



England-Thims & Miller, Inc.

DEP

EAST DISTRICT

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October 19, 2010

Ms. Melissa Long, P.E.
Program Administrator
Water Resources
Florida Department of Environmental Protection
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256

PRINCIPALS

Douglas C. Miller, P.E., CEO
N. Hugh Mathews, P.E., President
Joseph A. Tarver, Exec. V.P.
Juanitta Bader Clem, P.E., V.P.
Scott A. Wild, P.E., PSM, V.P.
Samuel R. Crissinger, CFO, V.P.
Robert A. Mizell, Jr., P.E., V.P.
Thomas N. Fallin, P.E., V.P.
Buckley K. Williams, C.C.C.A., V.P.
K.T. Peter Ma, P.E., V.P.

EMERITUS

James E. England, P.E.
Robert E. Thims

**Re: Trail Ridge Landfill –
Annual Stormwater Pump Station and Stormwater Irrigation system field review
Permit Number 0013493-017-SO
ETM Project Number E05-191**

Dear Ms. Long:

In accordance with Specific Condition No. 48 c. of the referenced permit for the Trail Ridge Landfill, the annual field review of the stormwater treatment facility (wet detention system) and the stormwater wetland irrigation system was conducted on October 15, 2010. Based on this field review of the stormwater pump station and the stormwater treatment system as well as the stormwater wetland irrigation system, it appeared that these systems were operating in accordance with the permitted design. Please see the attached reports, which have been signed and sealed in accordance with the specific condition.

If you have any questions, please do not hesitate to give me a call.

Sincerely,

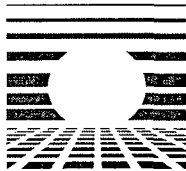
ENGLAND-THIMS & MILLER, INC.

Scott Jordan Lockwood, P.E., ETM

Attachments:

Stormwater Pump Station Field Review and the Stormwater Wetland Irrigation Field Review

cc: Greg Mathes, Trail Ridge Landfill, Inc.
Jeff Foster, City of Jacksonville
Edward Schmalfeld II, Trail Ridge Landfill, Inc.
Emerson Raulerson, Solid Waste Section, FDEP
Juanitta Bader Clem, P.E. ETM



England-Thims & Miller, Inc.

ENGINEERS • PLANNERS • SURVEYORS • GIS • LANDSCAPE ARCHITECTS

14775 St. Augustine Road, Jacksonville, FL. 32258
(904) 642-8990 Fax: (904) 646-9485 <http://www.etm-inc.com>

Trail Ridge Landfill Annual Stormwater Pump Station Field Review

Test Date: October 15, 2010 **Start Time:** 10:00 AM

Reference: Trail Ridge Landfill **Weather:** Sunny
ET&M Job No: E 05-191 Cool 70+/-

Attendees: Company
Edward Schmalfeld II (Cell 591-5378) Trail Ridge Landfill, Inc.
Scott Jordan Lockwood, P.E. England Thims & Miller, Inc.

Based on Original Design Parameters (Etm Plans E89-113-9)

Inflow Rate into the Storm Water Smf must be between 2.11 Cfs (947 Gpm) and 2.50 Cfs (1122 Gpm)

Based on existing Storm Water wetwell size 8' x 8' square approximately 478.75 Gallon / Ft of Depth

2.11 Cfs (947 Gpm) at (478.75 Gal / ft.) = 1.98 feet of Depth (Min.)

2.50 Cfs (1122 Gpm) at (478.75 Gal / ft.) = 2.34 feet of Depth (Max.)

Note:

During testing, the stormwater pumps located south of the Landfill were turned on so that the stormwater level in the wetwell was dropped. Next, the stormwater was allowed to enter wetwell under gravity flow via intake from the underdrain system. The intake valves were adjusted such that inflow was set between 947 Gpm and 1122 Gpm. The level was measured every 30 seconds for one minute. After each test the average flow rate was calculated to determine the rate of inflow. The Test was repeated until the average inflow was within design parameters. Once the desired rate was achieved the number of turns for each valve was noted by Trail Ridge Landfill, Inc and written down on the inside of the control panel. Each valve was opened to 12 turns (Counter Clockwise Opens and Clockwise Closes the Valves). During Testing it was noted that one of the Pumps for the Triplex Station was being repaired, it was recommended that all of the pumps / impellers be checked and that the Station be emptied to remove any sand or debris from the bottom. Also, it was recommended that the weeds growing around the Oil Skimmer be removed to avoid blockages.

Depth to Water from Top	Time	Fall Difference
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9.6 Feet	0 Sec	0 Feet
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8.2 Feet	30 Sec	1.4 Feet
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7.3 Feet	60 Sec	0.9 Feet
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Totals 1.0 Min.	2.3	Feet
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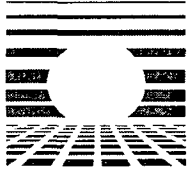
Average inflow per minute	2.3	Cfs
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Average Intake	1122	Gpm
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Scott Jordan Lockwood
PE #68426
OCT 19 2010

Prepared under the direction of

STATE OF FLORIDA
SCOTT J. LOCKWOOD
PE #68426
Professional Engineer



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Trail Ridge Landfill Annual Stormwater Wetland Irrigation System Field Review

Test Date: October 15, 2010

Start Time: 9:30 AM

Reference: Trail Ridge Landfill

Weather: Sunny

ET&M Job No: E 05-191

Cool 70+/-

Attendees:

Edward Schmalfeld II (Cell 591-5378)

Company

Trail Ridge Landfill, Inc.

Scott Jordan Lockwood, P.E.

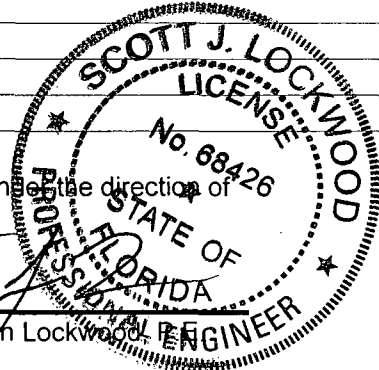
England Thims & Miller, Inc.

During the field review the pumps within the stormwater pump station located south of the Landfill were turned on so that the stormwater would be pumped into the wetlands. Next, we went around the storm water management facility to review the wetland Irrigation system while the system was operating. Generally, it appeared that the irrigation system was in good operating condition and was observed spraying stormwater into the wetlands. During this field review, there did not appear to be any broken pipes or areas where erosion could be noticed. It should be noted that most of the system is located anywhere from 50' to 100' into thick woods and bush. It appeared based on this limited field review that the system was in good working order and the system appeared to be functioning as designed. (See attached pictures)

Scott Jordan Lockwood
PE #68426
OCT 19 2010

Prepared under the direction of

Scott Jordan Lockwood, P.E.
PE #68426



Trail Ridge Landfill

Annual Storm Water Field Review - Wetland Irrigation

Date: 10-15-2010



STORMWATER IRRIGATION SYSTEM SPRAYING INTO WETLANDS



STORMWATER IRRIGATION SYSTEM SPRAYING INTO WETLANDS