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October 28, 2010

Mr. F. Thomas Lubozynski, P.E.
Solid and Hazardous Waste Program
Florida Department of Environmental Protection (FDEP), Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Re: Revisions to Cell 7 Certification Report and Financial Assurance Minor Modification Application
J.E.D. Solid Waste Management Facility, Osceola County, Florida
FDEP Permit No's. SC49-0199726-004 & SO49-0199726-005

Dear Mr. Lubozynski:

Submitted herewith are two (2) copies of the replacement pages for the Cell 7 Certification Report and the Minor Modification Application for Cell 7 Financial Assurance. The Cell 7 Certification Report and Minor Modification Application were originally submitted to the FDEP on October 4, 2010. The revisions to the documents are based on comments provided by Mr. Sandeep Janwadkar (FDEP) and Mr. George Cheryan (FDEP) at the site inspection meeting held at the JED Facility on Wednesday, October 20, 2010. In addition to the two (2) hard copies of the replacement pages provided, I have also included new compact disks (CDs) containing a revised PDF of Appendices E through U and a revised PDF of the entire report. Please discard the CDs submitted with the original documents.

If you have any questions or need additional information, please do not hesitate to contact the undersigned at (813) 388-1026 or Mike Kaiser with WSI at (904) 673-0446.

Sincerely,

Kirk Wills
Senior Engineer

Attachments

Copy: Mike Kaiser, WSI

- monitoring installation of sump risers, concrete surface pads, leachate pumps, leachate piping and system controls.

During construction activities involving monitoring and/or testing, the observations made and results obtained by EPS CQA personnel were compared with the requirements of the CQA Documents. The construction manager and the appropriate contractor were notified of deficiencies in construction practices and/or materials to ensure appropriate corrective actions are taken. The corrective actions were monitored and/or tested by CQA personnel to ensure compliance with the requirements of the CQA Documents.

3.4 Certification Report and Record Drawings

Record drawings for Cell 7 liner subbase, primary and secondary geomembrane panel layouts, liner protective cover, and the leachate collection and transmission system piping, and this CQA certification report were prepared as the final task of the CQA program for construction of Cell 7. The record drawings are included in Appendix C of this report. This certification report summarizes the CQA monitoring, testing, and documentation activities performed by EPS.

During construction of Cell 7, CQA monitoring and testing activities were documented by CQA personnel in Daily Field Reports and various other forms. In addition, QC certificates for the geosynthetics, other construction materials, and surveyor's data were provided to EPS for review. These and other construction-related documents are maintained by WSI and EPS as part of the project file. Results of CQA monitoring and testing activities that are critical with respect to the satisfactory performance of Cell 7 at the JED facility and protection of the surrounding environment have been summarized in a tabular form and are included in the Tables Sections 4 and 5 of this certification report.

3.5 Project Personnel

Major personnel or representatives of the firms involved in the project are as follows:

Owner:

Waste Services, Inc.

- Mike Kaiser, VP, Environmental Management, U.S.
- Matt Orr, District Manager
- Keith Lunsford, Facility Technician

CQA Consultant:

Environmental Planning Specialists (EPS)
Wesley Chapel, Florida

- Kenneth W. Cargill, P.E., Engineer of Record

Table 5-6. Table 5-6 also indicates the tests that were conducted, the required test frequencies, and the acceptance criteria in accordance with the CQA Documents. The MQC certificates for the geotextile are included in Appendix Q.

A CQA conformance samples was tested for approximately 54,000 ft² of the non-woven geotextile delivered to the site for installation in Cell 7. The actual CQA test frequency of 1 test per 54,000 ft² of non-woven geotextile exceeded the minimum testing frequency of 1 test per 100,000 ft² required by the CQA Documents. The CQA laboratory test results for the geotextile conformance sample have been included in Appendix QR.

5.6.2 Field Monitoring Activities

5.6.2.1 Delivery and On-Site Storage

Upon delivery to the site, non-woven geotextile rolls were stored in an area located south of the Cell 7 construction area (i.e., future Cell 8 footprint) and stacked on an elevated soil berm. The rolls were typically transported by an off-road forklift. CQA personnel monitored the delivery, unloading, and storage procedures to ensure that the material was handled in an appropriate manner.

5.6.2.2 Deployment

CQA personnel monitored the deployment of the non-woven geotextile rolls for manufacturing defects; damage that may have occurred during shipment, storage, and handling; and damage resulting from installation activities. If any materials were observed to be damaged, the installer was notified and the damaged materials were either discarded or repaired. CQA personnel observed repair locations to verify conformance with the requirements of the CQA Documents.

After deployment of the geotextile, CQA personnel observed that the installer overlapped geotextile panels end-to-end a minimum of 24-in. and continuously sewed the 6-in overlap.

5.7 Interface Friction Testing

As discussed in Section 2, the liner system in Cell 7 consists (from top to bottom) of the protective soil layer, primary geocomposite, primary liner, secondary geocomposite, secondary liner, secondary GCL and prepared subbase. Tests were performed in accordance with the CQA Documents to evaluate the interface shear strength for the various components of the liner system and the internal strength of the GCL. All tests for interface shear strength and the internal strength of the GCL were performed by SGI.

secondary sump risers were installed in Cell 7 sump. The sump risers were constructed using 24-in diameter SDR 32.5 HDPE pipe and included a perforated cap at the sump end and a bolted flanged top lid. The horizontal section (or collection segment) of the sump riser pipes were perforated to allow leachate to flow into the pipe. These sump pipes were installed in accordance with the CQA Documents.

The Cell 7 sump area included a primary GCL extending approximately 5-ft out from the limit of the sump.

Leachate from Cell 7 will be collected in the leachate collection system in the central leachate corridor, and will gravity flow to the Cell 7 sump. Leachate will be pumped from the sump risers through the leachate transmission line to the leachate storage area. To control the pumping and transfer of leachate, a sump control panel was installed as part of the leachate system in Cell 7.

EPS's CQA personnel monitored the construction of the leachate collection system within Cell 7, the extension of the leachate transmission header line from Cell 5, and the installation of a new leachate transmission line manhole on the west side of the Cell 7 sump area. The field monitoring and testing activities performed by the CQA personnel during construction of the leachate collection system and the leachate transmission line and manhole are discussed below. After construction of the leachate collection system was complete, the primary and secondary collection pipes were pressured cleaned by Florida JetClean, of Lutz, Florida. A letter report from Florida Jetclean verifying the system to be free flowing and not obstructed is included in Appendix T of this report.

6.2 HDPE Pipe

All pipes used in the construction of the leachate collection system were SDR 11 HDPE pipes except for the sump risers, which were constructed using SDR 32.5 HDPE pipes. The MQC certificates for the HDPE pipes were reviewed by the CQA personnel and were found to be in compliance with the requirements of the CQA Documents.

HDPE pipe sections were joined using butt-fusion welding and electro fusion coupler techniques. CQA personnel monitored the butt-fusion welding techniques to ensure that industry-accepted procedures were used during construction. CQA personnel also verified the diameter of and perforation details (size, number of rows, orientation) for the different pipes used in the leachate collection system and monitored the cleaning of all pipes, just prior to installation and after placement of the pipes.

6.3 Granular Drainage Materials

Granular drainage materials meeting the requirements of #5 stone (per ASTM D 448) were used in Cell 7 primary and secondary leachate collection systems. Granular

**MOISTURE DENSITY TEST SHEET
NUCLEAR DENSITY GAUGE METHOD
ASTM D 3017 / 2922**

PROJECT NUMBER: A027.101

DATE OF TEST: 4-2-10

PROJECT TITLE: J.E.D. Facility - Cell 7 Construction

TESTED BY: KL

PROJECT LOCATION: Saint Cloud, Florida

TEST NUMBER		DT 112	DT 113	DT 114	DT 115	DT 116	DT 117	DT 118
TEST LOCATION	NORTH	29° 3.655'	29° 3.647'	29° 3.639'	29° 3.630'	29° 3.625'	29° 3.632'	29° 3.639'
	EAST	81° 5.861'	81° 5.862'	81° 5.862'	81° 5.863'	81° 5.873'	81° 5.872'	81° 5.871'
TEST ELEVATION OR LIFT								
TEST DEPTH		6"	6"	6"	6"	6"	6"	6"
WET DENSITY (pcf)		117.0	117.0	119.8	111.3	119.8	118.6	117.7
MOISTURE (%)		13.9	20.3	18.9	9.4	18.8	18.0	17.2
DRY DENSITY (pcf)		102.8	99.7	100.4	101.7	100.9	100.5	100.4
LABORATORY PROCTOR CURVE NUMBER		GF-2	GF-1	GF-1	GF-2	GF-1	GF-1	GF-1
MAXIMUM DRY DENSITY (pcf)		105.7	103.9	103.9	105.7	103.9	103.9	103.9
OPTIMUM MOISTURE (%)		13.2	13.4	13.4	13.2	13.4	13.4	13.4
PERCENT COMPACTION (%)		97.3	96.0	96.6	96.2	97.1	96.7	96.6
DIFFERENCE FROM OPTIMUM MOISTURE								
DENSITY RESULT PASS/FAIL (P/F)		P	P	P	P	P	P	P
MOISTURE RESULT PASS/FAIL (P/F)								

SPECIFICATIONS:

DAILY STANDARD COUNT:

% STANDARD MODIFIED PROCTOR: 95%

DENSITY COUNT: 45268

% OF OPTIMUM MOISTURE CONTENT: _____

MOISTURE COUNT: 8991

CHECKED BY: _____

DATE: _____

ATLANTIC COAST CONSULTING, INC

**MOISTURE DENSITY TEST SHEET
NUCLEAR DENSITY GAUGE METHOD
ASTM D 3017 / 2922**

PROJECT NUMBER: A027.101

DATE OF TEST: 4-2-10

PROJECT TITLE: J.E.D. Facility - Cell 7 Construction

TESTED BY: KL

PROJECT LOCATION: Saint Cloud, Florida

TEST NUMBER		DT-119	DT-120	DT-121	DT-122	DT-123	DT-124	DT-125
TEST LOCATION	NORTH	28° 3.647	28° 3.708	28° 3.708	28° 3.681	28° 3.690	28° 3.698	28° 3.709
	EAST	81° 5.872	81° 5.945	81° 5.945	81° 5.957	81° 5.956	81° 5.957	81° 5.956
TEST ELEVATION OR LIFT								
TEST DEPTH		6"	6"	6"	6"	6"	6"	6"
WET DENSITY (pcf)		118.6	116.1	118.8	113.2	112.1	118.2	116.1
MOISTURE (%)		17.2	17.2	14.4	13.1	13.2	18.5	15.4
DRY DENSITY (pcf)		100.4	101.3	101.5	100.1	99.1	100.7	102.8
LABORATORY PROCTOR CURVE NUMBER		GF-1	GF-4	GF-1	GF-1	GF-1	GF-4	GF-1
MAXIMUM DRY DENSITY (pcf)		103.9	105.3	103.8	103.8	103.8	105.3	103.9
OPTIMUM MOISTURE (%)		13.4	15.3	13.4	13.4	13.4	15.3	13.4
PERCENT COMPACTION (%)		96.6	96.2	97.7	96.3	95.3	96.9	97.0
DIFFERENCE FROM OPTIMUM MOISTURE								
DENSITY RESULT PASS/FAIL (P/F)		P	P	P	P	P	P	P
MOISTURE RESULT PASS/FAIL (P/F)								

SPECIFICATIONS:

DAILY STANDARD COUNT:

% STANDARD / MODIFIED PROCTOR: 95%

DENSITY COUNT: 45268

% OF OPTIMUM MOISTURE CONTENT: _____

MOISTURE COUNT: 8991

CHECKED BY: _____

DATE: _____

ATLANTIC COAST CONSULTING, INC