First Closure

Side Slope Units 5, 6, 7 (Partial) and 8 (Partial)

Certified February 3, 1994

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

CERTIFICATION OF CONSTRUCTION COMPLETION
OF A SOLID WASTE MANAGEMENT FACILITY

DER Construction Permit No.: SC16-184444 County: Duval

Name of Project: Trail Ridge Landfill - Side Slope Closure of Units 5, 6, 7 & 8

Name of Owner: City of Jacksonville; Trail Ridge Landfill, Inc. - Operator/Permittee

Name of Engineer: England, Thims & Miller, Inc.

Type of Project: Class I Landfill - Incremental Closure
Closure of Units 5, 6, 7 (Partial) and 8 (Partial)

Cost: Estimated $ 870,950 Actual $ 738,700+/-

Site Design: Quantity: 2,600 (Avg) ton/day Site Acreage: 5.0+/- Acres

Population: 659,000+/-(1990) Dumping Fees: $ 55 /Ton

Deviations from Plans and Application Approved by DER: Deviations are shown on the As-Built Drawing and/or outlined in the attachment. The As-Built survey was prepared by Sunshine State Surveyors, Inc. and reviewed by England, Thims and Miller, Inc.

Water Monitoring Data Submitted to DER, Date: Quarterly

Address and Telephone No. of Site: 5110 U.S. Highway 301, Baldwin, FL 32234
Phone: (904) 289-9100

Name(s) of Site Supervisor: Greg Mathes

Date Site Inspection is requested: As soon as possible

This is to certify that, with the exception of deviation noted above, the construction of the project has been completed in accordance with the plans authorized by Construction Permit No.: SC16-184444 and Modifications Dated: 12-24-91

England, Thims & Miller relied upon the information and certifications provided by Law Engineering and Sunshine State Surveyors, Inc. in this certification.

Date: 2-4-94

Signature of Professional Engineer

Second Closure

Side Slope Units 9, 10 and 11

Certified April 17, 1995

Florida Department of Environmental Regulation

Twin Towers Office Bldg. 2600 Blair Stone Road Tallahassee, Florida 32399-2400

DER Form # 17-701.900(1)
Form Title
Effective Date
DER Application No.
(Filled in by DER)

Certification of Construction Completion of a Solid Waste Management Facility

DER Construction Permit No: SC16-184444 County: Duval

Name of Project: Trail Ridge Landfill - Side Slope Closure of Units 9, 10 and 11

Name of Owner: City of Jacksonville; Trail Ridge Landfill, Inc. - Operator/Permittee

Name of Engineer: England, Thims & Miller, Inc.

Type of Project: Class I Landfill - Incremental Closure
Closure of Units 9, 10 and 11

Estimate $ N/A Actual $ 606,041 +/-

Design: Quantity: 2,600 (Avg) ton/day Site Acreage: 2.3 +/- Acres

Deviations from Plans and Application Approved by DER: Deviations are shown on the As-Built Drawing and/or outlined in the attachment. The As-Built survey was prepared by Sunshine State Surveyors, Inc. and reviewed by England, Thims & Miller, Inc.

Address and Telephone No. of Site: 5110 U.S. Highway 301, Baldwin, FL 32234
Phone (904) 289-9100

Name(s) of Site Supervisor: Greg Mathes

Date Site inspection is requested: May 1, 1995 @ 9:00 AM

This is to certify that, with the exception of any deviation noted above, the construction of the project has been completed in substantial accordance with the plans authorized by Construction Permit No.: SC16-184444 and Modifications Dated: 12-24-91

England, Thims & Miller relied upon the information and certifications provided by Law Engineering and Sunshine State Surveyors, Inc. in this certification.

Date: 4/19/95

Signature of Professional Engineer

Third Closure

Side Slope Units 1-4 (Partial), 7-8 (Partial), 12-17 (Partial) and 18-20

Certified December 5, 1997

Florida Department of Environmental Regulation

Twin Towers Office Bldg. 2600 Blair Stone Road Tallahassee, Florida 32399-2400

DER Form #
Form Title
Effective Date
DER Application No.
(Filled in by DER)

Certification of Construction Completion of a Solid Waste Management Facility

DER Construction Permit No: SC16-184444 County: Duval

Name of Project: Trail Ridge Landfill - Incremental Closure

Name of Owner: City of Jacksonville

Name of Engineer: England, Thims & Miller, Inc.

Type of Project: Class I Landfill - Incremental Closure

Side Slope Units 1-4 (Partial), 7-8 (Partial), 12-17 (Partial) and 18-20

Cost: Estimate $ 1,800,000 Actual $ 1,569,240

Design: Quantity: 659,000 +/- (1990) ton/day Site Acreage: 12 +/- Acres

Deviations from Plans and Application Approved by DER:

Deviations are shown on the As-Built Drawing and/or outlined in the attachment. The As-Built Survey was prepared by Sunshine State Surveyors and reviewed by England, Thims & Miller, Inc.

Address and Telephone No. of Site: 5110 U.S. Highway 301, Baldwin, FL 32234

Phone: (904) 289-9100

Name(s) of Site Supervisor: Greg Mathes

Date Site inspection is requested: As soon as possible

This is to certify that, with the exception of any deviation noted above, the construction of the project has been completed in substantial accordance with the plans authorized by Construction Permit No.: SC16-184444 Dated: 12-24-91

England, Thims & Miller, Inc. relied upon the information and certifications provided by Law Engineering and Sunshine State Surveyors, Inc. in this certification.

Date: Dec. 3, 1997

Signature of Professional Engineer

Forth Closure

Side Slope Units 1-4 (Complete) and 21-23

Certified July 26, 2002

Florida Department of Environmental Protection
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, FL 32399-2400

DEP Application No. _____ (Filled by DEP)

Certification of Construction Completion of a Solid Waste Management Facility

DEP Construction Permit No: 0013493-002-SC County: Duval

Name of Project: Trail Ridge Landfill - Incremental Closure

Name of Owner: City of Jacksonville

Name of Engineer: England, Thims & Miller, Inc.

Type of Project: Class I Landfill - Incremental Closure
Side Slope Units 1-4 (Complete) and 21-23

Cost: Estimate $ _____ Actual $ 1,140,809

Site Design: Quantity: 3,500 ton/day Site Acreage: 4± Acres

Deviations from Plans and Application Approved by DEP:
Deviations are shown on the As-Built Drawing and/or outlined in the attachment.

The As-Built Survey was prepared by Robert M. Angas Associates, Inc. and reviewed by England, Thims & Miller, Inc.

Address and Telephone No. of Site: 5110 U.S. Highway 301, Baldwin, FL 32234
Phone: (904)289-9100

Name(s) of Site Supervisor: Greg Mathes

Date Site inspection is requested: As soon as possible

This is to certify that, with the exception of any deviation noted above, the construction of the project has been completed in substantial accordance with the plans authorized by Construction

Permit No.: 0013493-002-SC Dated: 11-25-97

England, Thims & Miller, Inc. relied upon the information and certifications provided by Law Engineering and Robert M. Angas Associates, Inc.

Date: 7/26/02 Signature of Professional Engineer

#43845

Northwest District
160 Governmental Center
Pensacola, FL 32501-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-448-4300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
3804 Coconut Palm Dr.
Tampa, FL 33619
813-744-6100

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
941-332-6975

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6600

Boesch, Julia

From: Juanitta Clem [ClemJ@etminc.com]
Sent: Tuesday, December 27, 2005 9:22 AM
To: Boesch, Julia
Cc: gmathes@wm.com
Subject: Trail Ridge Landfill

Dear Julia -

Please see the attached first and last pages of the December 13, 2002 RAI response letter. The last page discusses the closure issues and references Attachments G and H. I have includes the certification in those attachments for your reference. Please let me know if you need anything more.

Juanitta Bader Clem, P.E.
England, Thims & Miller, Inc.
(904) 265-3181 (direct)
(904) 646-9485 (fax)

<<AR-M455N_20040830_062755.pdf>>

England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • GIS • LANDSCAPE ARCHITECTS

Principals
James E. England, P.E., CEO
Douglas C. Miller, P.E., President
N. Hugh Mathews, P.E., Exec., V.P.
Joseph A. Tarver, Exec., V.P.
Juanitta Bader Clem, P.E., V.P.
Scott A. Wild, P.E., PSM, V.P.
Samuel R. Crissinger, CPA, V.P.
Robert A. Mizell, Jr., P.E., V.P.
Bryan R. Stewart, V.P.

December 13, 2002

Ms. Mary C. Nogas, P.E.
Waste Management Section
Department of Environmental Protection
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill - Second Permit Renewal
FDEP Permit No. 0013493-001 and 0013493-002
FDEP File Numbers 13493-010 and 13493-011
ET&M No. E02-25-3

Dear Ms. Nogas:

We have received your letter dated October 25, 2002 regarding the referenced project. On behalf of Trail Ridge Landfill, Inc., please find the following response to your request for additional information:

Attachment 1, Review Memorandum, dated October 25, 2002, prepared by Julia Boesch.

1. *Since you are proposing to recirculate leachate, please publish notice.*

The applicant hereby withdraws the request to recirculate leachate.

2. *Greg Mathis signed the application as a General Manager; however, the Florida Department of State, Division of Corporations web page does not list him as an officer/director. Please provide documentation demonstrating that he is an officer or director of Trail Ridge Landfill, Inc. or provide a letter from an officer/director giving him the required authorization.*

Charles Campagna, Vice President of Waste Management Holdings, Inc signed the application. Trail Ridge Landfill, Inc. is a wholly owned subsidiary of Waste Management Holdings, Inc. We recommend that the Department review the 09/16/2002 Corporate Annual Report which is a "Document Image" on the Florida Department of State, Division of Corporations web page for Trail Ridge Landfill, Inc. On the second page of the report, Mr. Charles J. Campagna is listed as Vice President, as stated on the application.

3. *If you wish to operate from 5:00 a.m. to 10:00 p.m., as indicated in item B 15 of the application form, please address how you will illuminate the site during the non-daylight hours. Please note that at least 3 candle-feet of illumination are required.*

Please be advised that this application is a permit renewal application. The above condition is an existing permit condition; the facility is in compliance with the existing permit condition and has on-site light plants to for use during non-daylight hours.

Reference: Trail Ridge Landfill - Second Permit Renewal
ET&M No. E02-25-3

72. *The following comments concern the cost estimates:*

a. *Concerning your cost estimates, you indicate in your application form that the disposal area is 148 acres, which equates to 716, 320 square yards; however, your estimates are for a smaller area. Please address and revise your estimates as appropriate.*

Please note that on Page 1 of the Financial Assurance Cost Estimate Form, 119 acres is the area used in the closure estimates. The reason 119 acres rather than 144 acres is used is because 25 acres have received final cover in accordance with the closure-as-you-go requirements. There have been four incremental closure projects at the site and each closure project has been documented and certified to the Department. Please see **Attachment G** which contains correspondence and the Closure QA/QC Plan associated with each closure project. Also, please note that Appendix M of the First Permit Renewal contained the QA/QC Plan for Side Slope Closure and Appendices J and K of the Second Permit Renewal (the current application) contains the QA/QC Plans for Side Slope Closure and Top Area Closure, respectively. Also, please see **Attachment H** which contains a letter from the Department accepting the Closure Construction Certification for Side Slope Units 1-4 (Partial), 7-8 (Partial), 12-17 (Partial) and 18-20.

b. *Please check the amount of leachate expected to be collected during the long-term care period. Since you are proposing to recirculate leachate, the disposal area is expected to be wetter than normal and more leachate, therefore, may be collected after closure. Please revise your costs accordingly.*

The leachate recirculation has been withdrawn.

c. *Please confirm that all cost estimates are for third party costs that the department may incur if tasked with the responsibility of maintaining and monitoring the facility.*

The cost estimates are third party cost estimates.

I sincerely hope this response will provide the Department all the necessary information. I would respectfully request that any questions regarding this application be directed to me.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Juanita Bader Clem, P.E.
Vice President

Attachments

cc: Greg Mathes
Achaya Kelpenda
Chris Pearson

ATTACHMENT G

Closure Documentation

First Closure

Side Slope Units 5, 6, 7 (Partial) and 8 (Partial)

Certified February 3, 1994

England-Thims & Miller, Inc.
Consulting & Design Engineers
3131 St. Johns Bluff Road So. · Jacksonville, FL 32246
904-642-8990

PRINCIPALS
James E. England, P.E., President
Robert E. Thims, V.Pres., Sec.
Douglas C. Miller, P.E., V. Pres.
N. Hugh Mathews, P.E., V. Pres.

February 3, 1994

Ms. Mary C. Nogas, P.E.
Waste Management Section
Department of Environmental Regulation
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256

Mr. Jai P. Prasad, P.E.
Stormwater Section
Department of Environmental Regulation
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill -Side Slope Closure
Side Slope Units 5, 6, 7 (Partial) and 8 (Partial)
FDER Permit No. SC16-184444
ET&M No. E93-143-3 (Certification File)

Dear Ms. Nogas and Mr. Prasad:

Please find herewith the Certification of Construction Completion for the Trail Ridge Landfill - Side Slope Closure. The construction Quality Assurance/Quality Control documentation and As-Built drawing are attached.

Subject to your site inspection, Trail Ridge Landfill, Inc. respectfully requests your written verification that this closure is accepted by the Department.

This is the certification for the Trail Ridge Landfill closure construction of Side Slope Units 5, 6, 7 (partial) and 8 (partial) which commenced on September 7, 1993. Should you have any questions concerning this certification, please do not hesitate to contact me or Juanitta Clem.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Douglas C. Miller, P.E.
Vice President

Attachments: Certification of Construction Completion
As-Built Drawing
Quality Assurance and Quality Control Documentation

cc: Greg Mathes w/attachments
Scott McCallister w/attachments
Chris Pierson w/attachments

DEP - 4 copies
City - 2 copies
Laws Eng. - 1 Copy

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

CERTIFICATION OF CONSTRUCTION COMPLETION
OF A SOLID WASTE MANAGEMENT FACILITY

DER Construction Permit No.: SC16-184444 County: Duval

Name of Project: Trail Ridge Landfill - Side Slope Closure of Units 5, 6, 7 & 8

Name of Owner: City of Jacksonville; Trail Ridge Landfill, Inc. - Operator/Permittee

Name of Engineer: England, Thims & Miller, Inc.

Type of Project: Class I Landfill - Incremental Closure
Closure of Units 5, 6, 7 (Partial) and 8 (Partial)

Cost: Estimated $ 870,950 Actual $ 738,700+/-

Site Design: Quantity: 2,600 (Avg) ton/day Site Acreage: 5.0+/- Acres

Population: 659,000+/-(1990) Dumping Fees: $ 55 /Ton

Deviations from Plans and Application Approved by DER: Deviations are shown on the As-Built Drawing and/or outlined in the attachment. The As-Built survey was prepared by Sunshine State Surveyors, Inc. and reviewed by England, Thims and Miller, Inc.

Water Monitoring Data Submitted to DER, Date: Quarterly

Address and Telephone No. of Site: 5110 U.S. Highway 301, Baldwin, FL 32234
Phone: (904) 289-9100

Name(s) of Site Supervisor: Greg Mathes

Date Site Inspection is requested: As soon as possible

This is to certify that, with the exception of deviation noted above, the construction of the project has been completed in accordance with the plans authorized by Construction Permit No.: SC16-184444 and Modifications Dated: 12-24-91

England, Thims & Miller relied upon the information and certifications provided by Law Engineering and Sunshine State Surveyors, Inc. in this certification.

Date: 2-4-94 _____
Signature of Professional Engineer

TRAIL RIDGE LANDFILL
SIDE SLOPE CLOSURE - UNITS 5, 6, 7 AND 8
DEVIATIONS FROM PLANS AND APPLICATION

1. Downcomer Pipe D-21 was constructed with stubouts on the uphill (southern) side only. Since the terraces were constructed with a minimum 1% slope, stubouts on the downhill (western) side were deemed unnecessary.

2. Side Slope Units 7 and 8 could not be completed because the solid waste has not been placed to complete the units. (Note: Completion of Units 7 and 8 required waste disposal in Cell C which was only recently (Nov. 5, 1993) accepted by the Department). These units were completed to Sta. 96+25 as shown on the As-Built Drawing.

3. The invert on Downcomer Pipe D-21 in Structure S-21 was raised to Elevation 117.8 +/-. It should be noted that the crown of the pipe remains below the throat of the inlet.

4. Terrace 1 at Downcomer D-19 has a depth of 2.11 feet rather than the design depth of 2.5 feet. However, based upon a 25-year storm event and the drainage area of 0.62 acres, the terrace will have over 1.0 foot of freeboard and therefore, meets the design intent.

5. For safety reasons, the gas well was install with a 24-inch borehole.

Second Closure

Side Slope Units 9, 10 and 11

Certified April 17, 1995

England-Thims & Miller, Inc.
Consulting & Design Engineers
3131 St. Johns Bluff Road S., Jacksonville, FL 32246
Tel: (904) 642-8990 Fax: (904) 646-9485

Principals
James E. England, P.E., Pres.
Robert E. Thims, Exec. V.P.
Douglas C. Miller, P.E., Exec. V.P.
N. Hugh Mathews, P.E., Exec. V.P.

April 17, 1995

Ms. Mary C. Nogas, P.E.
Waste Management Section
Department of Environmental Protection
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill -Side Slope Closure
Side Slope Units 9,10 and 11
FDER Permit No. SC16-184444
ET&M No. E94-17-3 (Certification File)

Dear Ms. Nogas:

Please find herewith the Certification of Construction Completion for the Trail Ridge Landfill - Side Slope Closure. The Construction Quality Assurance/Quality Control documentation and As-Built drawings are attached.

We request a site inspection on May 1, 1995 at 9:00 A.M. Subject to your site inspection, Trail Ridge Landfill, Inc. respectfully requests your written verification that this closure is accepted by the Department.

This is the certification for the Trail Ridge Landfill Closure construction of Side Slope Units 9, 10 and 11 which commenced on May 23, 1994. Should you have any questions concerning this certification, please do not hesitate to contact me or Juanitta Clem.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Douglas C. Miller, P.E.
Vice President

DCM:cl

Attachments: Certification of Construction Completion
As-Built Drawing
Quality Assurance and Quality Control Documentation

cc: Greg Mathes w/attachments
Scott McCallister w/attachments
Chris Pierson w/attachments
DEP Stormwater Section w/attachments

Florida Department of Environmental Regulation

Twin Towers Office Bldg. 2600 Blair Stone Road Tallahassee, Florida 32399-2400

DER Form # 17-701.900(7)
Form Title
Effective Date
DER Application No.
(Filled in by DER)

Certification of Construction Completion of a Solid Waste Management Facility

DER Construction Permit No: SC16-184444 County: Duval

Name of Project: Trail Ridge Landfill - Side Slope Closure of Units 9, 10 and 11

Name of Owner: City of Jacksonville; Trail Ridge Landfill, Inc. - Operator/Permittee

Name of Engineer: England, Thims & Miller, Inc.

Type of Project: Class I Landfill - Incremental Closure

Closure of Units 9, 10 and 11

Cost: Estimate $ N/A Actual $ 606,041 +/-

Site Design: Quantity: 2,600 (Avg) ton/day Site Acreage: 2.3 +/- Acres

Deviations from Plans and Application Approved by DER: Deviations are shown on the As-Built Drawing and/or outlined in the attachment. The As-Built survey was prepared by Sunshine State Surveyors, Inc. and reviewed by England, Thims & Miller, Inc.

Address and Telephone No. of Site: 5110 U.S. Highway 301, Baldwin, FL 32234

Phone (904) 289-9100

Name(s) of Site Supervisor: Greg Mathes

Date Site inspection is requested: May 1, 1995 @ 9:00 AM

This is to certify that, with the exception of any deviation noted above, the construction of the project has been completed in substantial accordance with the plans authorized by Construction Permit No.: SC16-184444 and Modifications Dated: 12-24-91

England, Thims & Miller relied upon the information and certifications provided by Law Engineering and Sunshine State surveyors, Inc. in this certification.

Date: 4/19/95

Signature of Professional Engineer

TRAIL RIDGE LANDFILL
SIDE SLOPE CLOSURE - UNITS 9, 10 AND 11
SUBSTANTIAL DEVIATIONS FROM PLANS AND APPLICATION

1. For safety reasons, the gas well was installed with a 24-inch borehole.

2. The screened interval on the gas well extends up to the top of daily cover (6" above the top of waste). Nevertheless, gas well will function properly as a passive vent.

Third Closure

Side Slope Units 1-4 (Partial), 7-8 (Partial), 12-17 (Partial) and 18-20

Certified December 5, 1997

England-Thims & Miller, Inc.

ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS

Principals
James E. England, P.E., Pres.
Robert E. Thims, Exec. V.P.
Douglas C. Miller, P.E., Exec. V.P.
N. Hugh Mathews, P.E., Exec. V.P.

December 5, 1997

Ms. Mary C. Nogas, P.E.
Waste Management Section
Department of Environmental Protection
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256

Mr. David P. Apple, P.E.
Stormwater Section
Department of Environmental Protection
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill – Incremental Closure
Side Slope Units 1-4 (Partial), 7-8 (Partial), 12-17 (Partial) and 18-20
FDEP Permit No. SC16-184444
ET&M No. E96-92-4

Dear Ms. Nogas and Mr. Apple:

Please find herewith the Certification of Construction Completion for the Trail Ridge Landfill, Incremental Closure, as well as certification of the stormwater pond modification. The construction Quality Assurance/Quality Control documentation and As-Built drawings are attached.

Subject to your site inspection, Trail Ridge Landfill, Inc. respectfully requests your written verification that this closure and stormwater modification are accepted by the Department.

This is the certification for the Trail Ridge Landfill closure construction of Side Slope Units 1-4 (Partial), 7-8 (Partial), 12-17 (Partial) and 18-20 which commenced on April 21, 1997. Should you have any questions regarding these certifications, please do not hesitate to give me a call.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Juanitta Bader Clem

Juanitta Bader Clem, P.E.
Vice President

Attachments: Certification of Construction Completion of a Solid Waste Management Facility
MSSW/Stormwater Certification
Quality Assurance and Quality Control Documentation
As-Built Drawings
Pump Test and Construction Drawing for Stormwater System Modification

cc: Greg Mathes w/attachments
Scott McCallister w/attachments
Chris Pearson w/attachments

3131 St. Johns Bluff Road S. • Jacksonville, FL 32246 • Tel: (904) 642-8990 • Fax: (904) 646-9485

Florida Department of Environmental Regulation

Twin Towers Office Bldg. 2600 Blair Stone Road Tallahassee, Florida 32399-2400

DER Form 17-701.900(2)
Form Title
Effective Date
DER Application No.
(Filled in by DER)

Certification of Construction Completion of a Solid Waste Management Facility

DER Construction Permit No: SC16-184444 County: Duval

Name of Project: Trail Ridge Landfill - Incremental Closure

Name of Owner: City of Jacksonville

Name of Engineer: England, Thims & Miller, Inc.

Type of Project: Class I Landfill - Incremental Closure

Side Slope Units 1-4 (Partial), 7-8 (Partial), 12-17 (Partial) and 18-20

Cost: Estimate $ 1,800,000 Actual $ 1,569,240

Design: Quantity: 659,000 +/- (1990) ton/day Site Acreage: 12 +/- Acres

Deviations from Plans and Application Approved by DER:

Deviations are shown on the As-Built Drawing and/or outlined in the attachment. The As-Built Survey was prepared by Sunshine State Surveyors and reviewed by England, Thims & Miller, Inc.

Address and Telephone No. of Site: 5110 U.S. Highway 301, Baldwin, FL 32234

Phone: (904) 289-9100

Name(s) of Site Supervisor: Greg Mathes

Date Site inspection is requested: As soon as possible

This is to certify that, with the exception of any deviation noted above, the construction of the project has been completed in substantial accordance with the plans authorized by Construction Permit No.: SC16-184444 Dated: 12-24-91

England, Thims & Miller, Inc. relied upon the information and certifications provided by Law Engineering and Sunshine State Surveyors, Inc. in this certification.

Date: Dec. 3, 1997

Signature of Professional Engineer

REGfiles: 5/94

TRAIL RIDGE LANDFILL
INCREMENTAL CLOSURE
UNITS 1-4 (Partial), 7-8 (Partial), 12-17 (Partial) and 18-20

DEVIATIONS FROM PLANS AND APPLICATION

1. The final grades were adjusted to accommodate settlement during closure construction. Adjustments are noted on the As-Built drawings.

2. The gravel for the gas vents was modified from FDOT No. 4 Course Aggregate (1/2" - 2.5") to FDOT No. 3 Course Aggregate (3/8" - 2.0"). The bentonite for the gas well plug was modified from requiring at least 50 percent pass the No. 200 sieve to a hydraulic conductivity no greater than 1.0×10^{-8} cm/sec. As explained in the May 8, 1997 letter to the Department, these modifications do not change the design intent of the gravel and the QA/QC Plan was modified to correspond to this change.

3. The density testing of the initial cover material was revised to correlate to the type of soil material - sandy soil materials with a Modified Proctor and clayey soil materials with a Standard Proctor. Please see the revised QA/QC Plan in Section I.

Department of Environmental Protection

Lawton Chiles
Governor

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7590

Virginia B. Wetherell
Secretary

January 28, 1998

Mr. Greg Mathes, Division President
Trail Ridge Landfill, Inc.
5110 U.S. Highway 301
Baldwin, Florida 32234

Dear Mr. Mathes:

Trail Ridge Landfill
Closure Construction Certification for Side Slope Units 1-4 (Partial), 7-8 (Partial), 12-17 (Partial) and 18-20
DEP Permit Number 0013493-002-SC
Duval County - Solid Waste

The Department acknowledges receipt of the following documents submitted to comply with the requirements of the subject permit and the requirements of Florida Administrative Code Chapter 62-701:

1. "Trail Ridge Landfill Incremental Closure Quality Assurance and Quality Control Documentation for Units 1-4 (Partial), 7-8 (Partial), 12-17 (Partial) and 18-20," prepared by England-Thims and Miller, Inc., and LAW Engineering and Environmental Services, Inc., dated December 5, 1997;

2. "Certification of Construction Completion of a Solid Waste Management Facility," signed and sealed on December 3, 1997 by Juanitta Bader Clem, P. E., received December 5, 1997; and

3. "Specific As-Built Survey of Trail Ridge Landfill Incremental Closure," prepared by Sunshine State Surveyors, Inc., signed and sealed on October 3, 1997 by Joseph Leslie Reynolds III, Registered Surveyor.

In addition, Department staff conducted a closure construction completion inspection of the subject side slope units on January 26, 1998. Based on the review of the above documents and the result of the inspection, closure construction of the subject side slope units, including construction of active gas extraction well numbers W-5, W-8, W-9, W-10 W-17, W-18, W-25 and W-35, has been found acceptable. The Permittee shall maintain the integrity of the side slope units, extraction wells and all associated structures as part of the facility's normal operation. Please contact me at the above letterhead address or at telephone number (904) 448-4320, if you have any questions regarding this matter.

Sincerely,

MC Nogas

Mary C. Nogas, P. E.
Solid Waste Section Supervisor

MCN:fd
cc: Juanitta Bader Clem, P. E.
Fred Wick, DEP, Tallahassee

Forth Closure

Side Slope Units 1-4 (Complete) and 21-23

Certified July 26, 2002

England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS

Principals
James E. England, P.E., CEO
Douglas C. Miller, P.E., President
N. Hugh Mathews, P.E., Exec. V.P.
Joseph A. Tarver, Exec. V.P.
Juanitta Bader Clem, P.E., V.P.
Scott A. Wild, P.E., PSM, V.P.
Samuel R. Crissinger, CPA, V.P.
Robert A. Mizell, Jr., P.E., V.P.
Bryan R. Stewart, V.P.

July 26, 2002

Ms. Mary C. Nogas, P. E.
Solid Waste Section
Department of Environmental Protection
7825 Baymeadows Way, Suite B-200
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill – Incremental Closure
Side Slope Units 1-4 (Complete) and 21-23
FDEP Permit No. 0013493-002-SC
ET&M Project No. E00-117-04

Dear Ms. Nogas:

Please find herewith the Certification of Construction Completion for the Trail Ridge Landfill, Incremental Closure of Side Slope Units 1-4 (Complete) and 21-23. The Construction Quality Assurance/Quality Control documentation and As-Built Drawings are attached.

Subject to your site inspection, Trail Ridge Landfill, Inc. respectfully requests your written verification that the Department accepts this incremental closure.

This is the certification for the Trail Ridge Landfill closure construction of Side Slope Units 1-4 (complete) and 21-23, which commenced on November 12, 2001. Should you have any questions, please feel free to give me a call.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Juanitta Bader Clem

Juanitta Bader Clem, P. E.
Vice President

Attachments: Certification of Construction Completion of a Solid Waste Management Facility
Quality Assurance and Quality Control Documentation
As-Built Drawings

cc: Greg Mathes, with attachments
Chris Pearson, with attachments
Jim Horton, with attachments

14775 St. Augustine Rd. • Jacksonville, FL 32258 • Tel: (904) 642-8990 • Fax: (904) 646-9485

Florida Department of Environmental Protection
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, FL 32399-2400

Effective Date _____
DEP Application No. _____ (Filled by DEP)

Certification of Construction Completion of a Solid Waste Management Facility

DEP Construction Permit No: 0013493-002-SC County: Duval

Name of Project: Trail Ridge Landfill - Incremental Closure

Name of Owner: City of Jacksonville

Name of Engineer: England, Thims & Miller, Inc.

Type of Project: Class I Landfill - Incremental Closure
Side Slope Units 1-4 (Complete) and 21-23

Cost: Estimate $_____ Actual $ 1,140,809

Site Design: Quantity: 3,500 ton/day Site Acreage: 4± Acres

Deviations from Plans and Application Approved by DEP:
Deviations are shown on the As-Built Drawing and/or outlined in the attachment.

The As-Built Survey was prepared by Robert M. Angas Associates, Inc. and reviewed by England, Thims & Miller, Inc.

Address and Telephone No. of Site: 5110 U.S. Highway 301, Baldwin, FL 32234
Phone: (904)289-9100

Name(s) of Site Supervisor: Greg Mathes

Date Site inspection is requested: As soon as possible

This is to certify that, with the exception of any deviation noted above, the construction of the project has been completed in substantial accordance with the plans authorized by Construction

Permit No.: 0013493-002-SC Dated: 11-25-97

England, Thims & Miller, Inc. relied upon the information and certifications provided by Law Engineering and Robert M. Angas Associates, Inc.

Date: 7/26/02 Signature of Professional Engineer

#43245

Northwest District
160 Governmental Center
Pensacola, FL 32501-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-448-4300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
3804 Coconut Palm Dr.
Tampa, FL 33619
813-744-6100

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
941-332-6975

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6600

TRAIL RIDGE LANDFILL
INCREMENTAL CLOSURE
UNITS 1-4 (COMPLETE) AND 21-23

DEVIATIONS FROM PLANS AND SPECIFICATIONS

1. Some final grades were adjusted to accommodate settlement during closure construction. Adjustments are noted on the As-Built Drawings.

2. An alternate aggregate material in lieu of the specified FDOT No. 3 coarse aggregate was used to backfill Gas Wells W-26 and W-27. As explained in the attached December 3, 2001 letter to the Department, the modification does not change the design intent of the aggregate.

3. The side slope closure areas have been sodded but the sod has not been established. Due to the field conditions at the sod farms and the field conditions at the site when the sod was placed, the sod appears stressed. If the existing sod is not established, then additional measures will be taken to establish a stand of grass (either by resodding or seeding).

ATTACHMENT H

Department Letter of Acceptance for Side Slope Closure

Department of Environmental Protection

Jeb Bush
Governor

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7590

David B. Struhs
Secretary

August 18, 2003

Mr. Greg Mathes
General Manager
Trail Ridge Landfill Inc.
5110 U.S. Highway 301
Jacksonville, Florida 32234

Dear Mr. Mathes:

Trail Ridge Landfill, Inc
Permit number 0013493-002-SC
Partial closure units 21-23 and units 1-4 (complete)
Duval County - Solid Waste

The Department acknowledges receipt of the following documents submitted pursuant to Florida Administrative Code Chapter 62-701 and Specific Condition Number 47 of the subject Permit:

1. Trail Ridge Landfill Incremental Closure Quality Assurance and Quality Control Documentation for Units 1-4 (complete) and 21-23, including the Certification of Construction Completion of a Solid Waste Management Facility, signed and sealed by Juanitta Bader Clem, P.E, prepared by England, Thims and Miller, Inc., and Drawing sheets, Cl-3A and Cl-6, signed and sealed by Joseph Leslie Reynolds, professional surveyor, received July 26, 2002.

The Department has reviewed the aforementioned Document, which addresses the closure of units 1-4, and of units 21-23, reflected on Drawing sheet number 14, provided October 28, 1996, as "Closure Phase 2." Based on the department's review, the department has determined the closure construction of partial closure units 21-23 and units 1-4 (complete) to be acceptable.

If you have any comments concerning this matter, please contact Julia Boesch at the letterhead address or telephone number (904) 807-3356.

Sincerely,

Mary C. Nogas, P. E.
Solid Waste Supervisor

MCN:jb:ml

cc: Juanitta Bader Clem, P.E., England, Thims and Miller, Inc.

Department of Environmental Protection

Jeb Bush
Governor

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7590

David B. Struhs
Secretary

August 18, 2003

Mr. Greg Mathes
General Manager
Trail Ridge Landfill Inc.
5110 U.S. Highway 301
Jacksonville, Florida 32234

Dear Mr. Mathes:

Trail Ridge Landfill, Inc
Permit number 0013493-002-SC
Partial closure units 21-23 and units 1-4 (complete)
Duval County - Solid Waste

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If you have any comments concerning this matter, please contact Julia Boesch at the letterhead address or telephone number (904) 807-3356.

Sincerely,

Mary C. Nogas, P. E.
Solid Waste Supervisor

MCN:jb:ml

cc: Juanitta Bader Clem, P.E., England, Thims and Miller, Inc.

Nogas, Mary

From: Nogas, Mary
Sent: Monday, March 17, 2003 10:58 AM
To: 'Cadenhead, Mark I. (Randstad)'
Cc: Tedder, Richard
Subject: RE: AmeriSteel Slag

There is an approval for Ameristeel's slag, but it is not "blanket" -- hopefully, the attachment will go through, and you can see our approval letter.....

-----Original Message-----
From: Cadenhead, Mark I. (Randstad) [mailto:cademi@jea.com]
Sent: Monday, March 17, 2003 10:18 AM
To: Nogas, Mary
Cc: Tedder, Richard
Subject: AmeriSteel Slag

Mary,

I had a call asking if slag from AmeriSteel had been approved for use on road bed, etc. Allegedly it is being used like in forestry work to help stabilize areas where they are taking equipment and trucks in and out. Is there blanket approval for this material to be used as a byproduct in this way?

Thanks for any enlightenment.

Mark

Per Vasing to Trail Ridge using slag

Department of Environmental Protection

Jeb Bush
Governor

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7590

David B. Struhs
Secretary

CONFERENCE

SUBJECT: Trail Ridge DATE: 12/12/2002

NAME/TITLE	AFFILIATION	PHONE NUMBER
Julia Boesch	FDEP	(904) 807-3356
Achaya Kelapanda	WMI	(850) 574-8224
Greg Mathes	WM	(904) 289-9100
Juanita Clem	ETM	642-8990
MARK BEHEL	WM	334-705-4340
Mary Nogay	FDEP	(soon to be 904 289-9100) 904/807-3355

cc: Files

Department of
Environmental Protection

Jeb Bush
Governor

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7590

David B. Struhs
Secretary

December 12, 2002

Greg Mathes
Trail Ridge Landfill, Inc.
5110 U.S. Highway 301
Baldwin, Florida 32234

Dear Mr. Mathes:

Trail Ridge Landfill-Phases VB, VC and VD
Silt removal and subsequent thickness measurements
Certification of Construction Completion
FDEP Permit Number 0013493-002-SC
Duval County – Solid Waste

In a previous department certification of construction completion inspection, the Department observed silt in portions of Phases VB, VC, and VD. In a department letter dated September 20, 2001, the facility was asked to remove any silt within the said phases and to subsequently measure the underlying protective sand layer to ensure the minimum 24-inch-thick protective sand layer is still provided. Pursuant to the said letter, the facility provided the following documents, 6 –10:

Document 6 - Trail Ridge Landfill – Phase VC East, prepared by England-Thims and Miller, Inc., signed and sealed by Juanitta Bader Clem, P.E., dated March 18, 2002 and received March 20, 2002.

1. Document 7 - Trail Ridge Landfill – Phase VC (West), prepared by England-Thims and Miller, Inc., signed and sealed by Francis Dayao, P.E., dated and received April 11, 2002.

2. Document 8 - Trail Ridge Landfill – Phase VB, prepared by England-Thims and Miller, Inc., signed and sealed by Francis Dayao, P.E., dated and received May 31, 2002.

3. Document 9- Trail Ridge Landfill – Phase VD (East), prepared by England-Thims and Miller, Inc., signed and sealed by Francis Dayao, P.E., dated and received August 15, 2002.

4. Document 10 - Trail Ridge Landfill – Phase VD (West), prepared by England-Thims and Miller, Inc., signed and sealed by Francis Dayao, P.E., dated and received October 2, 2002.

The following documents were previously reviewed and provided pursuant to Florida Administrative Code Chapter 62-701, Specific Condition Number 15 of the subject Permit:

5. Document 1 - "Record Documentation Report for Geosynthetic Quality Assurance of Construction of Phases VA, VB, VC and VD Third Construction Increment Trail Ridge Landfill, Baldwin, Florida," Volume I and II, signed by Francis T. Adams, P.E., prepared by Golder Associates, Inc., received July 13, 2001.

6. Document 2 - "Trail Ridge Landfill Phases VA, VB, VC and VD. Quality Assurance and Quality Control Documentation," signed by Juanitta B. Clem, P.E., prepared by England- Thims & Miller, Inc., received July 13, 2001.

7. Document 3 - "Certification of Construction Completion of a Solid Waste Management Facility," form dated July 13, 2001, signed and sealed by Juanitta B. Clem, P.E., prepared by England-Thims & Miller, Inc., received July 13, 2001.

8. Document 4 - As-Built Survey, "Trail Ridge Landfill Phases VA, VB, VC and VD," signed and sealed by Joseph L. Reynolds III, P.S., received July 13, 2001.

9. Document 5 - Additional documentation of the repair to the sand layer in Phase VA of Trail Ridge Landfill, signed and sealed by Juanitta B. Clem, P.E., prepared by England-Thims & Miller, Inc., received September 17, 2001.

In addition to the department's review of Documents 6 - 10, department staff conducted follow-up construction completion inspections of Phases VB, VC and VD to the department's August 10, 2001 inspection. More specifically, on April 12, 2002, the department inspected Phase VC. Based on the inspection and review of Documents 6 and 7, the department verbally approved Phase VC for waste receipt on April 12, 2002. On June 3, 2002, the department conducted an inspection of Phase VB after silt removal. Based on the department's review of Document 8 and the inspection, the department, on June 3, approved via electronic mail, waste receipt in said area. The department inspected the eastern half of Phase VD on August 19, 2002 and the western half of VD on October 3, 2002 after silt removal. Based on these inspections and review of Documents 10 and 11, the department found the areas to be acceptable for waste receipt. Verbal approval was given on the same day of the respective inspections.

The department has determined Phases VB, VC and VD to be acceptable for waste receipt as approved in your permit application.

If you have any comments concerning this matter, please contact Julia Boesch at the letterhead address or telephone number (904) 807-3356.

Sincerely,

Mary C. Nogas, P.E.
Solid Waste Supervisor

MCN:jbl

cc: Juanitta B. Clem, P.E., England, Thims & Miller, Inc.
Chris Pearson, City of Jacksonville

England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • GIS • LANDSCAPE ARCHITECTS

December 9, 2002

Mary C. Nogas, P. E.
Solid Waste Section Supervisor
Department of Environmental Protection
Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7590

Subject: Trail Ridge Landfill
FDEP Permit No. 0013493-001 and 0013493-002
ETM No. 98-34

Dear Ms. Nogas:

Pursuant to your request (via e-mail dated October 28, 2002), please find herewith a plan which illustrates the location of the proposed stockpile for the non-debris containing soil from the proposed Pond D site. Due to the Department's concerns, the use of the material will be limited to initial cover.

If you have any questions, please feel free to give me a call.

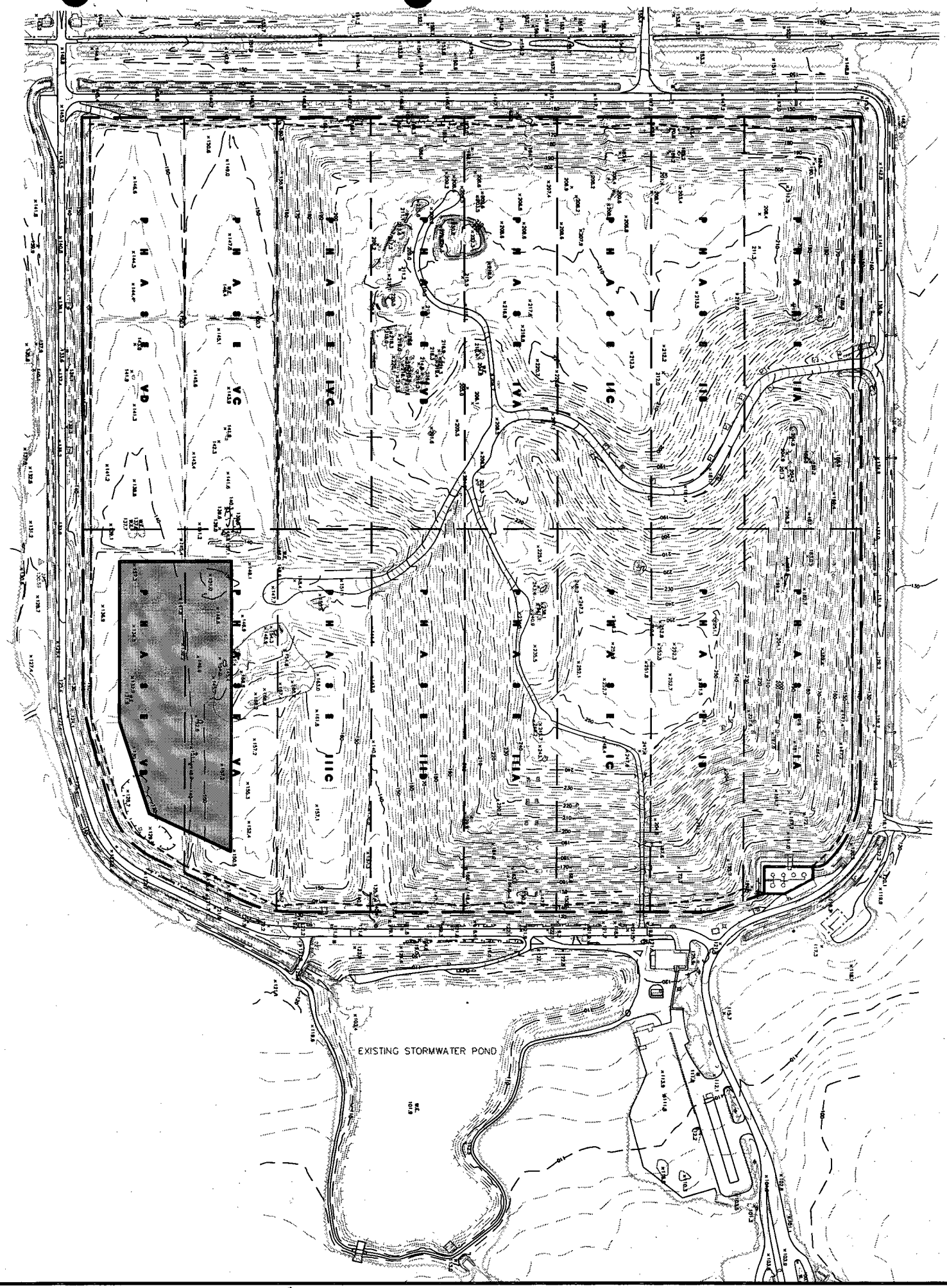
Sincerely,

ENGLAND, THIMS & MILLER, INC.

Juanitta Bader Clem

Juanitta Bader Clem, P.E.
Vice President

cc: Greg Mathes
Chris Pearson



N

GRAPHIC SCALE

200 0 100 200 400

(IN FEET)
1 INCH = 400 FEET

LEGEND

PROPOSED STOCKPILE

EDGE OF PRIMARY AND SECONDARY LINER SYSTEM

PHASE LINE

NOTES:

1. TOPOGRAPHIC INFORMATION SHOWN HEREON TAKEN FROM AERIAL TOPOGRAPHY PREPARED BY AIR SURVEY CORP.; MAP DATED 3-15-02. AIR SURVEY CORP. PROJECT NO. 71020260.
2. VERTICAL DATUM BASED ON NGVD 1929.

PROPOSED STOCKPILE PLAN

TRAIL RIDGE LANDFILL PERMIT RENEWAL
FOR
TRAIL RIDGE LANDFILL, INC.

ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

REVISIONS:

DRAWING NO.
1

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2554
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

Department of Environmental Protection

Jeb Bush
Governor

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7590

David B. Struhs
Secretary

October 25, 2002

Mr. Greg Mathis
General Manager
Trail Ridge Landfill Inc.
5110 U.S. Highway 301
Jacksonville, Florida 32234

Dear Mr. Mathis:

Trail Ridge Landfill, Inc
Permit renewal and modification request
FDEP File Number 13493-010 and 13493-011
First Request for Additional Information
Duval County - Solid Waste

The department has reviewed your submittal, received September 26, 2002. The following review is enclosed:

Attachment 1, Review Memorandum, dated October 25, 2002, prepared by Julia Boesch.

The information requested in this review is required for the department to proceed with the processing of your permit application. Please provide the requested information by November 30, 2002. Action on the application will be delayed until the requested information is received in this office. Please reference the associated DEP file number in all written correspondence concerning this project. If you have any comments concerning this matter, please contact Julia Boesch at the letterhead address or telephone number (904) 807-3356.

Sincerely,

Mary C. Nogas, P. E.
Solid Waste Supervisor

MCN:jbl

cc: Juanitta Bader-Clem, P.E., England, Thims, and Miller, Inc.

Memorandum

Florida Department of Environmental Protection

Northeast District – Jacksonville

TO: Files

THROUGH: Mary C. Nogas, P. E.
Solid Waste Section Supervisor

FROM: Julia Boesch

DATE: October 25, 2002

SUBJECT: Trail Ridge Landfill
Permit renewal and leachate recirculation
FDEP File Numbers 13493-010 and 13493-011
First Request for Additional Information
Duval County- Solid Waste

The Department has reviewed your submittal. received on September 26, 2002, and requests the following information:

1. Since you are proposing to recirculate leachate, please publish notice.

2. Greg Mathis signed the application as a General Manager; however, the Florida Department of State, Division of Corporations web page does not list him as an officer/director. Please provide documentation demonstrating that he is an officer or director of Trail Ridge Landfill, Inc. or provide a letter from an officer/director giving him the required authorization.

3. If you wish to operate from 5:00 a.m. to 10:00 p.m., as indicated in item B 15 of the application form, please address how you will illuminate the site during the non-daylight hours. Please note that at least 3 candle-feet of illumination are required

4. In item B 11 of the application form you indicate there will be one spotter. Please note that more than one spotter is required if you wish to accept the proposed average and maximum daily tonnages of 3900 and 5000 tons, respectively. Please revise and provide.

5. Please amend your training plan to include the initial training spotters, in addition to operators, will receive within 60 days of employment, as well as the continuing training they will receive to satisfy the requirements of FAC Chapter 62-701. Please confirm that the employees will be trained by a provider approved by the department to provide training for the particular job position. Please also list the minimum number of hours of training each employee by job position will receive. Please describe the training employees will receive in the interim prior to receiving the required training

6. Please propose to have the "trained" spotters inspect each load of waste as it is being discharged and spread.

7. Please list the minimum number of trained spotters and equipment operators you will provide at the working face at all times waste is being accepted. Please indicate the minimum number of trained spotters that will be stationed on the working face to observe waste from the ground as it is being discharged and spread. Please also list the minimum number of equipment operators that will be present at the working face when accepting and spreading waste, and specify and list the minimum equipment by type and what its capacity is. Please demonstrate the proposed minimum personnel and equipment will be adequate to manage the proposed maximum waste amount. If this information was previously provided and you wish to include it by reference, please identify the document (by title and date) and section where it is contained and confirm that the information is still valid.

8. Please identify the equipment you will utilize to spread the waste for spotter inspection as well as the equipment to compact the waste and specify the expected waste compaction. If from the time you originally calculated the settlement analysis you have changed the compaction equipment and increased the expected compaction rate, please reevaluate the validity of the foundation analysis and conduct waste settlement analysis. Please describe how the waste will be compacted, including the minimum number of passes and if the facility will compact from the top or crest down.

9. How will you handle unacceptable materials that are discovered at the working face after the hauler has left? Please propose a designated temporary storage area for unacceptable waste such as white goods, yard waste, waste tires, until their removal to a facility with the appropriate permit or authorization to accept the waste and show the locations on the site plan. Also please propose a maximum time frame that such waste will be allowed to remain at the facility until removal. Please identify the facility to where the materials will be removed and who will remove them.

10. Please list the procedures that will be implemented in the event hazardous waste is discovered at the working face. Please include in your plan at a minimum, that the facility will immediately notify the department of the discovery by telephone and will provide written notification and report addressing the managing of the waste within 7 days of the discovery. The facility shall record the incident including the location in logs and shall physically delineate the area in the field. The extent of contamination shall also be determined. Also the facility shall indicate that they will follow all applicable local, state and federal regulations in managing the waste. Furthermore, the facility shall commit to handling all materials contaminated by the hazardous material as hazardous waste.

11. In section X C you indicate that other waste materials such as shredded waste and biological waste may be accepted for disposal on condition that they satisfy the requirements of FAC Chapter 62-701.520(2)(5). Prior to accepting such waste, please list the procedures you will follow in ensuring the said requirements are satisfied. Also, if you intend to apply shredded waste and not follow up with initial cover, please demonstrate that you will satisfy the requirements of FAC Chapter 62-701.520(2). Please clarify if you are you proposing to

accept either new types of waste or waste such as an industrial waste at higher concentrations than you were previously permitted to accept and which may result in a leachate other than that which the leachate/liner compatibility liner test was based on. If so, please evaluate if the expected resultant leachate will remain compatible with the liner system and provide your evaluation.

12. Please provide calculations concerning the proposed downcomer pipes and terraces to be installed and constructed with the close-as-you-go closure and final closure. If previously provided and you wish to incorporate it by reference, please identify the document by title and date and list the section within the document the pertinent information may be found. Please also confirm that any information you intend to incorporate by reference is still valid.

13. In section X B., you indicate that ash that meets the requirements of Rule 62-701.570(6) may be used as initial cover. In other sections of your application you indicate you intend to also utilize shredded tires and tarpaulin for initial cover. Prior to utilizing any of the said materials for cover, please demonstrate that each will satisfy the initial cover requirements of FAC Rule 62-701.500(7)(e) including acting as a fire barrier. Additionally, please demonstrate that their use, especially where the ash and shredded tires are of concern, will not cause an impact to surface water. Please also specify the tarpaulin you will use and characterize and provide a description of the ash. In your response, please also list the procedures that will be followed in applying each of the proposed initial covers, i.e., tarpaulin, shredded waste tires, and ash as initial cover and identify by job position the person who will apply the covers. How thick of a layer of shredded tires or ash will you apply? Will you leave the materials in place or remove them? If left in place, how will the materials affect the flow of leachate? Also where will you store the materials when not being used as cover? Please list the procedures that will be followed in managing ash from the time it is received until it is used. If you wish to utilize any other materials for initial cover, other than the ones listed above with the exception of clean uncontaminated dirt, please specify and demonstrate they will satisfy the above requested requirements.

14. How will you ensure that contaminated soils accepted at the facility are not contaminated by a hazardous waste? How will you handle acceptable and unacceptable contaminated soils? Please address the procedures that will be followed in handling soils received at the facility from the time of their receipt until they are used. The department understands that you will not use them for any type of cover. Please confirm or deny.

15. How will you delineate and mark in the field the waste limits, to prevent the inadvertent placement of waste outside of them? What measures have or will you implement to delineate and mark the liner limits in the field so that the facility will be able to find them at a future date, if necessary? Please also discuss accessibility.

16. Please specify the maximum working face dimensions.

17. Please indicate what you mean by "bellies" in the report contained in Appendix D, concerning the inspection of the leachate collection lines. Did you video all pipes associated with the leachate collection and detection systems? Please address.

18. Please propose a minimum frequency for inspecting, videoing, and cleaning out the leachate collection and detection system during operations. Are fines in the leachate expected to increase, especially since you are proposing to recirculate it via an aggregate or slag media? Please address.

19. In section P of the engineering report you indicate that the landfill operator will monitor the level of leachate in the collection sumps on a daily basis. How about the detection sumps? Also, how will he/she monitor the levels? How is the proposed leachate recirculation event expected to affect these levels? How will you measure the rate of leachate being collected in each of the leachate collection and detection sumps? Please propose to provide and maintain meters at each sump. What level of leachate in the leachate collection and detection systems will alert a problem and warrant action?

20. In section P you propose to compare precipitation rates with leachate generation rates? Have you made such a comparison? Please do so and provide the results of your comparison.

21. In section B you indicate that "level sensors in the riser pipe are used to control the pump which removes leachate as it accumulates." What is the level and will the pumps have the capacity to continue maintaining leachate at the specified level or lower with leachate being recirculated at the proposed maximum amount and rate? Please address. Also, are the riser pipes built to final elevations, or are you proposing to construct them in increments as waste fill progresses? How will you prevent rainwater or other foreign matter from entering into the risers and cleanouts? How are gases that may collect in them being managed? Please address.

22. Have you compared the amount of leachate being collected against the amount of leachate that was projected to be generated by your design calculations previously submitted? If not, please make the comparison and provide a summary of the results to the department.

23. In light of the proposed leachate recirculation event please reevaluate the capacity of the leachate collection system, i.e., pipes, pumps, to adequately handle the expected leachate amount. Please provide all supporting calculations. Will you have backup pumps? Also, please show all sumps, leachate lift stations, and cleanouts on the site plan view.

24. Please provide sizing calculations for the leachate recirculation system, including the trench, the pipes within the trench, the force main, and the pump and pump lift station? Please provide a detail of the pump lift station and also show in a plan and cross sectional view the location of the force main, pump station and flow meter and how they will connect to the existing leachate containment area. Did you evaluate the potential for the pipes to clog due to fines that may be in the aggregate, or slag? Please address. Also, please specify the types of aggregate you intend to use and provide a description of the slag. From the help model printouts the department understands that the hydraulic conductivity of the trench slag/aggregate will be a minimum of 0.300 cm/sec. How will you ensure the material provides this minimum hydraulic conductivity after installation? Please address these comments and provide all supporting calculations.

25. Please list the procedures that will be followed in constructing the leachate recirculation trenches including the proposed 8-inch pipe and pumping system. Will the 8-inch pipe reflected on Drawing sheet number 19A be installed above grade or below grade? How will you prevent it from being damaged during operations? Please address. What equipment will be used to construct the system, who will construct it, and who will supervise the construction? Who will decide where to construct the system and when? Please address the quality assurance you will provide to the project, if any.

26. You are proposing to use slag or aggregate in the leachate trenches. How will the material, slag, be handled from the time it enters the facility, i.e., storage, until it is placed in the trenches. Will the trenches be immediately covered with intermediate cover?

27. The following comments concern the water balance analysis conducted utilizing the Help model:
    a. A curve number of 80 is too high. Please rerun the program utilizing a lower curve number and justify the number you select.

    b. It does not appear that you modeled the system in a saturated state; since you are proposing to recirculate leachate the disposal area will be wetter than normally expected and may reach saturation, please address.

    c. Please run the help model at various stages of the facility when the waste is at various elevations to determine the worst case.

    d. Please use historical rainfall data that reflects wet years as opposed to the default data, which reflects dryer times.

    e. Please run the model for 14 and 20 years as well as 5 years

    e. Please note you will be required to provide the earthen materials you specify in the program and the materials will be required to exhibit the hydraulic conductivities indicated therein.

    f. Are the porosities, field capacities, wilting points, initial soil water content, hydraulic conductivity default values from the program? Please address.

28. Please provide a factor of safety regarding the leachate head above the primary liner. Please note a head of 10 inches and 11.8 inches does not provide much safety. Therefore, the department is not inclined to accept the proposed leachate recirculation rate. Please address.

29. What will be the wetting front of the recirculated leachate and what will its impact be on the liner and leachate collection system? Please address.

30. Please calculate the expected leachate leakage rate through the primary liner. Please confirm that you will maintain a recording flow meter at each of the sumps, and will monitor the amount and rate of leachate being collected in the secondary (leak detection system). Please

propose to inspect and remediate the system when specific amounts are detected. Please justify all assumptions.

31. Please also demonstrate that the proposed leachate recirculation activity will not cause the maximum hydraulic head on the secondary liner to reach one inch or greater nor cause it to be as thick or thicker than the secondary lateral drainage layers (geonet).

32. Please provide a safety factor. Please provide all supporting calculations and justify any assumptions.

33. You propose to not recirculate leachate unless there is a minimum of 55 feet of waste. How will you determine in the field if waste is at this minimum height prior to implementing leachate recirculation activities?

34. From your proposal the department deduced that you will recirculate leachate at a rate no greater than 0.688 gallons per square foot of trench piping and that on a maximum day you will not recirculate more than 30,000 gallons of leachate. Furthermore, the department understands that you will recirculate in only one area during a day and that the trench area will be no greater than 1 acre in size. Please confirm or deny these understandings. Please clarify your engineering report, section VIIB to indicate these maximum rates.

35. How will you control and measure the rate leachate is being recirculated? At a minimum please propose recording flow meters on the recirculation line and describe them. Also, please identify the person by job role that will be responsible for recording the rates and ensuring the maximum amount is not exceeded. Please propose to have the person observe the area as the leachate is being recirculated to ensure the leachate is not penetrating the intermediate cover layer or seeping elsewhere. Please list the steps to be followed in conducting the leachate recirculation event and controlling leachate rate. Will the system pumps be operated manually or automatically? Please address.

36. How will you know when an area is reaching its liquid limit, becoming saturated? Please provide a justification for not proposing to monitor pore pressures or propose to and address how you will. If you will, please address the frequency at which you will monitor the pore pressure, indicate how you will monitor them, what level will warrant ceasing leachate recirculation activities, and propose a response time to cease them commencing from the time it is first discovered that cessation is warranted. Please list the steps to be implemented in ceasing the recirculation activities and who will implement it.

37. Are you intending to monitor backpressures in light of the proposed leachate recirculation activity? Please address.

38. How will you know when to cease recirculating leachate in an area, when you may recommence recirculation in an area, or when to abandon an area and move to a new one? Please list the measures you will implement to abandon a recirculation area prior to moving to a new location? Are you proposing to recirculate leachate every day? Are you not going

to recirculate leachate on rainy days? Please address these comments and provide all supporting calculations.

39. How will you know if the leachate recirculation activity is flooding the recirculation area and/or wetting the intermediate cover? What will be the minimum distances from the side slopes will you recirculate leachate? How will you minimize and inspect for leachate seeps? If a seep is discovered, what procedures will you follow in managing and eliminating it? Please address if perched leachate conditions will be a problem within the disposal considering the initial cover you will be and are using. Please address these comments for active areas as well as areas that have received intermediate and final cover. At a minimum please propose to notify the department and to cease leachate recirculation activities until evaluated and resolved.

40. The weight of waste and its decomposition rate are expected to increase when wet and moist. Subsequently waste settlement will accelerate which in turn may allow for additional waste to be disposed thereby further increasing the waste density and weight. Also, settlement may be greater in areas of the leachate recirculation activity, contributing to differential settlement. Please estimate the expected waste density and weight of the waste in light of the proposed leachate recirculation activity and provide an evaluation of how the increase in these factors will affect the total, primary and secondary, waste settlement, differential settlement and ultimately the foundation settlement. Please conduct and provide waste settlement calculations and if warranted, new foundation settlement calculations and justify all assumptions.

41. Since you are proposing to recirculate leachate, the amount of waste settlement is expected to increase which in turn may exert greater down drag forces on structures placed within the disposal area. Please evaluate the expected down drag forces and effects on such structures including those associated with the gas collection system. How far from the top of the bottom liner system are the bottom of the pipes? How far are they expected to be after the expected maximum amount of waste settlement and associated resultant forces? Please provide all supporting calculations and justify all assumptions. Please address the procedures you will follow in maintaining and monitoring the effectiveness of this system.

42. Also, please address the effect the expected total waste settlement and differential waste settlement will have on the grade of the top slope and terraces as well as on structures placed within the disposal area, i.e., the downcomer pipes, gas vents. Will the top slope effectively promote the drainage of rainfall after the expected maximum waste settlement? Please provide all supporting calculations and justify all assumptions.

43. Please include in your response how the increase in waste settlement and potentially foundation settlement will impact the leachate collection system including but not limited to the integrity of the pipes, liner and grade of the liner system. Please provide all supporting calculations.

44. Since you are proposing to recirculate leachate, which in turn will increase the wetness and weight of the waste, please provide an evaluation for the potential for deep-seated rotational or translational failures through the waste and final cover system, Pursuant to FAC Rule 62-701.600(5)(g)5.

45. Please not only indicate that erosion will be repaired within 3 days, but also indicate the measures you will implement to prevent and manage erosion. Also, please propose to investigate the cause of the leachate to determine if there is an underlying problem, such as unstable slopes.

46. Have you inspected the interior of the leachate storage tanks? If not, please do so. Please provide a copy of the results.

47. Please provide an updated agreement and/or contract with a facility to accept and treat the landfill's leachate. Please include the maximum amount they are willing to accept on any one day.

48. How will you prevent leachate that may travel underneath on the underside of the barrier liner or other final cover system component, from escaping into the environment? Will you connect the final cover system to the liner system? Please address

49. Please provide a more detailed description of the soil/mulch mixture proposed in the top earthen layer. Please propose to only utilize mulched yard trash, as defined in FAC Rule 62-701.200(143). What measures will you implement to ensure the mulch is composed of only "yard trash."? Where will you store the premixed and mixed material? Where will you mix the material? Please specify what the maximum size the mulch will be and what equipment you will use to mulch.

50. How will the proposed mulch/soil mixture to be utilized in the intermediate cover affect the stability of the final cover system? How will you compensate for degradation and settlement of the mulch material? Please note that the barrier liner of the final cover system shall be in direct contact with the mulch mixture. Please propose a protective layer between the two layers.

51. Concerning the final cover system design, please conduct and provide side slope stability calculations and analysis. Please conduct your calculations based on the materials you intend to utilize in the final cover system including the intermediate cover and account for saturated conditions. Please conduct laboratory interface friction angle tests (ASTM D5321) in wetted condition for each interface in the final cover system utilizing the actual components that will be utilized. Please note that the system shall be designed to be stable at the weakest interface determined. Finally, please provide all supporting calculations and laboratory results.

52. Please provide a water balance analysis on the final cover system, both top and sideslopes.

53. Please specify the grass and vegetation that will be provided, and address that it will not have root penetrations that may impact the barrier liner

54. Please show any existing as well as proposed gas vent locations, flares, blowers, on the site plan. Are you proposing to install gas vents in phases? If so, please reflect on the fill-phasing plan provided on drawing sheet numbers 10-15. If not, please justify why not.

55. By introducing more moisture to the waste it is expected to decompose quicker and accelerate the generation of gas. Please evaluate and address the effect the proposed leachate recirculation event will have on the generation of gas and provide a copy of your evaluation. Please also provide supporting calculations. If you find the gas collection system is still adequate and do not wish to propose any changes to the permitted active gas collection system, you may incorporate the previously submitted information including design calculations pertaining to the system by referencing it and confirming that the information remains valid and satisfies the applicable Rule of FAC Chapter 62-701. Please identify the document by listing the title and date and identify the sections where the subject information may be found. However, if you find the system will be inadequate, please provide your changes and any supporting calculations and modify your Title V permit accordingly.

56. The permeating of liquids that are present within the disposal area into the gas vent structures is a concern. What measures will you implement to prevent recirculated leachate from reaching into the gas collection structures and how will you monitor for it?

57. Please address the inspections you will conduct on the active gas collection system, leachate recirculation system, cover system components, leachate collection items, and etc. Please provide a quality assurance plan that will address the maintenance and repairs of these items and system during operations and after cover is applied. Please include the procedures that will be followed in maintaining and repairing them. Please address the tests, if any, that will be conducted in determining the integrity of these systems.

58. Please address who and how you will select the first four feet of select waste above the liner system. How will you manage the unselected waste?

59. Concerning the fill phasing plan, how will field personnel know when they have reached the elevations at which the facility is to construct final cover and install the drainage devices in accordance with drawing sheet numbers 11-15? How will they know where the limits of fill are for each respective fill phase reflected on same drawing sheets?

60. Please clarify the waste filling sequence within in each phase. For instance, will you start in the southeast corner and work your way north and west?

61. What material will the access roads be constructed of? How will you ensure the access road on the disposal area will be stable and not contribute to erosion?

62. In your notes you indicate that fill phasing may change; please note that such a change will require a modification to your permit prior to initiation.

63. Please address litter and dust control. If you intend to incorporate information previously provided, please list the title and date of the document and the section within the document the information may be found. Please also indicate if the information is still valid and satisfies the requirements of the now effective FAC Chapter 62-701.

64. Please address odor control and list the procedures you will follow in controlling and eliminating odors.

65. Please list the procedures that will be followed in the event of a fire or hot load is received at the facility.

66. The following comments concern the Quality Assurance/Quality Control Plan:

    a. Please list the minimum qualification the Quality Assurance personnel will have, independent of the contractor who will be retained for the project. Please confirm the QA/QC personnel will be at the site and will observe all work and associated testing related with the closure construction project.

    b. Please specify the criteria the various components of the final cover system will be required to satisfy; i.e., peel and shear strength, interface friction angles. Please note that the synthetic and earthen materials as well as their characteristics, i.e., hydraulic conductivities, thickness, friction angles, specified in the QA/QC report shall correspond with those provided in the requested water balance analysis, interface friction angle tests and other design calculations. Please revise the plan accordingly.

    c. Please address how you will handle gas bubbles if encountered during closure construction.

67. The following comments concern the Waste tire processing plan:

    a. Is the curb being maintained? Please show the storage areas for both processed and unprocessed waste tires on the site plan. Please reflect the required fire lanes on the drawings. Please reflect the dimensions and subbase.

    b. Please list the procedures that will be followed from the time a tire enters the site until it is removed or disposed after processing.

    c. What will be the maximum amount of tires you will store on site at any one time, both processed and unprocessed? Please demonstrate that the waste tire storage areas will have the capacity to contain the liquid residue from a potential waste tire fire when the maximum tire amount is being stored.

d. Please describe the processing equipment you will utilize on site including its processing capacity, daily throughput. Please provide a detail of the system. Who will operate the equipment and what are there qualifications? Please demonstrate that you will provide enough personnel to process the proposed maximum amount of tires. Please show on the site plan the location of the processing facility. Will the equipment be maintained on site? **If not, what will be the minimum frequency it will be made available** and please provide a copy of a contract with an authorized mobile waste tire processor. What will you do with tires that are unable to be processed? How long from the time a waste tire is received on site will it be processed? What will be the maximum amount of time processed tires will be allowed to remain on site? To where will you send the processed waste tires?

e. Please demonstrate that you will have the capacity in equipment and in personnel to adequately handle the maximum amount of tires you propose to have on site at any one time. Please demonstrate that you will not exceed the storage limitation of 60 times the daily throughput of the processing equipment for the days the equipment is at the site and operating.

f. What measures will you implement to control and minimize the breeding of mosquitoes?

g. What measures will you implement to ensure the processed waste tires are satisfying the FAC Chapter 62-711 required sizes for disposal.

h. Please provide a contingency plan in the event the equipment breaks down.

i. How will you ensure in the field that the tires are within the height and storage limits?

j. Please provide a closure plan listing the measures that will be implemented in closing the facility.

k. Please note that the cost estimates need to be for removing the maximum amount of tires, processed and unprocessed, you intend to have at the site.

l. Please address how you will handle fires at the facility. Also, have you had fire safety surveys conducted? If so, what were the recommendations if any and have you implemented them? If not, please do so and provide a copy of the survey with any recommendations and address.

68. Please provide a more detailed description of the Underdrain reflected on Drawing Sheet 8 and its purpose. Please provide all supporting calculations.

69. On drawing sheets 16 - 18, please list all revisions and clarify if you are proposing any changes to the items reflected in the drawings in this permit application.

70. Please explain the plywood shown on drawing sheet 16, detail 1.

71. Please note you will need to apply for a closure permit in accordance with the applicable rules of FAC Chapter 62-701

72. The following comments concern the cost estimates:

    a. Concerning your cost estimates, you indicate in your application form that the disposal area is 148 acres, which equates to 716, 320 square yards; however, your estimates are for a smaller area. Please address and revise your estimates as appropriate.

    b. Please check the amount of leachate expected to be collected during the long-term care period. Since you are proposing to recirculate leachate, the disposal area is expected to be wetter than normal and more leachate, therefore, may be collected after closure. Please revise your costs accordingly.

    c. Please confirm that all cost estimates are for third party costs that the department may incur if tasked with the responsibility of maintaining and monitoring the facility.

Nogas, Mary

From: Nogas, Mary
Sent: Monday, October 28, 2002 7:43 AM
To: Juanitta Clem (E-mail)
Cc: Rachal, Richard; Boesch, Julia
Subject: Trail Ridge Request

Please submit a site plan showing where your client intends to stockpile the material from McCoy's Creek Stormwater Improvements, Pond D. Also, please be advised that the department does not look favorably upon the request to use this for intermediate cover, as that material tends to get removed and reused at most landfills. If your client strongly wishes to use the soil in this manner, the department would need some sort of institutional control (such as a permit condition, which takes it beyond the scope of the one-time letter approval your client and I had discussed) that would prohibit such disturbance, as well as a marking of these areas in the field.

England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • GIS • LANDSCAPE ARCHITECTS

Principals
James E. England, P.E., CEO
Douglas C. Miller, P.E., President
N. Hugh Mathews, P.E., Exec., V.P.
Joseph A. Tarver, Exec., V.P.
Juanitta Bader Clem, P.E., V.P.
Scott A. Wild, P.E., PSM, V.P.
Samuel R. Crissinger, CPA, V.P.
Robert A. Mizell, Jr., P.E., V.P.
Bryan R. Stewart, V.P.

October 2, 2002

Ms. Mary Nogas, P. E.
Solid Waste Section
Department of Environmental Protection
7825 Baymeadows Way, Suite B-200
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill – Phase VD (West)
FDEP Permit Number 0013493-002-SC
ET&M Project No. E02-001

Dear Ms. Nogas:

In accordance with the letter from the Department dated September 20, 2001, Trail Ridge Landfill, Inc. has removed the silt and other soil deposits on the surface of the protective sand layer within the western half of Phase VD. Further, England, Thims & Miller, Inc. has conducted thickness checks on the protective sand layer in the silt removal areas to ensure the 24" minimum thickness of the sand layer (see attached results). Photographs of the area where silt deposits have been removed and the quality assurance monitor performing thickness checks on the protective sand layer are attached for your reference. By this letter, we hereby certify that the work has been completed and hereby request that Trail Ridge Landfill, Inc. be authorized to accept waste immediately on the western half of Phase VD.

If you have any questions, please feel free to give me a call.

Sincerely,

ENGINEERS, THIMS & MILLER, INC.

Francis Dayao, P. E.
Project Engineer

Attachment: Thickness Verification Table
Thickness Verification Plan
Photographs

cc: Greg Mathes
Chris Pearson

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL
PROTECTION
2002 OCT -2 P 3:31
NORTHEAST DISTRICT
JACKSONVILLE, FL

14775 ST. AUGUSTINE RD. • JACKSONVILLE, FL 32258 • TEL: (904) 642-8990 • FAX: (904) 646-9485
CA – 00002584 • www.etminc.com • LC – 0000316

TRAIL RIDGE LANDFILL
PHASE VD WEST
PROTECTIVE SAND LAYER THICKNESS

LOCATION NO.	NORTHING STATION	EASTING STATION	THICKNESS	COMMENTS
1	105+00 E	74+70 N	30"	Toe of angle berm
2	105+00 E	75+00 N	24 ½"	
3	105+00 E	75+50 N	24"	
4	105+00 E	76+00 N	24"	
5	105+00 E	76+10 N	24"	Leachate collection trench
6	105+00 E	76+20 N	24"	
7	105+00 E	76+50 N	24 ½ "	
8	105+00 E	77+00 N	24"	
9	105+00 E	77+40 N	25"	Toe of leachate control berm
10	105+50 E	74+70 N	26"	Toe of angle berm
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12	105+50 E	75+50 N	24 ½"	
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15	105+50 E	76+20 N	24"	
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17	105+50 E	77+00 N	26 ½"	
18	105+50 E	77+40 N	29"	Toe of leachate control berm
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20	106+00 E	75+00 N	24"	
21	106+00 E	75+50 N	24"	
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23	106+00 E	76+10 N	30"	Leachate collection trench
24	106+00 E	76+20 N	29"	
25A	106+00 E	76+45 N	28"	
25B	106+00 E	76+55 N	28"	
26	106+00 E	77+00 N	26"	
27	106+00 E	77+40 N	24"	Toe of leachate control berm
28	106+50 E	74+70 N	29"	Toe of angle berm

TRAIL RIDGE LANDFILL
PHASE VD WEST
PROTECTIVE SAND LAYER THICKNESS

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35	106+50 E	77+00 N	24"	
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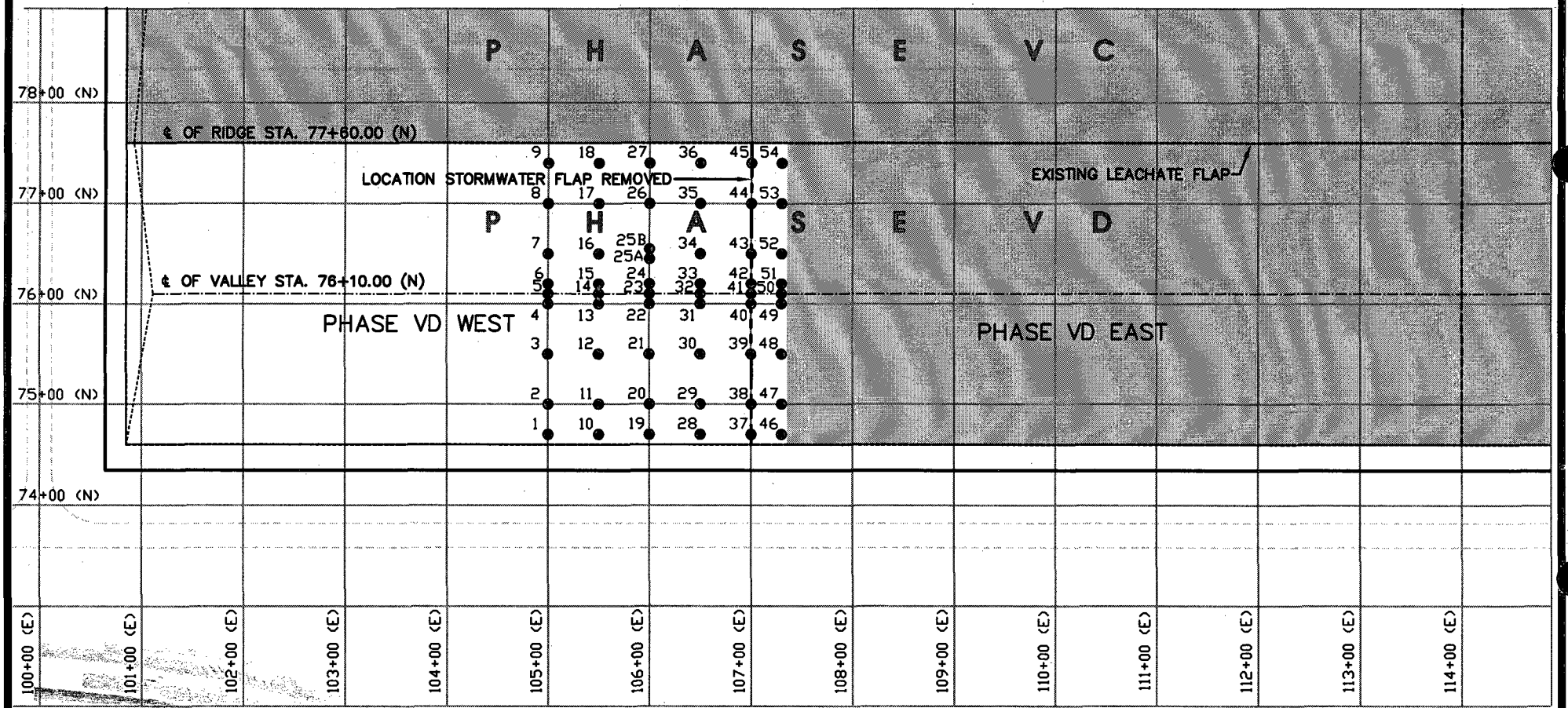
50	107+30 E	76+10 N	27"	Leachate collection trench
51	107+30 E	76+20 N	30"	
52	107+30 E	76+50 N	30"	
53	107+30 E	77+00 N	25 ½"	
54	107+30 E	77+40 N	24"	Toe of leachate control berm

Note: England, Thims & Miller, Inc. Quality Assurance Monitor performed thickness checks in the areas of the silt removal and stormwater flap removal from Sta.105+00 E to 107+30 E.

SCALE: 1 INCH = 150 FEET



LEGEND

- ● THICKNESS CHECK LOCATION
- EXISTING OPERATIONAL AREA

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS
SURVEYORS - LANDSCAPE ARCHITECTS
14775 St. Augustine Road
Jacksonville, Florida 32258
Certificate of Authorization No.: 2584
Phone No. (904) 642-8990
Fax No. (904) 646-9485

PHASE VD (WEST) - PROTECTIVE SAND LAYER THICKNESS VERIFICATION PLAN

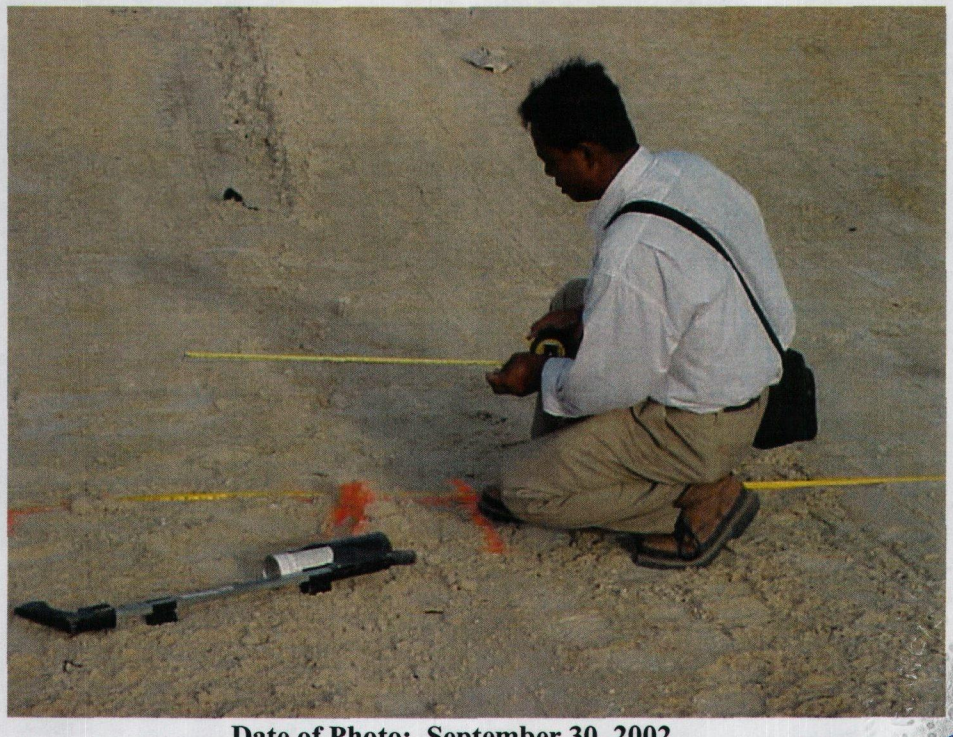
TRAIL RIDGE LANDFILL, INC.

ETM. NO.	E02-001
DATE:	OCTOBER 1, 2002
DRAWN BY:	F.D.D
DRAWING NO:	1

Date of Photo: September 30, 2002
Taken by: Pong Lanh (ETM QA Monitor)
Phase VD West – View looking east.

Date of Photo: September 30, 2002
Taken by: Pong Lanh (ETM QA Monitor)
Phase VD West – View looking west.

Date of Photo: September 30, 2002
Taken by: Pong Lanh (ETM QA Monitor)
Phase VD West – View looking northwest.



Date of Photo: September 30, 2002
Taken by: Pong Lanh (ETM QA Monitor)
Phase VD West – QA Monitor performing thickness checks.

England · Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • GIS • LANDSCAPE ARCHITECTS

FAX TRANSMISSION

To:	FDEP - Solid Waste	**Date:**	October 1, 2002
Attn:	Julia Boesch	**Page:**	4 (including cover sheet)
Fax No.:			
From:	Francis Dayao	**cc:**	
Reference:	Trail Ridge – Phase VD West		
ETM No.:	02-001		

If you do not receive all pages or have difficulty reading this document, please contact Francis Dayao at (904) 642-8990.

Dear Julia:

Per our conversation yesterday, attached for your review are the following:

- Thickness Verification Plan
- Thickness Verification Report

A signed and sealed copy of the report will be provided to you tomorrow. If you have any questions, please feel free to give me a call. As always, your assistance is greatly appreciated.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Francis Dayao, P. E.
Project Engineer

14775 St. Augustine Road, Jacksonville, Florida 32258
Phone: (904) 642-8990 • Fax: (904) 646-9485 • http://www.etminc.com

TRAIL RIDGE LANDFILL
PHASE VD WEST
PROTECTIVE SAND LAYER THICKNESS

LOCATION NO.	NORTHING STATION	EASTING STATION	THICKNESS	COMMENTS
1	105+00 E	74+70 N	30"	Toe of angle berm
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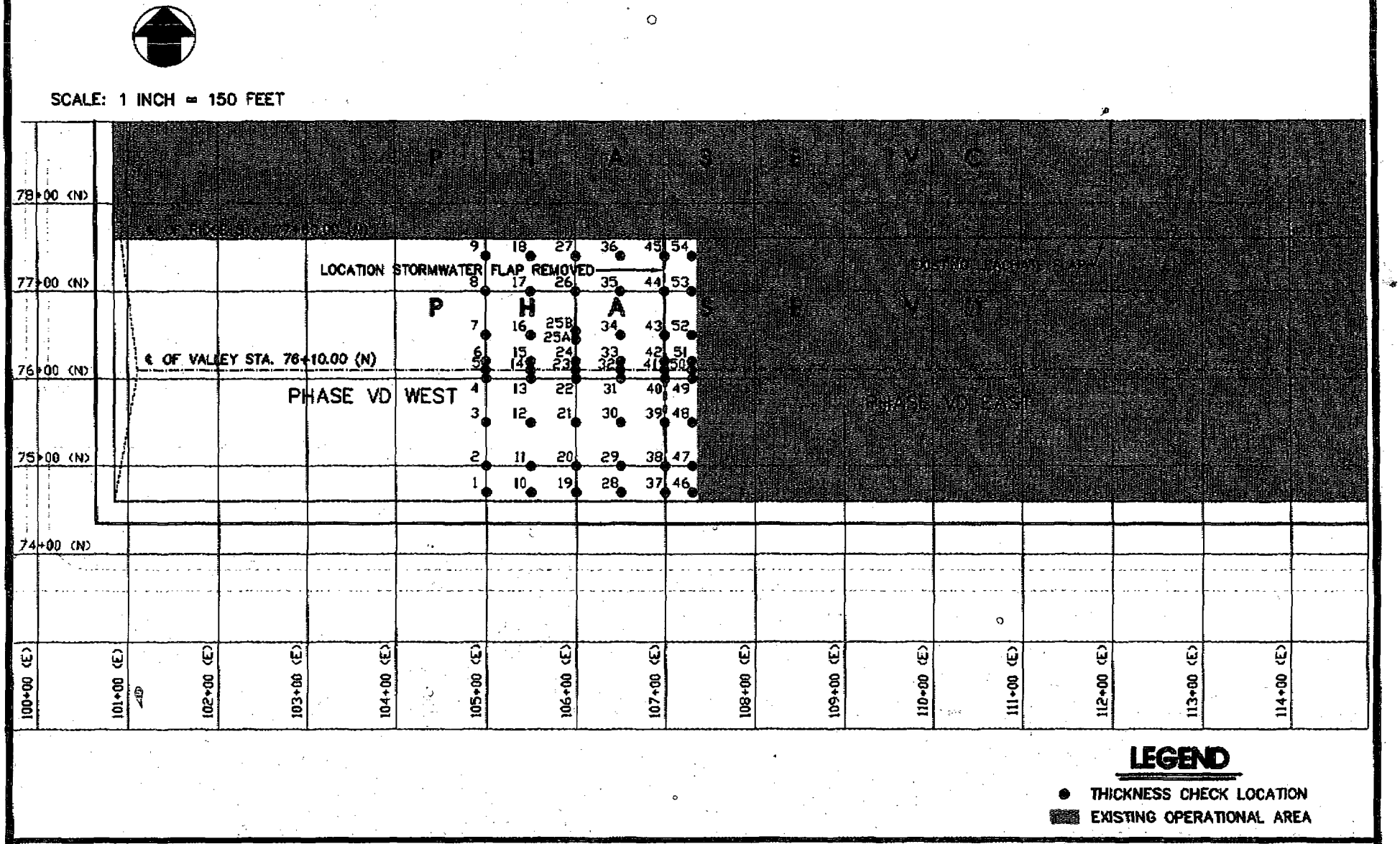

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS
SURVEYORS - LANDSCAPE ARCHITECTS
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Phone No. (904) 642-8990
Fax No. (904) 646-9485

PHASE VD (WEST) – PROTECTIVE SAND LAYER THICKNESS VERIFICATION PLAN

TRAIL RIDGE LANDFILL, INC.

ETM. NO.	E02-001
DATE:	OCTOBER 1, 2002
DRAWN BY:	F.D.D
DRAWING NO:	1

England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS

Principals
James E. England, P.E., CEO
Douglas C. Miller, P.E., President
N. Hugh Mathews, P.E., Exec., V.P.
Joseph A. Tarver, Exec., V.P.
Juanitta Bader Clem, P.E., V.P.
Scott A. Wild, P.E., PSM, V.P.
Samuel R. Crissinger, CPA, V.P.
Robert A. Mizell, Jr., P.E., V.P.
Bryan R. Stewart, V.P.

August 15, 2002

Ms. Mary Nogas, P. E.
Solid Waste Section
Department of Environmental Protection
7825 Baymeadows Way, Suite B-200
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill – Phase VD (East)
FDEP Permit Number 0013493-002-SC
ET&M Project No. E02-001

Dear Ms. Nogas:

In accordance with the letter from the Department dated September 20, 2001, Trail Ridge Landfill, Inc. has removed the silt and other soil deposits on the surface of the protective sand layer within the eastern half of Phase VD. Further, England, Thims & Miller, Inc. has conducted thickness checks on the protective sand layer in the silt removal areas to ensure the 24" minimum thickness of the sand layer (see attached results). Photographs of the area where silt deposits have been removed and the quality assurance monitor performing thickness checks on the protective sand layer are attached for your reference. By this letter, we hereby certify that the work has been completed and hereby request that Trail Ridge Landfill, Inc. be authorized to accept waste immediately on the eastern half of Phase VD.

If you have any questions, please feel free to give me a call.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

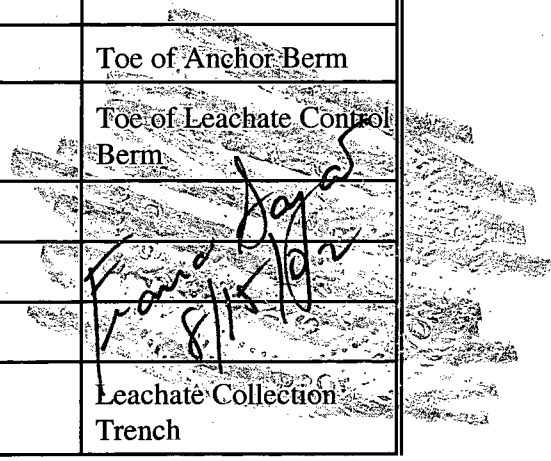
Francis Dayao, P. E.
Project Engineer

Attachment: Thickness Verification Table
Thickness Verification Plan
Photographs

cc: Greg Mathes
Chris Pearson

TRAIL RIDGE LANDFILL PHASE VD (EAST)
SAND THICKNESS

LOCATION NO.	EASTING STATION	NORTHING STATION	THICKNESS	COMMENTS
1	114+60 E	77+50 N	28"	Toe of Leachate Control Berm
2	114+60 E	77+00 N	27"	
3	114+60 E	76+50 N	28"	
4	114+60 E	76+20 N	30"	
5	114+60 E	76+10 N	30"	Leachate Collection Trench
6	114+60 E	76+00 N	30"	
7	114+60 E	75+50 N	27"	
8	114+60 E	75+00 N	28"	
9	114+60 E	74+80 N	30"	Toe of Anchor Berm
10	114+50 E	77+50 N	28"	Toe of Leachate Control Berm
11	114+50 E	77+00 N	24"	
12	114+50 E	76+50 N	27"	
13	114+50 E	76+20 N	30"	
14	114+50 E	76+10 N	30"	Leachate Collection Trench
15	114+50 E	76+00 N	30"	
16	114+50 E	75+50 N	25"	
17	114+50 E	75+00 N	25"	
18	114+50 E	74+80 N	30"	Toe of Anchor Berm
19	114+00 E	77+50 N	25"	Toe of Leachate Control Berm
20	114+00 E	77+00 N	24"	
21	114+00 E	76+50 N	25 ½"	
22	114+00 E	76+20 N	30"	
23	114+00 E	76+10 N	30"	Leachate Collection Trench

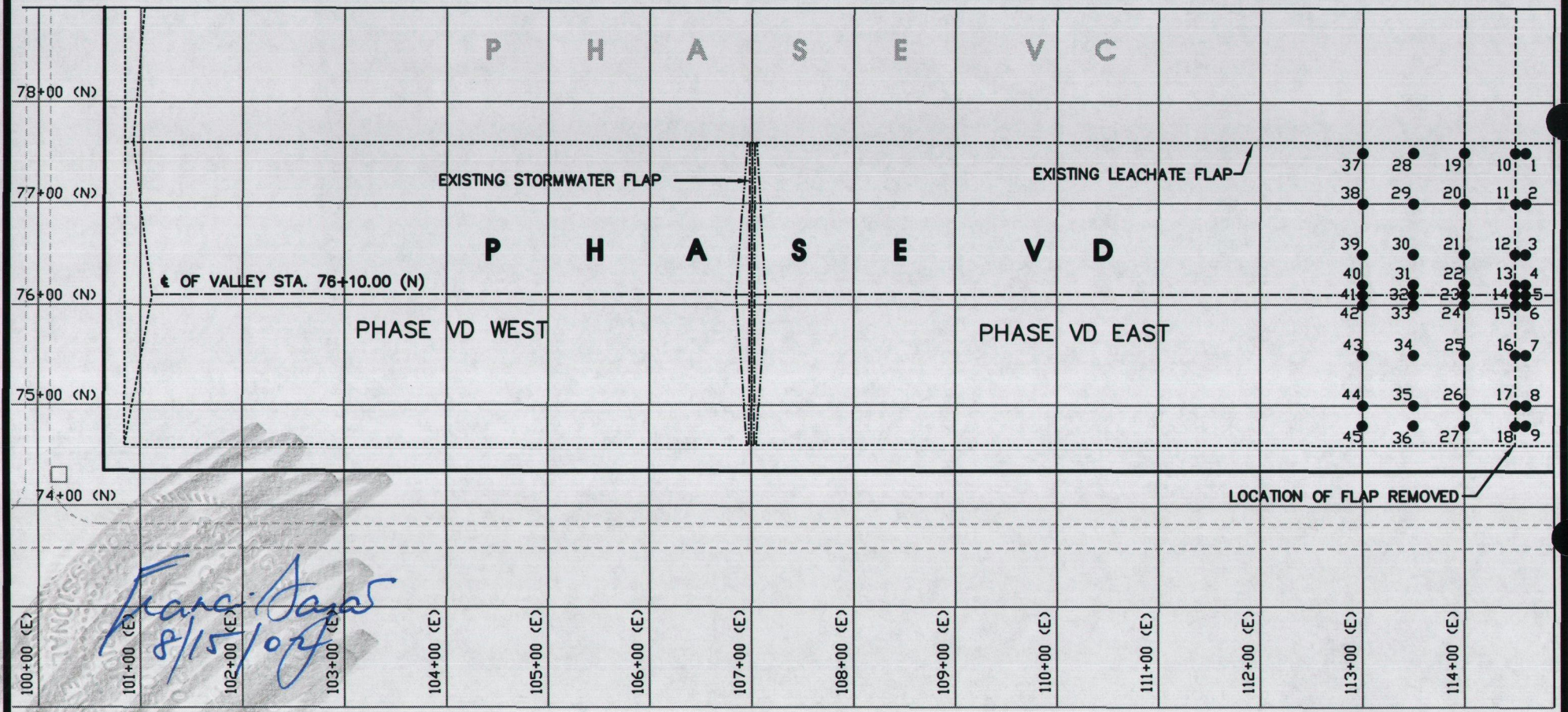


TRAIL RIDGE LANDFILL PHASE VD (EAST)
SAND THICKNESS

LOCATION NO.	EASTING STATION	NORTHING STATION	THICKNESS	COMMENTS
24	114+00 E	76+00 N	30"	
25	114+00 E	75+50 N	24"	
26	114+00 E	75+00 N	27"	
27	114+00 E	74+80 N	30"	Toe of Anchor Berm
28	113+50 E	77+50 N	25"	Toe of Leachate Control Berm
29	113+50 E	77+00 N	25"	
30	113+50 E	76+50 N	25"	
31	113+50 E	76+20 N	27"	
32	113+50 E	76+10 N	30"	Leachate Collection Trench
33	113+50 E	76+00 N	30"	
34	113+50 E	75+50 N	24"	
35	113+50 E	75+00 N	25"	
36	113+50 E	74+80 N	28"	Toe of Anchor Berm
37	113+00 E	77+50 N	24"	Toe of Leachate Control Berm
38	113+00 E	77+00 N	25"	
39	113+00 E	76+50 N	24"	
40	113+00 E	76+20 N	28"	
41	113+00 E	76+10 N	26"	Leachate Collection Trench
42	113+00 E	76+00 N	28"	
43	113+00 E	75+50 N	24"	
44	113+00 E	75+00 N	24"	
45	113+00 E	74+80 N	25"	Toe of Anchor Berm

Note: ETM performed thickness checks only in the area of the silt and stormwater control flap removal from Sta.113+00 E to 114+60 E.

SCALE: 1 INCH = 150 FEET



Francis Jones 8/15/02

LEGEND

● THICKNESS CHECK LOCATION

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS
SURVEYORS - LANDSCAPE ARCHITECTS
14775 St. Augustine Road
Jacksonville, Florida 32258
Certificate of Authorization No.: 2584
Phone No. (904) 642-8990
Fax No. (904) 646-9485

PHASE VD (EAST) – PROTECTIVE SAND LAYER THICKNESS VERIFICATION PLAN

FOR
TRAIL RIDGE LANDFILL, INC.

ETM. NO.	E02-001
DATE:	AUGUST 15, 2002
DRAWN BY:	F.D.D
DRAWING NO:	1

Date of Photo:
August 14, 2002
Taken by: Pong Lanh
(ETM QA Monitor)
Phase VD –
View looking west.

Date of Photo:
August 14, 2002
Taken by: Pong Lanh
(ETM QA Monitor)
Phase VD –
View looking west.

Frank Agas
8/15/02

Date of Photo:
August 14, 2002
Taken by: Pong Lanh
(ETM QA Monitor)
Phase VD –
View looking north.

Date of Photo:
August 14, 2002
Taken by: Pong Lanh
(ETM QA Monitor)
Phase VD –
View looking south.

Frank Dagar
8/15/02

England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS

Principals
James E. England, P.E., CEO
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Scott A. Wild, P.E., PSM, V.P.
Samuel R. Crissinger, CPA, V.P.
Robert A. Mizell, Jr., P.E., V.P.
Bryan R. Stewart, V.P.

July 26, 2002

Ms. Mary C. Nogas, P. E.
Solid Waste Section
Department of Environmental Protection
7825 Baymeadows Way, Suite B-200
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill – Incremental Closure
Side Slope Units 1-4 (Complete) and 21-23
FDEP Permit No. 0013493-002-SC
ET&M Project No. E00-117-04

Dear Ms. Nogas:

Please find herewith the Certification of Construction Completion for the Trail Ridge Landfill, Incremental Closure of Side Slope Units 1-4 (Complete) and 21-23. The Construction Quality Assurance/Quality Control documentation and As-Built Drawings are attached.

Subject to your site inspection, Trail Ridge Landfill, Inc. respectfully requests your written verification that the Department accepts this incremental closure.

This is the certification for the Trail Ridge Landfill closure construction of Side Slope Units 1-4 (complete) and 21-23, which commenced on November 12, 2001. Should you have any questions, please feel free to give me a call.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Juanitta Bader Clem

Juanitta Bader Clem, P. E.
Vice President

Attachments: Certification of Construction Completion of a Solid Waste Management Facility
Quality Assurance and Quality Control Documentation
As-Built Drawings

cc: Greg Mathes, with attachments
Chris Pearson, with attachments
Jim Horton, with attachments

14775 ST. AUGUSTINE RD. • JACKSONVILLE, FL 32258 • TEL: (904) 642-8990 • FAX: (904) 646-9485

Florida Department of Environmental Protection
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, FL 32399-2400

Form Title Certification of Construction Completion
Effective Date May 19, 1994
DEP Application No. _____ (Filled by DEP)

Certification of Construction Completion of a Solid Waste Management Facility

DEP Construction Permit No: 0013493-002-SC County: Duval

Name of Project: Trail Ridge Landfill - Incremental Closure

Name of Owner: City of Jacksonville

Name of Engineer: England, Thims & Miller, Inc.

Type of Project: Class I Landfill - Incremental Closure
Side Slope Units 1-4 (Complete) and 21-23

Cost: Estimate $_____ Actual $ 1,140,809

Site Design: Quantity: 3,500 ton/day Site Acreage: 4± Acres

Deviations from Plans and Application Approved by DEP:
Deviations are shown on the As-Built Drawing and/or outlined in the attachment.

The As-Built Survey was prepared by Robert M. Angas Associates, Inc. and reviewed by England, Thims & Miller, Inc.

Address and Telephone No. of Site: 5110 U.S. Highway 301, Baldwin, FL 32234
Phone: (904)289-9100

Name(s) of Site Supervisor: Greg Mathes

Date Site inspection is requested: As soon as possible

This is to certify that, with the exception of any deviation noted above, the construction of the project has been completed in substantial accordance with the plans authorized by Construction

Permit No.: 0013493-002-SC Dated: 11-25-97

England, Thims & Miller, Inc. relied upon the information and certifications provided by Law Engineering and Robert M. Angas Associates, Inc.

Date: 7/26/02 Leonitta Booker Dunn
Signature of Professional Engineer
#43245

Northwest District
160 Governmental Center
Pensacola, FL 32501-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-448-4300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
3804 Coconut Palm Dr.
Tampa, FL 33619
813-744-6100

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
941-332-6975

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6600

TRAIL RIDGE LANDFILL
INCREMENTAL CLOSURE
UNITS 1-4 (COMPLETE) AND 21-23

DEVIATIONS FROM PLANS AND SPECIFICATIONS

1. Some final grades were adjusted to accommodate settlement during closure construction. Adjustments are noted on the As-Built Drawings.

2. An alternate aggregate material in lieu of the specified FDOT No. 3 coarse aggregate was used to backfill Gas Wells W-26 and W-27. As explained in the attached December 3, 2001 letter to the Department, the modification does not change the design intent of the aggregate.

3. The side slope closure areas have been sodded but the sod has not been established. Due to the field conditions at the sod farms and the field conditions at the site when the sod was placed, the sod appears stressed. If the existing sod is not established, then additional measures will be taken to establish a stand of grass (either by resodding or seeding).

EMCON/OWT Solid Waste Services
999 Remington Boulevard, Suite A
Bolingbrook, IL 60440
Phone: (630) 771-9200
Fax: (630) 771-9250

December 3, 2001
Project 829385

Ms. Mary C. Nogas, P.E.
Solid Waste Section
Department of Environmental Protection
7825 Baymeadows Way, Suite B-200
Jacksonville, FL 322565-7590

Re: Trail Ridge Landfill
Landfill Gas System Expansion

Dear Ms. Nogas:

On behalf of Trail Ridge Landfill Inc. EMCON/OWT Solid Waste Services (EMCON) respectfully requests permission to use an alternate backfill material for four (4) gas extraction wells (W-26, W-27, T-22 and T-37) for the ongoing construction of the landfill gas system expansion. The Incremental Closure Quality Assurance/Quality Control Plan and the Project Specifications require FDOT No. 3 Course Aggregate for the backfill material for the gas wells.

The gradation test result exceeds the allowable percentage of material passing a 1-inch sieve (approximately 32% actual vs. 0% to 15% allowed per FDOT No. 3). However, the percentage of finer material passing a 0.5-inch sieve is well within specification requirements (approximately 3% actual vs. 0% to 5% allowed).

The material was utilized to backfill the perforated portion of the landfill gas extraction well casings. The purpose of the stone backfill is to allow the flow of landfill gas into the well casings, while providing an isolation or "filter" medium between the well casing and the waste mass. Considering the perforations in the well casing consist of vertical slots approximately 0.375 inches wide, the alternate material gradation should perform in a manner consistent with the FDOT No. 3 course aggregate. As the design engineer for this portion of the landfill gas extraction system, I respectfully request that this material be approved for these four (4) wells as an alternate to the FDOT No. 3 course aggregate.

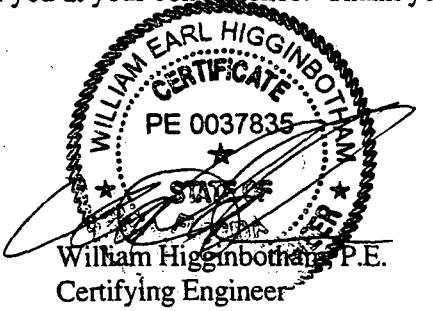
Please contact my office (630-771-9213) with any questions you may have regarding this request. I would be pleased to discuss this project with you at your convenience. Thank you.

Sincerely,

EMCON

Thomas Bilgri by AD.

Thomas A. Bilgri, P.E.
Manager – LFG Engineering Services



William Higginbotham, P.E.
Certifying Engineer

cc: Greg Mathes, Trail Ridge Landfill, Inc.
Juanitta Clem, England, Thims & Miller, Inc.

TABLE OF CONTENTS

Trail Ridge Landfill
Incremental Closure
Side Slope Units 1-4 and 21-23
Quality Assurance and Quality Control Documentation

England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS

Principals
James E. England, P.E., CEO
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Samuel R. Crissinger, CPA, V.P
Robert A. Mizell, Jr., P.E., V.P.
Bryan R. Stewart, V.P.

June 28, 2002

Ms. Mary C. Nogas, P.E.
Solid Waste Section
Department of Environmental Protection
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill
Incremental Side Slope Closure
FDEP Permit No. 0013493-002-SC
ET&M No. E00-117-04

Dear Ms. Nogas:

By this letter and on behalf of Trail Ridge Landfill, Inc., we hereby notify the Department that the incremental closure construction of Side Slope Units 1-4 (complete) and 21-23 is substantially complete. The certification and Quality Assurance/Quality Control documentation for this construction is currently being prepared and will be submitted to the Department within thirty (30) days.

If you have any questions regarding this construction, please feel free to give me a call.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Juanitta Bader Clem

Juanitta Bader Clem, P.E.
Vice President

cc: Greg Mathes
Chris Pearson
Neil Rushing
Jeff Marshall

'02 JUN 28 AM 11 30
STATE OF FLORIDA
DEP - NE DISTRICT
JACKSONVILLE

14775 ST. AUGUSTINE RD. • JACKSONVILLE, FL 32258 • TEL: (904) 642-8990 • FAX: (904) 646-9485

Boesch, Julia

From: Boesch, Julia
Sent: Monday, June 03, 2002 3:40 PM
To: 'Francis Dayao'
Subject: RE: Trail Ridge Landfill - Phase VB

The department has no objecction to the facility accepting waste in area Phase VB per your letter dated May 31, 2002, that included thickness measurements, and the removal of the minor waste items observed during my site visit earlier today.

-----Original Message-----
From: Francis Dayao [mailto:DayaoF@etminc.com]
Sent: Monday, June 03, 2002 1:33 PM
To: Boesch, Julia
Subject: Trail Ridge Landfill - Phase VB

Julia, I have been informed by Jimmy Purvis that the minor waste observed in Phase VB has been removed by Trail Ridge personnel. Please let me know if the facility can start accepting waste in Phase VB.

I appreciate your assistance and if you have any questions, please feel free to give me a call.

England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS

Principals
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Scott A. Wild, P.E., PSM, V.P.
Samuel R. Crissinger, CPA, V.P.
Robert A. Mizell, Jr., P.E., V.P.
Bryan R. Stewart, V.P.

May 31, 2002

Ms. Mary Nogas, P. E.
Solid Waste Section
Department of Environmental Protection
7825 Baymeadows Way, Suite B-200
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill – Phase VB
FDEP Permit Number 0013493-002-SC
ET&M Project No. E02-001

Dear Ms. Nogas:

In accordance with the letter from the Department dated September 20, 2001, Trail Ridge Landfill, Inc. has removed the silt and other soil deposits on the surface of the protective sand layer within Phase VB. Further, England, Thims & Miller, Inc. has conducted thickness checks on the protective sand layer in the silt removal areas to ensure the 24" minimum thickness of the sand layer (see attached results). Photographs of the area where silt deposits have been removed are attached for your reference. By this letter, we hereby certify that the work has been completed and hereby request that Trail Ridge Landfill, Inc. be authorized to accept waste immediately in Phase VB.

If you have any questions, please feel free to give me a call.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Francis Dayao, P. E.
Project Engineer

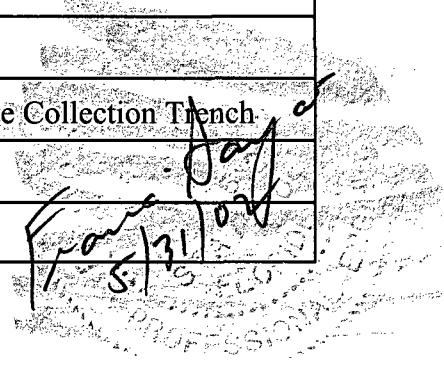
Attachment: Thickness Verification Table
Thickness Verification Plan
Photographs

cc: Greg Mathes
Chris Pearson

14775 ST. AUGUSTINE RD. • JACKSONVILLE, FL 32258 • TEL: (904) 642-8990 • FAX: (904) 646-9485

TRAIL RIDGE LANDFILL PHASE VB
SAND THICKNESS

LOCATION NO.	EASTING STATION	NORTHING STATION	THICKNESS	COMMENTS
1	119+50 E	77+40 N	24"	Toe of Leachate Control Berm
2	119+50 E	77+00 N	24"	
3	119+50 E	76+50 N	25"	
4	119+50 E	76+20 N	29"	
5	119+50 E	76+10 N	24"	Leachate Collection Trench
6	119+50 E	76+00 N	26"	
7	119+50 E	75+50 N	25"	
8	119+50 E	75+00 N	24"	
9	119+50 E	74+75 N	24 ½"	Toe of Anchor Berm
10	120+00 E	77+40 N	24"	Toe of Leachate Control Berm
11	120+00 E	77+00 N	24"	
12	120+00 E	76+50 N	29"	
13	120+00 E	76+20 N	31"	
14	120+00 E	76+10 N	25 ½"	Leachate Collection Trench
15	120+00 E	76+00 N	33"	
16	120+00 E	75+50 N	28"	
17	120+00 E	75+00 N	28"	
18	120+00 E	74+85 N	31"	Toe of Anchor Berm
19	120+50 E	77+40 N	24"	Toe of Leachate Control Berm
20	120+50 E	77+00 N	25"	
21	120+50 E	76+50 N	26"	
22	120+50 E	76+20 N	28"	
23	120+50 E	76+10 N	25"	Leachate Collection Trench
24	120+50 E	76+00 N	26"	
25	120+50 E	75+50 N	24"	



TRAIL RIDGE LANDFILL PHASE VB
SAND THICKNESS

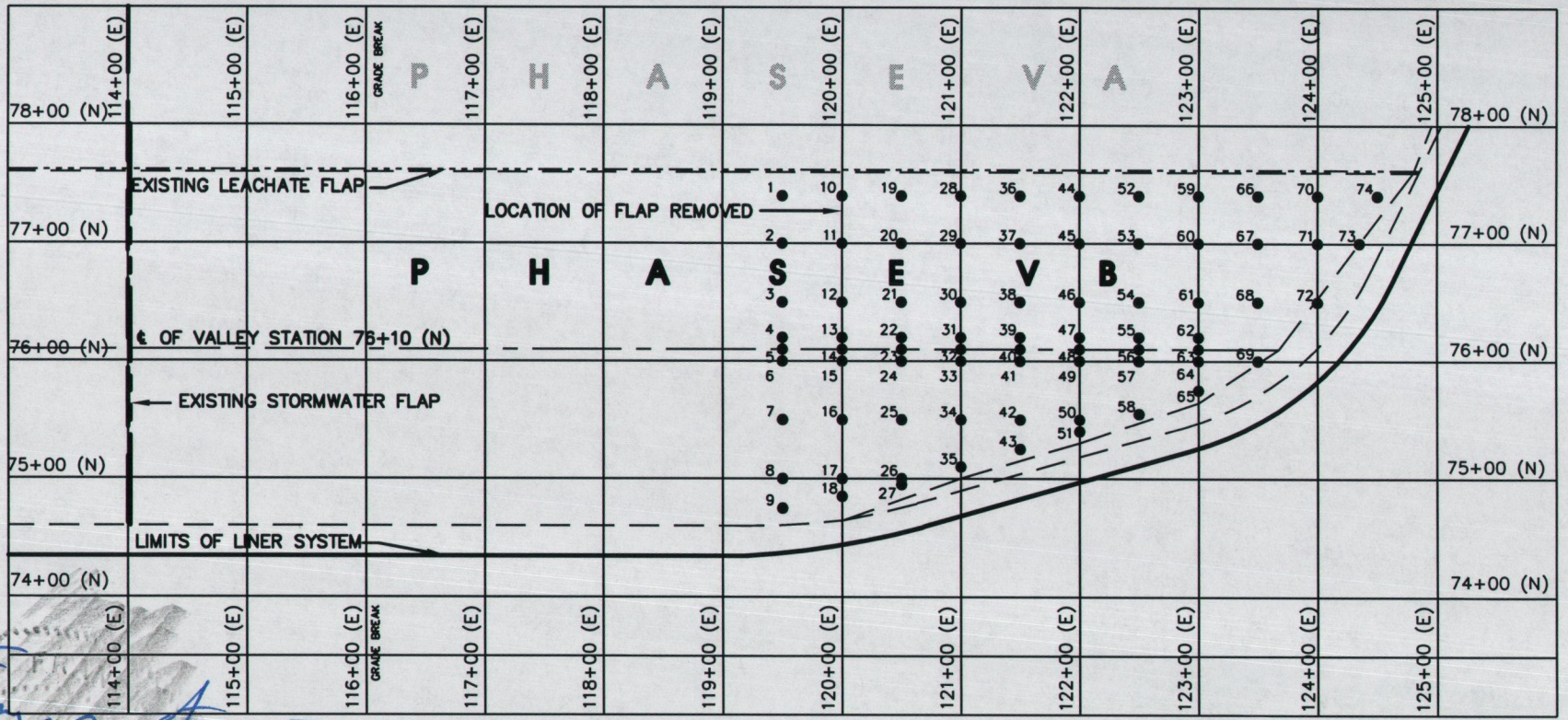
LOCATION NO.	EASTING STATION	NORTHING STATION	THICKNESS	COMMENTS
26	120+50 E	75+00 N	24"	
27	120+50 E	74+95 N	26"	Toe of Anchor Berm
28	121+00 E	77+40 N	24"	Toe of Leachate Control Berm
29	121+00 E	77+00 N	25"	
30	121+00 E	76+50 N	24 ½"	
31	121+00 E	76+20 N	26"	
32	121+00 E	76+10 N	27"	Leachate Collection Trench
33	121+00 E	76+00 N	27"	
34	121+00 E	75+50 N	25"	
35	121+00 E	75+10 N	26"	Toe of Anchor Berm
36	121+50 E	77+40 N	26"	Toe of Leachate Control Berm
37	121+50 E	77+00 N	24"	
38	121+50 E	76+50 N	25"	
39	121+50 E	76+20 N	25 ½"	
40	121+50 E	76+10 N	24"	Leachate Collection Trench
41	121+50 E	76+00 N	25"	
42	121+50 E	75+50 N	25"	
43	121+50 E	75+25 N	28"	Toe of Anchor Berm
44	122+00 E	77+40 N	24"	Toe of Leachate Control Berm
45	122+00 E	77+00 N	24"	
46	122+00 E	76+50 N	26"	
47	122+00 E	76+20 N	24 ½"	
48	122+00 E	76+10 N	24"	Leachate Collection Trench
49	122+00 E	76+00 N	25"	
50	122+00 E	75+50 N	27"	
51	122+00 E	75+40 N	30"	Toe of Anchor Berm

TRAIL RIDGE LANDFILL PHASE VB
SAND THICKNESS

LOCATION NO.	EASTING STATION	NORTHING STATION	THICKNESS	COMMENTS
52	122+50 E	77+40 N	26"	Toe of Leachate Control Berm
53	122+50 E	77+00 N	26"	
54	122+50 E	76+50 N	25"	
55	122+50 E	76+20 N	26"	
56	122+50 E	76+10 N	24"	Leachate Collection Trench
57	122+50 E	76+00 N	24 ½"	
58	122+50 E	75+55 N	29"	Toe of Anchor Berm
59	123+00 E	77+40 N	24"	Toe of Leachate Control Berm
60	123+00 E	77+00 N	29"	
61	123+00 E	76+50 N	28"	
62	123+00 E	76+20 N	26"	
63	123+00 E	76+10 N	24"	Leachate Collection Trench
64	123+00 E	76+00 N	26"	
65	123+00 E	75+75 N	29"	Toe of Anchor Berm
66	123+50 E	77+40 N	26"	Toe of Leachate Control Berm
67	123+50 E	77+00 N	28"	
68	123+50 E	76+50 N	26"	
69	123+50 E	76+00 N	34"	Toe of Anchor Berm
70	124+00 E	77+40 N	26"	Toe of Leachate Control Berm
71	124+00 E	77+00 N	24"	
72	124+00 E	76+50 N	28"	Toe of Anchor Berm
73	124+35 E	77+00 N	26"	Toe of Anchor Berm
74	124+50 E	77+40 N	27"	Toe of Leachate Control Berm and Toe of Anchor Berm

Note: ETM performed thickness checks only in the area of the silt and stormwater control flap removal from Sta.119+50 E to 124+50 E.

SCALE: 1 INCH = 150 FEET



LEGEND

● THICKNESS CHECK LOCATION

5/31/02

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS
SURVEYORS - LANDSCAPE ARCHITECTS
14775 St. Augustine Road
Jacksonville, Florida 32258
Certificate of Authorization No.:2584
Phone No. (904) 642-8990
Fax No. (904) 646-9485

PHASE VB – PROTECTIVE SAND LAYER

THICKNESS VERIFICATION PLAN FOR TRAIL RIDGE LANDFILL, INC.

ETM. NO.	E02-001
DATE:	MAY 30, 2002
DRAWN BY:	F.D.D
DRAWING NO:	1

Date of Photo: May 29, 2002
Taken by: William Davidson
(ETM QA Monitor)
Phase VB –
View looking east/northeast.

Date of Photo: May 29, 2002
Taken by: William Davidson
(ETM QA Monitor)
Phase VB –
View looking west.

Date of Photo: May 29, 2002
Taken by: William Davidson
(ETM QA Monitor)
Phase VB –
View looking northeast.

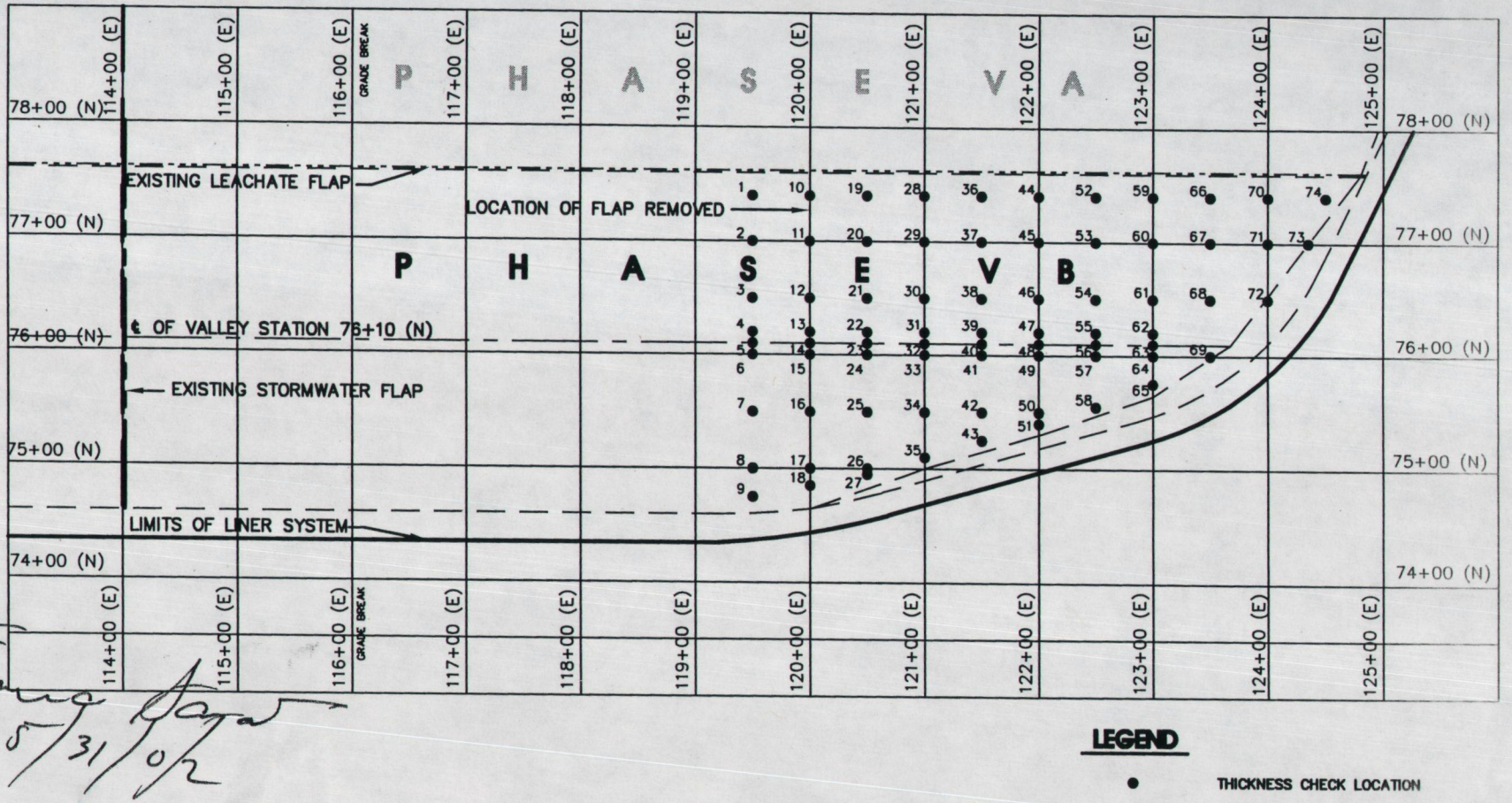
Date of Photo: May 29, 2002
Taken by: William Davidson
(ETM QA Monitor)
Phase VB –
View looking east.

Date of Photo: May 29, 2002
Taken by: William Davidson
(ETM QA Monitor)
Phase VB –
View looking south/southeast.

Date of Photo: May 29, 2002
Taken by: William Davidson
(ETM QA Monitor)
Phase VB –
View looking south.

5/31/06

SCALE: 1 INCH = 150 FEET



5/31/02

LEGEND

● THICKNESS CHECK LOCATION

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS
SURVEYORS - LANDSCAPE ARCHITECTS
14775 St. Augustine Road
Jacksonville, Florida 32258
Certificate of Authorization No.:2584
Phone No. (904) 642-8990
Fax No. (904) 646-9485

PHASE VB – PROTECTIVE SAND LAYER

THICKNESS VERIFICATION PLAN FOR TRAIL RIDGE LANDFILL, INC.

ETM. NO.	E02-001
DATE:	MAY 30, 2002
DRAWN BY:	F.D.D
DRAWING NO:	1

England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS

May 15, 2002

Ms. Mary Nogas, P. E.
Solid Waste Section
Department of Environmental Protection
7825 Baymeadows Way, Suite B-200
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill – Phase VB
FDEP Permit No. 0013493-002-SC
ET&M Project No. E02-001

Dear Ms. Nogas:

In accordance with the letter from the Department dated September 20, 2001, silt removal in Phase VB at Trail Ridge Landfill is scheduled to begin this week and is expected to be complete by next week, weather permitting. Thickness checks on the protective sand layer within the silt removal area as well as photographs will be provided to the Department of Environmental Protection. As discussed with Julia Boesch, a tentative inspection of Phase VB is scheduled for June 3, 2002 at 10:00 a.m.

If you have any questions, please feel free to give me a call.

Sincerely,

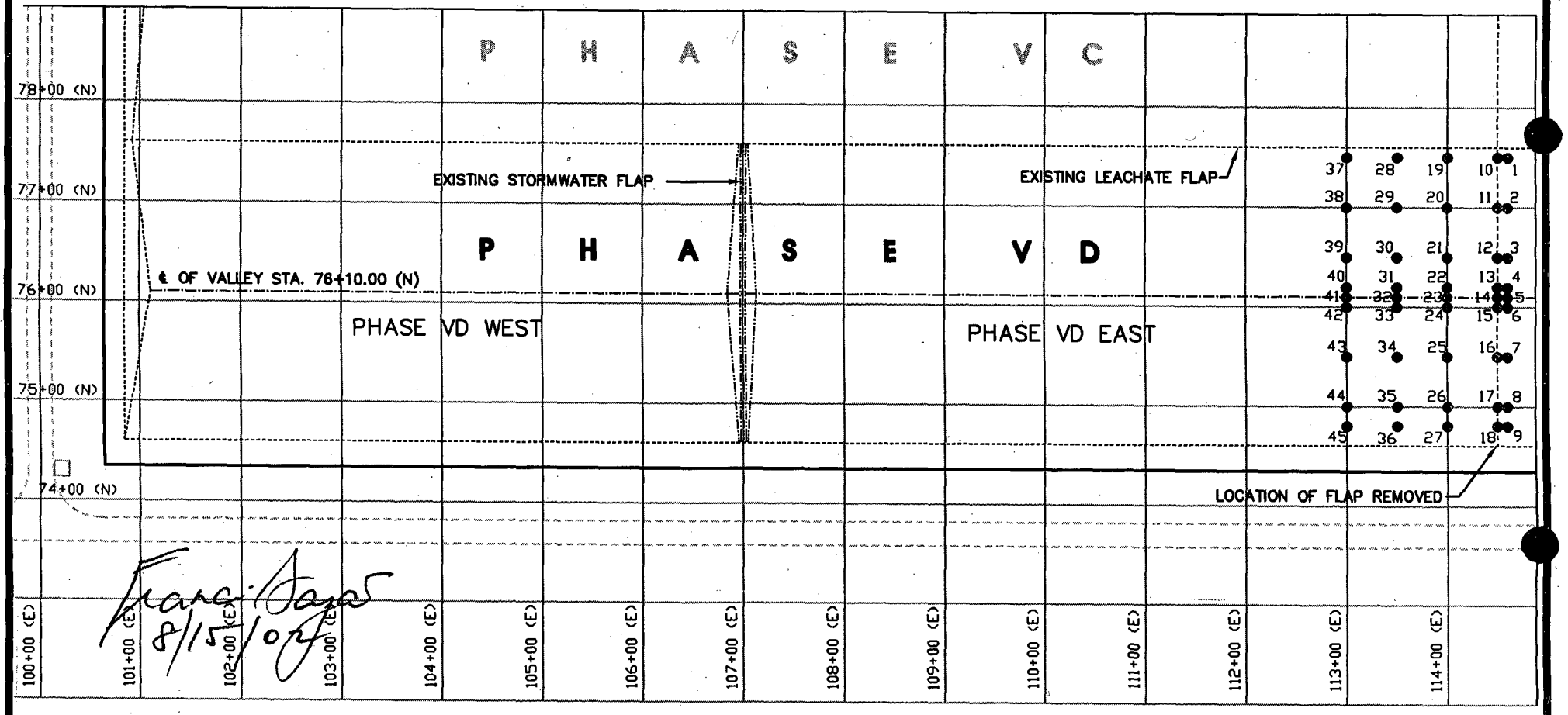
ENGLAND, THIMS & MILLER, INC.

Francis Dayao, P. E.
Project Engineer

cc: Greg Mathes
Chris Pearson
Neil Rushing
Julia Boesch

14775 ST. AUGUSTINE RD. • JACKSONVILLE, FL 32258 • TEL: (904) 642-8990 • FAX: (904) 646-9485

SCALE: 1 INCH = 150 FEET



Francis Jaap
8/15/02

LEGEND

● THICKNESS CHECK LOCATION

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS
SURVEYORS - LANDSCAPE ARCHITECTS
14775 St. Augustine Road
Jacksonville, Florida 32258
Certificate of Authorization No.: 2584
Phone No. (904) 642-8990
Fax No. (904) 646-9485

PHASE VD (EAST) - PROTECTIVE SAND LAYER THICKNESS VERIFICATION PLAN

FOR
TRAIL RIDGE LANDFILL, INC.

ETM. NO. E02-001
DATE: AUGUST 15, 2002
DRAWN BY: F.D.D
DRAWING NO: 1

Boesch, Julia

From: Boesch, Julia
Sent: Monday, April 29, 2002 2:34 PM
To: 'Francis Dayao'
Cc: Juanitta Clem; 'gmathes@wm.com'; 'nrushing@coj.net'; Nogas, Mary
Subject: RE: Trail Ridge Landfill - Incremental Side Slope Closure and Landfill Gas System Expansion

Dear Francis:

Your understanding is correct, the department does not object to your request for a time extension until June 29, 2002 to complete the incremental side slope closure.

Sincerely,
Julia Boesch
DEP

-----Original Message-----
From: Francis Dayao [mailto:DayaoF@etminc.com]
Sent: Monday, April 29, 2002 10:00 AM
To: Boesch, Julia
Cc: Juanitta Clem; 'gmathes@wm.com'; 'nrushing@coj.net'
Subject: Trail Ridge Landfill - Incremental Side Slope Closure and Landfill Gas System Expansion

Dear Julia:

Per our telephone conversation this morning, it is my understanding that the FDEP does not object to our request for time extensions due to weather delays as requested on February 7 and April 4, 2002 for the completion of the Incremental Side Slope Closure of Side Slope Units 1-3 (Partial), 4 and 21-23. The closure construction of the aforementioned Side Slope Units at Trail Ridge Landfill shall be completed by June 29, 2002, weather permitting. If the closure construction cannot be completed due to weather delays, the FDEP will be notified.

Your immediate response to this e-mail indicating that the FDEP does not object to the June 29, 2002 completion schedule for the Incremental Side Slope Closure will be greatly appreciated.

If you have any questions, please give me a call.

Francis Dayao, P. E.
England, Thims & Miller, Inc.
14775 St. Augustine Road
Jacksonville, FL 32258

England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS

Principals
James E. England, P.E., CEO
Douglas C. Miller, P.E., President
N. Hugh Mathews, P.E., Exec., V.P.
Joseph A. Tarver, Exec., V.P.
Juanitta Bader Clem, P.E., V.P.
Scott A. Wild, P.E., PSM, V.P.
Samuel R. Crissinger, CPA, V.P.
Robert A. Mizell, Jr., P.E., V.P.
Bryan R. Stewart, V.P.

April 11, 2002

Ms. Mary Nogas, P. E.
Solid Waste Section
Department of Environmental Protection
7825 Baymeadows Way, Suite B-200
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill – Phase VC (West)
FDEP Permit Number 0013493-002-SC
ET&M Project No. E02-001

Dear Ms. Nogas:

In accordance with the letter from the Department dated September 20, 2001, Trail Ridge Landfill, Inc. has removed the silt and other soil deposits on the surface of the protective sand layer within the western half of Phase VC. Further, England, Thims & Miller, Inc. has conducted thickness checks on the protective sand layer in the silt removal areas to ensure the 24" minimum thickness of the sand layer (see attached results). Photographs of the area where silt deposits have been removed and the quality assurance monitor performing thickness checks on the protective sand layer are attached for your reference. By this letter, we hereby certify that the work has been completed and hereby request that Trail Ridge Landfill, Inc. be authorized to accept waste immediately in the western half of Phase VC.

If you have any questions, please feel free to give me a call.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Francis Dayao, P.E.
Project Engineer

Attachment: Thickness Verification Table
Thickness Verification Plan
Photographs

cc: Greg Mathes
Chris Pearson

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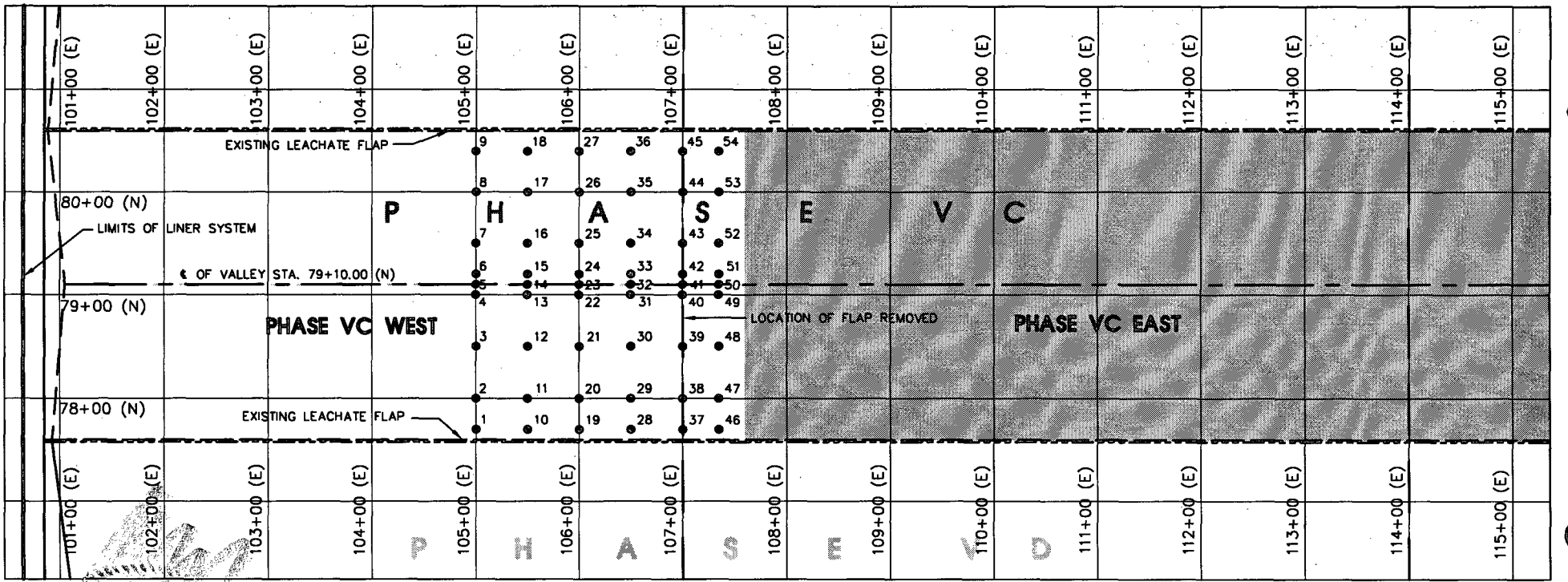
SCALE: 1 INCH = 150 FEET



LEGEND

- ● THICKNESS CHECK LOCATION
- EXISTING OPERATIONAL AREA

Frank Jones 4/10/02

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS
SURVEYORS - LANDSCAPE ARCHITECTS
14775 St. Augustine Road
Jacksonville, Florida 32258
Certificate of Authorization No.:2584
Phone No. (904) 642-8990
Fax No. (904) 646-9485

PHASE VC (WEST) – PROTECTIVE SAND LAYER THICKNESS VERIFICATION PLAN

FOR
TRAIL RIDGE LANDFILL, INC.

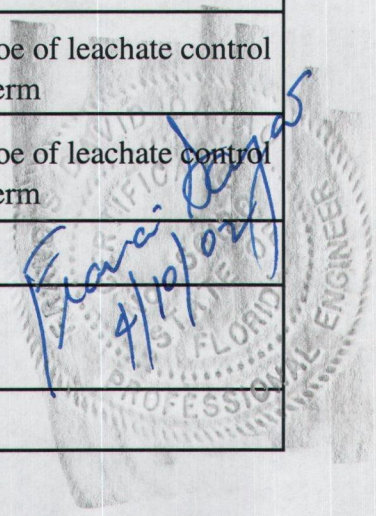
ETM. NO.	E02-001
DATE:	APRIL 10, 2002
DRAWN BY:	F.D.D
DRAWING NO:	1

TRAIL RIDGE LANDFILL
PHASE VC WEST
PROTECTIVE SAND LAYER THICKNESS

LOCATION NO.	NORTHING STATION	EASTING STATION	THICKNESS	COMMENTS
1	105+00 E	77+70 N	25"	Toe of leachate control berm
2	105+00 E	78+00 N	24"	
3	105+00 E	78+50 N	26"	
4	105+00 E	79+00 N	28"	
5	105+00 E	79+10 N	24"	Leachate collection trench
6	105+00 E	79+20 N	28"	
7	105+00 E	79+50 N	24 ½ "	
8	105+00 E	80+00 N	24"	
9	105+00 E	80+40 N	25"	Toe of leachate control berm
10	105+50 E	77+70 N	26"	Toe of leachate control berm
11	105+50 E	78+00 N	25"	
12	105+50 E	78+50 N	25 ½"	
13	105+50 E	79+00 N	26"	
14	105+50 E	79+10 N	24"	Leachate collection trench
15	105+50 E	79+20 N	26"	
16	105+50 E	79+50 N	24"	
17	105+50 E	80+00 N	24"	
18	105+50 E	80+40 N	25"	Toe of leachate control berm
19	106+00 E	77+70 N	26"	Toe of leachate control berm
20	106+00 E	78+00 N	24"	

TRAIL RIDGE LANDFILL
PHASE VC WEST
PROTECTIVE SAND LAYER THICKNESS

LOCATION NO.	NORTHING STATION	EASTING STATION	THICKNESS	COMMENTS
21	106+00 E	78+50 N	26 ½"	
22	106+00 E	79+00 N	30"	
23	106+00 E	79+10 N	34"	Leachate collection trench
24	106+00 E	79+20 N	28"	
25	106+00 E	79+50 N	24"	
26	106+00 E	80+00 N	24"	
27	106+00 E	80+40 N	24"	Toe of leachate control berm
28	106+50 E	77+70 N	24"	Toe of leachate control berm
29	106+50 E	78+00 N	26"	
30	106+50 E	78+50 N	26"	
31	106+50 E	79+00 N	31"	
32	106+50 E	79+10 N	27 ½"	Leachate collection trench
33	106+50 E	79+20 N	30"	
34	106+50 E	79+50 N	28 ½"	
35	106+50 E	80+00 N	28"	
36	106+50 E	80+40 N	26"	Toe of leachate control berm
37	107+00 E	77+70 N	25"	Toe of leachate control berm
38	107+00 E	78+00 N	27"	
39	107+00 E	78+50 N	24 ½"	
40	107+00 E	79+00 N	31"	



TRAIL RIDGE LANDFILL
PHASE VC WEST
PROTECTIVE SAND LAYER THICKNESS

LOCATION NO.	NORTHING STATION	EASTING STATION	THICKNESS	COMMENTS
41	107+00 E	79+10 N	28"	
42	107+00 E	79+20 N	32"	Leachate collection trench
43	107+00 E	79+50 N	25"	
44	107+00 E	80+00 N	24"	
45	107+00 E	80+40 N	31"	Toe of leachate control berm
46	107+35 E	77+70 N	24"	Toe of leachate control berm
47	107+35 E	78+00 N	24"	
48	107+35 E	78+50 N	24"	
49	107+35 E	79+00 N	30"	
50	107+35 E	79+10 N	29"	Leachate collection trench
51	107+35 E	79+20 N	36"	
52	107+35 E	79+50 N	26"	
53	107+35 E	80+00 N	24"	
54	107+35 E	80+40 N	24"	Toe of leachate control berm

Note: England, Thims & Miller, Inc. Quality Assurance Monitor performed thickness checks only in the area of the silt removal from Sta.105+00 E to 107+35 E.

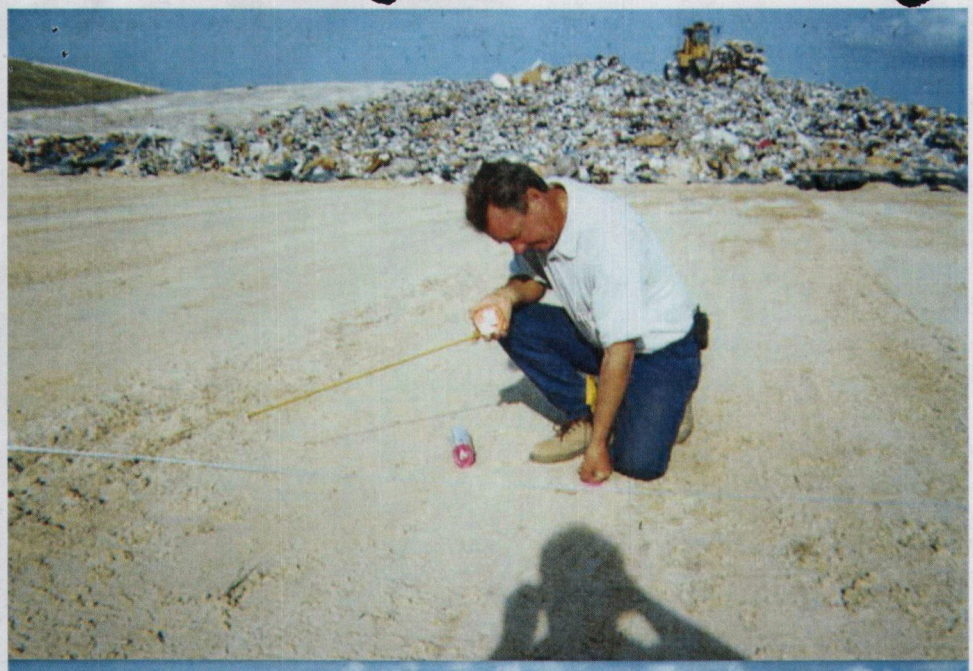
Francis Long 4/10/02

Date of Photo: April 9, 2002
Taken by: Francis Dayao
Phase VC (West) –
View looking northeast
after silt removal.

Date of Photo: April 9, 2002
Taken by: Francis Dayao
Phase VC (West) –
View looking south
after silt removal.

Date of Photo: April 9, 2002
Taken by: Francis Dayao
Phase VC (West) –
View looking east/southeast
after silt removal.

Francis Dayao
4/10/02



Date of Photo: April 9, 2002
Taken by: Francis Dayao
William Davidson
(ETM QA Monitor)
performing thickness checks on the protective sand layer.

Date of Photo: April 9, 2002
Taken by: Francis Dayao
William Davidson
(ETM QA Monitor)
performing thickness checks using a 3 ft. probe.

Date of Photo: April 9, 2002
Taken by: Francis Dayao
The probe is measured to determine the thickness of the protective sand layer.

Francis Dayao
4/10/02

England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS

Principals
James E. England, P.E., CEO
Douglas C. Miller, P.E., President
N. Hugh Mathews, P.E., Exec., V.P.
Joseph A. Tarver, Exec., V.P.
Juanitta Bader Clem, P.E., V.P.
Scott A. Wild, P.E., PSM, V.P.
Samuel R. Crissinger, CPA, V.P.
Robert A. Mizell, Jr., P.E., V.P.
Bryan R. Stewart, V.P.

April 4, 2002

Ms. Mary C. Nogas, P. E.
Solid Waste Section
Northeast District
Department of Environmental Protection
7825 Baymeadows Way, Suite B-200
Jacksonville, Florida 32256

'02 APR 5 PM 3 42
STATE OF FLORIDA
DEP - NE DISTRICT
JACKSONVILLE

Reference: Trail Ridge Landfill
Incremental Side Slope Closure
FDEP Permit No. 0013493-002-SC
ET&M Project No. E00-117-04

Dear Ms. Nogas:

On behalf of Trail Ridge Landfill, Inc., we hereby request a time extension for completion of the incremental closure (Side Slope Units 1-4 (partial) and 21-23) at the referenced facility. This extension is necessary due to rain delays during the month of March. Attached is a letter from the Contractor regarding his rain delays. As you can see, the Contractor has been delayed 4 working days during the month of March. According to facility records, the site has experienced a total of 4.26 inches of rainfall during the month of March and the normal rainfall is 3.77 inches. Based upon these rain delays, we request an extension of 4 days from June 25 to June 29, 2002.

Should you have any questions regarding this extension, please give me a call.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Francis Dayao, P. E.
Project Engineer

Attachment

cc: Greg Mathes
Chris Pearson
Neil Rushing
Jeff Marshall

14775 ST. AUGUSTINE RD. • JACKSONVILLE, FL 32258 • TEL: (904) 642-8990 • FAX: (904) 646-9485

R.B. Baker Construction, Inc.

100 Morgan Industrial Blvd., Garden City, GA 31408
Tel: (912) 964-6513 Fax: (912) 964-6531

Weather Delay Notice

Submitted To:	**England, Thims, and Miller**
Project Name:	**Trail Ridge Landfill Incremental Closure and Gas Expansion**
RB Baker Project Number:	**01-022**
Owner's Project Number:	**E00-117-01**
Day(s) of:	**March 1, 2002 Thru March 31, 2002**
Date:	**April 1, 2002**
Author:	**Jeff Marshall**
Copies to:	**Juanitta Clem, Greg Mathes, Bill Davidson, John Solich, Project File**

R.B. Baker Construction intends to stay focused on this project and minimize any weather impacts to the schedule, however, during the above referenced period, weather adversely affected our ability to work follows:

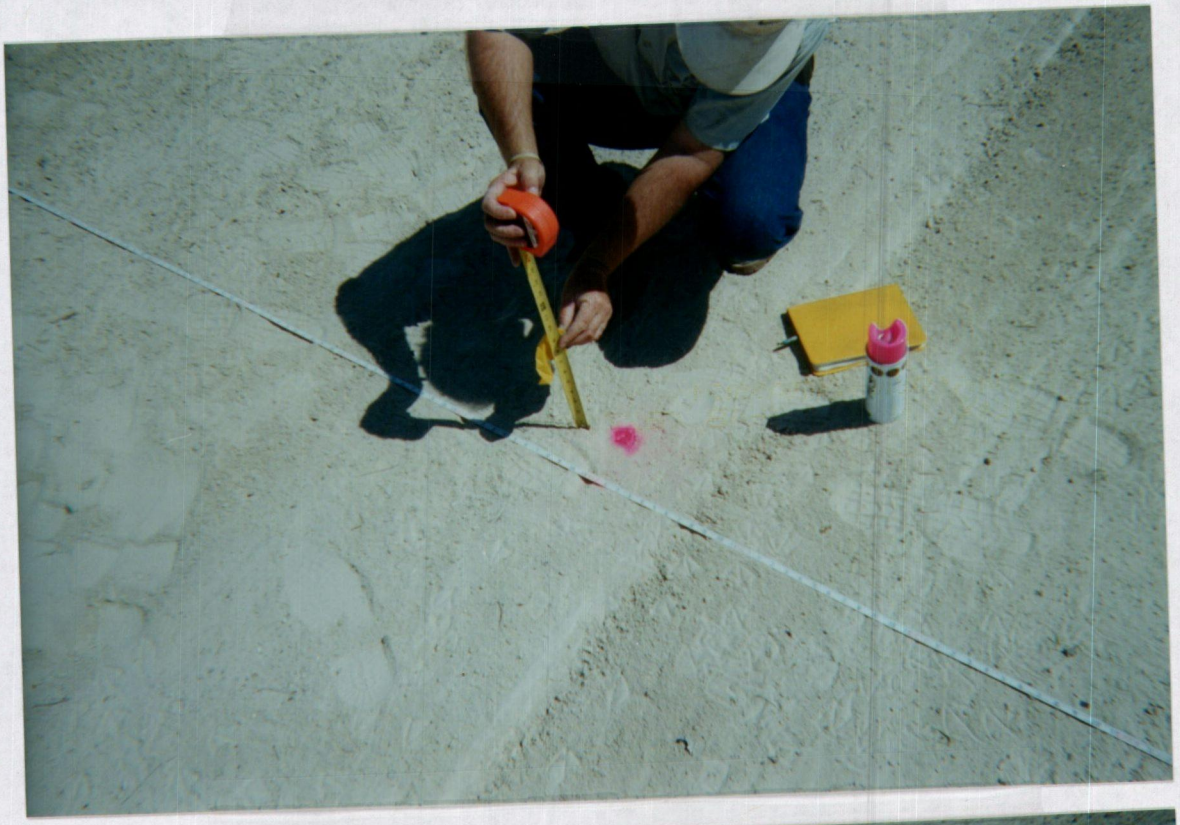
Our ability to place, grade, and compact the clay has been affected due to the site receiving 4.26 inches of rainfall in the above stated month. We have been impacted six (6) days. The average number of days of rainfall in excess of 0.5 inches for March is two (2) days. Therefore, we are entitled a time extension of four days (4) for the construction schedule per the specification.

Weather is beyond our control, therefore, we reserve the right to negotiate additional days should the cumulative effect of weather delays make extra time necessary. Weather memos are produced as part of the project record.

We appreciate the opportunity to serve your site construction needs. Please feel free to call with any questions.

Sincerely,
R.B. Baker Construction Inc.

Jeff Marshall
Project Manager



England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS

Principals
James E. England, P.E., CEO
Douglas C. Miller, P.E., President
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Joseph A. Tarver, Exec., V.P.
Juanitta Bader Clem, P.E., V.P.
Scott A. Wild, P.E., PSM, V.P.
Samuel R. Crissinger, CPA, V.P.
Robert A. Mizell, Jr., P.E., V.P.
Bryan R. Stewart, V.P.

March 19, 2002

Ms. Julia Boesch, Engineer IV
Solid Waste Section
Department of Environmental Protection
7825 Baymeadows Way, Suite B-200
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill – Phase VC East
FDEP Permit Number 0013493-002-SC
ET&M Project No. E02-001

Dear Julia:

Per your request, attached herewith are photographs of Phase VC East at Trail Ridge Landfill after the silt deposits have been removed and a plan drawing showing the location of the thickness checks.

If you have any questions, please feel free to give me a call.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

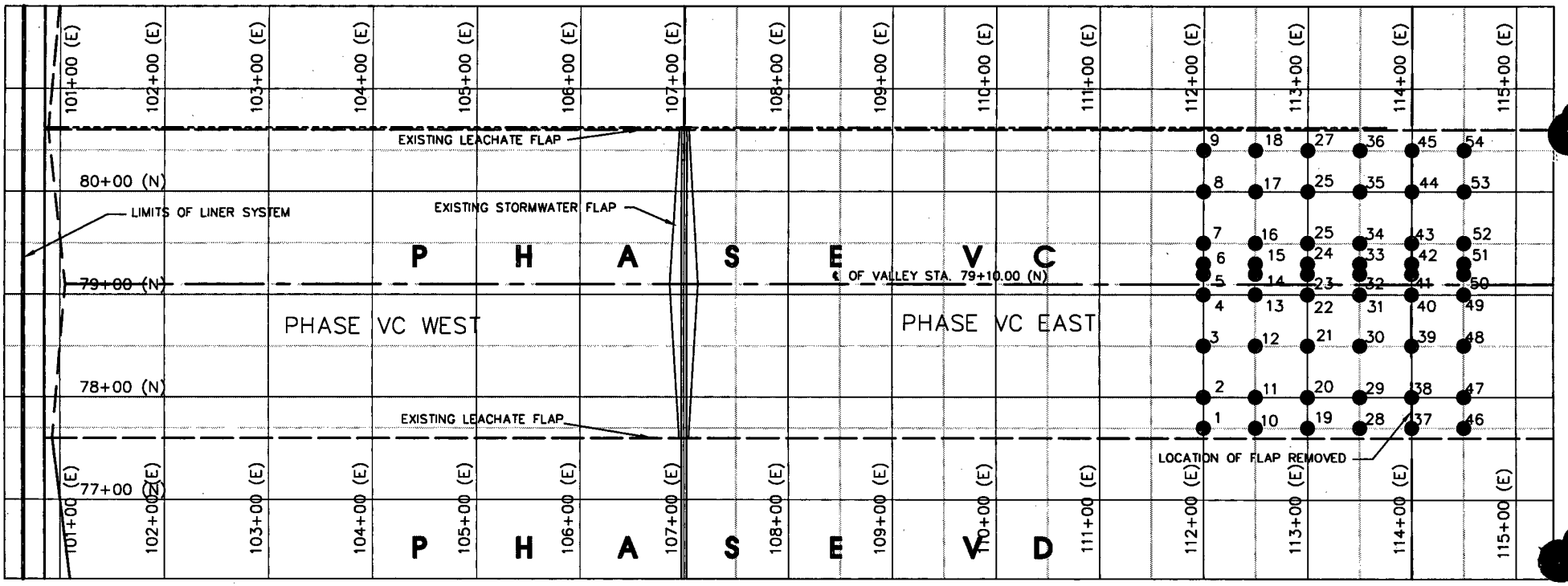
Francis Dayao, P. E.

Attachment: Thickness Checks Location Drawing
Photographs – Phase VC East

cc: Greg Mathes
Chris Pearson
Neil Rushing

14775 ST. AUGUSTINE RD. • JACKSONVILLE, FL 32258 • TEL: (904) 642-8990 • FAX: (904) 646-9485

SCALE: 1 INCH = 150 FEET



LEGEND ● THICKNESS CHECK LOCATION

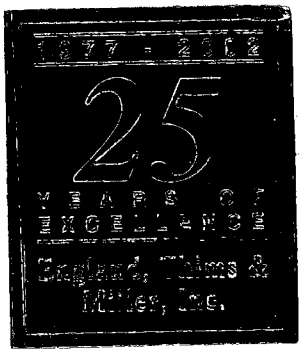
England-Thims & Miller, Inc.
ENGINEERS - PLANNERS
SURVEYORS - LANDSCAPE ARCHITECTS
14775 St. Augustine Road
Jacksonville, Florida 32258
Certificate of Authorization No.:2584
Phone No. (904) 642-8990
Fax No. (904) 646-9485

PHASE VC EAST - SAND LAYER THICKNESS CHECK LOCATION

THICKNESS CHECKS
FOR
TRAIL RIDGE LANDFILL, INC.

ETM. NO.	E02-001
DATE:	MARCH 19, 2002
DRAWN BY:	F.D.D
DRAWING NO:	1

England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS



March 18, 2002

Ms. Mary Nogas, P. E.
Solid Waste Section
Department of Environmental Protection
7825 Baymeadows Way, Suite B-200
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill – Phase VC East
FDEP Permit Number 0013493-002-SC
ET&M Project No. E02-001

In accordance with the letter from the Department dated September 20, 2001, Trail Ridge Landfill, Inc. has removed the silt and other soil deposits on the surface of the protective sand layer within the eastern half of Phase VC. Further, England, Thims & Miller, Inc. has conducted thickness checks on the protective sand layer in the silt removal areas to ensure the 24" minimum thickness of the sand layer (see attached results). By this letter, we hereby certify that the work has been completed and hereby request that Trail Ridge Landfill, Inc. be authorized to accept waste immediately in the eastern half of Phase VC.

If you have any questions, please feel free to give me a call.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

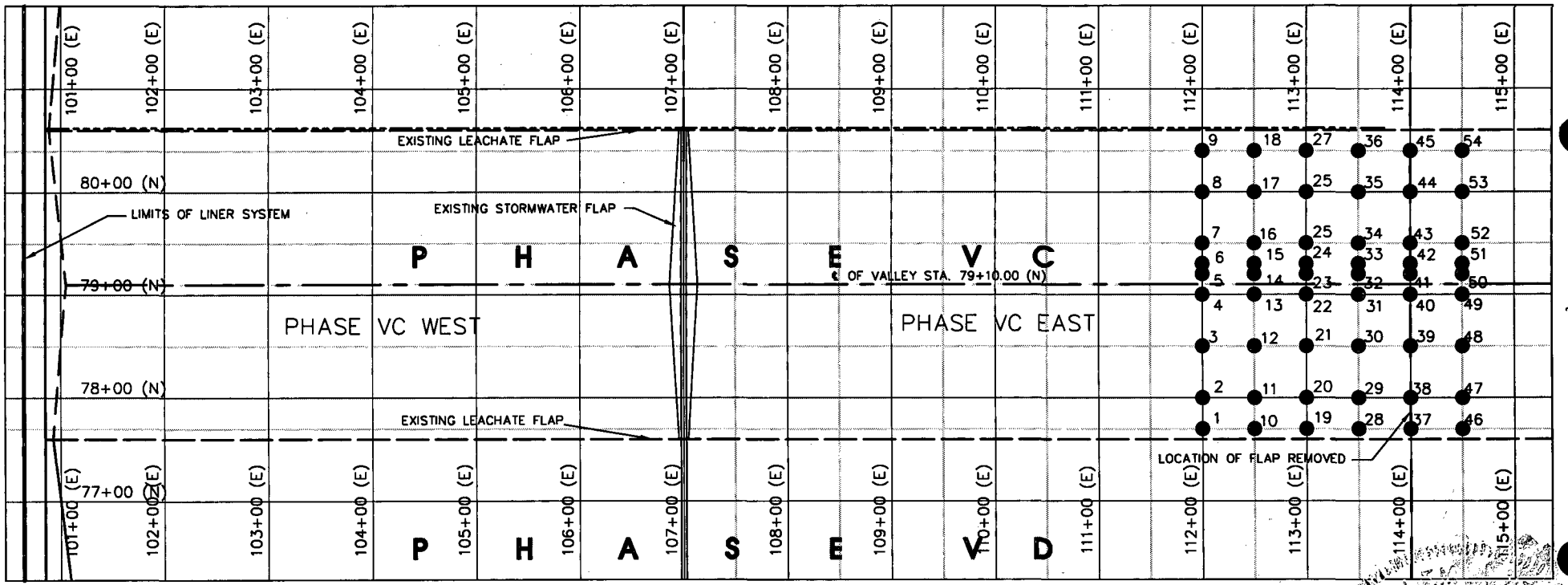
Juanitta Bader Clem

Juanitta Bader Clem, P. E.
Vice President

Attachment: Thickness Checks

cc: Greg Mathes
Chris Pearson
Neil Rushing

SCALE: 1 INCH = 150 FEET



LEGEND ● THICKNESS CHECK LOCATION

3/20/02

G:\LANDFILL\TRAIL\SELECTWASTE\02-001\Phase VC\x-liner.dwg, 03/20/2002 12:42:29 PM, ClemJ

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS
SURVEYORS - LANDSCAPE ARCHITECTS
14775 St. Augustine Road
Jacksonville, Florida 32258
Certificate of Authorization No.:2584
Phone No. (904) 642-8990
Fax No. (904) 646-9485

PHASE VC EAST – SAND LAYER THICKNESS CHECK LOCATION

THICKNESS CHECKS
FOR
TRAIL RIDGE LANDFILL, INC.

ETM. NO. E02-001
DATE: MARCH 19, 2002
DRAWN BY: F.D.D
DRAWING NO: 1

TRAIL RIDGE LANDFILL
PHASE VC EAST
PROTECTIVE SAND THICKNESS

LOCATION NO.	EASTING	NORTHING	THICKNESS	COMMENTS
1	112+00 E	77+70 N	24"	Toe Leachate Control Berm
2	112+00 E	78+00 N	25 ½"	
3	112+00 E	78+50 N	25"	
4	112+00 E	79+00 N	27 ½"	
5	112+00 E	79+10 N	26"	Leachate Collection Trench
6	112+00 E	79+20 N	27"	
7	112+00 E	79+50 N	24"	
8	112+00 E	80+00 N	25"	
9	112+00 E	80+40 N	24"	Toe Leachate Control Berm
10	112+50 E	77+70 N	24"	Toe Leachate Control Berm
11	112+50 E	78+00 N	25 ½"	
12	112+50 E	78+50 N	25 ½"	
13	112+50 E	79+00 N	28 ½"	
14	112+50 E	79+10 N	28 ½"	Leachate Collection Trench
15	112+50 E	79+20 N	27 ½"	
16	112+50 E	79+50 N	24"	
17	112+50 E	80+00 N	24"	
18	112+50 E	80+40 N	24 ½"	Toe Leachate Control Berm
19	113+00 E	77+70 N	24"	Toe Leachate Control Berm
20	113+00 E	78+00 N	24 ½"	

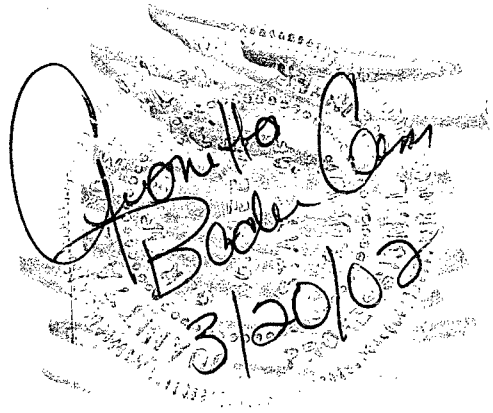
TRAIL RIDGE LANDFILL
PHASE VC EAST
PROTECTIVE SAND THICKNESS

LOCATION NO.	EASTING	NORTHING	THICKNESS	COMMENTS
21	113+00 E	78+50 N	25"	
22	113+00 E	79+00 N	31 ½"	
23	113+00 E	79+10 N	28"	Leachate Collection Trench
24	113+00 E	79+20 N	27 ½"	
25	113+00 E	79+50 N	24"	
26	113+00 E	80+00 N	24"	
27	113+00 E	80+40 N	24"	Toe Leachate Control Berm
28	113+50 E	77+70 N	24"	Toe Leachate Control Berm
29	113+50 E	78+00 N	25 ½"	
30	113+50 E	78+50 N	26 ½"	
31	113+50 E	79+00 N	27"	
32	113+50 E	79+10 N	26"	Leachate Collection Trench
33	113+50 E	79+20 N	28"	
34	113+50 E	79+50 N	25"	
35	113+50 E	80+00 N	24"	
36	113+50 E	80+40 N	26"	Toe Leachate Control Berm
37	114+00 E	77+70 N	24"	Toe Leachate Control Berm
38	114+00 E	78+00 N	24"	
39	114+00 E	78+50 N	24"	
40	114+00 E	79+00 N	28 ½"	
41	114+00 E	79+10 N	27 ½"	Leachate Collection Trench

TRAIL RIDGE LANDFILL
PHASE VC EAST
PROTECTIVE SAND THICKNESS

LOCATION NO.	EASTING	NORTHING	THICKNESS	COMMENTS
42	114+00 E	79+20 N	29 ½"	
43	114+00 E	79+50 N	24"	
44	114+00 E	80+00 N	24 ½"	
45	114+00 E	80+40 N	24"	Toe Leachate Control Berm
46	114+50 E	77+70 N	24 ½"	Toe Leachate Control Berm
47	114+50 E	78+00 N	27"	
48	114+50 E	78+50 N	27 ½"	
49	114+50 E	79+00 N	36"	
50	114+50 E	79+10 N	34"	Leachate Collection Trench
51	114+50 E	79+20 N	36"	
52	114+50 E	79+50 N	27"	
53	114+50 E	80+00 N	25 ½"	
54	114+50 E	80+40 N	27"	Toe Leachate Control Berm

Note: Thickness checks were performed only in the area of the silt removal from Sta.112+00 E to 114+50 E within the eastern half of Phase VC.



England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS

Principals
James E. England, P.E., CEO
Douglas C. Miller, P.E., President
N. Hugh Mathews, P.E., Exec., V.P.
Joseph A. Tarver, Exec., V.P.
Juanitta Bader Clem, P.E., V.P.
Scott A. Wild, P.E., PSM, V.P.
Samuel R. Crissinger, CPA, V.P.
Robert A. Mizell, Jr., P.E., V.P.
Bryan R. Stewart, V.P.

March 18, 2002

Ms. Mary Nogas, P. E.
Solid Waste Section
Department of Environmental Protection
7825 Baymeadows Way, Suite B-200
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill – Phase VC East
FDEP Permit Number 0013493-002-SC
ET&M Project No. E02-001

In accordance with the letter from the Department dated September 20, 2001, Trail Ridge Landfill, Inc. has removed the silt and other soil deposits on the surface of the protective sand layer within the eastern half of Phase VC. Further, England, Thims & Miller, Inc. has conducted thickness checks on the protective sand layer in the silt removal areas to ensure the 24" minimum thickness of the sand layer (see attached results). By this letter, we hereby certify that the work has been completed and hereby request that Trail Ridge Landfill, Inc. be authorized to accept waste immediately in the eastern half of Phase VC.

If you have any questions, please feel free to give me a call.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Juanitta Bader Clem, P. E.
Vice President

Attachment: Thickness Checks

cc: Greg Mathes
Chris Pearson
Neil Rushing

14775 ST. AUGUSTINE RD. • JACKSONVILLE, FL 32258 • TEL: (904) 642-8990 • FAX: (904) 646-9485

TRAIL RIDGE LANDFILL
PHASE VC EAST
PROTECTIVE SAND THICKNESS

LOCATION NO.	EASTING	NORTHING	THICKNESS	COMMENTS
1	112+00 E	77+70 N	24"	Toe Leachate Control Berm
2	112+00 E	78+00 N	25 ½"	
3	112+00 E	78+50 N	25"	
4	112+00 E	79+00 N	27 ½"	
5	112+00 E	79+10 N	26"	Leachate Collection Trench
6	112+00 E	79+20 N	27"	
7	112+00 E	79+50 N	24"	
8	112+00 E	80+00 N	25"	
9	112+00 E	80+40 N	24"	Toe Leachate Control Berm
10	112+50 E	77+70 N	24"	Toe Leachate Control Berm
11	112+50 E	78+00 N	25 ½"	
12	112+50 E	78+50 N	25 ½"	
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14	112+50 E	79+10 N	28 ½"	Leachate Collection Trench
15	112+50 E	79+20 N	27 ½"	
16	112+50 E	79+50 N	24"	
17	112+50 E	80+00 N	24"	
18	112+50 E	80+40 N	24 ½"	Toe Leachate Control Berm
19	113+00 E	77+70 N	24"	Toe Leachate Control Berm
20	113+00 E	78+00 N	24 ½"	

TRAIL RIDGE LANDFILL
PHASE VC EAST
PROTECTIVE SAND THICKNESS

LOCATION NO.	EASTING	NORTHING	THICKNESS	COMMENTS
21	113+00 E	78+50 N	25"	
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25	113+00 E	79+50 N	24"	
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33	113+50 E	79+20 N	28"	
34	113+50 E	79+50 N	25"	
35	113+50 E	80+00 N	24"	
36	113+50 E	80+40 N	26"	Toe Leachate Control Berm
37	114+00 E	77+70 N	24"	Toe Leachate Control Berm
38	114+00 E	78+00 N	24"	
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TRAIL RIDGE LANDFILL
PHASE VC EAST
PROTECTIVE SAND THICKNESS

LOCATION NO.	EASTING	NORTHING	THICKNESS	COMMENTS
42	114+00 E	79+20 N	29 ½"	
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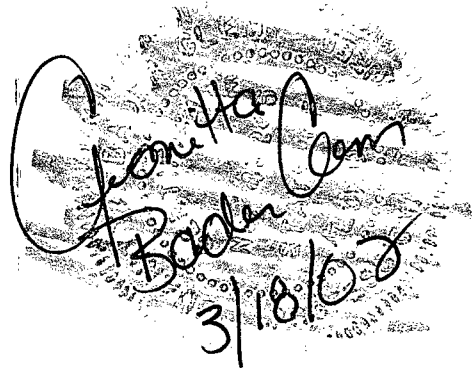

England-Thims & Miller, Inc.

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Robert A. Mizell, Jr., P.E., V.P.
Bryan R Stewart, V.P.

FAX TRANSMITTAL LETTER

To: MARY NOGAS

FROM: FRANCIS DAYAO **ATTN:** _____

FAX: _____ **PHONE:** _____ **DATE:** 3/18/02 **TIME:** 2:38

NUMBER OF PAGES (INCLUDING COVER SHEET): 5

RE: TRAIL RIDGE LANDFILL - PHASE V@ EAST

PROJECT NO.: 502-001

MESSAGE: PLEASE SEE ATTACHED LETTER & THICKNESS CHECK RESULTS FOR PHASE V@ EAST AT TRAIL RIDGE.

HARD COPIES WILL BE HAND-DELIVERED TO YOUR OFFICE THIS AFTERNOON.

IF YOU HAVE NOT RECEIVED THE TOTAL NUMBER OF PAGES NOTED ABOVE, HAVE DIFFICULTY READING THIS DOCUMENT, OR IF YOU HAVE ANY QUESTIONS OR COMMENTS, PLEASE CALL US IMMEDIATELY.

England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS

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March 18, 2002

Ms. Mary Nogas, P. E.
Solid Waste Section
Department of Environmental Protection
7825 Baymeadows Way, Suite B-200
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill – Phase VC East
FDEP Permit Number 0013493-002-SC
ET&M Project No. E02-001

In accordance with the letter from the Department dated September 20, 2001, Trail Ridge Landfill, Inc. has removed the silt and other soil deposits on the surface of the protective sand layer within the eastern half of Phase VC. Further, England, Thims & Miller, Inc. has conducted thickness checks on the protective sand layer in the silt removal areas to ensure the 24" minimum thickness of the sand layer (see attached results). By this letter, we hereby certify that the work has been completed and hereby request that Trail Ridge Landfill, Inc. be authorized to accept waste immediately in the eastern half of Phase VC.

If you have any questions, please feel free to give me a call.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Juanitta Bader Clem

Juanitta Bader Clem, P. E.
Vice President

Attachment: Thickness Checks

cc: Greg Mathes
Chris Pearson
Neil Rushing

TRAIL RIDGE LANDFILL
PHASE VC EAST
PROTECTIVE SAND THICKNESS

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PHASE VC EAST
PROTECTIVE SAND THICKNESS

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PHASE VC EAST
PROTECTIVE SAND THICKNESS

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Note: Thickness checks were performed only in the area of the silt removal from Sta.112+00 E to 114+50 E within the eastern half of Phase VC.

Tonitta Bader Cam
3/18/02

Golder Associates Inc.
8933 Western Way, Suite 12
Jacksonville, FL USA 32256
Telephone (904) 363-3430
Fax (904) 363-3445

Golder Associates

February 1, 2002

993-2632.1

Ms. Mary C. Nogas, P.E.
Florida Department of Environmental Protection
Northeast District
7825 Baymeadows Way
Suite B200
Jacksonville, Florida 32256-7590

RE: INSTALLATION OF REPLACEMENT WELL MWB-11I(R)
TRAIL RIDGE LANDFILL
FDEP PERMIT 0013493-002-SC

Dear Ms. Nogas:

On behalf of Trail Ridge Landfill, Inc. (Trail Ridge), Golder Associates Inc. (Golder) is pleased to present this letter report documenting the installation of monitoring well MW-11I(R) at the above-referenced facility. Monitoring well MW-11I(R) was installed to replace the existing well, in the attempt to address the consistently high turbidity levels encountered during previous sampling events. This letter report summarizes the justification for installation of the monitoring well and specific drilling and well construction techniques used.

Background

Of the wells monitored at the Trail Ridge Landfill, monitoring well MWB-11I has had the greatest number of exceedances of State Primary Drinking Water Standards (PDWS) lead, with one exceedence of the chromium standard in January 2000)[1] at the site. Over the last three sampling events, there appears to be a general decreasing trend in the concentration of total lead in MWB-11I and filtered samples for dissolved lead have all been reported as below the method detection limit. As noted in previous reports, there has been a high degree of field turbidity in monitoring well MWB-11I, with the suspended solids considered the most likely cause of the elevated lead concentrations. Attempts have been made to redevelop the well; however, high field turbidity (values consistently surpass 1,000 NTUs) and corresponding elevated metal detections continue. A review of the boring log for MWB-11I indicated that there is a thin silty clay layer that intersects the screened interval. This silty clay unit is considered the most likely source of the suspended sediment, resulting in turbid samples and elevated metal concentrations. Given the consistently elevated metals concentrations (lead in particular) and the limited success

[1] As noted in the last Biennial Review of Groundwater, Surface Water, and Leachate Data (Golder, December 21, 2000) several samples from the January 2000 sampling event had anomolously elevated concentrations (including background monitoring well MWB-2S) compared to data collected before and after that event and were suspected to be erratic values, likely the result of sampling or analytical error.

of the well development (total lead concentrations were reduced, but turbidity levels were still high), the replacement of MWB-11I was deemed the most logical next course of action.

Procedures

A replacement monitoring well (MWB-11IR) was installed in the MWB-11 well cluster on March 29, 2001. Drilling and monitoring well installation activites were performed by Huss Drilling, Inc (Huss) with oversight provided by Golder. The replacement well was located approximately 10 feet from the existing well, in the northwest direction. A boring/monitoring well installation log is attached to this report.

The replacement well was installed using a truck-mounted Brainard Kilman BK-66, mud rotary drill. Soil samples were collected and examined at 5-foot vertical intervals from 0 to 45 feet below ground surface (bgs) and continuous from 45 to 65 feet bgs, to characterize soil conditions and identify the approximate depth of the suspected source of the turbidity. The soil samples were retrieved using standard penetration test (SPT) procedures in accordance with ASTM Method D-1586, using split-spoon samplers during drilling activities.

Decontamination

All equipment, tools, and materials used in drilling, well installation, and well development were decontaminated prior to use. Decontamination activities were conducted prior to arrival at the Trail Ridge Landfill facility and upon completion of the installed well. All drill rods, drill bits, or other parts of the drilling equipment that could come in contact with the soil or groundwater were cleaned as outlined below:

- the equipment was thoroughly washed with laboratory detergent (Alconox) and water using a brush to remove any particulate matter or surface film;
- the equipment was thoroughly rinsed with tap water (steam cleaned), and;
- subsequent to the completion of site drilling and well installation activities, the decontamination fluids, debris and development water were scattered throughout the forested area to the immediate northeast.

Site Geology

Split spoon (standard penetration test or SPT) soil samples were collected on five-foot centers from 0 to 45 feet below ground surface (bgs) and continuously from 45 to 65 feet bgs, for the purpose of lithologic description. In general, the subsurface conditions encountered in the boring for MWB-11I(R) were similar to those noted in the boring log for MWB-11I. The boring/ monitoring well installation log attached to this report includes a more detailed description of the subsurface conditions encountered in the boring for MWB-11I(R).

Monitoring Well Installation

The monitoring well was installed such that the screened interval would be positioned above the top of the unit suspected of causing the turbidity problem. This unit had been previously encountered at between 55 to 56 feet bgs during the installation of MWB-11I and MWB-11D. It was described as a dense grey, silty clay and fine sand (SC). A unit similar to this description (and presumed to be the same) was encountered between 56.00 and 56.75 feet bgs during advancement of the boring for MWB-11I(R). Also, a soft sandy clay seam (less than 1-inch) was

encountered at approximately 54 feet bgs. This field information was used to determine the depth of the screen interval.

The monitoring well was constructed of 2-inch diameter, Schedule 40 PVC with threaded joints and a 5-foot length of 0.010-inch mill slotted screen. The screened interval was set from 47 to 52 feet bgs. A 6-inch long sump (sediment trap) extended the bottom of the well to a depth of 52.5 feet bgs. Approximately ten feet of overdrill (by the 2-inch diameter pilot hole) was backfilled with bentonite pellets to 55 feet bgs. The intent was to seal off the turbidity causing unit (at 56 to 56.75 feet). A 20/30 grade silica sand filter pack was positioned to approximately two feet above the top of screen interval, followed by a 2-foot thick 30/65 grade fine sand seal. A cement/bentonite grout mixture was placed in the remaining annular space to just below ground surface. The well was then completed above-grade with a locking steel protective cover set into concrete 2-foot by 2-foot anti-percolation pads and two (2) protective bollards placed to the west side of the pad (facing the road). The top of PVC casing extended approximately 2.5 feet above ground surface, and the top of the locking steel protective cover set approximately 6 inches above the top of the PVC casing. 20/30 grade silica sand was placed between the locking steel protective cover and the 2-inch diameter well riser pipe. Holes were drilled into the steel protective cover (just above the top of the concrete pad) to allow for drainage of any water that might accumulate inside the cover during development or future sampling events.

Well Development

Following installation, monitoring well MW-11I(R) was developed by pumping to reduce suspended sediments in the discharge water. Well development was performed to establish good hydraulic connection between the monitoring well and the lithologic formation into which the well was installed. Development consisted of lowering a 1-inch diameter PVC pipe to the bottom of the well, connecting the pipe to a surface-mounted centrifugal pump, and systematically surging (rapidly raising and lowering the PVC pipe) and pumping. The intake (tip of the 1-inch diameter PVC pipe) was raised and lowered in order to ensure that the entire screened interval was developed. A total of approximately 390 gallons of water were removed from the well over a 1-hour period, after the in-situ water quality parameters (pH, conductivity, and temperature) stabilized. Development water was water discharged to the ground surface in the vicinity of the well.

Recommendations

Both monitoring wells MWB-11I and MWB-11I(R) will be sampled in the first two scheduled sampling events following the installation of MW-11I(R) (July 2001 and January 2002). Based on the results of the sampling, a recommendation will be made in the report on the January 2002 sampling event as to which well should continue to be used as part of the long-term groundwater monitoring program at the site.

Should you have any questions or comments regarding this letter, please call Greg Mathes at 289-9100 or Ken Karably at 363-3430.

Very truly yours,

GOLDER ASSOCIATES INC.

Richard W. Poff
Staff Hydrogeologist

Kenneth B. Karably, P.G.
Principal

Attachment: Boring/Monitoring Well Installation Log

cc: Mr. Greg Mathes

g:\projects\993-2632.1\well installation 2001\MWB-11IR report.doc

Well No.: MWB-11I(R)

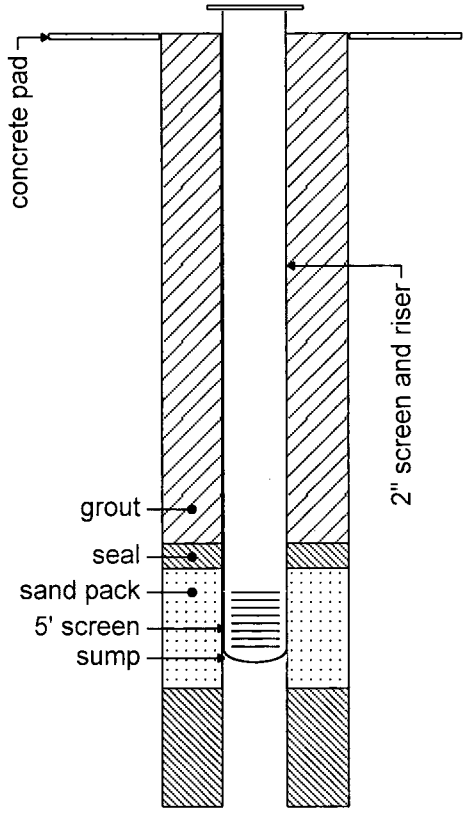
Project No: 993-2632-1
Project: WMI/Trail Ridge Reporting 2001/02

Started: 3/29/01
Completed: 3/30/01

Weather: Overcast 67F
Geologist: Richard Poff

Golder Associates

Depth	Soil Symbol	Description	Blows/Foot	Recovered/ Attempted
-3		Ground Surface		
-1		Light grey to dark brown, medium sand (SP)		
1				
3				
5			18	22/24
7				
9				
11			33	18/24
13				
15				
17			28	10/24
19				
21			20	9/24
23				
25		Very dark brown, medium to fine silty sand (SM)		
27			11	19/24
29				
31		Brown / grey, soft sandy clay (SC)	11	22/24
33				
35				
37		Brown to grey, medium sand (SP)	72	16/24
39				
41			47	8/21
43				
45				
47			55	12/24
49			56	10/24
51			80:11"	12/24
53			95:9"	14/24
55			41	16/24
57		White silty sand	80	12/24
59		Brown, fine to medium sand, trace smooth quartz (SP)	50:6"	8/24
61			50:6"	8/24
63			84:11"	12/24
65			85:9"	10/24
67				



Notes

Drilling Company: Huss Drilling Inc.
Drill Rig / Driller: BK-66 truck mount/ Tony

Drilling Method: Mud Rotary

Well Casing - diam./length: 2"/49.5'
Casing Type: Scd 40 PVC

Well Screen - diam./length: 2"/5'
Screen Type: Scd 40 PVC
Slot Size: .01 inch

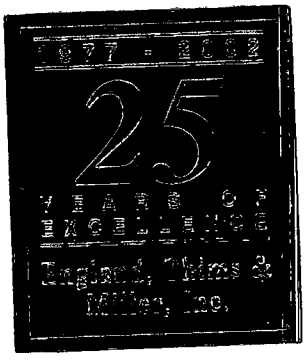
Grout Quantity/Type: (4.5) 96 lb bags Portland cement
Installation Method: gravity pour

Bentonite Seal Type: 30/65 fine sand seal

Filter Pack Type: 20/30 silica sand
Installation Method: gravity pour
Filter Pack Quantity: (11.5) 50 lb bags

Development: ~360 gallons

England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS



February 7, 2002

Ms. Mary C. Nogas, P.E.
Waste Management Section
Northeast District
Department of Environmental Protection
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill
Incremental Side Slope Closure
FDEP Permit No. 0013493-002-SC
ET&M No. E00-117-4

Dear Ms. Nogas:

On behalf of Trail Ridge Landfill, Inc., we hereby request a time extension for completion of the incremental closure (Side Slope Units 1-4 (partial) and 21-23) at the referenced facility. This extension is necessary due to rain delays during the month of January. Attached is a letter from the Contractor regarding his rain delays. As you can see, the Contractor has been delayed 17 working days during the month of January. According to facility records, the site has experienced a total of 6.19 inches of rainfall during the month of January and the normal rainfall is 3.52 inches. Based upon these rain delays, we request an extension of 17 days from June 5 to June 25.

Should you have any questions regarding this extension, please give me a call.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Juanitta Bader Clem

Juanitta Bader Clem, P.E.
Vice President

Attachment

cc: Greg Mathes
Chris Pearson
Jeff Marshall

14775 ST. AUGUSTINE RD. • JACKSONVILLE, FL 32258 • TEL: (904) 642-8990 • FAX: (904) 646-9485

R.B. Baker Construction, Inc.

100 Morgan Industrial Blvd., Garden City, GA 31408
Tel: (912) 964-6513 Fax: (912) 964-6531

Weather Delay Notice

Submitted To:	**England, Thims, and Miller**
Project Name:	**Trail Ridge Landfill Incremental Closure and Gas Expansion**
RB Baker Project Number:	**01-022**
Owner's Project Number:	**E00-117-01**
Day(s) of:	**January 1, 2002 Thru January 31, 2002**
Date:	**February 1, 2002**
Author:	**Jeff Marshall**
Copies to:	**Juanitta Clem, Greg Mathes, Bill Davidson, John Solich, Project File**

R.B. Baker Construction intends to stay focused on this project and minimize any weather impacts to the schedule, however, during the above referenced period, weather adversely affected our ability to work follows:

Our ability to place, grade, and compact the sub-base for clay placement has been affected due to the site receiving 6.19 inches of rainfall in the above stated month. We have been impacted nineteen (19) days. The average number of days of rainfall in excess of 0.5 inches for January is two (2) days. Therefore, we are entitled a time extension of seventeen days (17) for the construction schedule per the specification.

Weather is beyond our control, therefore, we reserve the right to negotiate additional days should the cumulative effect of weather delays make extra time necessary. Weather memos are produced as part of the project record.

We appreciate the opportunity to serve your site construction needs. Please feel free to call with any questions.

Sincerely,
R.B. Baker Construction Inc.

Jeff Marshall
Project Manager

England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS

Principals
James E England P.E., CEO
Douglas C Miller P.E., President
N Hugh Mathews, P.E., Exec. V P
Joseph A. Tarver, Exec., V P
Juanitta Bader Clem, P.E. V P
Scott A Wild P.E. PSM V P
Samuel R Crissinger, CPA, V P
Robert A Mizell, Jr P.E. V P
Bryan R Stewart, V P

February 7, 2002

Ms. Mary C. Nogas, P.E.
Waste Management Section
Northeast District
Department of Environmental Protection
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill
Incremental Side Slope Closure
FDEP Permit No. 0013493-002-SC
ET&M No. E00-117-4

Dear Ms. Nogas:

On behalf of Trail Ridge Landfill, Inc., we hereby request a time extension for completion of the incremental closure (Side Slope Units 1-4 (partial) and 21-23) at the referenced facility. This extension is necessary due to rain delays during the month of January. Attached is a letter from the Contractor regarding his rain delays. As you can see, the Contractor has been delayed 17 working days during the month of January. According to facility records, the site has experienced a total of 6.19 inches of rainfall during the month of January and the normal rainfall is 3.52 inches. Based upon these rain delays, we request an extension of 17 days from June 5 to June 25.

Should you have any questions regarding this extension, please give me a call.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Juanitta Bader Clem

Juanitta Bader Clem, P.E.
Vice President

Attachment

cc: Greg Mathes
Chris Pearson
Jeff Marshall

England-Thims & Miller, Inc.
ENGINEERS • PLANNERS • SURVEYORS • LANDSCAPE ARCHITECTS

November 7, 2001

Principals
James E. England, P.E., C.E.O.
Douglas C. Miller, P.E., President
N. Hugh Mathews, P.E., Exec., V.P.
Joseph A. Tarver, Exec., V.P.
Juanitta Bader Clem, P.E., V.P.
Scott A. Wild, P.E., P.S.M., V.P.

Ms. Mary C. Nogas, P.E.
Waste Management Section
Department of Environmental Protection
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256

Reference: Trail Ridge Landfill
Incremental Side Slope Closure
FDEP Permit No. 0013493-002-SC
ET&M No. E00-117-4

Dear Ms. Nogas:

By this letter and on behalf of Trail Ridge Landfill, Inc., we hereby notify the Department that the closure construction of Closure Phase 2 (see Drawing No. 14 of the approved Permit Drawings), as required by Specific Condition 47 a. of the referenced permit, will begin on November 12, 2001. The parties involved in the construction are as follows:

Construction Contractor - R. B. Baker Construction Inc.
General Quality Assurance Engineer - Juanitta Bader Clem, P.E.
Soils Quality Assurance Engineer - James Horton, P.E.
General/Soils Quality Control Monitor - William Davidson

Please see the attached copy of the Quality Assurance/Quality Control (QA/QC) Plan for the project. All clarifications to the plan from the Department approved plan are in strike-out format for deletions and underlined for additions. As you will see upon review, the clarifications will simplify the implementation of the plan.

As in the previous closure construction, the field density of the clay layer will be established by the Soils QA Engineer based upon test strip results and will be determined by Standard Proctor Density (ASTM D-698). In no case will the field density be less than 80% of Standard Proctor Density. Thus, the field density will be established based upon the clay material to be used in this project.

If you have any questions regarding the construction or QA/QC Plan, please feel free to give me a call.

Sincerely,
ENGLAND, THIMS & MILLER, INC.

Juanitta Bader Clem, P.E.
Vice President

cc: Greg Mathes
Chris Pearson
Jim Horton

14775 ST. AUGUSTINE RD. • JACKSONVILLE, FL 32258 • TEL: (904) 642-8990 • FAX: (904) 646-9485

TRAIL RIDGE LANDFILL
INCREMENTAL SIDE SLOPE CLOSURE
QUALITY ASSURANCE/QUALITY CONTROL PLAN

This plan addresses the quality assurance and quality control (QA/QC) for the incremental closure (close-as-you-go) of Trail Ridge Landfill. This program delineates the quality procedures and standards for the construction. This plan includes the closure of the side slopes only (including the reconstruction of final cover on side slopes). The top area will be the final closure for which a closure permit will be obtained, prior to final closure construction.

In the context of this plan, quality assurance and quality control are defined as follows:

Quality Assurance - A planned and systematic pattern of all means and actions designed to provide adequate confidence that items or services meet contractual and regulatory requirements and will perform satisfactorily in service.

Quality Control - Those actions which provide a means to measure and regulate the characteristics of an item or service to contract and regulatory requirements.

The City of Jacksonville, Florida is the owner~~/permittee~~ of Trail Ridge Landfill. Trail Ridge Landfill, Inc. is the permittee and operates the landfill. England, Thims & Miller, Inc. is the design engineer. The name of the Contractor for each incremental closure shall be provided to the Department of Environmental Protection (DEP), prior to construction.

All QA/QC activities (including monitoring, sampling and testing) shall be directed and conducted by third parties, whom are independent of the Contractor.

The QA/QC Plan for this project includes General QA/QC and Soils QA/QC. The General QA/QC includes full-time services to periodically observe the contractor's work to verify substantial compliance with permits, plans, specifications and design concepts. These services will include the following:

General Quality Control Monitor - shall monitor the construction for compliance with the permits, plans, specifications and design including construction to proper lines and grades, maintain daily logs and weekly progress reports of the construction (including observation data sheets, problem identification and correction logs), make note of any construction deviations, coordinate qualifying and testing of materials, monitor any waste excavation, and monitor filling. This individual shall be experienced in civil site construction and solid waste regulations.

General Quality Assurance Engineer - shall supervise the construction monitoring and waste removal to verify compliance with permits, plans, specification and design concepts. This individual shall be experienced in civil site construction and solid waste regulations and shall be a registered Professional Engineer.

The General QA/QC Program includes monitoring the following activities:

1. General Earthwork
2. Storm Drainage Installation
3. General Construction Quality Control

The Soils QA/QC for this project includes soil material qualifying, sampling and testing to verify substantial compliance with the material standards. This work will include the following:

Soils Quality Control Monitor - shall pre-qualify soil materials, monitor the installation of soil materials, determine where in-place soil materials shall be tested, and test the in-place soil materials. This individual shall be responsible for assuring that all soil materials have been pre-qualified and have a chain-of-custody from the pre-qualified source to the project site, prior to installation. This individual shall be experienced in civil site construction and soil testing standards and procedures.

Soils Quality Assurance Engineer - shall supervise the soil material pre-qualifying and testing of in-place soil materials to assure compliance with the test standards and testing frequency requirements, and verify compliance with the plans, specification and design. This individual shall be experienced in civil site construction and soil testing procedures and shall be a registered Professional Engineer.

The QA/QC Plan including monitoring construction of the following:

A. Final Cover (~~Intermediate~~ Initial Cover, Compacted Clay Layer and Vegetative Cover)

Incremental side slope closure of Trail Ridge Landfill includes a final cover consisting of 12" of ~~intermediate~~ initial cover, 12" of clay, and 24" of vegetative cover. The clay layer of the final cover must be placed in two 6" (minimum) lifts. The Soils Quality Control Monitor shall observe the clay layer construction on a full-time (on-site) basis. The QA/QC for the final cover is as follows:

1. ~~Intermediate~~ Initial Cover

a. Location - The fill material shall come from an off-site source. The Soils Quality Control Monitor shall visually inspect the fill material.

b. Standard - Soil shall be free of brush, weeds, and other litter; and free of roots, stumps, stones and any other extraneous or toxic matter.

The ~~intermediate~~ initial cover shall be a minimum of 12" thick.

Compacted to 90% of Modified Proctor maximum dry density (ASTM D 1557), unless the soil material contains 30.0% or greater passing the No. 200 sieve, then compacted to 90% of Standard Proctor maximum dry density (ASTM D-698).

c. Frequency - Depth measurements and density tests shall be conducted at the frequency of four per acre.

2. Clay Layer (referred to as Barrier Layer in Chapter 62-701, F.A.C.)

a. Borrow Source - Prior to clay layer installation, an appropriate borrow source shall be located. Suitability of the clay layer construction materials from that source shall be determined in accordance with the following:

(1) If demonstrated field experience is available from at least three prior successful projects of five or more acres each to document that a given borrow source can meet the requirements of the project specifications, then extensive laboratory testing of the borrow source will not be required. However, the source of material shall be geologically similar to and the methods of excavating and stockpiling the material shall be consistent with those used on the prior projects. Furthermore, a minimum of three representative samples from the appropriate thickness of the in-situ stratum or from stockpiles of the borrow material proposed for clay layer construction shall be submitted to the Owner's independent soil testing laboratory to document through index testing that the proposed material is consistent with the material used on prior successful projects. At a minimum, index testing shall consist of percent fines, Atterberg limits and moisture content determinations.

(2) If demonstrated field experience as defined above is not available or cannot be documented, then the following requirements shall be met.

(a) A field exploration and laboratory testing program shall be conducted by the Owner's independent soil testing laboratory to document the horizontal and vertical extent and the homogeneity of the soil strata proposed for use as clay layer material. A sufficient number of index tests from each potential borrow stratum shall be performed to quantify the variability of the borrow materials and to document that the proposed borrow material complies with specifications. At a minimum, the index tests shall consist of percent fines, Atterberg limits and moisture content determinations.

(b) Sufficient laboratory hydraulic conductivity tests shall be conducted on samples representative of the range invariability of the proposed borrow source (ASTM D-5084). For each such sample, test specimens shall be prepared and tested to cover the range of molding conditions (moisture content and dry density) required by project specifications. The hydraulic conductivity tests shall be conducted in triaxial type permeameters. The test specimens shall be consolidated under an isotropic consolidation stress no greater than 10 pounds per square inch and permeated with water under an adequate backpressure to achieve saturation of the test specimens. The inflow to and outflow from the specimens shall be monitored with time and the hydraulic conductivity calculated for each recorded flow increment. The test shall continue until steady state flow is achieved and relatively constant values of hydraulic conductivity are measured (ASTM D-5084). The borrow source will only be considered suitable if the hydraulic conductivity of the material, as documented on laboratory test specimens, can be shown to meet the requirements of the project specifications at the 98 percent confidence level.

(3) The Soils Quality Assurance Engineer shall review the pre-qualification data and shall approve or reject the clay layer material for use.

b. Test Strip - Prior to full-scale clay layer installation, a field test section or test strip shall be constructed at the site above a prepared subbase. The test strip shall be considered acceptable if the measured hydraulic conductivities of undisturbed samples from the test

strip meet the requirements of the project specifications at the 98 percent confidence level. If the test section fails to achieve the desired results, additional test sections shall be constructed in accordance with the following requirements:

(1) The test section shall be of sufficient size (40' wide x 60' long at a minimum) such that full-scale clay layer installation procedures can be duplicated within the test section;

(2) The test section shall be constructed using the same equipment for spreading, kneading and compaction and the same construction procedures (e.g., number of passes, moisture addition and homogenization, if needed) that are anticipated for use during full-scale clay layer installation;

(3) At a minimum, the clay layer test section shall be subject to the following field and laboratory testing requirements by Soils Quality Control Monitor:

   (a) A minimum of five random samples of the clay layer construction material delivered to the site during test section installation shall be tested for moisture content (ASTM D-2216), percent fines (ASTM D-1140) and Atterberg limits (ASTM D-4318);

   (b) At least five field density and moisture determinations shall be performed on each lift of the compacted clay layer test section;

   (c) Upon completion of the test section lift, the thickness of the lift shall be measured at a minimum of five random locations to check for thickness adequacy; and

   (d) A minimum of five Shelby tube or drive cylinder (ASTM D-2937) samples shall be obtained from each lift of the test section for laboratory hydraulic conductivity testing. Laboratory hydraulic conductivity testing shall be conducted in triaxial type permeameters (ASTM D-5084). The test specimens shall be consolidated under an isotropic consolidation stress no greater than 10 pounds per square inch and permeated with water under an adequate backpressure to achieve saturation of the test specimens. The inflow to and outflow from the specimens shall be monitored with time and the hydraulic conductivity calculated for each recorded flow increment. The test shall continue until steady state flow is achieved and relatively constant values of hydraulic conductivity are measured (ASTM D-5084).

   (e) The test strip shall meet or exceed the standards established below except the field density which shall be established by the QA Engineer, based upon the test strip results. If the test strip fails to meet these standards, the construction methods and/or material will be rejected and the test strip shall be performed again.

c. Final Cover Installation - Full scale final cover installation may begin only after completion of a successful test section. During clay layer construction, quality control testing shall be provided to document that the installed clay layer conforms to project specifications. The testing frequency for quality control testing is specified below; however, during construction of the first five acres, the frequencies shall be doubled. The clay layer shall be installed in two 6" lifts for a total minimum thickness of 12".

(1) Location - The clay layer shall be tested in place. The locations of testing shall be random locations as determined by the Soils Quality Control Monitor. If there are indications of a change in product quality or construction procedures during final cover construction, additional tests shall be performed to determine compliance.

(2) Standard

(a) Clay Layer Subgrade - Compacted to 90% of Modified Proctor maximum dry density (ASTM D-1557)D 1557), unless the soil material contains 30.0% or greater passing the No. 200 sieve, then compacted to 90% of Standard Proctor maximum dry density (ASTM D-698). (See ~~Intermediate~~ Initial Cover above).

(b) Field Density - The field density shall be established by the QA Engineer based upon the test strip results and shall be determined by Standard Proctor Density (ASTM D-698). In no case shall the field density be less than 80% of Standard Proctor Density (ASTM D-698).

(c) Thickness - Each lift (two total) shall be a minimum of 6" thick.

(d) Hydraulic Conductivity - The compacted clay layer shall have an in-place hydraulic conductivity no greater than 6.67×10^{-8} cm/sec (ASTM D-5084).

(3) Field Testing Frequency

(a) Prior to the laying of the clay layer materials, the clay layer subgrade shall be compacted to the specified density. Density tests shall be conducted at a minimum rate of two tests per acre;

(b) A minimum of two moisture content and field density determinations shall be conducted per acre per lift of the compacted clay layer. The degree of compaction shall be checked using the one-point field Proctor test or other appropriate test procedures; and

(c) A minimum of four thickness measures shall be conducted per acre per lift of the compacted clay layer.

(4) Laboratory Testing Frequency

(a) Percent fines (ASTM D-1140) of the clay layer material shall be determined at a minimum frequency of two tests per acre per lift of installed clay layer;

(b) Atterberg limits determinations shall be performed on one sample per acre per lift of installed clay layer; and

(c) Hydraulic conductivity testing of Shelby tube or drive cylinder (ASTM D-2937) samples of the compacted clay layer shall be performed at a minimum frequency of one test per acre per lift. Laboratory hydraulic conductivity tests shall be conducted in triaxial type permeameters (ASTM D-5084). The test specimens shall be consolidated under an isotropic consolidation stress no greater than 10 pounds per square inch and permeated with water under an adequate backpressure to achieve saturation of the test specimens. The inflow to and outflow from the specimens shall be monitored with time and the hydraulic conductivity calculated for each recorded flow increment. The test shall continue until steady state flow is achieved and relatively constant values of hydraulic conductivity are measured.

(5) Deficiency - If the test data from a clay layer section does not meet the requirements of the project specifications, additional random samples shall be tested from that clay layer section. If such additional testing demonstrates that the thickness and hydraulic conductivity meet the requirements of the project specifications at the 95 percent confidence level, that clay layer section will be considered acceptable. If not, that clay layer section shall be reworked or reconstructed so that it does meet these requirements.

3. Clay Layer Tie-In (To Existing Clay Layer, Where Applicable)

a. Location - The edge of any existing final cover adjacent to the proposed final cover area.

b. Standard - The compacted clay layer of any existing final cover and the proposed final cover must be tied together to form one continuous seamless layer. At the interface, the existing and new clay layers shall be compacted to form a seamless connection.

c. Frequency - The Soils Quality Control Monitor shall monitor the tie-in by visual inspection on a continuous basis.

4. Vegetative Cover

a. Location - The vegetative cover shall be tested in place. The location of testing shall be determined by the Soils Quality Control Monitor.

b. Standard - Top soil which is reasonably free of brush, weeds, and other litter; and relatively free of roots, stumps, stones and any other extraneous or toxic matter harmful to plant growth. Roots with a diameter greater than ⅜" shall be hand picked and removed.

The vegetative cover shall be at least 24" thick.

c. Frequency - Depth measurements shall be taken at the frequency of four per acre. The soil shall be monitored on a continuous basis for extraneous matter.

5. Final Cover Repairs (When Applicable)

If, during construction of the final cover system, damage is sustained on the final cover system (including the ~~intermediate~~ initial cover, clay layer and vegetative cover), the areas of damage shall be reconstructed and retested in accordance with corresponding section described above. All repair areas shall be tested at the frequencies prescribed above, unless more frequent testing is required at the discretion of the Soils Quality Assurance Engineer.

B. Downcomer Pipes

Downcomer pipes shall be installed in the final cover at the low point of the terraces, to intercept the stormwater between terraces. The downcomer pipes shall include the terrace side drains and terrace underdrain piping.

The downcomer pipes shall be constructed as shown on the Construction Drawings. The clay around the pipes shall be compacted into a uniform homogeneous material. Prior to placement of vegetative cover over the downcomer pipes, the pipe shall be inspected by the General Quality Control Monitor.

1. Location - The compacted clay layer shall be tested in place. The locations of testing shall be determined by the Soils Quality Control Monitor. If there are indications of a change in product quality or construction procedures during construction, additional tests shall be performed to determine compliance.

2. Standard -

a. Clay Layer Subgrade - Compacted to 90% of Modified Proctor maximum dry density (ASTM D 1557)D 1557), unless the soil material contains 30.0% or greater passing the No. 200 sieve, then compacted to 90% of Standard Proctor maximum dry density (ASTM D-698) (12" thick minimum).

b. Field Density - The field density of the clay layer shall be as established in Section A.2.c.(2)(b) above and shall be determined by Standard Proctor Density (ASTM D 698).

c. Thickness - Twelve inches minimum below pipe.

d. Hydraulic Conductivity - The compacted clay layer shall have an in-place hydraulic conductivity no greater than 6.67×10^{-8} cm/sec (ASTM D 5084).

3. Field Testing Frequency -

a. Prior to the laying of the compacted clay materials, the subbase shall be compacted to the specified density. Density tests and thickness shall be conducted at a minimum rate of one per 75 L.F. of pipe. (Minimum of one test between terraces).

b. A minimum of one moisture content and field density determination of the compacted clay layer shall be conducted per 75 L.F. of pipe

c. A minimum of two thickness measures of the compacted clay layer shall be conducted per 75 L.F. of pipe.

4. Laboratory Testing Frequency -

a. Hydraulic conductivity testing of Shelby tube or drive cylinder (ASTM D 2937) samples of the compacted clay layer shall be performed at a minimum frequency of one test per 75 L.F. of pipe (at least once between terraces). Laboratory hydraulic conductivity tests shall be conducted in triaxial type permeameters (ASTM D 5084). The test specimens shall be consolidated under an isotropic consolidation stress no greater than 10 pounds per square inch and permeated with water under an adequate backpressure to achieve saturation of the test specimens. The inflow to and outflow from the specimens shall be monitored with time and the hydraulic conductivity calculated for each recorded flow increment. The test shall continue until steady state flow is achieved and relatively constant values of hydraulic conductivity are measured.

5. Deficiency - If the test data from a compacted clay layer section does not meet the requirements of the project specifications, that section shall be reworked or reconstructed so that it does meet these requirements.

C. Underdrain Filter Sand

The underdrains in the terraces shall be surrounded by filter sand as shown on the Contract Drawings. The QA/QC for the filter sand is as follows:

1. Filter Sand

a. Location - The material shall be pre-qualified prior to installation.

If the testing is done at the borrow source, a chain of custody shall be provided.

b. Standard - Clean, uniformly graded sand with a uniformity coefficient of 1.5 or greater and an effective grain size of 0.2 mm to 0.5 mm. Grain size distribution shall be conducted as part of pre-qualification.

The sand shall have a hydraulic conductivity no less than 1.0×10^{-3} cm/sec at a density of 100 percent Modified Proctor. The hydraulic conductivity testing shall be by Constant Head method (ASTM D2434).

c. Frequency - The hydraulic conductivity of the sand shall be tested once per 100 C.Y. of sand material.

D. Gas Wells ~~Vents~~

Gas wells (temporary and permanent) ~~vents~~ shall be installed through the final cover. The QA/QC for gas vent materials shall be as follows:

1. Gravel

   a. Location - The gravel shall be pre-qualified by certification by the supplier.

   b. Standard - The gravel shall be clean gravel with no fines. The gravel shall be FDOT No. ~~4~~ 3 Course Aggregate (ASTM D 448).

      The gravel shall be non-calcareous (ASTM D 4373).

   c. Frequency - The gravel shall be certified by the supplier. The gravel shall be tested once per 100 C.Y.

2. Bentonite

   a. Location - The material shall be pre-qualified with documentation from the supplier.

   b. Standard - The material shall have a hydraulic conductivity no greater than 1.0×10^{-8} cm/sec (ASTM D 5084). ~~be a homogeneous, inorganic material with at least 50 percent, by weight, passing the No. 200 sieve (ASTM D 1140)~~

   c. Frequency - The material shall be certified by the supplier, one time only.

FAX COVER SHEET

TRAIL RIDGE LANDFILL INC.

A Waste Management Company
5110 U.S. Highway 301
Baldwin, Florida 32234
Phone: 904/289-9100 FAX: 904/289-9013

Number of Pages 3
(includes cover sheet)
Date: 4/11/96

To: Mary Nogas

From: Scott McCallister

Fax Number:

Phone: (904) 289-9100

Fax: (904) 289-9013

Remarks:

☐ Urgent ☑ For your review ☐ Reply ASAP ☐ Please comment

Mary: Chris Pearson asked me to send you a copy of this MSDS that we had on file for Florida Steel Corp. slag. Please give me a call at 289-9100 if you have any questions.

Scott

FLORIDA STEEL CORPORATION
"Steel when you want it"
P.O. Box 23328, Tampa, FL 33630 (813)251-8811

MATERIAL SAFETY DATA SHEET

Steelmaking Slag

SECTION I, MATERIAL IDENTIFICATION

Manufacturer:	Florida Steel Corporation
Contact:	Frank J. Lakotich, Group Safety and Health Manager Mill Group P. O. Box 31328 Tampa, FL 33631 (813) 251-8811
Product:	Electric Arc Furnace (EAF) Steelmaking Slag
Chemical Name:	Calcium silicates and ferrites
CAS NO.	65996-71-5

SECTION II, INGREDIENTS AND HAZARDS

Composition	CAS NO.	% WT	Exposure Limits OSHA PEL (mg/m³)	ACGIH TLV (mg/m³)
CaO	1305-78-8	23-30	5	5
SiO_2	14808-60-7	7-29	10/%-SiO_2 +2 Resp. Dust 30/%-SiO_2 +2 Total Dust	0.1 Resp. Fraction
Fe_2O_3	1309-37-1	1-46	10	5 as fume
MgO	1309-48-4	5-21	5 Respirable Fraction	10 as fume
S	7704-34-9	<.1	" 15	5
Na_2O	7439-96-5	1-10	5	2 as dust
P_2O_5	1314-56-3	<1	None Established	None Established
TiO_2	13463-67-7	<1	5 Respirable Fraction	10
Al_2O_3	1344-28-1	4-17	5 Respirable Fraction	10
Cr_2O_3	7440-47-3	<1	1	0.5

SECTION III, PHYSICAL DATA

Boiling Point - N/A
Vapor Pressure - N/A
Specific Gravity - 2.0/63.4
Freezing Point - N/A
Vapor Density - N/A
Percent Volatiles - N/A
Solubility in H_2O - N/A
Evaporation Rate - N/A
Appearance and Odor - Dark Gray Rock-Like material with no odor

SECTION IV, HEALTH HAZARD DATA

Major Exposure Hazard: Inhalation

Effects of Overexposure:

Various handling operations (crushing, grinding, sizing, conveying, etc.) may cause dust to be released. Excessive exposure to high concentrations of dust may cause irritation of the mucous membranes of the upper respiratory system and may cause coughing, sneezing and inflammation of the respiratory passages. Exposure to slag dust containing small amounts of silica particles less than 5 microns in diameter may result in silicosis if inhaled in high enough concentrations over an extended period of time. The principal manifestation of silicosis is difficult breathing. This condition can progress to dry cough, shortness of breath on exertion, decreased lung function and massive pulmonary fibrosis. High level doses may cause acute silicosis in 1 - 3 years. Chronic silicosis may not occur for 10 - 20 or more years after exposures begin, and sometimes long after they have ceased.

SECTION IV, HEALTH HAZARD DATA - CONTINUED

Based on animal experimental studies and human health findings, overexposure to slag dust and/or some components of slag (i.e. various complexed amorphous silicates) can cause pneumoconiosis and may pose a fibrogenic potential to the lung. Individuals overexposed to slag dusts may be at an increased risk of progression of existing lung impairment. IARC has determined crystalline silica to be a probable human carcinogen. Repeated or prolonged contact with the skin and direct eye contact with slag dust is likely to cause irritation. Contact with molten slag can cause serious thermal burns and permanent scarring. Long-term inhalation of iron oxide dust may produce a benign pneumoconiosis (siderosis).

Emergency and First Aid Procedures:
Inhalation: Remove from exposure to dust, administer oxygen or artificial respiration as needed.
Skin Contact: Wash skin with soap and water. For contact with molten product, do not remove contaminated clothing. Flush area with large amounts of cold water. If possible, submerge area in cold water, pack with ice and seek medical aid.
Eye Contact: Flush with water immediately for 15 minutes. Seek medical aid.

SECTION V, FIRE AND EXPLOSION DATA

Flash Point - N/A
Autoignition Temperature - N/A
Flammability Limits - N/A
Extinguishing Media - N/A
Special Fire Fighting Data - N/A
Explosion Hazard - N/A

Fire and explosion hazards are not associated with this product.

SECTION VI, REACTIVITY DATA

Stability - Stable
Incompatibility - None
Decomposition Products - None
Hazardous Polymerization - None

SECTION VII, SPILL OR LEAK PROCEDURES

Spill or Leak - Pick up mechanically or by hand tools. Fine material should be removed by vacuuming or wet sweeping to minimize dusting. Avoid using compressed air.
Disposal Dispose of in proper manner as common non-hazardous waste.
Clean-up personnel should be protected against eye or skin contact and inhalation of dust.

SECTION VIII, SPECIAL PROTECTION INFORMATION

Respiratory Protection: A NIOSH/MSHA - approved dust respirator should be used to avoid excessive inhalation of particles. Appropriate respirator selection depends on the magnitude of exposure.
Ventilation: Provide general ventilation or local exhaust ventilation where material is used or processed to prevent excessive dust exposure.
Gloves: Wear protective gloves as required for handling operations.
Protective Clothing: None required.
Eyes: Wear safety glasses with sideshields for impact and to prevent dust particles from entering the eye.
Other: Depending upon conditions of use and specific work situations, additional protective equipment and/or clothing may be required to control exposures.

SECTION IX, SPECIAL PRECAUTIONS

Handling and storage: Use good housekeeping practices to prevent accumulation of dust, and follow sound cleaning techniques that will keep airborne particulate to a minimum. Avoid inhalation of dust and excessive contact with eyes and skin.
Other comments: Personal hygiene should be encouraged.

Date Revised: 7/91

$5/ton -

NORTHEAST DISTRICT
RECEIVED
APR 10 1996
DEP JACKSONVILLE

04/09/96

FLORIDA STEEL CORPORATION
SALES DOLLARS FOR 8400

CUSTOMER NUMBER	NAME	TOT SALES	
FISCAL 1993			
50033653	ALLSTATE STEEL INC	1,659	
40191108	BAKER COUNTY ROAD DEPT	890	
50044734	BOB'S SEPTIC TANKS	14,583	
40178121	C.O.D. BALDWIN MILL--A. DAVIS	105,248	
40192379	CHAMPION INT'L CORP	2,557	
40188922	CITY OF JACKSONVILLE-GEN ACCTG	11,754	
50033075	COMMERCIAL METALS JACKSONVILLE	2,080	
50037670	CSX TRANSPORTATION	1,530	
40160608	DAVID J JOSEPH CO	26,719	
13798087	FLORIDA ROCK INDUSTRIES,INC**	1,251	
40240103	FLORIDA-GEORGIA MATERIALS INC	874	
50030444	G - P MATERIAL	3,805	
40057853	GEORGIA PACIFIC CORP LB	1,826	
50048438	JACKSONVILLE AREA LANDFILLS HAUL ROADS	45,035	
40152779	JAX UTILITY INC	341	
50029149	JEFFERSON SMURFIT CORP CONSTRUCTION	23,973	
50035948	JEFFERSON SMURFIT CORP	722	
50022409	MARIETTA SAND CORP CONSTRUCTION MATERIAL	11,458	
50035286	MOORE ROAD CONTRACTING INC	565	
40183014	NEWMAN CONSTRUCTION CO	288	
50022391	NOLAN BROS CONSTRUCTION CONTRACTOR	14,678	
50040203	OWENS-CORNING FIBERGLAS CORP.	5,178	
50027515	RAYONIER INC TIMBER COMPANY - HAUL ROADS	4,637	
50022375	SOUTHDOWN INC.-BROOKSVILLE - NOT SLAG	115,806	Mill Scale used in Cement Kiln
50026749	TIM-PREP INC CONSTRUCTION CONTRACTOR	17,638	
50023290	W J SAPP & SON INC RAIL ROAD CONTRACTOR	18,823	
50039106	W.W.GAY MECHANICAL CONTRACTORS	12,753	
50031350	WELLS FARMS HAUL ROADS	5,980	
50022524	WILBUR C. BELL RESELLS for CONSTRUCTION	15,370	
40059040	40059040	6,920	
40059768	40059768	554	
40156572	40156572	336	
40219206	40219206	151	
40240095	40240095	79	
50024264	50024264	364	
50024421	50024421	4,879	
50026236	50026236	467,826	
50026343	50026343	6,775	
50026350	50026350	2,550	
50026582	50026582	780	
50027424	50027424	14,685	
50029461	50029461	1,923	
50029693	50029693	6,763	
50030717	50030717	4,185	
50031723	50031723	2,083	
50032911	50032911	1,004	
50033059	50033059	3,334	
50036052	50036052	5,792	
50036243	50036243	149	
50037589	50037589	194	
50037852	50037852	14,085	

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FLORIDA STEEL CORPORATION
SALES DOLLARS FOR 8400

CUSTOMER NUMBER	NAME	TOT SALES	
FISCAL 1993			
50039387	50039387	1,036	
50039478	50039478	4,495	
50039783	50039783	1,438	
50044023	50044023	4,211	
50044601	50044601	17,822	
50045392	50045392	7,733	
		1,050,167	
FISCAL 1994			
50033653	ALLSTATE STEEL INC	1,198	
40191108	BAKER COUNTY ROAD DEPT	1,258	
50044734	BOB'S SEPTIC TANKS	19,568	
40178121	C.O.D. BALDWIN MILL--A. DAVIS	78,587	
40192379	CHAMPION INT'L CORP	2,374	
40188922	CITY OF JACKSONVILLE-GEN ACCTG	11,674	
40246522	CONTAINER CORP TIMBER HAUL ROADS	149	
40203317	CONTAINER CORP.	1,313	
50037670	CSX TRANSPORTATION	1,441	
40242349	DANTZLER LUMBER INC	151	
40246639	FLORIDA MECHANICAL SYSTEMS	1,185	
40240103	FLORIDA-GEORGIA MATERIALS INC HAUL ROADS	4,618	
50030444	G - P MATERIAL	351	
40246621	GENERAL TRUCK CO	831	
40057853	GEORGIA PACIFIC CORP LB HAUL ROADS	6,937	
40240442	GILMAN PAPER CO	620	
40243529	J B COXWELL - RESELLS TO LANDFILLS	1,041	
50048438	JACKSONVILLE AREA LANDFILLS	24,531	
40152779	JAX UTILITY INC	679	
50029149	JEFFERSON SMURFIT CORP CONSTRUCTION	20,604	
50035948	JEFFERSON SMURFIT CORP CONTARACTOR	1,423	
40077695	M D MOODY & SONS INC	2,435	
50022409	MARIETTA SAND CORP	1,875	
50035286	MOORE ROAD CONTRACTING INC	1,086	
40183014	NEWMAN CONSTRUCTION CO	127	
50022391	NOLAN BROS CONSTRUCTION MATERIAL	10,988	
50040203	OWENS-CORNING FIBERGLAS CORP.	2,788	
50027515	RAYONIER INC	998	
50022375	SOUTHDOWN INC.-BROOKSVILLE NOT SLAG	138,711	Mill Scale Sold to CEMENT KILN
50026749	TIM-PREP INC CONSTRUCTION CONTACTOR	5,613	
40243537	TRI STATE RECYCLING CORP	1,872	
50023290	W J SAPP & SON INC RAIL ROAD CONTRACTOR	15,675	
50039106	W.W.GAY MECHANICAL CONTRACTORS	3,779	
50031350	WELLS FARMS	3,588	
50022524	WILBUR C. BELL CONSTRUCTION MATERIAL	34,599	
40059768	40059768	513	
40203036	40203036	380	
40218430	40218430	809	
40240079	40240079	3,275	
40240616	40240616	452	
40240624	40240624	1,516	
40240749	40240749	749	
40240905	40240905	90	

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FLORIDA STEEL CORPORATION
SALES DOLLARS FOR 8400

CUSTOMER NUMBER	NAME	TOT SALES
FISCAL 1994		
40240913	40240913	13,664
40241085	40241085	434
40241606	40241606	6,449
40245151	40245151	834
40246209	40246209	102
40246514	40246514	105
50024421	50024421	415
50026236	50026236	212,979
50026343	50026343	186
50027424	50027424	482
50029693	50029693	4,592
50036243	50036243	598
50037589	50037589	1,559
50037852	50037852	978
50039387	50039387	461
50044601	50044601	10,491
50045392	50045392	7,847
		674,627
FISCAL 1995		
50033653	ALLSTATE STEEL INC	1,883
40191108	BAKER COUNTY ROAD DEPT	2,410
50044734	BOB'S SEPTIC TANKS	25,386
40247652	C & W TRUCKING INC	1,501
40178121	C.O.D. BALDWIN MILL--A. DAVIS	65,100
40251191	CENTURION LEASING CO	171
40192379	CHAMPION INT'L CORP	3,552
40188922	CITY OF JACKSONVILLE-GEN ACCTG	14,080
40246522	CONTAINER CORP	3,931
40248312	CONTAINER CORP HAUL ROADS	338
40203317	CONTAINER CORP.	2,320
50037670	CSX TRANSPORTATION	187
40242349	DANTZLER LUMBER INC	171
40160608	DAVID J JOSEPH CO	1,517
40248254	DIV OF FORESTRY	86
40246639	FLORIDA MECHANICAL SYSTEMS	277
40240103	FLORIDA-GEORGIA MATERIALS INC	508
40247033	FLOYD GARRETT CO INC	582
50030444	G - P MATERIAL	649
40246621	GENERAL TRUCK CO PARKING LOT	4,768
40057853	GEORGIA PACIFIC CORP LB	975
40240442	GILMAN PAPER CO	2,467
40212789	H & M TRUCKING CO INC	2,867
40243529	J B COXWELL	8,725
50048438	JACKSONVILLE AREA LANDFILLS	15,443
40152779	JAX UTILITY INC	345
50029149	JEFFERSON SMURFIT CORP CONSTRUCTION	14,609
50035948	JEFFERSON SMURFIT CORP MATERIAL	2,446
40077695	M D MOODY & SONS INC	167
50022409	MARIETTA SAND CORP	2,707
50035286	MOORE ROAD CONTRACTING INC	105
40183014	NEWMAN CONSTRUCTION CO	44

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FLORIDA STEEL CORPORATION
SALES DOLLARS FOR 8400

CUSTOMER NUMBER	NAME	TOT SALES	
FISCAL 1995			
50022391	NOLAN BROS CONSTRUCTION MATERIAL	15,708	
50040203	OWENS-CORNING FIBERGLAS CORP.	771	
40210775	PECAN ROW LANDFILL	4,092	
40246530	RAY'S NURSERY INC	3,664	
50027515	RAYONIER INC	8,225	
50022375	SOUTHDOWN INC.-BROOKSVILLE NOT SLAG	88,978	MILL SCALE - CEMENT KILN
40208506	STEVE'S TRUCKING	1,556	
50026749	TIM-PREP INC CONSTRUCTION MATERIAL	3,657	
40243537	TRI STATE RECYCLING CORP	3,408	
50023290	W J SAPP & SON INC RAIL ROAD CONTRACTOR	7,227	
50039106	W.W.GAY MECHANICAL CONTRACTORS	10,102	
50031350	WELLS FARMS	3,870	
50022524	WILBUR C. BELL CONSTRUCTION MATERIAL	43,064	
40203036	40203036	1,142	
40218430	40218430	484	
40240079	40240079	860	
40241606	40241606	49	
40245151	40245151	105	
40246738	40246738	3,595	
40247942	40247942	724	
40247959	40247959	323	
40249393	40249393	5,880	
50024421	50024421	599	
50027424	50027424	141	
50029693	50029693	639	
50037589	50037589	140	
50037852	50037852	6,746	
50044601	50044601	4,254	
		400,320	
FISCAL 1996			
40233330	BULK MATERIALS INT'L CO.INC. NOT SLAG	154,521	MILL SCALE - CEMENT KIL
40247652	C & W TRUCKING INC	992	
40178121	C.O.D. BALDWIN MILL--A. DAVIS	87,477	
40216145	CANAM STEEL CORP(JAX) PARKING LOT	15,732	
40192379	CHAMPION INT'L CORP	7,369	
40188922	CITY OF JACKSONVILLE-GEN ACCTG	5,290	
40229320	COLONIAL INVESTMENTS CORP.	235	
40246522	CONTAINER CORP	3,604	
40248312	CONTAINER CORP HAUL ROADS	616	
40289357	CONTAINER CORP	789	
40203317	CONTAINER CORP.	1,332	
40253023	CSX TRANSPORTATION INC	1,382	
40248254	DIV OF FORESTRY	976	
40255713	FLORIDA GAME & FRESHWATER COMM	136	
40246639	FLORIDA MECHANICAL SYSTEMS	898	
40240103	FLORIDA-GEORGIA MATERIALS INC	258	
40247033	FLOYD GARRETT CO INC	272	
50030444	G - P MATERIAL	3,551	
40057853	GEORGIA PACIFIC CORP LB	1,178	
40240442	GILMAN PAPER CO	2,862	
40252504	HOWARD JOHNSON HAULING CONTR	22,516	

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FLORIDA STEEL CORPORATION
SALES DOLLARS FOR 8400

CUSTOMER NUMBER	NAME	TOT SALES
FISCAL 1996		
40243529	J B COXWELL	5,693
50048438	JACKSONVILLE AREA LANDFILLS	11,475
40215733	JAKE TRANSPORT SERVICES	848
40152779	JAX UTILITY INC	8,644
50029149	JEFFERSON SMURFIT CORP	7,754
50035948	JEFFERSON SMURFIT CORP	535
40291122	JEFFREY'S STEEL CO INC	871
40254393	JOHNNY SMITH & CO	2,084
40077695	M D MOODY & SONS INC	283
50022409	MARIETTA SAND CORP	11,454
40254518	MICHAEL W SHODA	146
50035286	MOORE ROAD CONTRACTING INC	5,408
40252876	MYERS TREE & TRACTOR SERVICE	534
40287005	NASSAU COUNTY SOLID WASTE	2,605
40183014	NEWMAN CONSTRUCTION CO	177
50022391	NOLAN BROS CONSTRUCTION MATERIAL	16,272
50040203	OWENS-CORNING FIBERGLAS CORP.	488
40210775	PECAN ROW LANDFILL	1,977
40255887	POWERLINE SAND	2,939
40246530	RAY'S NURSERY INC	2,321
40294332	RAYONIER INC	2,221
50027515	RAYONIER INC Timber Haul Roads	8,030
40289969	SHAPELLS	141
40208506	STEVE'S TRUCKING	1,783
50026749	TIM-PREP INC CONSTRUCTION MATERIAL	10,743
50023290	W J SAPP & SON INC RAIL ROAD CONTRACTOR	5,439
50039106	W.W.GAY MECHANICAL CONTRACTORS	1,669
50022524	WILBUR C. BELL	64,941
		489,461