

February 17, 2011

Mr. F. Thomas Lubozynski, P.E.
Waste Program Administrator
Department of Environmental Protection, Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

RE: Volusia County Tomoka Farms Road Landfill, WACS #27540
Response to DEP Review of Response to Review of Evaluation Monitoring Plan and
Related Documents

Dear Mr. Lubozynski:

The following information is being submitted to the Department in response to the January 18, 2011 DEP Review of "Response to Review of Evaluation Monitoring Plan and Related Documents", dated 1/6/11. Information is provided in the order requested in the referenced correspondence. In each case, the FDEP comment is presented in *italics* with the response immediately following in **bold**.

- Submittal of the Contamination Evaluation Report (CER).
The Department accepts that the CER will be submitted by April 7, 2011. The report must be signed and sealed by either a professional geologist or professional engineer. By April 7, 2011, the facility will have:
 - a. **Installed the proposed Benzene and Ammonia Evaluation Monitoring (EM) wells.**
 - b. **Done an initial sample on the 6 new wells.**
 - c. **Conducted a potable well survey.**
 - d. **Submitted the Contamination Evaluation Report (CER) which includes the results of the potable well survey.**

Comment is acknowledged. The six EM wells have been installed and are scheduled for sampling the first week of March. A potable well survey is underway. The CER will be submitted to the Department by April 7, 2011.

- The targeted locations for the 6 new wells
 - a. *The Department approves the proposed locations of the 6 evaluation monitoring wells including the adjusted locations of B78-1 and B80-2.*
 - b. *Please revise and resubmit Sheet C-01 to include the location of B77-1.*

B77-1 was installed in cluster with monitoring well B45-1 to provide vertical delineation data. The wells will be surveyed by a licensed Florida surveyor. This data will be provided to the Department in the CER. A revised figure showing the well locations based on the survey data will also be provided in the CER.

3. Submittal of 2009-2010 Evaluation Monitoring Sampling Data:
 - a. *The department understands that the November 2009 data is still being worked on for an ADaPT submittal.*
 - i. *When is this data expected to be successfully submitted in ADaPT to our Tallahassee office.*

An ADaPT submittal for the November 2009 evaluation monitoring data is provided in the attached CD. A copy of this data has also been submitted to the DEP Tallahassee office as required.

- ii *Of particular interest are the November 2009 leachate results including metals which are not currently shown in WACS. Please submit the results for the metals analysis of the leachate sample(s).*

All MPIS required sampling data (including leachate data) has been previously submitted separately by SCS Engineers, Inc. on behalf of Volusia County. Our understanding is that due to errors on the part of the analytical laboratory, the MPIS required data was submitted three times. Among other revisions, the final submittal removed the evaluation monitoring data from the ADaPT file. As mentioned above, the evaluation monitoring data for this event is provided in the attached CD.

- b. *The Department requested ADaPT submittals for any quarterly sampling in February 2010 and August 2010. The response gives the impression that the submitted CD does not have Appendix II analytical results for either February or August 2010. The CD in the 1/6/2011 submittal does include Appendix II analytical results for the February 2010 sampling. This is consistent with the table in the submittal's Comment 4.*

The Department is correct. Appendix II data for February 2010 sampling was included in the CD provided on January 6, 2011.

- c. *ADaPT submittals for the Appendix II sampling in May 2010.*

- i. *As required by the MPIS for the facility, the May 2010 sampling is considered the first semi-annual sampling event for 2010. The February 2010 samples are a quarterly sampling event only. The November 2010 sampling event should have been the second semi-annual sampling event in addition to the 4th quarterly event. Please clarify, correct, and resubmit the table in Comment 4, if appropriate.*

The Department is correct. The table provided in Comment 4 of the January 6, 2011 correspondence was incorrect. A revised version of the table is provided below.

Event	Date	Appendix II	ADaPT Data
2009 S2/Q4	November 2009	Yes	Enclosed on CD
2010 Q1	February 2010	Yes	Previously submitted
2010 S1/Q2	May 2010	Yes	Enclosed on CD
2010 Q3	August 2010	No	Previously submitted
2010 S2/Q4	November 2010	No	Previously submitted

- ii. *The table notes that Appendix II was not done for the May 2010 sampling event. However, the submittal "Ammonia Contamination Evaluation Plan," dated 9/29/2010, included the laboratory results for the May 2010 sampling event. (The Benzene evaluation monitoring wells were B41-1, B43-1, B45-1, and B45-2). Please clarify, correct, and resubmit the above table if appropriate.*

The Department is correct. Appendix II data was collected for the May 2010 sampling event. The revised table provided in the response to Comment 3.c.i. reflects this change. It should be noted that the ADaPT file for this data was not submitted with the September 29, 2010 report due to laboratory errors. The required ADaPT file is provided in the attached CD.

- iii. *According to the submittal the May 2010 quarterly sampling event was included on the compact disk (CD) provided with the 1/6/2011 submittal. The Department's copy of the CD in Attachment 2 does not include any May 2010 sampling results. However, the results for the May 2010 sampling event have been included in the submittal "Ammonia Contamination Evaluation Plan," dated 9/29/2010. Did the 9/29/2010 submittal have all the laboratory data for the May 2010 sampling event?*

The September 29, 2010 submittal included only evaluation monitoring data. All data required by the MPIS was submitted separately by SCS Engineers, Inc. on behalf of Volusia County. A copy of the evaluation monitoring ADaPT file is provided on the attached CD. A copy of the ADaPT file for the May 2010 evaluation monitoring data is also being submitted to DEP Tallahassee.

- iv. *The routine semi-annual May 2010 sampling data was submitted; it has been uploaded into WACS. However, the WACS data does not include the Appendix II results.*
1. *Submit all of the previously un-submitted Evaluation Monitoring sampling data to Tallahassee in ADaPT format to upload to the WACS database. Use ADaPT Report Type "ASSMT" for any sampling that is different from what would be required for routine semi-annual sampling.*

Copies of previously un-submitted evaluation monitoring sampling data in ADaPT format are provided on the attached CD and are being submitted to DEP Tallahassee.

2. *Describe the additional data submitted to Tallahassee in your response to this letter, that is, sampling date, sampling locations, and analytical parameters.*

A table summarizing the requested information is provided below.

File	Wells	Sample Date	Parameters
November 2009	B45-1	11/5/2009	MIPS parameters plus Appendix II
	B45-2	11/5/2009	MIPS parameters plus Appendix II
	B41-1	11/5/2009	MIPS parameters plus Appendix II
	B43-1	11/5/2009	MIPS parameters plus Appendix II
May 2010	B45-1	5/20/2010	MIPS parameters plus Appendix II
	B45-2	5/20/2010	MIPS parameters plus Appendix II
	B41-1	5/20/2010	MIPS parameters plus Appendix II
	B43-1	5/20/2010	MIPS parameters plus Appendix II

4. *Reducing the EM Parameters in the Benzene monitoring wells.*

a. *The 1/6/2011 submittal stated:*

- i. *Cyanide and pentachlorophenol are on the Attachment 3 table of detected parameters but are not on the Appendix I list for routine semi-annual sampling. Please discuss why these parameters were not noted.*

Cyanide and Pentachlorophenol were each detected once in two separate groundwater samples (above the MDL but below the MCL) but were inadvertently not noted in the text of the report. The presence of cyanide and pentachlorophenol will be closely evaluated in the groundwater samples to be collected during the first week of March 2011.

- ii. *The May 2010 Appendix II sampling in monitoring well B41-1 detected an exceedance of bis(2-Ethylhexyl)phthalate (17 ug/L). Monitoring well B43-1 had an exceedance of bis(2-Ethylhexyl)phthalate (14 ug/L). The water quality standard is 6 ug/L. Why was this parameter not listed on the table in Attachment 3. If appropriate, revise and resubmit the Attachment 3 table.*

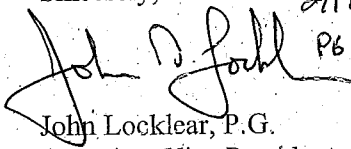
Bis(2-Ethylhexyl)phthalate was inadvertently omitted from the Attachment 3 table. A revised table is provided in Attachment 1.

- b. *The Department agrees that any request to reduce analytical parameters depends upon the results of the February 2011 sampling event.*

Comment is acknowledged.

Please do not hesitate to call me at (352) 642-1105 if you have any questions regarding this information.

Sincerely,

 2/17/11
PB 2467

John Locklear, P.G.
Associate Vice President
HDR Engineering, Inc.

Cc: Jennifer Stirk, Volusia County

ATTACHMENT 1

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
TOMOKA FARMS ROAD LANDFILL
NOVEMBER 2009 THROUGH MARCH 2010

PARAMETER	CONDUCTIVITY (FIELD)	DISSOLVED OXYGEN (FIELD)	pH (FIELD)	TEMPERATURE (FIELD)	TURBIDITY (FIELD)	AMMONIA NITROGEN	CHLORIDE	CYANIDE	NITRATE NITROGEN	SULFIDE	TOTAL DISSOLVED SOLIDS	ANTIMONY	ARSENIC
STANDARD*	(1)	(1)	6.5-8.5S.U.**	(1)	(1)	2.8 mg/L***	250 mg/L**	0.2 mg/L*	10 mg/L*	(1)	500 mg/L**	6 µg/L*	10 µg/L*
UNITS	µmhos/cm	mg/L	S.U.	Degrees C	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L
B41-1	1500	0.14	6.32	22.8	2.65	61	150	-	0.35	0.061	1000	47	<8.5
B41-1	1865	0.33	5.75	22.1	1.24	150	-	<0.00097	-	0.024 I	1100	<0.073	<8.5
B41-1	1655	0.19	6.27	22.1	0.82	51	150	<0.00097	<0.085	0.021 I	1000	<0.73	0.52 I
B41-1	2089	0.39	6.25	22.78	1.81	55	-	-	-	-	-	-	-
B41-1	2060	0.54	6.38	22.45	2.62	63.4	163	-	<0.025	11.6	1030	<0.5	<5
B43-1	846	0.25	6.01	23.2	1.18	11	70	-	<0.078	0.076	450	36	<8.5
B43-1	707	0.52	5.54	21.5	5.87	1.6	-	<0.00097	-	0.094	470	<0.073	<8.5
B43-1	840	0.39	6.41	24.9	4.22	4	68	<0.00097	<0.043	<0.021	550	0.12 I	<0.36
B43-1	915	0.39	6.00	23.5	2.4	3.2	-	-	-	-	-	-	-
B43-1	886	0.38	6.11	23.01	2.44	4.5	79.6	-	<0.05	<5	448	<0.5	<5
B45-1	1501	0.2	6.04	22.4	6.68	0.1	160	-	<0.16	0.061	990	65	<8.5
B45-1	663	0.94	6.23	21.3	8.16	-	-	<0.00097	-	0.085	930	0.073	<8.5
B45-1	1664	0.64	6.45	21.86	1.04	1.4	180	0.003	<0.43	<0.021	930	0.084 I	2
B45-1	-	-	-	-	-	-	-	-	-	-	-	-	-
B45-1	1524	0.49	6.12	21.99	3.65	<0.04	180	-	<0.12	<12.5	828	<0.5	<5
B45-2	1049	0.38	5.10	23.3	3.04	0.066	260	-	<0.078	0.3	930	78	<8.5
B45-2	160	1.19	5.20	18.3	40.9	-	-	<0.00097	-	0.056	240	0.079 I	<8.5
B45-2	800	0.47	5.29	21.44	1.13	0.05	140	0.0067	<0.43	0.025 I	1000	0.097 I	1.2
B45-2	-	-	-	-	-	-	-	-	-	-	-	-	-
B45-2	1300	0.83	5.00	22.91	10.74	<0.04	334	-	<0.5 J	7.6 I	676	<0.5	<0.5

LEGEND

(1) No Standard

* = Primary Drinking Water Standard

** = Secondary Drinking Water Standard

*** = Chapter 62-777 Groundwater Cleanup Target Level (GCTL)

Bold indicates the result is outside of the standard

NA = not analyzed due to extreme sample matrix interference

- = not analyzed

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
 TOMOKA FARMS ROAD LANDFILL
 NOVEMBER 2009 THROUGH MARCH 2010

PARAMETER	BARIUM	BERYLLIUM	CADMIUM	CHROMIUM	COBALT	COPPER	IRON	LEAD	MERCURY	NICKEL	SELENIUM	SILVER	SODIUM	THALLIUM	TIN
STANDARD*	2000 µg/L*	4 µg/L*	5 µg/L*	100 µg/L*	140 µg/L***	1000 µg/L***	300 µg/L**	15 µg/L*	2 µg/L*	100 µg/L*	50 µg/L*	100 µg/L**	160 µg/L*	2 µg/L*	4200 µg/L***
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
B41-1	210	0.28 I	<0.32	3.6 I	<0.6	<2.5	18000	<1.3	<0.014	<1.1	<6.8	<1.1	130	<5.5	-
B41-1	230	0.20 I	<0.32	4.4	<0.6	<2.5	-	<1.3	<0.014	<1.1	<6.8	<1.1	-	<0.067	95
B41-1	240	0.36	<0.32	3.6 I	<0.6	<2.5	18000	<1.3	<0.014	<1.1	<2.2	0.95 I	120	<0.067	14.1
B41-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B41-1	232	<0.5	<0.5	4.4 I	8.8 I	<2.5	21700	<5	<0.1	<2.5	<7.5	<2.5	152	<0.5	-
B43-1	170	0.20 I	<0.32	0.5	<0.6	<2.5	24000	<1.3	<0.014	<1.1	<6.8	0.96 I	74	<5.5	-
B43-1	130	<0.13	<0.32	0.59 I	<0.6	<2.5	-	<1.3	<0.014	2.3 I	<6.8	<0.44	-	0.15 I	44
B43-1	150	0.26 I	<0.32	<0.5	<0.6	<2.5	21000	<1.3	<0.014	<1.1	<2.2	1.5 I	87	<0.067	11.1
B43-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B43-1	189	<0.5	<0.32	<2.5	<5	<2.5	26600	<5	<0.1	2.5 I	<7.5	<2.5	88.1	<0.5	-
B45-1	130	0.28 I	<0.32	1.3 I	<0.6	<2.5	44000	<1.3	<0.014	<1.1	<6.8	0.52 I	200	<5.5	-
B45-1	130	0.14 I	<0.32	0.64 I	<0.6	<2.5	-	<1.3	<0.014	2.3 I	<6.8	1.2 I	-	<0.067	96
B45-1	150	0.34	<0.32	<0.5	<0.6	<2.5	44000	<1.3	<0.014	1.3 I	4.1 I	1.6 IV	190	<0.067	20.1
B45-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B45-1	159	<0.5	<0.5	<2.5	5.2 I	<2.5	49200	<5	<0.1	<2.5	<7.5	<2.5	206	<0.5	-
B45-2	140	0.51	<0.32	2.2 I	<0.6	<2.5	54000	<1.3	<0.014	4.0 I	<6.8	<0.44	54	<5.5	-
B45-2	35	0.28 I	<0.32	5.2	<0.6	<2.5	-	<1.3	<0.014	1.3 I	<6.8	<0.44	-	<0.067	22
B45-2	95	0.53	<0.32	2.2 I	<0.6	<2.5	21000	<1.3	<0.014	1.2 I	2.6 I	0.94 I	36	<0.067	10.1
B45-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B45-2	213	0.76 I	<0.5	2.7 I	<5	<2.5	80300	<5	<0.1	2.9 I	<7.5	<2.5	62.5	<0.5	-

LEGEND

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PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
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NOVEMBER 2009 THROUGH MARCH 2010

PARAMETER	VANADIUM	ZINC	ACETONE	BENZENE	CARBON DISULFIDE	CHLORO-BENZENE	TOLUENE	VINYL CHLORIDE	XYLENES	BENZYL ALCOHOL	BIS (2-ETHYLHEXYL) PHTHALATE	DIN-OCTYL PHTHALATE	PENTA-CHLORO-PHENOL	SIMAZINE
STANDARD*	49 µg/L***	5000 µg/L**	6300 µg/L***	1 µg/L*	700 µg/L***	100 µg/L*	40 µg/L**	1 µg/L*	20 µg/L**	2100 µg/L***	6 µg/L*	140 µg/L***	1 µg/L*	4 µg/L*
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
B41-1	11/5/2009	9.6	10	4.5 I	0.91 I	1.9	<0.28	<0.37	<0.59	<0.66	<1.9	<2	<1.1	-
B41-1	2/23/2010	9.4	<2	3.6 I	1.1	2.5	<0.28	<0.4	<0.59	<0.66	<1.9	<2	<0.29	0.20 I
B41-1	5/20/2010	9	<2	4.3 I	0.68 I	1.5	<0.28	<0.4	<0.63	<0.66	17	<2	<0.29	<0.074
B41-1	8/20/2010	-	-	-	-	-	-	-	-	-	-	-	-	-
B41-1	11/9/2010	9.7 I	<10	<5	1.4	2.7	<0.5	<0.5	<0.5	-	-	-	-	-
B43-1	11/5/2009	5.1	9.5 I	<3.3	1.5	7.6	<0.28	<0.37	<0.59	<0.66	<1.9	<2	<1.1	-
B43-1	2/23/2010	4.1	4.6 I	<3.3	0.84 I	3.7	<0.28	<0.4	<0.63	1.4 I	<1.9	<2	<0.29	<0.072
B43-1	5/20/2010	4.6	3.9 I	<3.3	0.91 I	3.5	<0.28	<0.4	<0.63	<0.66	14	<2	<0.29	<0.074
B43-1	8/20/2010	-	-	-	-	-	-	-	-	-	-	-	-	-
B43-1	11/9/2010	5.3 I	<10	<5	1.7	5.6	<0.5	<0.5	<0.5	-	-	-	-	-
B45-1	11/5/2009	4.3	<2	<3.3	8.6	5.4	0.36 I	<0.37	1.5 I	<0.66	<1.9	<2	<1.1	-
B45-1	2/23/2010	3	<2	4.3 I	4.3 I	5	0.37 I	<0.4	1.6 I	<0.66	<1.9	<2	<0.29	0.32
B45-1	5/20/2010	2.9	<2	<3.3	8	4.6	0.30 I	<0.4	1.4 I	<0.66	<1.9	2.6 I	<0.29	<0.074
B45-1	8/20/2010	-	-	-	-	-	-	-	-	-	-	-	-	-
B45-1	11/9/2010	<5	<10	<5	12.1	5.8	0.53 I	<0.5	2.6	-	-	-	-	-
B45-2	11/5/2009	17	<2	<3.3	0.74 I	1.1	<0.28	<0.37	<0.59	<0.66	<1.9	<2	<1.1	-
B45-2	2/23/2010	18	<2	<3.3	<0.3	<0.23	<0.28	<0.4	<0.63	<0.66	<1.9	<2	0.38 I	<0.072
B45-2	5/20/2010	15	<2	3.8 I	0.41 I	0.50 I	<0.28	<0.4	<0.63	<0.66	<1.9	<2	<0.29	<0.074
B45-2	8/20/2010	-	-	-	-	-	-	-	-	-	-	-	-	-
B45-2	11/9/2010	21.6	<10	<5	2.3	0.73 I	0.52 I	0.52 I	<0.5	-	-	-	-	-

LEGEND

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