4?	X			X			
(5) Are CN samples field-preserved pH>12/50% w/NaOH?			X			X	
c) Sample labeling: *(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		X	X		SAP doesn't specify matrix. Some bottles do – some don't.
(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			SAP doesn't specify indelibility
(8) Are sample labels secured and protected to ensure legibility when delivered to the laboratory?		X		X	X		Wired tags – secured but not protected
14. Field Quality Assurance/Quality Control (QA/QC), including: a) Use of standard procedures that ensure the validity and reliability of field and laboratory data, as well as representative analytical results?	X	X		X	X		Documented throughout this form

	SAP Requirement?			Field Instrumentation			Comments:
	Yes	No	N/A	Yes	No	N/A	
14. Field Quality Assurance/Quality Control, cont. :	X					X	
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		
(3) Equipment blanks?		X			X		
(4) Trip blanks?		X			X		
d) Collection of all necessary laboratory QA/QC samples (*e.g.*, matrix spike, matrix spike duplicate)?	X			X			
15. Chain-of-Custody (COC) procedures, including:				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 therequested 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			
(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		X			SAP – if courier used

	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?							
a) Monitoring program (detection, assessment, or compliance) identified?	X			X			
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			
f) Presence and thickness of immiscible layers and associated measurement technique?	X		X			X	
g) Well purging procedures and all associated SAP-required information?				X			SAP-required info documented throughout this form
h) Field analyses procedures and all associated SAP-required information?				X			SAP-required info documented throughout this form
i) Sampling procedures and all associated SAP-required information?				X			SAP-required info documented throughout this form
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		X			
k) Equipment malfunction(s)?	X			X		X	
l) Any deviations from the SAP and explanation of why such modifications were necessary?	X			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			Once report submitted

Have all discrepancies between the SAP and the field implementation been described in the AComment@ 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

Celina Landfill
May 30, 2012

Well Identification Number:	A-3	B-1	B-2	C-1	C-2	C-3	D-1R	E-1
Correct location?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clearly and correctly labeled?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Locked prior to arrival at well location?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ground water depth:	18.81	20.92	12.50	39.08	8.37	23.27	10.39	9.39
Well total depth:	Not Meas	Not Meas	Not Meas	Not Meas	Not Meas	Not Meas	Not Meas	Not Meas
For above ground completions: a) Protective outer casing present?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(1) Condition?	Good	Good	Good	Good	Good	Good	Good	Good
(2) Locking cap? Condition?	Good	Good	Good	Good	Good	Good	Good	Good
(3) Weep hole present?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(4) Standing water between protective casing & well casing?	No	No	No	No	No	No	No	No
b) Surface seal/apron present?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(1) Condition?	Low	Good	Good	Good	Good	Good	Good	Cracked
(2) Ponded surface water?	No	No	No	No	No	No	No	No
For flush mount completions: a) Well vault present?	NA	NA	NA	NA	NA	NA	NA	NA
(1) Condition?	NA	NA	NA	NA	NA	NA	NA	NA
(2) Covered with bolted vault lid?	NA	NA	NA	NA	NA	NA	NA	NA
(3) Standing water in vault? Covering top of inner casing?	NA	NA	NA	NA	NA	NA	NA	NA
b) Surface seal/apron present?	NA	NA	NA	NA	NA	NA	NA	NA
(1) Condition?	NA	NA	NA	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	NA	NA	NA
(3) Ponded surface water on top of vault lid?	NA	NA	NA	NA	NA	NA	NA	NA
Well (inner) Inner well casing condition?	Good	Good	Good	Good	Good	Good	Good	Good
a) Material?	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC
b) Survey reference mark?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c) Cap present?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d) If the completion is flush mount, is the cap expandable and locking?	NA	NA	NA	NA	NA	NA	NA	NA
e) Condition of casing and cap?	Good	Good	Good	Good	Good	Good	Good	Good

Additional Comments: The concrete pad at A-3 is low (several inches below the surrounding ground surface). The concrete pad at E-1 is cracked.

GROUND WATER MONITORING WELL FIELD INSPECTION FORM

Celina Landfill
May 30, 2012

Well Identification Number:	F-1	G-1	G-2	H-1	I-1	J-1	J-2	K-1
Correct location?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clearly and correctly labeled?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Locked prior to arrival at well location?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ground water depth:	12.86	11.91	7.46	15.83	20.63	31.59	39.45	23.31
Well total depth:	Not Meas	Not Meas	Not Meas	Not Meas	Not Meas	Not Meas	Not Meas	Not Meas
For above ground completions: a) Protective outer casing present?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(1) Condition?	Good	Good	Good	Good	Good	Good	Good	Good
(2) Locking cap? Condition?	Good	Good	Good	Good	Good	Good	Good	Good
(3) Weep hole present?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(4) Standing water between protective casing & well casing?	No	No	No	No	No	No	No	No
b) Surface seal/apron present?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(1) Condition?	Loose	Good	Good	Good	Good	Good	Good	Good
(2) Ponded surface water?	No	No	No	No	No	No	No	No
For flush mount completions: a) Well vault present?	NA	NA	NA	NA	NA	NA	NA	NA
(1) Condition?	NA	NA	NA	NA	NA	NA	NA	NA
(2) Covered with bolted vault lid?	NA	NA	NA	NA	NA	NA	NA	NA
(3) Standing water in vault? Covering top of inner casing?	NA	NA	NA	NA	NA	NA	NA	NA
b) Surface seal/apron present?	NA	NA	NA	NA	NA	NA	NA	NA
(1) Condition?	NA	NA	NA	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	NA	NA	NA
(3) Ponded surface water on top of vault lid?	NA	NA	NA	NA	NA	NA	NA	NA
Well (inner) Inner well casing condition?	Good	Good	Good	Good	Good	Good	Good	Good
a) Material?	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC
b) Survey reference mark?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c) Cap present?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
d) If the completion is flush mount, is the cap expandable and locking?	NA	NA	NA	NA	NA	NA	NA	NA
e) Condition of casing and cap?	Good	Good	Good	Good	Good	Good	Good	Good

Additional Comments: The concrete pad and protective casing at F-1 is loose, suggesting that there might be void space beneath the pad.

GROUND WATER MONITORING WELL FIELD INSPECTION FORM

Celina Landfill
May 30, 2012

Well Identification Number:	K-2	L-1	L-1R	PW-1	C-4			
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:	31.14	32.38	33.92	37.79	31.10			
Well total depth:	Not Meas	Not Meas	Not Meas	Not Meas	Not Meas			
For above ground completions: a) Protective outer casing present?	Yes	Yes	Yes	Yes	Yes			
(1) Condition?	Good	Good	Good	Good	Good			
(2) Locking cap? Condition?	Good	Good	Good	Good	Good			
(3) Weep hole present?	Yes	Yes	Yes	No	No			
(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	Cracked	Loose			
(2) Ponded surface water?	No	No	No	No	No			
For flush mount completions: 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			
Well (inner) Inner well casing condition?	Good	Good	Good	Good	Good			
a) Material?	2" PVC	2" PVC	2" PVC	5" Steel	2" PVC			
b) Survey reference mark?	Yes	Yes	Yes	Yes	Yes			
c) Cap present?	Yes	Yes	No	No	Yes			
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: The protective casings at PW-1 and C-4 do not have weep holes. The concrete pad at PW-1 is severely cracked and the concrete pad and protective casing at C-4 is loose, suggesting that there might be void space beneath the pad. L-1R and PW-1 do not have inner well caps.