

P 771 975 753

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

PS Form 3800, June 1985

Sent to	
Street and No.	
P.O., State and ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	

INSTRUCTIONS:

Complete items 1 and/or 2 for additional services.
Complete items 3, and 4a & b.
Print your name and address on the reverse of this form so that we can return this card to you.
Attach this form to the front of the mailpiece, or on the back if space is not permit.
Write "Return Receipt Requested" on the mailpiece below the article number. The Return Receipt will show to whom the article was delivered and the date received.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

*Doug Miller
England Thin + Miller*

4a. Article Number

771975753

4b. Service Type

- | | |
|---------------------------------------|---|
| ☐ Registered | ☐ Insured |
| ☐ Certified | ☐ COD |
| ☐ Express Mail | ☐ Return Receipt for Merchandise |

7. Date of Delivery

5-27-83

8. Addressee's Address (Only if requested and fee is paid)

54

Signature (Addressee)

Trail R Ph. II B

6. Signature (Agent)

PS Form 3811, December 1991

☆U.S. GPO: 1992-323-402

DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.



661535

Florida Department of Environmental Regulation

Northeast District • Suite B200, 7825 Baymeadows Way • Jacksonville, Florida 32256-7577

Lawton Chiles, Governor

Virginia B. Wetherell, Secretary

May 25, 1993

CERTIFIED-RETURN RECEIPT

Mr. Douglas C. Miller, P.E.
England-Thims & Miller, Inc.
3131 St. Johns Bluff Road South
Jacksonville, FL 32216

Dear Mr. Miller:

Trail Ridge Landfill Phase IIB
Permit No. SC16-184444
Duval County-Solid Waste

The Department has reviewed the following documents submitted in accordance with the permit:

1. Construction Quality Assurance Monitoring of the Geosynthetic Lining System for the Trail Ridge Landfill Phases IC, IIA, IIB, and IIC - Final Report (Volumes I, II, III, IV, V and VI), prepared by Geosyntec Consultants, received on February 12, 1993, and supplemented on March 4, 1993, March 23, 1993, April 9, 1993 and May 14, 1993.

2. Report of Soils Quality Assurance Testing Phase IC and Phase II Trail Ridge Landfill, prepared by Law Engineering, received on February 12, 1993, and supplemented on March 23, 1993;

3. Phases I and II "As-Built" of Trail Ridge Landfill, Sheets 1 through 20 and WT1 through WT4, prepared by Sunshine State Surveyors, Inc., received on February 12, 1993; and

4. Certificate of Construction Completion for Trail Ridge Landfill Phases IIA and IIB including the Phase II Stormwater Collection System, prepared by Douglas C. Miller, P.E., received on March 4, 1993.

Please be advised that all applicable submissions required for Phase IIB have been received and found acceptable. Therefore, Trail Ridge Landfill, Inc. may begin accepting waste in Phase IIB of the subject landfill.



Mr. Doug Miller
Trail Ridge Landfill, Phase IIB
Page two

If you have any questions, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'MC Nogas', written over the printed name.

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

cc: David Salyers, Waste Management, Inc.
Allan E. Williams, City of Jacksonville



England-Thims & Miller, Inc.

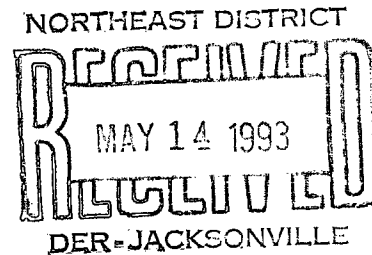
Consulting & Design Engineers
3131 St. Johns Bluff Road So. Jacksonville, FL 32246
904-642-8990

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.

May 14, 1993

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



Reference: Trail Ridge Landfill
Phase IIB Certification
Permit No. SC16-184444
ET&M No. E91-156-2

Dear Ms. Nogas:

Please find herein four copies of the response report from GeoSyntec Consultants regarding the April 23, 1993 Memorandum from Mr. Mark Cadenhead on the subject certification, specifically addressing the Construction Quality Assurance Monitoring of the Geosynthetic Lining System.

If you have any questions, please give me or Juanitta Clem a call. We look forward to receipt of the Department's written authorization to accept Class I solid waste in Phase IIB at Trail Ridge Landfill.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Douglas C. Miller, P.E.
Vice President

DCM:cl

cc: Luke DeBock
Greg Mathes
Jim Lukens



England-Thims & Miller, Inc.

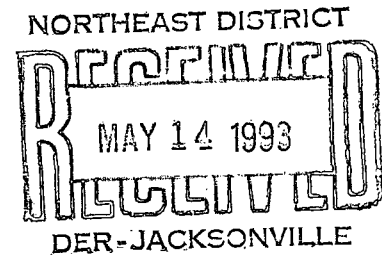
Consulting & Design Engineers
3131 St. Johns Bluff Road So. Jacksonville, FL 32246
904-642-8990

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.

May 14, 1993

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



Reference: Trail Ridge Landfill
FDER Permit No. SC16-184444 (Modification Request)
ET&M No. E92-148-6

Dear Ms. Nogas:

In accordance with Chapter 17-4.080(2), F.A.C., we hereby request a minor modification of the subject permit. The modification is to correct minor errors or typographical errors and does not involve technical review. Therefore, in accordance with 17-4.050(4)(p)(1), there is no fee for such modification.

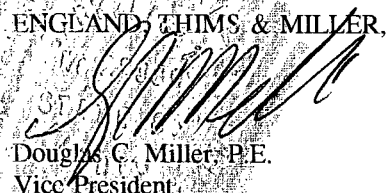
The requested modification is as follows:

1. Specific Condition No. 4 - "The final design shall be implemented by Permittee for each solid waste disposal side slop unit described in Specific Condition No. 34." It appears that the Specific Condition referenced should be No. 36 and slope is misspelled. Please modify accordingly.
2. Specific Condition No. 16. (g) - "Replanting if vegetative cover in littoral zones falls below 80% coverage." There are no littoral zones on the site, therefore we request that this condition be deleted from the permit.
3. Specific Condition No. 51 - "The first monitoring year shall start as of the planting date and data shall be collected and submitted in accordance with Specific Condition No. 4." It appears that the Specific Condition referenced should be No. 49. Please modify accordingly.
4. Specific Condition No. 54 - "In the event that the success criteria as stated in Specific Condition No. 33 are not achieved by the expiration date of this permit," It appears that the Specific Condition referenced should be No. 53. Please modify accordingly.

Should you have any questions regarding these proposed modifications, please give me or Juanitta Clem a call.

Sincerely,

ENGLAND, THIMS & MILLER, INC.


Douglas C. Miller, P.E.
Vice President

cc: Greg Mathes
Jim Lukens

DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

To: _____
To: _____
To: _____
To: _____

NORTHEAST DISTRICT - JACKSONVILLE

TO: Jai Prasad
FROM: Mark Cadenhead
DATE: June 7, 1993
SUBJECT: Trail Ridge Minor Modification
File No. 231431

Please review the attached minor modification, item 2, concerning Specific Condition 16.(g) of the Trail Ridge permit. Attached is a copy of the referenced specific condition as it appears in the permit. Please let me know by June 15, 1993 if you agree or disagree with the request.

Thanks!

P 771 975 728

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

PS Form 3800, June 1985

Sent to	
Street and No.	
P.O., State and ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt Fee will provide you the signature of the person delivered to and the date of delivery.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Scott Kelly
Public Works

4a. Article Number

771975-728

4b. Service Type

☒ Registered ☐ Insured

☒ Certified

☐ Express Mail

7. Date of Delivery

MAY 11 1993

8. Addressee's Address and fee is paid

54

5. Signature (Addressee)

Notyaster

6. Signature (Agent)

DER JACKSONVILLE

PS Form 3811, November 1990

★ U.S. GPO: 1991-287-088

DOMESTIC RETURN RECEIPT



Florida Department of Environmental Regulation

Northeast District • Suite B200, 7825 Baymeadows Way • Jacksonville, Florida 32256-7577

Lawton Chiles, Governor

Virginia B. Wetherell, Secretary

May 7, 1993

CERTIFIED-RETURN RECEIPT

Mr. Scott Kelly, P. E.
Assistant Director
Public Utilities Department
219 Newnan Street
Jacksonville, Florida 32202

Dear Mr. Kelly:

Trail Ridge Landfill
DER Files No. 230404
Duval County - Solid Waste

Please be advised that the Department has received an application from England-Thims & Miller, Inc., on behalf of Trail Ridge Landfill, Inc., for a minor modification to Permit No. SC16-184444 to modify the definition of an exterior side slope unit, define the side slope closure plan of the facility, and modify the schedule for side slope unit closure.

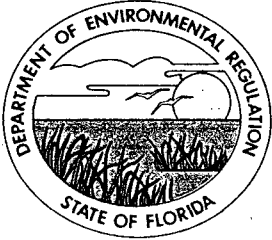
The application may be inspected during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Northeast District Office.

If you have any questions, please contact Mary C. Nogas, P. E., at the letterhead address, or telephone number 904/448-4320.

Sincerely,

for Michael J. Fitzsimmons
Waste Program Administrator

MJF:mn1



Florida Department of Environmental Regulation

Northeast District • Suite B200, 7825 Baymeadows Way • Jacksonville, Florida 32256-7577

Lawton Chiles, Governor

Virginia B. Wetherell, Secretary

May 7, 1993

CERTIFIED-RETURN RECEIPT

Mr. Scott Kelly, P. E.
Assistant Director
Public Utilities Department
219 Newnan Street
Jacksonville, Florida 32202

Dear Mr. Kelly:

Trail Ridge Landfill
DER Files No. 230403
Duval County - Solid Waste

Please be advised that the Department has received an application from England-Thims & Miller, Inc., on behalf of Trail Ridge Landfill, Inc., for a minor modification to Permit No. SC16-184444 to modify the final cover system of the facility.

The application may be inspected during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Northeast District Office.

If you have any questions, please contact Mary C. Nogas, P.E., at the letterhead address, or telephone number 904/448-4320.

Sincerely,

Michael J. Fitzsimmons
Waste Program Administrator

MJF:mn1





England-Thims & Miller, Inc.

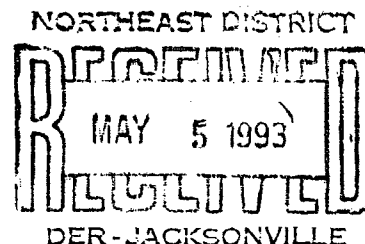
Consulting & Design Engineers
3131 St. Johns Bluff Road So. Jacksonville, FL 32246
904-642-8990

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.

May 5, 1993

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



Reference: Trail Ridge Landfill, Inc.
Permit No. SC16-184444 (Modification Request)
ET&M No. E92-148

Dear Mr. Prasad:

In accordance with Chapter 40C-4.331(2)(b), F.A.C. and on behalf of Trail Ridge Landfill, Inc., we hereby request a minor modification of the subject permit. A minor modification fee of \$700.00 is submitted in accordance with Chapter 40C-1.603(4)(b), F.A.C.

On April 29, 1993, a request for modification and modification fee of \$250.00 was submitted to the Department. We understand the \$250.00 fee was not sufficient for the requested modification and request that the attached fee of \$700.00 be applied to the April 29, 1993 request for modification.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

Juanitta Bader Clem, P.E.
Project Engineer

cc: Greg Mathes
Jim Gleeson
Jim Lukens



England-Thims & Miller, Inc.

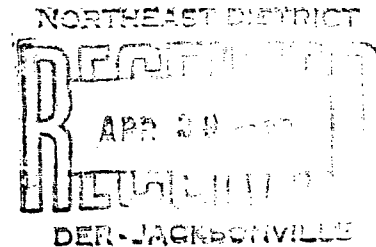
Consulting & Design Engineers
3131 St. Johns Bluff Road So. Jacksonville, FL 32246
904-642-8990

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.

April 29, 1993

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



Reference: Trail Ridge Landfill, Inc.
Permit No. SC16-184444 (Modification Request)
ET&M No. E92-148

Dear Mr. Prasad:

In accordance with Rule 17-4.080(2), F.A.C. and on behalf of Trail Ridge Landfill, Inc., we hereby request a minor modification of the subject permit. A minor modification fee of \$250.00 is submitted in accordance with Rule 17-4.050(4)(p)5., F.A.C.

This request includes the following:

1. The addition of downcomer pipes on the eastern slope (D-85) and northeast corner (D-21) as shown on the attached plans. These downcomers are proposed to extend up to terrace T-4 and T-3, respectively. The reason for the additional downcomers is to accommodate vertical and horizontal phasing.
2. The addition of an underdrain (6" perforated HDPE pipe with a filter sock) along the terraces as shown on the attached plans. This proposed underdrain will discharge to the downcomer pipes. The purpose of the underdrain is to provide a means of collection for the water that may infiltrate and accumulate in the top of the clay layer along the terraces.

Mr. Jai Prasad, P.E.
Department of Environmental Regulation

April 29, 1993
Page 2

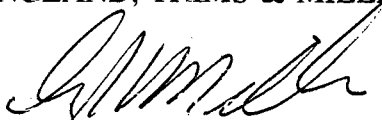
Reference: Trail Ridge Landfill, Inc.

3. The permitted design included lining the interior perimeter swale along the perimeter road with Enkamat. As previously stated in the certification of the stormwater management system, the Enkamat was to be installed as part of the side slope closure. However, the Enkamat was originally proposed because the landfill closure did not include terraces. Thus, erosion at the toe of the slope and in the perimeter swale was anticipated. However, with the addition of the terraces, erosion of the perimeter swale is not anticipated. Therefore, the Enkamat will be eliminated.

Should you have any questions, please do not hesitate to contact me or Juanitta Clem.

Sincerely,

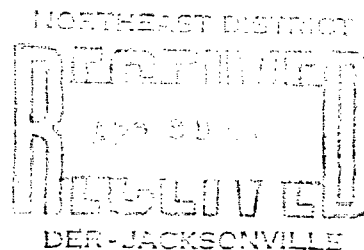
ENGLAND, THIMS & MILLER, INC.



Douglas C. Miller, P.E.
Vice President

Attachment: Drawing Nos. 1 and 2
Modification Fee

cc: Greg Mathes
Jim Lukens



De
5-4-93

OGC FILE CLOSING FORM

Deputy General Counsel Bill Congdon

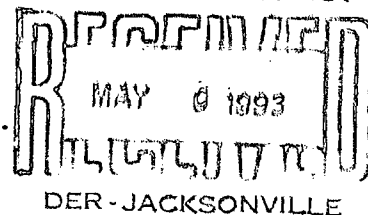
Attorney Bill Congdon Date _____

OGC File # 92-0489 Case Style Darrell Sperry v. Trail Ridge
Landfill, Inc. + DER

The above-referenced OGC file is being closed and sent to archives for storage. See below for summary of final disposition.

NORTHEAST DISTRICT

ENFORCEMENT CASE



- ☐ Draft Consent Order received, case resolved informally.
- ☐ Consent Order executed, all conditions met.
- ☐ Draft Notice of Violation received, case resolved informally.
- ☐ Notice of Violation issued, Final Order filed, all conditions met.
- ☐ Circuit Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

PERMITTING CASE: Permit Application # SC 16-207131

Final Permit Status: ☒ Issued ☐ Denied ☐ Withdrawn
Date: 12-20-92

- ☐ Request for Extension of Time - No Petition was Filed.
- ☐ Request for Extension of Time - Petition Filed.
Final Order Filed (date) _____
- ☐ Petition for Hearing Filed.
Final Order Filed (date) _____
- ☐ Appellate Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

OTHER CASES (RULEMAKING, PERSONNEL, ETC.)

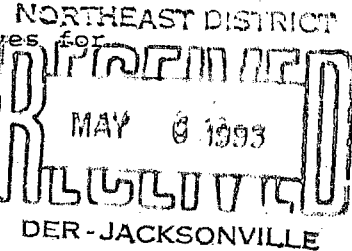
Final Disposition _____

District Manager

OGC FILE CLOSING FORM

Deputy General Counsel Bill CongdonAttorney Bill Congdon Date 4-30-93OGC File # 91-0090 Case Style Sylvia Webb-Thibault v.Trail Ridge Landfill, Inc. & DER

The above-referenced OGC file is being closed and sent to archives for storage. See below for summary of final disposition.

ENFORCEMENT CASE

- ☐ Draft Consent Order received, case resolved informally.
- ☐ Consent Order executed, all conditions met.
- ☐ Draft Notice of Violation received, case resolved informally.
- ☐ Notice of Violation issued, Final Order filed, all conditions met.
- ☐ Circuit Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

PERMITTING CASE: Permit Application # SC 184444

Final Permit Status: ☒ Issued ☐ Denied ☐ Withdrawn

Date: 12-24-91

- ☐ Request for Extension of Time - No Petition was Filed.
- ☐ Request for Extension of Time - Petition Filed.
Final Order Filed (date) _____
- ☐ Petition for Hearing Filed.
Final Order Filed (date) _____
- ☐ Appellate Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

OTHER CASES (RULEMAKING, PERSONNEL, ETC.)

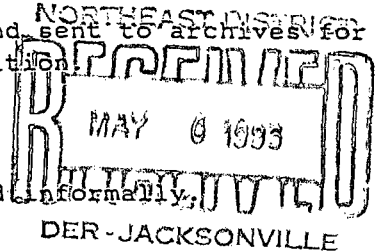
Final Disposition _____

District Manager

OGC FILE CLOSING FORM

Deputy General Counsel Bill Congdon
 Attorney Bill Congdon Date 4-30-93
 OGC File # 91-0093 Case Style Clarence J. Suggs v.
Trail Ridge Landfill, Inc. + DER

The above-referenced OGC file is being closed and sent to archives for storage. See below for summary of final disposition.



ENFORCEMENT CASE

- ☐ Draft Consent Order received, case resolved informally.
- ☐ Consent Order executed, all conditions met.
- ☐ Draft Notice of Violation received, case resolved informally.
- ☐ Notice of Violation issued, Final Order filed, all conditions met.
- ☐ Circuit Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

PERMITTING CASE: Permit Application # SC 184444

Final Permit Status: ☒ Issued ☐ Denied ☐ Withdrawn
 Date: 12-24-91

- ☐ Request for Extension of Time - No Petition was Filed.
- ☐ Request for Extension of Time - Petition Filed.
 Final Order Filed (date) _____
- ☐ Petition for Hearing Filed.
 Final Order Filed (date) _____
- ☐ Appellate Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

OTHER CASES (RULEMAKING, PERSONNEL, ETC.)

Final Disposition _____

District Manager

OGC FILE CLOSING FORM

Deputy General Counsel Bill CongdonAttorney Bill Congdon Date 4-30-93OGC File # 91-0091 Case Style William Mark McCranie v. Trail Ridge Landfill, Inc. & DER

The above-referenced OGC file is being closed and sent to archives for storage. See below for summary of final disposition.

SOUTHEAST DISTRICT
RECEIVED
MAY 6 1993
JACKSONVILLE
DER-JACKSONVILLE

ENFORCEMENT CASE

- ☐ Draft Consent Order received, case resolved informally.
- ☐ Consent Order executed, all conditions met.
- ☐ Draft Notice of Violation received, case resolved informally.
- ☐ Notice of Violation issued, Final Order filed, all conditions met.
- ☐ Circuit Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

PERMITTING CASE: Permit Application # SC 184444

Final Permit Status: ☒ Issued ☐ Denied ☐ Withdrawn
 Date: 12-24-91

- ☐ Request for Extension of Time - No Petition was Filed.
- ☐ Request for Extension of Time - Petition Filed.
 Final Order Filed (date) _____
- ☐ Petition for Hearing Filed.
 Final Order Filed (date) _____
- ☐ Appellate Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

OTHER CASES (RULEMAKING, PERSONNEL, ETC.)

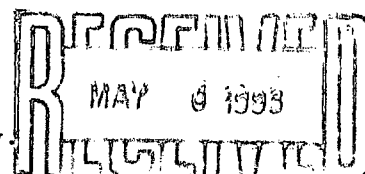
Final Disposition _____

District Manager

OGC FILE CLOSING FORM

Deputy General Counsel Bill CongdonAttorney Bill Congdon Date 4-30-93OGC File # 91-0083
91-0084 Case Style Lambert L. Herring v Norma J. Herring
91-0085
v. Trail Ridge Landfill, Inc. & DER

The above-referenced OGC file is being closed and sent to archives for storage. See below for summary of final disposition.

ENFORCEMENT CASE☐ Draft Consent Order received, case resolved informally.☐ Consent Order executed, all conditions met.☐ Draft Notice of Violation received, case resolved informally.☐ Notice of Violation issued, Final Order filed, all conditions met.☐ Circuit Court action, document processed, all conditions met.☐ Other (please specify) _____

DER-JACKSONVILLE

PERMITTING CASE: Permit Application # SC 184445, SC 184445, MSW 184447Final Permit Status: ☒ Issued ☐ Denied ☐ WithdrawnDate: 12-24-91☐ Request for Extension of Time - No Petition was Filed.☐ Request for Extension of Time - Petition Filed.
Final Order Filed (date) _____☐ Petition for Hearing Filed.
Final Order Filed (date) _____☐ Appellate Court action, document processed, all conditions met.☐ Other (please specify) _____OTHER CASES (RULEMAKING, PERSONNEL, ETC.)

Final Disposition _____

District Manager

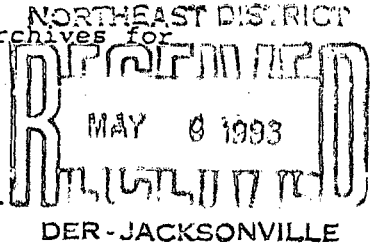
OGC FILE CLOSING FORM

Deputy General Counsel Bill Congdon

Attorney Bill Congdon Date 4-30-93

OGC File # 91-0086
91-0087 Case Style John J. Herring v. Trail Ridge
91-008 Landfill, Inc. & DER

The above-referenced OGC file is being closed and sent to archives for storage. See below for summary of final disposition.



ENFORCEMENT CASE

- ☐ Draft Consent Order received, case resolved informally.
- ☐ Consent Order executed, all conditions met.
- ☐ Draft Notice of Violation received, case resolved informally.
- ☐ Notice of Violation issued, Final Order filed, all conditions met.
- ☐ Circuit Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

PERMITTING CASE: Permit Application # SC-18444, SC 18445, MSSW 18447

Final Permit Status: ☒ Issued ☐ Denied ☐ Withdrawn
Date: 12-24-91

- ☐ Request for Extension of Time - No Petition was Filed.
- ☐ Request for Extension of Time - Petition Filed.
Final Order Filed (date) _____
- ☐ Petition for Hearing Filed.
Final Order Filed (date) _____
- ☐ Appellate Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

OTHER CASES (RULEMAKING, PERSONNEL, ETC.)

Final Disposition _____

District Manager

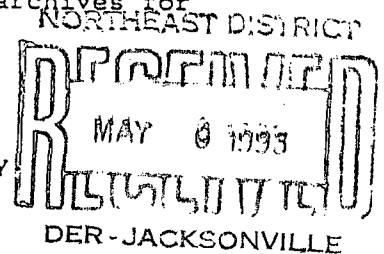
OGC FILE CLOSING FORM

Deputy General Counsel Bill CongdonAttorney Bill Congdon Date 4-30-93OGC File # 91-0019
91-0020
91-0021 Case Style Ronnie E and Laurie J. Hall v.Trail Ridge Landfill, Inc. & DER

The above-referenced OGC file is being closed and sent to archives for storage. See below for summary of final disposition.

ENFORCEMENT CASE

- ___ Draft Consent Order received, case resolved informally.
- ___ Consent Order executed, all conditions met.
- ___ Draft Notice of Violation received, case resolved informally.
- ___ Notice of Violation issued, Final Order filed, all conditions met.
- ___ Circuit Court action, document processed, all conditions met.
- ___ Other (please specify) _____

PERMITTING CASE: Permit Application # SC 18444, SC 184445, SC 184447Final Permit Status: X Issued ___ Denied ___ WithdrawnDate: 12-24-91

- ___ Request for Extension of Time - No Petition was Filed.
- ___ Request for Extension of Time - Petition Filed.
Final Order Filed (date) _____
- ___ Petition for Hearing Filed.
Final Order Filed (date) _____
- ___ Appellate Court action, document processed, all conditions met.
- ___ Other (please specify) _____

OTHER CASES (RULEMAKING, PERSONNEL, ETC.)

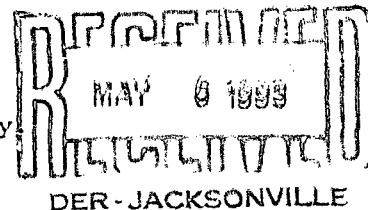
Final Disposition _____

District Manager

OGC FILE CLOSING FORM

Deputy General Counsel Bill CongdonAttorney Bill Congdon Date 4-30-93OGC File # 91-0089 Case Style Baker Co. Bd. of Co. Comm. v.Trail Ridge Landfill, Inc. + DER

The above-referenced OGC file is being closed and sent to archives for storage. See below for summary of final disposition.

ENFORCEMENT CASE☐ Draft Consent Order received, case resolved informally.☐ Consent Order executed, all conditions met.☐ Draft Notice of Violation received, case resolved informally.☐ Notice of Violation issued, Final Order filed, all conditions met.☐ Circuit Court action, document processed, all conditions met.☐ Other (please specify) _____PERMITTING CASE: Permit Application # 182118-2Final Permit Status: ☒ Issued ☐ Denied ☐ WithdrawnDate: 11-14-91☐ Request for Extension of Time - No Petition was Filed.☐ Request for Extension of Time - Petition Filed.

Final Order Filed (date) _____

☐ Petition for Hearing Filed.

Final Order Filed (date) _____

☐ Appellate Court action, document processed, all conditions met.☐ Other (please specify) _____OTHER CASES (RULEMAKING, PERSONNEL, ETC.)

Final Disposition _____

District Manager

OGC FILE CLOSING FORM

Deputy General Counsel

Bill Congdon

Attorney

Bill Congdon

Date

4-30-93

OGC File #

91-0069
91-0070
91-0071

Case Style

Baker Co. Bd. & Co. Comm. v.Trail Ridge Landfill, Inc. + DER

The above-referenced OGC file is being closed and sent to archival storage. See below for summary of final disposition.

ENFORCEMENT CASE Draft Consent Order received, case resolved informally. Consent Order executed, all conditions met. Draft Notice of Violation received, case resolved informally. Notice of Violation issued, Final Order filed, all conditions met. Circuit Court action, document processed, all conditions met. Other (please specify) _____PERMITTING CASE: Permit Application #SC184444SC 184445MSSW184447Final Permit Status: X Issued Denied WithdrawnDate: 12-24-91 Request for Extension of Time - No Petition was Filed. Request for Extension of Time - Petition Filed.

Final Order Filed (date) _____

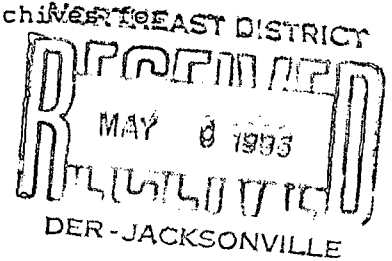
 Petition for Hearing Filed.

Final Order Filed (date) _____

 Appellate Court action, document processed, all conditions met. Other (please specify) _____OTHER CASES (RULEMAKING, PERSONNEL, ETC.)

Final Disposition _____

District Manager



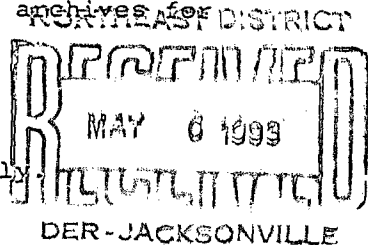
OGC FILE CLOSING FORM

Deputy General Counsel Bill Congdon

Attorney Bill Congdon Date 4-30-93

OGC File # 91-0092 Case Style Myra D. Frasier v. Trail Ridge Landfill, Inc. + DER

The above-referenced OGC file is being closed and sent to archives for storage. See below for summary of final disposition.



ENFORCEMENT CASE

- ☐ Draft Consent Order received, case resolved informally.
- ☐ Consent Order executed, all conditions met.
- ☐ Draft Notice of Violation received, case resolved informally.
- ☐ Notice of Violation issued, Final Order filed, all conditions met.
- ☐ Circuit Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

PERMITTING CASE: Permit Application # SC 184 444

Final Permit Status: ☒ Issued ☐ Denied ☐ Withdrawn
Date: 12-24-91

- ☐ Request for Extension of Time - No Petition was Filed.
- ☐ Request for Extension of Time - Petition Filed.
Final Order Filed (date) _____
- ☐ Petition for Hearing Filed.
Final Order Filed (date) _____
- ☐ Appellate Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

OTHER CASES (RULEMAKING, PERSONNEL, ETC.)

Final Disposition _____

District Manager

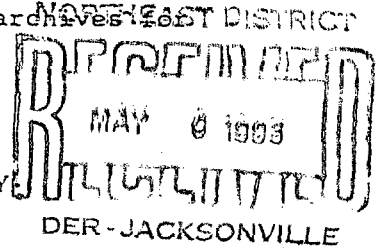
OGC FILE CLOSING FORM

Deputy General Counsel Bill Congdon

Attorney Bill Congdon Date 4-30-93

OGC File # 90-1688 Case Style Coastal Environmental Society, Inc. & St. Johns Preservation Assoc., Inc. v. Trail Ridge Landfill, Inc. & DER

The above-referenced OGC file is being closed and sent to archives for storage. See below for summary of final disposition.



ENFORCEMENT CASE

- ☐ Draft Consent Order received, case resolved informally.
- ☐ Consent Order executed, all conditions met.
- ☐ Draft Notice of Violation received, case resolved informally.
- ☐ Notice of Violation issued, Final Order filed, all conditions met.
- ☐ Circuit Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

PERMITTING CASE: Permit Application # DF 182118

Final Permit Status: ☒ Issued ☐ Denied ☐ Withdrawn
Date: 11-14-91

- ☐ Request for Extension of Time - No Petition was Filed.
- ☐ Request for Extension of Time - Petition Filed.
Final Order Filed (date) _____
- ☐ Petition for Hearing Filed.
Final Order Filed (date) _____
- ☐ Appellate Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

OTHER CASES (RULEMAKING, PERSONNEL, ETC.)

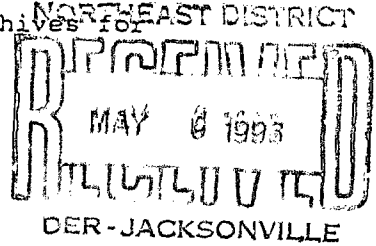
Final Disposition _____

District Manager

OGC FILE CLOSING FORM

Deputy General Counsel Bill Congdon
 Attorney Bill Congdon Date 4-30-93
 OGC File # 91-0068 Case Style Darrell Sperry v. Trail Ridge
Landfill, Inc + DER

The above-referenced OGC file is being closed and sent to archives for storage. See below for summary of final disposition.

ENFORCEMENT CASE

- ☐ Draft Consent Order received, case resolved informally.
- ☐ Consent Order executed, all conditions met.
- ☐ Draft Notice of Violation received, case resolved informally.
- ☐ Notice of Violation issued, Final Order filed, all conditions met.
- ☐ Circuit Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

PERMITTING CASE: Permit Application # SC 184444

Final Permit Status: ☒ Issued ☐ Denied ☐ Withdrawn
 Date: 12-24-91

- ☐ Request for Extension of Time - No Petition was Filed.
- ☐ Request for Extension of Time - Petition Filed.
 Final Order Filed (date) _____
- ☐ Petition for Hearing Filed.
 Final Order Filed (date) _____
- ☐ Appellate Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

OTHER CASES (RULEMAKING, PERSONNEL, ETC.)

Final Disposition _____

CC: District Manager

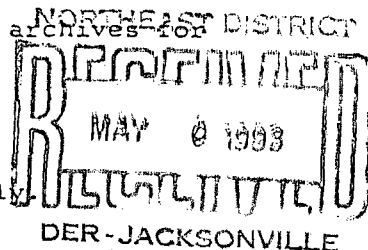
OGC FILE CLOSING FORM

Deputy General Counsel Bill Congdon

Attorney Bill Congdon Date 4-30-93

OGC File # 91-0061 Case Style Baldwin-Maxville Coalition, Inc.
v. Trail Ridge Landfill, Inc. and DER

The above-referenced OGC file is being closed and sent to archives for storage. See below for summary of final disposition.



ENFORCEMENT CASE

- ☐ Draft Consent Order received, case resolved informally.
- ☐ Consent Order executed, all conditions met.
- ☐ Draft Notice of Violation received, case resolved informally.
- ☐ Notice of Violation issued, Final Order filed, all conditions met.
- ☐ Circuit Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

PERMITTING CASE: Permit Application # SC 18444

Final Permit Status: ☒ Issued ☐ Denied ☐ Withdrawn
Date: 12-24-91

- ☐ Request for Extension of Time - No Petition was Filed.
- ☐ Request for Extension of Time - Petition Filed.
Final Order Filed (date) _____
- ☐ Petition for Hearing Filed.
Final Order Filed (date) _____
- ☐ Appellate Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

OTHER CASES (RULEMAKING, PERSONNEL, ETC.)

Final Disposition _____

3: District Manager

OGC FILE CLOSING FORM

Deputy General Counsel Bill Congdon

Attorney Bill Congdon Date 4-30-93

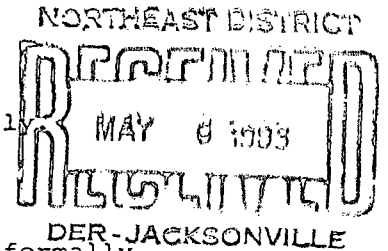
OGC File # 91-0048, 91-0049
91-0050 Case Style Coastal Environmental Society, Inc.

St. Johns Preservation Assoc., Inc. v. Trail Ridge Landfill, Inc. + DER

The above-referenced OGC file is being closed and sent to archives for storage. See below for summary of final disposition.

ENFORCEMENT CASE

- ☐ Draft Consent Order received, case resolved informally
- ☐ Consent Order executed, all conditions met.
- ☐ Draft Notice of Violation received, case resolved informally.
- ☐ Notice of Violation issued, Final Order filed, all conditions met.
- ☐ Circuit Court action, document processed, all conditions met.
- ☐ Other (please specify) _____



PERMITTING CASE: Permit Application # SC 184444

Final Permit Status: ☒ Issued ☐ Denied ☐ Withdrawn
Date: 12-24-91

- ☐ Request for Extension of Time - No Petition was Filed.
- ☐ Request for Extension of Time - Petition Filed.
Final Order Filed (date) _____
- ☐ Petition for Hearing Filed.
Final Order Filed (date) _____
- ☐ Appellate Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

OTHER CASES (RULEMAKING, PERSONNEL, ETC.)

Final Disposition _____

District Manager

OGC FILE CLOSING FORM

Deputy General Counsel Bill Congdon

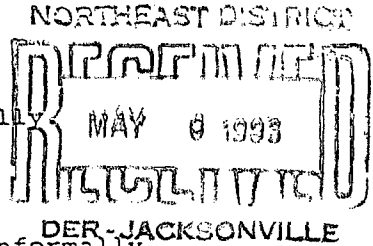
Attorney Bill Congdon Date 4-30-93

OGC File # 90-1635 Case Style Save Trail Ridge & The Environment Association, et al. v. DER & Trail Ridge Landfill, Inc.

The above-referenced OGC file is being closed and sent to archives for storage. See below for summary of final disposition.

ENFORCEMENT CASE

- ☐ Draft Consent Order received, case resolved informally
- ☐ Consent Order executed, all conditions met.
- ☐ Draft Notice of Violation received, case resolved informally.
- ☐ Notice of Violation issued, Final Order filed, all conditions met.
- ☐ Circuit Court action, document processed, all conditions met.
- ☐ Other (please specify) _____



PERMITTING CASE: Permit Application # DF 182118

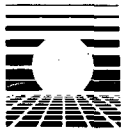
Final Permit Status: ☒ Issued ☐ Denied ☐ Withdrawn
Date: 11-14-91

- ☐ Request for Extension of Time - No Petition was Filed.
- ☐ Request for Extension of Time - Petition Filed.
Final Order Filed (date) _____
- ☐ Petition for Hearing Filed.
Final Order Filed (date) _____
- ☐ Appellate Court action, document processed, all conditions met.
- ☐ Other (please specify) _____

OTHER CASES (RULEMAKING, PERSONNEL, ETC.)

Final Disposition _____

____ District Manager



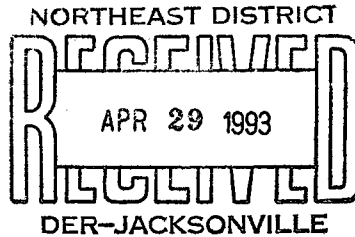
England-Thims & Miller, Inc.

Consulting & Design Engineers
3131 St. Johns Bluff Road So. Jacksonville, FL 32246
904-642-8990

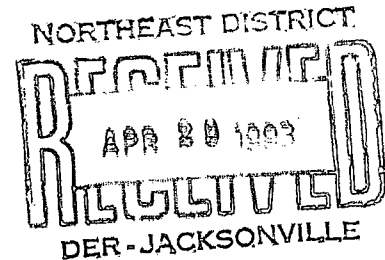
PRINCIPALS

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.

April 29, 1993



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



Reference: Trail Ridge Landfill, Inc.
Permit No. SC16-184444 (Modification Request)
ET&M No. E92-148

Dear Ms. Nogas:

In accordance with Rule 17-4.080(2), F.A.C. and on behalf of Trail Ridge Landfill, Inc., we hereby request a minor modification of the subject permit. A minor modification fee of \$250.00 is submitted in accordance with Rule 17-4.050(4)(p)5., F.A.C.

This request includes the following:

The final cover of the side slope unit be modified as shown on the attached drawing to include 12" of compacted clay with a maximum hydraulic conductivity of 1×10^{-7} cm/sec and 24" of top soil. The side slope units will have 18" of initial cover prior to placement of final cover.

In accordance with Rule 17-701.600(5)(g) 2., F.A.C. , the 12" layer of compacted clay will minimize infiltration to an equivalent degree as an 18" layer of barrier soil with a permeability of 1×10^{-5} cm/sec. Please see the attached analysis.

Should you have any questions, please do not hesitate to contact me or Juanitta Clem.

Sincerely,

ENGLAND, THIMS & MILLER, INC.


Douglas C. Miller, P.E.
Vice President

cc: Greg Mathes
David Salyers
Jim Lukens

Attachment: Drawing Nos. 1 and 2
Equivalency Analysis
Modification Fee

TRAIL RIDGE LANDFILL
CLAY COVER
Equivalency Analysis

In accordance with Rule 17-701.600(5)(g) 2., F.A.C., the proposed compacted clay layer must minimize infiltration to an equivalent degree as an 18-inch layer of barrier soil with a permeability of 1×10^{-5} cm/sec.

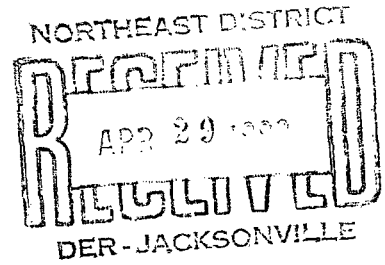
The travel time of the proposed 12" layer of compacted clay is determined as follows:

$$\text{Time of Travel (t)} = \frac{\text{Thickness (s)}}{\text{Velocity of Travel (k)}}$$

$$\begin{aligned} s &= 12 \text{ inches} = 30.5 \text{ cm} \\ k &= 1 \times 10^{-7} \text{ cm/sec} \end{aligned}$$

Thus:

$$t = \frac{30.5 \text{ cm}}{1 \times 10^{-7} \text{ cm/sec}} = 3.05 \times 10^8 \text{ sec}$$



The thickness of barrier soil with a permeability of 1×10^{-5} cm/sec that is equivalent to the proposed 12" layer of compacted clay is determined as follows:

$$\text{Thickness (s)} = \text{Time of Travel (t)} \times \text{Velocity of Travel (k)}$$

$$\begin{aligned} t &= 3.05 \times 10^8 \text{ sec (as determined above)} \\ k &= 1 \times 10^{-5} \text{ cm/sec} \end{aligned}$$

Thus:

$$\begin{aligned} s &= (3.05 \times 10^8 \text{ sec})(1 \times 10^{-5}) \\ s &= 3,050 \text{ cm} = 1,200 \text{ inches} \end{aligned}$$

Since the proposed clay layer is equivalent to 1,200 inches of barrier soil with a permeability of 1×10^{-5} cm/sec and this thickness is much greater than the required 18 inch thickness, it is anticipated that the proposed layer will minimize infiltration to a greater degree than 18 inches of barrier soil with a permeability of 1×10^{-5} cm/sec. Thus, the proposed clay layer is an acceptable alternative.

Handwritten signature and date 4-29-93.



England-Thims & Miller, Inc.

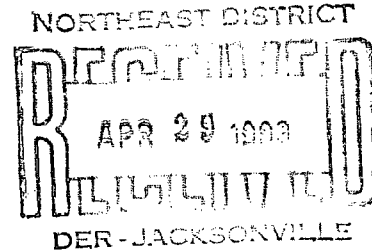
Consulting & Design Engineers
3131 St. Johns Bluff Road So. Jacksonville, FL 32246
904-642-8990

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.

April 29, 1993

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



Reference: Trail Ridge Landfill, Inc.
Permit No. SC16-184444 (Modification Request), Specific Condition 34
ET&M No. E92-148

Dear Ms. Nogas:

In accordance with Rule 17-4.080(2), F.A.C. and on behalf of Trail Ridge Landfill, Inc., we hereby request a minor modification of the subject permit. A minor modification fee of \$250.00 is submitted in accordance with Rule 17-4.050(4)(p)5., F.A.C.

1. As stated in our meeting on April 16, 1993, portions of the side slope units in Phase IA and Phase IB have received final waste placement. In accordance with Specific Condition 34 of the subject permit, "The final cap and cover system including permanent vegetation shall be placed over the entire surface of each completed solid waste disposal exterior side slope unit within 180 days after final waste placement". Further, the Specific Condition states that "An exterior side slope unit is that area between the toe of the slope and intermediate benches or terraces, or that area between two intermediate benches or terraces in which final waste deposition has occurred".

Although the Specific Condition defines the vertical limits of an exterior side slope unit, the horizontal limits are ambiguously defined. Thus, as discussed in our meeting, we propose that the exterior side slope unit definition be modified as follows:

"An exterior side slope unit is that area defined vertically between the toe of slope and intermediate benches or terraces, or that area between two intermediate benches or terraces, and horizontally between two high points with a downcomer in between in which final waste deposition has occurred."

Ms. Mary C. Nogas, P.E.
Waste Management Section

April 29, 1993
Page 2

Reference: Trail Ridge Landfill, Inc.

2. The attached Side Slope Unit Closure Plan, dated April 23, 1993, was prepared to delineate the exterior side slope units for the subject facility. It is proposed to use this Side Slope Unit Closure Plan for future closures. Thus, we request that the permit be modified to include this plan.
3. Upon the clarification of an exterior side slope unit, the first exterior side slope units (5 and 6) were estimated to be complete on March 16, 1993. This estimate is based on the January 17, 1993 aerial survey and the landfill filling sequence in Phases IA and IB. Thus, these units must have final cover in place by September 11, 1993. However, since these are the first side slope units to be closed and this initial closure requires additional time for efforts such as; developing a QA/QC Plan, locating and obtaining approval of a clay borrow source, and establishing a protocol with the City of Jacksonville to eliminate the need for future extensions. We request an extension of 90 days until December 9, 1993 for the completion of this initial closure.

The attached Side Slope Unit Closure Plan, dated April 23, 1993, was developed to delineate the exterior side slope units. During the initial closure, it is anticipated that side slope units 5, 6, 7, and 9 will be closed. Following the initial closure for which we are requesting this extension, it is anticipated that future side slope units will be closed within the required 180 days.

Should you have any questions, please do not hesitate to contact me or Juanitta Clem.

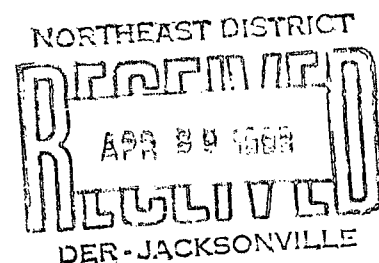
Sincerely,

ENGLAND, THIMS & MILLER, INC.


Douglas C. Miller, P.E.
Vice President

cc: Greg Mathes
David Salyers
Jim Lukens

Attachment: Drawing No. 1
Modification Fee



TRAIL RIDGE LANDFILL, INC.

5110 U.S. HWY. 301
P. O. BOX 548
BALDWIN, FL 32234



GLOBAL CASH MANAGEMENT
Mellon Bank
Mellon Bank N.A.
Pittsburgh, PA

00276

APR 28, 1993

8-26
430

PAY SEVEN HUNDRED FIFTY AND 00/100***** DOLLARS \$ 750.00

TO
THE
ORDER
OF

DEPARTMENT OF ENVIRONMENTAL REGULATION

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

211226

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from TRAIL RIDGE LANDFILL, INC. Date 4-30-93
5110 U.S. HWY. 301
Address P.O. BOX 548 BALDWIN FL 32234 Dollars \$ 750.00
TRAIL RIDGE LANDFILL, INC.
Applicant Name & Address P.O. BOX 6987 JACKSONVILLE FL 32236
Source of Revenue TRAIL RIDGE L/F MINOR MODIFICATION
Revenue Code 001055 CK#00276 Application Number SC16-230403
SC16-230404
SC16-230405

By Brenda Deavers

DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

TO: _____
TO: _____
TO: _____
TO: _____

NORTHEAST DISTRICT - JACKSONVILLE

TO: FILES

THROUGH: MARY C. NOGAS, P. E.

FROM: MARK CADENHEAD

DATE: APRIL 23, 1993

SUBJECT: REVIEW MEMORANDUM
TRAIL RIDGE LANDFILL
CERTIFICATION OF CONSTRUCTION, PHASE II B
DUVAL COUNTY - SOLID WASTE

Post-It™ brand fax transmittal memo 7671		# of pages ▶ 2
To	Juanitta Clem	
From	M. Cadenhead	
Co.	ETM	
Co.	FDER	
Dept.	Phone #	
Fax #	(904) 646-9485	
Fax #	(904) 448-4320	

X 366

The following comments are a result of a review of the Construction Quality Assurance Monitoring of the Geosynthetic Lining System.

1. The following comments concern the Seaming Log and the As-Built drawing for the Secondary Liner for Cell IIB:

a. S79, which is shown in the log to connect to S211, does not appear on the As-Built drawing.

b. S449/S441 is not shown in the Seaming Log (extrusion).

2. The following comments refer to the Air Pressure Test Log and the As-Built drawing for the Secondary Liner for Cell IIB:

a. The As-Built does not clearly show the extrusion weld from 0' to 6' for S175/S176.

b. Full seam extrusion noted in the log is not shown on the As-Built for S391/S392. If S391/S392 is not a full extruded weld, was it air pressure tested in the area not extruded?

c. The following welds appear as extruded on the As-Built but do not match the normal convention used and show an air pressure test: S435/S443, S436/S444, S439/S447, S440/S448 and S441/S449. Please indicate the type seam used and whether or not an air pressure test was performed.

3. The following comments concern the Seaming Log and the As-Built drawing for the Primary Liner for Cell IIB:

a. P148/P149 from 246' to 288' is not shown in the log.

b. P172/P174 is not logged.

4. The following comments concern the Air Pressure Test Log and the As-Built drawing for the Primary Liner for Cell IIB:

a. P155/P156 from 133' to end was not listed in the Log.

b. P156/P158 from 133' to 145' of extruded weld is not shown on the As-Built.

c. P230/P231 from 143' to 155' does not show an extruded weld in the As-Built as noted in the Log; the Field Sketch also does not reflect that there is an extruded seam.

d. P232/P318 from 155' to 212' of extruded seam is not shown on the As-Built although it is shown in the Field Sketch.

e. P321/P322 was not logged in the Air Pressure Test log nor is it clear if the entire seam was extruded.

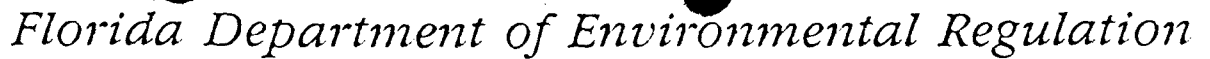
f. P363/P366 does not show that the seam was Air Pressure Tested.

g. P370/P371: Was the air pressure test actually performed as shown in the log?

h. The following comments concern confusion resulting from a change in the convention used by the new QA inspector beginning on page 9 or 11 of the Seaming Log:

Please determine if "end" means to an extruded seam or the entire length of the seam.

Please define where "0'" is for all the panels listed. The previous convention for 0' was from the North end of the cell.



Carol M. Browner, Secretary

cc: Files

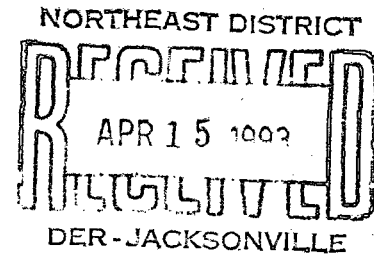
Trail Ridge Landfill, Inc.
5110 U.S. Highway 301
P.O. Box 548
Baldwin, Florida 32234
904/289-9100



A Waste Management Company

April 14, 1993

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



**Re: Trail Ridge Landfill, SC16-184444
Water Quality Data
First Quarter, 1993**

Dear Ms. Nogas,

Two copies of the water quality data are hereby submitted in accordance with the above referenced permit. The samples were collected February 8 through 11 and subsequently analyzed by Environmental Monitoring Laboratories (EML).

This submittal is organized into three sections as follows:

- Section 1 contains the analytical and field measurements presented on the Parameter Monitoring Report form.
- Section 2 contains the report forms from the analytical laboratory. FDER drinking water standards/criteria are noted on these forms. Included with these reports is additional information from the laboratory intended to facilitate data interpretation. This information includes method detection limits and dilution factors.
- Section 3 contains shallow, intermediate and deep groundwater surface contour maps.

As a part of EML's laboratory analysis they were requested to provide a "Plus Analysis" for this set of data. A "Plus Analysis" identifies all peaks greater than the EPA specified detection limit for the analytical method. EML was unable to provide this information since the volatile organic compounds were analyzed using Gas Chromatographic (GC) methodology. GC methodology does not allow for identification of these peaks, since it does not look at the mass spectra of compounds found in the sample.

Our summary of the data is as follows:

- Turbidity exceeded the Florida Primary Drinking Water Standard (FPDWS) in most sample points, including the background.
- pH was low in most sampling points, including the background.

- Iron exceeded the Florida Secondary Drinking Water Standard (FSDWS) in most sample points, including the background.
- Chromium and lead exceeded the FPDWS in B-11I. This, however, appears normal, given historical results for this well. The elevated levels are probably attributable to sediment in the water sample, as total dissolved solids and turbidity were high. Because of the high sediment content, a "filtered" sample was collected. Neither chromium or lead was detected in the filtered sample.
- Toluene was detected at low levels in MW19S, 25S, 27S and the field blank. It is unlikely that detection of those parameters is a result of landfill activities. We will continue to monitor these levels in upcoming monitoring events. We will also investigate other sources including onsite construction, sampling protocol, and Well Wizard installation.

Should you have any questions regarding this submittal please contact David Salyers at 904/289-9100.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Greg Mathes', with a long horizontal flourish extending to the right.

Greg Mathes
Division President and General Manager

cc: Scott McCallister
Chris Pearson, City of Jacksonville
David Salyers

P 771 975 696

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

PS Form 3800, June 1985

Sent to	
Street and No.	
P.O., State and ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt Fee will provide you the signature of the person delivered to and the date of delivery.

I also wish to receive the following services (for an extra fee):

- ☐ Addressee's Address
- ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

DER-JACKSONVILLE

4a. Article Number

771975696

Jim Lukens
Trail Ridge LF
POB 4548
Baldwin FL 32234

4b. Service Type

- | | |
|---------------------------------------|---|
| ☐ Registered | ☐ Insured |
| ☐ Certified | ☐ COD |
| ☐ Express Mail | ☐ Return Receipt for Merchandise |

7. Date of Delivery

4/6/93

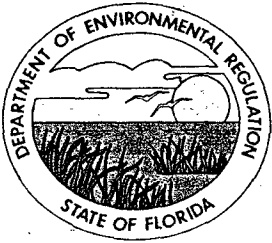
5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

M. J. Mills

54



Florida Department of Environmental Regulation

Northeast District • Suite B200, 7825 Baymeadows Way • Jacksonville, Florida 32256-7577

Lawton Chiles, Governor

Virginia B. Wetherell, Secretary

April 14, 1993

CERTIFIED - RETURN RECEIPT

Mr. Jim Lukens
Trail Ridge Landfill, Inc.
Post Office Box 548
Baldwin, Florida 32234

Dear Mr. Lukens:

Trail Ridge Landfill
Duval County - Solid Waste

This letter is a follow-up to an inspection by Department personnel on March 23, 1993.

The following minor problem at the Landfill needs to be addressed before the next inspection: windblown litter needs to be controlled in the trees northeast of the waste cell.

If you have any questions, please contact Neal Newton at the letterhead address or telephone (904)448-4320.

Sincerely,

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

NK.
MCN:nnl



England-Thims & Miller, Inc.

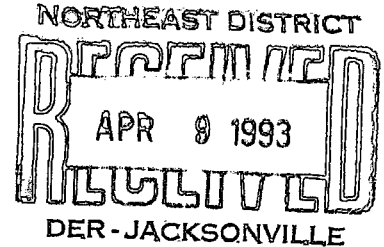
Consulting & Design Engineers
3131 St. Johns Bluff Road So. Jacksonville, FL 32246
904-642-8990

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.

April 9, 1993

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



Reference: Trail Ridge Landfill
FDER Permit No. SC16-184444
ET&M No. E91-156-2 (Certification File)

Dear Ms. Nogas:

Please find herein a supplemental letter report from GeoSyntec Consultants regarding the Construction Quality Assurance for the synthetic liner system of Phase IIB at the subject facility. This report provides clarification on several items listed in the certification documents for Phase IIB.

Should you have any questions, please do not hesitate to contact me. We look forward to receipt of the Department's written authorization to accept Class I solid waste in Phase IIB at Trail Ridge Landfill.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

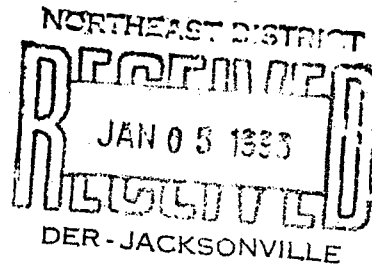
Douglas C. Miller, P.E.
Vice President

cc: Luke DeBock
Greg Mathes
Jim Lukens

Trail Ridge Landfill, Inc.
5110 U.S. Highway 301
P.O. Box 548
Baldwin, Florida 32234
904/289-9100



A Waste Management Company



December 15, 1992

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

Re: Trail Ridge Landfill
Permit #SC16-184444

Dear Ms. Nogas,

In accordance with specific condition #37 of the above referenced permit a detailed chemical characterization of a representative sample of the leachate was performed. The sample was taken within six months of waste acceptance and analyzed by the Environmental Monitoring Laboratory.

A copy of the analytical report is submitted for your review. Following your review, we understand a routine sampling schedule and analytical list will be established by permit modification.

Please contact Jim Lukens at 289-9100 if you have any questions concerning the results on in establishing the permit modification.

Sincerely,

Tom Nelson
General Manager

cc: Jim Lukens



WMI ENVIRONMENTAL MONITORING LABORATORIES, INC

CLIENT REPORT

NORTHEAST
JAN 05 1993
Page
DER-JACKSONVILLE

Site: 446 - Trail Ridge Landfill, Inc.

5110 US Highway 301
Baldwin FL 32234

Sample Point: TRLC01

Sample Type: LEACHATE

Sample Number: AF9522

ENS: 92-13030

MP: 446923

REV: 00

Sampled: 2-NOV-1992

Received: 3-NOV-1992

Reported: 25-NOV-1992

Analyte	Result	EML RL	Units	Comments	Method
FIELD DATA:					
PH FIELD	6.68		PH UNITS		FDPHSING01
SPECIFIC CONDUCTANCE FIELD	8680.		UMHOS/CM		FDSPCOND01
WATER TEMPERATURE IN DEGREES CELSIUS	24.4		DEGREES C		FDXTEMP01
CHEMICAL METHODS & ROBOTICS:					
CYANIDE, TOTAL	ND	0.020	MG/L		CRCNTTLX01
INORGANICS:					
ANTIMONY-TOTAL	ND	250.000	UG/L	DL	INICPTOTSB
ARSENIC-TOTAL	13.7	5.000	UG/L		INGFAATOAS
BERYLLIUM-TOTAL	ND	25.000	UG/L	DL	INICPTOTBE
CADMIUM-TOTAL	ND	25.000	UG/L	DL	INICPTOTCD
CHROMIUM-TOTAL	ND	50.000	UG/L	DL	INICPTOTCR
COPPER-TOTAL	ND	125.000	UG/L	DL	INICPTOTCU
LEAD-TOTAL	ND	5.000	UG/L		INGFAATOPB
MERCURY-TOTAL	.20	0.200	UG/L		INCVAATOHG
NICKEL-TOTAL	ND	200.000	UG/L	DL	INICPTOTNI
SELENIUM-TOTAL	ND	5.000	UG/L		INGFAATOSE
SILVER-TOTAL	31.3	10.000	UG/L		INICPTOTAG
THALLIUM-TOTAL	ND	10.000	UG/L		INGFAATOTL
SEMI-VOLATILE ORGANICS:					
1,2,4-TRICHLOROBENZENE	ND	140.000	UG/L	SU	SVMS1BNA06
1,2-DICHLOROBENZENE	ND	140.000	UG/L	SU	SVMS1BNA06
1,2-DIPHENYLHYDRAZINE	ND	140.000	UG/L	SU	SVMS1BNA06
1,3-DICHLOROBENZENE	ND	140.000	UG/L	SU	SVMS1BNA06
1,4-DICHLOROBENZENE	ND	140.000	UG/L	SU	SVMS1BNA06
2,4,6-TRICHLOROPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
2,4-DICHLOROPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
2,4-DIMETHYLPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
2,4-DINITROPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
2,4-DINITROTOLUENE	ND	140.000	UG/L	SU	SVMS1BNA06
2,6-DINITROTOLUENE	ND	140.000	UG/L	SU	SVMS1BNA06
2-CHLORONAPHTHALENE	ND	140.000	UG/L	SU	SVMS1BNA06
2-CHLOROPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
2-NITROPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
3,3'-DICHLOROBENZIDINE	ND	140.000	UG/L	SU	SVMS1BNA06
4,4'-DDD	ND	0.240	UG/L	NQ	SVGC1PTP01
4,4'-DDE	ND	0.100	UG/L		SVGC1PTP01
4,4'-DDT	ND	0.240	UG/L	NQ	SVGC1PTP01
4,6-DINITRO-2-METHYLPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
4-BROMOPHENYL-PHENYL ETHER	ND	140.000	UG/L	SU	SVMS1BNA06
4-CHLORO-3-METHYLPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
4-CHLOROPHENYL-PHENYL ETHER	ND	140.000	UG/L	SU	SVMS1BNA06
4-NITROPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
ACENAPHTHENE	ND	140.000	UG/L	SU	SVMS1BNA06
ACENAPHTHYLENE	ND	140.000	UG/L	SU	SVMS1BNA06
ALDRIN	ND	0.400	UG/L		SVGC1PTP01
ALPHA-BHC	ND	0.360	UG/L		SVGC1PTP01

NA = Not Analyzed

ND = Not Detected

TBK = Trip Blank

Item	Additional Comment Explanations (NQ/DL)
ANTIMONY-TOTAL	Dilution factor 5 applied.
BERYLLIUM-TOTAL	Dilution factor 5 applied.
CADMIUM-TOTAL	Dilution factor 5 applied.
CHROMIUM-TOTAL	Dilution factor 5 applied.
COPPER-TOTAL	Dilution factor 5 applied.
NICKEL-TOTAL	Dilution factor 5 applied.
SVGC1PTP01	Dilution factor 4 applied.
SVMS1BNA06	Dilution factor 14 applied.
4,4'-DDD	HIGH BACKGROUND INTERFERENCE FOR THESE ANALYTES MAKES QUANTITATION SUSPECT.
4,4'-DDT	HIGH BACKGROUND INTERFERENCE FOR THESE ANALYTES MAKES QUANTITATION SUSPECT.



WMI ENVIRONMENTAL MONITORING LABORATORIES, INC

CLIENT REPORT

Site: 446 - Trail Ridge Landfill, Inc.

5110 US Highway 301
Baldwin FL 32234Sample Point: TRLC01
Sample Type: LEACHATE
Sample Number: AF9522ENS: 92-13030
MP: 446923
REV: 00Sampled: 2-NOV-1992
Received: 3-NOV-1992
Reported: 25-NOV-1992

Analyte	Result	EML RL	Units	Comments	Method
ANTHRACENE	ND	140.000	UG/L	SU	SVMS1BNA06
AROCLOR-1016	ND	4.000	UG/L		SVGC1PTP01
AROCLOR-1221	ND	4.000	UG/L		SVGC1PTP01
AROCLOR-1232	ND	4.000	UG/L		SVGC1PTP01
AROCLOR-1242	ND	3.840	UG/L		SVGC1PTP01
AROCLOR-1248	ND	4.000	UG/L		SVGC1PTP01
AROCLOR-1254	ND	3.920	UG/L		SVGC1PTP01
AROCLOR-1260	ND	1.000	UG/L		SVGC1PTP01
BENZIDINE	ND	140.000	UG/L	SU	SVMS1BNA06
BENZO[A]PYRENE	ND	140.000	UG/L	SU	SVMS1BNA06
BENZO[B]FLUORANTHENE	ND	140.000	UG/L	SU	SVMS1BNA06
BENZO[G,H,I]PERYLENE	ND	140.000	UG/L	SU	SVMS1BNA06
BENZO[K]FLUORANTHENE	ND	140.000	UG/L	SU	SVMS1BNA06
BENZ[A]ANTHRACENE	ND	140.000	UG/L	SU	SVMS1BNA06
BETA-BHC	ND	0.400	UG/L	BL	SVGC1PTP01
BIS(2-CHLOROETHOXY)METHANE	ND	140.000	UG/L	SU	SVMS1BNA06
BIS(2-CHLOROETHYL)ETHER	ND	140.000	UG/L	SU	SVMS1BNA06
BIS(2-CHLOROISOPROPYL)ETHER	ND	140.000	UG/L	SU	SVMS1BNA06
BIS(2-ETHYLHEXYL)PHTHALATE	ND	140.000	UG/L	SU	SVMS1BNA06
BUTYLBENZYLPHthalATE	ND	140.000	UG/L	SU	SVMS1BNA06
CHLORDANE	ND	3.240	UG/L		SVGC1PTP01
CHRYSENE	ND	140.000	UG/L	SU	SVMS1BNA06
DELTA-BHC	ND	0.200	UG/L		SVGC1PTP01
DI-N-BUTYLPHthalATE	ND	140.000	UG/L	SU	SVMS1BNA06
DI-N-OCTYLPHthalATE	ND	140.000	UG/L	SU	SVMS1BNA06
DIBENZ[A,H]ANTHRACENE	ND	140.000	UG/L	SU	SVMS1BNA06
DIELDRIN	ND	0.280	UG/L		SVGC1PTP01
DIETHYLPHthalATE	ND	140.000	UG/L	SU	SVMS1BNA06
DIMETHYLPHthalATE	ND	140.000	UG/L	SU	SVMS1BNA06
ENDOSULFAN I	ND	0.200	UG/L		SVGC1PTP01
ENDOSULFAN II	ND	0.240	UG/L	NQ	SVGC1PTP01
ENDOSULFAN SULFATE	ND	0.800	UG/L	NQ	SVGC1PTP01
ENDRIN	ND	0.240	UG/L	NQ	SVGC1PTP01
ENDRIN ALDEHYDE	ND	0.400	UG/L	NQ	SVGC1PTP01
FLUORANTHENE	ND	140.000	UG/L	SU	SVMS1BNA06
FLUORENE	ND	140.000	UG/L	SU	SVMS1BNA06
HEPTACHLOR	ND	0.200	UG/L		SVGC1PTP01
HEPTACHLOR EPOXIDE	ND	0.500	UG/L		SVGC1PTP01
HEXACHLOROBENZENE	ND	140.000	UG/L	SU	SVMS1BNA06
HEXACHLOROBUTADIENE	ND	140.000	UG/L	SU	SVMS1BNA06
HEXACHLOROCYCLOPENTADIENE	ND	560.000	UG/L	SU	SVMS1BNA06
HEXACHLOROETHANE	ND	140.000	UG/L	SU	SVMS1BNA06
INDENO[1,2,3-CD]PYRENE	ND	140.000	UG/L	SU	SVMS1BNA06
ISOPHORONE	ND	140.000	UG/L	SU	SVMS1BNA06
LINDANE (GAMMA-BHC)	ND	0.160	UG/L		SVGC1PTP01
N-NITROSODI-N-PROPYLAMINE	ND	140.000	UG/L	SU	SVMS1BNA06
N-NITROSODIMETHYLAMINE	ND	140.000	UG/L	SU	SVMS1BNA06
N-NITROSODIPHENYLAMINE	ND	140.000	UG/L	NN, SU	SVMS1BNA06
NAPHTHALENE	ND	140.000	UG/L	SU	SVMS1BNA06
NITROBENZENE	ND	140.000	UG/L	SU	SVMS1BNA06
PENTACHLOROPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
PHENANTHRENE	ND	140.000	UG/L	SU	SVMS1BNA06
PHENOL	2100.	140.000	UG/L	SU	SVMS1BNA06

NA = Not Analyzed

ND = Not Detected

TBK = Trip Blank

Item	Additional Comment Explanations (NQ/DL)
ENDOSULFAN II ENDOSULFAN SULFATE	FLORISIL CLEANUP CAUSES LOW RECOVERY OF THIS ANALYTE. FLORISIL CLEANUP CAUSES LOW RECOVERY OF THIS ANALYTE. HIGH BACKGROUND INTERFERENCE FOR THESE ANALYTES MAKES QUANTITATION SUSPECT.
ENDRIN	HIGH BACKGROUND INTERFERENCE FOR THESE ANALYTES MAKES QUANTITATION SUSPECT.
ENDRIN ALDEHYDE	FLORISIL CLEANUP CAUSES LOW RECOVERY OF THIS ANALYTE. HIGH BACKGROUND INTERFERENCE FOR THESE ANALYTES MAKES QUANTITATION SUSPECT.



WMI ENVIRONMENTAL MONITORING LABORATORIES, INC

CLIENT REPORT

Site: 446 - Trail Ridge Landfill, Inc.

5110 US Highway 301
Baldwin FL 32234Sample Point: TRLC01
Sample Type: LEACHATE
Sample Number: AF9522ENS: 92-13030
MP: 446923
REV: 00Sampled: 2-NOV-1992
Received: 3-NOV-1992
Reported: 25-NOV-1992

Analyte	Result	EML RL	Units	Comments	Method
PYRENE	ND	140.000	UG/L	SU	SVMS1BNA06
TOXAPHENE	ND	3.720	UG/L		SVGC1PTP01
VOLATILE ORGANICS:					
1,1,1-TRICHLOROETHANE	ND	50.000	UG/L		VOGCAAN203
1,1,2,2-TETRACHLOROETHANE	ND	50.000	UG/L		VOGCAAN203
1,1,2-TRICHLOROETHANE	ND	25.000	UG/L		VOGCAAN203
1,1-DICHLOROETHANE	130.	50.000	UG/L		VOGCAAN203
1,1-DICHLOROETHENE	ND	50.000	UG/L		VOGCAAN203
1,2-DICHLOROBENZENE	ND	50.000	UG/L		VOGCAAN203
1,2-DICHLOROBENZENE	ND	50.000	UG/L	PX	VOGCBAN101
1,2-DICHLOROETHANE	ND	50.000	UG/L		VOGCAAN203
1,2-DICHLOROPROPANE	ND	50.000	UG/L		VOGCAAN203
1,3-DICHLOROBENZENE	ND	50.000	UG/L		VOGCAAN203
1,3-DICHLOROBENZENE	ND	50.000	UG/L	PX	VOGCBAN101
1,4-DICHLOROBENZENE	ND	50.000	UG/L		VOGCAAN203
1,4-DICHLOROBENZENE	ND	50.000	UG/L	PX	VOGCBAN101
2-CHLOROETHYL VINYL ETHER	ND	50.000	UG/L	ST	VOGCAAN203
ACROLEIN	ND	250.000	UG/L		VOMSDAA101
ACRYLONITRILE	ND	250.000	UG/L		VOMSDAA101
BENZENE	ND	35.000	UG/L	PX	VOGCBAN101
BROMODICHLOROMETHANE	ND	50.000	UG/L		VOGCAAN203
BROMOFORM	ND	50.000	UG/L		VOGCAAN203
BROMOMETHANE	ND	50.000	UG/L		VOGCAAN203
CARBON TETRACHLORIDE	ND	50.000	UG/L		VOGCAAN203
CHLOROBENZENE	ND	50.000	UG/L		VOGCAAN203
CHLOROBENZENE	ND	50.000	UG/L	PX	VOGCBAN101
CHLOROETHANE	ND	50.000	UG/L		VOGCAAN203
CHLOROFORM	ND	50.000	UG/L		VOGCAAN203
CHLOROMETHANE	ND	50.000	UG/L		VOGCAAN203
CIS-1,3-DICHLOROPROPENE	ND	50.000	UG/L		VOGCAAN203
DIBROMOCHLOROMETHANE	ND	50.000	UG/L		VOGCAAN203
DICHLORODIFLUOROMETHANE	ND	50.000	UG/L		VOGCAAN203
ETHYLBENZENE	ND	50.000	UG/L	PX	VOGCBAN101
METHYLENE CHLORIDE	69.	50.000	UG/L		VOGCAAN203
TETRACHLOROETHENE	ND	50.000	UG/L		VOGCAAN203
TOLUENE	740.	50.000	UG/L	PX	VOGCBAN101
TRANS-1,2-DICHLOROETHENE	ND	25.000	UG/L		VOGCAAN203
TRANS-1,3-DICHLOROPROPENE	ND	50.000	UG/L		VOGCAAN203
TRICHLOROETHENE	ND	50.000	UG/L		VOGCAAN203
TRICHLOROFLUOROMETHANE	ND	50.000	UG/L		VOGCAAN203
VINYL CHLORIDE	ND	50.000	UG/L		VOGCAAN203

NA = Not Analyzed

ND = Not Detected

TBK = Trip Blank

Item	Additional Comment Explanations (NQ/DL)
VOGCAAN203	Dilution factor 50 applied.
VOGCBAN101	Sample foamed therefore dilution was necessary.
	Dilution factor 50 applied.
VOMSDAA101	Sample foamed therefore dilution was necessary.
	Dilution factor 25.00 applied.
	Sample foamed therefore dilution was necessary.



WMI ENVIRONMENTAL MONITORING LABORATORIES, INC

CLIENT REPORT

Site: 446 - Trail Ridge Landfill, Inc.

5110 US Highway 301
Baldwin FL 32234

Sample Point: TBK-TRLC01

Sample Type: LEACHATE

Sample Number: AF9522

ENS: 92-13030

MP: 446923

REV: 00

Sampled: 2-NOV-1992

Received: 3-NOV-1992

Reported: 25-NOV-1992

Analyte	Result	EML RL	Units	Comments	Method
VOLATILE ORGANICS:					
1,2-DICHLOROBENZENE	ND	1.000	UG/L		VOGCBAN101
1,3-DICHLOROBENZENE	ND	1.000	UG/L		VOGCBAN101
1,4-DICHLOROBENZENE	ND	1.000	UG/L		VOGCBAN101
ACROLEIN	ND	10.000	UG/L	PY	VOMSDAA101
ACRYLONITRILE	ND	10.000	UG/L	PY	VOMSDAA101
BENZENE	ND	1.000	UG/L		VOGCBAN101
CHLOROBENZENE	ND	1.000	UG/L		VOGCBAN101
ETHYLBENZENE	ND	1.000	UG/L		VOGCBAN101
TOLUENE	ND	1.000	UG/L		VOGCBAN101

NA - Not Analyzed

ND - Not Detected

TBK - Trip Blank

WMISubcontract To: _____
Environmental Monitoring Laboratories, Inc.**FIELD CHAIN-OF-CUSTODY RECORD**

AquaPak™ PREP	AP1079
AquaPak™ #	AP0404
Date Sealed	9/21/02
YY / MM / DD	
Seal #	0037286
By:	

SITE/FACILITY # 146 SITE NAME: Trait Ridge Landfill, Inc.Sample Point: C17RLC01
Source CodeSAMPLE DATE: - 9/21/02
YY / MM / DDSAMPLE TIME: 11:15
(2400 HR.)MATRIX CODE: CWater.....(W) Leachate.....(C)
Soil.....(S) Other.....(X)

Source Codes:

Well.....(W)	Leachate System.....(C)	Pretreatment Facility.....(P)	River/Stream/Brook.....(R)	Soil.....(S)	Generation Pl.....(G)
Dewatering/Pressure Relief.....(D)	Gas Condensate.....(M)	Influent.....(U)	Lake or Ocean.....(L)	Bottom Sediment.....(B)	Other.....(X)
Surface Water Impoundment.....(I)	Air.....(A)	Effluent.....(T)	Outfall.....(O)	Noise.....(N)	Specify.....

ENS # 92-13030 AquaPak™ CONTENT

SAMPLE I.D.	# OF BOTTLES	BOTTLE TYPE	PRESERVATIVE TYPE	ANALYTES/LAB GROUPS	FILTER Y - N	FIELD COMMENTS	E.M.L. COMMENTS
AF9522-A	01	P	NAOH/COOL 4	DEG C CR	Y N		
AF9522-B	01	P	HNO3	IN	Y N		
AF9522-C	01	P	HNO3	IN	Y N		
AF9522-D	04	G	NONE/COOL 4	DEG C SV	Y N		
AF9522-E	04	G	NONE/COOL 4	DEG C SV	Y N		
AF9522-F	04	G	HCL/COOL 4	DEG C VO	Y N		
AF9522-G	04	G	NONE/COOL 4	DEG C VO	Y N		
AF9522-H	04	G	PH 4-5/COOL 4	DEG C VO	Y N		
AF9522-I	01	G	HCL/COOL 4	DEG C VO	Y N		TC 10/24/92
AF9522-J	01	G	NONE/COOL 4	DEG C VO	Y N		TC 10/24/92
AF9522-K	01	G	PH 4-5/COOL 4	DEG C VO	Y N		TC 10/24/92
					Y N		
					Y N		
					Y N		
					Y N		
					Y N		
					Y N		
					Y N		

CHAIN OF CUSTODY CHRONICLE

1. AquaPak™ Opened By: (print) Jim Delrow Date: 11/12/92 Time: 12:30
Signature: [Signature] Seal #: 37286 Intact: ✓
2400 HR.

I have received these materials in good condition from the above person.

2. Name: _____ Signature: _____
Date: 1/1 Time: 12:30 Remarks: _____
2400 HR.

I have received these materials in good condition from the above person.

3. Name: _____ Signature: _____
Date: 1/1 Time: 12:30 Remarks: _____
2400 HR.

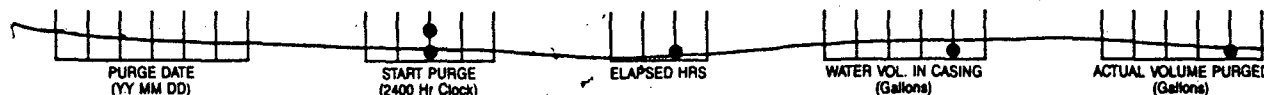
4. AquaPak™/Sub Contr. # 1079 Sealed By: Jim Delrow Date: 11/12/92 Time: 17:40
Signature: [Signature] Seal #: 37632 Intact: ✓
2400 HR.

LAB USE ONLY

Opened By: (Signature) [Signature] Date: 11/13/92 Time: 10:35
AquaPak™/Sub. Contr. # 1079 Temp.°C 2 Seal # 37632 Intact: ✓
2400 HR.

FIELD INFORMATION FORM

PURGING INFORMATION



PURGING AND SAMPLING EQUIPMENT

Purging Equipment Dedicated ☒ Y ☐ NSampling Equipment Dedicated ☒ Y ☐ N

Purging Device	☒ A-Submersible Pump	☐ D-Gas Lift Pump	☐ G-Bailer	X- _____
Sampling Device	☒ B-Peristaltic Pump	☐ E-Venturi Pump	☐ H-Scoop/Shovel	X- _____
	☐ C-Bladder Pump	☐ F-Dipper/Bottle	☐ I-Piston Pump	X- _____
Purging Material	☒ A-Teflon	☐ C-Polypropylene	☐ E-Polyethylene	X- _____
Sampling Material	☒ B-Stainless Steel	☐ D-PVC		X- _____
				X- _____
Tubing-Purging	☒ A-Teflon	☐ D-Polypropylene	☐ F-Silicon	X- _____
Tubing-Sampling	☒ B-Tygon	☐ E-Polyethylene	☐ G-Combination teflon/ Polypropylene	X- _____
	☒ C-Rope X- _____	(SPECIFY)		X- _____
Filtering Devices 0.45 μ :	☒ A-In-line Disposable	☐ B-Pressure	☐ C-Vacuum	

FIELD MEASUREMENTS

Well Elevation	☒ (ft/msl)	Land Surface Elevation	☐ (ft/msl)
Depth to water	☒ (ft)	Depth to water	☐ (ft)
From top of well casing		From land surface	
Groundwater Elevation	☒ (ft/msl)	Groundwater Elevation	☐ (ft/msl)
Well Depth	☒ (ft)	Stickup	☐ (ft)

1st ☒ 6.68 (STD) ph	1st ☒ 8680 μ m/cm at 25° C spec. cond.	Sample Temp. ☒ 24.4 (° C):
2nd ☐ (STD) ph	2nd ☐ μ m/cm at 25° C spec. cond.	☐ (other parameter) ☐ value ☐ units
3rd ☐ (STD) ph	3rd ☐ μ m/cm at 25° C spec. cond.	☐ (other parameter) ☐ value ☐ units
4th ☐ (STD) ph	4th ☐ μ m/cm at 25° C spec. cond.	☐ (other parameter) ☐ value ☐ units

FIELD COMMENTS

Sample Appearance: Dark (if applicable) Odor: Strong Color: Black Turbidity: 63.3
Weather Conditions: Wind Speed 0-5 Direction W Precipitation 0 Outlook Cloudy Light Rain
Specific Comments: TRLC01 = Leachate; Taken from Tank #4

Ph: 6.68

SC: 8680

temp: 24.4

I certify that sampling procedures were in accordance with applicable EPA, State and WMI protocols.

11/2/92 (Date) [Signature] (Signature)Employer: WMN AS

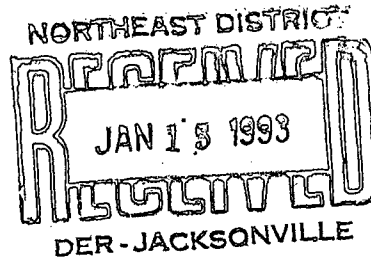
Golder Associates Inc.

9104 Cypress Green Drive, Suite 100
Jacksonville, FL USA 32256
Telephone (904) 448-0605
Fax (904) 448-0703



January 13, 1993

Trail Ridge Landfill
5110 U.S. Highway 301
P.O. Box 548
Baldwin, FL 32234



923-3350

Attn: Mr. Jim Lukens
Site Engineer

RE: EVALUATION OF THE GROUNDWATER MONITORING SYSTEM
GROUNDWATER ELEVATION DATA - 4TH QUARTER 1992
TRAIL RIDGE LANDFILL
JACKSONVILLE, FLORIDA

Gentlemen:

In accordance with specific condition 38b.1 of the Florida Department of Environmental Regulation (FDER) permit for Trail Ridge Landfill, Inc., Golder Associates Inc. (Golder Associates) has prepared a series of groundwater potentiometric maps of the site. These maps were constructed using the potentiometric data collected during the fourth quarter of 1992. The potentiometric data are based on weekly water level measurements from site monitoring wells taken during fourteen (14) individual events conducted between October 9, 1992 and January 7, 1993. The locations of the monitoring wells on site are shown on Figure 1. Individual potentiometric maps have been produced for each of the three hydrogeologic zones within the Surficial Aquifer and for each measurement date (Figures 2 through 43). The data for each of these maps are presented in the accompanying tables (Table 1 - Shallow Zone, Table 2 - Intermediate Zone, and Table 3 - Deep Zone).

This is the fourth and final report on the site's potentiometric data scheduled for submittal to FDER. Previous reports were submitted to FDER on April 15, 1992, July 13, 1992, and October 15, 1992.

General Hydrogeology

The hydrogeologic zones within the Surficial Aquifer are discussed in detail in the hydrogeology section of the permit application. In general, the three hydrogeologic zones monitored at the site include:

- Deep Zone: Approximately 110 to 150 feet below the ground surface. Wells are screened above the Marl Unit. Deep Zone wells are designated with a "D" suffix (e.g. MWB-14D).
- Intermediate Zone: Approximately 50 to 70 feet below the ground surface. Wells are screened in sands that are typically coarser than those that are at shallower depths. Intermediate Zone wells are designated with an "I" suffix (e.g. MWB-14I).

- Shallow Zone: Typically less than 25 feet below the ground surface. Wells are screened across the water table, in a zone that is typically comprised of poorly sorted, fine grained sands with variable silt content. Shallow Zone wells are designated with a "S" suffix (e.g. MWB-14S).

In summary, the conceptual hydrogeologic flow model presented in the permit application consisted of downward groundwater flow from the shallow zone to the deep zone along the western boundary of the landfill, transitioning across the site to upward flow from the deep zone to the shallow zone, along the eastern side of the landfill, where discharge occurs in the wetland areas. This flow model was supported by the potentiometric data collected from the wells that were installed for the site characterization. Also, as in most unconfined systems, it was noted that the site's groundwater flow direction conformed to the slope of the surface topography, with topography sloping and flow direction towards the east.

In the site characterization, the small east-west trending surface water drainage swales, located to the north and the south of the landfill area, were noted as being localized discharge areas for the shallow zone. The localized discharge of groundwater from the shallow zone in these areas resulted in the slight curving of potentiometric contours at the edge of the north and south site boundary. Overall, the effect of the east-west drainage swales on groundwater flow direction beneath the footprint of the landfill was insignificant to overall groundwater flow direction.

Observed Conditions

In general, the potentiometric conditions observed during the monitored period (October 9, 1992 to January 7, 1993) do not vary significantly from the data presented in the site characterization study, nor do they vary significantly from the data collected during the first three quarters of 1992. The data presented on the attached potentiometric maps exhibit consistent groundwater flow direction, west to east, in all three monitoring zones (deep, intermediate, and shallow).

The shallow zone potentiometric contours indicate a dominant easterly flow direction. Equipotential lines are slightly closer towards the eastern side of the landfill, indicating steeper gradients which have resulted from the proximity to discharge areas (the wetlands and the stormwater retention pond). It is noted that the water level in the stormwater retention pond is about 106 feet above Mean Sea Level (MSL). In general, groundwater elevations in the shallow zone varied from approximately 145 feet MSL along the west side of the landfill to approximately 115 feet MSL along the east side of the landfill. Overall, the horizontal gradient is relatively uniform, across the landfill and downgradient to MWB-6S. For the period monitored, there were not any wells in the shallow zone that had water levels above ground surface.

The intermediate zone potentiometric contours indicate an easterly flow direction. In general, groundwater elevations in the intermediate zone varied from approximately 140 feet MSL along the west side of the landfill to approximately 115 to 120 feet MSL along the east side of the landfill. Groundwater elevation along the east side of the landfill is consistently lowest in MWB-13IR which is located at approximately the mid-point (in a north-south direction) of the west side of the stormwater retention pond. Overall, the horizontal gradient across the remainder of the site was consistent. Intermediate zone wells which were observed to flow or have water levels above the ground surface during the period of record included 6I, 17I, and 29I.

The deep zone potentiometric contours indicate a relatively consistent horizontal gradient during the monitored period with flow dominantly towards the east. In general, groundwater elevations in the deep zone varied from approximately 140 feet MSL along the west side of the landfill to approximately 120 feet MSL along the east side of the landfill with apparently a consistent horizontal gradient across the site. Although less pronounced than in the shallow and intermediate zones, there is apparently a slight skew towards the southeast in the easternmost potentiometric contour shown (120 feet MSL). It is possible that this skew is in response to upward leakage to the stormwater retention pond. Deep zone wells which were observed to flow or have water levels above the ground surface during the period of record included 7D and 29D. Fluctuations in the deep zone water levels have been consistent with similar water level changes in the shallow and intermediate zones, indicating that hydraulic interconnection is strong. Average fluctuation in water levels were slightly less in the deep zone (2.4 feet) than in the intermediate and shallow zones (2.7 feet) indicating that the deep zone, while hydraulically connected to the upper zones is less sensitive to seasonal fluctuations in precipitation.

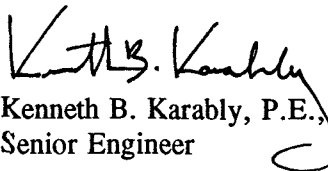
Conclusions and Recommendations

Based upon our review of the enclosed data, along with data from the first three quarters of 1992 (Golder Associates' reports dated April 15, 1992, July 13, 1992, and October 15, 1992) it is evident that the groundwater flow patterns at the Trail Ridge Landfill were consistent over the one-year period monitored, and have not changed significantly since Golder Associates conducted a Phase II hydrogeological investigation at the site in May 1990 and designed the groundwater monitoring system. As mentioned above, the Phase II hydrogeological investigation (contained in the permit application) indicated that the groundwater flow beneath the site was predominantly from the west to the east and that vertical gradients were downward on the west side and generally upward on the east side. The data collected during the third quarter of 1992, and presented here on the attached groundwater potentiometric maps confirms the original hydrogeological conclusions.

The spacing of the shallow monitoring wells is about 450 feet on the north and south sides of the landfill, and about 250 feet on the east side (downgradient). This well spacing is in accordance with FDER guidelines. Two clusters with intermediate and deep monitoring wells (MWB-19 and MWB-27) exist on the north and south sides of the landfill. Based on the flow directions identified by the intermediate and deep potentiometric contour maps, these two well clusters appear to be more than adequate to monitor the intermediate and deep zones north and south of the landfill. Given the spacing and construction of the monitoring wells that are in place, and the groundwater flow conditions that have been established, it is our recommendation that no additional wells are required to be added to the existing groundwater monitoring system.

Very truly yours,

GOLDER ASSOCIATES INC.


Kenneth B. Karably, P.E., P.G.
Senior Engineer


Donald J. Miller, P.Eng.
Associate

KBK/DJM:grd
923-3350.193/#1/grd

TABLE 1

(Page 1 of 2)

GROUNDWATER ELEVATION MEASUREMENTS (10/9/92 TO 1/7/93)
(SHALLOW WELLS)TRAIL RIDGE LANDFILL
JACKSONVILLE, FLORIDA

Well	10/09/92 Water Level Elev. (ft. BTOC) (ft. MSL)	10/16/92 Water Level Elev. (ft. BTOC) (ft. MSL)	10/23/92 Water Level Elev. (ft. BTOC) (ft. MSL)	10/28/92 Water Level Elev. (ft. BTOC) (ft. MSL)	11/05/92 Water Level Elev. (ft. BTOC) (ft. MSL)	11/12/92 Water Level Elev. (ft. BTOC) (ft. MSL)	11/20/92 Water Level Elev. (ft. BTOC) (ft. MSL)
TOC Elev. (ft. MSL)							
B-2SR	146.64	143.16	142.46	142.07	141.83	141.69	141.79
B-3SR	153.49	150.69	149.29	148.51	148.08	147.69	147.63
B-6S	100.00	96.98	96.02	95.60	95.34	95.28	94.89
B-7SR	123.29	118.29	117.59	117.11	116.94	116.74	116.57
B-11SR	120.81	113.91	113.53	112.83	112.15	111.86	110.87
B-12SR	124.63	117.72	117.28	116.98	116.86	116.72	115.95
B-13SR	126.06	116.71	116.38	114.96	114.93	114.56	114.12
B-14SR	126.05	119.33	118.17	116.43	115.90	114.41	114.17
B-16S	144.01	140.17	139.59	139.26	139.12	139.36	138.19
B-17S	138.31	134.31	131.19	132.36	132.17	131.57	131.39
B-18S	134.09	130.37	129.77	129.19	129.17	128.95	128.61
B-19S	127.38	124.24	123.38	122.98	122.78	122.57	122.41
B-20S	121.01	116.63	115.31	115.01	114.73	114.50	113.86
B-21S	122.84	113.98	114.34	113.92	113.60	113.27	112.80
B-22S	126.97	117.05	117.19	116.64	116.31	116.17	115.86
B-23S	124.98	NA	114.73	112.64	113.30	113.10	113.17
B-24S	126.04	122.22	122.64	121.70	121.30	120.86	119.81
B-25S	125.22	121.68	121.82	121.42	120.61	120.31	120.11
B-26S	126.55	123.07	122.97	122.31	121.97	122.16	121.71
B-27S	128.42	125.74	125.76	125.28	125.02	124.84	124.42
B-28S	133.73	130.93	130.03	129.73	129.55	129.83	129.47
B-29S	138.02	135.64	135.10	134.54	133.31	133.62	133.58
B-30S	142.52	140.32	138.68	139.21	138.99	138.14	138.12

TABLE 1

(Page 2 of 2)

GROUNDWATER ELEVATION MEASUREMENTS (10/9/92 TO 1/7/93)
(SHALLOW WELLS)TRAIL RIDGE LANDFILL
JACKSONVILLE, FLORIDA

Well	TOC Elev. (ft. MSL)	11/27/92 Water Level Elev. (ft. BTOC) (ft. MSL)	12/04/92 Water Level Elev. (ft. BTOC) (ft. MSL)	12/11/92 Water Elev. (ft. BTOC) (ft. MSL)	12/18/92 Water Level Elev. (ft. BTOC) (ft. MSL)	12/23/92 Water Level Elev. (ft. BTOC) (ft. MSL)	12/30/92 Water Level Elev. (ft. BTOC) (ft. MSL)	01/07/93 Water Level Elev. (ft. BTOC) (ft. MSL)
B-2SR	146.04	4.68 141.96	4.54 142.10	4.68 141.96	4.18 142.46	5.36 141.28	5.45 141.19	5.32 141.32
B-3SR	153.49	6.99 146.50	6.78 146.71	7.24 146.25	7.34 146.15	7.42 146.07	7.52 145.97	7.78 145.71
B-6S	100.00	4.47 95.53	4.33 95.67	4.40 95.60	5.80 94.20	5.00 95.00	5.04 94.96	4.92 95.08
B-7SR	123.29	6.81 116.48	6.54 116.75	6.77 116.52	7.05 116.24	4.16 119.13	4.20 119.09	7.18 116.11
B-11SR	120.31	9.59 111.22	9.50 111.31	9.68 111.13	9.68 111.13	9.75 111.06	9.88 110.93	9.84 110.97
B-12SR	124.63	8.28 116.35	8.02 116.61	8.32 116.31	8.51 116.12	8.58 116.05	8.66 115.97	8.71 115.92
B-13SR	126.06	12.20 113.86	11.88 114.18	12.40 113.66	12.44 113.62	12.46 113.60	12.61 113.45	12.51 113.55
B-14SR	126.05	10.98 115.07	10.39 115.66	8.85 117.20	8.98 117.07	9.51 116.54	9.61 116.44	10.04 116.01
B-16S	144.01	4.58 139.43	4.44 139.57	5.20 138.81	5.22 138.79	5.24 138.77	5.32 138.69	5.41 138.60
B-17S	138.31	5.98 132.33	5.72 132.59	7.62 130.69	6.58 131.73	6.38 131.93	6.42 131.89	6.45 131.86
B-18S	134.09	5.42 128.67	5.27 128.82	5.88 128.21	6.00 128.09	6.00 128.09	6.09 128.00	5.95 128.14
B-19S	127.38	5.08 122.30	4.91 122.47	5.24 122.14	5.11 122.27	5.40 121.98	5.48 121.90	5.58 121.80
B-20S	121.01	7.15 113.86	6.88 114.13	7.11 113.90	7.31 113.70	7.36 113.65	7.41 113.60	7.42 113.59
B-21S	122.84	10.15 112.69	9.92 112.92	10.22 112.62	10.31 112.53	10.34 112.50	10.44 112.40	10.47 112.37
B-22S	126.97	11.05 115.92	10.74 116.23	11.15 115.82	11.36 115.61	11.35 115.62	11.44 115.53	11.44 115.53
B-23S	124.98	11.57 113.41	11.32 113.66	11.53 113.45	11.64 113.34	11.78 113.20	11.92 113.06	12.11
B-24S	126.04	6.28 119.76	6.10 119.94	6.10 119.94	3.54 122.50	6.68 119.36	6.74 119.30	6.90 119.14
B-25S	125.22	4.98 120.24	4.72 120.50	5.16 120.06	5.76 119.46	5.92 119.30	6.01 119.21	6.06 119.16
B-26S	126.55	4.78 121.77	4.54 122.01	4.06 122.49	5.18 121.37	5.33 121.22	5.38 121.17	5.35 121.20
B-27S	128.42	3.43 124.99	3.33 125.09	3.48 124.94	3.88 124.54	4.03 124.39	4.11 124.31	3.98 124.44
B-28S	133.73	3.70 130.03	3.54 130.19	3.62 130.11	4.04 129.69	4.20 129.53	4.22 129.51	3.99 129.74
B-29S	138.02	3.18 134.84	3.02 135.00	3.08 134.94	3.60 134.42	3.78 134.24	3.78 134.24	3.44 134.58
B-30S	142.52	3.18 139.34	3.00 139.52	3.23 139.29	3.61 138.91	3.78 138.74	3.83 138.69	3.68 138.84

TABLE 2

GROUNDWATER ELEVATION MEASUREMENTS (10/9/92 TO 1/7/93)
(INTERMEDIATE WELLS)

TRAIL RIDGE LANDFILL
JACKSONVILLE, FLORIDA

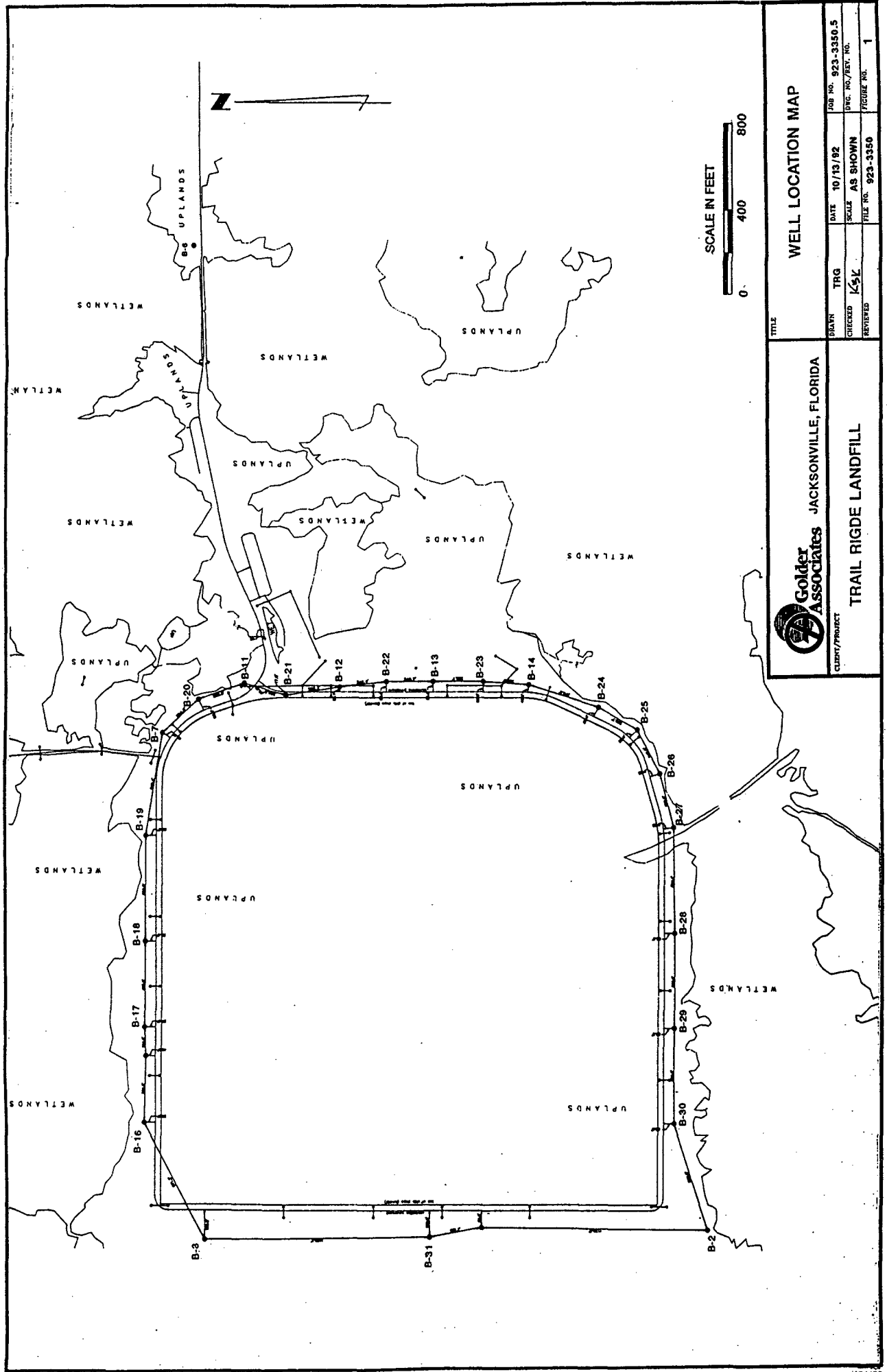
Well	10/09/92 Water Level Elev. (ft. BTOC) (ft. MSL)	10/16/92 Water Level Elev. (ft. BTOC) (ft. MSL)	10/23/92 Water Level Elev. (ft. BTOC) (ft. MSL)	10/28/92 Water Level Elev. (ft. BTOC) (ft. MSL)	11/05/92 Water Level Elev. (ft. BTOC) (ft. MSL)	11/12/92 Water Level Elev. (ft. BTOC) (ft. MSL)	11/20/92 Water Level Elev. (ft. BTOC) (ft. MSL)
B-2I	145.73 4.74 140.99	140.52 5.21 140.52	140.15 5.58 140.15	139.93 5.80 139.93	139.81 5.92 139.81	139.82 5.91 139.82	139.89 5.84 139.89
B-3I	152.50 9.48 143.02	142.50 10.00 142.50	142.08 10.42 142.08	141.87 10.63 141.87	141.74 10.76 141.74	140.86 11.64 140.86	140.76 11.74 140.76
B-6I	99.67 0.00 99.67	99.67 0.00 99.67	99.67 0.00 99.67	99.67 0.00 99.67	99.67 0.00 99.67	98.27 1.40 98.27	97.99 1.68 97.99
B-7I	121.53 1.17 120.36	119.98 1.55 119.98	119.18 2.35 119.18	118.68 2.85 118.68	118.58 2.95 118.58	118.45 3.08 118.45	118.16 3.37 118.16
B-11I	120.43 1.23 119.20	118.89 1.54 118.89	117.93 2.50 117.93	117.43 3.00 117.43	117.26 3.17 117.26	117.22 3.21 117.22	116.93 3.50 116.93
B-12I	124.72 5.37 119.35	119.18 5.54 119.18	118.12 6.60 118.12	117.65 7.07 117.65	117.63 7.09 117.63	117.24 7.48 117.24	117.14 7.58 117.14
B-13IR	125.98 16.66 109.32	110.56 15.42 110.56	108.40 17.58 108.40	108.10 17.88 108.10	108.11 17.87 108.11	107.08 18.90 107.08	107.28 18.70 107.28
B-14IR	125.92 6.95 118.97	117.80 8.12 117.80	116.40 9.52 116.40	115.91 10.01 115.91	116.01 9.91 116.01	115.10 10.82 115.10	115.00 10.92 115.00
B-17I	138.43 0.00 138.43	138.43 0.00 138.43	138.43 0.00 138.43	138.43 0.00 138.43	137.50 0.93 137.50	136.95 1.48 136.95	136.65 1.78 136.65
B-18I	127.94 4.00 123.94	123.44 4.50 123.44	122.83 5.11 122.83	122.52 5.42 122.52	122.36 5.58 122.36	122.30 5.64 122.30	122.22 5.72 122.22
B-25I	124.03 3.28 120.75	121.18 2.85 121.18	119.73 4.30 119.73	119.85 4.18 119.85	119.74 4.29 119.74	119.50 4.53 119.50	119.45 4.58 119.45
B-27I	128.63 2.64 125.99	126.40 2.23 126.40	125.76 2.87 125.76	125.48 3.15 125.48	125.32 3.31 125.32	126.26 2.37 126.26	125.19 3.44 125.19
B-29I	138.08 0.00 138.08	137.17 0.91 137.17	136.78 1.30 136.78	136.55 1.53 136.55	136.58 1.50 136.58	137.18 0.90 137.18	136.40 1.68 136.40
Well	11/27/92 Water Level Elev. (ft. BTOC) (ft. MSL)	12/04/92 Water Level Elev. (ft. BTOC) (ft. MSL)	12/11/92 Water Level Elev. (ft. BTOC) (ft. MSL)	12/18/92 Water Level Elev. (ft. BTOC) (ft. MSL)	12/23/92 Water Level Elev. (ft. BTOC) (ft. MSL)	12/30/92 Water Level Elev. (ft. BTOC) (ft. MSL)	01/07/93 Water Level Elev. (ft. BTOC) (ft. MSL)
B-2I	145.73 4.80 140.93	141.00 4.73 141.00	139.91 5.82 139.91	139.58 6.15 139.58	139.45 6.28 139.45	139.39 6.34 139.39	139.45 6.28 139.45
B-3I	152.50 10.84 141.66	141.98 10.52 141.98	141.50 11.00 141.50	141.27 11.23 141.27	141.08 11.42 141.08	141.02 11.48 141.02	140.97 11.53 140.97
B-6I	99.67 1.56 98.11	98.34 1.33 98.34	98.05 1.62 98.05	98.02 1.65 98.02	97.89 1.78 97.89	97.86 1.81 97.86	97.88 1.99 97.88
B-7I	121.53 3.18 118.35	118.53 3.00 118.53	118.35 3.18 118.35	118.01 3.52 118.01	117.82 3.71 117.82	117.76 3.77 117.76	118.11 3.42 118.11
B-11I	120.43 3.31 117.12	117.30 3.13 117.30	117.00 3.33 117.00	116.59 3.43 116.59	116.50 3.93 116.50	116.43 4.00 116.43	116.48 3.95 116.48
B-12I	124.72 4.56 120.16	120.41 4.31 120.41	117.14 7.58 117.14	116.69 8.03 116.69	116.54 8.18 116.54	116.49 8.23 116.49	116.50 8.22 116.50
B-13IR	125.98 18.65 107.33	108.06 17.92 108.06	107.33 18.65 107.33	106.84 19.14 106.84	106.76 19.22 106.76	106.57 19.41 106.57	106.67 19.31 106.67
B-14IR	125.92 10.77 115.15	115.61 10.31 115.61	115.32 10.60 115.32	114.84 11.08 114.84	114.67 11.25 114.67	114.58 11.34 114.58	114.59 11.33 114.59
B-17I	138.43 0.97 137.46	137.59 0.84 137.59	137.25 1.18 137.25	137.10 1.33 137.10	136.93 1.50 136.93	136.91 1.52 136.91	136.89 1.54 136.89
B-19I	127.94 5.67 122.27	122.37 5.57 122.37	122.25 5.69 122.25	121.99 5.95 121.99	121.79 6.15 121.79	121.73 6.21 121.73	121.76 6.18 121.76
B-25I	124.03 4.48 119.55	119.63 4.40 119.63	119.41 4.62 119.41	118.98 5.05 118.98	118.85 5.18 118.85	118.77 5.26 118.77	118.78 5.25 118.78
B-27I	128.63 3.33 125.30	125.36 3.27 125.36	125.26 3.37 125.26	124.92 3.71 124.92	124.80 3.83 124.80	124.69 3.94 124.69	124.75 3.88 124.75
B-29I	138.08 1.68 136.40	136.56 1.52 136.56	136.26 1.82 136.26	136.12 1.96 136.12	136.00 2.08 136.00	135.93 2.15 135.93	136.00 2.08 136.00

TABLE 3

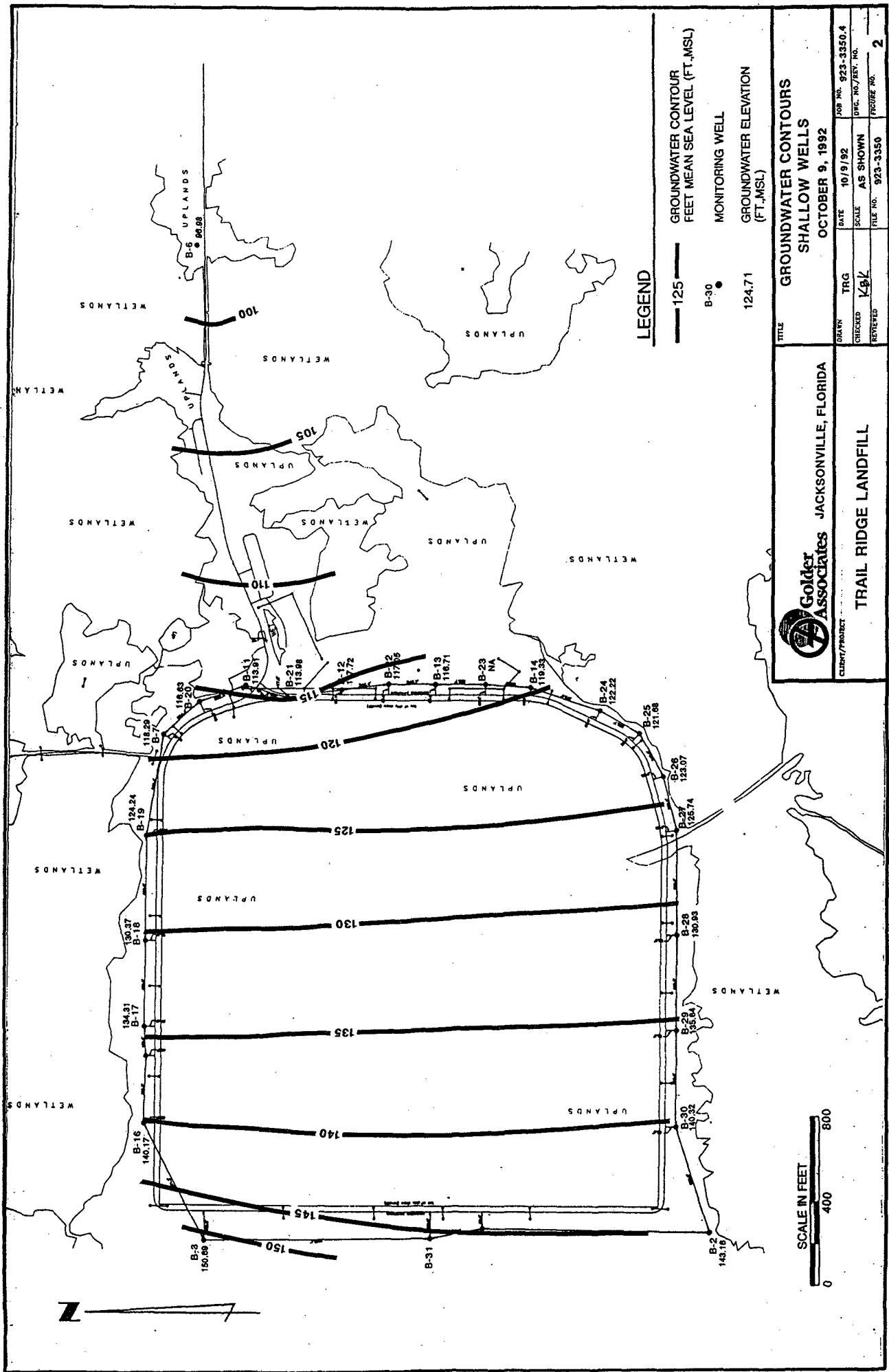
**GROUNDWATER ELEVATION MEASUREMENTS (10/9/92 TO 1/7/93)
(DEEP WELLS)**

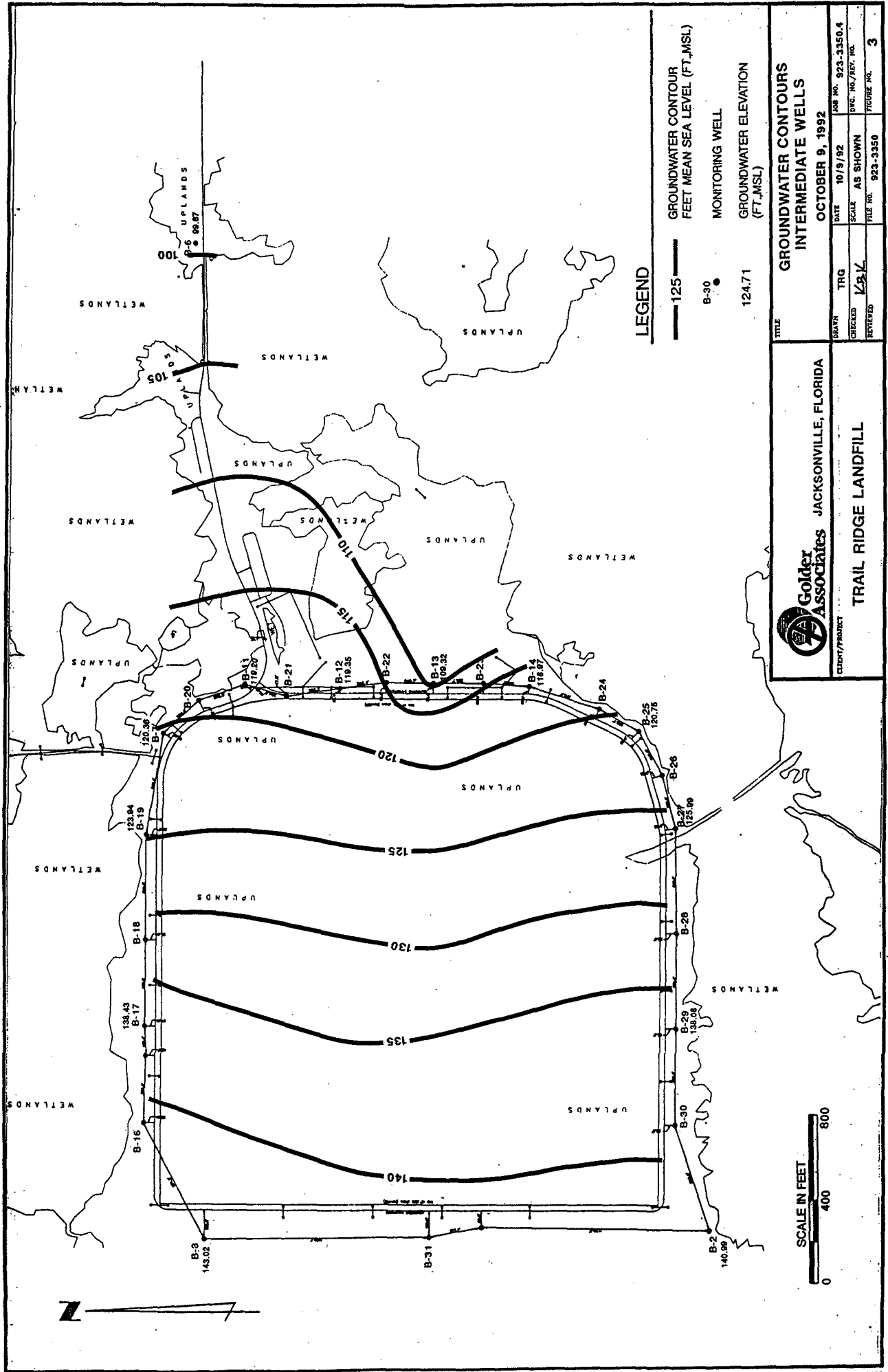
TRAIL RIDGE LANDFILL
JACKSONVILLE, FLORIDA

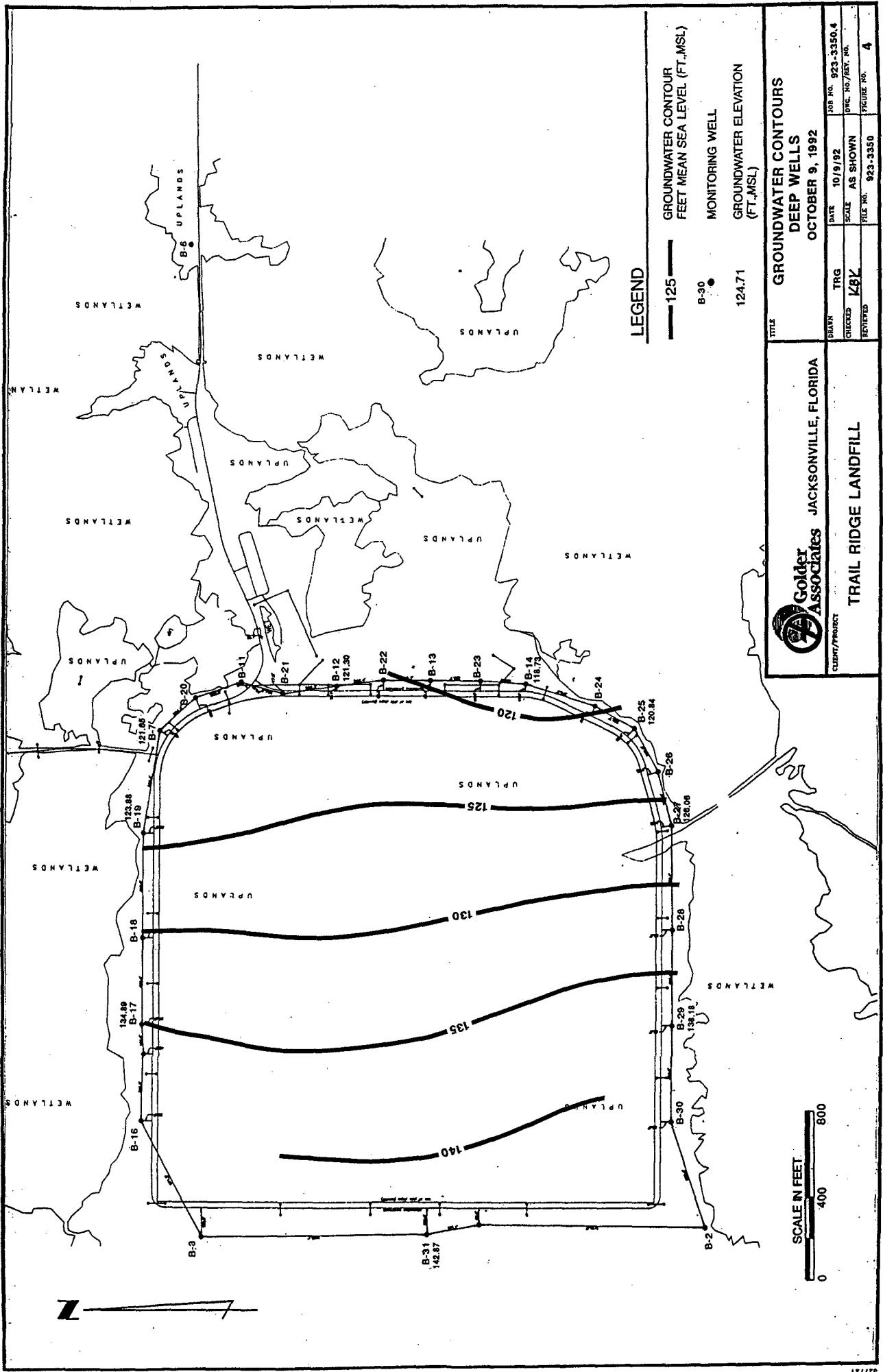
Well	10/09/92 Water Level Elev. (ft. BTOC) (ft. MSL)	10/16/92 Water Level Elev. (ft. BTOC) (ft. MSL)	10/23/92 Water Level Elev. (ft. BTOC) (ft. MSL)	10/28/92 Water Level Elev. (ft. BTOC) (ft. MSL)	11/05/92 Water Level Elev. (ft. BTOC) (ft. MSL)	11/12/92 Water Level Elev. (ft. BTOC) (ft. MSL)	11/20/92 Water Level Elev. (ft. BTOC) (ft. MSL)
TOC Elev. (ft. MSL)							
B-7D	121.65	121.65	121.65	121.65	121.65	121.65	121.05
B-12D	124.56	121.30	120.48	120.19	120.07	119.56	119.22
B-14DR	125.87	118.73	116.72	116.19	116.29	115.79	115.59
B-17D	138.52	134.89	133.82	133.70	133.61	133.47	133.26
B-19D	128.23	123.88	122.98	122.73	122.49	122.41	122.31
B-25D	124.84	120.84	120.42	119.90	119.83	119.55	119.46
B-27D	128.88	126.06	125.64	125.34	125.29	125.68	125.22
B-29D	138.18	138.18	136.68	136.48	136.50	136.38	136.40
B-31D	156.15	142.87	141.84	141.73	141.55	139.01	138.37
TOC Elev. (ft. MSL)							
B-7D	121.65	121.13	121.05	120.87	120.71	120.69	120.72
B-12D	124.56	119.39	119.35	119.14	118.76	118.70	119.06
B-14DR	125.87	115.85	115.65	115.16	115.01	114.91	114.93
B-17D	138.52	133.10	133.34	133.11	132.97	132.88	132.94
B-19D	128.23	122.41	122.27	122.06	121.88	121.83	121.88
B-25D	124.84	119.62	119.45	119.06	118.91	118.85	118.84
B-27D	128.88	125.17	125.09	124.78	124.65	124.63	124.60
B-29D	138.18	136.44	136.39	136.06	135.93	135.86	135.95
B-31D	156.15	141.63	141.36	141.11	140.97	140.84	140.87
TOC Elev. (ft. MSL)							
B-7D	121.65	121.13	121.05	120.87	120.71	120.69	120.72
B-12D	124.56	119.39	119.35	119.14	118.76	118.70	119.06
B-14DR	125.87	115.85	115.65	115.16	115.01	114.91	114.93
B-17D	138.52	133.10	133.34	133.11	132.97	132.88	132.94
B-19D	128.23	122.41	122.27	122.06	121.88	121.83	121.88
B-25D	124.84	119.62	119.45	119.06	118.91	118.85	118.84
B-27D	128.88	125.17	125.09	124.78	124.65	124.63	124.60
B-29D	138.18	136.44	136.39	136.06	135.93	135.86	135.95
B-31D	156.15	141.63	141.36	141.11	140.97	140.84	140.87
TOC Elev. (ft. MSL)							
B-7D	121.65	121.13	121.05	120.87	120.71	120.69	120.72
B-12D	124.56	119.39	119.35	119.14	118.76	118.70	119.06
B-14DR	125.87	115.85	115.65	115.16	115.01	114.91	114.93
B-17D	138.52	133.10	133.34	133.11	132.97	132.88	132.94
B-19D	128.23	122.41	122.27	122.06	121.88	121.83	121.88
B-25D	124.84	119.62	119.45	119.06	118.91	118.85	118.84
B-27D	128.88	125.17	125.09	124.78	124.65	124.63	124.60
B-29D	138.18	136.44	136.39	136.06	135.93	135.86	135.95
B-31D	156.15	141.63	141.36	141.11	140.97	140.84	140.87



WELL LOCATION MAP			
Golder Associates JACKSONVILLE, FLORIDA			
TRAIL RIGDE LANDFILL			
DATE	10/13/92	JOB NO.	923-3350.5
SCALE	AS SHOWN	DWG. NO./REV. NO.	
CHECKED	KSL	FILE NO.	923-3350
REVIEWED		FIGURE NO.	1



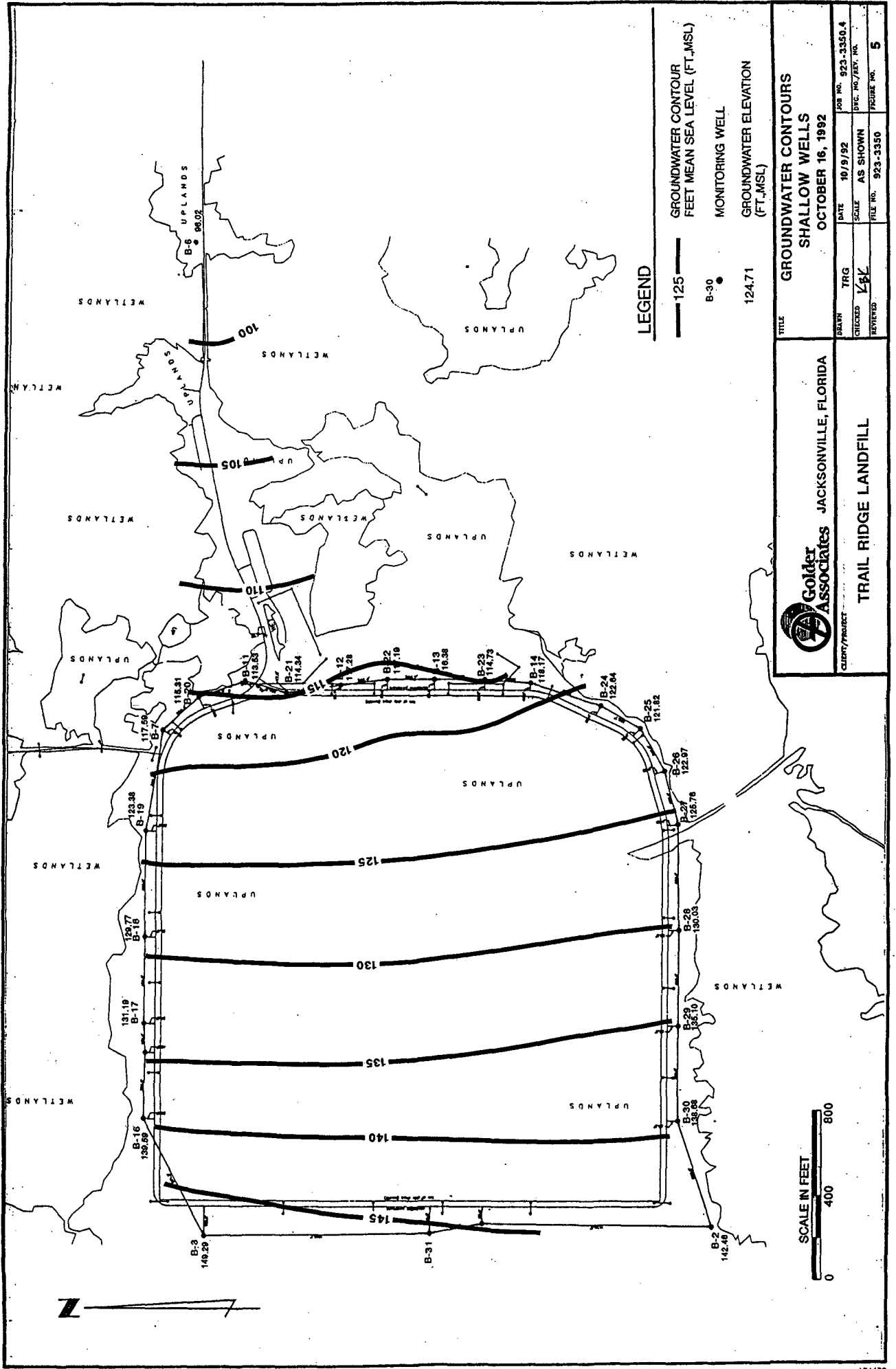


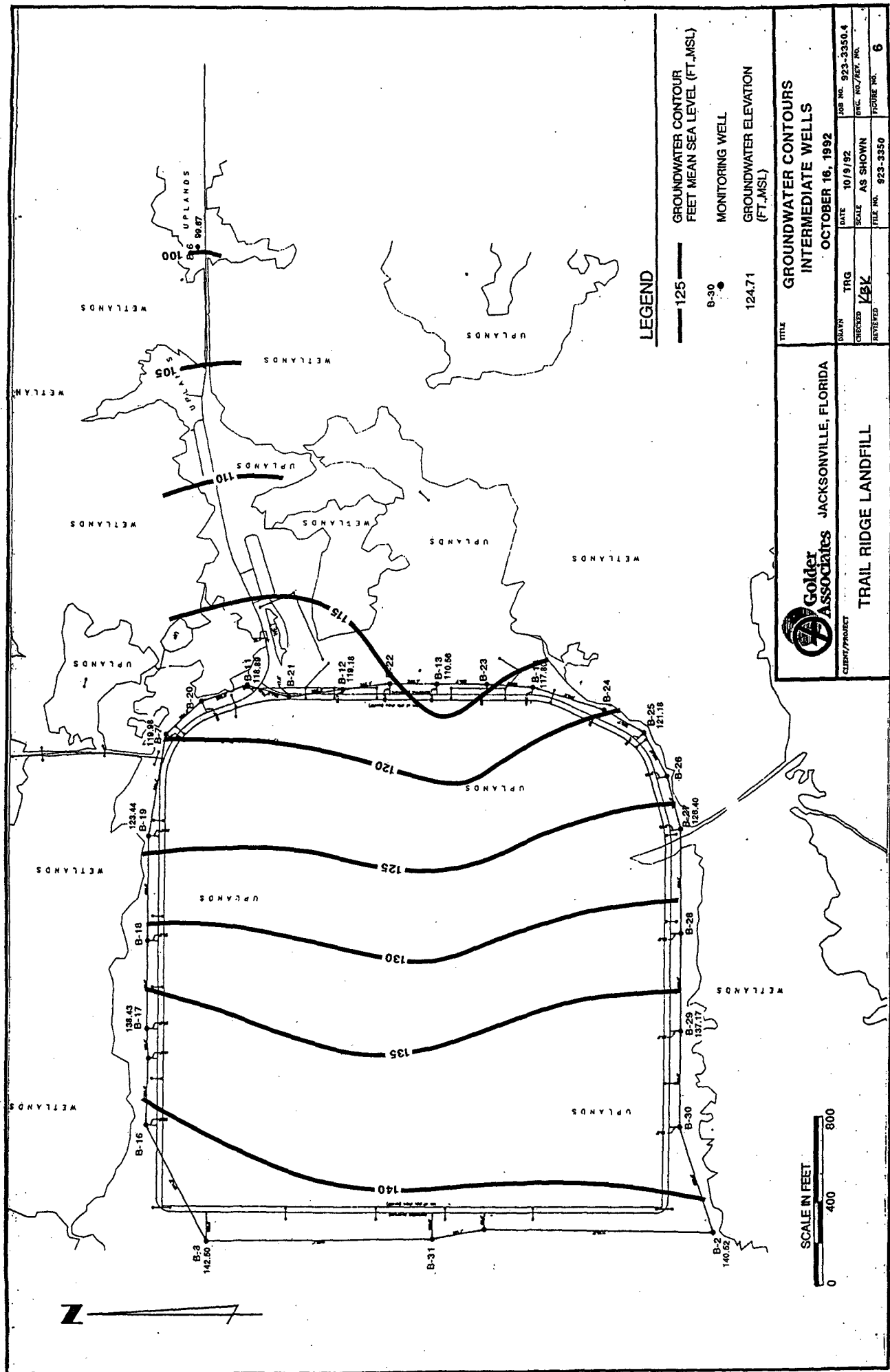


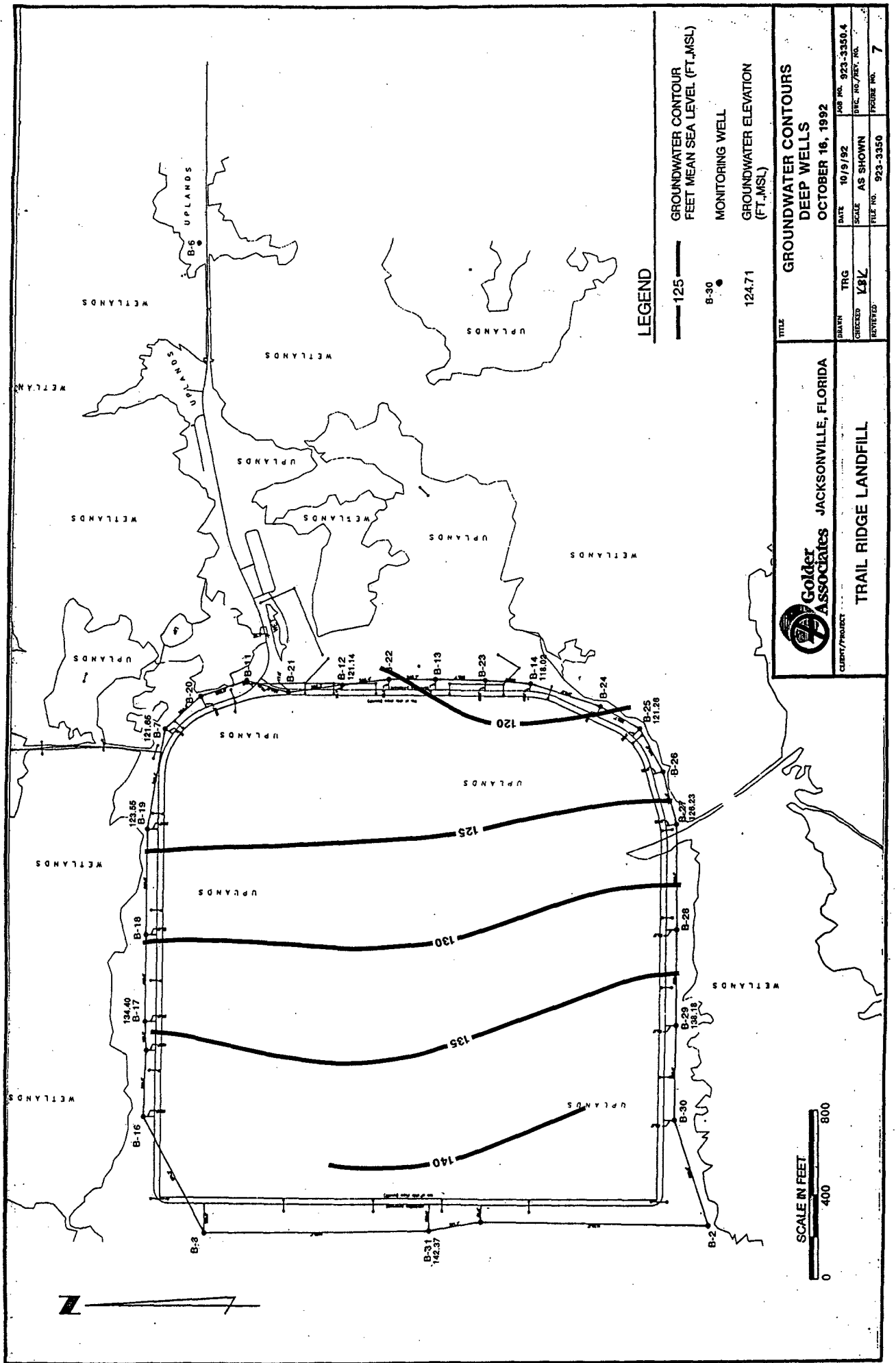
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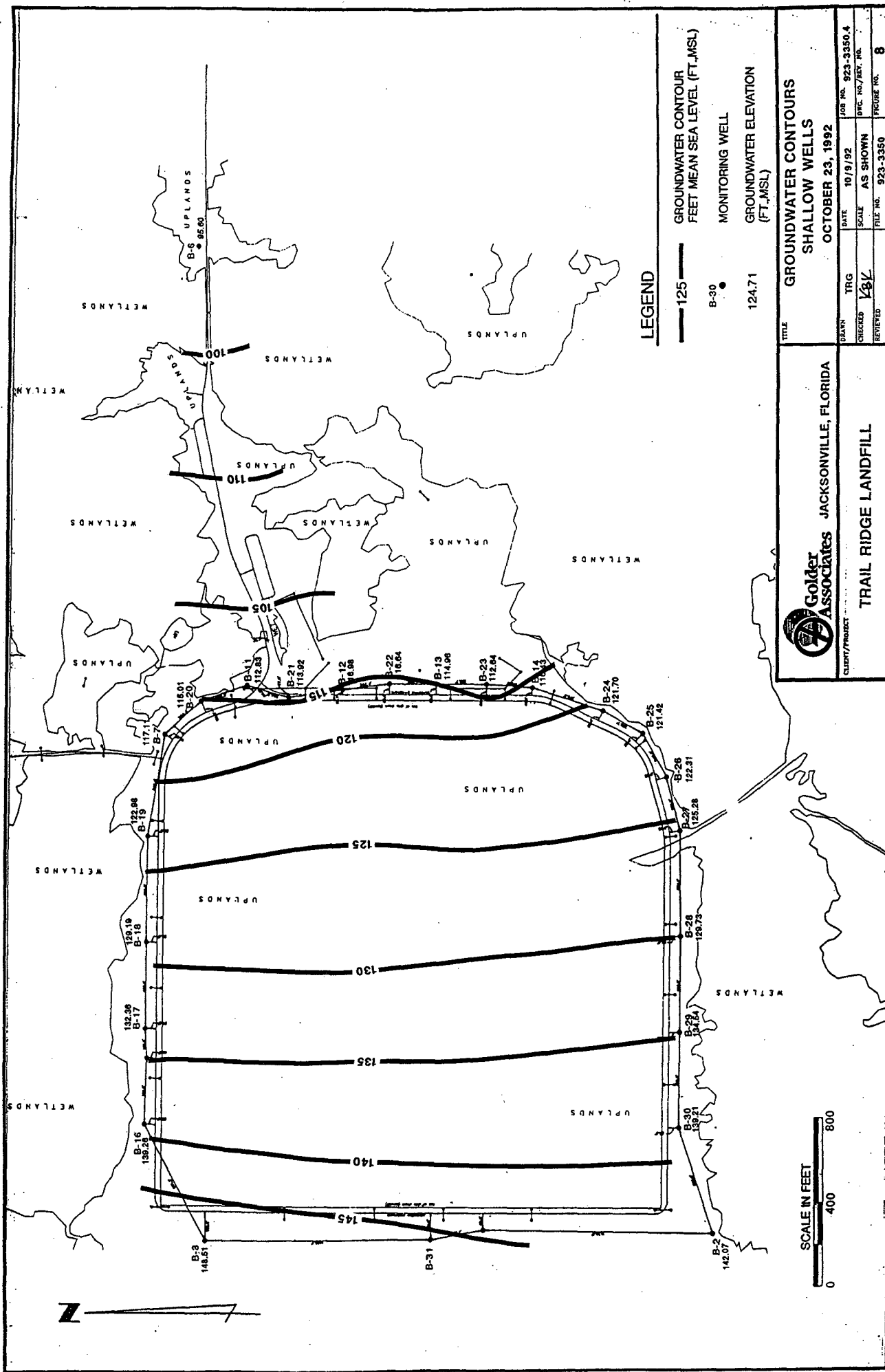
- 125 — GROUNDWATER CONTOUR
FEET MEAN SEA LEVEL (FT.,MSL)
- B-30 ● MONITORING WELL
- 124.71 GROUNDWATER ELEVATION
(FT.,MSL)

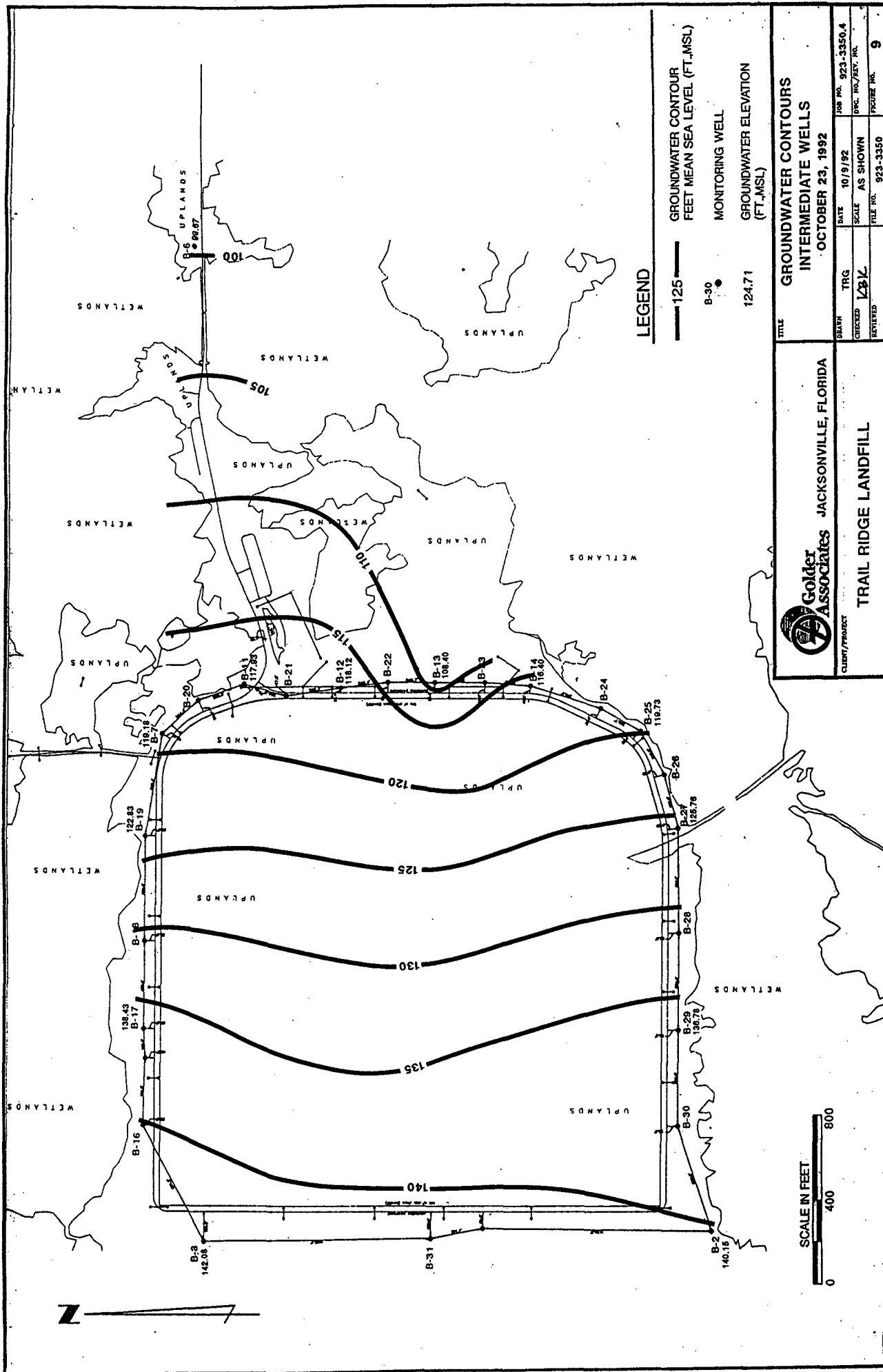
 Golder Associates JACKSONVILLE, FLORIDA		TITLE				GROUNDWATER CONTOURS DEEP WELLS OCTOBER 9, 1992			
CLIENT/PROJECT TRAIL RIDGE LANDFILL		DRAWN	TRG	DATE	10/9/92	JOB NO.	923-3350.4		
		CHECKED	KBY	SCALE	AS SHOWN	DWG. NO./REV. NO.			
		REVIEWED		FILE NO.	923-3350	FIGURE NO.	4		

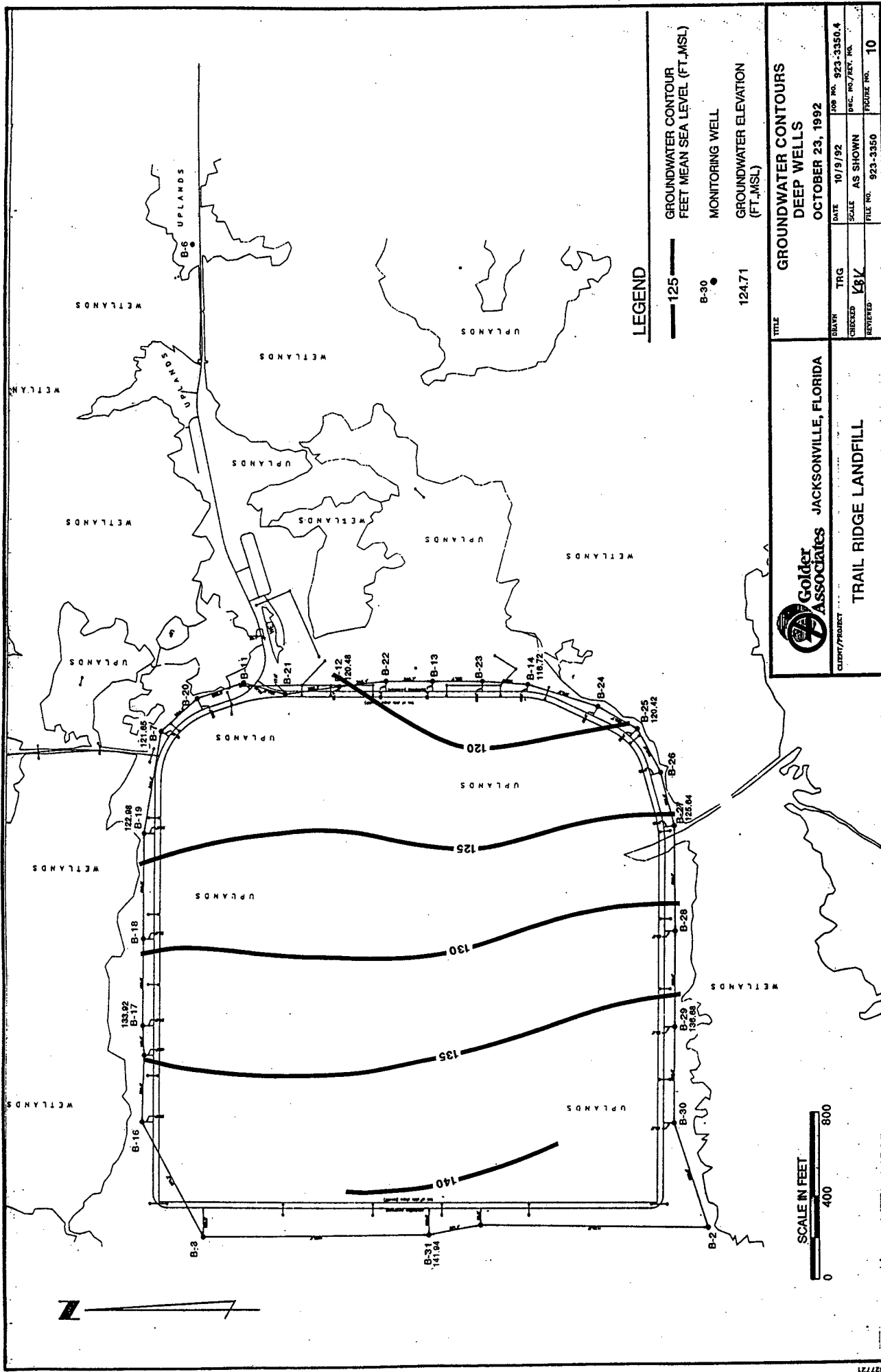


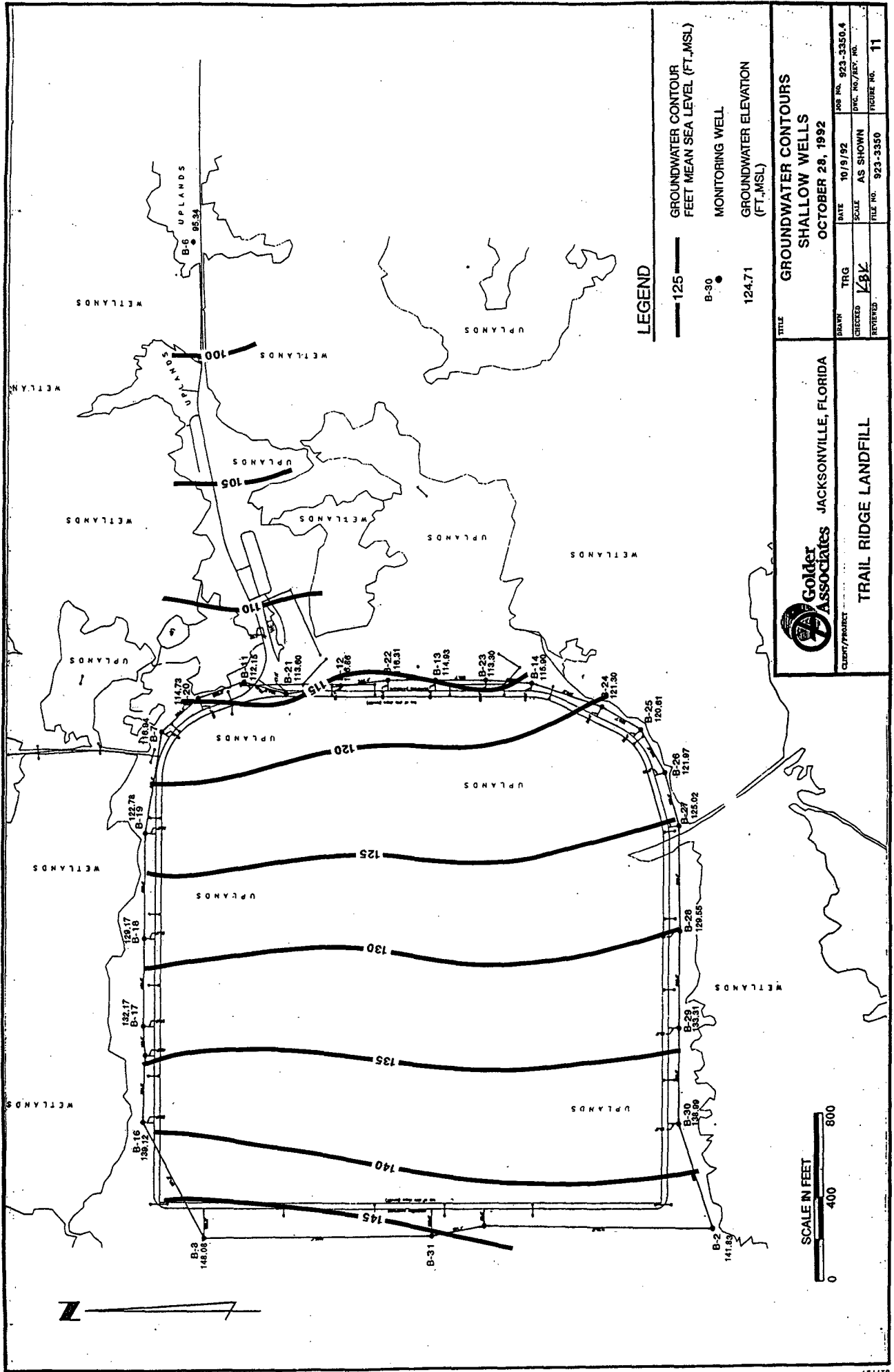


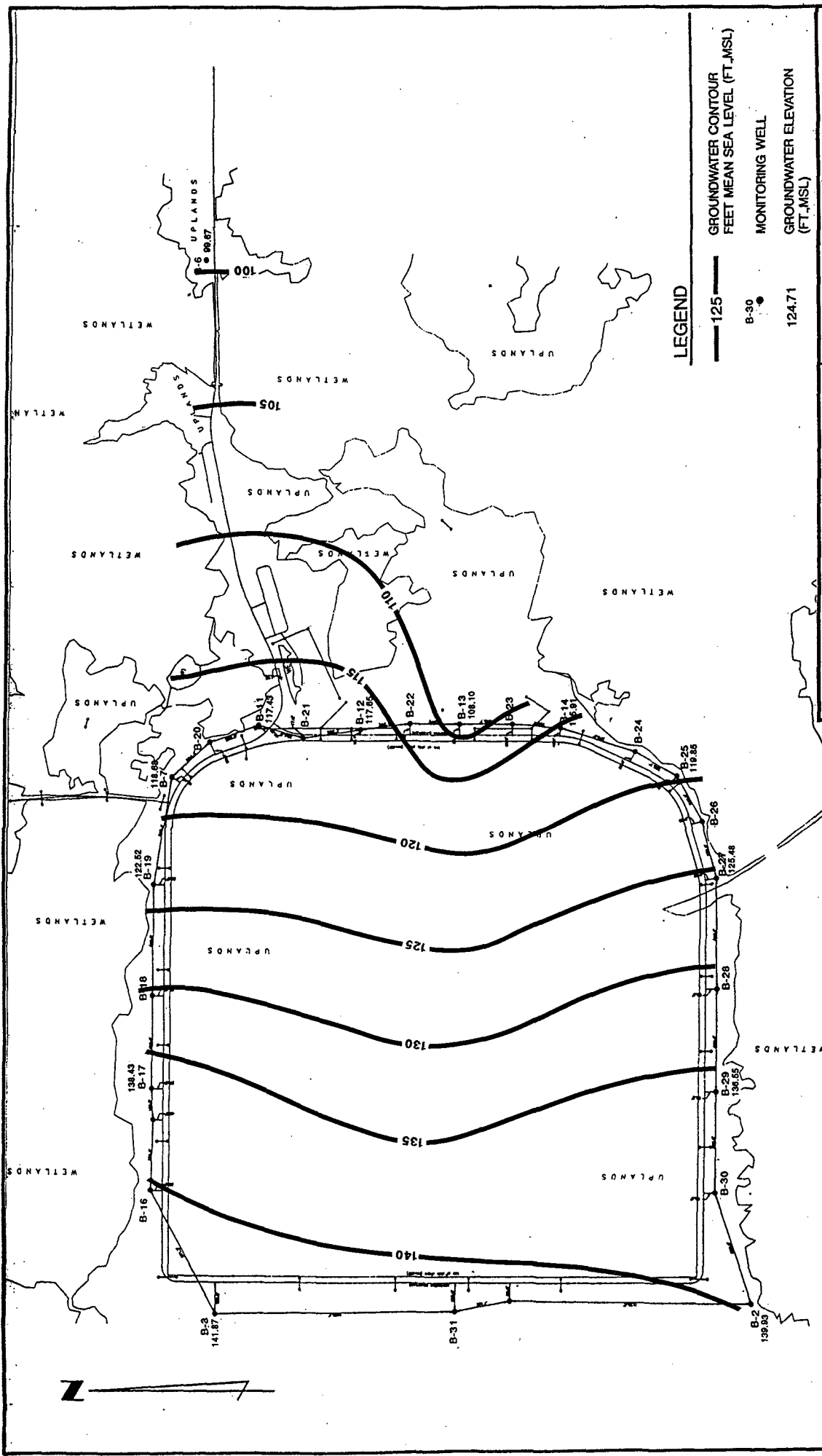










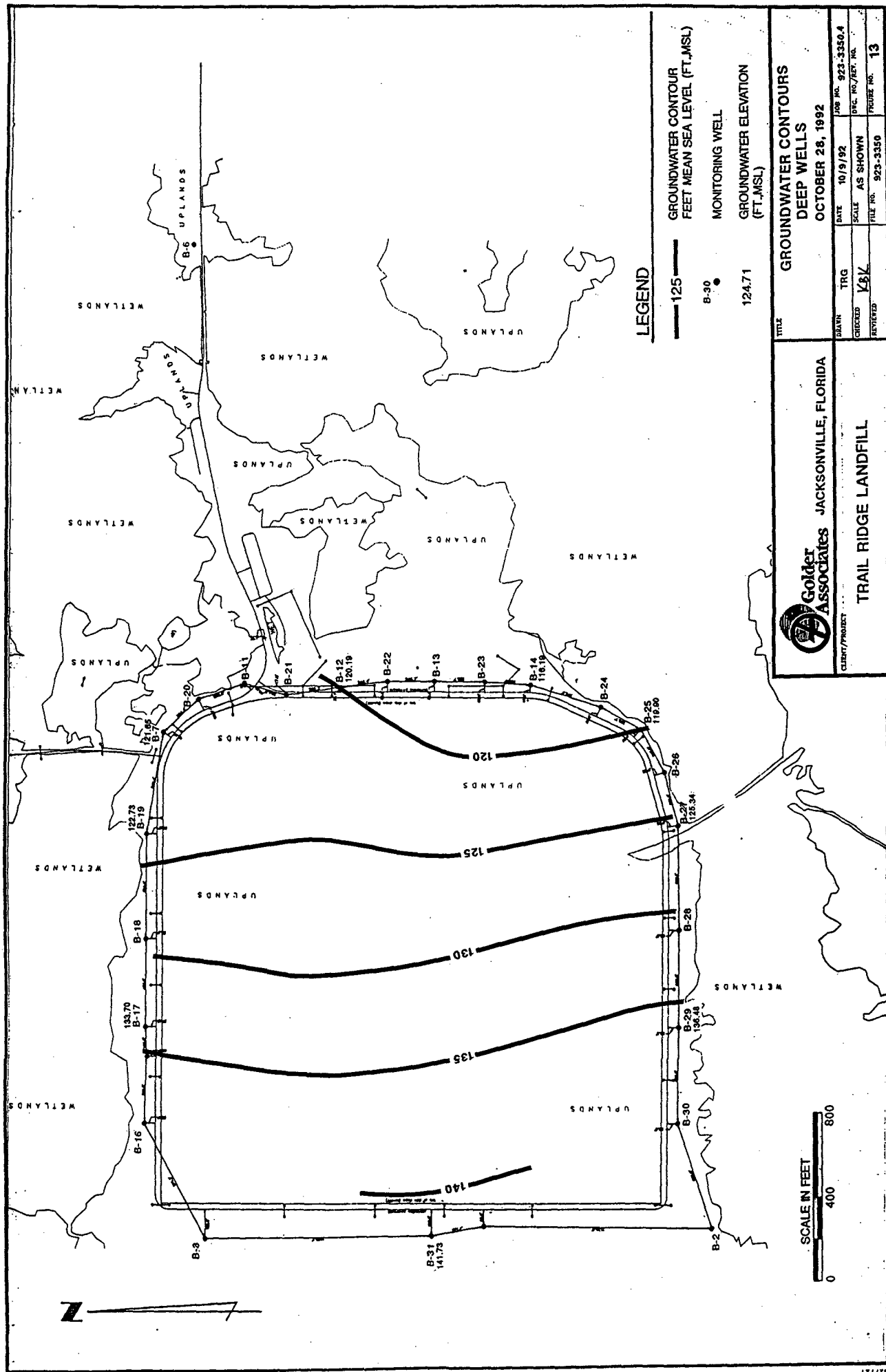


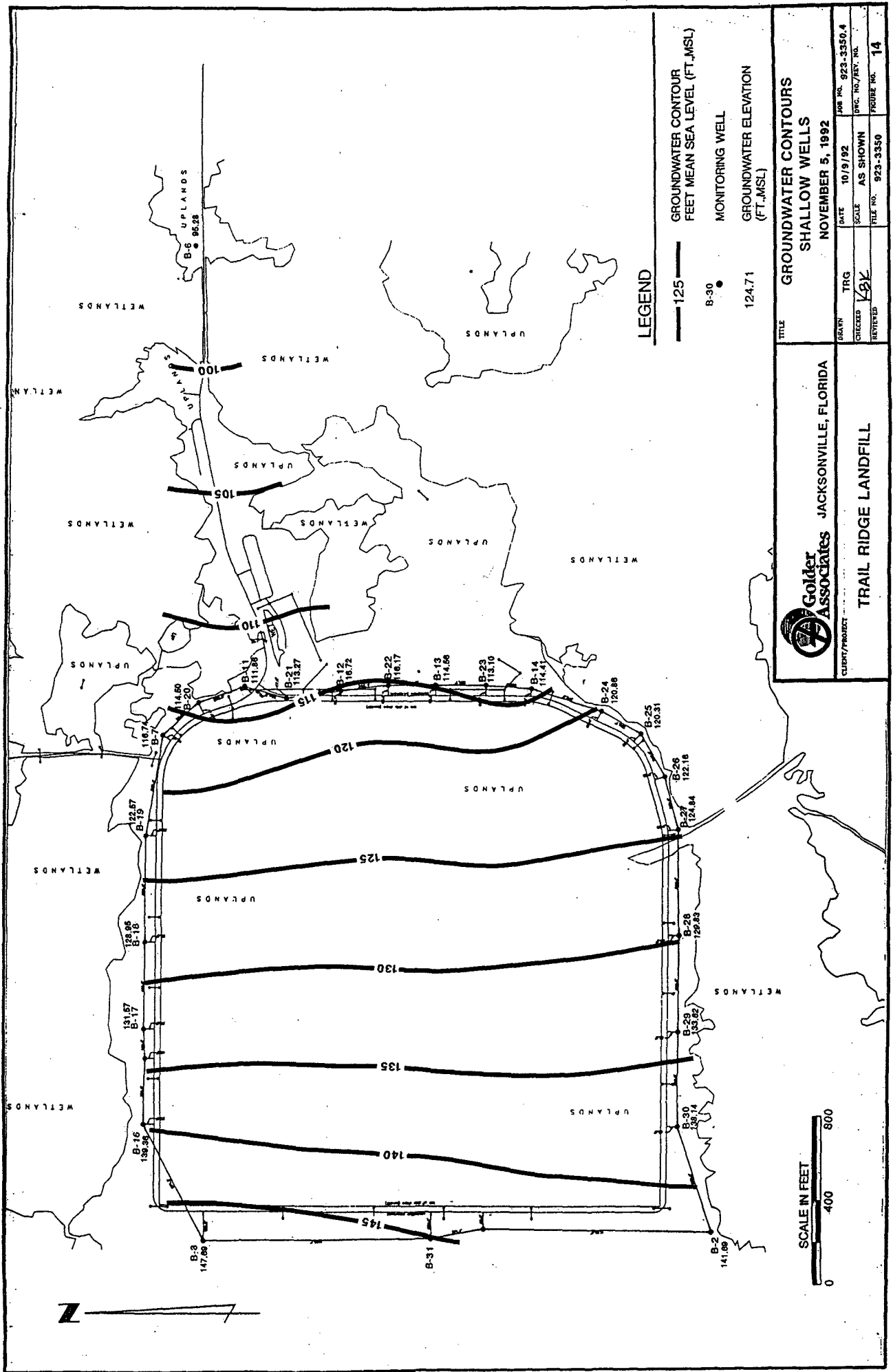
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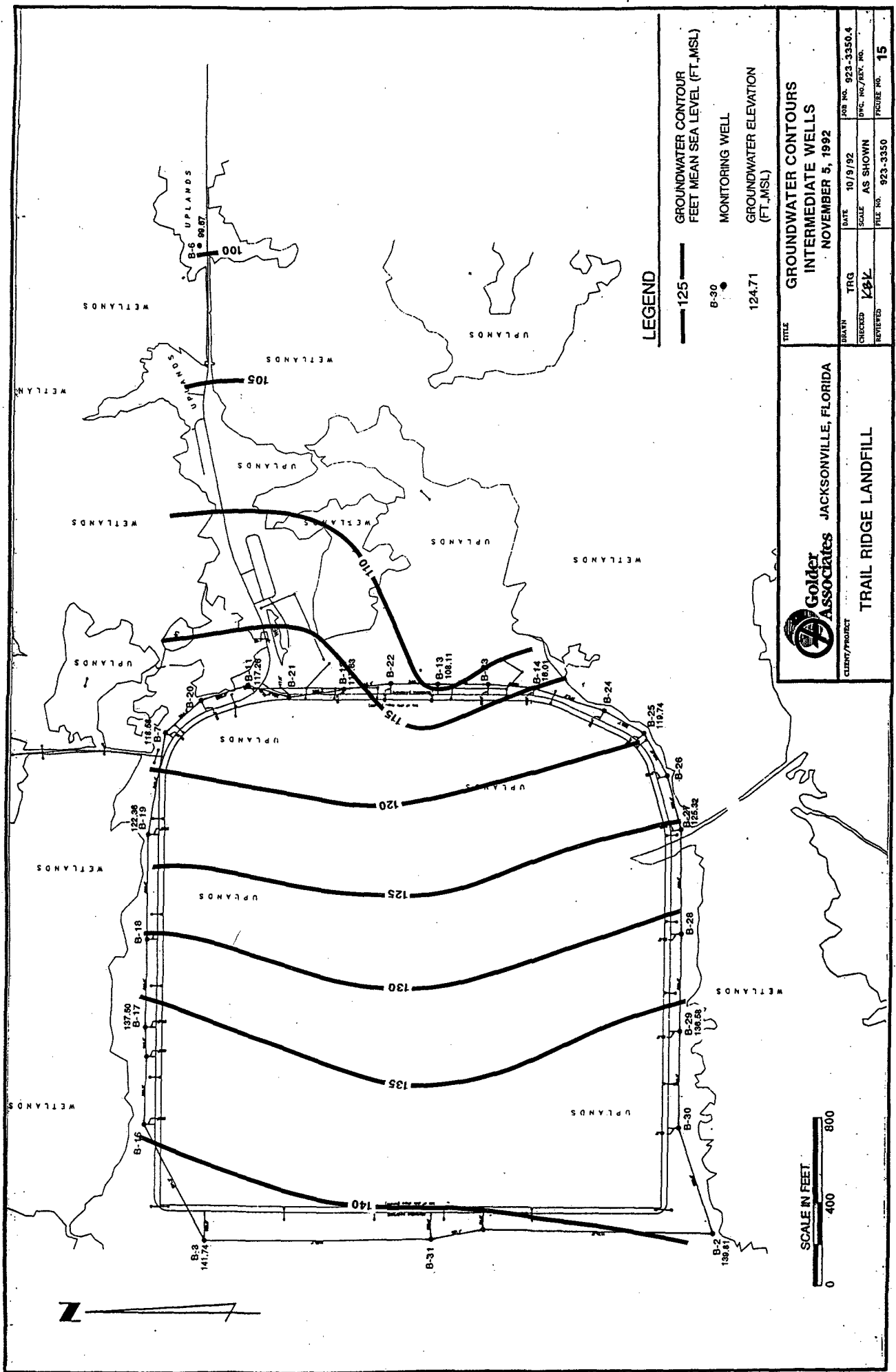
- 125 — GROUNDWATER CONTOUR
FEET MEAN SEA LEVEL (FT. MSL)
- B-30 ● MONITORING WELL
- 124.71 GROUNDWATER ELEVATION
(FT. MSL)



Goldier Associates JACKSONVILLE, FLORIDA		GROUNDWATER CONTOURS INTERMEDIATE WELLS OCTOBER 28, 1992	
CLIENT/PROJECT	TRAIL RIDGE LANDFILL	DRAWN	TRG
CHECKED	VBY	DATE	10/9/92
REVIEWED		SCALE	AS SHOWN
		FILE NO.	923-3350
		FIGURE NO.	12
		DWG. NO./REV. NO.	923-3350.4







LEGEND

- 125 — GROUNDWATER CONTOUR
FEET MEAN SEA LEVEL (FT. MSL)
- B-30 ● MONITORING WELL
- 124.71 GROUNDWATER ELEVATION
(FT. MSL)

GROUNDWATER CONTOURS INTERMEDIATE WELLS NOVEMBER 5, 1992		Trail Ridge Landfill	
DATE	10/19/92	JOB NO.	923-3350.4
SCALE	AS SHOWN	SYN. NO./REV. NO.	
FILE NO.	923-3350	FIGURE NO.	15

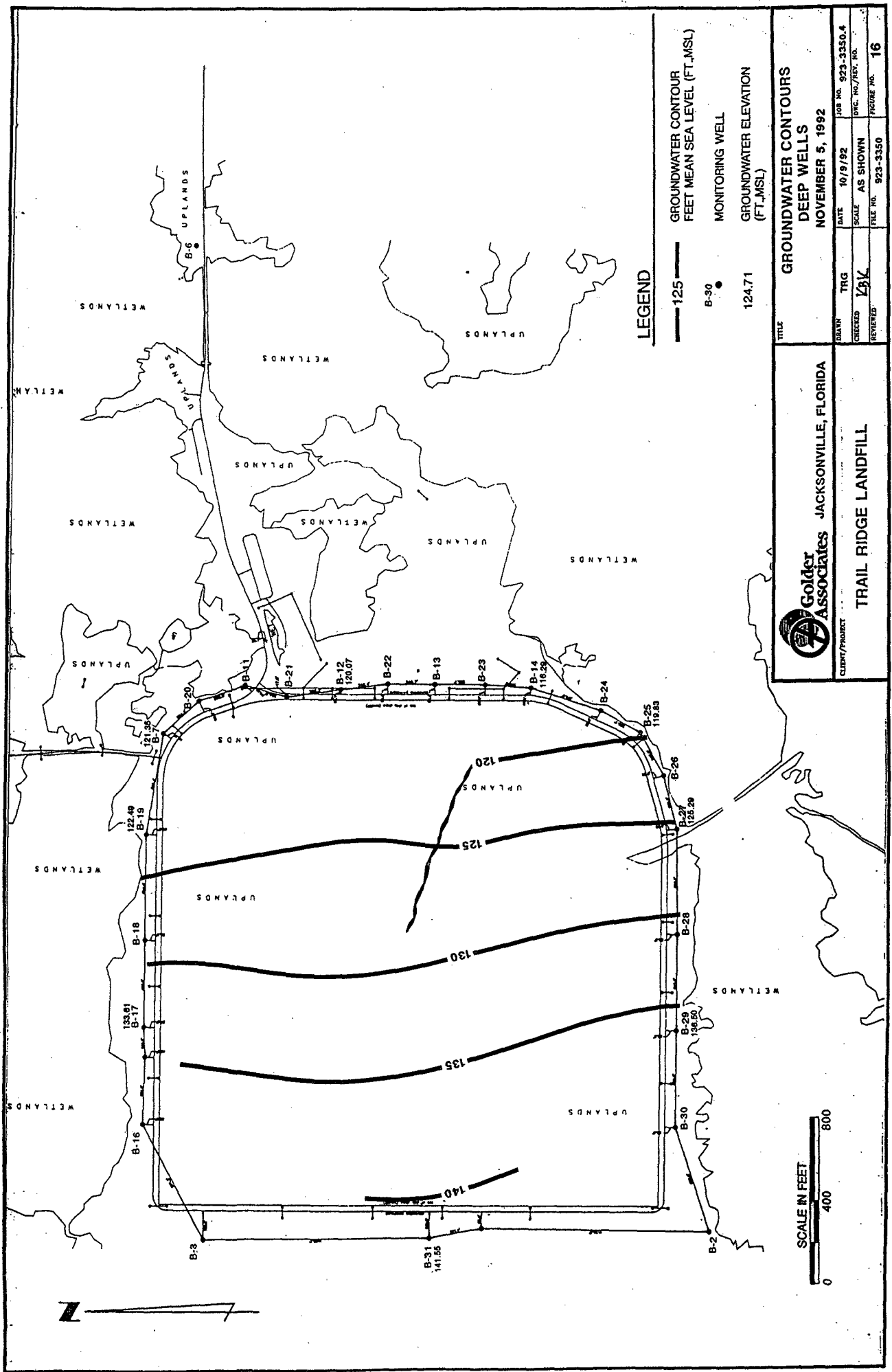
Golder Associates

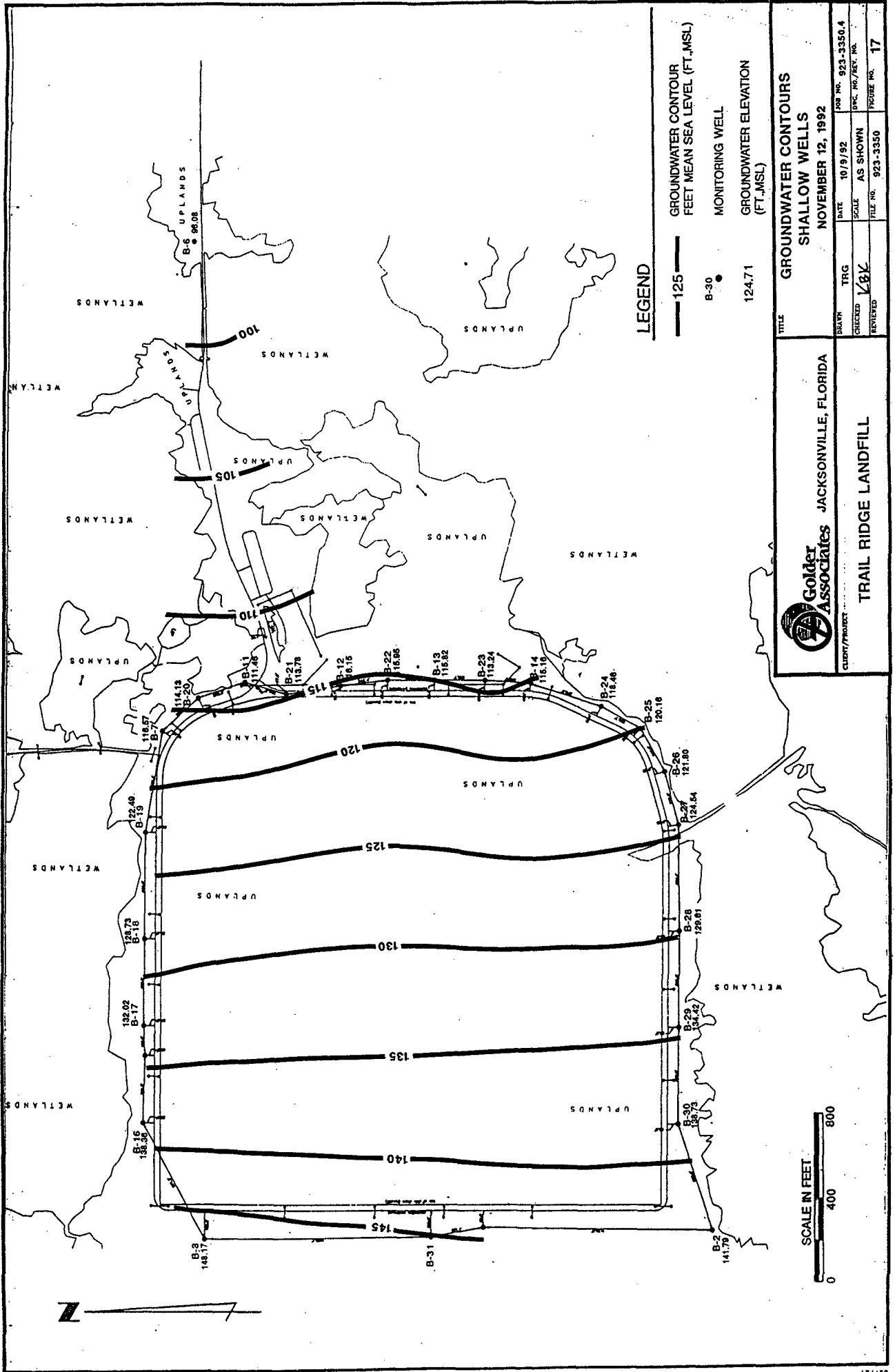
JACKSONVILLE, FLORIDA

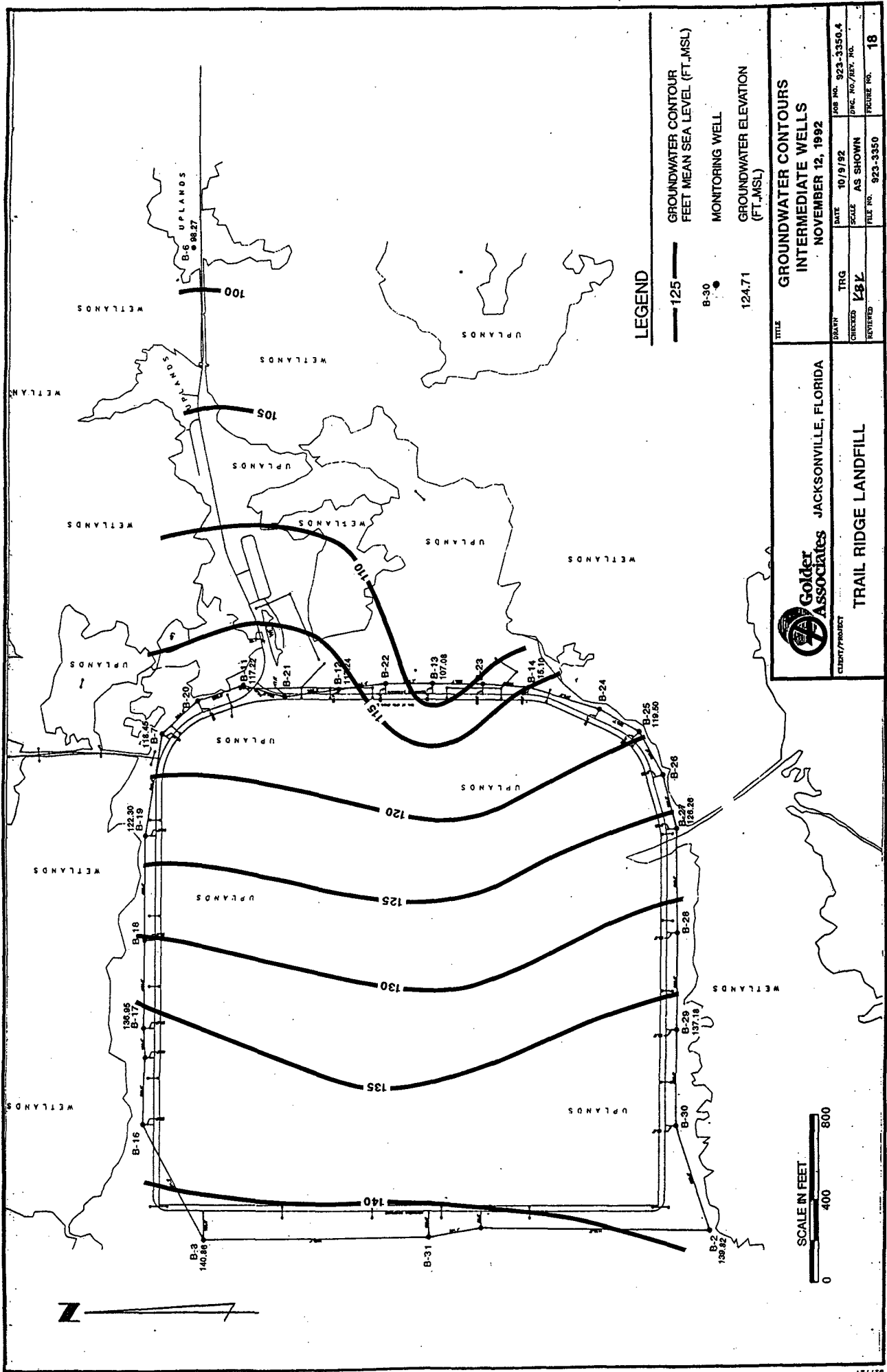
CLIENT/PROJECT

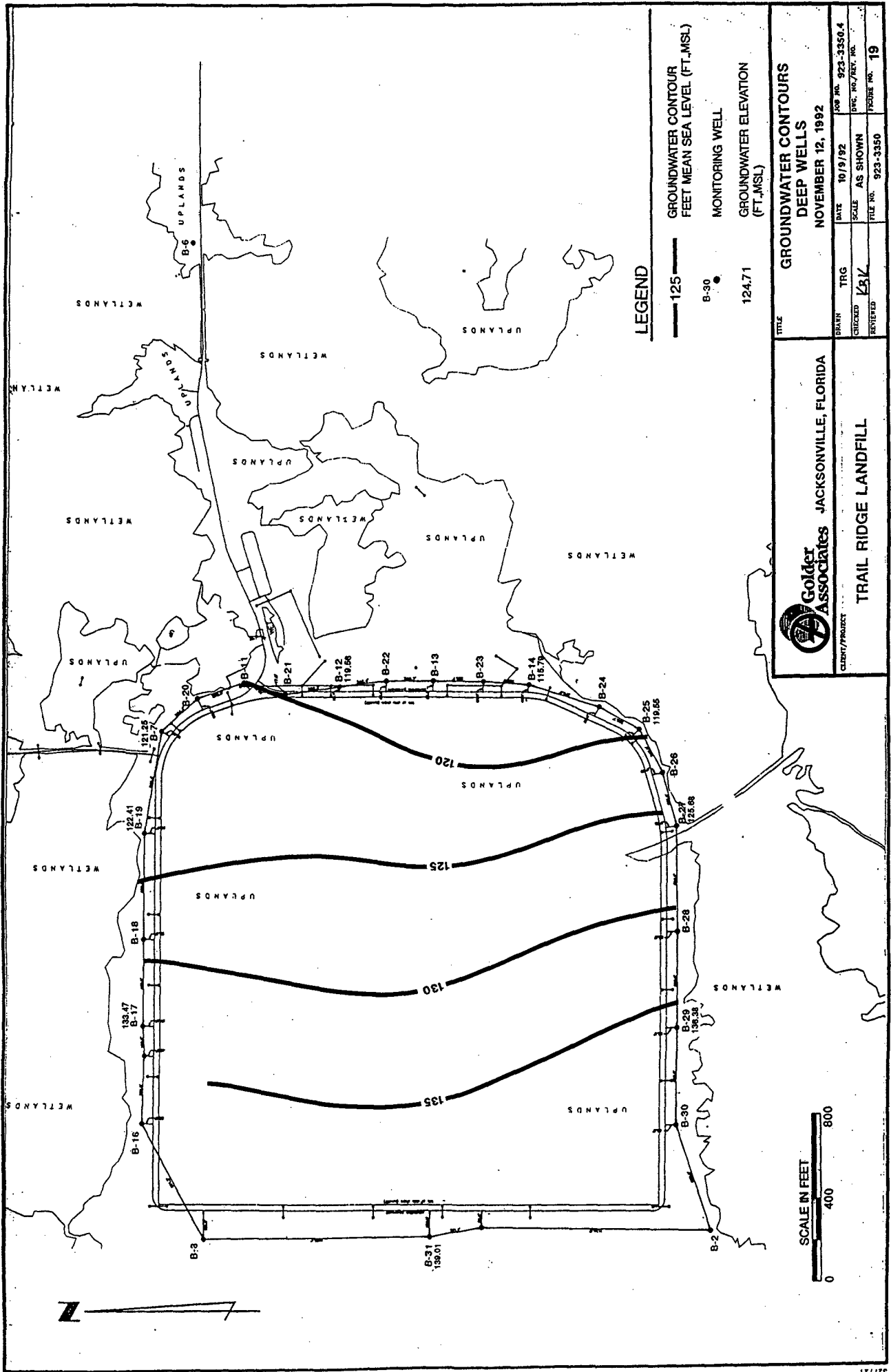
SCALE IN FEET

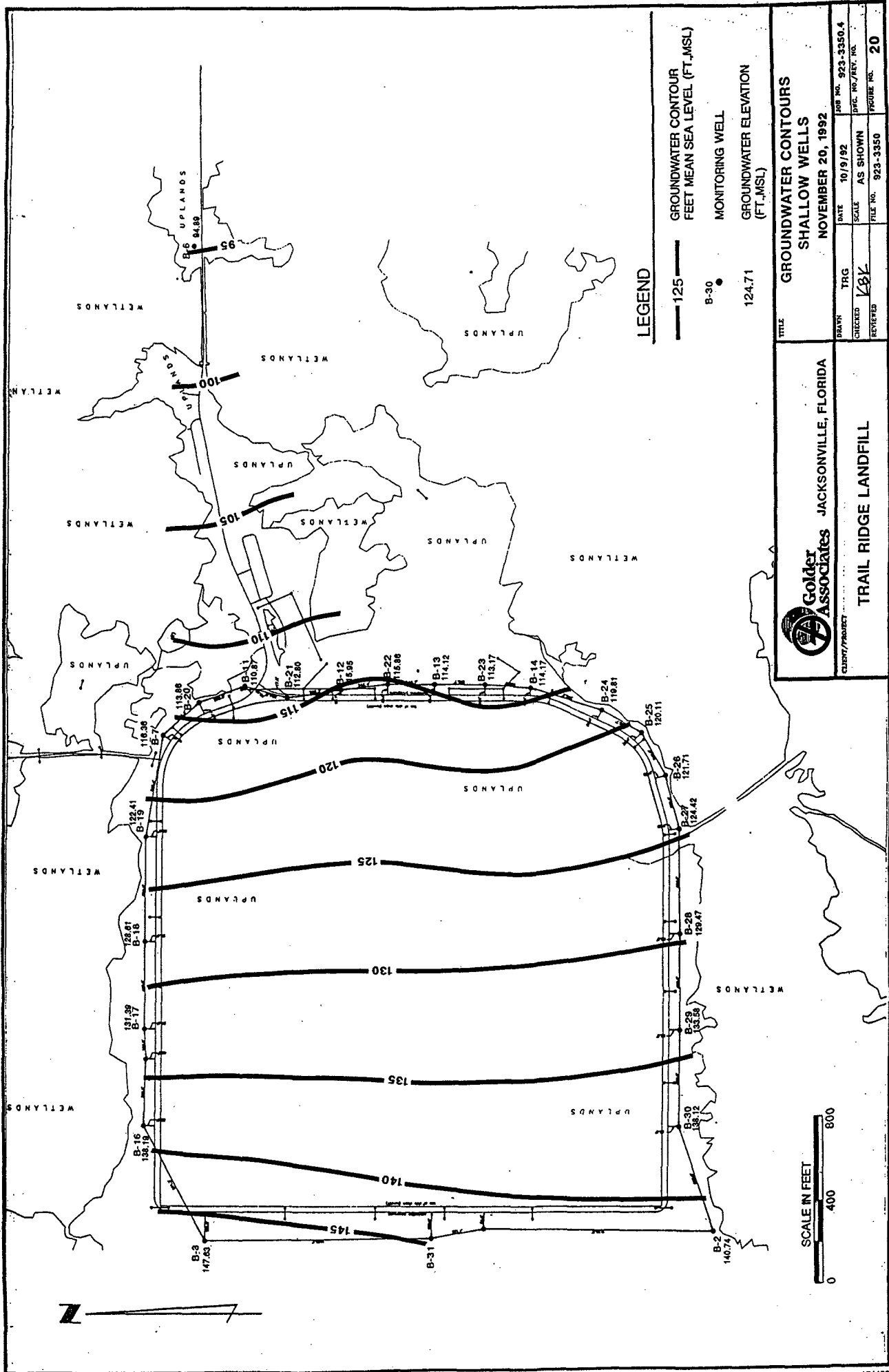
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400
800



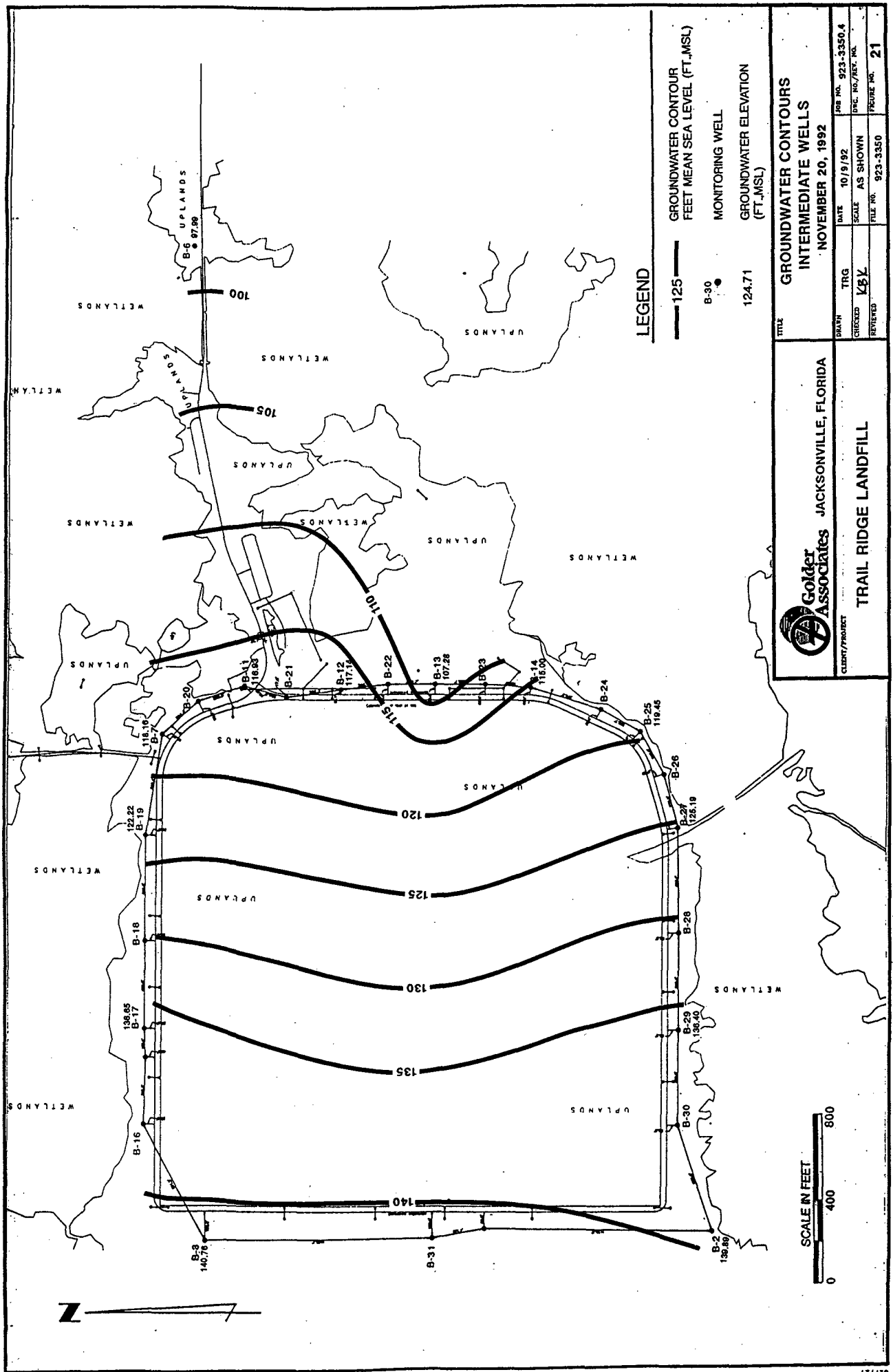


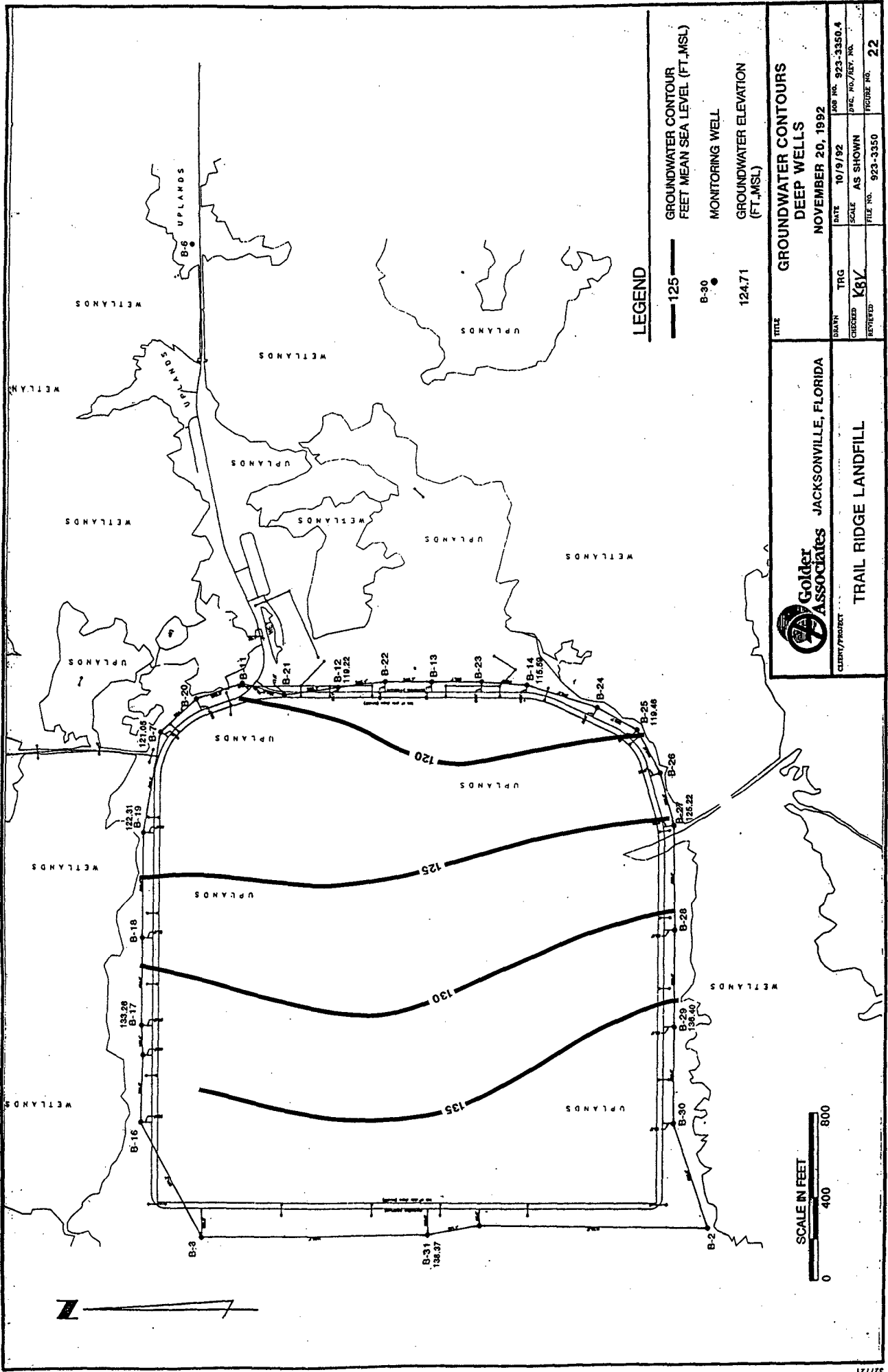




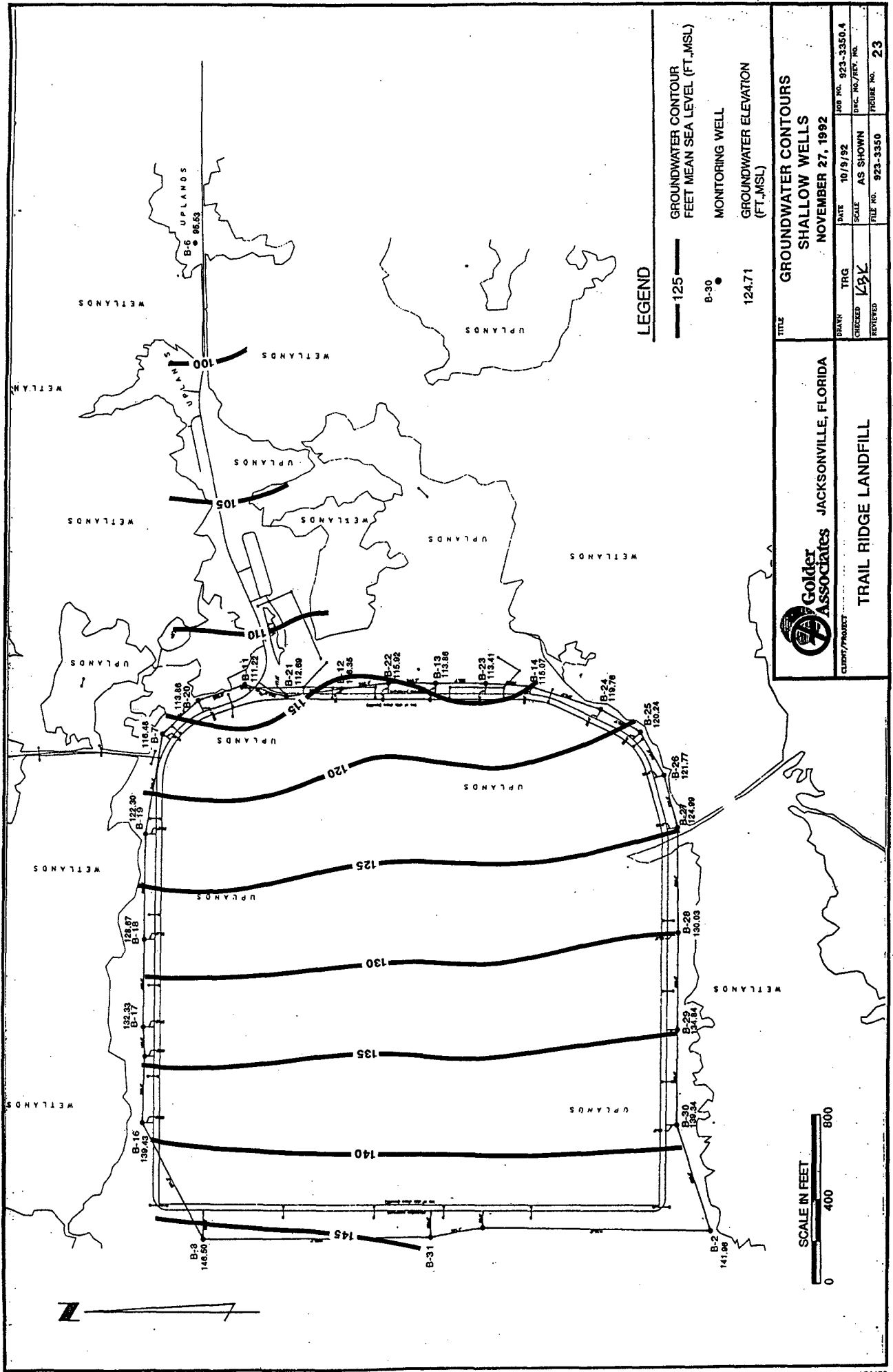


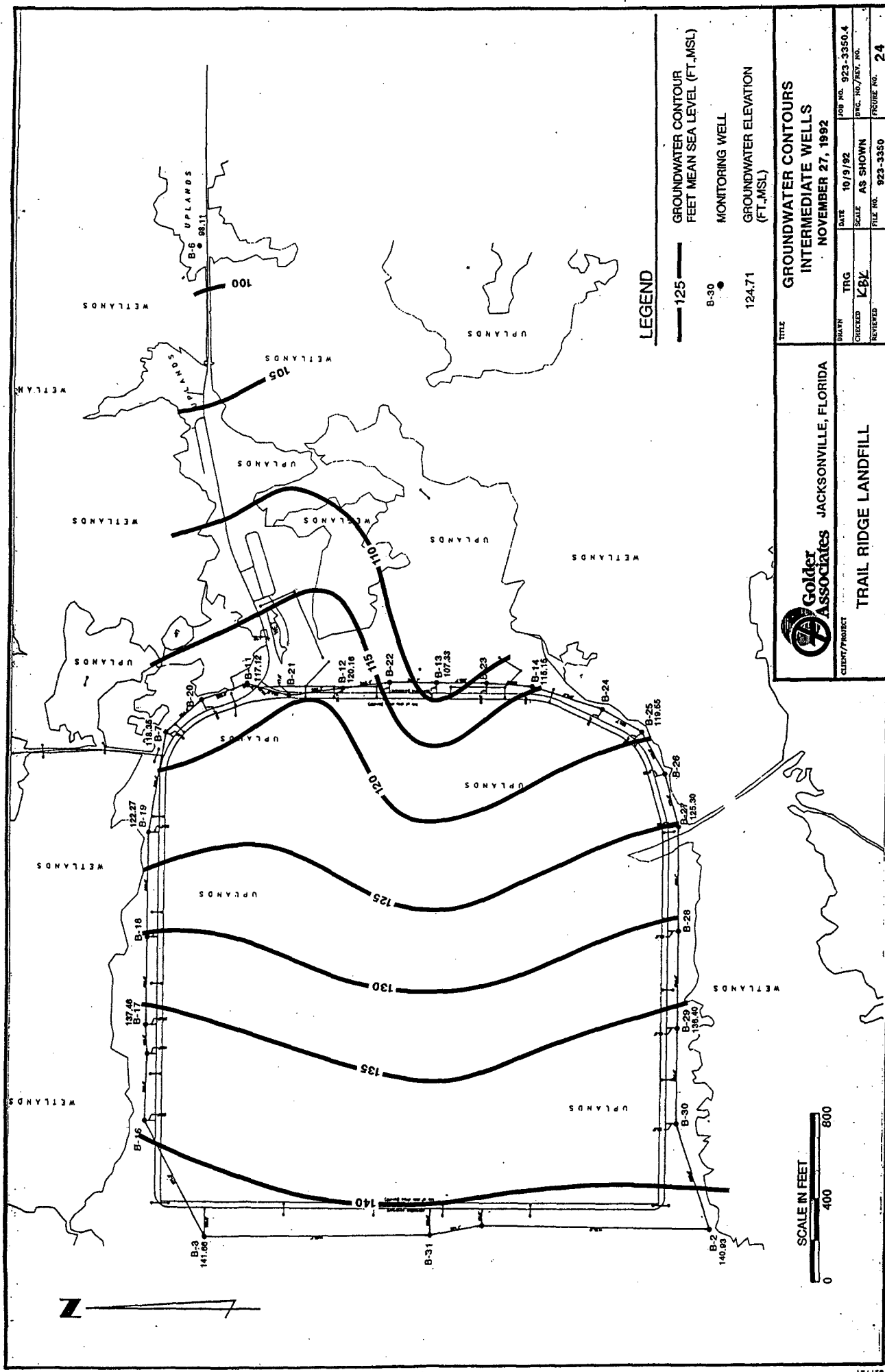
Trail Ridge Landfill 		GROUNDWATER CONTOURS SHALLOW WELLS NOVEMBER 20, 1992	
CLIENT/PROJECT	TRG	DATE	10/9/92
DRAWN	TRG	SCALE	AS SHOWN
CHECKED	KBL	FILE NO.	923-3350
REVISED		FIGURE NO.	20

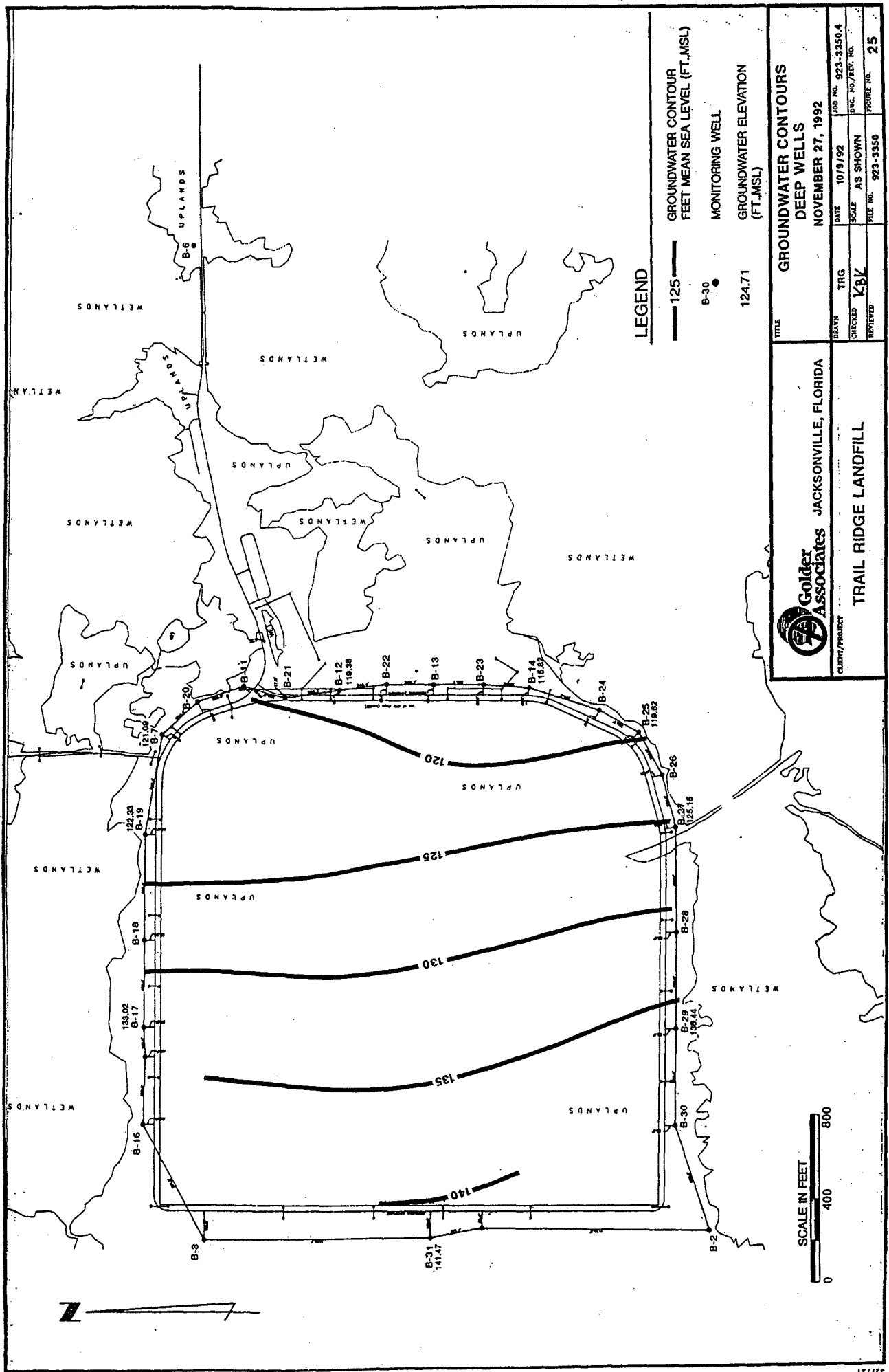


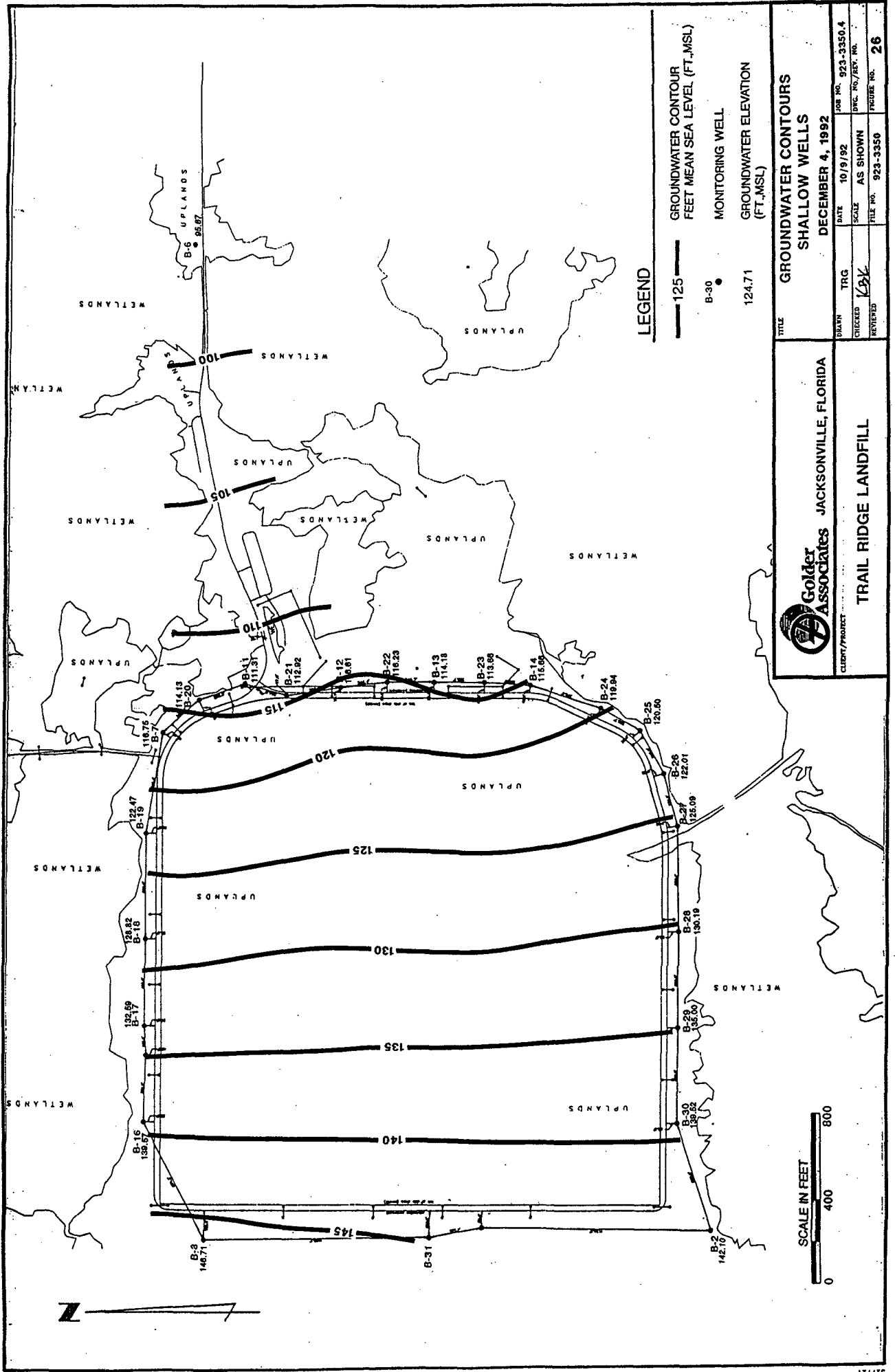


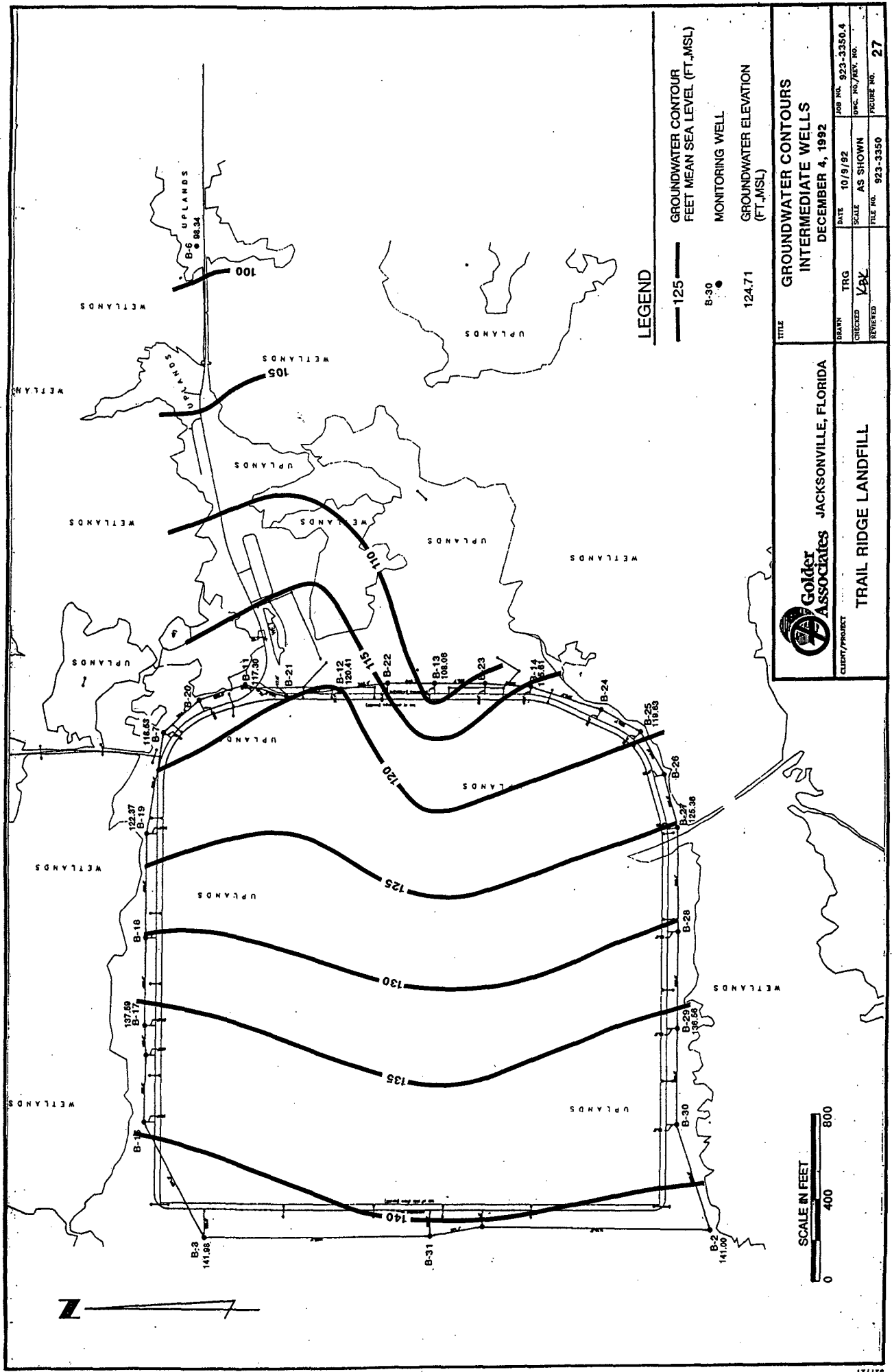
Goldier Associates JACKSONVILLE, FLORIDA		Trail Ridge Landfill	
CLIENT/PROJECT TRG	DATE 10/19/92	JOB NO. 923-3350.4	SHEET NO./TOTAL 22
CHECKED K8V	SCALE AS SHOWN	FILE NO. 923-3350	FIGURE NO. 22
REVIEWED	NOVEMBER 20, 1992	GROUNDWATER CONTOURS DEEP WELLS	

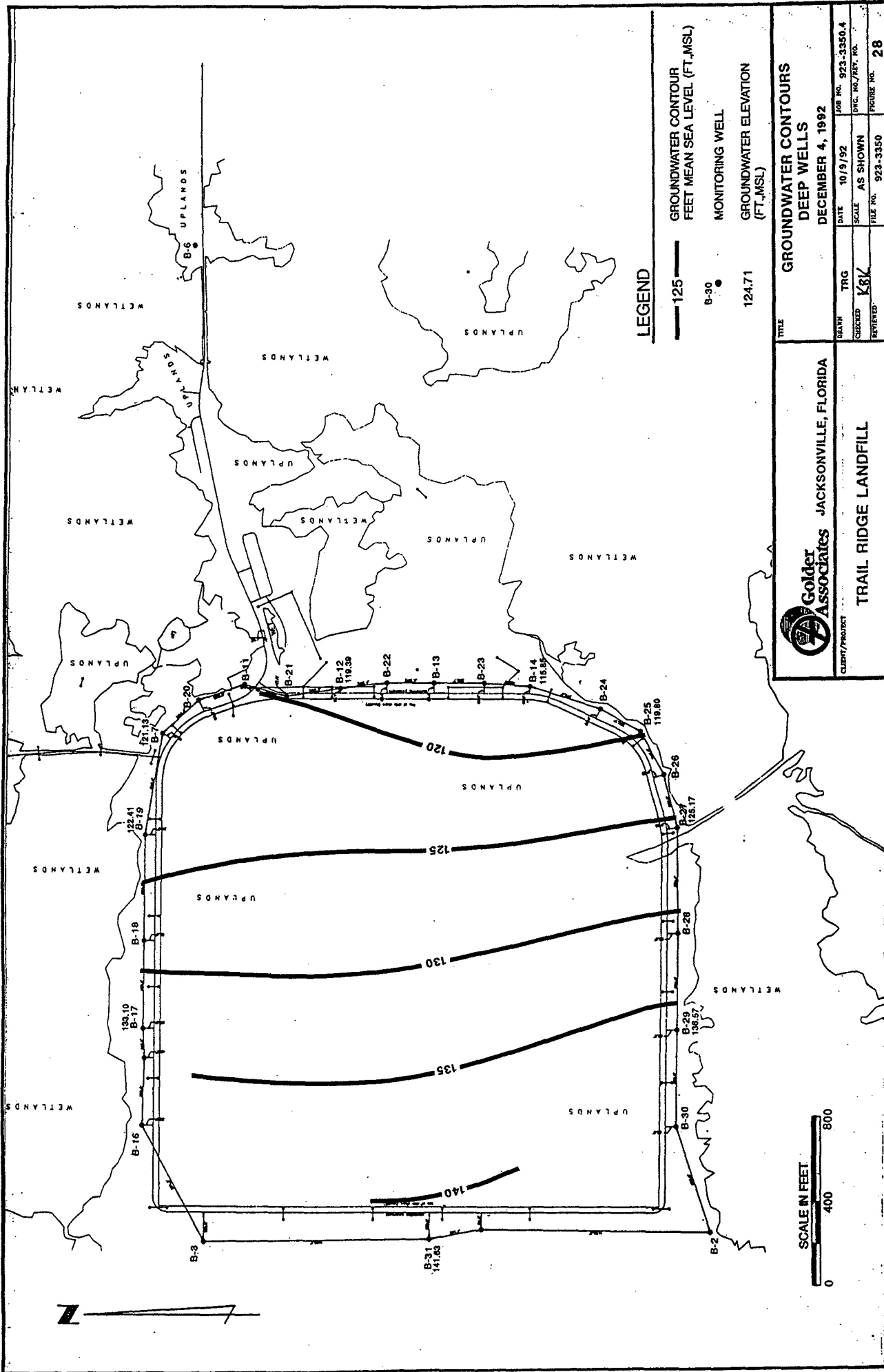


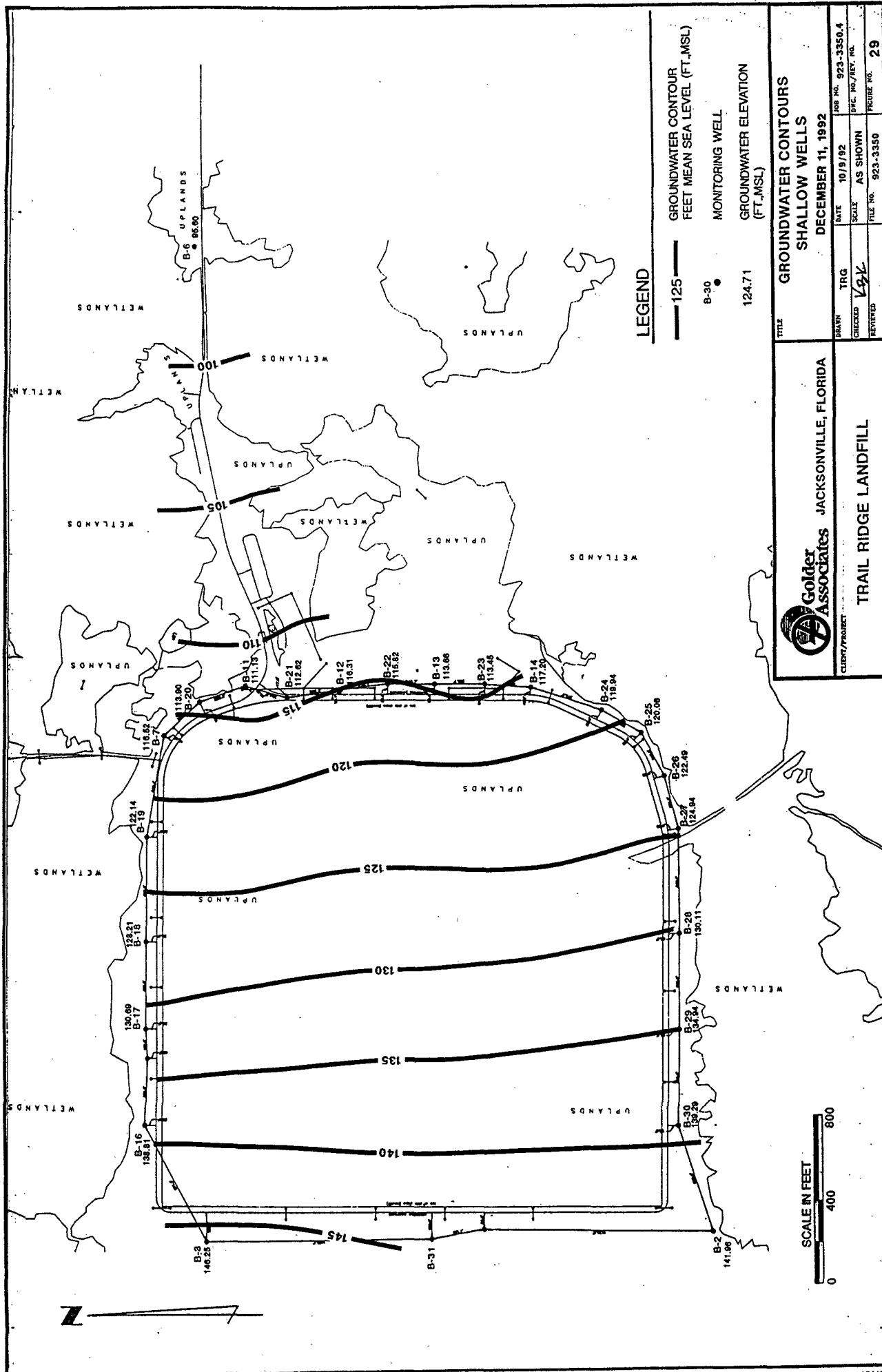


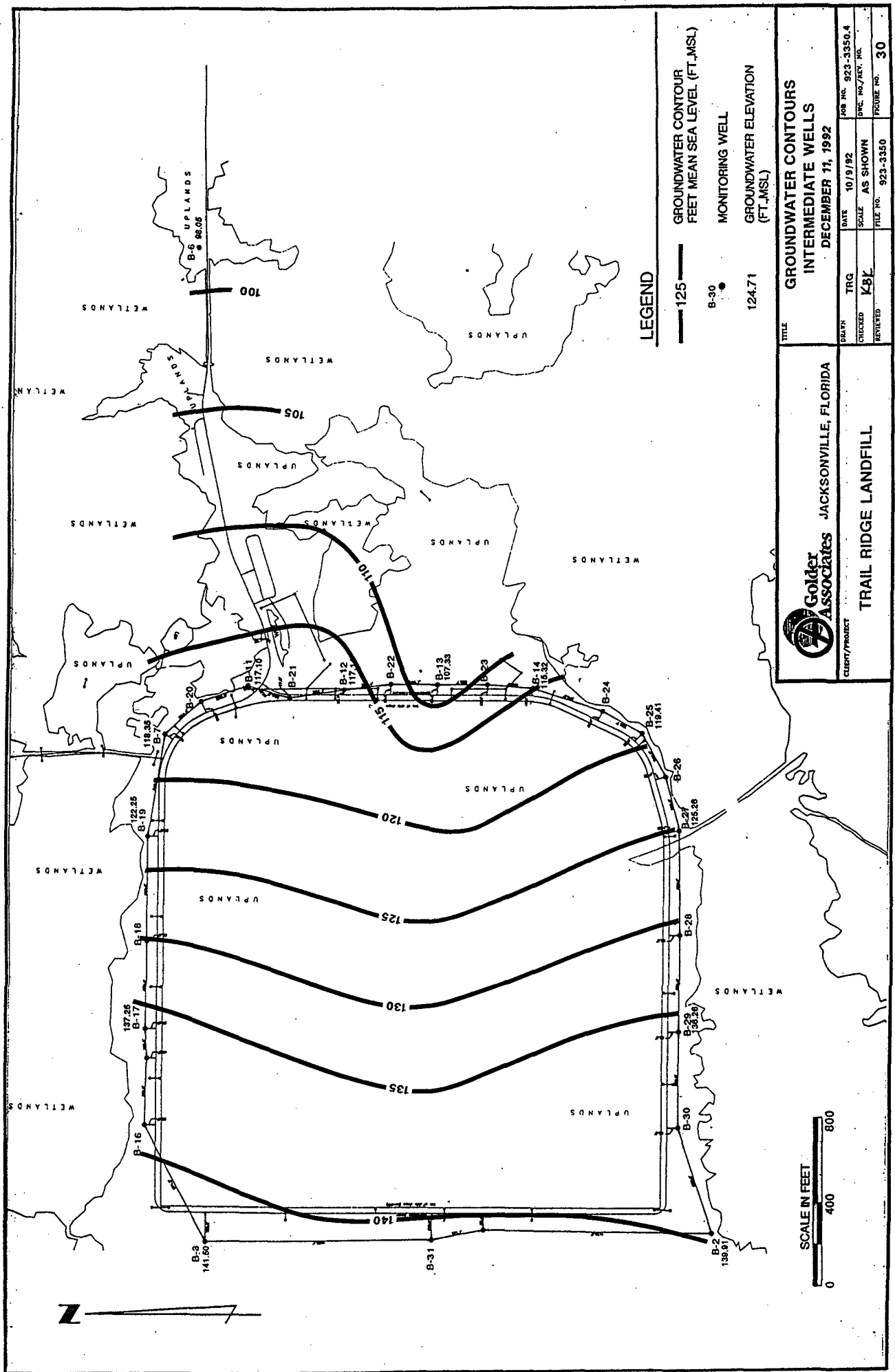


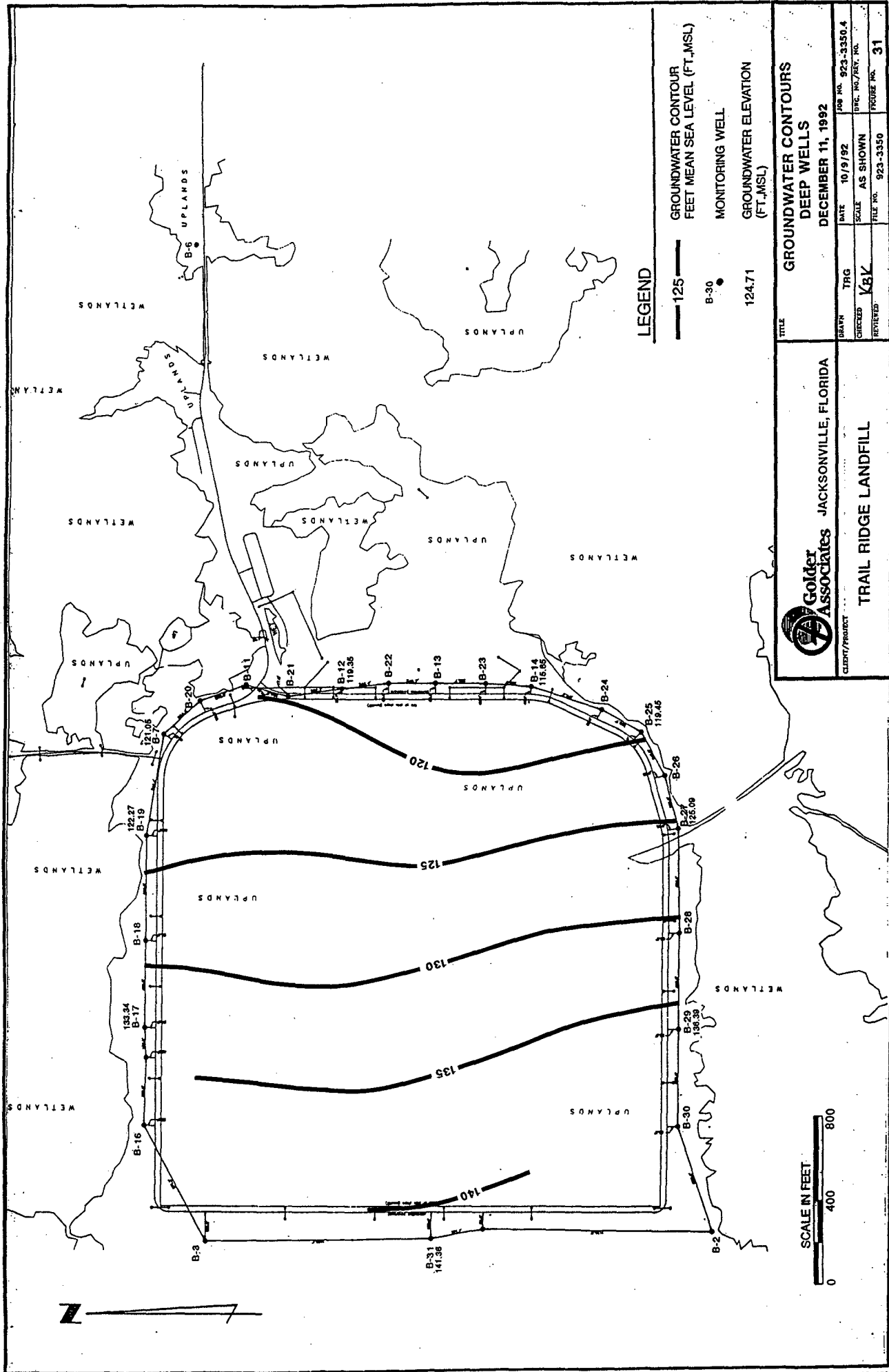








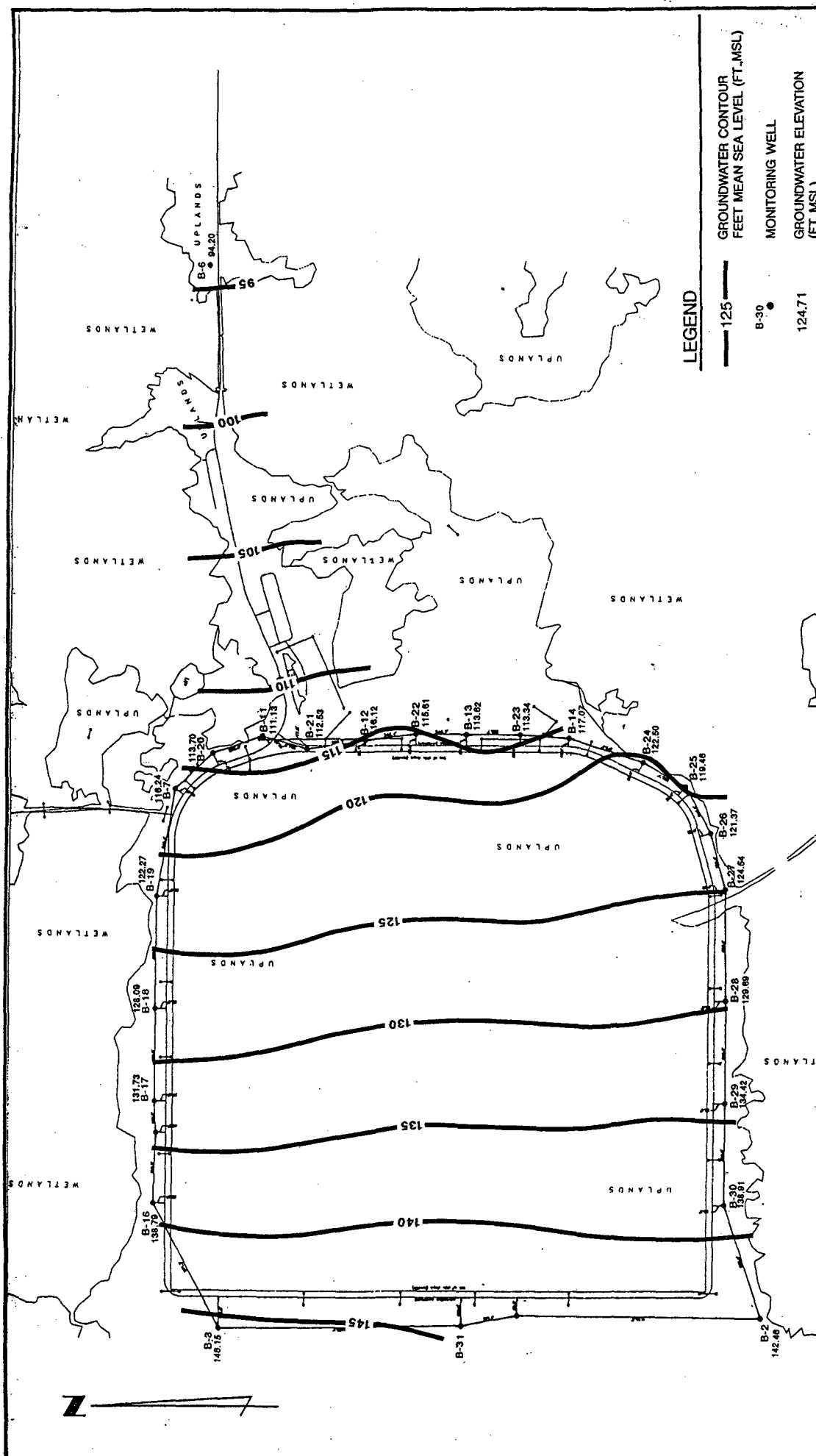




LEGEND

- 125 — GROUNDWATER CONTOUR
FEET MEAN SEA LEVEL (FT.,MSL)
- B-30 MONITORING WELL
- 124.71 GROUNDWATER ELEVATION
(FT.,MSL)

Trail Ridge Landfill Jacksonville, Florida Golder Associates		GROUNDWATER CONTOURS DEEP WELLS DECEMBER 11, 1992	
DATE	10/9/92	JOB NO.	923-3350.4
CHECKED	AS SHOWN	DWG. NO./REV.	NO.
REVIEWED	K8V	FILE NO.	923-3350
		FIGURE NO.	31



LEGEND

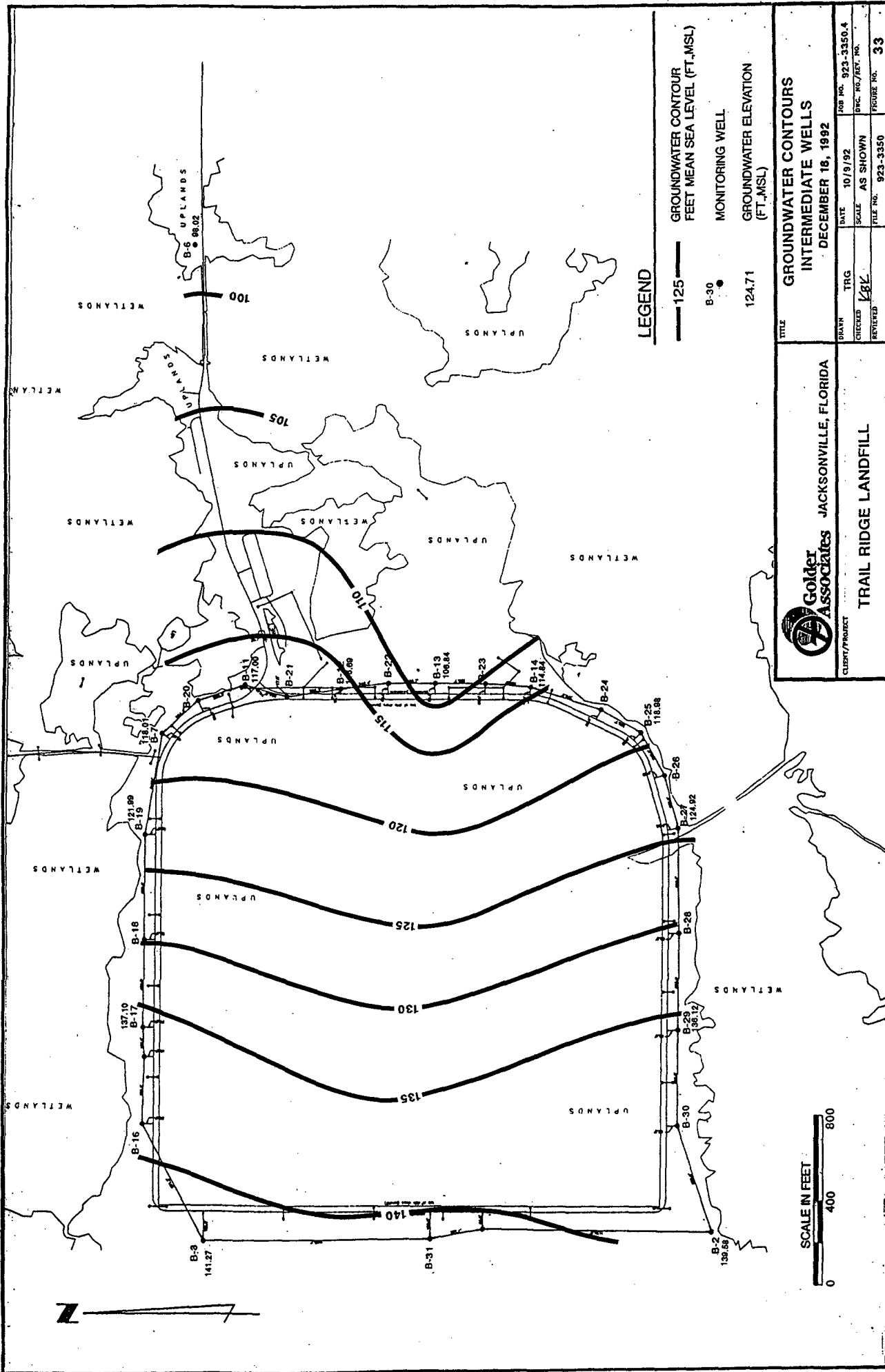
- 125 — GROUNDWATER CONTOUR
FEET MEAN SEA LEVEL (FT. MSL)
- B-30 MONITORING WELL
- 124.71 GROUNDWATER ELEVATION
(FT. MSL)

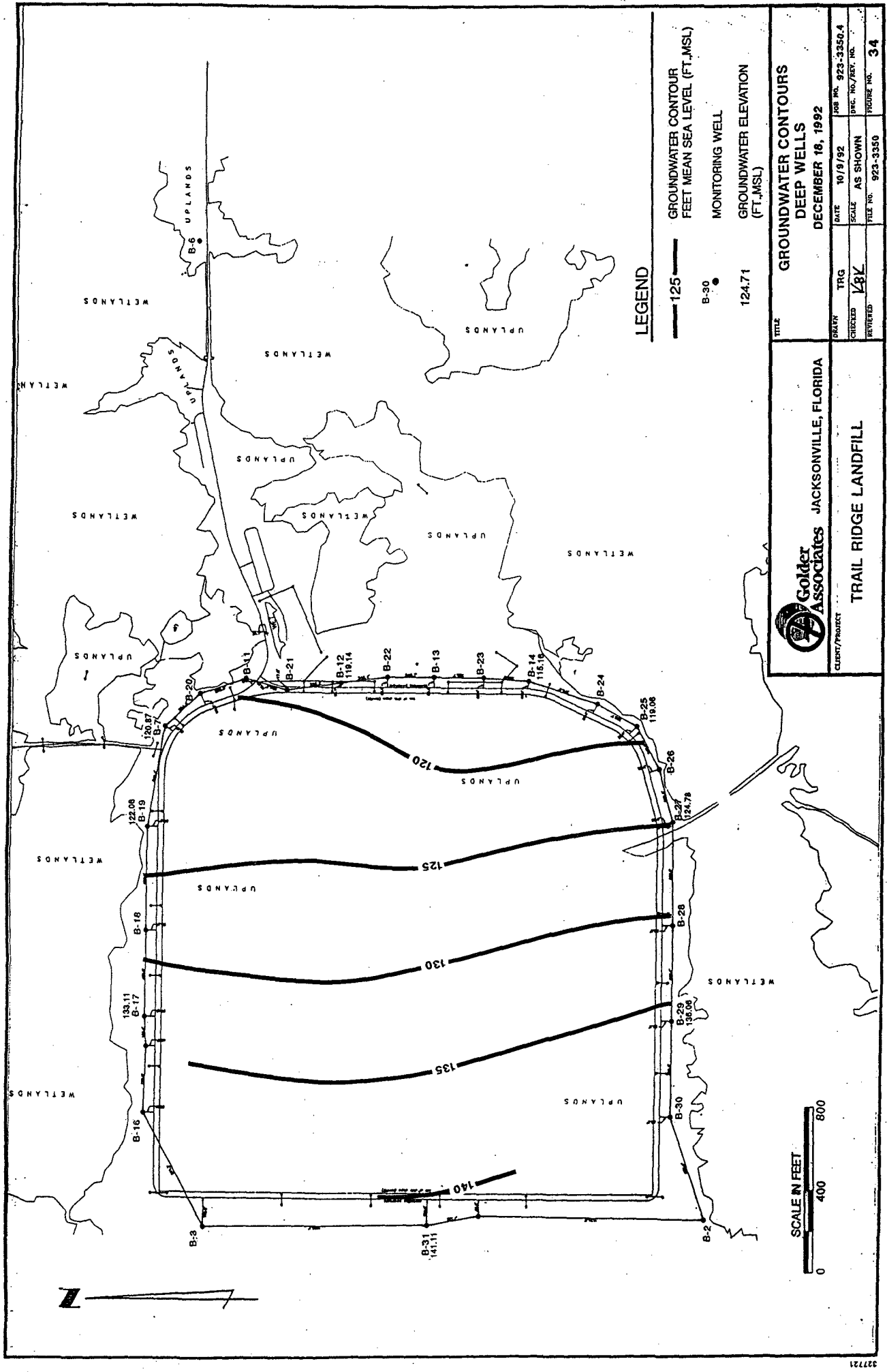
TITLE		GROUNDWATER CONTOURS SHALLOW WELLS DECEMBER 18, 1992	
CLIENT/PROJECT	Trail Ridge Landfill	DATE	10/9/92
DRAWN	TRG	SCALE	AS SHOWN
CHECKED	WJK	FILE NO.	923-3350
REVIEWED		FIGURE NO.	32

Goldier Associates JACKSONVILLE, FLORIDA

SCALE IN FEET

0 400 800





LEGEND

- 125 — GROUNDWATER CONTOUR
FEET MEAN SEA LEVEL (FT. MSL)
- B-30 MONITORING WELL
- 124.71 GROUNDWATER ELEVATION
(FT. MSL)

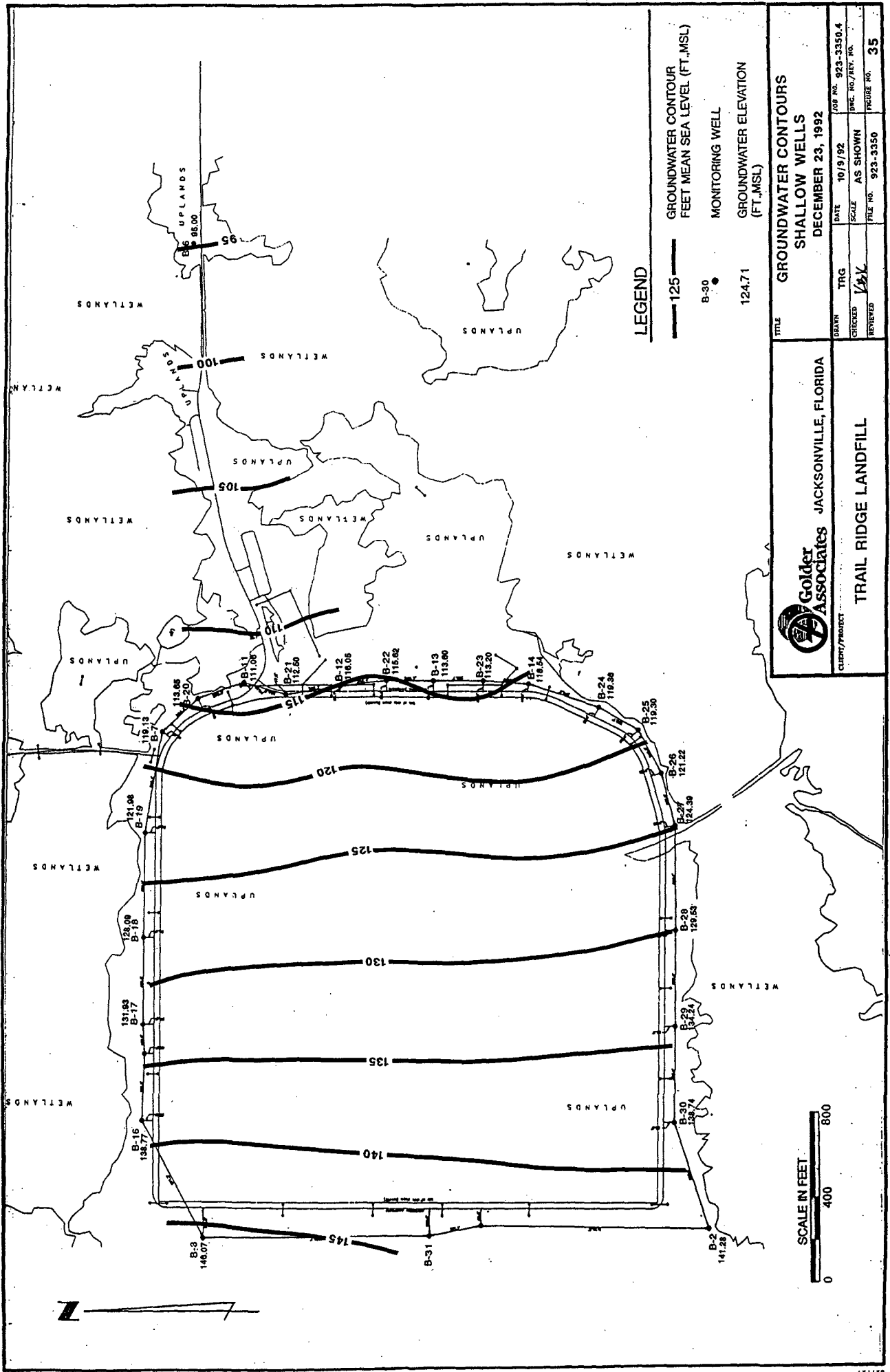
**GROUNDWATER CONTOURS
DEEP WELLS
DECEMBER 18, 1992**

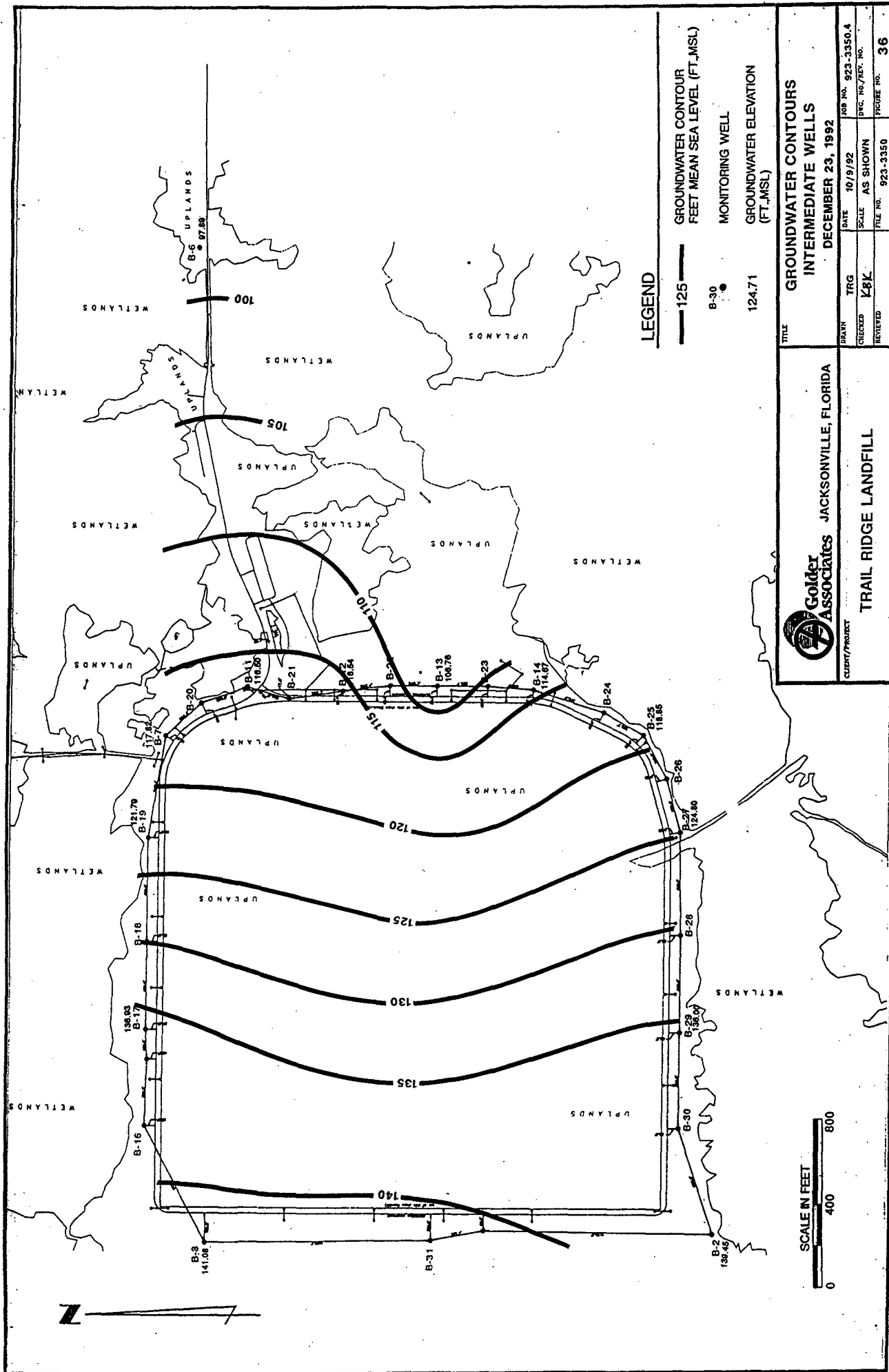
Goldier Associates JACKSONVILLE, FLORIDA

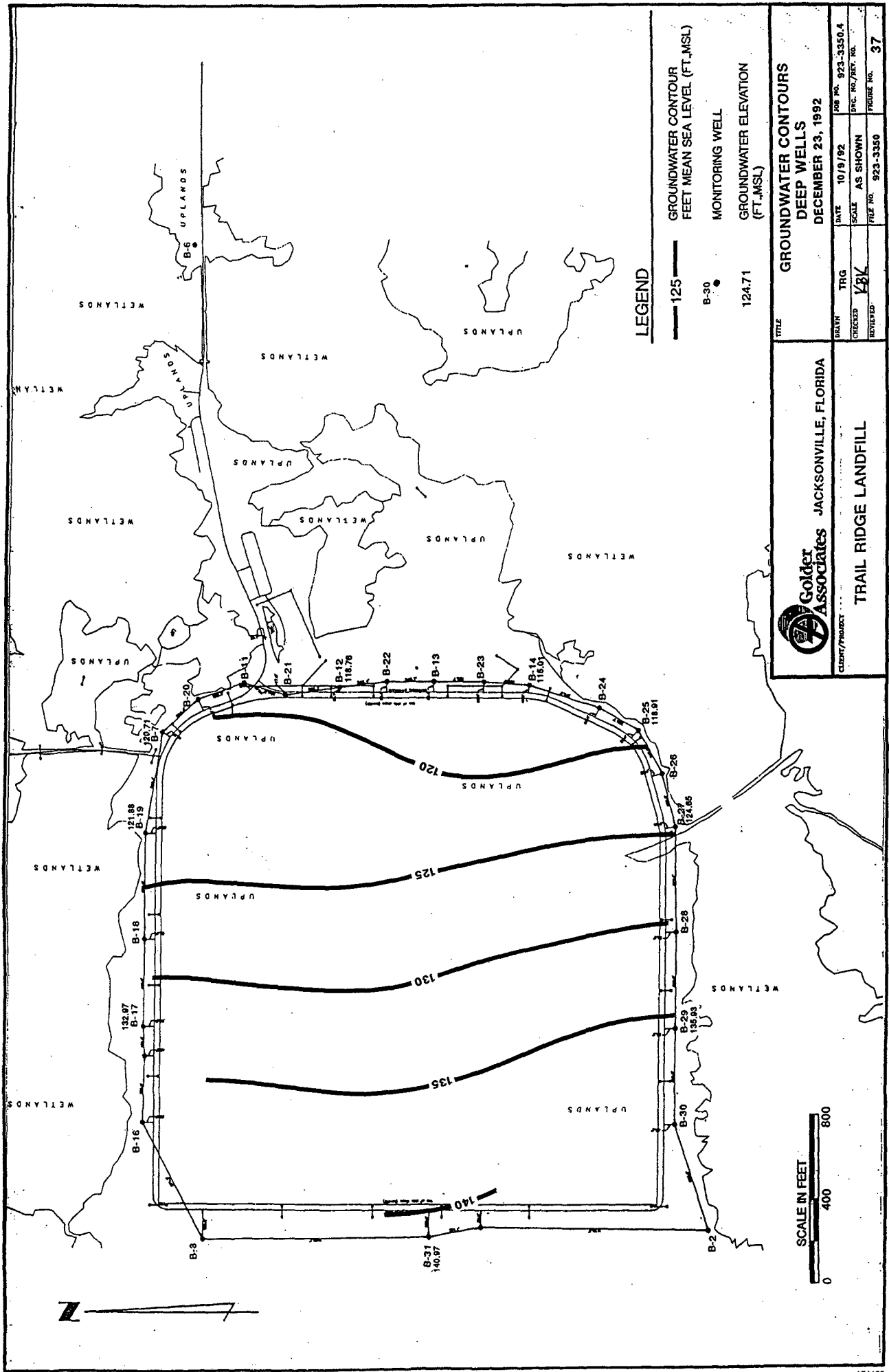
TRAIL RIDGE LANDFILL

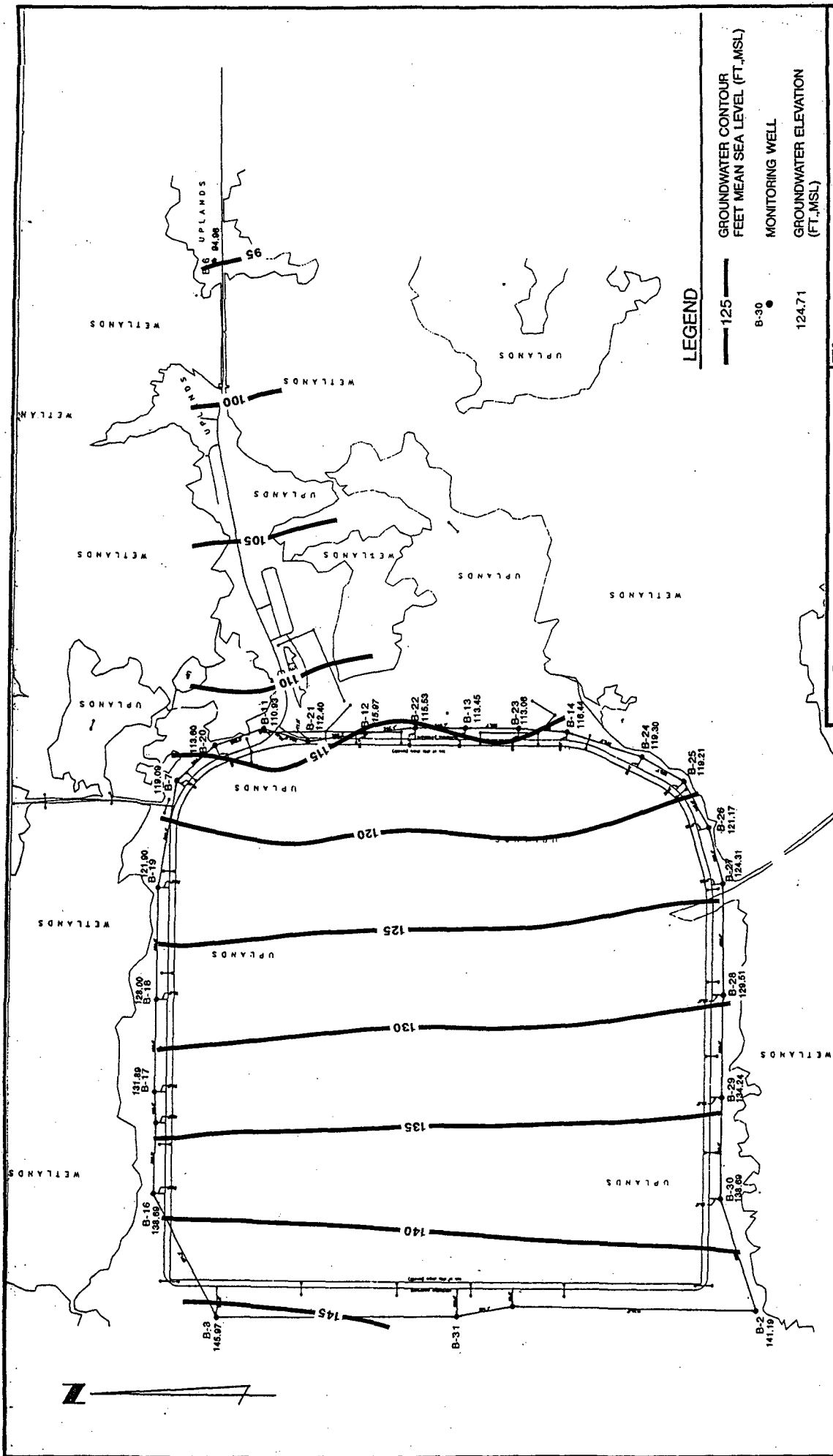
DATE	10/9/92	JOB NO.	923-3350.4
SCALE	AS SHOWN	DWG. NO./REV. NO.	
CHECKED	✓BVL	FILE NO.	923-3350
REVIEWED		FIGURE NO.	34

SCALE IN FEET
0 400 800







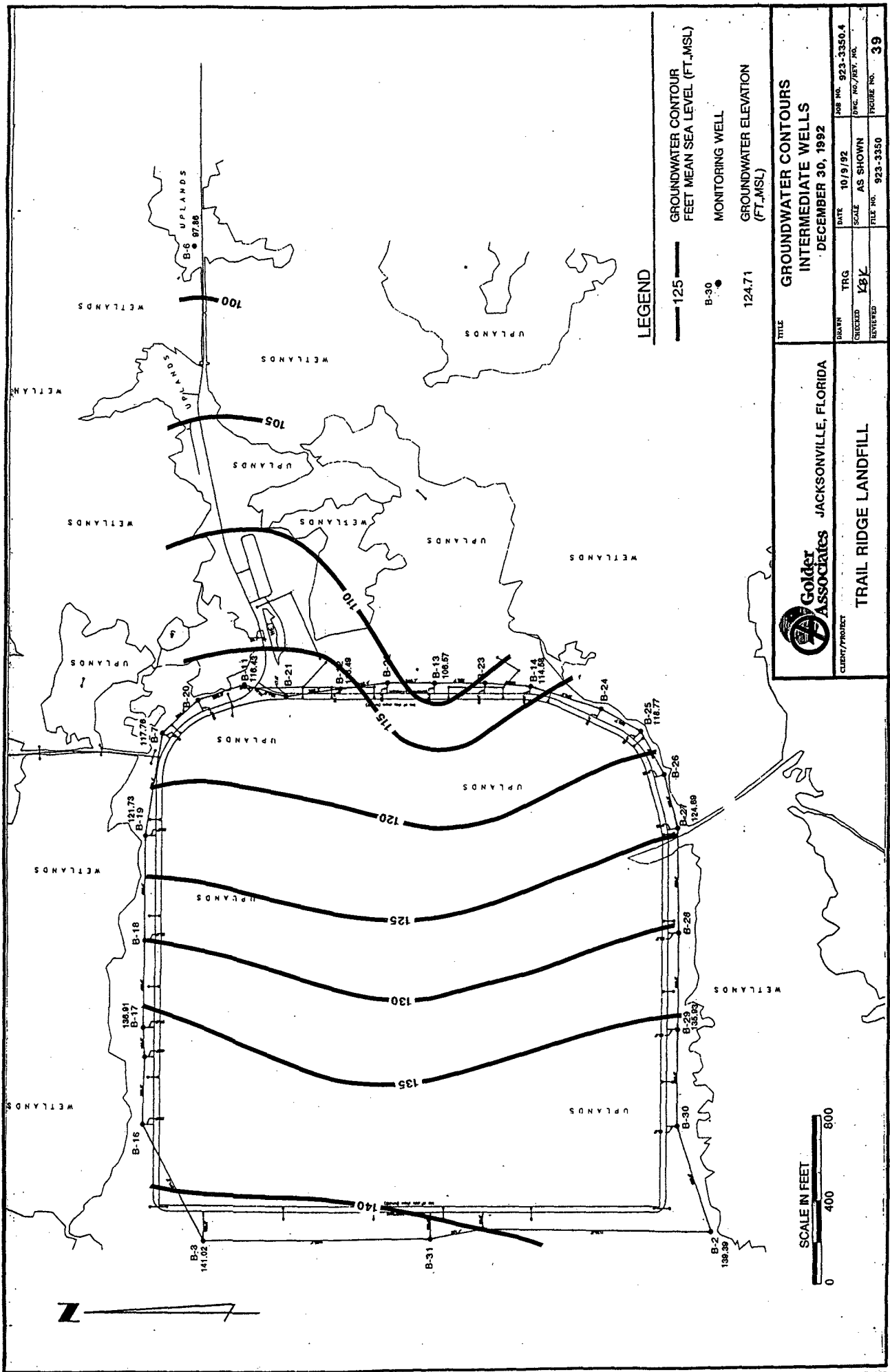


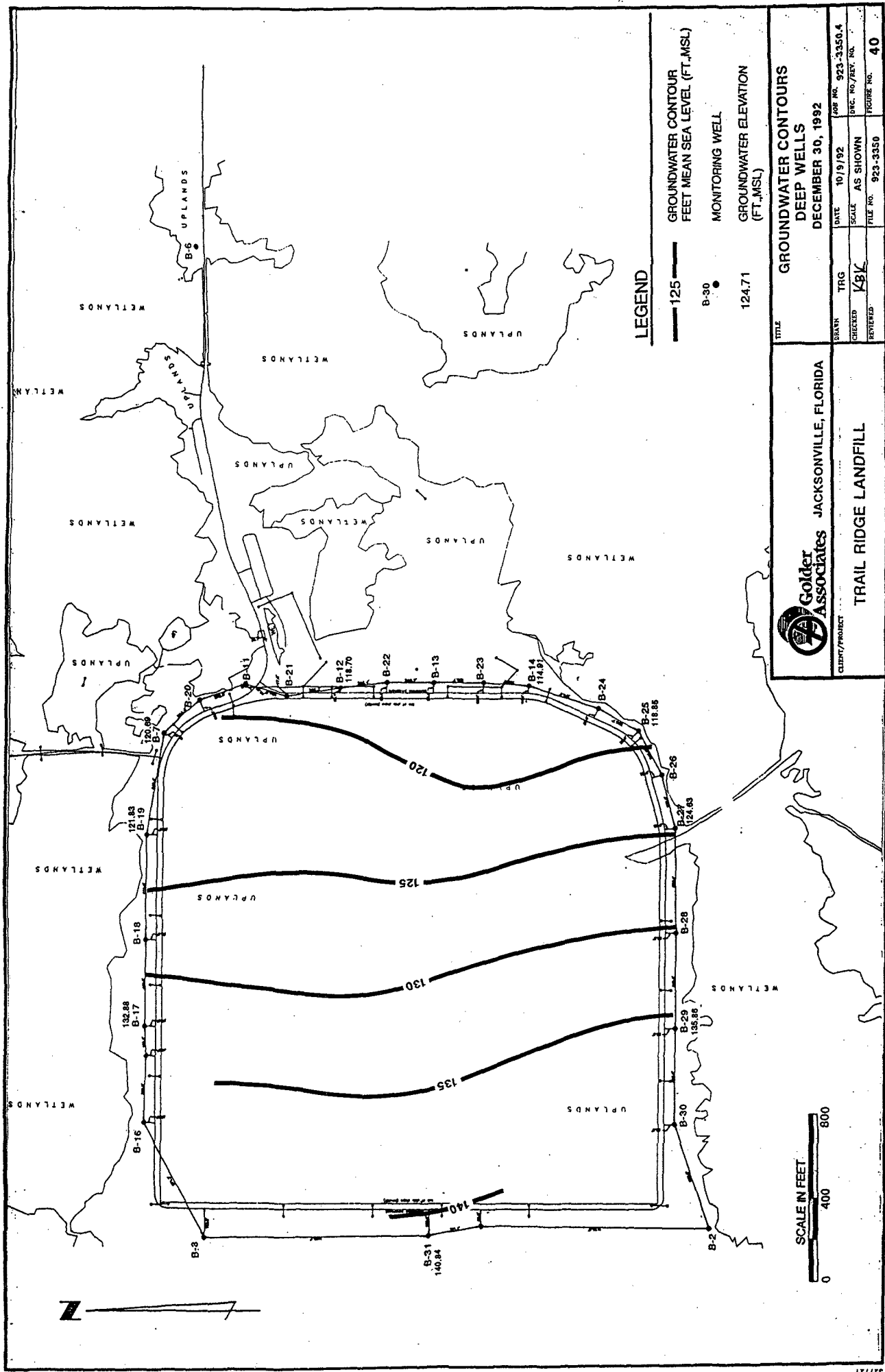
LEGEND

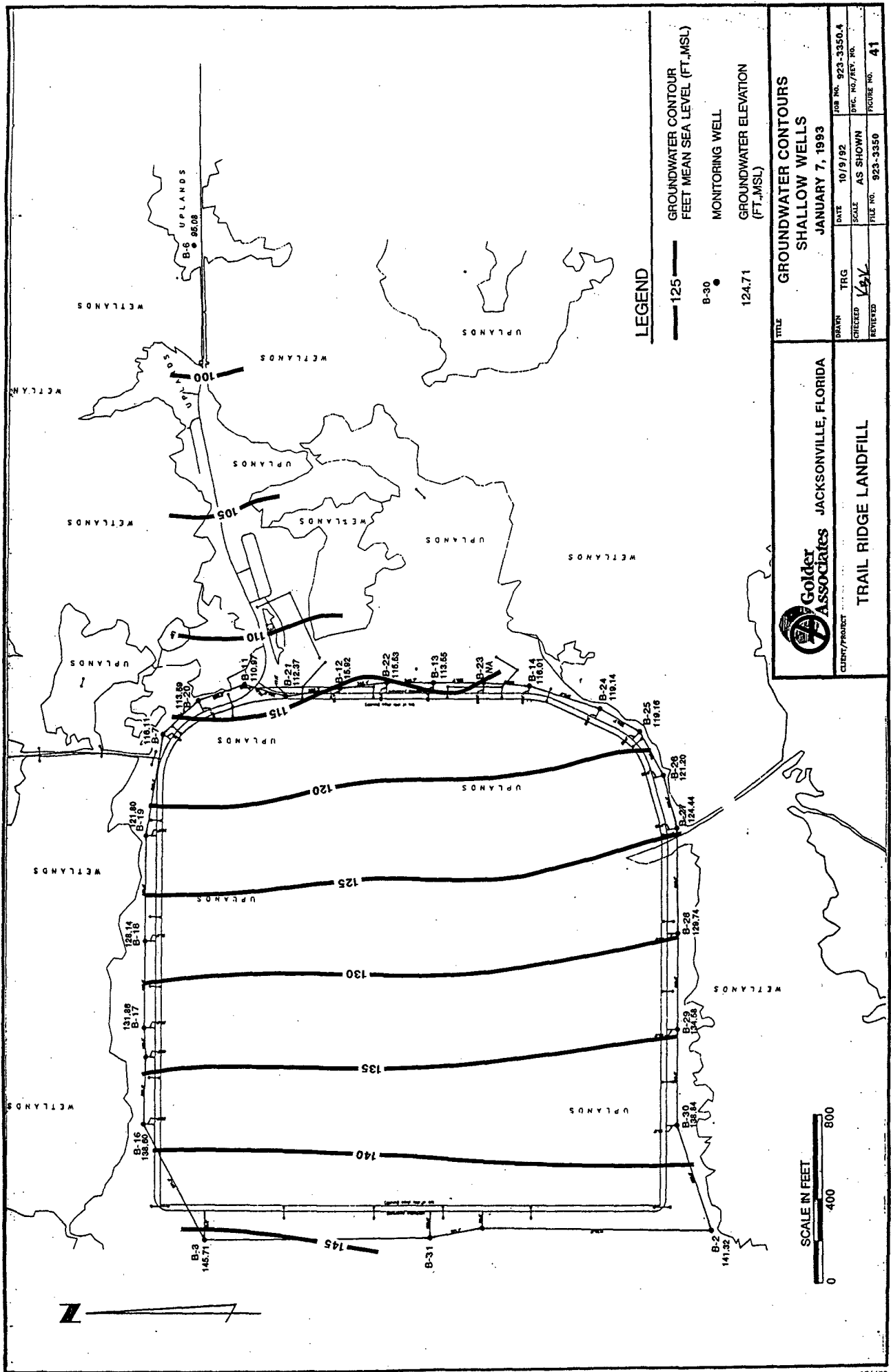
- 125 ————— GROUNDWATER CONTOUR
FEET MEAN SEA LEVEL (FT. MSL)
- B-30 ● MONITORING WELL
- 124.71 ————— GROUNDWATER ELEVATION
(FT. MSL)

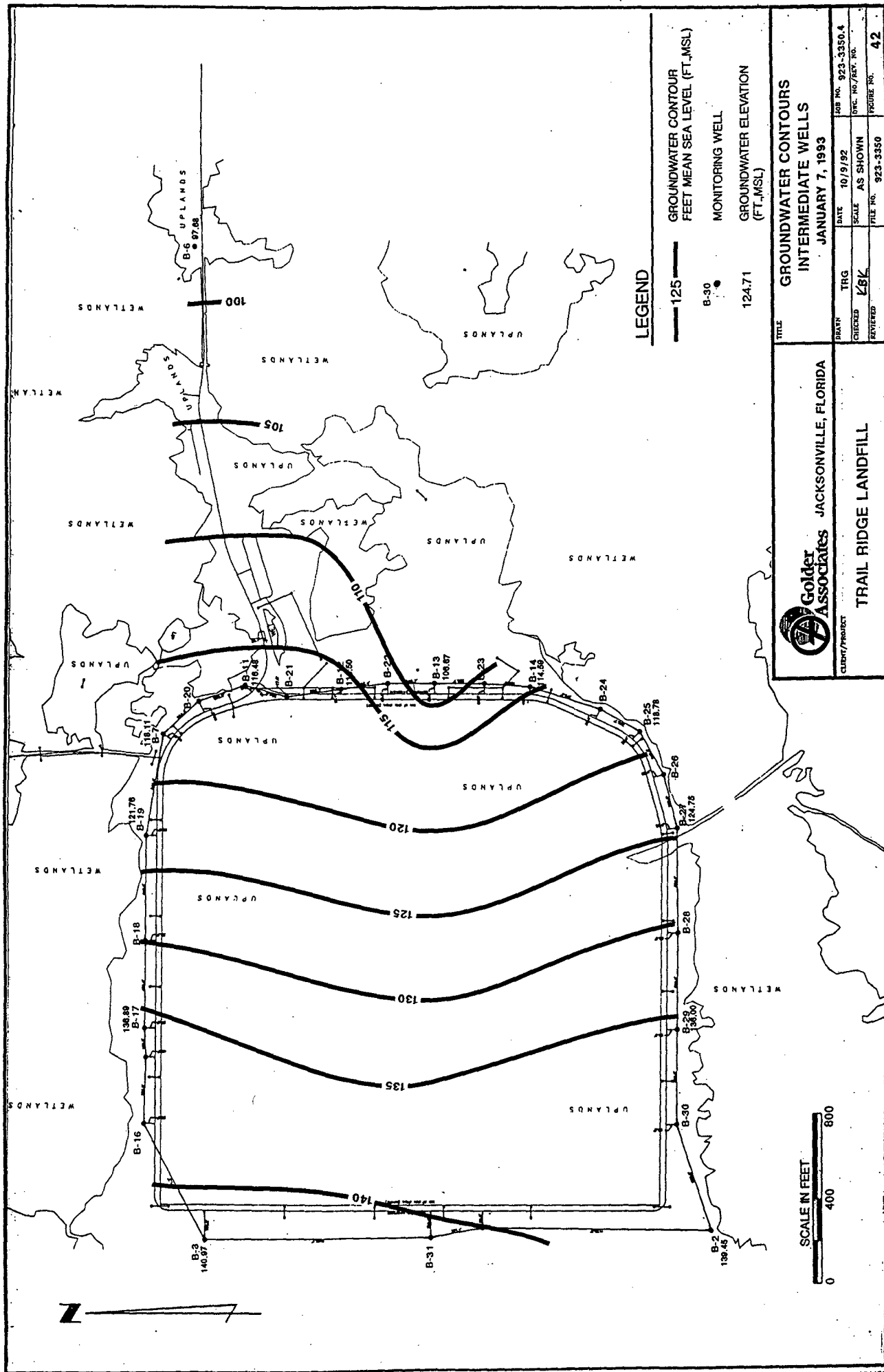
Trail Ridge Landfill		GROUNDWATER CONTOURS SHALLOW WELLS DECEMBER 30, 1992	
CLIENT/PROJECT	DATE	TRG	JOB NO. 923-3350.4
Golder Associates Jacksonville, Florida	10/9/92	✓	DWG. NO./REV. NO.
	SCALE AS SHOWN		
	FILE NO. 923-3350		FIGURE NO. 38

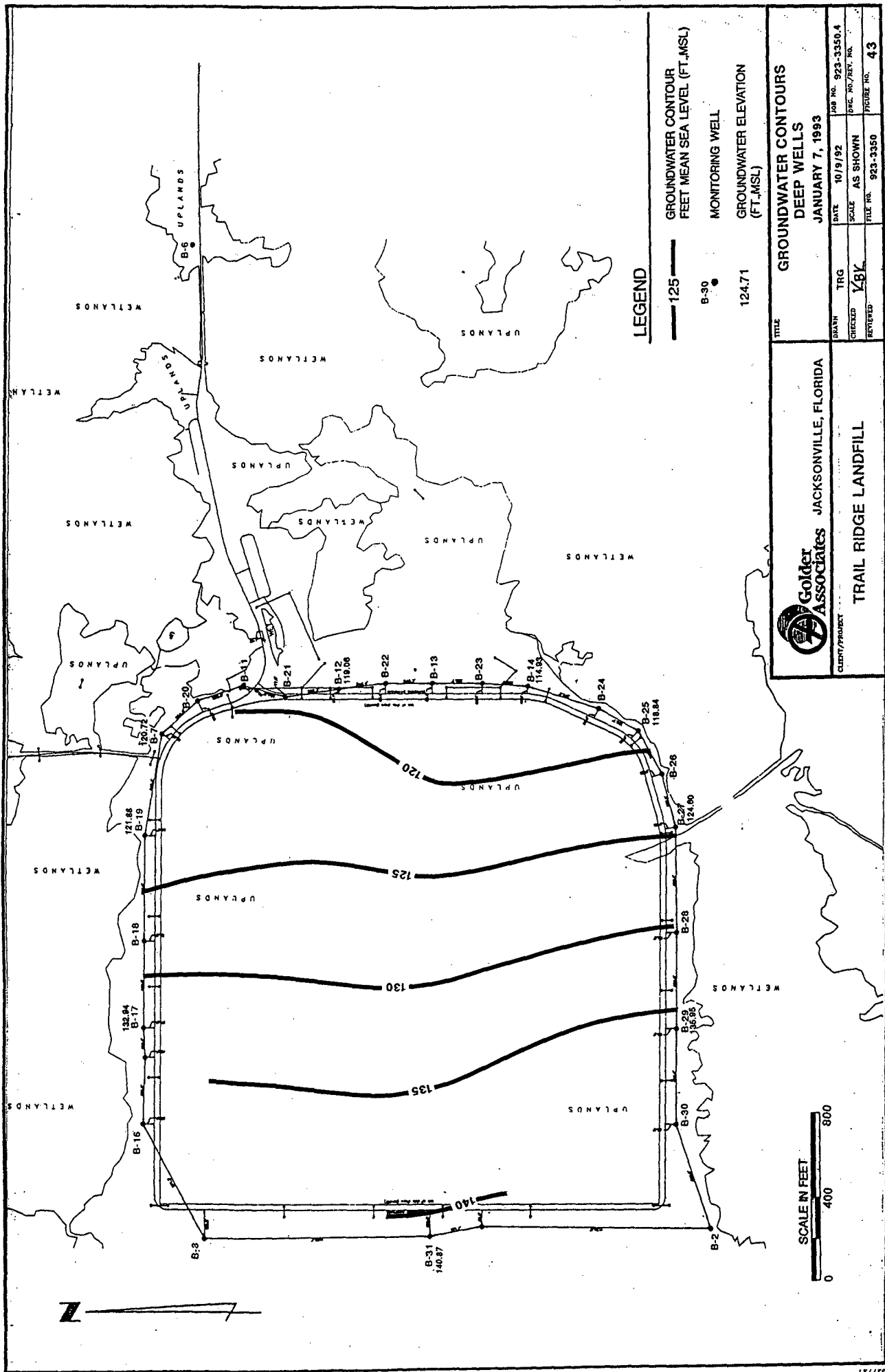












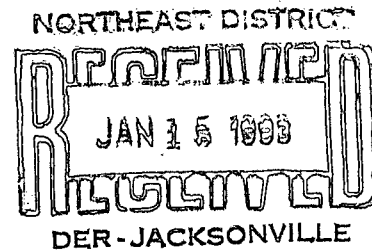
Golder Associates Inc.

9104 Cypress Green Drive, Suite 100
Jacksonville, FL USA 32256
Telephone (904) 448-0605
Fax (904) 448-0703



January 13, 1993

Trail Ridge Landfill
5110 U.S. Highway 301
P.O. Box 548
Baldwin, FL 32234



923-3350

Attn: Mr. Jim Lukens
Site Engineer

RE: EVALUATION OF THE GROUNDWATER MONITORING SYSTEM
GROUNDWATER ELEVATION DATA - 4TH QUARTER 1992
TRAIL RIDGE LANDFILL
JACKSONVILLE, FLORIDA

Gentlemen:

In accordance with specific condition 38b.1 of the Florida Department of Environmental Regulation (FDER) permit for Trail Ridge Landfill, Inc., Golder Associates Inc. (Golder Associates) has prepared a series of groundwater potentiometric maps of the site. These maps were constructed using the potentiometric data collected during the fourth quarter of 1992. The potentiometric data are based on weekly water level measurements from site monitoring wells taken during fourteen (14) individual events conducted between October 9, 1992 and January 7, 1993. The locations of the monitoring wells on site are shown on Figure 1. Individual potentiometric maps have been produced for each of the three hydrogeologic zones within the Surficial Aquifer and for each measurement date (Figures 2 through 43). The data for each of these maps are presented in the accompanying tables (Table 1 - Shallow Zone, Table 2 - Intermediate Zone, and Table 3 - Deep Zone).

This is the fourth and final report on the site's potentiometric data scheduled for submittal to FDER. Previous reports were submitted to FDER on April 15, 1992, July 13, 1992, and October 15, 1992.

General Hydrogeology

The hydrogeologic zones within the Surficial Aquifer are discussed in detail in the hydrogeology section of the permit application. In general, the three hydrogeologic zones monitored at the site include:

- Deep Zone: Approximately 110 to 150 feet below the ground surface. Wells are screened above the Marl Unit. Deep Zone wells are designated with a "D" suffix (e.g. MWB-14D).
- Intermediate Zone: Approximately 50 to 70 feet below the ground surface. Wells are screened in sands that are typically coarser than those that are at shallower depths. Intermediate Zone wells are designated with an "I" suffix (e.g. MWB-14I).

- Shallow Zone: Typically less than 25 feet below the ground surface. Wells are screened across the water table, in a zone that is typically comprised of poorly sorted, fine grained sands with variable silt content. Shallow Zone wells are designated with a "S" suffix (e.g. MWB-14S).

In summary, the conceptual hydrogeologic flow model presented in the permit application consisted of downward groundwater flow from the shallow zone to the deep zone along the western boundary of the landfill, transitioning across the site to upward flow from the deep zone to the shallow zone, along the eastern side of the landfill, where discharge occurs in the wetland areas. This flow model was supported by the potentiometric data collected from the wells that were installed for the site characterization. Also, as in most unconfined systems, it was noted that the site's groundwater flow direction conformed to the slope of the surface topography, with topography sloping and flow direction towards the east.

In the site characterization, the small east-west trending surface water drainage swales, located to the north and the south of the landfill area, were noted as being localized discharge areas for the shallow zone. The localized discharge of groundwater from the shallow zone in these areas resulted in the slight curving of potentiometric contours at the edge of the north and south site boundary. Overall, the effect of the east-west drainage swales on groundwater flow direction beneath the footprint of the landfill was insignificant to overall groundwater flow direction.

Observed Conditions

In general, the potentiometric conditions observed during the monitored period (October 9, 1992 to January 7, 1993) do not vary significantly from the data presented in the site characterization study, nor do they vary significantly from the data collected during the first three quarters of 1992. The data presented on the attached potentiometric maps exhibit consistent groundwater flow direction, west to east, in all three monitoring zones (deep, intermediate, and shallow).

The shallow zone potentiometric contours indicate a dominant easterly flow direction. Equipotential lines are slightly closer towards the eastern side of the landfill, indicating steeper gradients which have resulted from the proximity to discharge areas (the wetlands and the stormwater retention pond). It is noted that the water level in the stormwater retention pond is about 106 feet above Mean Sea Level (MSL). In general, groundwater elevations in the shallow zone varied from approximately 145 feet MSL along the west side of the landfill to approximately 115 feet MSL along the east side of the landfill. Overall, the horizontal gradient is relatively uniform, across the landfill and downgradient to MWB-6S. For the period monitored, there were not any wells in the shallow zone that had water levels above ground surface.

The intermediate zone potentiometric contours indicate an easterly flow direction. In general, groundwater elevations in the intermediate zone varied from approximately 140 feet MSL along the west side of the landfill to approximately 115 to 120 feet MSL along the east side of the landfill. Groundwater elevation along the east side of the landfill is consistently lowest in MWB-13IR which is located at approximately the mid-point (in a north-south direction) of the west side of the stormwater retention pond. Overall, the horizontal gradient across the remainder of the site was consistent. Intermediate zone wells which were observed to flow or have water levels above the ground surface during the period of record included 6I, 17I, and 29I.

The deep zone potentiometric contours indicate a relatively consistent horizontal gradient during the monitored period with flow dominantly towards the east. In general, groundwater elevations in the deep zone varied from approximately 140 feet MSL along the west side of the landfill to approximately 120 feet MSL along the east side of the landfill with apparently a consistent horizontal gradient across the site. Although less pronounced than in the shallow and intermediate zones, there is apparently a slight skew towards the southeast in the easternmost potentiometric contour shown (120 feet MSL). It is possible that this skew is in response to upward leakage to the stormwater retention pond. Deep zone wells which were observed to flow or have water levels above the ground surface during the period of record included 7D and 29D. Fluctuations in the deep zone water levels have been consistent with similar water level changes in the shallow and intermediate zones, indicating that hydraulic interconnection is strong. Average fluctuation in water levels were slightly less in the deep zone (2.4 feet) than in the intermediate and shallow zones (2.7 feet) indicating that the deep zone, while hydraulically connected to the upper zones is less sensitive to seasonal fluctuations in precipitation.

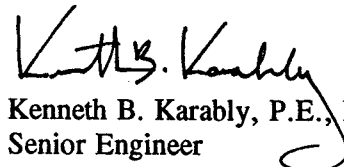
Conclusions and Recommendations

Based upon our review of the enclosed data, along with data from the first three quarters of 1992 (Golder Associates' reports dated April 15, 1992, July 13, 1992, and October 15, 1992) it is evident that the groundwater flow patterns at the Trail Ridge Landfill were consistent over the one-year period monitored, and have not changed significantly since Golder Associates conducted a Phase II hydrogeological investigation at the site in May 1990 and designed the groundwater monitoring system. As mentioned above, the Phase II hydrogeological investigation (contained in the permit application) indicated that the groundwater flow beneath the site was predominantly from the west to the east and that vertical gradients were downward on the west side and generally upward on the east side. The data collected during the third quarter of 1992, and presented here on the attached groundwater potentiometric maps confirms the original hydrogeological conclusions.

The spacing of the shallow monitoring wells is about 450 feet on the north and south sides of the landfill, and about 250 feet on the east side (downgradient). This well spacing is in accordance with FDER guidelines. Two clusters with intermediate and deep monitoring wells (MWB-19 and MWB-27) exist on the north and south sides of the landfill. Based on the flow directions identified by the intermediate and deep potentiometric contour maps, these two well clusters appear to be more than adequate to monitor the intermediate and deep zones north and south of the landfill. Given the spacing and construction of the monitoring wells that are in place, and the groundwater flow conditions that have been established, it is our recommendation that no additional wells are required to be added to the existing groundwater monitoring system.

Very truly yours,

GOLDER ASSOCIATES INC.


Kenneth B. Karably, P.E., P.G.
Senior Engineer


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Associate

KBK/DJM:grd
923-3350.193/#1/grd

TABLE 1
(Page 1 of 2)
GROUNDWATER ELEVATION MEASUREMENTS (10/9/92 TO 1/7/93)
(SHALLOW WELLS)

TRAIL RIDGE LANDFILL
JACKSONVILLE, FLORIDA

Well	TOC Elev. (ft. MSL)	10/09/92 Water Level/Elev. (ft. BTOC) (ft. MSL)	10/16/92 Water Level/Elev. (ft. BTOC) (ft. MSL)	10/23/92 Water Level/Elev. (ft. BTOC) (ft. MSL)	10/28/92 Water Level/Elev. (ft. BTOC) (ft. MSL)	11/05/92 Water Level/Elev. (ft. BTOC) (ft. MSL)	11/12/92 Water Level/Elev. (ft. BTOC) (ft. MSL)	11/20/92 Water Level/Elev. (ft. BTOC) (ft. MSL)
B-2SR	146.84	3.48	4.18	4.57	4.81	4.95	4.85	5.90
B-3SR	153.49	2.80	4.20	4.98	5.41	5.80	5.32	5.86
B-6S	100.00	3.02	3.98	4.40	4.66	4.72	3.92	5.11
B-7SR	123.29	5.00	5.70	6.18	6.35	6.55	6.72	6.93
B-11SR	120.81	6.90	7.28	7.98	8.66	8.95	9.35	9.84
B-12SR	124.63	6.91	7.35	7.65	7.77	7.91	8.48	8.68
B-13SR	126.06	9.35	9.68	11.10	11.13	11.50	10.24	11.94
B-14SR	126.05	6.72	7.88	9.62	10.15	11.64	10.89	11.88
B-16S	144.01	3.84	4.42	4.75	4.89	4.65	5.65	5.82
B-17S	138.31	4.00	7.12	5.95	6.14	6.74	6.29	6.92
B-18S	134.09	3.72	4.32	4.90	4.92	5.14	5.36	5.48
B-19S	127.38	3.14	4.00	4.40	4.60	4.81	4.89	4.97
B-20S	121.01	4.38	5.70	6.00	6.28	6.51	6.88	7.15
B-21S	122.84	8.86	8.50	8.92	9.24	9.57	9.06	10.04
B-22S	126.97	9.92	9.78	10.33	10.66	10.80	11.02	11.11
B-23S	124.98	NA	10.25	12.34	11.68	11.88	11.74	11.81
B-24S	126.04	3.82	3.40	4.34	4.74	5.18	7.58	6.23
B-25S	125.22	3.54	3.40	3.80	4.61	4.91	5.06	5.11
B-26S	126.55	3.48	3.58	4.24	4.58	4.39	4.75	4.84
B-27S	128.42	2.68	2.66	3.14	3.40	3.58	3.88	4.00
B-28S	133.73	2.80	3.70	4.00	4.18	3.90	4.12	4.26
B-29S	138.02	2.38	2.92	3.48	4.71	4.40	3.80	4.44
B-30S	142.52	2.20	3.84	3.31	3.53	4.38	3.79	4.40

TABLE 1

(Page 2 of 2)

GROUNDWATER ELEVATION MEASUREMENTS (10/9/92 TO 1/7/93) (SHALLOW WELLS)

TRAIL RIDGE LANDFILL
JACKSONVILLE, FLORIDA

Well	TOC Elev. (ft. MSL)	11/27/92 Water Level Water Elev. (ft. BTOC) (ft. MSL)	12/04/92 Water Level Water Elev. (ft. BTOC) (ft. MSL)	12/11/92 Water Elev. (ft. BTOC) (ft. MSL)	12/18/92 Water Level Water Elev. (ft. BTOC) (ft. MSL)	12/23/92 Water Level Water Elev. (ft. BTOC) (ft. MSL)	12/30/92 Water Level Water Elev. (ft. BTOC) (ft. MSL)	01/07/93 Water Level Water Elev. (ft. BTOC) (ft. MSL)
B-25R	146.64	4.68	4.54	4.68	4.18	5.36	5.45	5.32
B-35R	153.49	6.99	6.78	7.24	7.34	7.42	7.52	7.78
B-6S	100.00	4.47	4.33	4.40	5.80	5.00	5.04	4.92
B-75R	123.29	6.81	6.54	6.77	7.05	4.16	4.20	7.18
B-115R	120.81	9.59	9.50	9.68	9.68	9.75	9.88	9.84
B-125R	124.63	8.28	8.02	8.32	8.51	8.58	8.66	8.71
B-135R	126.06	12.20	11.88	12.40	12.44	12.46	12.61	12.51
B-145R	126.05	10.98	10.39	8.85	8.98	9.51	9.61	10.04
B-16S	144.01	4.58	4.44	5.20	5.22	5.24	5.32	5.41
B-17S	138.31	5.98	5.72	7.62	6.58	6.38	6.42	6.45
B-18S	134.09	5.42	5.27	5.88	6.00	6.00	6.09	5.95
B-19S	127.38	5.08	4.91	5.24	5.11	5.40	5.48	5.58
B-20S	121.01	7.15	6.88	7.11	7.31	7.36	7.41	7.42
B-21S	122.84	10.15	9.92	10.22	10.31	10.34	10.44	10.47
B-22S	126.97	11.05	10.74	11.15	11.36	11.35	11.44	11.44
B-23S	124.98	11.57	11.32	11.53	11.84	11.78	11.92	12.11
B-24S	126.04	6.28	6.10	6.10	3.54	6.68	6.74	6.90
B-25S	125.22	4.98	4.72	5.16	5.76	5.92	6.01	6.06
B-26S	126.55	4.78	4.54	4.06	5.18	5.33	5.38	5.35
B-27S	128.42	3.43	3.33	3.48	3.88	4.03	4.11	3.98
B-28S	133.73	3.70	3.54	3.62	4.04	4.20	4.22	3.99
B-29S	136.02	3.18	3.02	3.08	3.60	3.78	3.78	3.44
B-30S	142.52	3.18	3.00	3.23	3.61	3.78	3.83	3.68

TABLE 2
GROUNDWATER ELEVATION MEASUREMENTS (10/9/92 TO 1/7/93)
(INTERMEDIATE WELLS)

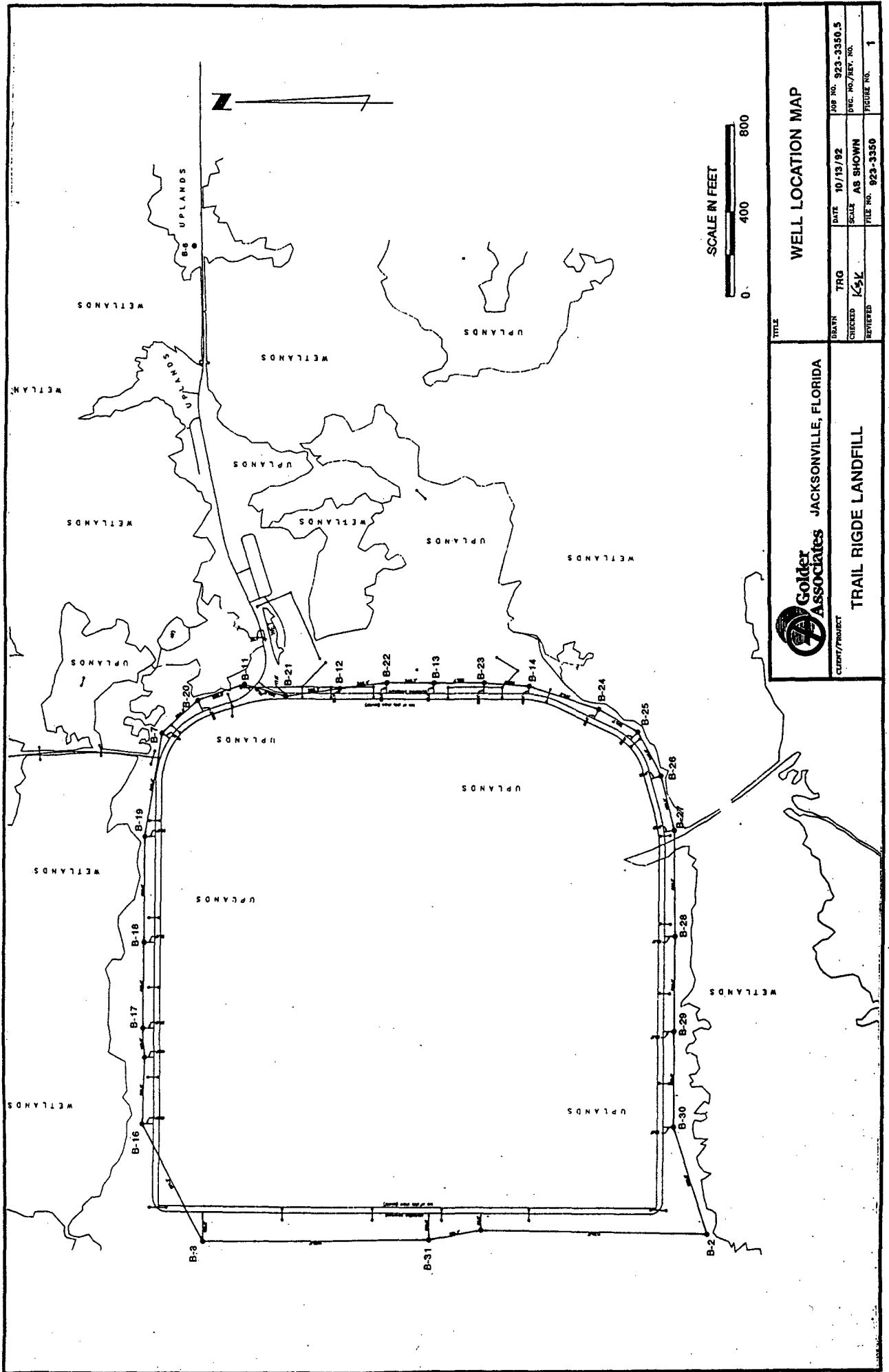
TRAIL RIDGE LANDFILL
JACKSONVILLE, FLORIDA

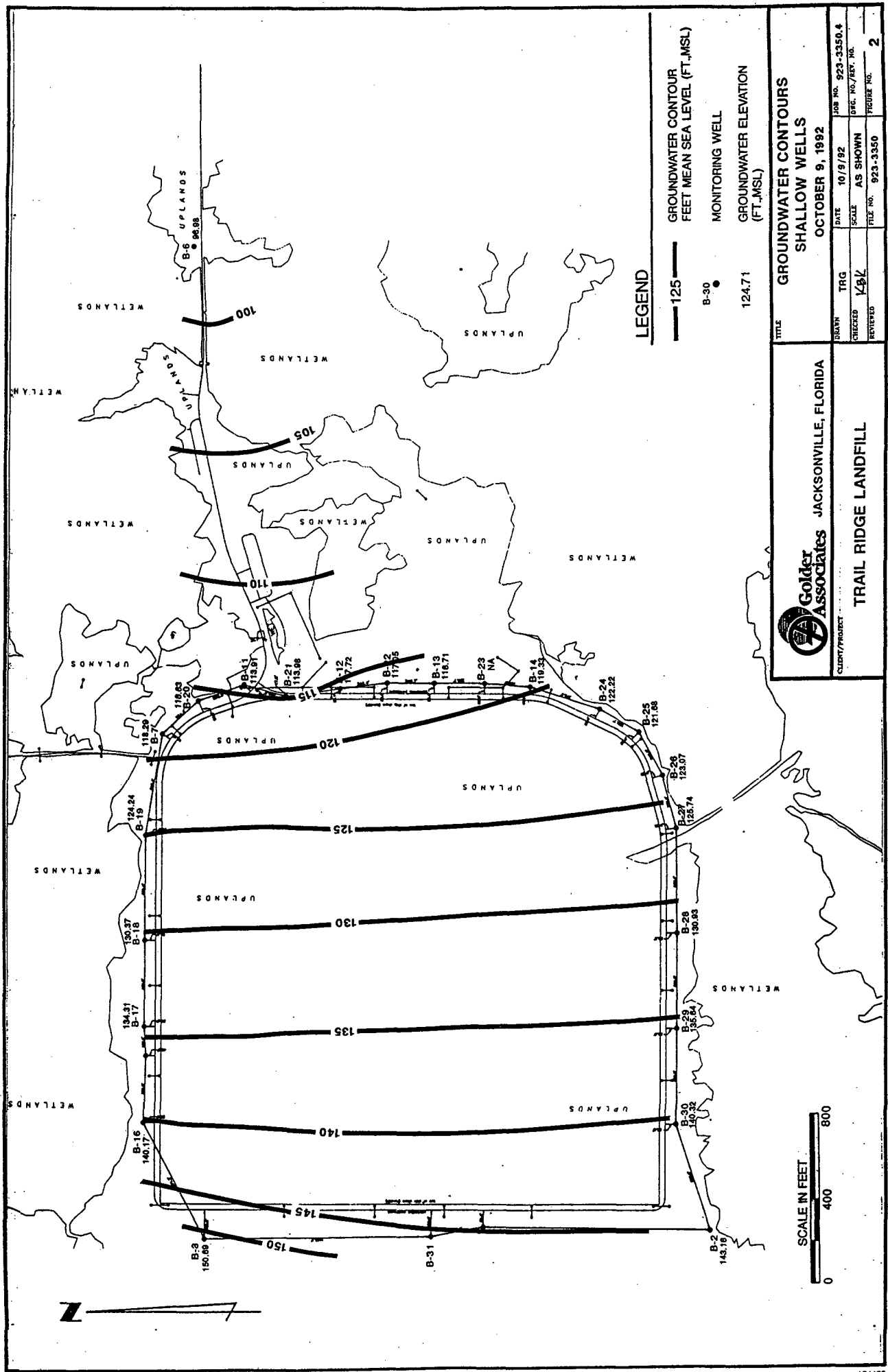
Well	TOC Elev. (ft. MSL)	10/09/92		10/16/92		10/23/92		10/28/92		11/05/92		11/12/92		11/20/92	
		Water Level Water Elev. (ft. BTOC)	(ft. MSL)	Water Level Water Elev. (ft. BTOC)	(ft. MSL)	Water Level Water Elev. (ft. BTOC)	(ft. MSL)	Water Level Water Elev. (ft. BTOC)	(ft. MSL)	Water Level Water Elev. (ft. BTOC)	(ft. MSL)	Water Level Water Elev. (ft. BTOC)	(ft. MSL)	Water Level Water Elev. (ft. BTOC)	(ft. MSL)
B-21	145.73	4.74	140.99	5.21	140.52	5.58	140.15	5.80	139.93	5.92	139.81	5.91	139.82	5.84	139.89
B-31	152.50	9.48	143.02	10.00	142.50	10.42	142.08	10.63	141.87	10.76	141.74	11.64	140.86	11.74	140.78
B-61	99.67	0.00	99.67	0.00	99.67	0.00	99.67	0.00	99.67	0.00	99.67	1.40	98.27	1.68	97.99
B-71	121.53	1.17	120.36	1.55	119.98	2.35	119.18	2.85	118.68	2.95	118.58	3.08	118.45	3.37	118.16
B-111	120.43	1.23	119.20	1.54	118.89	2.50	117.93	3.00	117.43	3.17	117.26	3.21	117.22	3.50	116.93
B-121	124.72	5.37	119.35	5.54	119.18	6.60	118.12	7.07	117.65	7.09	117.63	7.48	117.24	7.58	117.14
B-131R	125.98	16.66	109.32	15.42	110.56	17.58	108.40	17.88	108.10	17.87	108.11	18.90	107.08	18.70	107.28
B-141R	125.92	6.95	118.97	8.12	117.80	9.52	116.40	10.01	115.91	9.91	116.01	10.82	115.10	10.92	115.00
B-171	138.43	0.00	138.43	0.00	138.43	0.00	138.43	0.00	138.43	0.93	137.50	1.48	136.95	1.78	136.65
B-191	127.94	4.00	123.94	4.50	123.44	5.11	122.83	5.42	122.52	5.58	122.36	5.64	122.30	5.72	122.22
B-251	124.03	3.28	120.75	2.85	121.18	4.30	119.73	4.18	119.85	4.29	119.74	4.53	119.50	4.58	119.45
B-271	128.63	2.64	125.99	2.23	126.40	2.87	125.76	3.15	125.48	3.31	125.32	2.37	126.26	3.44	125.19
B-291	138.08	0.00	138.08	0.91	137.17	1.30	136.78	1.53	136.55	1.50	136.58	0.90	137.18	1.68	136.40
Well	TOC Elev. (ft. MSL)	11/27/92		12/04/92		12/11/92		12/18/92		12/23/92		12/30/92		01/07/93	
		Water Level Water Elev. (ft. BTOC)	(ft. MSL)	Water Level Water Elev. (ft. BTOC)	(ft. MSL)	Water Level Water Elev. (ft. BTOC)	(ft. MSL)	Water Level Water Elev. (ft. BTOC)	(ft. MSL)	Water Level Water Elev. (ft. BTOC)	(ft. MSL)	Water Level Water Elev. (ft. BTOC)	(ft. MSL)	Water Level Water Elev. (ft. BTOC)	(ft. MSL)
B-21	145.73	4.80	140.93	4.73	141.00	5.82	139.91	6.15	139.58	6.28	139.45	6.34	139.39	6.28	139.45
B-31	152.50	10.84	141.66	10.52	141.98	11.00	141.50	11.23	141.27	11.42	141.08	11.48	141.02	11.53	140.97
B-61	99.67	1.56	98.11	1.33	98.34	1.62	98.05	1.65	98.02	1.78	97.89	1.81	97.86	1.99	97.88
B-71	121.53	3.18	118.35	3.00	118.53	3.18	118.35	3.52	118.01	3.71	117.82	3.77	117.76	3.42	118.11
B-111	120.43	3.31	117.12	3.13	117.30	3.33	117.10	3.43	117.00	3.93	116.50	4.00	116.43	3.95	116.48
B-121	124.72	4.56	120.16	4.31	120.41	7.58	117.14	8.03	116.69	8.18	116.54	8.23	116.49	8.22	116.50
B-131R	125.98	18.65	107.33	17.92	108.06	18.65	107.33	19.14	106.84	19.22	106.76	19.41	106.57	19.31	106.67
B-141R	125.92	10.77	115.15	10.31	115.61	10.60	115.32	11.08	114.84	11.25	114.67	11.34	114.58	11.33	114.59
B-171	138.43	0.97	137.46	0.84	137.59	1.18	137.25	1.33	137.10	1.50	136.93	1.52	136.91	1.54	136.89
B-191	127.94	5.67	122.27	5.57	122.37	5.69	122.25	5.95	121.99	6.15	121.79	6.21	121.73	6.18	121.76
B-251	124.03	4.48	119.55	4.40	119.63	4.62	119.41	5.05	118.98	5.18	118.85	5.26	118.77	5.25	118.78
B-271	128.63	3.33	125.30	3.27	125.36	3.37	125.26	3.71	124.92	3.83	124.80	3.94	124.69	3.88	124.75
B-291	138.08	1.68	136.40	1.52	136.56	1.82	136.26	1.96	136.12	2.08	136.00	2.15	135.93	2.08	136.00

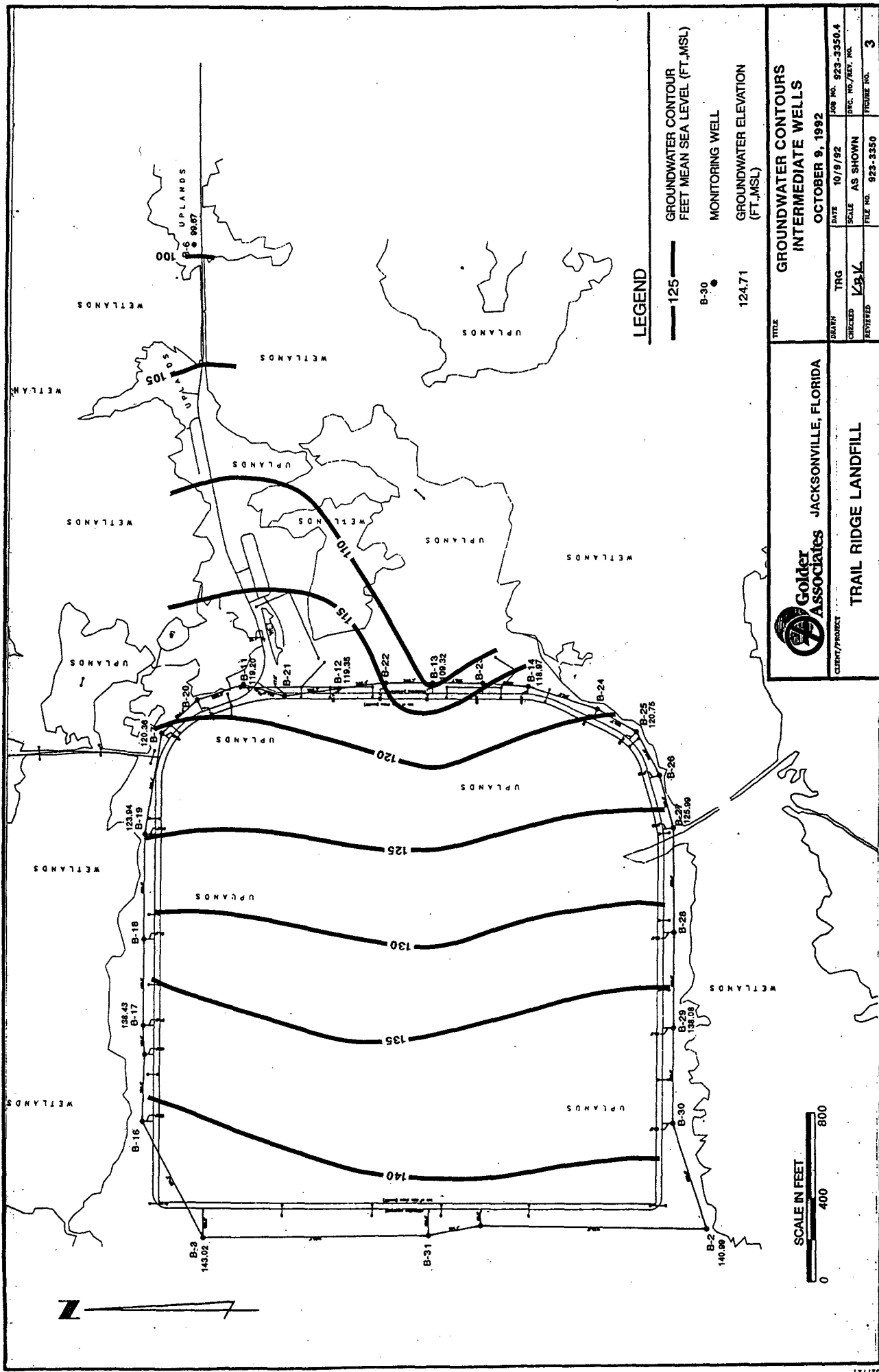
**GROUNDWATER ELEVATION MEASUREMENTS (10/9/92 TO 1/7/93)
(DEEP WELLS)**

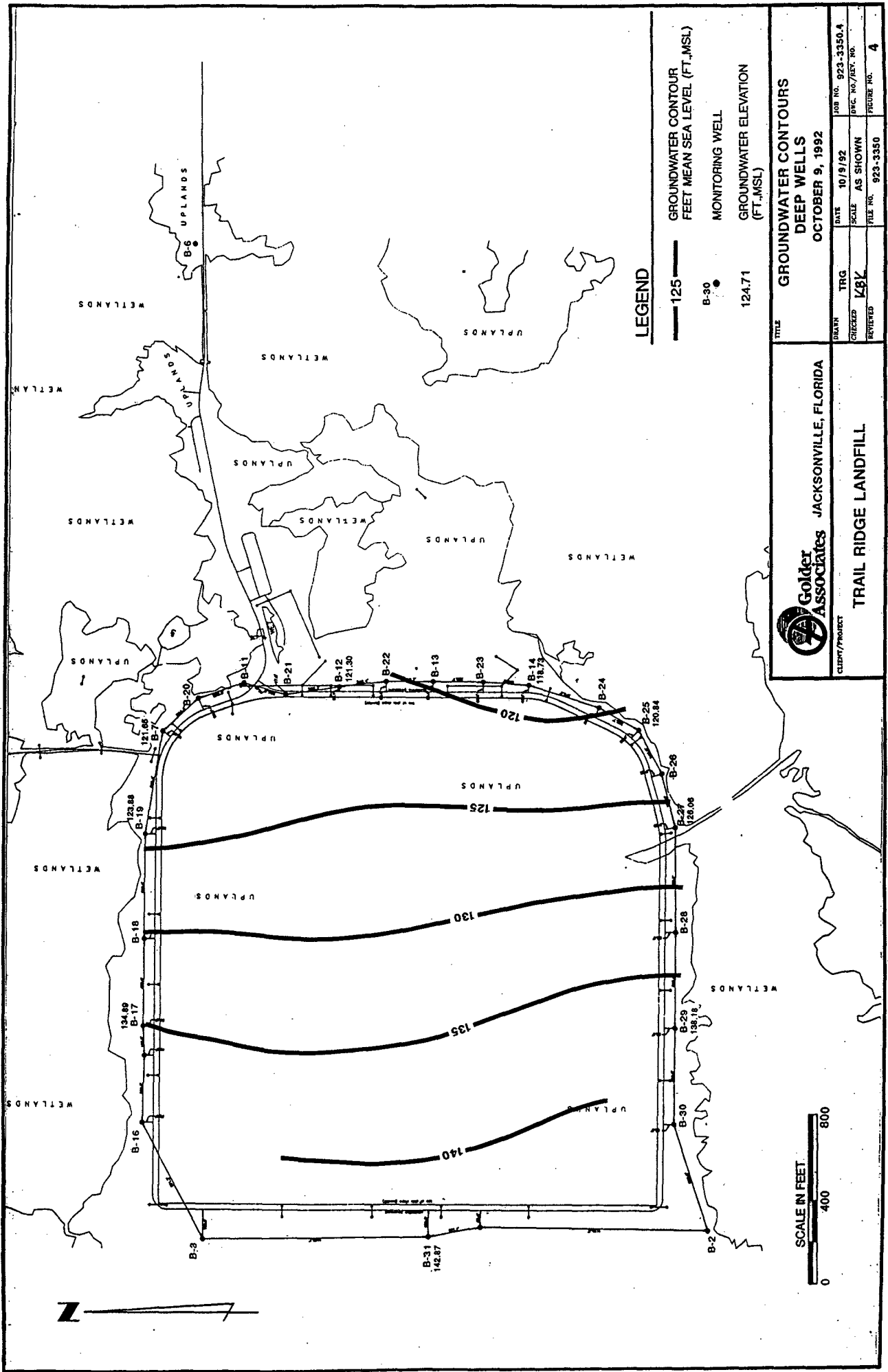
**TRAIL RIDGE LANDFILL
JACKSONVILLE, FLORIDA**

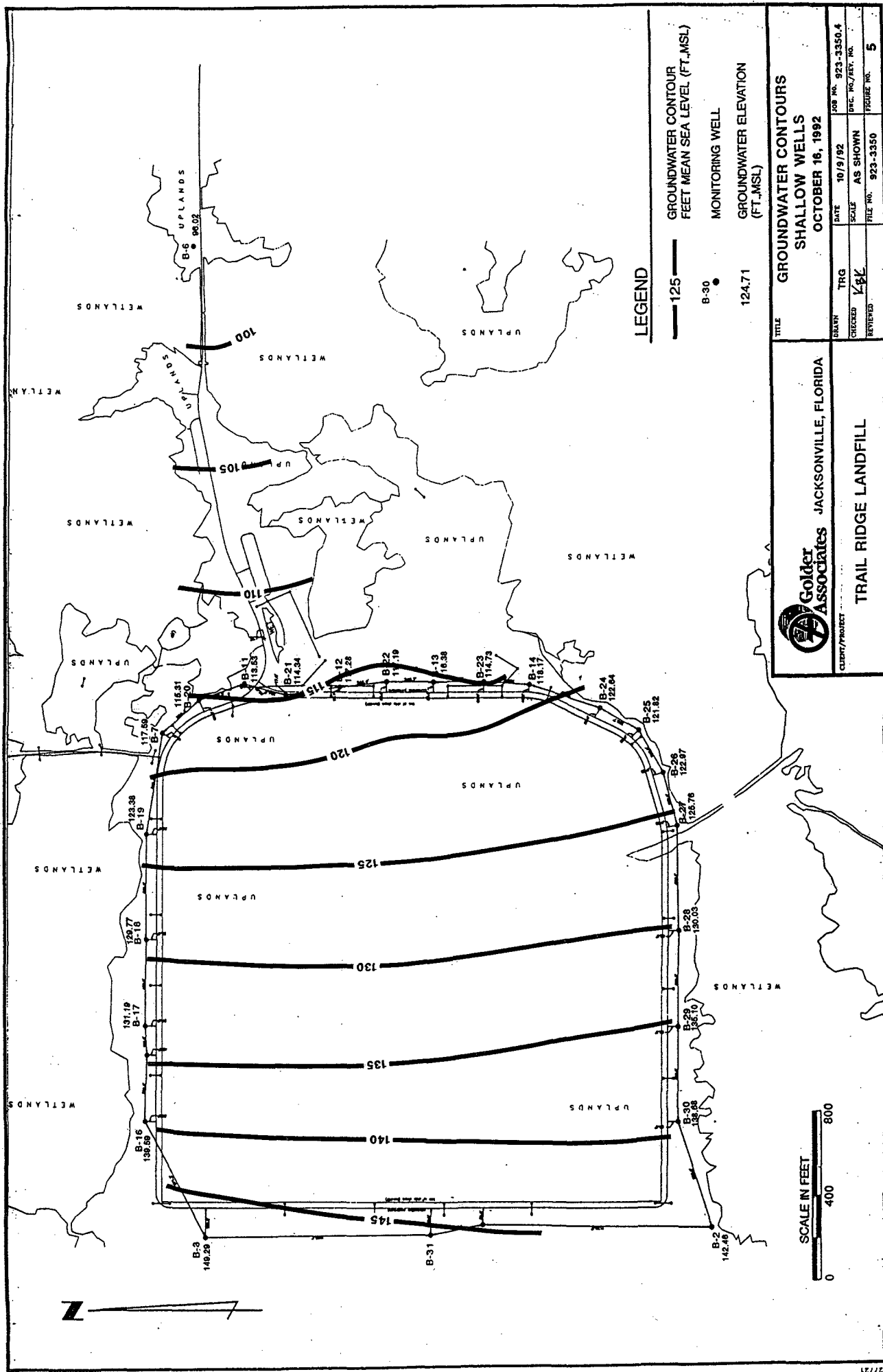
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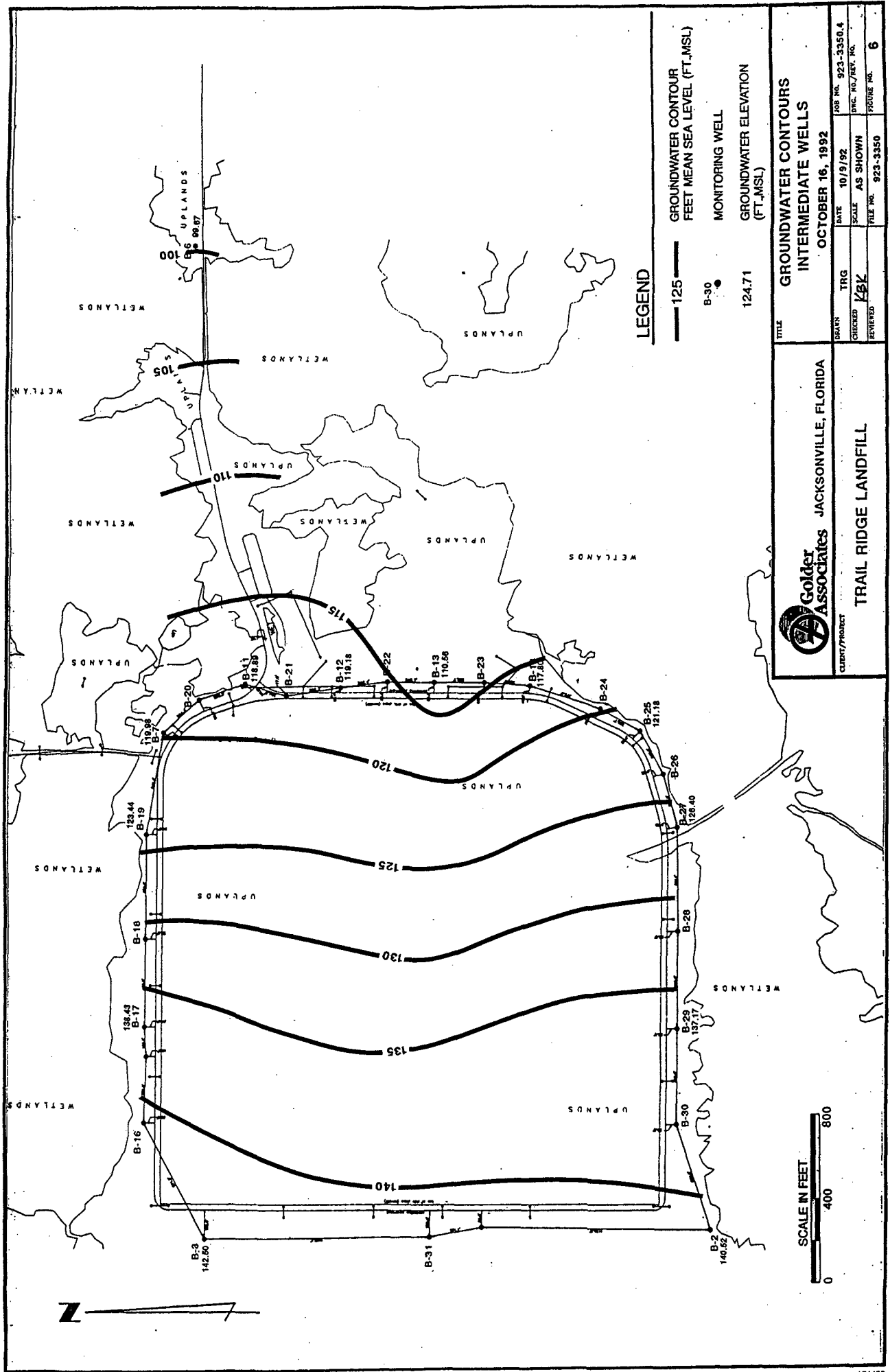




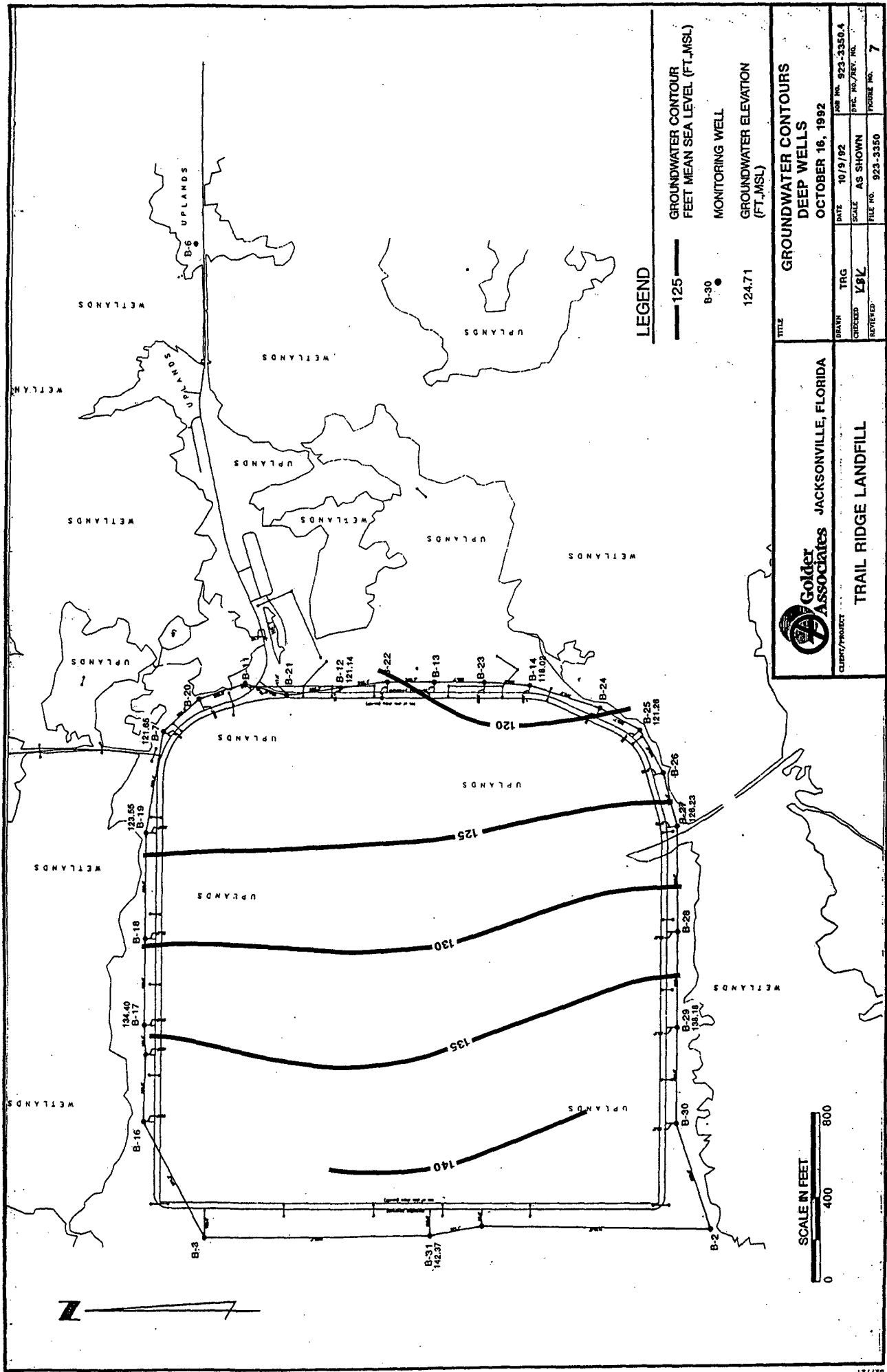


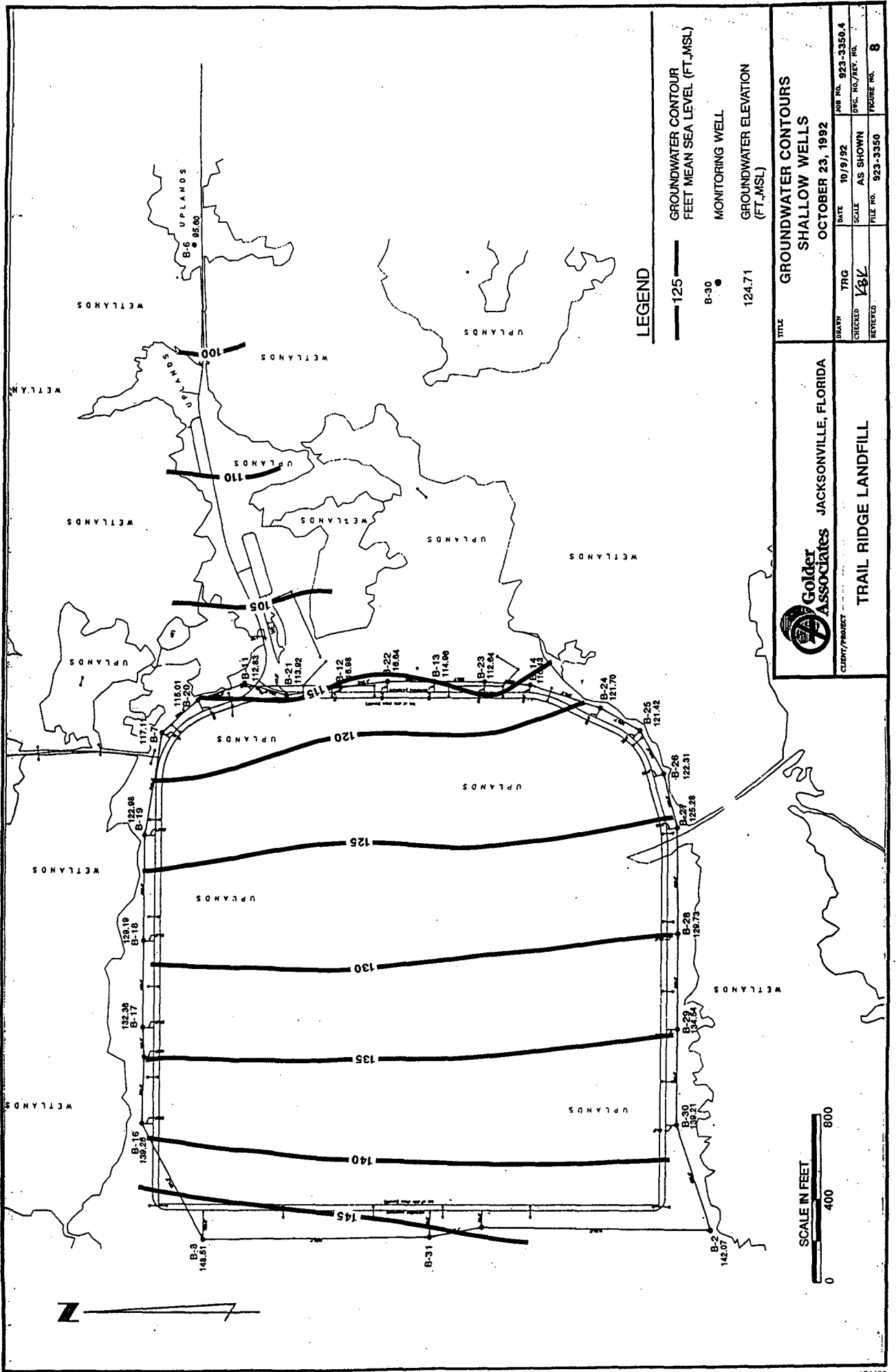


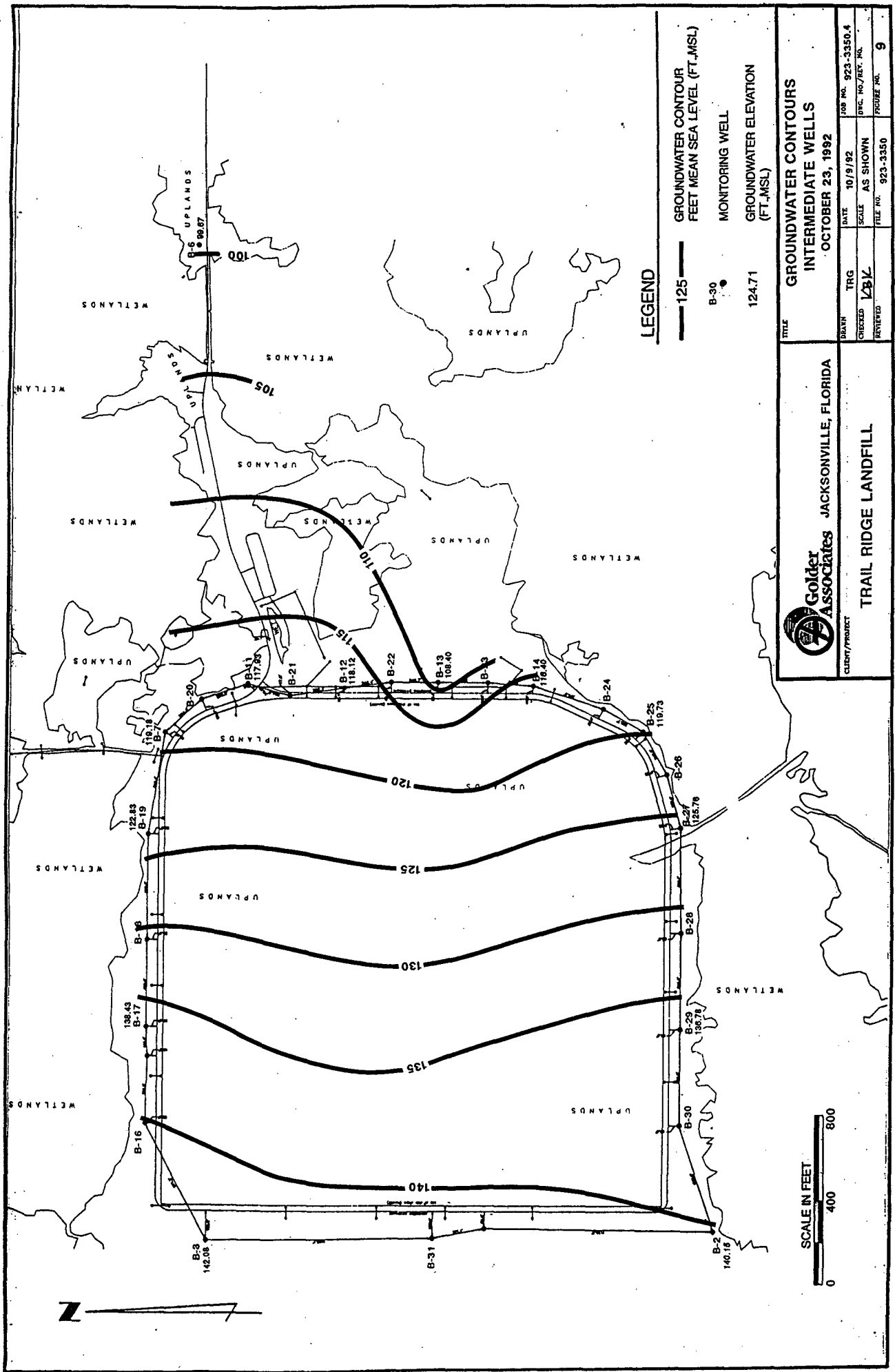


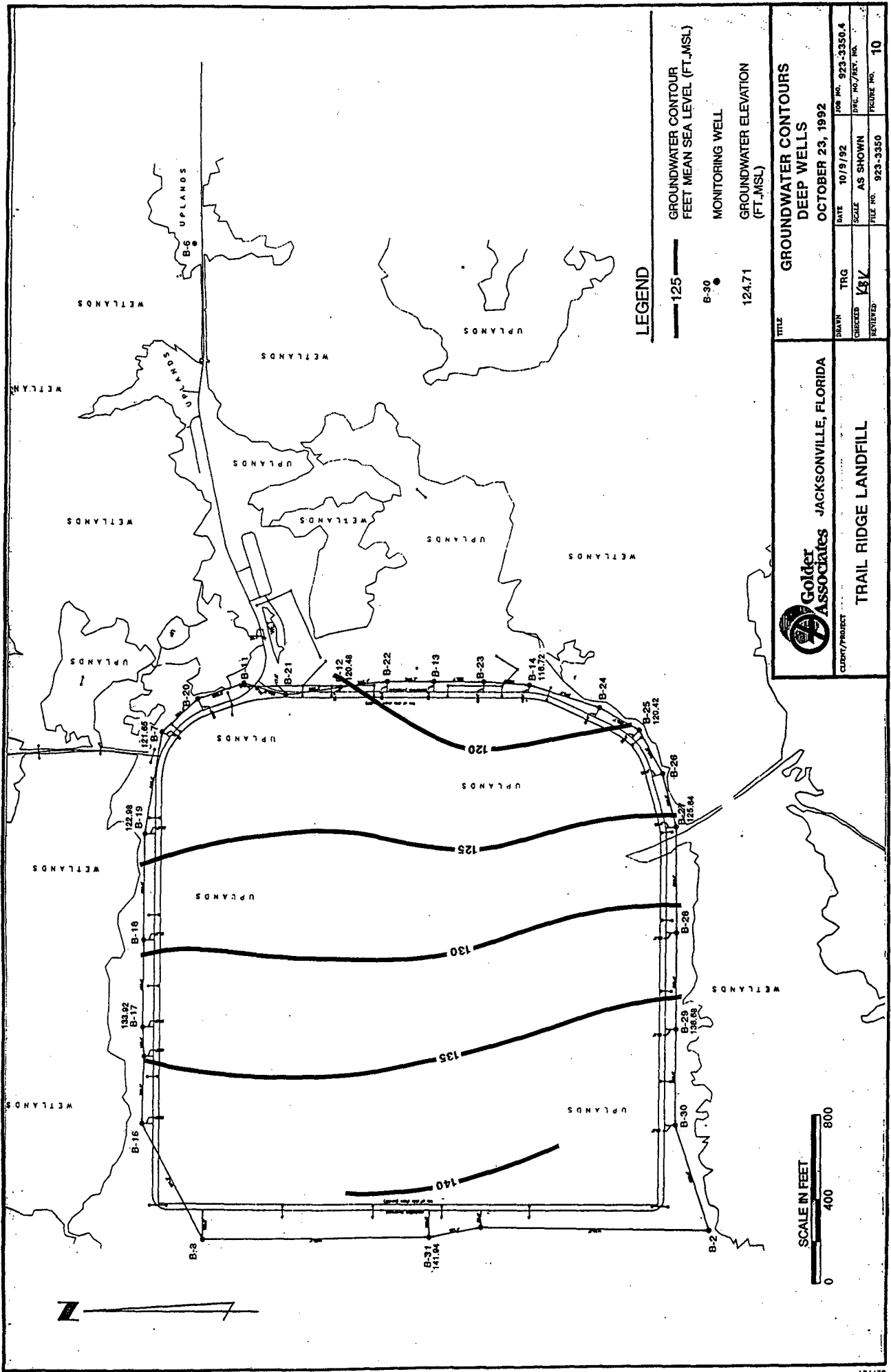


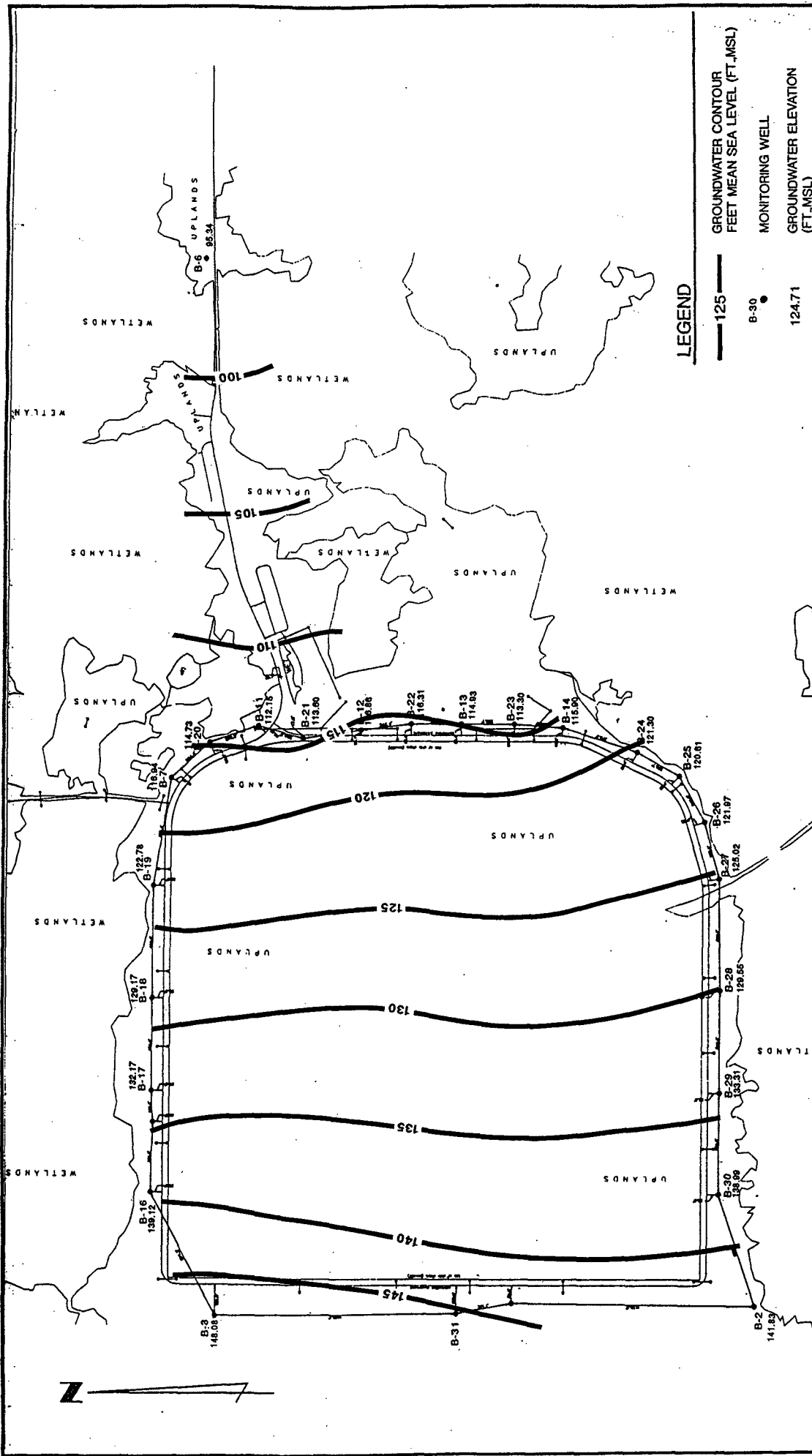
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CLIENT/PROJECT	DATE	TRG	JOB NO. 923-3350.4
	10/9/92		
CHECKED	SCALE	AS SHOWN	DATE NO./REV. NO.
13K			
REVIEWED	FILE NO.	923-3350	FIGURE NO. 6











LEGEND

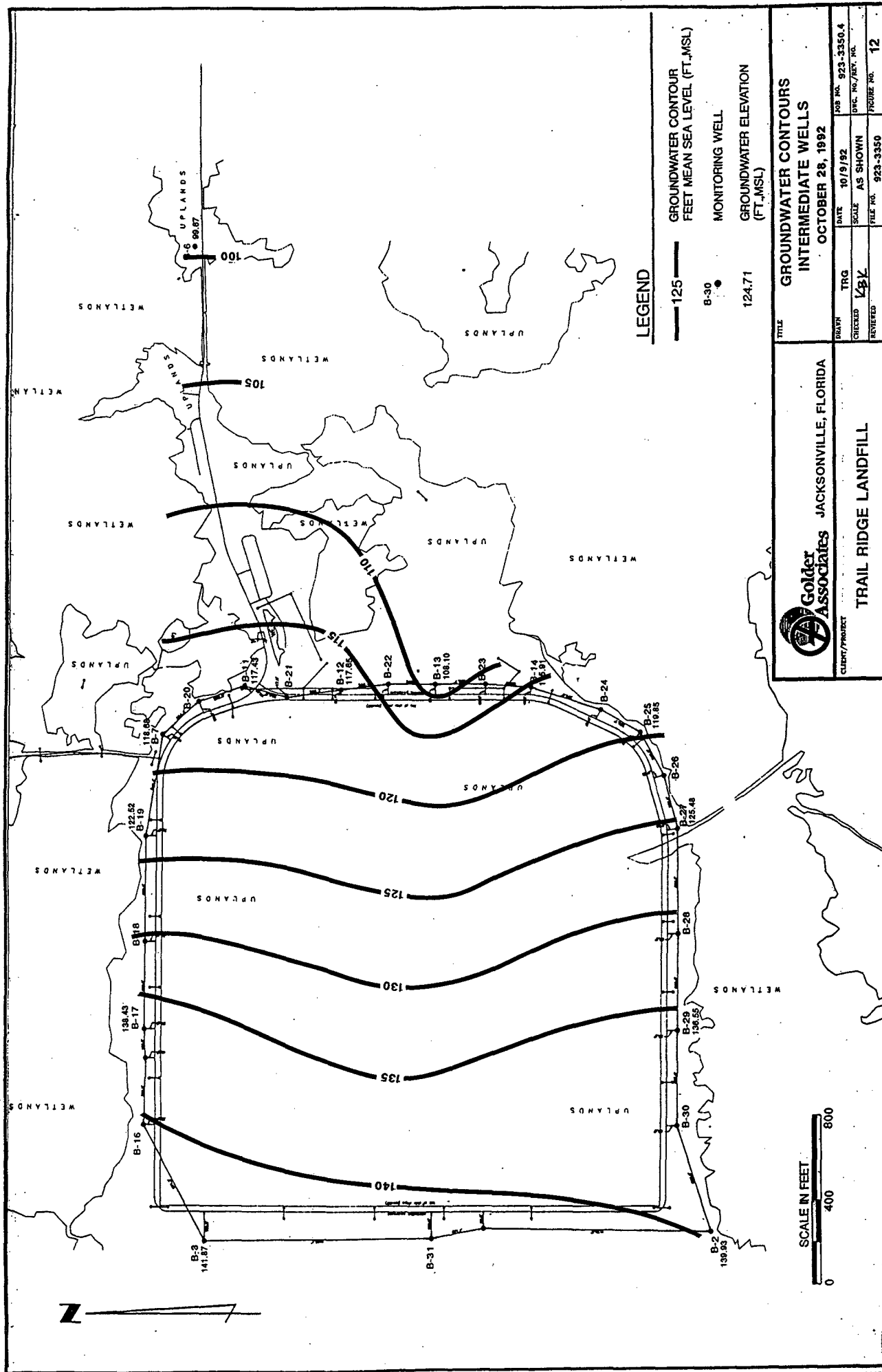
— 125 — GROUNDWATER CONTOUR
 FEET MEAN SEA LEVEL (FT.,MSL)

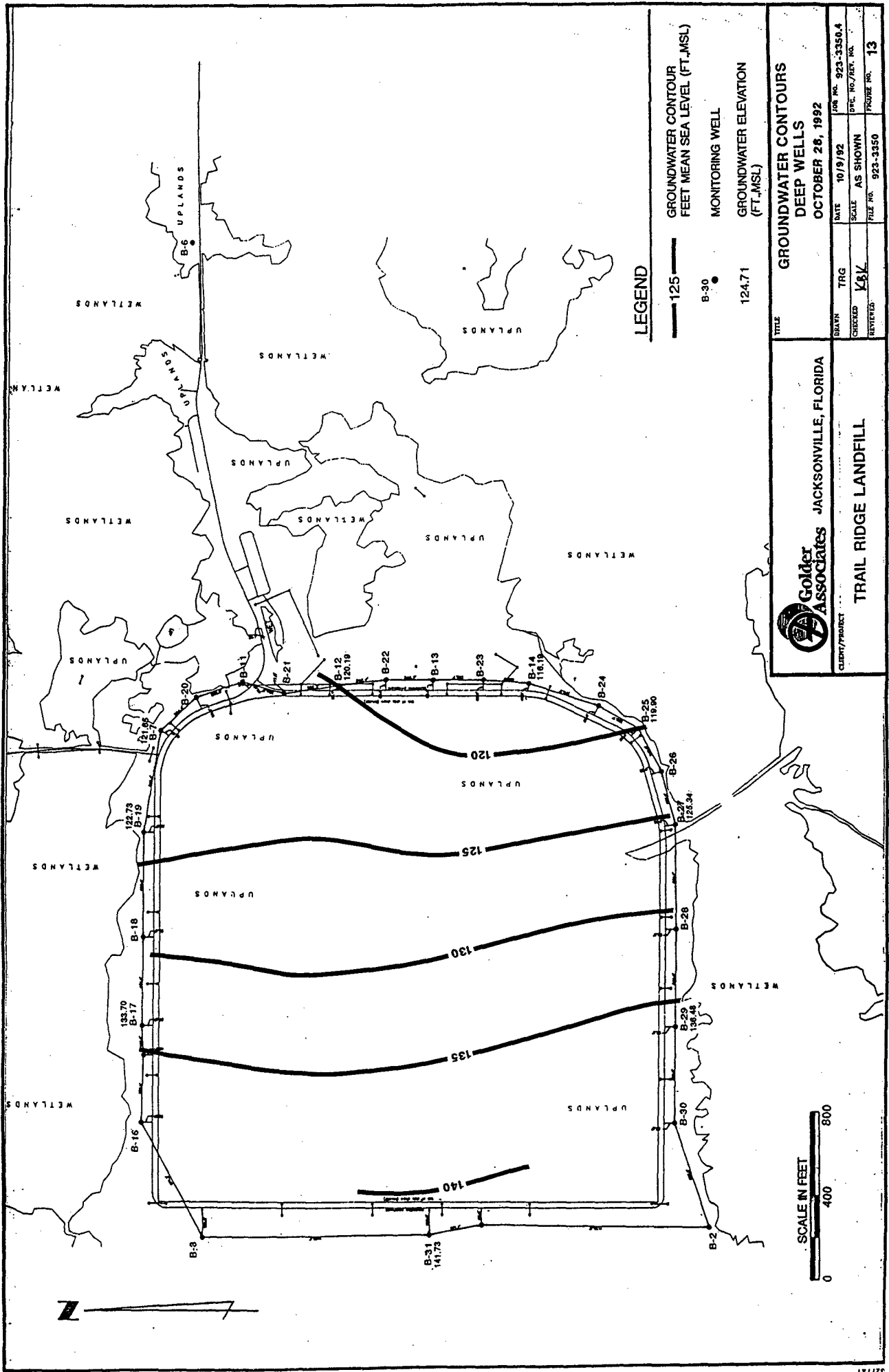
● B-30 MONITORING WELL

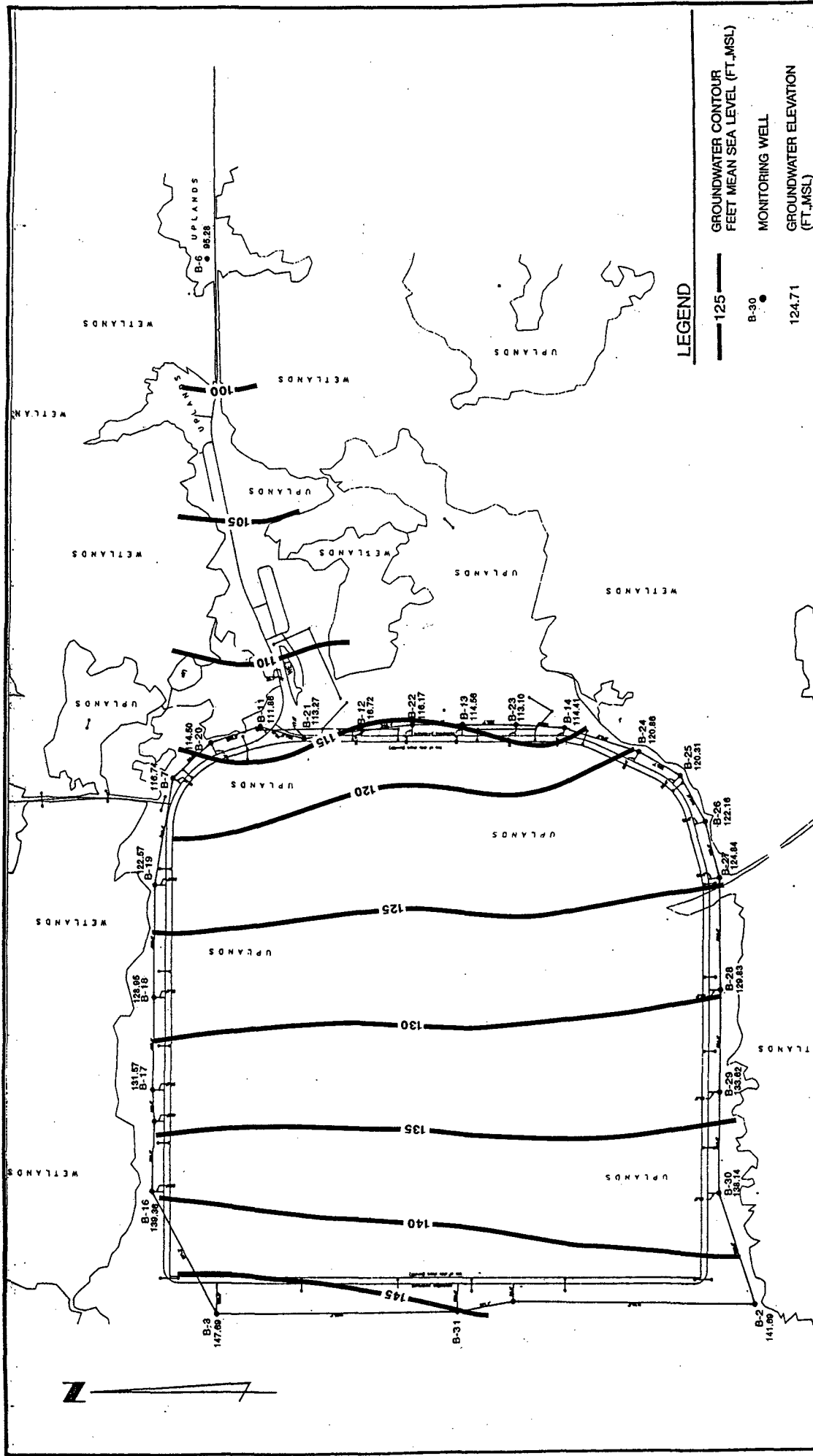
124.71 GROUNDWATER ELEVATION
 (FT.,MSL)

GROUNDWATER CONTOURS SHALLOW WELLS OCTOBER 28, 1992		DATE	10/9/92	DRAWN	THG	JOB NO. 923-3350.4
TRAIL RIDGE LANDFILL		CHECKED	LAB	SCALE	AS SHOWN	DWG. NO./REV. NO.
Golder Associates JACKSONVILLE, FLORIDA		REVIEWED		FILE NO.	923-3350	FIGURE NO. 11







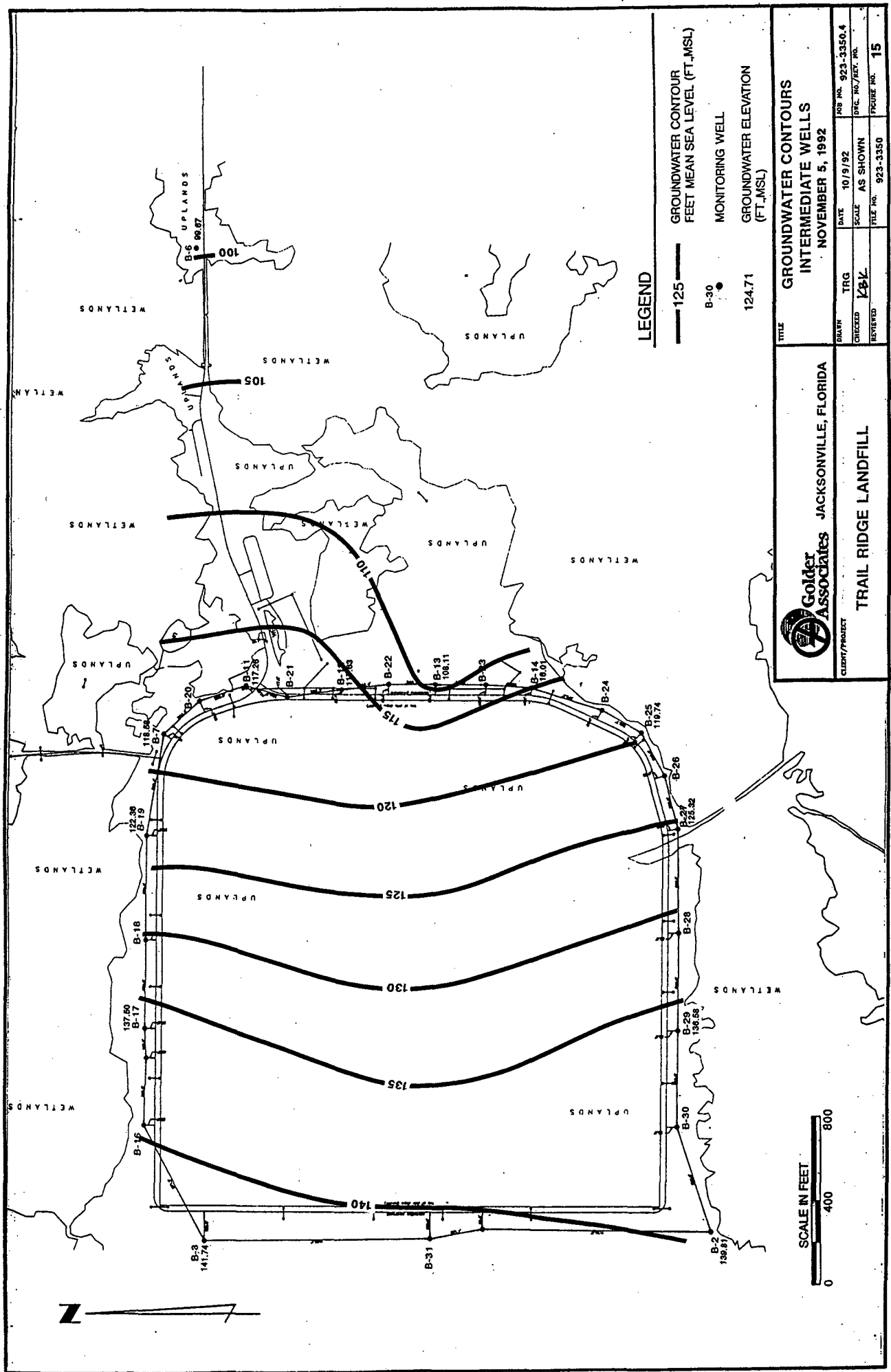


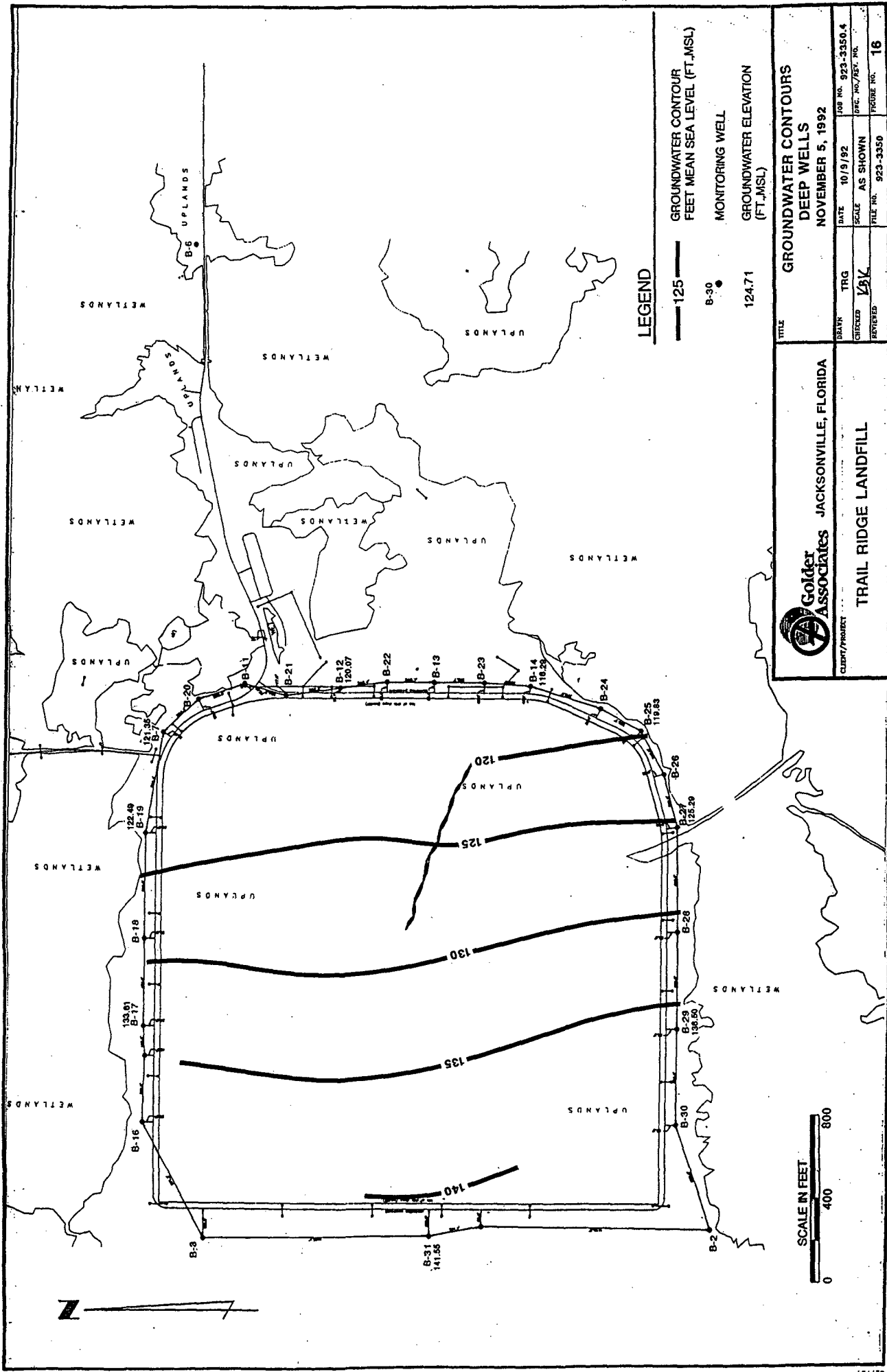
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- 125 — GROUNDWATER CONTOUR
FEET MEAN SEA LEVEL (FT.,MSL)
- B-30 ● MONITORING WELL
- 124.71 GROUNDWATER ELEVATION
(FT.,MSL)

Trail Ridge Landfill 		GROUNDWATER CONTOURS SHALLOW WELLS NOVEMBER 5, 1992	
DATE	10/9/92	JOB NO.	923-3350.4
CHECKED	AS SHOWN	FILE NO.	923-3350
REVIEWED		FIGURE NO.	14





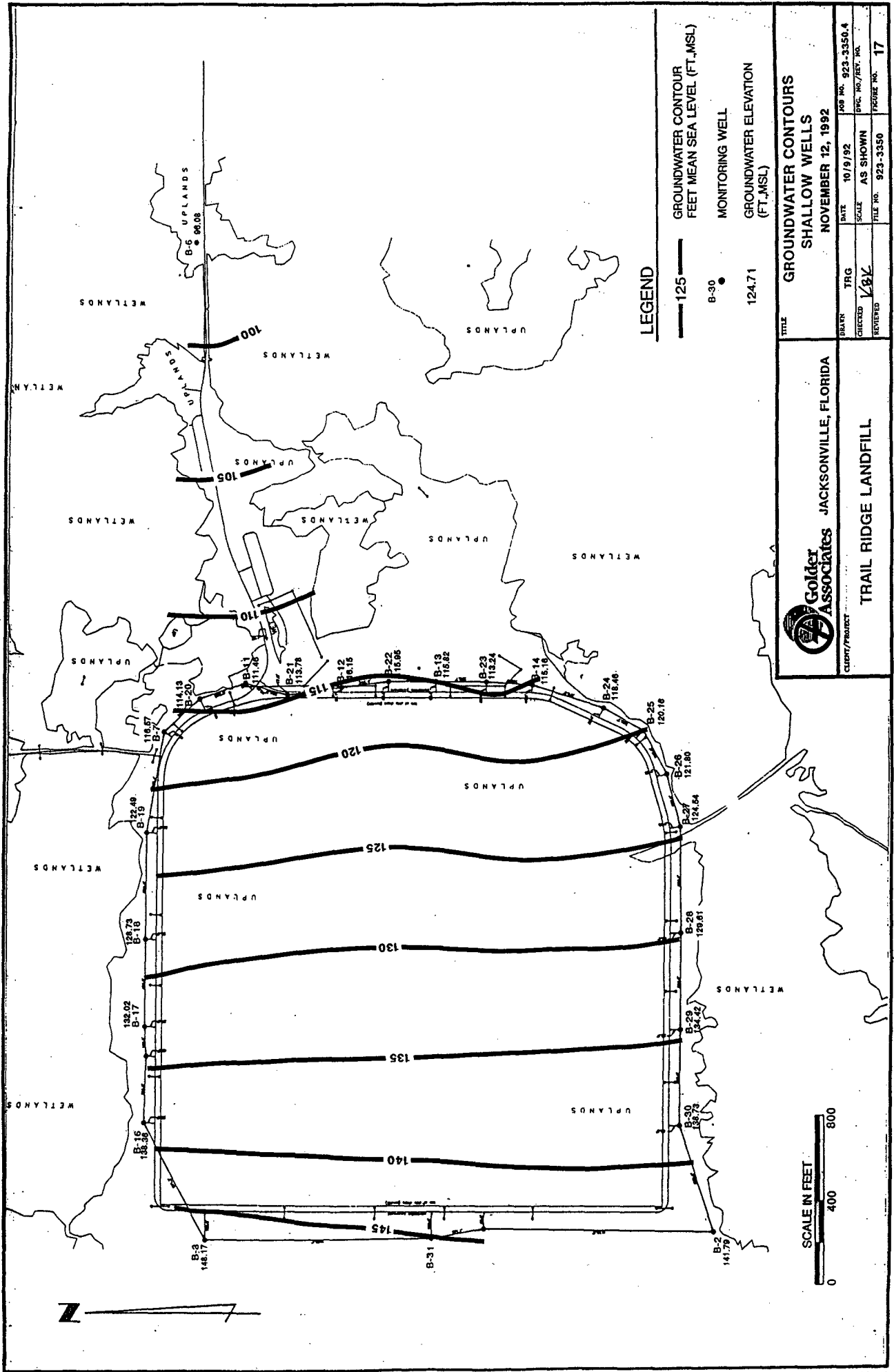


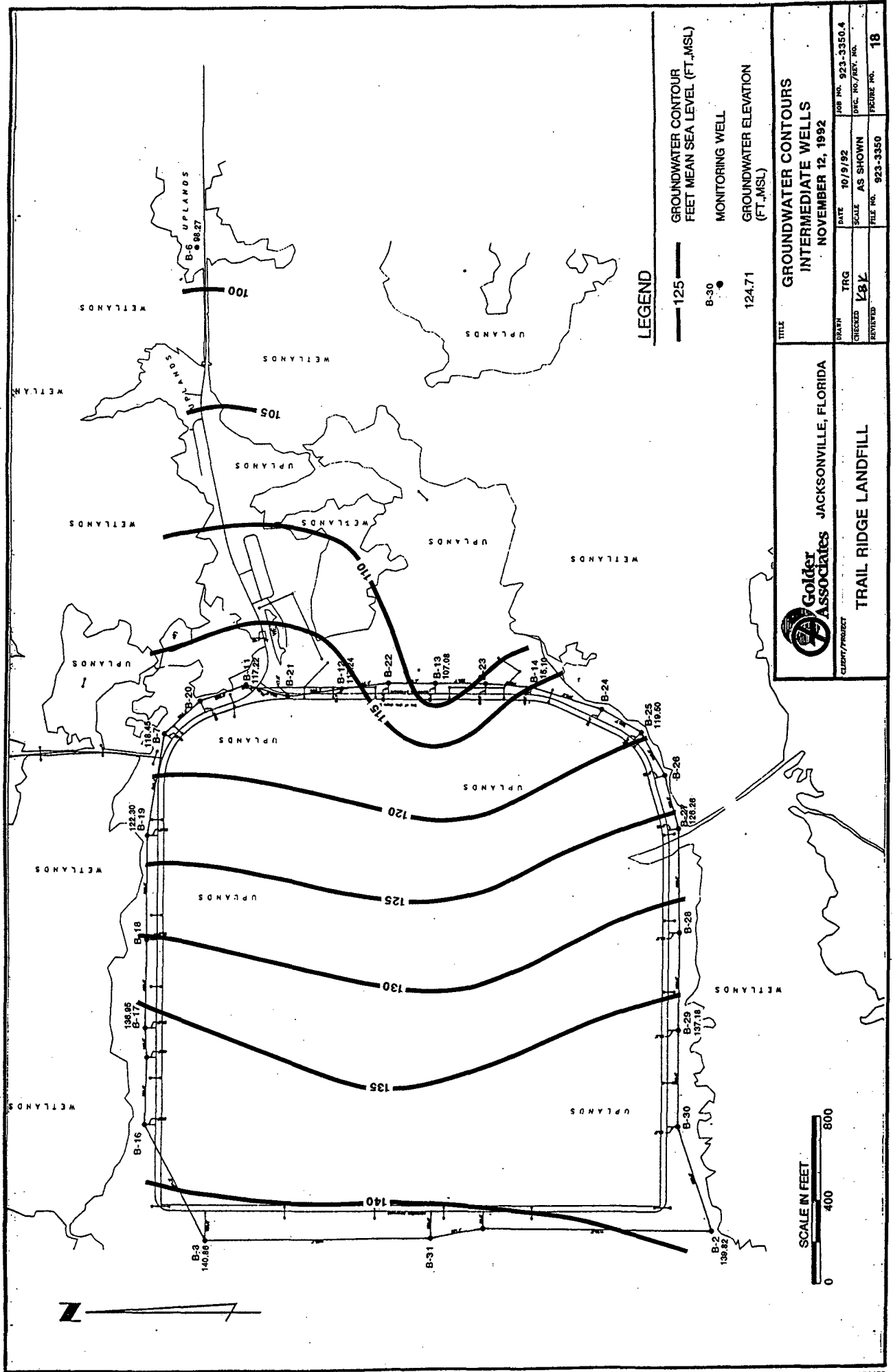
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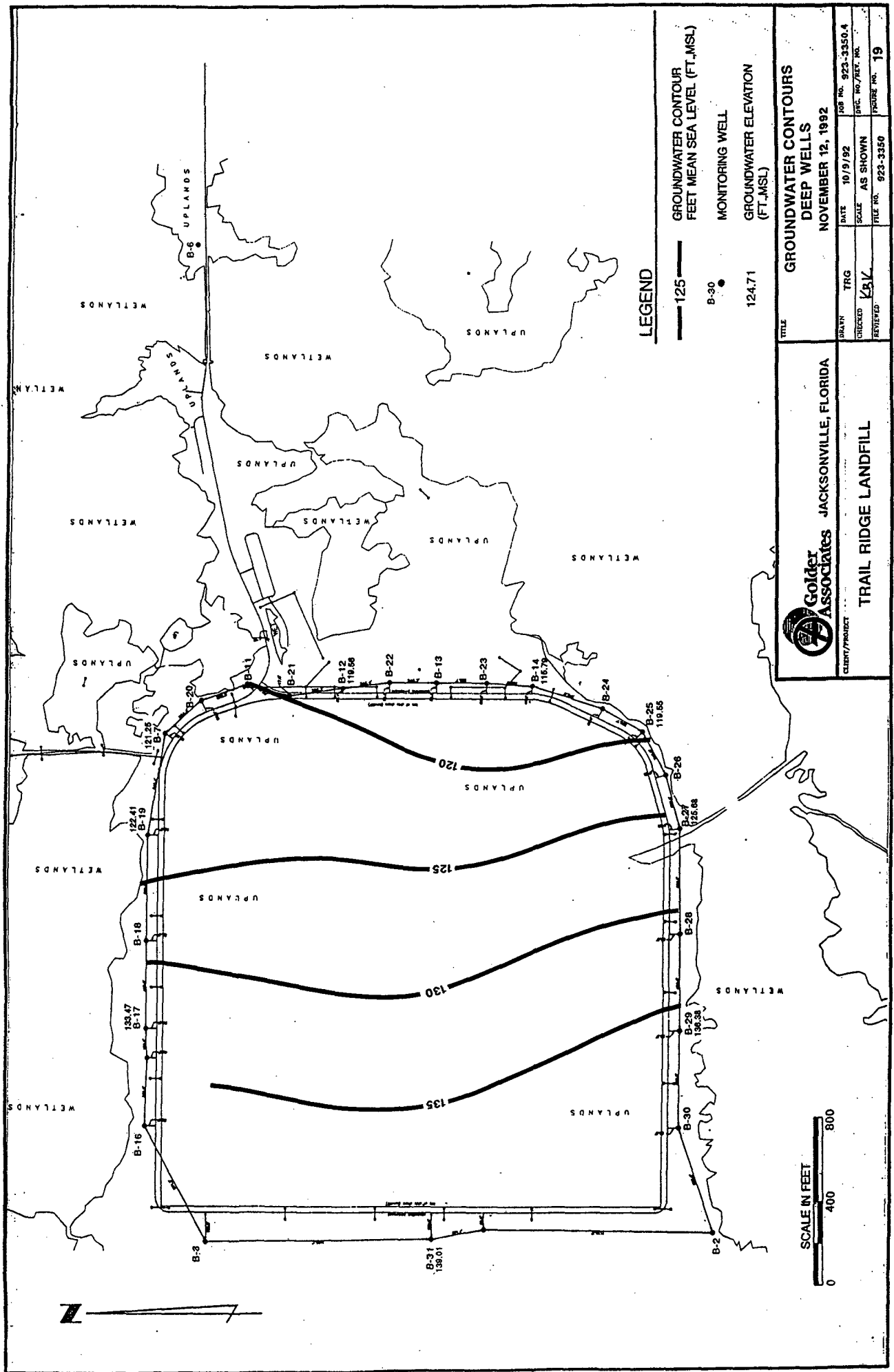
- 125 — GROUNDWATER CONTOUR
FEET MEAN SEA LEVEL (FT. MSL)
- B-30 MONITORING WELL
- 124.71 GROUNDWATER ELEVATION
(FT. MSL)

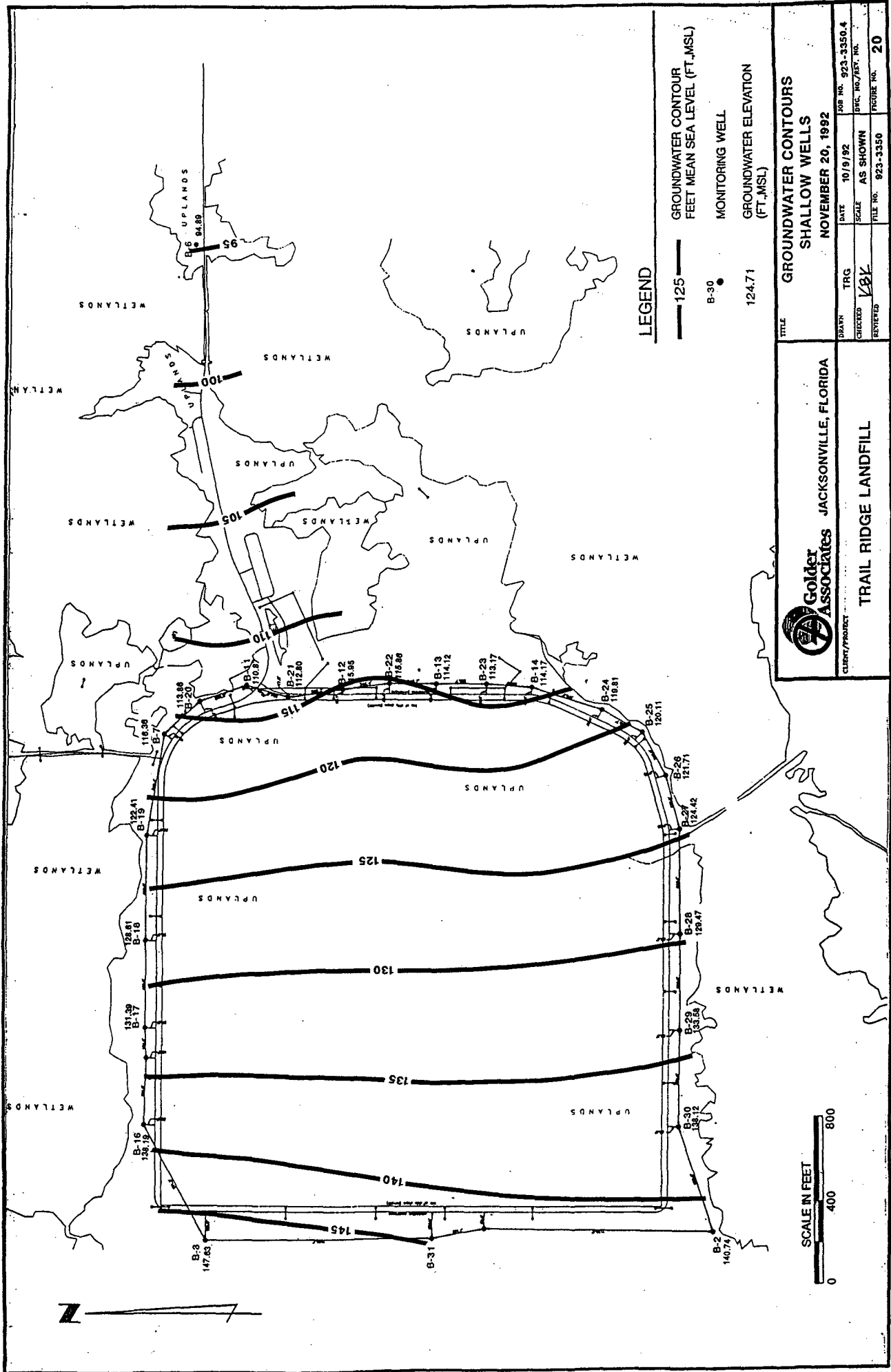
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CLIENT/PROJECT	TRAIL RIDGE LANDFILL	DATE	10/9/92
DRAWN	TRG	SCALE	AS SHOWN
CHECKED	WJK	FILE NO.	923-3350
REVIEWED		FIGURE NO.	16
JOB NO. 923-3350.4		SPEC. NO./REV. NO.	

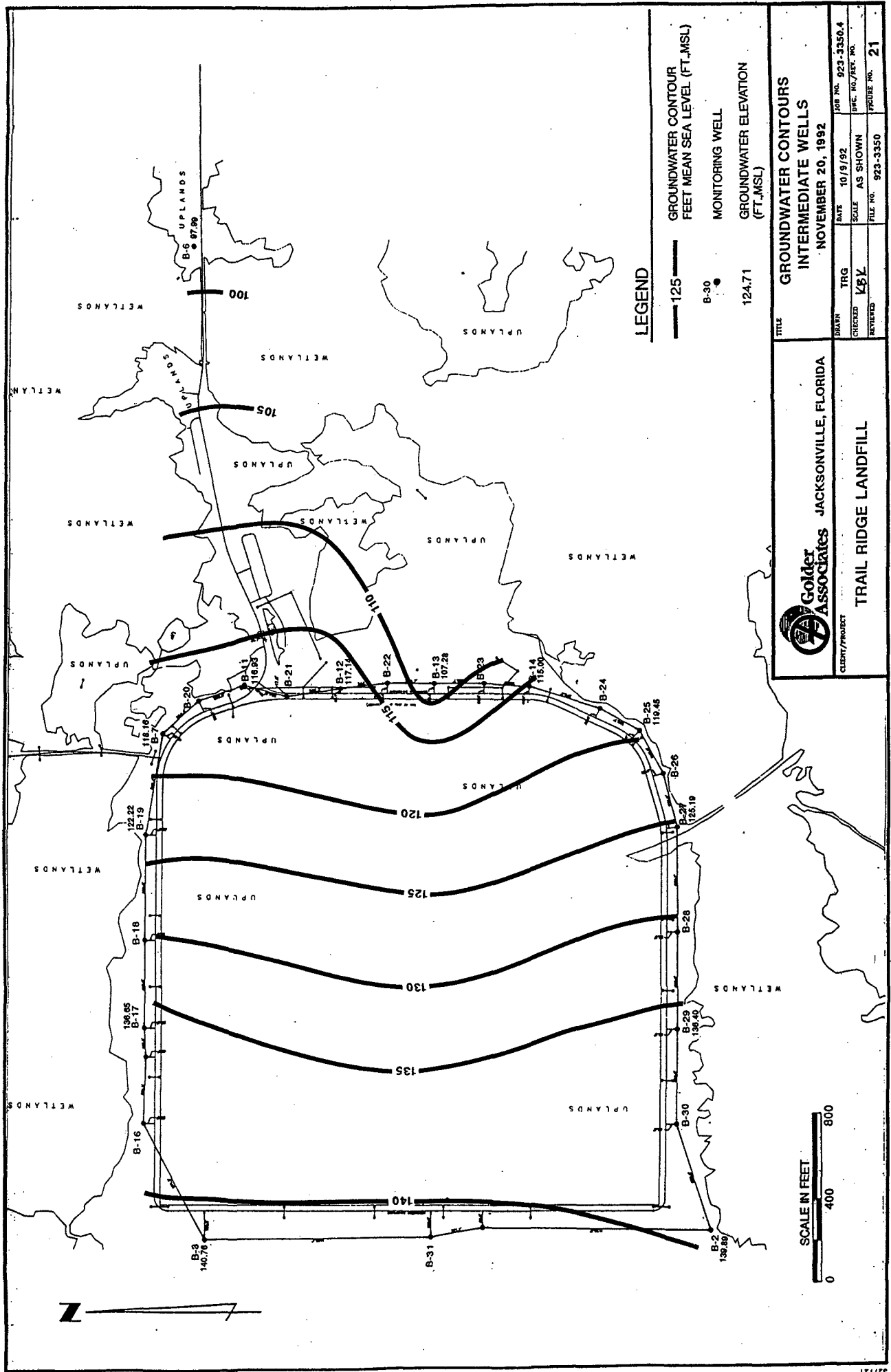
SCALE IN FEET
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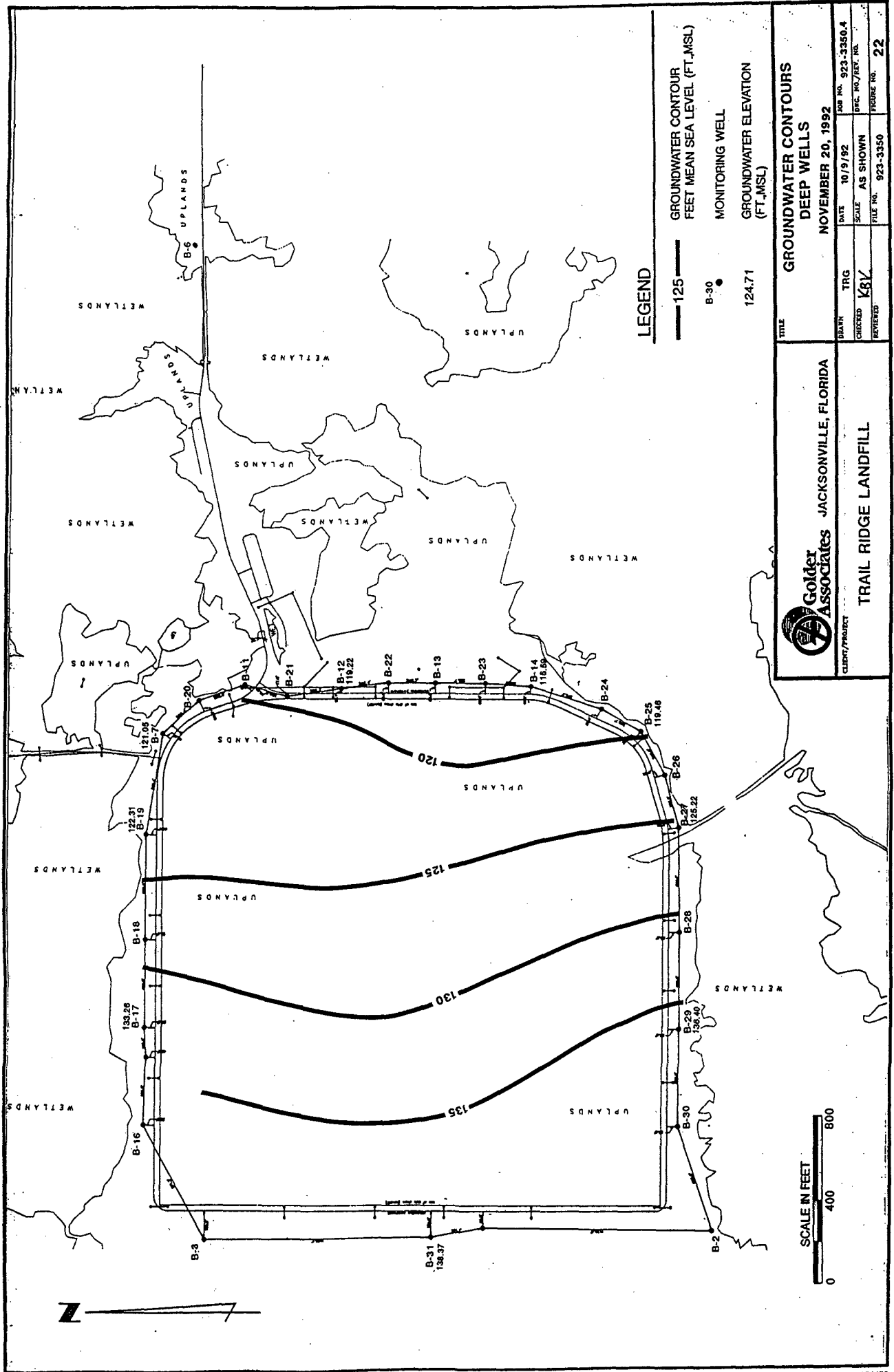


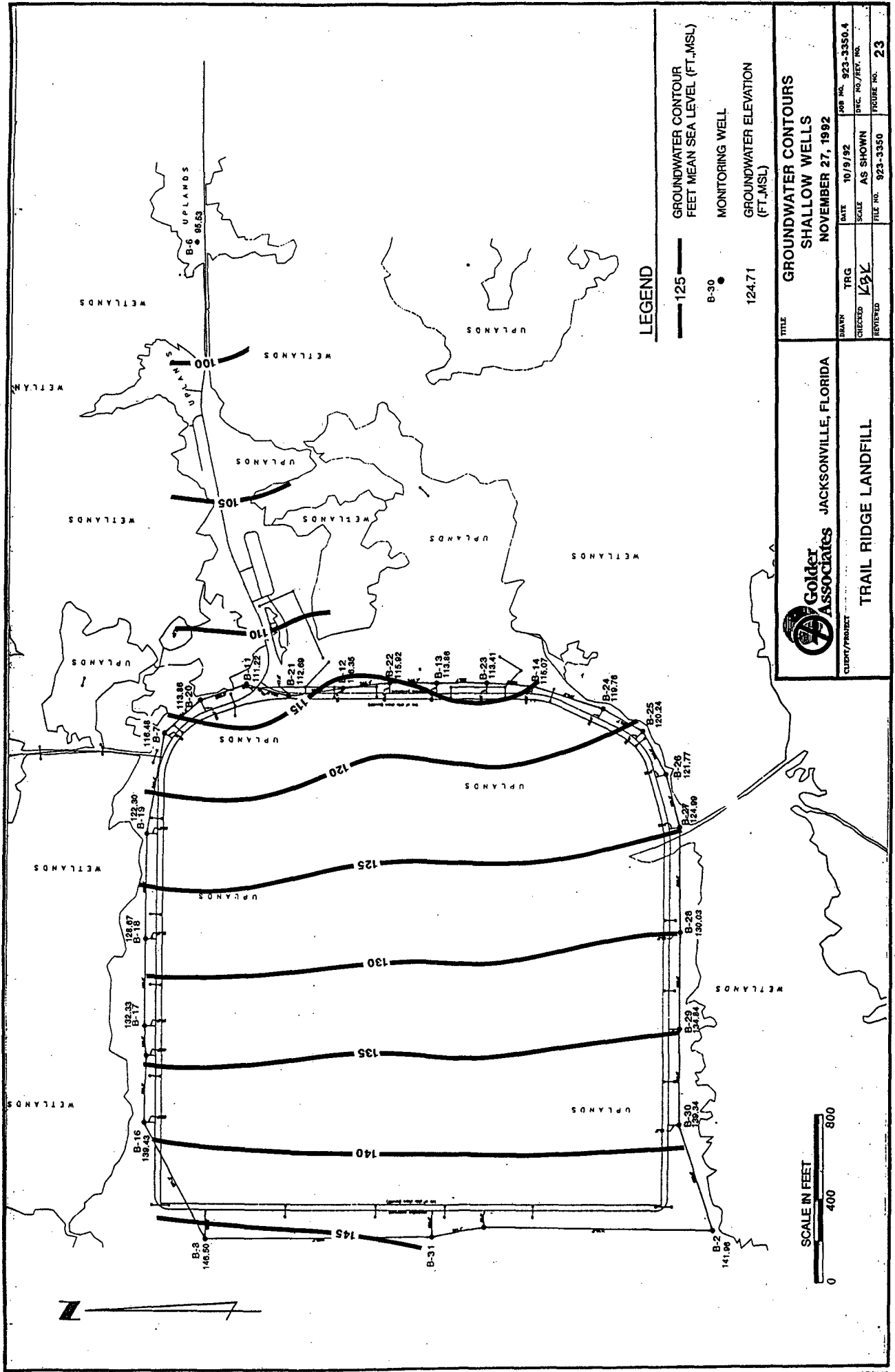












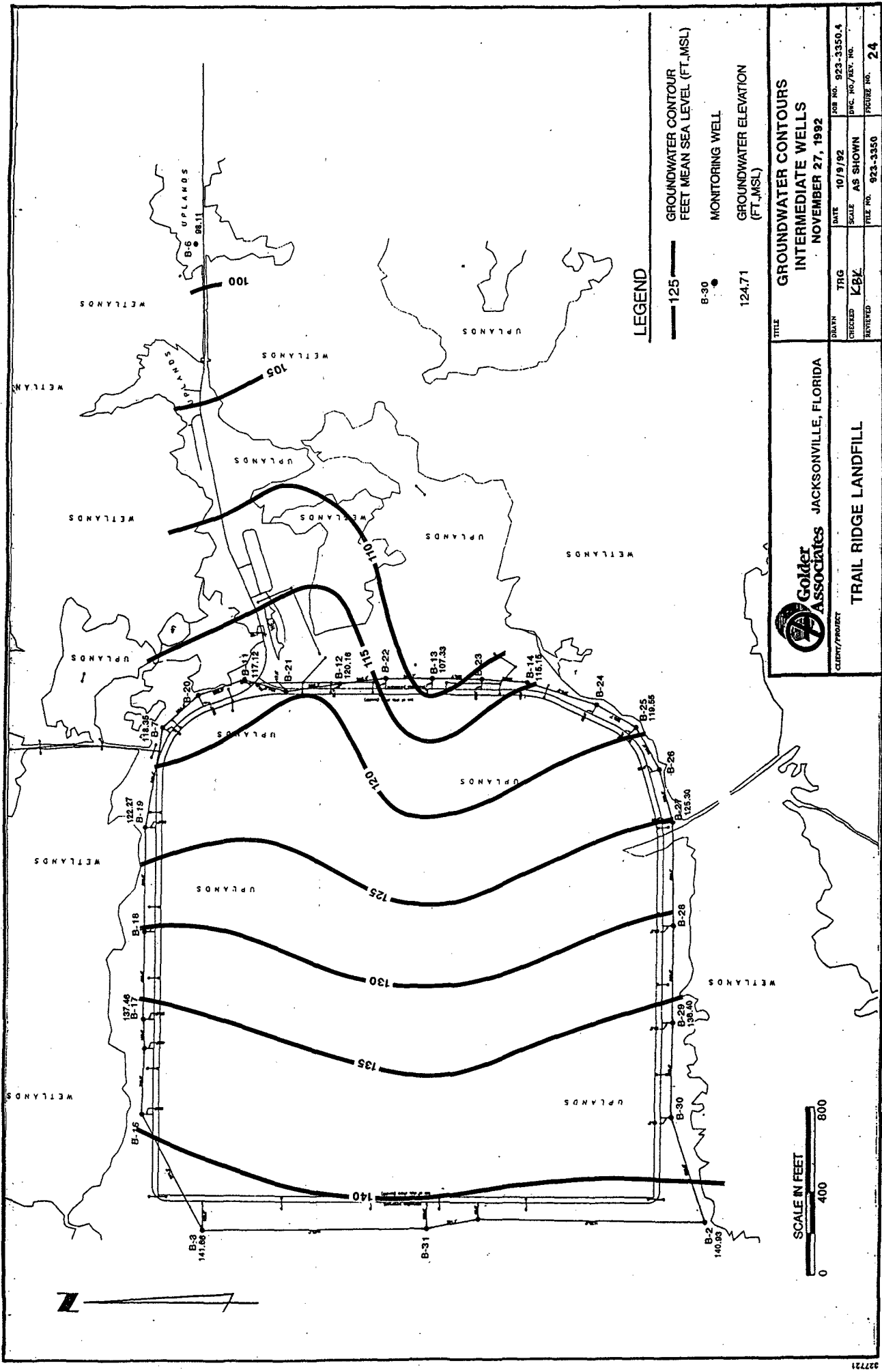
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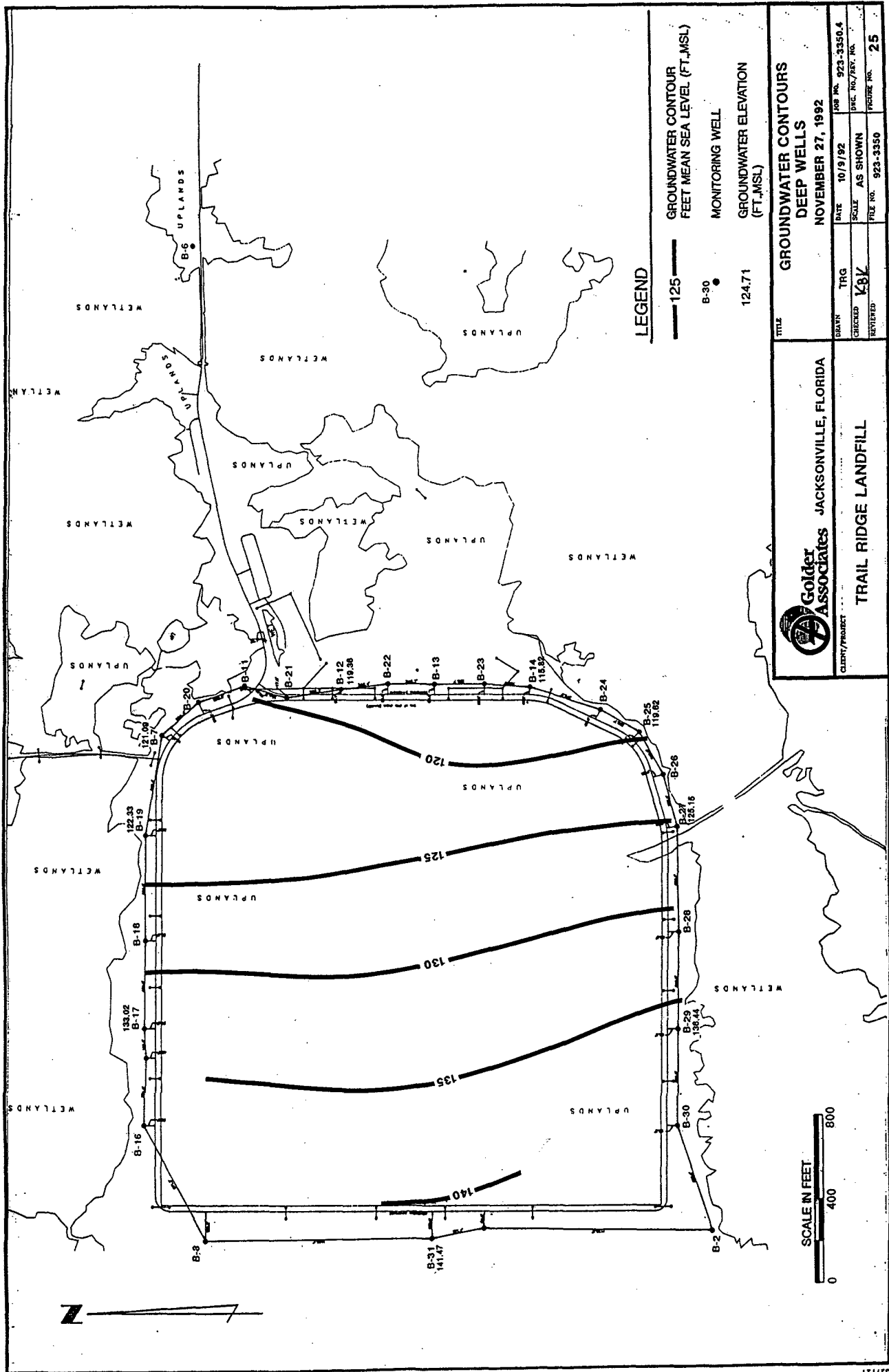
- 125 — GROUNDWATER CONTOUR
FEET MEAN SEA LEVEL (FT.,MSL)
- B-30 MONITORING WELL
- - - 124.71 GROUNDWATER ELEVATION
(FT.,MSL)

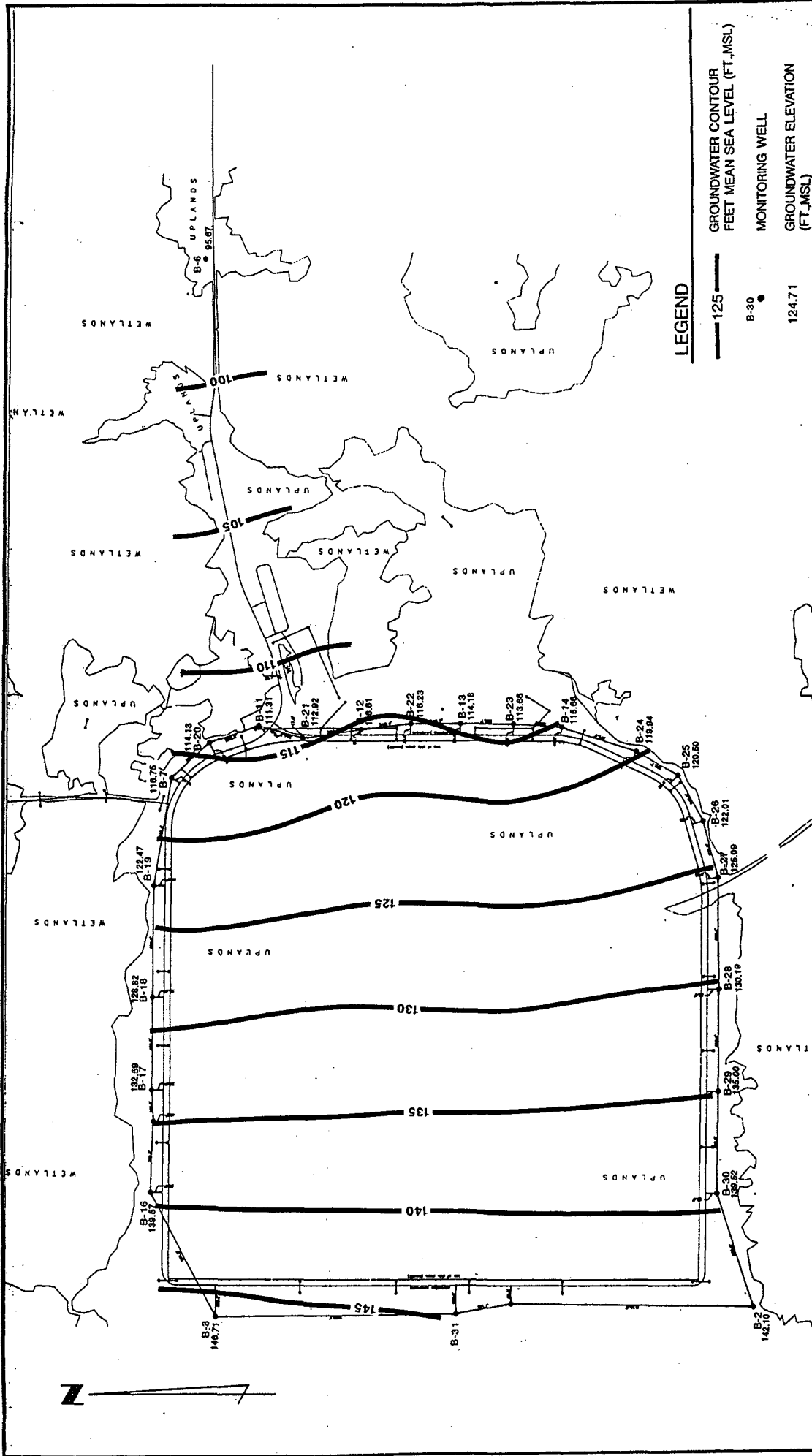
**GROUNDWATER CONTOURS
SHALLOW WELLS
NOVEMBER 27, 1992**

Trail Ridge Landfill
Golder Associates Jacksonville, Florida

DATE	10/9/92	JOB NO.	923-3350.4
CHECKED	AS SHOWN	SHEET NO./REV. NO.	
REVIEWED		FILE NO.	923-3350
		FIGURE NO.	23





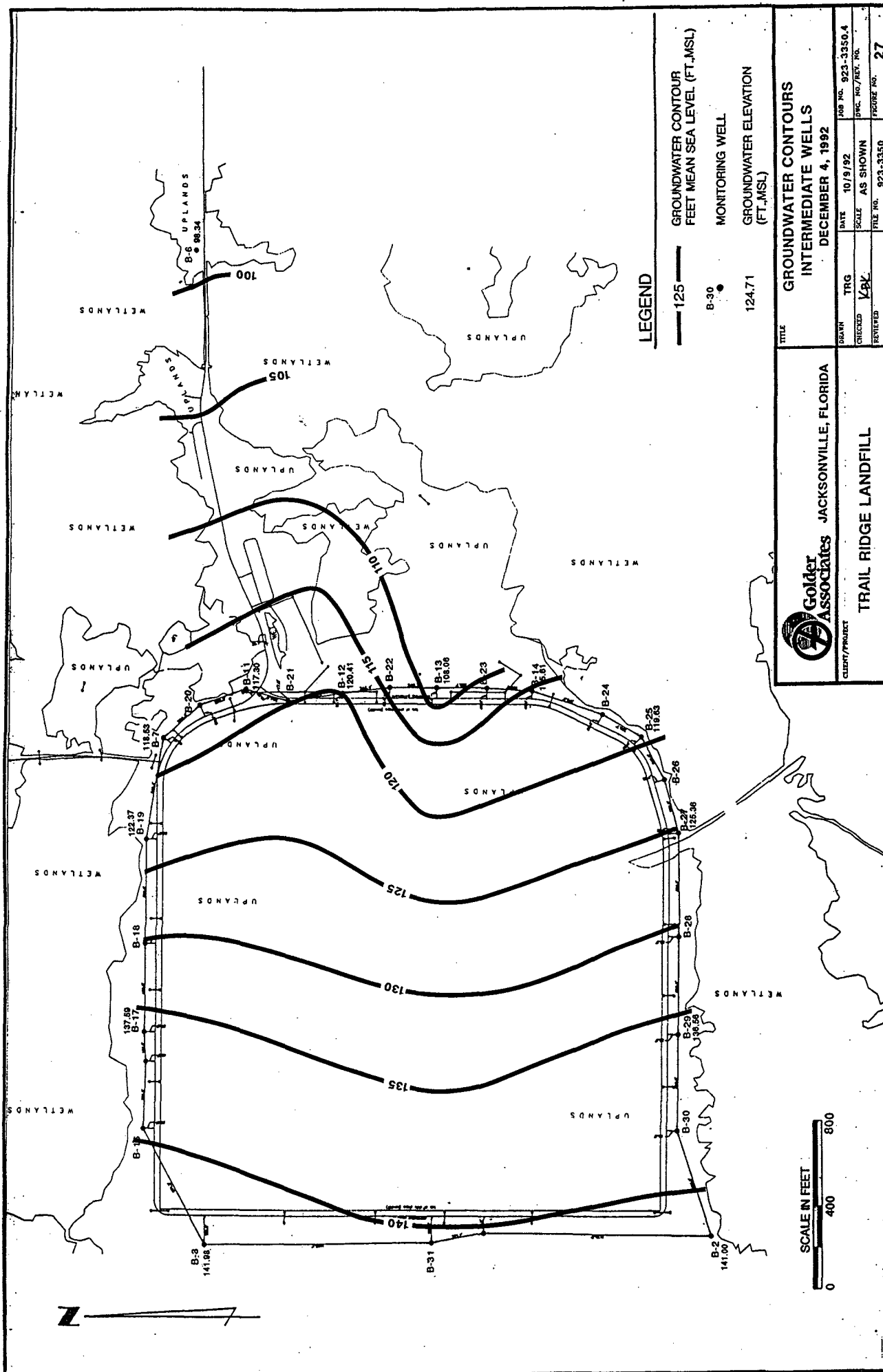


LEGEND

- 125 — GROUNDWATER CONTOUR
FEET MEAN SEA LEVEL (FT.,MSL)
- B-30 ● MONITORING WELL
- 124.71 GROUNDWATER ELEVATION
(FT.,MSL)

Trail Ridge Landfill Golder Associates JACKSONVILLE, FLORIDA		GROUNDWATER CONTOURS SHALLOW WELLS DECEMBER 4, 1992	
GRAPH	TRG	DATE	10/9/92
CHECKED	KPK	SCALE	AS SHOWN
REVIEWED		FILE NO.	923-3350
		JOB NO.	923-3350.4
		FIG. NO./REV. NO.	
		FIGURE NO.	26



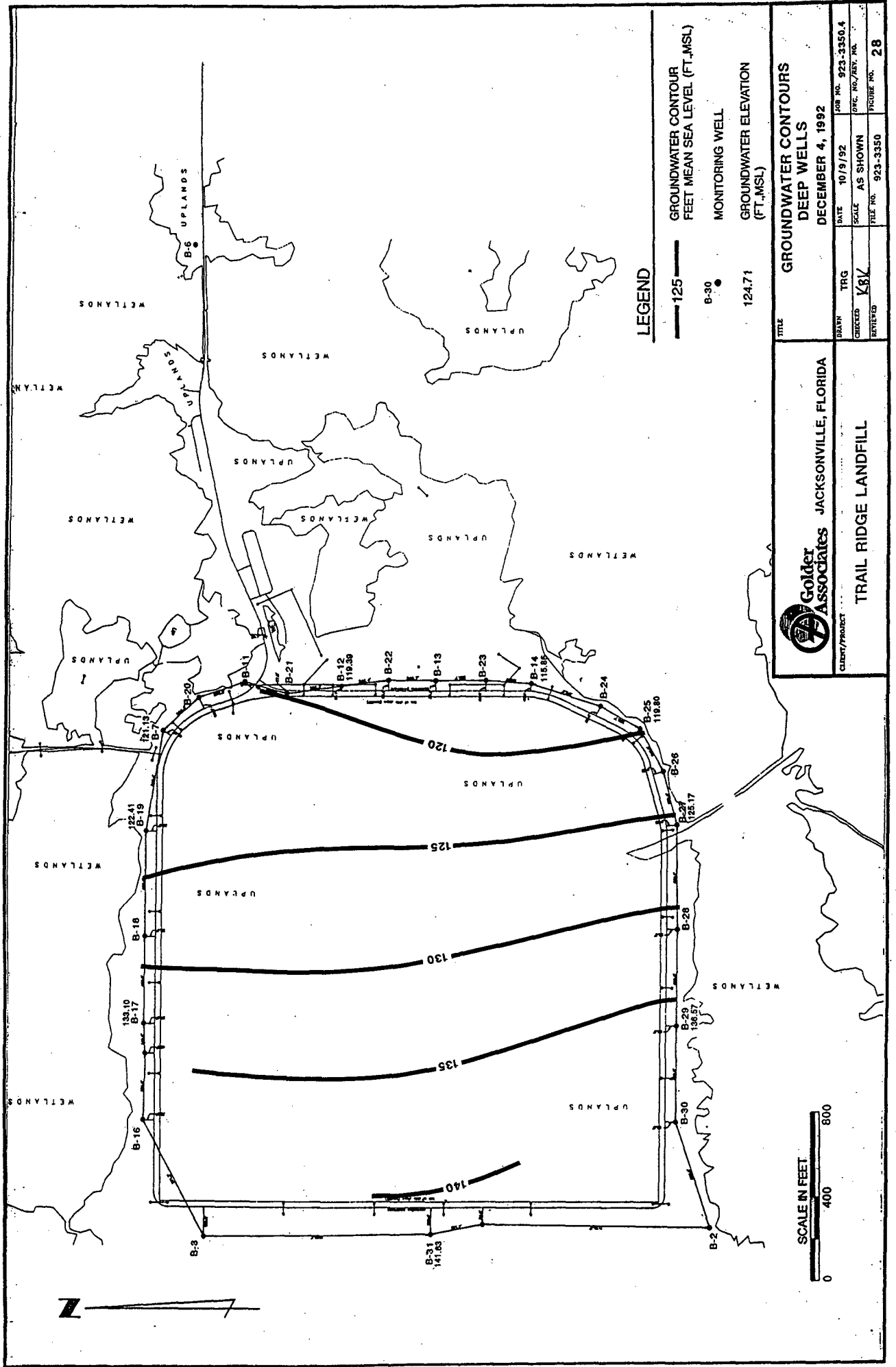


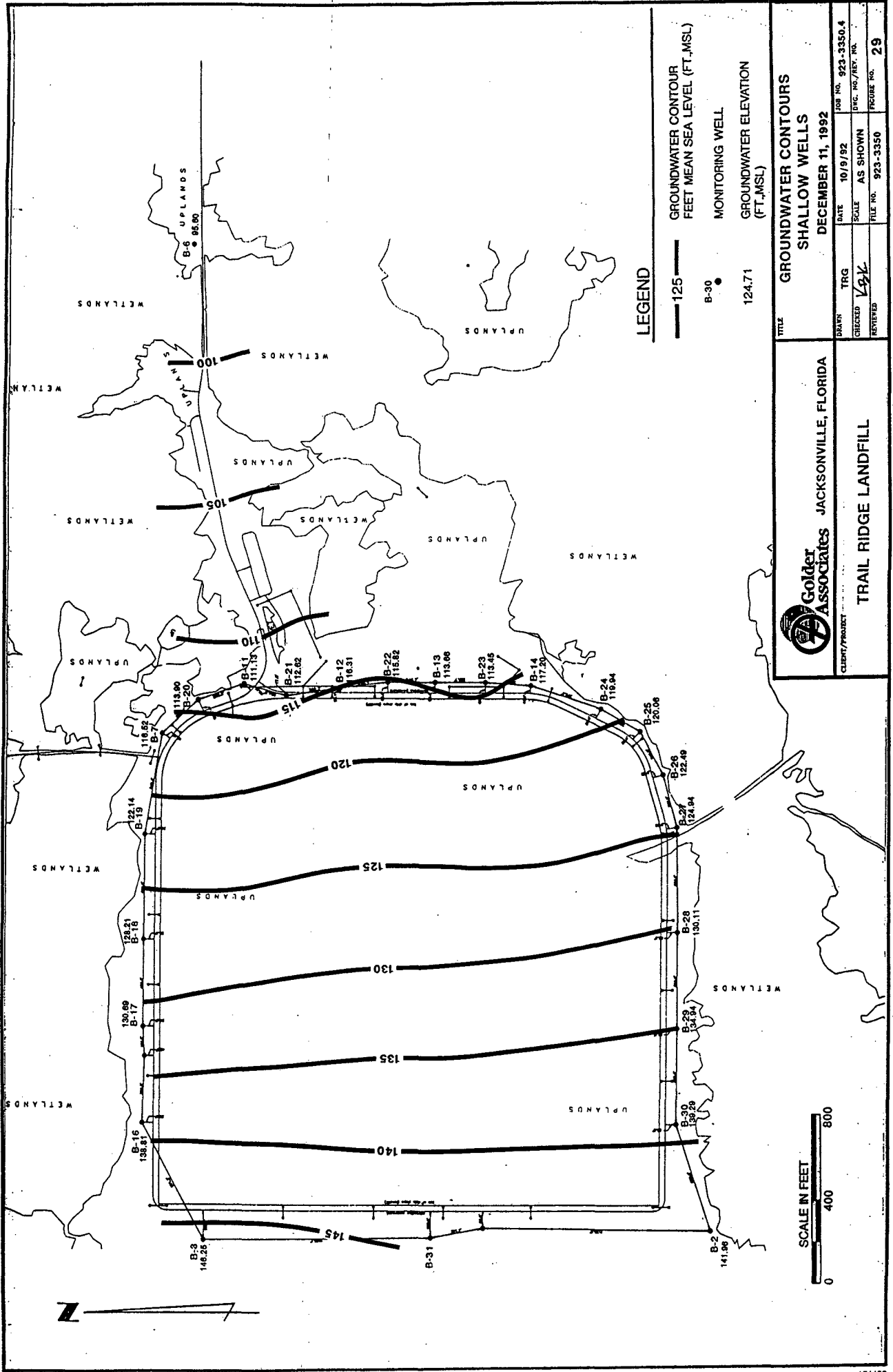
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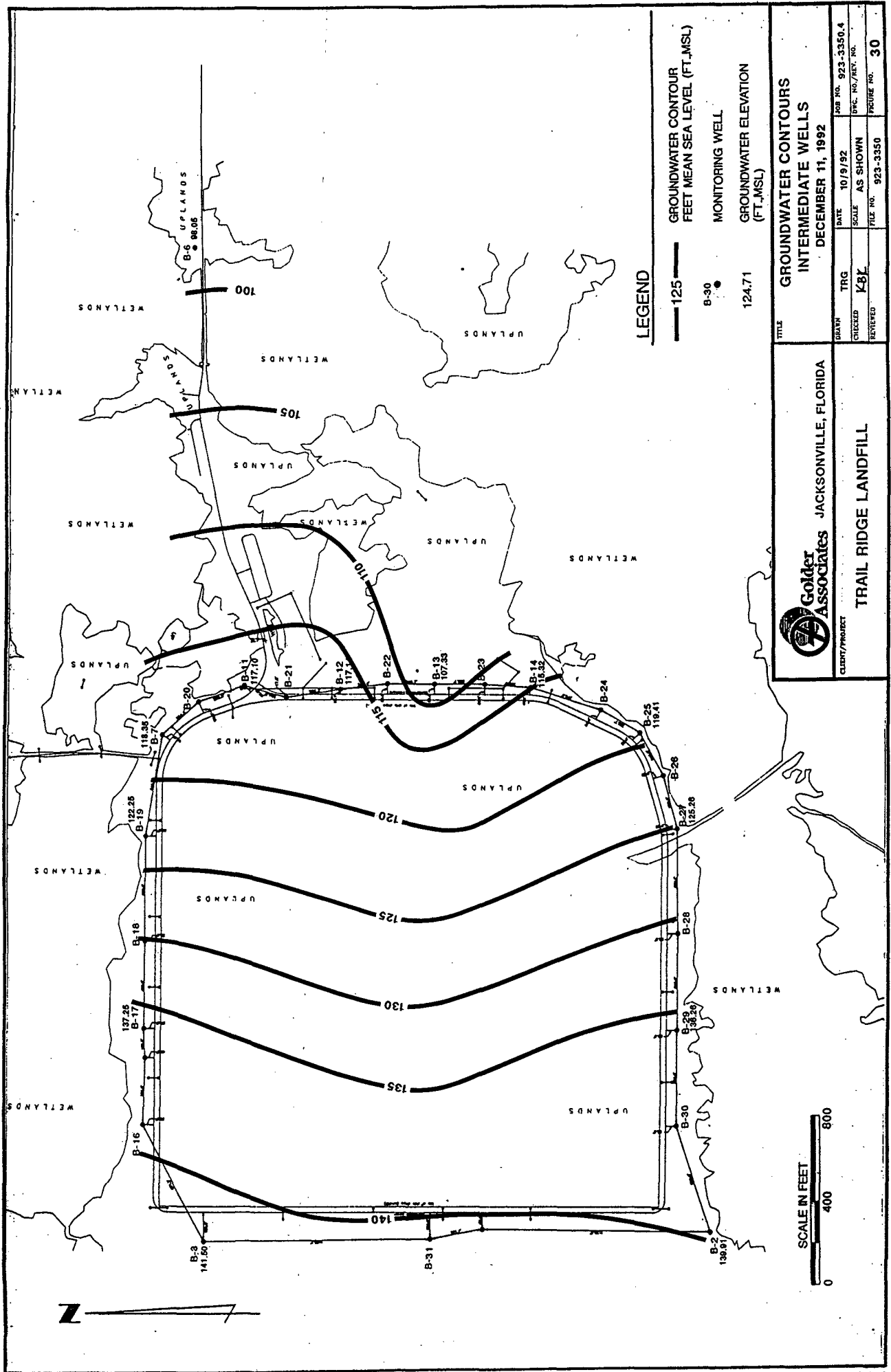
- 125 — GROUNDWATER CONTOUR
FEET MEAN SEA LEVEL (FT. MSL)
- B-30 MONITORING WELL
- 124.71 GROUNDWATER ELEVATION
(FT. MSL)

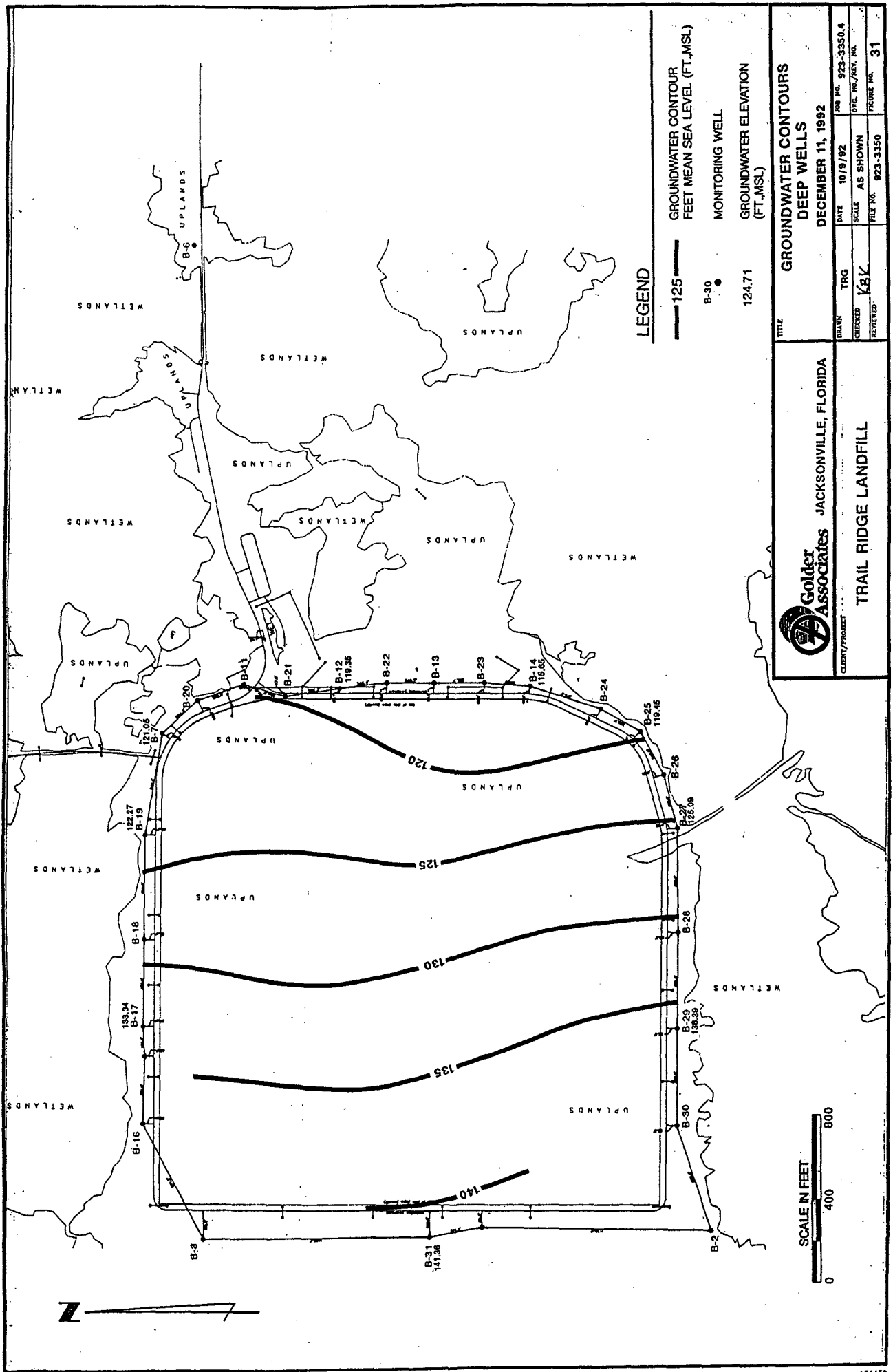
TITLE		GROUNDWATER CONTOURS INTERMEDIATE WELLS DECEMBER 4, 1992	
CLIENT/PROJECT		Golder Associates Jacksonville, Florida TRAIL RIDGE LANDFILL	
DRAWN	TRG	DATE	JOB NO. 923-3350.4
CHECKED	KVK	SCALE	DATE 10/9/92
REVIEWED		FILE NO.	FIGURE NO. 27
			923-3350

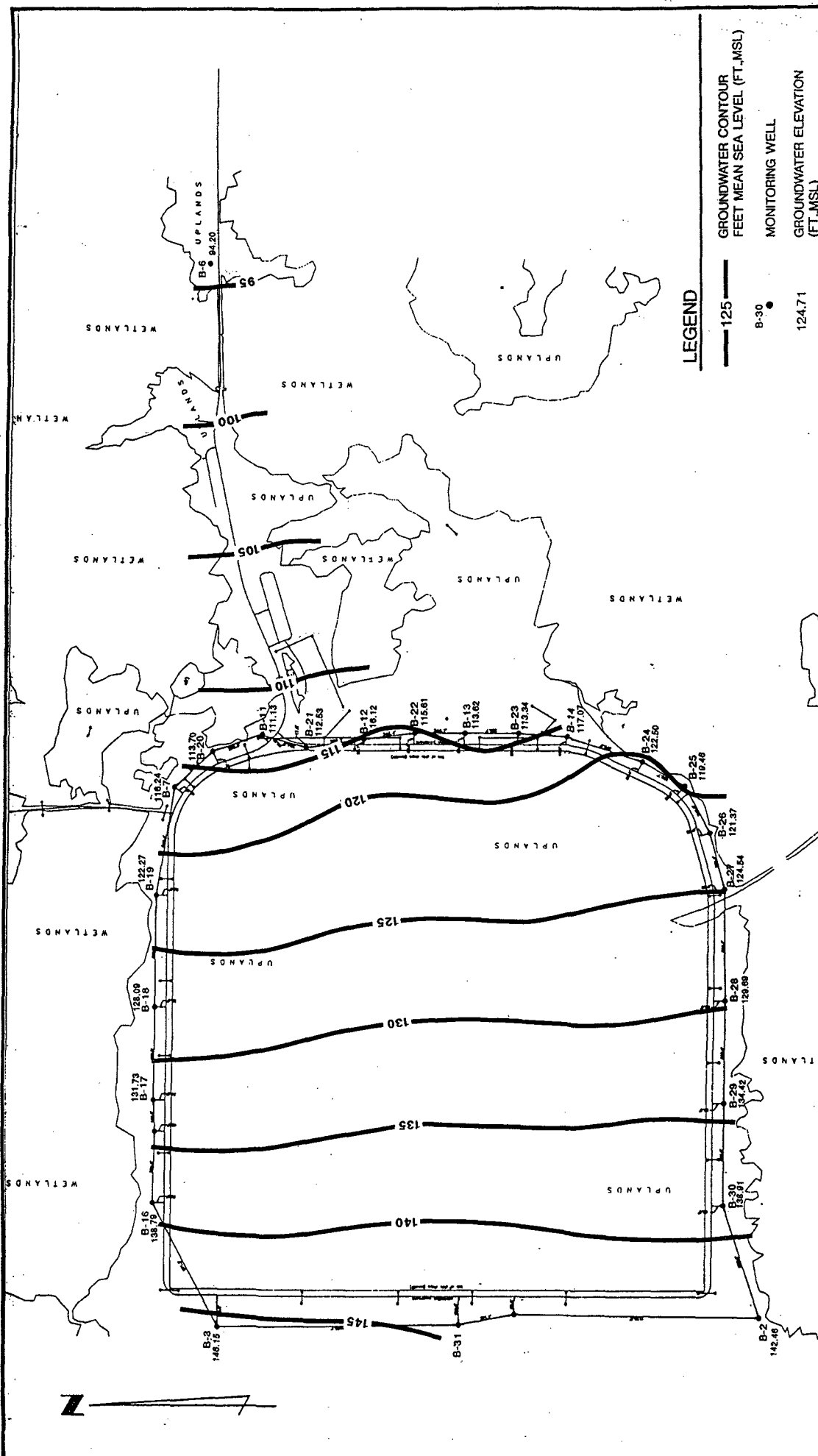












Trail Ridge Landfill

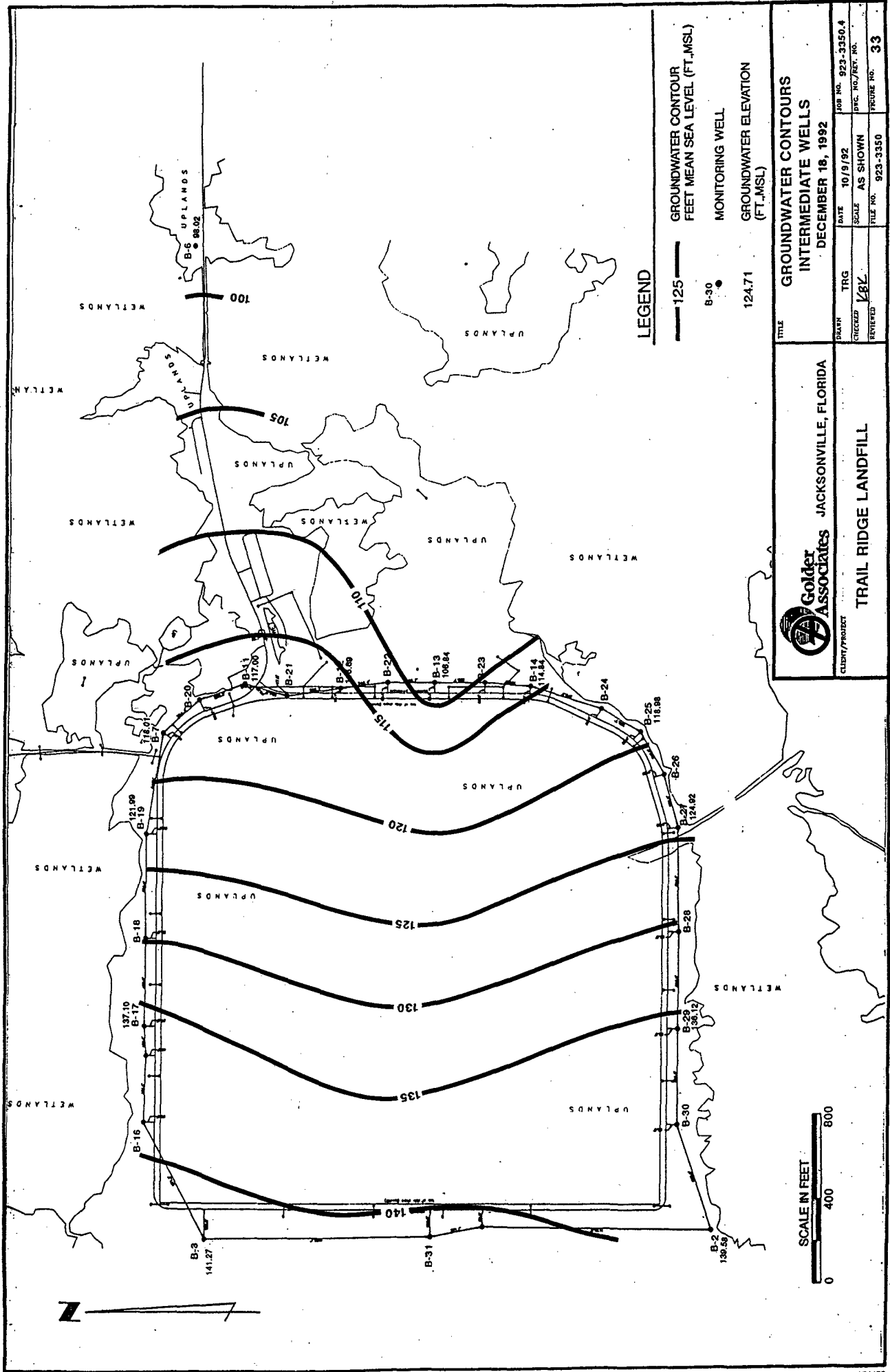
Goldier Associates JACKSONVILLE, FLORIDA

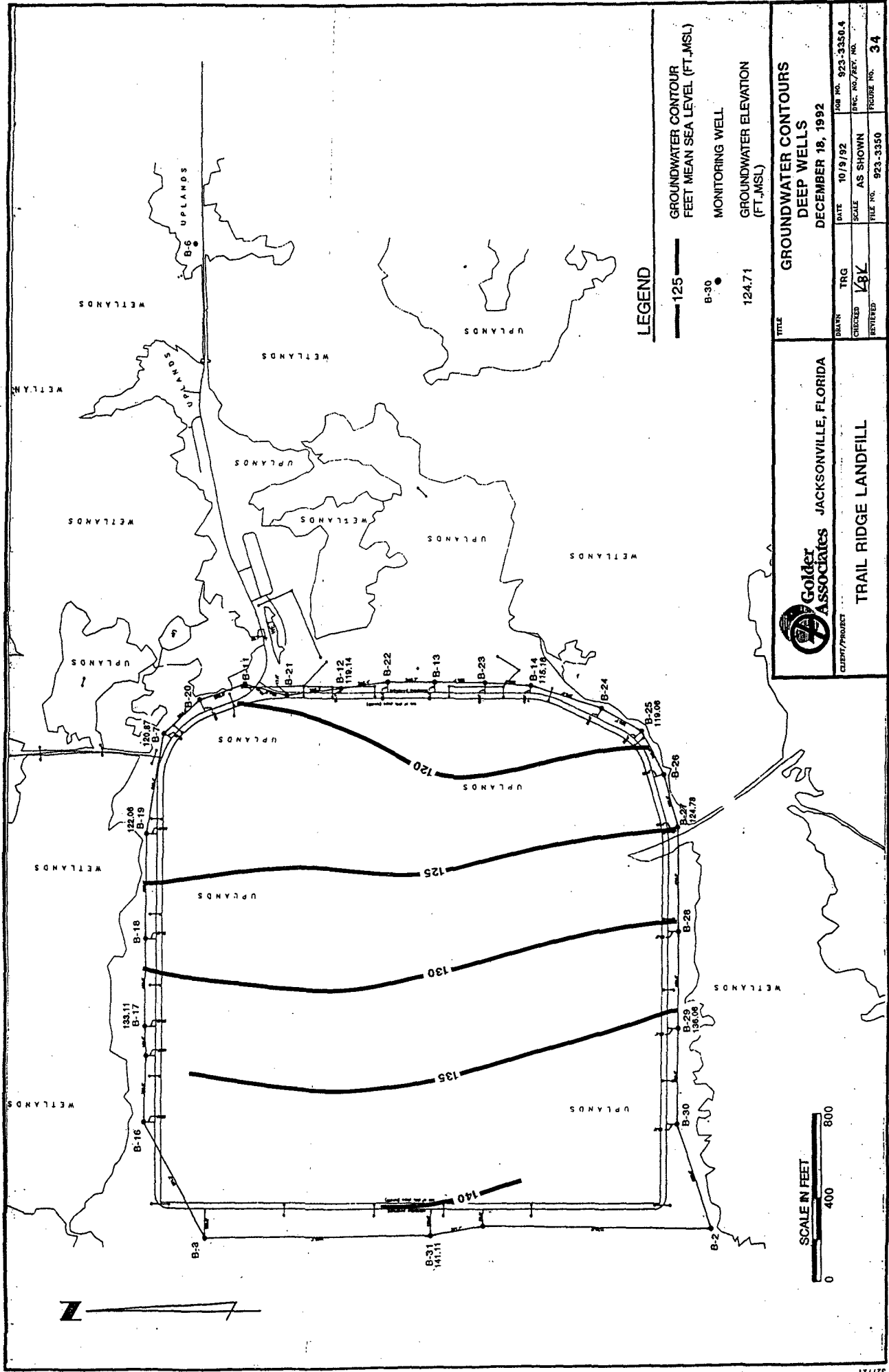
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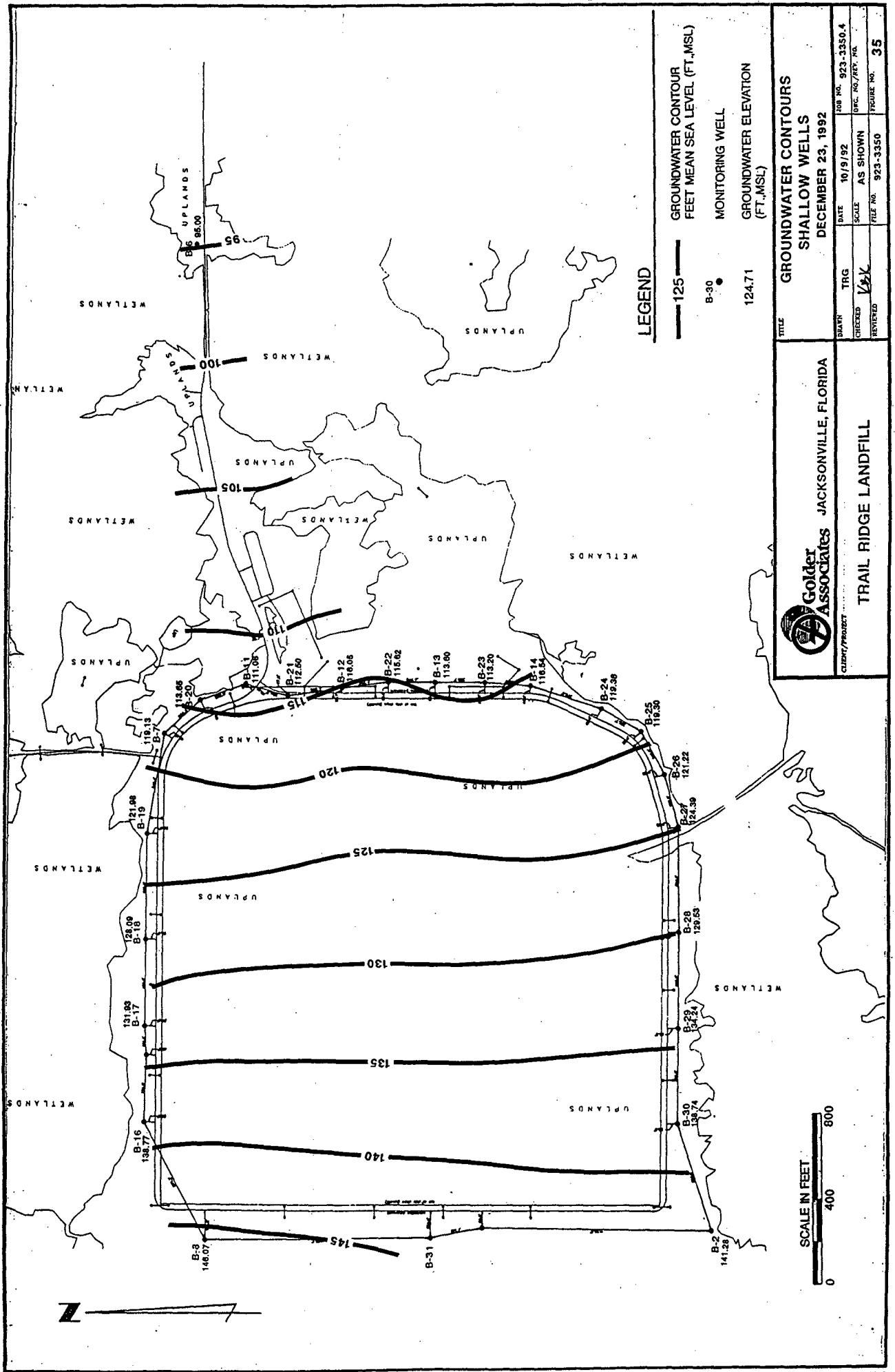
SHALLOW WELLS

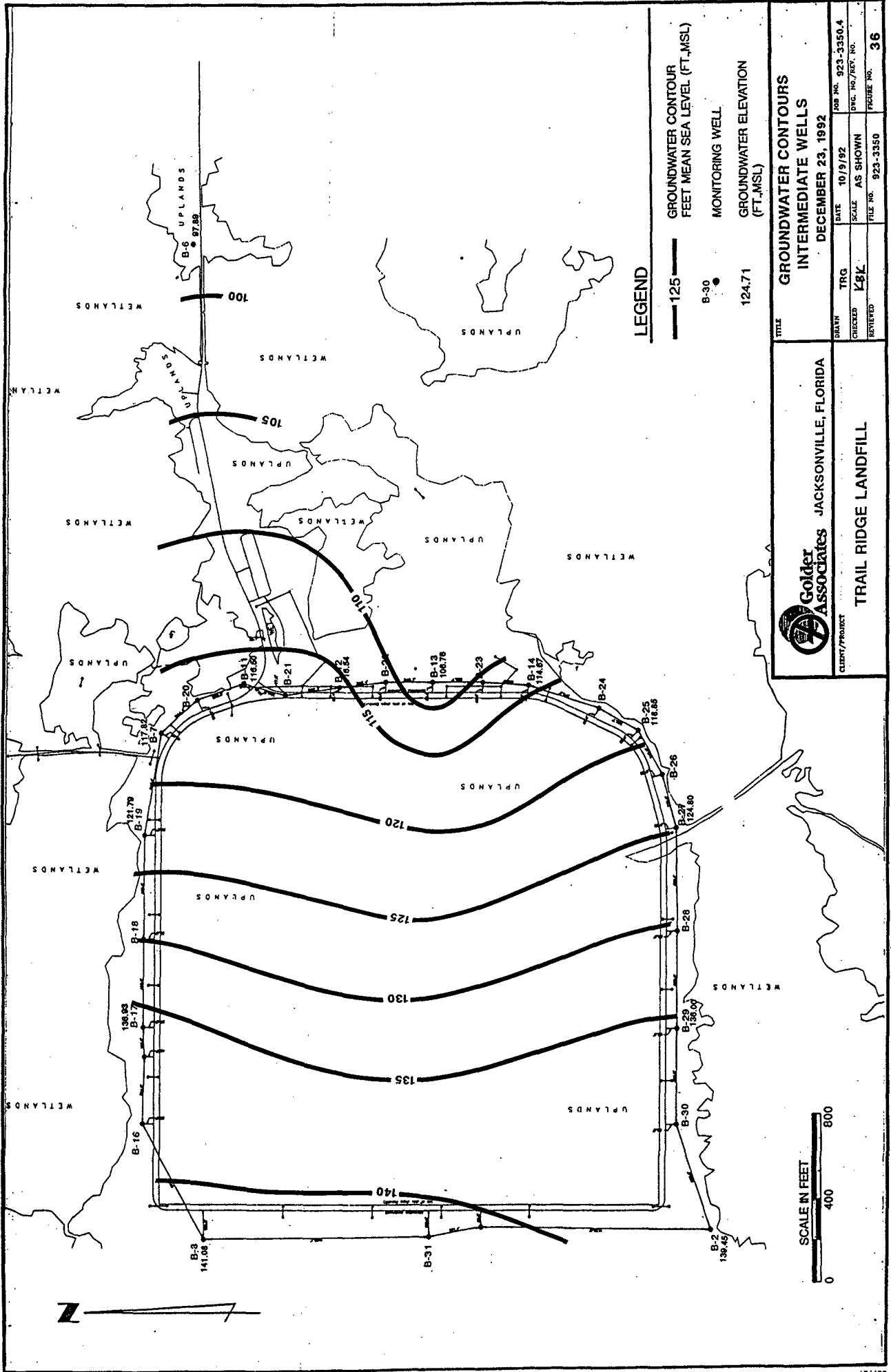
DECEMBER 18, 1992

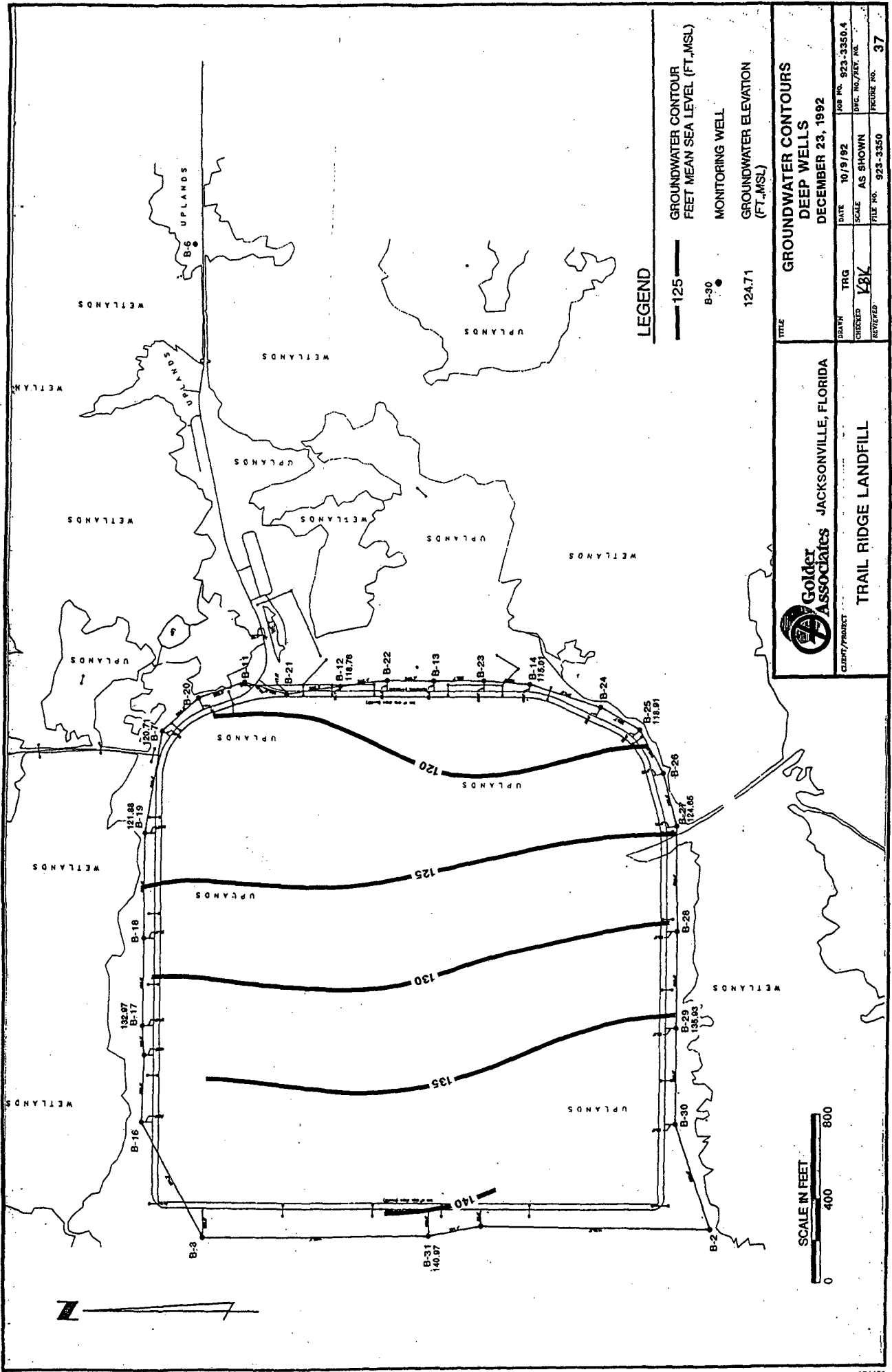
DRAWN	TRG	DATE	JOB NO. 923-3350.4
CHECKED	AS SHOWN	10/9/92	DATE
REVIEWED	FILE NO. 923-3350	FIGURE NO.	32

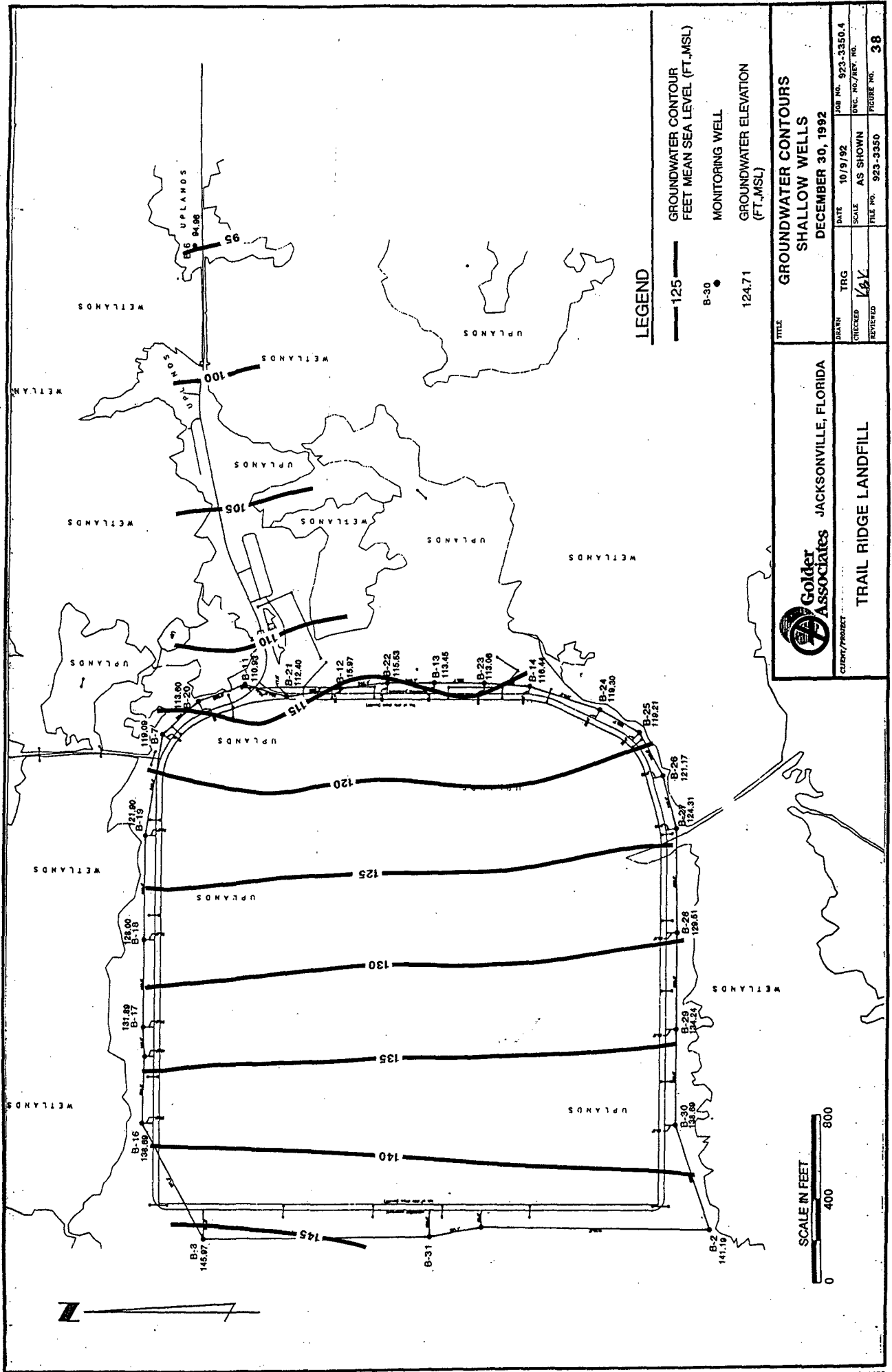


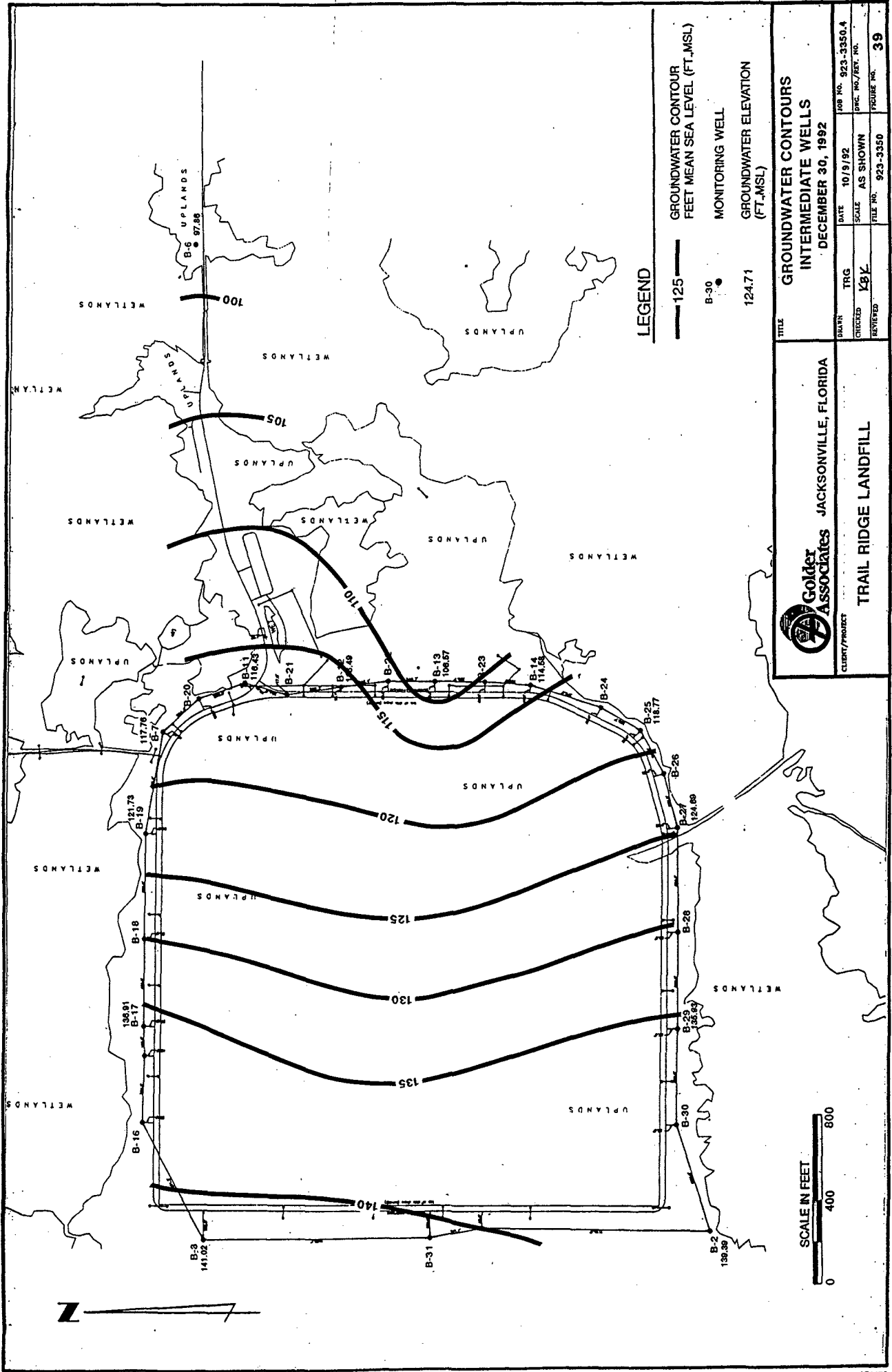


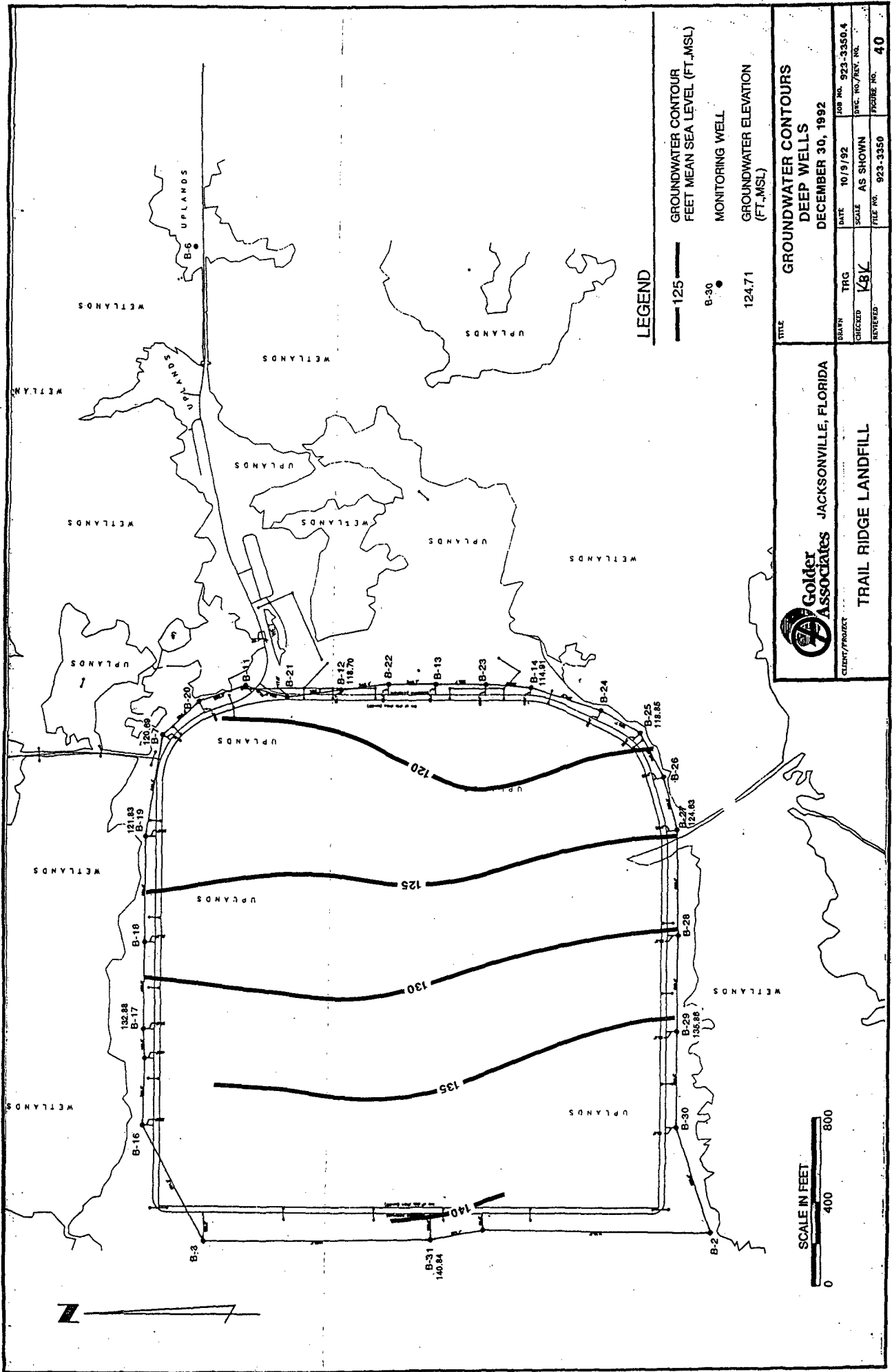


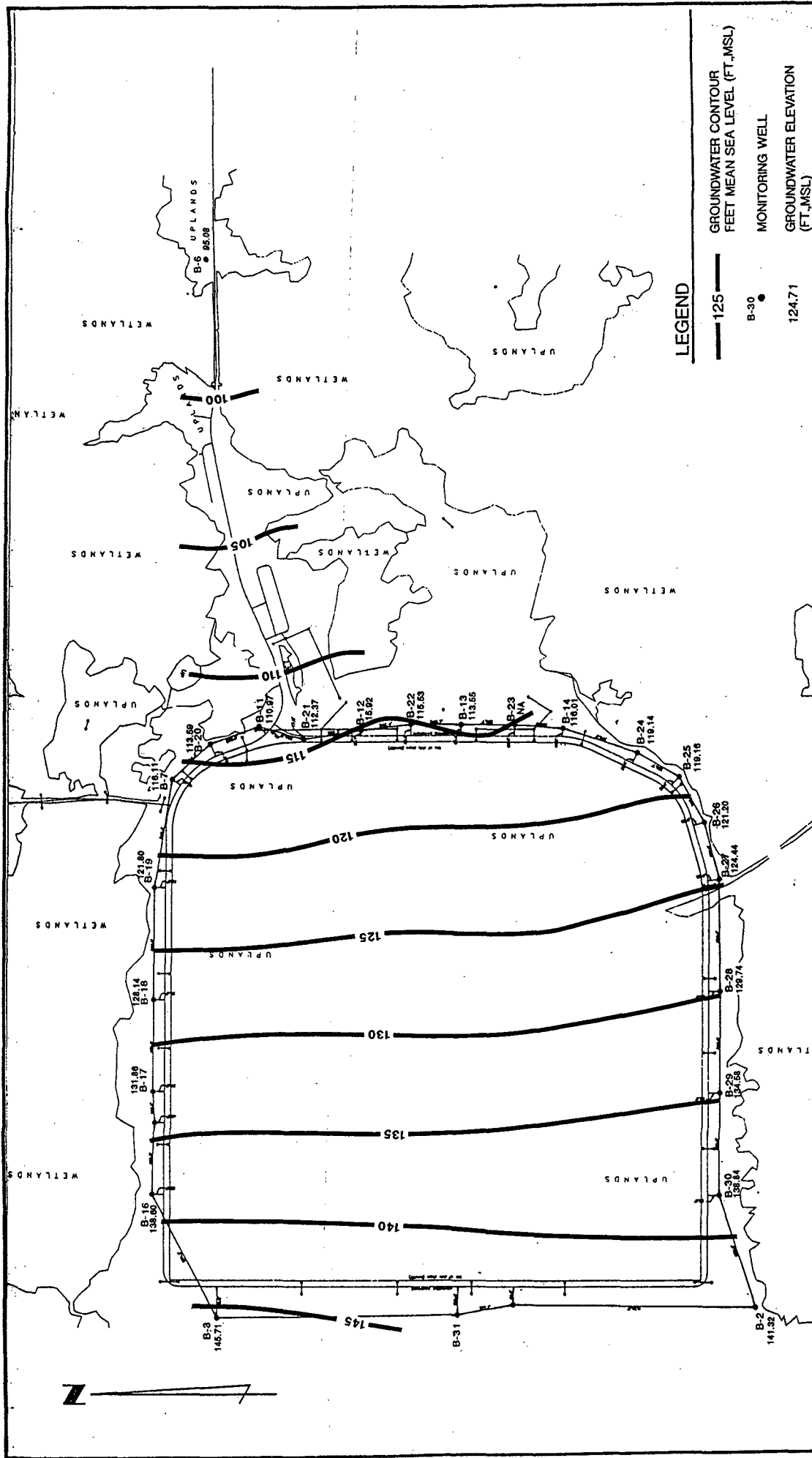










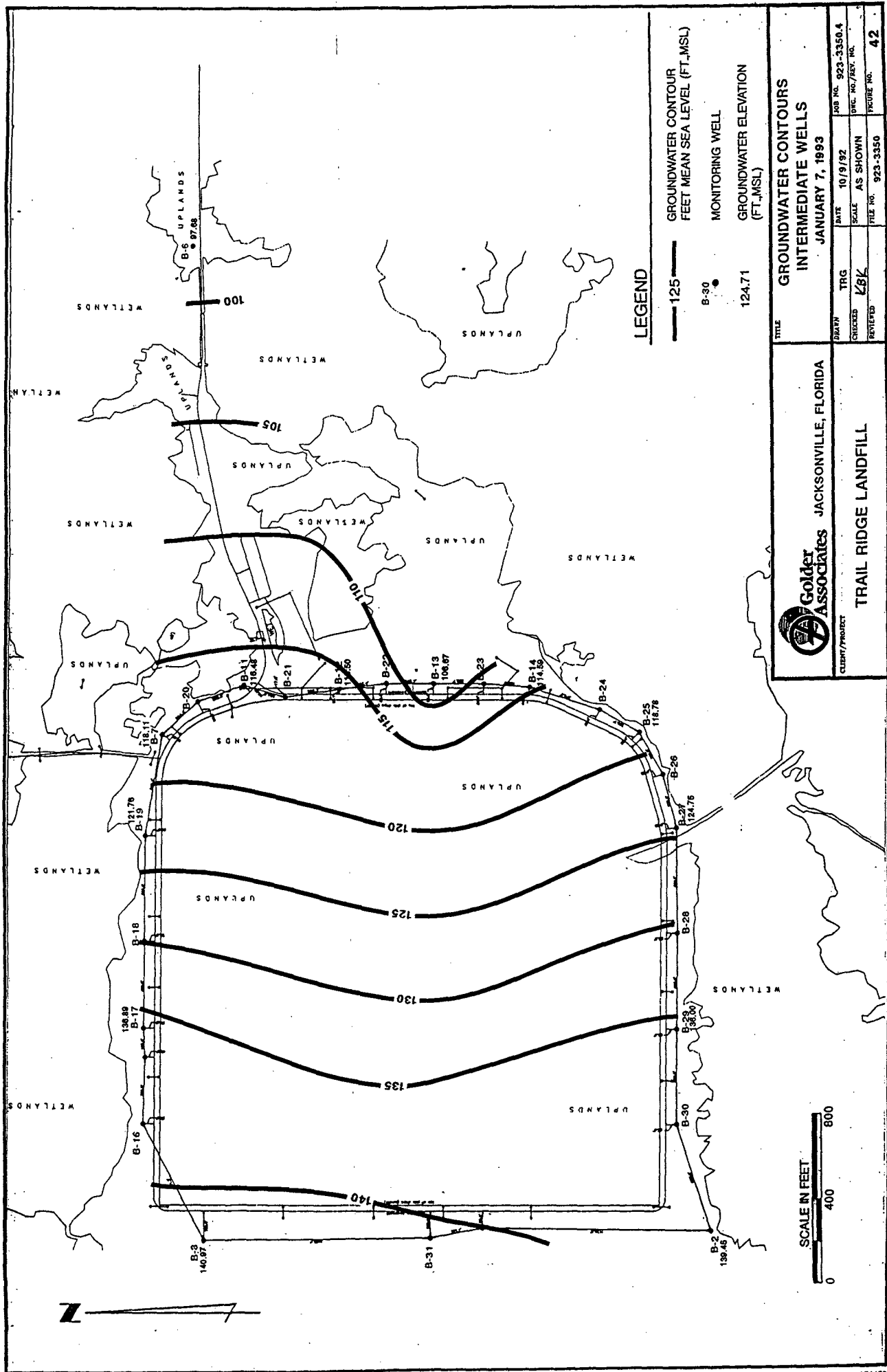


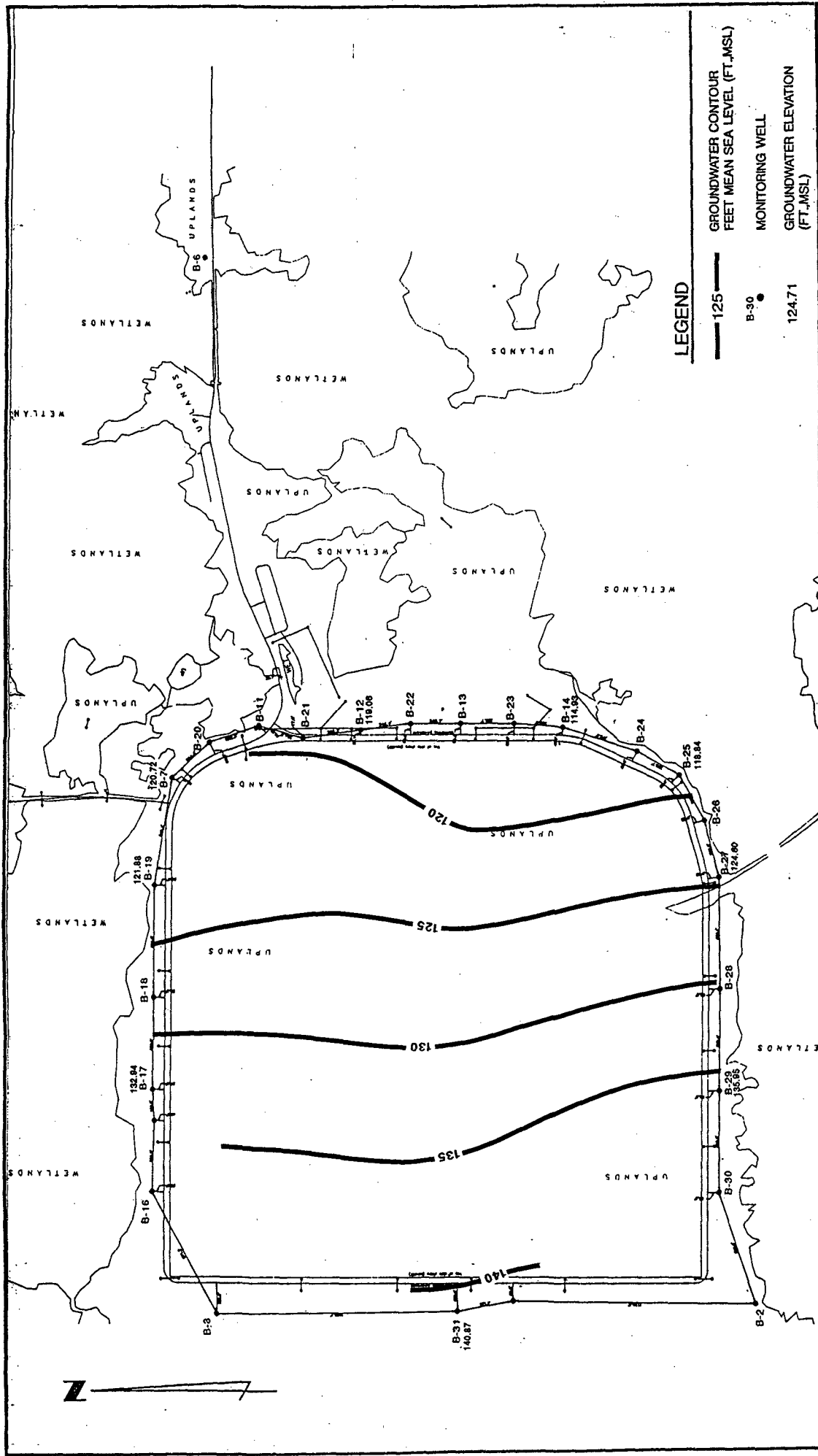
LEGEND

- 125 — GROUNDWATER CONTOUR
FEET MEAN SEA LEVEL (FT. MSL)
- B-30 MONITORING WELL
- 124.71 GROUNDWATER ELEVATION
(FT. MSL)

TITLE		CLIENT/PROJECT	
GROUNDWATER CONTOURS SHALLOW WELLS JANUARY 7, 1993		Golder Associates JACKSONVILLE, FLORIDA	
DATE	10/9/92	TRG	
CHECKED	AS SHOWN	SCALE	1/4" = 1'
FILE NO.	923-3350	FIGURE NO.	41







LEGEND

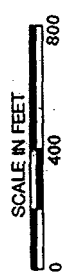
- 125 — GROUNDWATER CONTOUR FEET MEAN SEA LEVEL (FT. MSL)
- B-30 ● MONITORING WELL
- 124.71 GROUNDWATER ELEVATION (FT. MSL)

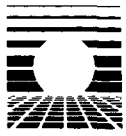
GROUNDWATER CONTOURS DEEP WELLS JANUARY 7, 1993			
DATE	10/9/92	148 NO. 923-3350.4	
SCALE	AS SHOWN	DWG. NO./REV. NO.	
FILE NO.	923-3350	FIGURE NO.	43

Golder Associates
JACKSONVILLE, FLORIDA

CLIENT/PROJECT

TRAIL RIDGE LANDFILL





England-Thims & Miller, Inc.

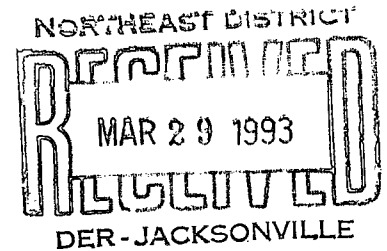
Consulting & Design Engineers
3131 St. Johns Bluff Road So. Jacksonville, FL 32246
904-642-8990

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.

March 24, 1993

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



Reference: Trail Ridge Landfill - Phases IIA and IIB
and Phase II Stormwater Collection System
FDER Permit No. SC16-184444
ET&M No. E91-156-2 (Certification File)

Dear Ms. Nogas:

Please find herein the letter from Law Engineering regarding the sampling of the leachate trench aggregate at the subject facility. I believe this letter will complete your file regarding the Phase IA certification.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

ENGLAND, THIMS & MILLER, INC.

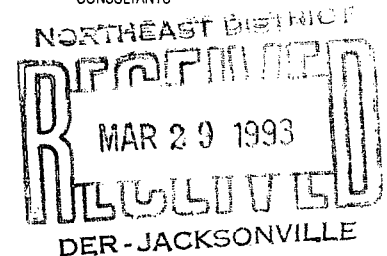
Juanitta Bader Clem, P.E.
Project Engineer

cc: Luke DeBock
Sonny Sanfilippo
Jim Lukens



LAW ENGINEERING

GEOTECHNICAL, ENVIRONMENTAL
& CONSTRUCTION MATERIALS
CONSULTANTS



March 23, 1993

Mr. Doug Miller
England, Thims & Miller, Inc.
3131 St. Johns Bluff Boulevard South
Jacksonville, Florida 32216

Subject: **Soil Quality Assurance Testing**
Trail Ridge Landfill
Jacksonville, Florida
LAW Project No. 446-01631-01

Dear Mr. Miller:

Law Engineering, Inc. provided quality assurance testing for the subject project. Included in this testing was sampling of the leachate trench aggregate. The sampling was performed as documented in our letter dated March 22, 1993. As noted, the samples were obtained from stockpiled material. Our also personnel observed the placement of the stockpiled material. In our opinion the placed material was consistent with the sampled and tested materials. The sampling frequency performed was not in strict accordance with the QA Plan submitted to the Florida Department of Environmental Regulation; however, it is our opinion the material met the intent of the specifications.

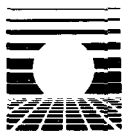
If you have any questions concerning this matter, please contact us.

Sincerely,

LAW ENGINEERING, INC.

James A. Horton, P.E.
Principal Geotechnical Engineer
Registered, Florida 23315

JAH:kw



England-Thims & Miller, Inc.

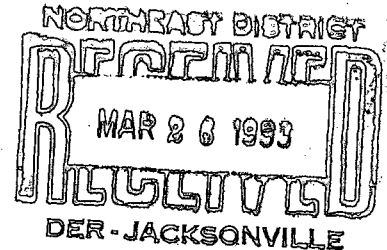
Consulting & Design Engineers
3131 St. Johns Bluff Road So. Jacksonville, FL 32246
904-642-8990

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.

March 26, 1993

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



Reference: Trail Ridge Landfill - Phases IIA and IIB
and Phase II Stormwater Collection System
FDER Permit No. SC16-184444
ET&M No. E91-156-2 (Certification File)

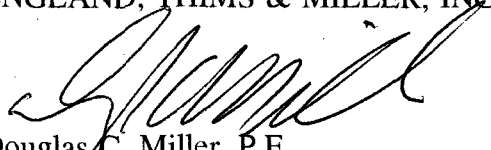
Dear Ms. Nogas:

Please find herein the survey field notes from Sunshine State Surveyors regarding the sand blanket along the rain flap at the subject facility as requested in your letter dated March 23, 1993. Based upon the survey, the sand blanket in the vicinity of the rain flap has been regraded and is in substantial conformance with the permit requirements.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

ENGLAND, THIMS & MILLER, INC.



Douglas C. Miller, P.E.
Vice President

Attachment: Survey Field Notes

cc: Luke DeBock
Sonny Sanfilippo
Jim Lukens

NORTHEAST DISTRICT
RECEIVED
 MAR 26 1993
 DER-JACKSONVILLE

TRAIL RIDGE
 3/23/93

H. WADE

B. WALLS

M. TURNER

DOETHINK	EASTTAK	ELEV.	ON 3/14/93	Now
97410	114400	137288	0.99 Low	0.38 High
92460	112400	145163	0.13 Low	0.07 Low
92460	113400	144182	0.10 Low	-0.08 Low
92460	108400	14910	0.20 Low	0.00
92460	110400	147140	0.26 Low	0.00
95460	114400	142150	0.68 Low	0.00
95460	112400	14408	0.14 Low	0.02 Low
95460	110400	14587	-0.18 Low	0.03 Low

Re Shot of Deeral Area
 in Cell 2-A/20

Stansbury State-Silverdale, Ill

[Signature]

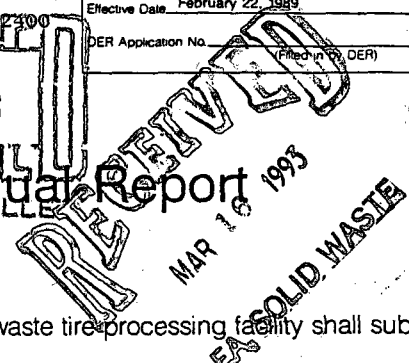
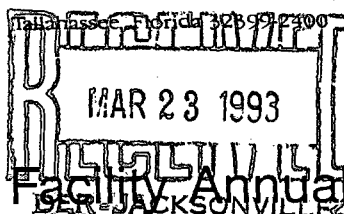
ARTHUR A. MASTRONICOLA, JR. PLS 4166



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32309-2400

DER Form # 17-711.900(4)
Form Title <u>Waste Tire Processing Facility Annual Report</u>
Effective Date <u>February 22, 1989</u>
DER Application No. _____ (Filed in the DER)



Waste Tire Processing Facility Annual Report

Pursuant to Rule 17-711.530, Florida Administrative Code, the owner or operator of a waste tire processing facility shall submit the following information to the Department annually.

- Facility name: Trail Ridge Landfill
- Facility mailing address: 5110 U.S. Hwy. 301
City Baldwin County Duval Zip 32234
- Facility permit number: SC16-184444
- Facility telephone number: (904) 289-9100
- Authorized person preparing report: Tom Nelson
- Affiliation with facility: General Manager
- Telephone number (if different from above): () _____
- The year covered by the report: 1992
- Quantity of waste tires or processed tires, expressed in tons, received at the facility during the calendar year covered by the report (assume 100 tires per ton or 10 tires per cubic yard): 1,046.41 tons
- Quantity of waste tires or processed tires, expressed in tons, shipped from the facility during the calendar year covered by the report (assume 100 tires per ton or 10 tires per cubic yard): 0 tons
- Quantity of waste tires and processed tires, expressed in tons, located at the facility at the beginning of the calendar year covered by the report (assume 100 tires per ton or 10 tires per cubic yard): 0 tons
- Describe the general disposition of waste tires, processed tires, and residuals shipped from the facility during the year covered by the report:
n/a
 - ☐ % Shipped for disposal in a permitted solid waste management facility.
 - ☐ % Shipped to retreader.
 - ☐ % Shipped to another processing facility.
 - ☐ % Shipped to fuel user.
 - ☐ % Shipped to recycling end user. Describe type of recycling use: _____
 - ☐ % Other. Explain. _____
- Attach the most recent closure cost estimate prepared using the criteria in Rule 17-711.510, F.A.C. n/a
- Certification:

To the best of my knowledge and belief, I certify the information provided in this report is true, accurate and complete.

Tom Nelson
Name of Authorized Agent

[Signature]
Signature of Authorized Agent

5/11/93
Date

Mail completed form to
the appropriate district office
listed below.

Page 1 of 1

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794
904-436-8300

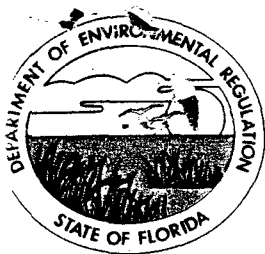
Northeast District
3426 Bills Rd.
Jacksonville, Florida 32207
904-798-4200

Central District
3319 Maguire Blvd. Suite 232
Orlando, Florida 32803-3767
305-894-7555

Southwest District
4520 Oak Fair Blvd.
Tampa, Florida 33610-7347
813-623-5561

South District
2269 Bay St.
Fort Myers, Florida 33901-2896
813-332-2667

Southeast District
1900 S. Congress Ave. Suite A
West Palm Beach, Florida 33406
305-964-9668



Florida Department of Environmental Regulation

Northeast District • Suite B200, 7825 Baymeadows Way • Jacksonville, Florida 32256-7577

Lawton Chiles, Governor

Virginia B. Wetherell, Secretary

March 23, 1993

CERTIFIED - RETURN RECEIPT

Mr. Douglas C. Miller, P. E.
England-Thims & Miller, Inc.
3131 St. Johns Bluff Road South
Jacksonville, Florida 32216

Note:

Hand-delivered to
Ms. Clem, P.E., 3/23/93
MN

Dear Mr. Miller:

Trail Ridge Landfill Phase IIA
Permit No. SC16-184444
Duval County - Solid Waste

The Department has reviewed the following documents submitted in accordance with the permit:

1. Construction Quality Assurance Monitoring of the Geosynthetic Lining System for the Trail Ridge Landfill Phases IC, IIA, IIB, and IIC - Final Report (Volumes I, II, III, IV, V and VI), prepared by Geosyntec Consultants, received on February 12, 1993, and supplemented on March 4, 1993 and March 23, 1993.

2. Report of Soils Quality Assurance Testing Phase IC and Phase II Trail Ridge Landfill, prepared by Law Engineering, received on February 12, 1993, and supplemented on March 23, 1993;

3. Phases I and II "As-Builts" of Trail Ridge Landfill, Sheets 1 through 20 and WT1 through WT4, prepared by Sunshine State Surveyors, Inc., received on February 12, 1993; and

4. Certificate of Construction Completion for Trail Ridge Landfill Phases IIA and IIB including the Phase II Stormwater Collection System, prepared by Douglas C. Miller, P. E., received on March 4, 1993.

Please be advised that all applicable submissions required for Phase IIA have been received and found acceptable. Therefore, Trail Ridge Landfill, Inc. may begin accepting waste in Phase IIA of the subject landfill.

However, it was noted that the leachate aggregate testing frequency was not in accordance with the Construction Quality Assurance Plan. Any future construction must comply with the frequency of one test per sump plus one test per 500 linear feet of trench with a minimum of one test per trench.

Mr. Douglas C. Miller
March 23, 1993
Page two

Additionally, the sand blanket was deficient along the rain flap at 114 +00 east; before waste may be placed in this area, the Engineer shall certify that the sand blanket was repaired.

If you have any questions, please contact me.

Sincerely,

A handwritten signature in dark ink, appearing to read "MC Nogas". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

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

cc: S. Sanfilippo, Waste Management, Inc.
Allan E. Williams, City of Jacksonville



Florida Department of Environmental Regulation

Northeast District • Suite B200, 7825 Baymeadows Way • Jacksonville, Florida 32256-7577

Lawton Chiles, Governor

Virginia B. Wetherell, Secretary

NORTHEAST DISTRICT - JACKSONVILLE

TO: Mary Nogas
FROM: Jai P. Prasad JP
DATE: March 23, 1993
SUBJECT: Trail Ridge Landfill Closure
Documentation

Based upon my site visit on March 22, 1993, the stormwater management plan, which only required an additional L-shaped ditch section for phase 2A, meets the appropriate provisions of FAC Rule 17-25.





England-Thims & Miller, Inc.

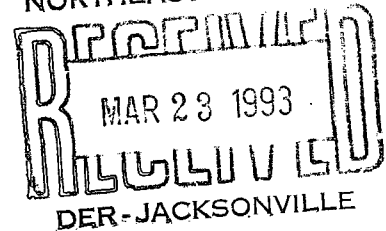
Consulting & Design Engineers
3131 St. Johns Bluff Road So. Jacksonville, FL 32246
904-642-8990

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.

March 22, 1993

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



Reference: Trail Ridge Landfill - Phases IIA and IIB
and Phase II Stormwater Collection System
FDER Permit No. SC16-184444
ET&M No. E91-156-2 (Certification File)

Dear Ms. Nogas:

During the site inspection of the subject facility on March 18, 1993, several items were requested to finalize the certification of Phase IIA. The requested items are attached as follows:

1. The surface elevation of the top of the sand blanket in Phases IIA and IIB was rechecked by field survey and determined to be substantially in compliance. Please see the attached survey field notes from Sunshine State Surveyors, Inc.
2. An explanation of the leachate trench aggregate analysis (AASHTO T27 and ASTM D448) and testing location/frequency is provided in the attached letter from Law Engineering.
3. A response letter from GeoSyntec Consultants which addresses the March 17, 1993 Interoffice Memorandum from Mary C. Nogas, P.E. and Mark Cadenhead regarding the Trail Ridge Landfill Construction QA Report.

Should you have any questions concerning this matter, please do not hesitate to contact me.

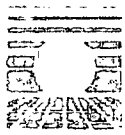
Sincerely,

ENGLAND, THIMS & MILLER, INC.

Juanita Bader Clem, P.E.
Project Engineer

Attachments: Survey Field Notes from Sunshine State Surveyors, Inc.
Response Letter from Law Engineering
Response Letter from GeoSyntec Consultants

cc: Luke DeBock
Sonny Sanfilippo
Jim Lukens



England-Thims & Miller, Inc.

Consulting & Design Engineers
3131 St Johns Bluff Road So. Jacksonville, FL 32216
(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.

TELECOPIER TRANSMITTAL LETTER

DATE: 3/23/93
TO: Mary Noyes
ATTENTION: _____
FROM: Quonitta Conn
REFERENCE: Trait Ridge Landfill
PROJECT NO: _____

Dear Mary:
Attached is a clearer copy
of the Panel Seaming Form
as requested.
We are anxiously awaiting
to hear from you.
Quonitta

WE ARE TRANSMITTING 2 PAGES, INCLUDING COVER PAGE. IF YOU DO NOT
RECEIVE ALL PAGES OR HAVE DIFFICULTY READING THIS DOCUMENT, PLEASE CALL
US IMMEDIATELY AT (904) 642-8990.

ENGLAND, THIMS & MILLER, INC. TELECOPIER NUMBER (904) 646-9485.

NSC

NATIONAL SEAL COMPANY

PANEL SEAMING FORM

PAGE 1 OF 5

PROJECT NAME: Real Road/Land

PROJECT NUMBER: 2173 Phase 2-4

MATERIAL DESCRIPTION: 60 mil polyurea

DATE TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DEST TEST P#	COMMENTS
8:15	SP-1	P1	14.5	2066	1412	700/600	Cloudy	C-5	78	P	Cross Seams
8:33	SP-1	P1 P2	397'	2067	1504	700/600	"	"	"	P	From South To North
8:40	SP-2	P3 P4	395'	2066	1413	700/600	"	"	"	P	"
8:48	SP-3	P3 P4 P5	14.5	2067	1504	700/600	"	"	"	P	Cross Seams
8:58	SP-3	P5 P6	395'	2069	1514	700/600	"	"	"	P	From South To North
9:27	SP-4	P7	14.5	2019	1516	700/600	"	"	"	P	Cross Seams
9:41	SP-4	P8 P1	395'	2067	1504	700/600	"	"	"	P	"
9:48	SP-5	P5	395'	2066	1412	700/600	"	"	"	P	"
9:56	SP-6	P6	394'	2066	1516	700/600	"	"	"	P	"
10:06	SP-7	P10	398'	2067	1524	700/600	"	"	"	P	"
10:10	SP-8	P10	14.5	2019	1516	700/600	"	"	"	P	Cross Seams
10:15	SP-8	P10 P11	396'	2066	1412	700/600	"	"	"	P	"
10:18	SP-9	P13 P14	398'	2067	1516	700/600	"	"	"	P	"
10:21	SP-10	P14 P15	388'	SK	1504	700/600	"	"	"	P	"
10:25	SP-11	P17 P18	388'	2066	1412	700/600	"	"	"	P	"
10:28	SP-12	P18	14.5	2066	1413	700/600	"	"	"	P	Cross Seams



England-Thims & Miller, Inc.

Consulting & Design Engineers
3131 St. Johns Bluff Road So. Jacksonville, FL 32216
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.L., V. Pres.

TELECOPIER TRANSMITTAL LETTER

DATE: March 23, 1993

TO: Mary Morgan

ATTENTION:

FROM: Terriella Clemm

REFERENCE: Trident Ridge Landfill

PROJECT NO:

Dear Mary:

Attached is the letter from
Gunn H. on as requested. The
original will be submitted
to you.

Terriella

WE ARE TRANSMITTING 1 PAGES, INCLUDING COVER PAGE. IF YOU DO NOT RECEIVE ALL PAGES OR HAVE DIFFICULTY READING THIS DOCUMENT, PLEASE CALL US IMMEDIATELY AT (904) 642-8990.

ENGLAND THIMS & MILLER, INC. TELECOPIER NUMBER (904) 646-9485.

FROM LAW ENGINEERING

03.23.1993 14:06

NO.11 P. 2

**LAW ENGINEERING**GEOTECHNICAL, ENVIRONMENTAL
& CONSTRUCTION MATERIALS
CONSULTANTS

March 23, 1993

Mr. Doug Miller
England, Thims & Miller, Inc.
3131 St. Johns Bluff Boulevard South
Jacksonville, Florida 32216

Subject: Soil Quality Assurance Testing
Trail Ridge Landfill
Jacksonville, Florida
LAW Project No. 446-01631-01

Dear Mr. Miller:

Law Engineering, Inc. provided quality assurance testing for the subject project. Included in this testing was sampling of the leachate trench aggregate. The sampling was performed as documented in our letter dated March 22, 1993. As noted, the samples were obtained from stockpiled material. Our also personnel observed the placement of the stockpiled material. In our opinion the placed material was consistent with the sampled and tested materials. The sampling frequency performed was not in strict accordance with the QA Plan submitted to the Florida Department of Environmental Regulation; however, it is our opinion the material met the intent of the specifications.

If you have any questions concerning this matter, please contact us.

Sincerely,

LAW ENGINEERING, INC.


James A. Horton, P.E.
Principal Geotechnical Engineer
Registered, Florida 28316

JAH:aw



GEOSYNTEC CONSULTANTS

22 March 1993

Ms. Juanitta B. Clem, P.E.
England Thims & Miller, Inc.
3131 St. Johns Bluff Rd. South
Jacksonville, Florida 32246

Subject: Response to Regulatory Comments on the
Trail Ridge Landfill CQA Final Report
Jacksonville, Florida

Dear Ms. Clem:

This letter has been prepared in response to the comments made by Florida Department of Environmental Regulation (FDER) on the Trail Ridge Landfill Construction Quality Assurance (CQA) Final Report. The comments were telefaxed to GeoSyntec Consultants on 18 March 1993 by England Thims & Miller, Inc. GeoSyntec Consultants' response to the comments are presented below. The response corresponding to each comment is presented below with the comments presented in italics.

Comment No. 1a

The Seaming Log does not reflect the seaming between the following panels: P6/P8, P21/P23, P1/P54, P56/P58, P397/P399, P399/P400, P403/P404 and P412/P414.

Response

The air pressure tests performed on the eight seams listed in Comment No. 1a would imply that the corresponding panels had been seamed prior to the air pressure testing. The quality control documentation prepared by National Seal Company (NSC) during the installation of the liner indicates that seaming of the above eight seams were performed. Copies of NSC's documentation is presented in Attachment 1.

Comment No. 1b

The Air Pressure Test Log does not reflect testing of seam P407/P409. The Panel and Seam Repair Field Sketch did not indicate that this was a seam extruded weld.

FQ2030-07/Q930137

Corporate Office:

621 N.W. 53rd Street • Suite 650
Boca Raton, Florida 33487 • USA
Tel. (407) 995-0900 • Fax (407) 995-0925

Regional Offices:

Atlanta, GA • Boca Raton, FL
Columbia, MD • Huntington Beach, CA
Walnut Creek, CA • Brussels, Belgium

Laboratories:

Atlanta, GA
Boca Raton, FL
Huntington Beach, CA



RECYCLED AND RECYCLABLE



Ms. Juanitta B. Clem, P.E.
22 March 1993
Page 2

Response

Seam P407/P409 and P407/P408 are the two segments of a north-south seam which extends across the entire width of Cell IIA. Panel P407 is a continuous panel which extends from the southern to the northern boundaries of Cell IIA. Panel P408 extends from the southern boundary of Cell IIA to approximately 70 ft from the northern boundary of Cell IIA. Panel P408 ties into Panel P409 which extends to the northern boundary of Cell IIA. The routine seaming procedure in the field for seaming panels such as P407, P408, and P409 is to perform cross-seams, such as seam P408/P409, and subsequently perform the long seams; such as seams P407/P408 and P407/P409. The long seam produced according to this procedure will have a continuous air channel between the two fusion tracks in the seam; and, the entire seam can be air pressure tested in one attempt.

According to the Air Pressure Test Log (Sheet No. 11 of 12), seam P407/P408 was air pressure tested to the end of the seam. NSC's quality control documentation also indicates that seam P407/P408 was air pressure tested to the end of the seam. GeoSyntec Consultants believes that seam P407/P409 has been tested as part of the air pressure testing of seam P407/P408, and, as such, the passing results for seam P407/P408 also applies to seam P407/P409. A copy of NSC's documentation for air pressure testing of seam P407/P408 is provided in Attachment 2.

Comment No. 2a

The Seaming Log does not reflect the seaming between panel S495 and S496.

Response

Panels S495 and S496 are not two adjacent panels, and as such, the Seaming Log correctly does not reflect the seaming between these two panels. However, the Air Pressure Test Log (Sheet No. 11 of 12) incorrectly indicated that an air pressure test was conducted for seam S495/S496 (which does not exist) on 24 November 1992. GeoSyntec Consultants has determined that the seam number S495/S496 was incorrectly recorded on the Air Pressure Test Log. The air pressure test actually corresponds to seam S494/S495, and therefore the seam number on the Air Pressure Test Log should be corrected to S494/S495. Panels S494 and S495

FQ2030-07/Q930137



Ms. Juanitta B. Clem, P.E.
22 March 1993
Page 3

are two adjacent panels which in accordance to the Seaming Log (Sheet No. 12 of 13) were seamed on 20 November 1992.

Comment No. 2b

The Air Pressure Test Log does not reflect testing of seam S494/S495. The Field Sketch did not indicate that the seam was extrusion welded.

Response

As described in the response to Comment No. 2a, the seam number for the air pressure test conducted on seam S494/S495 on 24 November 1992 was erroneously recorded as S495/S496 on Sheet No. 11 of 12 of the Air Pressure Test Log. The seam number on the Air pressure Test Log should be corrected to S494/S495.

Closure

GeoSyntec Consultants believes that the information provided in this letter addresses the comments made by FDER on the Trail Ridge Landfill CQA Final Report. Should you have any questions or require any additional information, please do not hesitate to contact either of the undersigned.

Sincerely,


Daniel A. Schauer, P.G.
Project Manager


Ali Khatami, Ph.D. P.E.
Project Engineer

Attachment

FQ2030-07/Q930137



ATTACHMENT 1

NSC NATIONAL SEAL COMPANY

PAGE 1 OF 2

[illegible]

NSC

NATIONAL SEAL COMPANY

PAGE 4 OF 8

PANEL SEAMING FORM

PROJECT NAME: Tail Race InletPROJECT NUMBER: 2173 Phase AMATERIAL DESCRIPTION: Unilap 22

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST P/F	COMMENTS
6-6-02	FSR41	P-50 P-51	60	2019	1516	700 400	Sunny	0-5	89	P	
11-19	FSR42	P-51 P-52	60	2019	1516	700 400	=	=	=	P	
11-19	FSR43	P-52 P-53	59	2019	1516	700 400	=	=	=	P	1st panel on west end
4-00	FSR44	P-53 P-54	393	2019	1516	700 400	Sunny	0-5	94	P	2nd panel on west end
4-12	FSR45	P-54 P-55	393	2007	1504	750 750	=	=	=	P	
4-20	FSR46	P-55 P-56	394	2019	1516	700 400	=	=	=	P	
4-31	FSR47	P-56 P-57	14.5	2019	1516	700 500	=	=	=	P	CRSS SEAM
5-05	FSR47	P-57 P-58	392	2019	1516	700 500	=	=	=	P	
5-07	FSR49	P-58 P-59	393	2007	1504	750 700	=	=	=	P	
5-18	FSR49	P-59 P-60	395	2006	1412	700 700	=	=	=	P	4682
6-6-02	FSR49	P-60 P-61	383	2007	1504	750 750	=	=	=	P	TRANS 303' EAS 10' SEAM
6-8-02	FSR50	P-61 P-62	394	T.L.	1516	700 400	Sunny	0-5	74	P	TRANS 303' EAS 10' SEAM
9-150	FSR51	P-62 P-63	394	2005	1412	700 400	=	=	=	P	
8-140	FSR52	P-63 P-64	14.5	2005	1412	700 400	=	=	=	P	CRSS SEAM
9-130	FSR53	P-64 P-65	395	T.L.	1516	700 400	=	=	=	P	
9-130	FSR53	P-65 P-66	397	2005	1412	700 400	=	=	=	P	

NSC

NATIONAL SEAL COMPANY

Primary II A

PAGE 1 OF

PANEL SEAMING FORM

PROJECT NAME: Trail RidgePROJECT NUMBER: 2173MATERIAL DESCRIPTION: 60 mil

NATIONAL SEAL

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST P/F	COMMENTS
12-4-92	Trail	348/114	385'	2084	G#20	265/285	partly cloudy	E03	65°	P	Trail II A to II A older
0905		338/359	385	2002	1625	725	"	"	"	P	East of 388
1010		390 390/391	14.5 385	2002	1625	725	"	"	"	P	Cross Seam
1025		359/390	385	2002	1625	725	"	"	"	P	
1115		391 390/392	385 385	2002	1625	725	"	"	"	P	
1130		392/393	385	2098	1532	750	"	"	"	P	
1350		394/395	14.5	2098	1532	750	"	"	"	P	Cross Seam
1401		392 392/393	385	2002	1625	725	"	"	"	P	
1410		394 393/394	385	2098	1532	750	"	"	"	P	
1430		394/395	385	2002	1625	725	"	"	"	P	
1506		397/398	285	2098	1532	750	"	"	"	P	
1500		398/399	14.5	2098	1532	750	"	"	"	P	Cross Seam
1540		398 397/400	385'	2022	1625	785	"	"	"	P	
1605		400/401	385	2098	1532	750	"	"	"	P	
1620		401/402	385	2002	1625	715	"	"	"	P	
1615		402/403	14.5	2002	1625	725	"	"	"	P	Cross Seam

ID:504-751-2789

MAR 22 '93

16:04 No.020 P.04

NSC

NATIONAL SEAL COMPANY

Primary II A

PAGE 2 OF

PANEL SEAMING FORM

PROJECT NAME: Trail RidgePROJECT NUMBER: 2073MATERIAL DESCRIPTION: 60 mil

NATIONAL SEAL

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST P/F	COMMENTS
12-4-92	1506	<u>402/403/404</u>	38.5'	2098	1532	750	partly dly	003	60°	P	
12-5-92	1506	404/405	38.5	2098	1530	750	cloudy	003	70°	P	
15-2-92	1506	405/406	38.5	2098	1625	725	"	"	"	P	
16-0-92		406/407	38.5	2098	1532	750	"	"	"	P	
16-2-92		<u>407/408</u>	38.5'	2098	1625	725	"	"	"	P	
16-15		408/409	14.5	2098	1625	725	"	"	"	P	Cross Seam
12-6-92		409/410/411	38.5	2098	1532	750	clear	"	54°	P	
10-2-92		410/411	38.5	2098	1625	725	clear	"	53°	P	
11-0-92		411/412	38.5	2098	1532	750	"	"	57°	P	
11-4-92		412/413	14.5	2098	1532	750	"	"	59°	P	Cross Seam
11-23		<u>413/414</u>	38.5	2098	1625	725	"	"	60°	P	
12-0-92		414/415	38.5	2098	1532	750	"	"	62°	P	
12-0-92		415/416	161'	2106	6405	265/265	"	"	64°	P	T12-in 161' EXT
14-0-92		415/416	72'	2098	1625	725	"	"	51°	P	
17-0-92		416/417	5'	2106	6405	265/265	"	"	51°	P	Cross Seam
17-2-92		417/418		2106	6405	265/265	"	"	50°	P	

4276

16:04 No. 020 P.05

MAR 22 '93

ID: 504-751-2789

ATTACHMENT 2



NON-DESTRUCTIVE TESTING FORM

PROJECT NAME: Trail Ridge PROJECT NUMBER: 2173 MATERIAL DESCRIPTION: 60 mil

DATE/ TIME	SEAM NO.	TESTER INITIAL	PRESSURE		AIR TESTING		TIME		COMPLETE Y/N	V BOX COMPLETE Y/N	LOCATION / COMMENTS
			START	END	+/-	START	END				
12-6-92	406-407	2063	33	31	-2	1346	1345		Y		0-605
12-6-92	407-408	2063	34	32	-2	1350	1355		Y		0-605
12-7-92	408-409	2063	-	EXT					Y		EXT cross seam
	409-410	2063	34	32	-2	1425	1430		Y		0-605
	410-411	2063	33	33	0	1425	1430		Y		0-605
	411-412	2063	34	32	-2	1450	1455		Y		0-612
	412-413	2063	32	31	0	1450	1455		Y		0-605
	413-414	2063	32	32	0	1452	1457		Y		0-311
12-8-92	411-413	2063	35	34	-1	0845	0850		Y		311-605
12-7-92	412-413	2063	-	EXT					Y		cross seam
12-5-92	411-412	2063	33	32	-1	0850	0855		Y		0-605
	412-414	2063	33	31	-2	0915	0920		Y		0-605
	413-414	2063	33	31	-2	0915	0920		Y		0-605
	414-415	2063	34	32	-2	1012	1017		Y		0-273
12-9-92	414-415	2063	34	34	0	0945	0950		Y		273-605
	415-416	2063	30	30	0	0950	0955		Y		0-605
	416-417	2063	-	EXT					Y		EXT cross seam
	415-417	2063	33	32	0	0955	1000		Y		0-721
	415-417	2063	32	31	-1	0949	0945		Y		72-605



England-Thims & Miller, Inc.

Consulting & Design Engineers
3131 St. Johns Bluff Road So. Jacksonville, FL 32246
904-642-8990

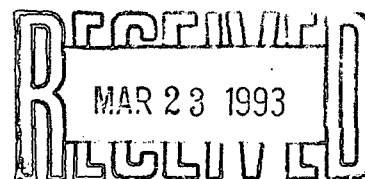
PRINCIPALS

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

March 22, 1993

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

NORTHEAST DISTRICT



DER-JACKSONVILLE

Reference: Trail Ridge Landfill - Phases IIA and IIB
and Phase II Stormwater Collection System
FDER Permit No. SC16-184444
ET&M No. E91-156-2 (Certification File)

Dear Ms. Nogas:

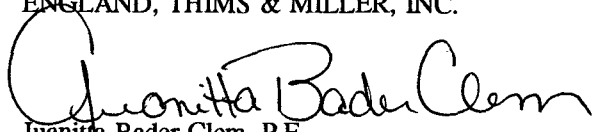
During the site inspection of the subject facility on March 18, 1993, several items were requested to finalize the certification of Phase IIA. The requested items are attached as follows:

1. The surface elevation of the top of the sand blanket in Phases IIA and IIB was rechecked by field survey and determined to be substantially in compliance. Please see the attached survey field notes from Sunshine State Surveyors, Inc.
2. An explanation of the leachate trench aggregate analysis (AASHTO T27 and ASTM D448) and testing location/frequency is provided in the attached letter from Law Engineering.
3. A response letter from GeoSyntec Consultants which addresses the March 17, 1993 Interoffice Memorandum from Mary C. Nogas, P.E. and Mark Cadenhead regarding the Trail Ridge Landfill Construction QA Report.

Should you have any questions concerning this matter, please do not hesitate to contact me.

Sincerely,

ENGLAND, THIMS & MILLER, INC.


Juanitta Bader Clem, P.E.
Project Engineer

Attachments: Survey Field Notes from Sunshine State Surveyors, Inc.
Response Letter from Law Engineering
Response Letter from GeoSyntec Consultants

cc: Luke DeBock
Sonny Sanfilippo
Jim Lukens

TRAIL RIDGE LANDFILL
 3/16/93
 H. WADE
 H. LAMM
 R. DEGRANGE
 M. ADDISON

10' = NAIL IN PIPE - APPROX 101' ± 0.01
 ± 100' ± 0.0 E.

EL = 145.286

99' ± 26
 99' ± 10
 90' TYP

FWD
 118' ±
 (TYP)

97' ± 10
 PUT PAINT MARK 60' ELEV 100' STAS. (TYP)

95' ± 40

94' ± 10

92' ± 26



395-17

STA. NORTH	STA. EAST	ELEV.
99 ± 08	101 ± 00	153.40
97 ± 10	101 ± 10	149.78
95 ± 40	100 ± 90	153.65
94 ± 10	101 ± 00	151.97
92 ± 60		
94 ± 10	101 ± 00	151.15
92 ± 60	100 ± 92	155.10
92 ± 60	102 ± 00	154.27
94 ± 10	102 ± 00	149.89
95 ± 60	102 ± 00	152.61
97 ± 10	102 ± 00	147.88
99 ± 08	102 ± 00	152.51
99 ± 08	103 ± 00	151.69
97 ± 10	103 ± 00	146.96
95 ± 60	103 ± 00	151.96
94 ± 10	103 ± 00	149.10
92 ± 60	103 ± 00	153.42
92 ± 60	104 ± 00	152.50
94 ± 10	104 ± 00	148.23
95 ± 60	104 ± 00	150.96
97 ± 10	104 ± 00	146.15
99 ± 08	104 ± 00	150.60
99 ± 08	105 ± 00	149.73
97 ± 10	105 ± 00	145.51
95 ± 60	105 ± 00	150.04
94 ± 10	105 ± 00	147.47
92 ± 60	105 ± 00	151.70
92 ± 60	106 ± 00	150.85
94 ± 10	106 ± 00	146.30
95 ± 60	106 ± 00	149.83
97 ± 10	106 ± 00	144.72
99 ± 08	106 ± 00	149.30
99 ± 08	107 ± 00	148.73
97 ± 10	106 ± 80	144.51

0.04' LOW

0.04' LOW

0.16' LOW

HOLE @
 107 ± 00 E.
 W/DIRT MOUND

395-18

STA NORTH	STA EAST	ELEV.	STA NORTH	STA EAST	ELEV.
99+08	113+00	143.56	99+08	113+00	143.56
97+10	113+00	138.67	97+10	113+00	138.67
95+60	113+00	143.26	95+60	113+00	143.26
94+10	113+00	140.40	94+10	113+00	140.40
92+60	113+00	144.80	92+60	113+00	144.80
		144.27			144.27
92+60	114+00	144.27	92+60	114+00	144.27
94+10	114+00	140.75	94+10	114+00	140.75
95+60	114+00	141.82	95+60	114+00	141.82
97+10	114+00	136.51	97+10	114+00	136.51
99+08	114+00	142.81	99+08	114+00	142.81

NOTES: 99+08 N. = 108+00 NO. ELEV. TAKEN ON THIS SPOT BECAUSE DOZER IS WORKING ON TEMP. ROAD IN THIS LOCATION

SAND IS LOW BETWEEN 95+60 & 97+10 NORTH ALONG WEST SIDE OF RAIN FLAP AT 114+00 EAST DUE TO RUN OFF FROM TAB TO I.A. #

Note: that this will be rectified when the rain flap is removed.

STA NORTH	STA EAST	ELEV.	STA NORTH	STA EAST	ELEV.
95+60	107+00	148.47	95+60	107+00	148.52
94+10	107+00	146.91	94+10	107+00	146.91
92+60	107+00	150.45	92+60	107+00	150.45
94+10	108+00	148.90	94+10	108+00	148.90
95+60	108+00	147.80	95+60	108+00	147.80
97+10	108+00	147.56	97+10	108+00	147.56
99+08	108+00	142.73	99+08	108+00	142.73
		NOTES			NOTES
		0.20 LOW			0.20 LOW
		0.04 LOW			0.04 LOW
		0.11 LOW			0.11 LOW
		0.26 LOW			0.26 LOW
		0.18 LOW			0.18 LOW
		0.08 LOW			0.08 LOW
		0.07 LOW			0.07 LOW
		0.24 LOW			0.24 LOW
		0.13 LOW			0.13 LOW
		0.14 LOW			0.14 LOW
99+08	112+00	144.17	99+08	112+00	144.17
97+10	112+00	145.57	97+10	112+00	145.57
95+60	112+00	141.33	95+60	112+00	141.33
94+10	112+00	143.96	94+10	112+00	143.96
92+60	112+00	139.36	92+60	112+00	139.36
99+08	112+00	144.17	99+08	112+00	144.17



LAW ENGINEERING

GEOTECHNICAL, ENVIRONMENTAL
& CONSTRUCTION MATERIALS
CONSULTANTS

March 22, 1993

Mr. Doug Miller
England, Thims & Miller, Inc.
3131 St. Johns Bluff Boulevard South
Jacksonville, Florida 32216

Subject: **Soil Quality Assurance Testing**
Trail Ridge Landfill
Jacksonville, Florida
LAW Project No. 446-01631-01

Dear Mr. Miller:

Law Engineering, Inc. provided quality assurance testing for the subject project. Included in this testing was sampling of the leachate trench aggregate. The sampling was performed as documented in our letter dated March 22, 1993. As noted, the samples were obtained from stockpiled material. Our also personnel observed the placement of the stockpiled material. In our opinion the placed material was consistent with the sampled and tested materials. It is also our opinion the material met the intent of the specifications.

If you have any questions concerning this matter, please contact us.

Sincerely,

LAW ENGINEERING, INC.

James A. Horton, P.E.
Principal Geotechnical Engineer
Registered, Florida 23315

JAH:kw

POST OFFICE BOX 5728
3901 CARMICHAEL AVENUE
JACKSONVILLE, FL 32207
904-396-5173

March 22, 1993

Mr. Doug Miller
England, Thims & Miller, Inc.
3131 St. Johns Bluff Boulevard South
Jacksonville, Florida 32216



LAW ENGINEERING

GEOTECHNICAL, ENVIRONMENTAL
& CONSTRUCTION MATERIALS
CONSULTANTS

Subject: **Soil Quality Assurance Testing**
Trail Ridge Landfill
Jacksonville, Florida
LAW Project No. 446-01631-01

Dear Mr. Miller:

In regard to questions on testing for the subject project telephoned to our office on March 19, 1993, we offer the following information:

1. AASHTO T27 describes the sieve analysis procedure by which the aggregate particle size is determined. ASTM D448 classifies the limits of the various particle sizes for a particular designation, in this case No. 3.
2. The leachate trench aggregate samples were as follows:

Phase	Sump		Trench	
	Primary	Secondary	Primary	Secondary
1A	Sample 4 Sample 5* Sample 6**	Sample 3	Sample 4 Sample 5* Sample 6**	N/A
1B	Sample 8	Sample 7	Sample 8	N/A
1C	Sample 10	Sample 9	Sample 10	N/A
2A	N/A	N/A	Sample 11 Sample 12***	N/A
2B	N/A	N/A	Sample 13	N/A
2C	N/A	N/A	Sample 14	N/A

*: Retest 4
**: Retest 5
***: Retest 11

Note: Samples 1 and 2 were general sample pre-qualification samples.
Sample 15 was from the system tie-in of Phase 1 and Phase 2.

The test samples were obtained from aggregate stockpile so that non-acceptable aggregate would not be placed in the system.

England, Thims & Miller
March 22, 1993
Page -2-



I hope this information is beneficial. Please contact me if there are additional questions.

Sincerely,

LAW ENGINEERING, INC.

James A. Horton, P.E.
Principal Geotechnical Engineer
Registered, Florida 23315

JAH:kw



GEOSYNTEC CONSULTANTS

22 March 1993

Ms. Juanitta B. Clem, P.E.
England Thims & Miller, Inc.
3131 St. Johns Bluff Rd. South
Jacksonville, Florida 32246

Subject: Response to Regulatory Comments on the
Trail Ridge Landfill CQA Final Report
Jacksonville, Florida

Dear Ms. Clem:

This letter has been prepared in response to the comments made by Florida Department of Environmental Regulation (FDER) on the Trail Ridge Landfill Construction Quality Assurance (CQA) Final Report. The comments were telefaxed to GeoSyntec Consultants on 18 March 1993 by England Thims & Miller, Inc. GeoSyntec Consultants' response to the comments are presented below. The response corresponding to each comment is presented below with the comments presented in italics.

Comment No. 1a

The Seaming Log does not reflect the seaming between the following panels: P6/P8, P21/P23, P1/P54, P56/P58, P397/P399, P399/P400, P403/P404 and P412/P414.

Response

The air pressure tests performed on the eight seams listed in Comment No. 1a would imply that the corresponding panels had been seamed prior to the air pressure testing. The quality control documentation prepared by National Seal Company (NSC) during the installation of the liner indicates that seaming of the above eight seams were performed. Copies of NSC's documentation is presented in Attachment 1.

Comment No. 1b

The Air Pressure Test Log does not reflect testing of seam P407/P409. The Panel and Seam Repair Field Sketch did not indicate that this was a seam extruded weld.

FQ2030-07/Q930137

Corporate Office:
621 N.W. 53rd Street • Suite 650
Boca Raton, Florida 33487 • USA
Tel. (407) 995-0900 • Fax (407) 995-0925

Regional Offices:
Atlanta, GA • Boca Raton, FL
Columbia, MD • Huntington Beach, CA
Walnut Creek, CA • Brussels, Belgium

Laboratories:
Atlanta, GA
Boca Raton, FL
Huntington Beach, CA



Ms. Juanitta B. Clem, P.E.
22 March 1993
Page 2

Response

Seam P407/P409 and P407/P408 are the two segments of a north-south seam which extends across the entire width of Cell IIA. Panel P407 is a continuous panel which extends from the southern to the northern boundaries of Cell IIA. Panel P408 extends from the southern boundary of Cell IIA to approximately 70 ft from the northern boundary of Cell IIA. Panel P408 ties into Panel P409 which extends to the northern boundary of Cell IIA. The routine seaming procedure in the field for seaming panels such as P407, P408, and P409 is to perform cross-seams, such as seam P408/P409, and subsequently perform the long seams; such as seams P407/P408 and P407/P409. The long seam produced according to this procedure will have a continuous air channel between the two fusion tracks in the seam; and, the entire seam can be air pressure tested in one attempt.

According to the Air Pressure Test Log (Sheet No. 11 of 12), seam P407/P408 was air pressure tested to the end of the seam. NSC's quality control documentation also indicates that seam P407/P408 was air pressure tested to the end of the seam. GeoSyntec Consultants believes that seam P407/P409 has been tested as part of the air pressure testing of seam P407/P408, and, as such, the passing results for seam P407/P408 also applies to seam P407/P409. A copy of NSC's documentation for air pressure testing of seam P407/P408 is provided in Attachment 2.

Comment No. 2a

The Seaming Log does not reflect the seaming between panel S495 and S496.

Response

Panels S495 and S496 are not two adjacent panels, and as such, the Seaming Log correctly does not reflect the seaming between these two panels. However, the Air Pressure Test Log (Sheet No. 11 of 12) incorrectly indicated that an air pressure test was conducted for seam S495/S496 (which does not exist) on 24 November 1992. GeoSyntec Consultants has determined that the seam number S495/S496 was incorrectly recorded on the Air Pressure Test Log. The air pressure test actually corresponds to seam S494/S495, and therefore the seam number on the Air Pressure Test Log should be corrected to S494/S495. Panels S494 and S495

FQ2030-07/Q930137



Ms. Juanitta B. Clem, P.E.
22 March 1993
Page 3

are two adjacent panels which in accordance to the Seaming Log (Sheet No. 12 of 13) were seamed on 20 November 1992.

Comment No. 2b

The Air Pressure Test Log does not reflect testing of seam S494/S495. The Field Sketch did not indicate that the seam was extrusion welded.

Response

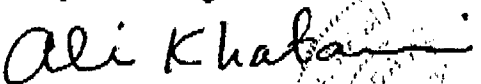
As described in the response to Comment No. 2a, the seam number for the air pressure test conducted on seam S494/S495 on 24 November 1992 was erroneously recorded as S495/S496 on Sheet No. 11 of 12 of the Air Pressure Test Log. The seam number on the Air pressure Test Log should be corrected to S494/S495.

Closure

GeoSyntec Consultants believes that the information provided in this letter addresses the comments made by FDER on the Trail Ridge Landfill CQA Final Report. Should you have any questions or require any additional information, please do not hesitate to contact either of the undersigned.

Sincerely,

for 
Daniel A. Schauer, P.G.
Project Manager


Ali Khatami, Ph.D., P.E.
Project Engineer

Attachment

FQ2030-07/Q930137



ATTACHMENT 1

NSC

NATIONAL SEAL COMPANY

PAGE 1 OF 8

PANEL SEAMING FORM

PROJECT NAME: Trail/Roseland PROJECT NUMBER: 2173 Phase 2-A MATERIAL DESCRIPTION: Grill permeable

DATE/TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST P/F	COMMENTS
6-25-82	ESD-1	2-1	14.5	2066	1412	700/400	Sunny	0-5	78	P	SEAMING DONE IN 1982
6-25-82	ESD-1	2-2	397'	2067	1412	700/400	"	"	"	"	from south to north
6-25-82	ESD-2	2-3	295'	2066	1412	700/400	"	"	"	P	"
6-25-82	ESD-3	2-4	14.5	2067	1412	700/400	"	"	"	S	SEAMING DONE
6-25-82	ESD-4	2-5	295'	2067	1412	700/400	"	"	"	P	from south to north
6-25-82	ESD-5	2-6	395'	2067	1412	700/400	"	"	"	P	"
6-25-82	ESD-6	2-7	295'	2067	1412	700/400	"	"	"	P	"
6-25-82	ESD-7	2-8	300'	2067	1412	700/400	"	"	"	P	"
6-25-82	ESD-8	2-9	395'	2067	1412	700/400	"	"	"	P	"
6-25-82	ESD-9	2-10	14.5	2067	1412	700/400	"	"	"	S	SEAMING DONE
6-25-82	ESD-10	2-11	390'	2066	1412	700/400	"	"	"	P	"
6-25-82	ESD-11	2-12	295'	2067	1412	700/400	"	"	"	P	"
6-25-82	ESD-12	2-13	388'	2067	1412	700/400	"	"	"	P	"
6-25-82	ESD-13	2-14	295'	2067	1412	700/400	"	"	"	P	"
6-25-82	ESD-14	2-15	14.5	2067	1412	700/400	"	"	"	P	from south to north

NSC

NATIONAL SEAL COMPANY

PANEL SEAMING FORM

PAGE 4 OF 8

PROJECT NAME: Tand Rose InnofillPROJECT NUMBER: 2173 Phase 2-4MATERIAL DESCRIPTION: Drill pipe

DATE/TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST P/F	COMMENTS
6-6-02 11:19	FSP41	P50 P51	60	2019	#7 1516	700 400	Sunny	0-5	89	P	
11:37	FSP42	P57 P58	60	2019	#7 1516	700 400	=	=	=	P	
11:45	FSP43	P52 P53	59	2019	#7 1516	700 400	=	=	=	P	LAST PANEL AS WELL END
11:40	FSP44	P54 P2 P1	393	2019	#7 1516	700 400	Sunny	0-5	94	P	Panel 2019 2019 2019 End of P-2 P-3
4:12	FSP45	P55 P54	393	2017	#7 1504	750 750	=	=	=	P	
4:20	FSP46	P53 P55	394	2019	#7 1516	700 400	=	=	=	P	
4:51	FSP46-1	P56 P57	14.5	2019	#7 1516	700 500	=	=	=	P	CROSS SEAM
5:05	FSP47	P58 P57 P58 P57	392	2019	#7 1516	700 500	=	=	=	P	
5:07	FSP49	P57 P58	393	2017	#7 1504	750 750	=	=	=	P	
5:11	FSP49	P58 P55	395	2016	#7 1412	700 700	=	=	=	P	468x
6-6-02 12:55	TIE-IN SEAM #1	P53 P57 P58	383	2017	#7 1504	750 750	=	=	=	P	TIE-IN 1 TRANS 303 2019 2019 TIE-IN 1
6-6-02 1:11	FSP50	P58 P59	394	T.L.	#7 1516	750 400	Sunny	0-5	74	P	
9:50	FSP51	P61 P53	394	2015	#7 1412	700 600	=	=	=	P	
8:40	FSP52	P62 P63	14.5	2015	#7 1412	700 600	=	=	=	P	CROSS SEAM
9:00	FSP52	P63 P64	395	T.L.	#7 1516	700 400	=	=	=	P	
9:02	FSP53	P64 P65	397	2015	#7 1412	700 600	=	=	=	P	

NSC

NATIONAL SEAL COMPANY

Primary IIA

PAGE 1 OF

PANEL SEAMING FORM

PROJECT NAME: Trail Ridge

PROJECT NUMBER: 073

MATERIAL DESCRIPTION: 60 MIL

DATE/ TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DEST TEST P/F	COMMENTS
12-4-92	Tie-in	388/114	385'	2084	G#20	265/285	Partly cloudy	E 20-3	65°	P	Tie-in IIA to IIA old liner
0905		388/357	385	2002	1625	725	"	"	"	P	EAST of 388
1010		390 390/391	19.5 200	2002	1625	725	"	"	"	P	Cross Seam
1025		359/390	385	2002	1625	725	"	"	"	P	
1115		391 390/392	385	2002	1625	725	"	"	"	P	
1130		392/393	385	2098	1532	750	"	"	"	P	
1350		394/395	19.5	2098	1532	750	"	"	"	P	Cross Seam
1401		393 394 395	385	2002	1625	725	"	"	"	P	
1410		390 395 396	385	2098	1532	750	"	"	"	P	
1430		396/397	385	2002	1625	725	"	"	"	P	
1506		399 397/398	385	2098	1532	750	"	"	"	P	
1500		398/399	19.5	2098	1532	750	"	"	"	P	Cross Seam
1540		399 397/400	385	2002	1625	785	"	"	"	P	
1605		400/401	385	2098	1532	750	"	"	"	P	
1620		401 401/402	385	2002	1625	715	"	"	"	P	
1615		402/403	19.5	2002	1625	725	"	"	"	P	Cross Seam

NSC

NATIONAL SEAL COMPANY

Primary II A

PAGE 2 OF

PANEL SEAMING FORM

PROJECT NAME: TRAIL ROGE

PROJECT NUMBER: 2073

MATERIAL DESCRIPTION: 60 MIL

DATE/TIME	SEAM NUMBER	PANEL NUMBERS	SEAM LENGTH	SEAMER INITIALS	MACHINE NUMBER	TEMP SETTING	WEATHER	WINDS	AMBIENT TEMP	DES TEST P/F	COMMENTS
12-4-92	1508	402/404	38.5'	2098	1532	750	btch ddy	ce3	60°	P	
12-5-92	1506	404/405	38.5	2098	1532	750	chd	ce3	70°	P	
1520	1500	405/406	38.5	2098	1625	725	"	"	"	P	
1606		406/407	38.5	2098	1532	750	"	"	"	P	
1620		407/408	38.5	2098	1625	725	"	"	"	P	
1615		408/409	14.5	2098	1625	725	"	"	"	P	Cross Seam
12-6-92	1605	409/410	38.5	2098	1532	750	chd	"	54°	P	
1623		410/411	38.5	2002	1625	725	clear	"	53°	P	
11:00		411/412	38.5	2098	1532	750	li	"	57°	P	
11:40		412/413	14.5	2098	1532	750	"	"	59°	P	Cross Seam
11:23		413/414	38.5	2002	1625	725	"	"	60°	P	
12:00		414/415	38.5	2098	1532	750	"	"	52°	P	
12-6-92	1603	415/416	161'	2106	6#05	265/285	"	"	64°	P	T12-10 161' EXT
1400		415/416	72'	2002	1625	725	"	"	51°	P	
17:00		416/417	5'	2106	6#05	265/285	"	"	51°	P	Cross Seam
17:20		417/418		2106	6#05	265/285	"	"	50°	P	

417

ATTACHMENT 2



LAW ENGINEERING

GEOTECHNICAL, ENVIRONMENTAL
& CONSTRUCTION MATERIALS
CONSULTANTS

March 22, 1993

Mr. Doug Miller
England, Thims & Miller, Inc.
3131 St. Johns Bluff Boulevard South
Jacksonville, Florida 32216

Subject: **Soil Quality Assurance Testing**
Trail Ridge Landfill
Jacksonville, Florida
LAW Project No. 446-01631-01

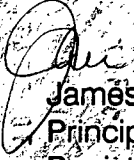
Dear Mr. Miller:

Law Engineering, Inc. provided quality assurance testing for the subject project. Included in this testing was sampling of the leachate trench aggregate. The sampling was performed as documented in our letter dated March 22, 1993. As noted, the samples were obtained from stockpiled material. Our also personnel observed the placement of the stockpiled material. In our opinion the placed material was consistent with the sampled and tested materials. It is also our opinion the material met the intent of the specifications.

If you have any questions concerning this matter, please contact us.

Sincerely,

LAW ENGINEERING, INC.


James A. Horton, P.E.
Principal Geotechnical Engineer
Registered, Florida 23315

JAH:kw

March 22, 1993



LAW ENGINEERING

GEOTECHNICAL, ENVIRONMENTAL
& CONSTRUCTION MATERIALS
CONSULTANTS

Mr. Doug Miller
England, Thims & Miller, Inc.
3131 St. Johns Bluff Boulevard South
Jacksonville, Florida 32216

Subject: **Soil Quality Assurance Testing**
Trail Ridge Landfill
Jacksonville, Florida
LAW Project No. 446-01631-01

Dear Mr. Miller:

In regard to questions on testing for the subject project telephoned to our office on March 19, 1993, we offer the following information:

1. AASHTO T27 describes the sieve analysis procedure by which the aggregate particle size is determined. ASTM D448 classifies the limits of the various particle sizes for a particular designation, in this case No. 3.
2. The leachate trench aggregate samples were as follows:

Phase	Sump		Trench	
	Primary	Secondary	Primary	Secondary
1A	Sample 4 Sample 5* Sample 6**	Sample 3	Sample 4 Sample 5* Sample 6**	N/A
1B	Sample 8	Sample 7	Sample 8	N/A
1C	Sample 10	Sample 9	Sample 10	N/A
2A	N/A	N/A	Sample 11 Sample 12***	N/A
2B	N/A	N/A	Sample 13	N/A
2C	N/A	N/A	Sample 14	N/A

*: Retest 4

**: Retest 5

***: Retest 11

Note: Samples 1 and 2 were general sample pre-qualification samples.
Sample 15 was from the system tie-in of Phase 1 and Phase 2.

The test samples were obtained from aggregate stockpile so that non-acceptable aggregate would not be placed in the system.

POST OFFICE BOX 5728
3901 CARMICHAEL AVENUE
JACKSONVILLE, FL 32207
904-396-5173

England, Thims & Miller
March 22, 1993
Page -2-



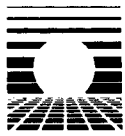
I hope this information is beneficial. Please contact me if there are additional questions.

Sincerely,

LAW ENGINEERING, INC.

James A. Horton, P.E.
Principal Geotechnical Engineer
Registered, Florida 23315

JAH:kw



England-Thims & Miller, Inc.

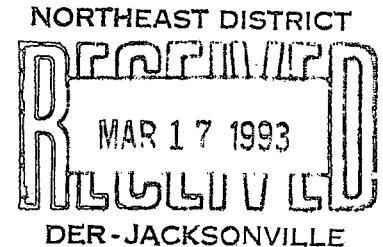
Consulting & Design Engineers
3131 St. Johns Bluff Road So. Jacksonville, FL 32246
904-642-8990

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.

March 16, 1993

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



Reference: Trail Ridge Landfill, Inc.
Permit No. SC16-184444 (Modification Request)
ET&M No. E91-156-2

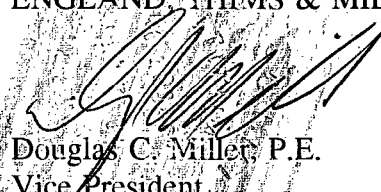
Dear Ms. Nogas:

As per your telephone request on March 15, 1993, we have revised Drawing No. 9. Drawing No. 9 was submitted as part of the March 3, 1993 modification request for the subject permit and shows the modified phasing sequence of operation of Phases I and II.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

ENGLAND, THIMS & MILLER, INC.


Douglas C. Miller, P.E.
Vice President

cc: Sonny Sanfilippo
Jim Lukens

Attachment: Drawing No. 9

TRAIL RIDGE LANDFILL
3/16/93

H. WADE
H. SAMIN
E. DESSOLVE
M. ADDISON

3M = WAHL IN GRADE = APPROX 101700 N
E 100+00 E.

EL. = 145.286

99+26
90' TYP
(TYP)

97+10 Put TRAIL MARK 600' ELEV 100' STRAS. (TYP)

95+40

94+10

92+40



395-17

STA. NORTH	STA. EAST	ELEV.	
99+08	101+00	153.40	
97+10	101+10	149.78	
95+40	100+90	153.45	
94+10	101+00	151.97	
92+60			
94+10	101+00	151.15	
92+60	100+92	155.07 155.10	
92+60	102+00	154.27	
94+10	102+00	149.89	
95+40	102+00	152.61	
97+10	102+00	147.88	
99+08	102+00	152.51	
99+08	103+00	151.69	
97+10	103+00	146.96	
95+40	103+00	151.96	
94+10	103+00	149.10	
92+60	103+00	153.42	
92+60	104+00	152.50	
94+10	104+00	148.23	
95+40	104+00	150.96	
97+10	104+00	146.15	
99+08	104+00	150.40	
99+08	105+00	149.73	
97+10	105+00	145.51	
95+40	105+00	150.04	
94+10	105+00	147.47	
92+60	105+00	151.70	
92+60	106+00	150.85	
94+10	106+00	146.30	
95+40	106+00	149.83	
97+10	106+00	144.72	
99+08	106+00	149.30	
99+08	107+00	148.73	
97+10	106+80	144.31	

0.16' LOW

0.04' LOW

0.09' LOW

HOLE
107+00 E.
W/ TRAIL MARK

STA NORTH	STA EAST	ELEV	NOTES
92+60	108+00	148.90	0.20 LOW
94+10	108+00	147.80	0.04 LOW
95+60	108+00	147.56	
97+10	108+00	142.73	
99+08	108+00	142.73	SEE NOTES
92+60	109+00	145.93	
94+10	109+00	141.85	
95+60	109+00	146.80	
97+10	109+00	143.90	
99+08	109+00	148.19	0.11 LOW
92+60	110+00	147.14	0.26 LOW
94+10	110+00	142.92	
95+60	110+00	145.72	0.18 LOW
97+10	110+00	141.00	
99+08	110+00	145.46	
92+60	111+00	144.83	
94+10	111+00	140.02	0.08 LOW
95+60	111+00	145.03	0.07 LOW
97+10	111+00	142.20	
99+08	111+00	146.36	0.24 LOW
92+60	112+00	145.57	0.13 LOW
94+10	112+00	141.33	
95+60	112+00	143.96	0.14 LOW
97+10	112+00	139.36	
99+08	112+00	144.17	

STA NORTH	STA EAST	ELEV	NOTES
92+60	114+00	144.27	
94+10	114+00	140.75	
95+60	114+00	141.82	
97+10	114+00	136.51	
99+08	114+00	142.81	LOW NOTES
92+60	113+00	144.80	0.10 LOW
94+10	113+00	140.40	
95+60	113+00	138.67	
97+10	113+00	143.26	
99+08	113+00	143.56	

NOTES: 99+08 N. - 108+00 NO ELEV TAKEN ON THIS SPOT BECAUSE DOZER IS WORKING ON TEMP ROAD IN THIS LOCATION

SAND IS LOW BETWEEN 95+60 & 97+10 NORTH ALONG WEST SIDE OF RAIN FLAP AT 114+00 EAST DUE TO RUN OFF FROM IFB TO IFA.

NOTE: that this will be rectified when the rain flap is removed.



England-Thims & Miller, Inc.

Consulting & Design Engineers
3131 St. Johns Bluff Road So. Jacksonville, FL 32216
904-642-8990

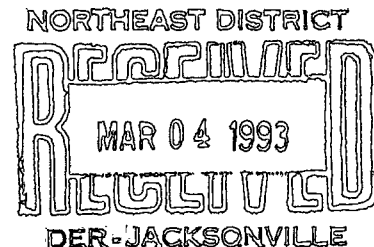
PRINCIPALS

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.

March 4, 1993

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 - Phases IIA and IIB
and Phase II Stormwater Collection System
FDER Permit No. SC16-184444
ET&M No. E91-156-2 (Certification File)

Dear Ms. Nogas and Mr. Prasad:

Please find herewith the Certification of Construction Completion for the Trail Ridge Landfill Phases IIA and IIB including the Phase II stormwater collection system in accordance with specific condition #19 of the subject permit. The As-Built Surveys are included. The Liner and Soils Quality Assurance documentation were submitted with the Phase IC certification on February 12, 1993. Attached is Supplement No. 2 for the Construction Quality Assurance Final Report for Phase II-Cells IIA, IIB, and IIC for the rainflap at Trail Ridge Landfill as prepared by GeoSyntec. Phase IA, Phase IB, Phase IC and the Phase I Stormwater Management System and Leachate Storage Facility were previously certified on May 15, 1992, June 18, 1992, February 12, 1993, and September 15, 1992, respectively.

Subject to your site inspection, Trail Ridge Landfill, Inc. respectfully requests your written authorization to accept Class I Solid Waste in Phases IIA and IIB of the Trail Ridge Landfill.

Should you have any questions concerning this matter, please do not hesitate to contact me.

Sincerely,

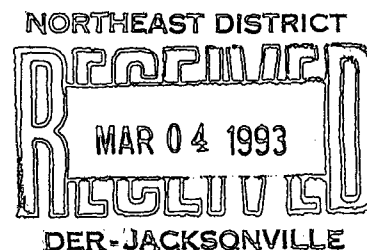
ENGLAND-THIMS & MILLER, INC.


Douglas C. Miller, P.E.
Vice President

Attachments: Certification of Construction Completion
As-Built Surveys
Supplement No. 2 to CQA Final Report for Phase II - Cells IIA, IIB, and IIC

cc: Luke DeBock
Tom Nelson
Jim Lukens

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 - Phases IIA and IIB
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 - Phases IIA and IIB including the Phase
II Stormwater Collection System

Cost: Estimated \$ 7,748,000 Actual \$ 6,192,000
Site Design: Quantity: 2,600 (avg) ton/day Site Acreage: 20.3± Acres
Population: 659,000± (1990) Dumping Fees: \$ 55 /Ton

Deviations from Plans and Application Approved by DER: _____

Deviations are shown in the Construction Quality Assurance documentation and
As-Built surveys. The As-Built surveys were prepared by Sunshine State
Surveyors, Inc. and reviewed by England, Thims & Miller, Inc. Deviations

are also outlined in the attachment and the Supplement No. 2 CQA Final Report. **

Water Monitoring Data Submitted to DER, Date: January 11, 1993 and February 26, 1993

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

Name(s) of Site Supervisor: Tom Nelson

Date Site Inspection is requested: ASAP

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
SC16-184444 and
authorized by Construction Permit No.: Modifications Dated: Permit 12/24/91

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

Date: 3-4-93


Signature of Professional Engineer

**NOTE: The Construction Quality Assurance documentation was previously submitted with
the Phase IC certification.

TRAIL RIDGE LANDFILL
PHASE II STORMWATER COLLECTION SYSTEM DEVIATIONS
March 3, 1993

1. Concrete Lined Perimeter Ditch

- a. The westerly perimeter ditch was constructed to the same typical section as the northerly perimeter ditch (4' bottom with 2:1 side slopes instead of a V-Type ditch).
- b. The westerly perimeter ditch was constructed with the slope shown on the As-Built Drawings instead of a 0% slope.
- c. Deviations in the flow line of the concrete ditch pavement are shown on the As-Built Drawings.

2. Temporary East-West Interceptor Ditch

- a. Deviations in the flow line and cross-section are shown on the As-Built Drawings.

3. Storm Drainage Piping

- a. Deviations in the horizontal and vertical locations are shown on the As-Built Drawings.
- b. Enkamat (erosion control material) has not been installed in the inner perimeter ditch. This material is to be installed with the side slope closure.

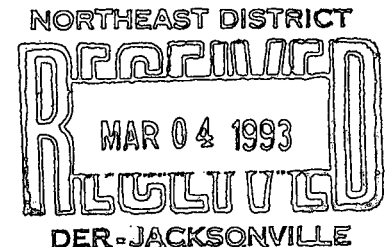


GEOSYNTEC® CONSULTANTS

1 March 1993

Mr. Douglas C. Miller, P.E.
England-Thims & Miller, Inc.
3131 St. Johns Bluff Rd. South
Jacksonville, Florida 32246

Subject: Supplement No. 2 to the CQA Final Report
for Phase II - Cells IIA, IIB, and IIC
Trail Ridge Landfill
Jacksonville, Florida



Dear Mr. Miller:

This letter is prepared as Supplement No. 2 to GeoSyntec Consultants' report entitled "Construction Quality Assurance Monitoring for the Geosynthetics in the Lining System of Cells IC, IIA, IIB, and IIC of the Trail Ridge Landfill, Jacksonville, Florida", herein referred to as the CQA Final Report. The CQA Final Report was prepared by GeoSyntec Consultants after installation of geosynthetic lining system components in Cells IC, IIA, IIB, and IIC of the Trail Ridge Landfill were complete. Supplement No. 2 describes the CQA monitoring activities performed in Cells IIA, IIB, and IIC since the submittal of the CQA Final Report to England-Thims & Miller, Inc. (ETM) in January 1993.

GeoSyntec Consultants' CQA monitors observed the following activities in Cells IIA, IIB, and IIC between 1 February 1993 and 18 February 1993:

- sand was excavated along the west side of the high density polyethylene (HDPE) geomembrane leachate control flap between Cells IA/IIA and IC/IIC;
- the existing 15-ft (4.5-m) wide, 60-mil (1.5-mm) thick geomembrane leachate control flap between Cells IC/IIC in the areas north and south of the leachate trench was replaced with 15-ft (4.5-m) wide, 40-mil (1-mm) thick geomembrane leachate control flap;
- the 40-mil (1-mm) thick geomembrane leachate control flap at the southeast corner of Cell IIC was welded to the 60-mil (1.5-mm) thick geomembrane leachate control flap along the south boundary of Cell IIC;
- the 40-mil (1-mm) thick geomembrane leachate control flap at the northeast corner of Cell IIC was welded to the 60-mil (1.5-mm)

FQ2030/Q930106

Corporate Office:

One Park Place
621 N.W. 53rd Street • Suite 650
Boca Raton, Florida 33487 • USA
Tel. (407) 995-0900 • Fax (407) 995-0925

Regional Offices:

Atlanta, GA • Boca Raton, FL
Huntington Beach, CA • Pleasant Hill, CA
Timonium, MD • Brussels, Belgium

Laboratories:

Atlanta, GA
Boca Raton, FL
Huntington Beach, CA

Mr. Douglas C. Miller, P.E.

1 March 1993

Page 2

thick geomembrane leachate control flaps between Cells IB/IC and IB/IIB;

- holes observed in the existing geomembrane leachate control flap, above the 2-ft (0.6-m) thick protective sand cover layer, between Cells IB/IIB were repaired by extrusion welding a geomembrane patch over the affected area;
- the existing 3-ft (0.9-m) wide leachate control flap between Cells IA/IIA in the areas north and south of the leachate trench was replaced with a 15-ft (4.5-m) wide, 40-mil (1-mm) thick HDPE geomembrane flap;
- the segments of the leachate collection pipe located west of leachate control flap and east of the leachate collection pipe gate valve in Cells IIA, IIB, and IIC were examined for perforations; subsequently, any perforations in these segments were covered with a 60-mil (1.5-mm) thick geomembrane sheet and secured with 0.5-in. (12-mm) wide stainless steel bands; and
- open areas along the west side of the leachate control flap between Cells IA/IIA and IC/IIC were backfilled.

The geomembrane leachate control flap replacement and repair activities were conducted by the National Seal Company (NSC) of Baton Rouge, Louisiana. NSC's activities were documented by GeoSyntec Consultants on-site CQA monitors. GeoSyntec Consultants' observations are recorded on the Daily Field Reports presented in Appendix A. Excavation and subsequent backfilling of the protective cover sand was performed by employees of the Trail Ridge Landfill and Barco-Duval. These operations were also monitored and documented by GeoSyntec Consultants' on the Daily Field Reports presented in Appendix A.

GeoSyntec Consultants' CQA monitoring activities included the following:

- monitored the excavation of the protective cover sand layer above the geosynthetics;
- monitored removal and replacement of portions of the geomembrane leachate control flap;

FQ2030/Q930106



Mr. Douglas C. Miller, P.E.

1 March 1993

Page 3

- monitored extrusion trial seam tests and extrusion seaming operations;
- monitored nondestructive vacuum box tests of the extrusion seams; and
- monitored backfilling of the open areas along the west side of leachate control flaps.

No leak indications were observed by GeoSyntec Consultants' CQA monitors or NSC during the nondestructive vacuum box tests. The geomembrane leachate control flap installation and repair activities conducted at the Trail Ridge Landfill between 1 February and 18 February 1993 were observed by GeoSyntec Consultants to be in general accordance with the project documents described in the CQA Final Report.

GeoSyntec Consultants' Daily Field Reports, which describe the CQA monitoring activities during the period of 1 February 1993 to 18 February 1993, are presented in Appendix A of this Supplement.

Supplement No. 2 is intended by GeoSyntec Consultants to complete the CQA monitoring documentation for the construction of geosynthetic components of the lining system in Cells IIA, IIB, and IIC of the Trail Ridge Landfill. Should you have any questions concerning the CQA field activities presented in this letter, please do not hesitate to call either of the undersigned.

Sincerely,



Daniel A. Schauer, P.G.
Project Manager



Ali Khatami, Ph.D., P.E.
Engineer of Record

Copy to Jim Lukens, Trail Ridge Landfill

FQ2030/Q930106



DAILY FIELD REPORTS
FOR PERIOD
1 FEBRUARY 1993
THROUGH 18 FEBRUARY 1993



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 1 of 2

Project: Trail Ridge Landfill MONDAY **Phase:** TEII

Project No. FQ2030 **Date: (mo/dy)** FEB. 1 **Year:** 1993

Location: Jacksonville, Florida **Contractor:** National Seal Company

0700 GEOSYNTEC ARRIVES ON SITE. SITE CONDITIONS IS DRY, LIGHT WIND, AND PARTLY CLOUDY. GEOSYNTEC OBSERVES POOLED WATER (BACKUP LEAKS), BEING: TE-A EAST @ 150', TE-A WEST @ 90', TE-B EAST @ 178', AND TE-B WEST @ 200'. GEOSYNTEC ALSO BEGINS LEAK SENSOR READINGS LOCATED ON THE EAST SECTION OF PHASE TE-C.

0900 SARCO ON SITE, OPERATOR BEGINS TO REMOVE THE SAND MATERIAL LOCATED ON PHASE TE-C EAST SECTION. GEOSYNTEC CONTINUES TO OBSERVE ACTIVITIES.

1005 SARCO BEGINS TO REMOVE THE SAND MATERIAL LOCATED APPROX. 25' SOUTH OF LEACHATE TRENCH (PHASE TE-C), USING A GRADE-ALL MACHINE.

1015. GEOSYNTEC OBSERVES SARCO REMOVING THE SAND MATERIAL LOCATED ON THE WEST SECTION OF PHASES TE-C/TE-C 15 FT. FLAP AND FINDS A DAMAGED AREA IN THE GEOTEXTILE AND ~~THE~~ PLY-NET LAYERS.

1025 4 ADDITIONAL PERSONNEL ARRIVE TO AID IN THE REMOVAL OF SAND LOCATED ON THE EAST SECTION OF PHASE TE-C. GEOSYNTEC CONTINUES TO OBSERVE SAND REMOVAL AND LEAK SENSOR READINGS.

1100 CONVERSATION WITH MR. TOM NELSON (WMMA), MR. DAN SCHAUER (GEOSYNTEC), MR. PHIL WELCH (NSC), AND MR. LARRY HIRSH (WMMA). POINTS OF INTEREST AS FOLLOWS:

- NSC INDICATED THAT EXCAVATION WILL CONTINUE FROM THE SOUTH DIRECTION TO THE NORTH DIRECTION IN THE EAST SIDE (TE-C/TE-C) OF PHASE TE-C TO EXPOSE

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 10.0

Per:

[Signature]



GEO SYNTec CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 2 of 2

Project: Trail Ridge Landfill

Monday

Phase: I & II

Project No. FQ2030

Date: (mo/dy) FEB 1

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

THE 15 FT. HDPE FLAP.

- WMMA INDICATED THAT A 15 FT. HDPE FLAP WILL BE ADDED TO THE EXISTING 3 FT. HDPE FLAP LOCATED IN PHASE I-A/II-A.
- NSC. WILL SCHEDULE 2 ADDITIONAL PERSONNEL FOR THE FLAP INSTALLATIONS ALL PHASES I/II.
- GEOSYNTec RECEIVED FLOW RATES FROM WMMA FOR THE MONTHS OF NOVEMBER AND TRANSMITS INFO. TO MR. ALI KHATAMI (GEOSYNTec), BY MEANS OF FAX.

1310 GEOSYNTec CONTINUES TO OBSERVE SAND REMOVAL PERFORMED BY BARCO USING A TRACK GRADE ALL. GEOSYNTec ALSO CONTINUES LEAK SENSOR READINGS LOCATED IN PHASE II-C, EAST SECTION.

1520 MR. JULES WINFREE (GEOSYNTec), INFORMS WMMA OF NEGATIVE TEST RESULTS (LEAK SENSOR), LOCATED ALONG II-C/II-C 15' FLAP. GEOSYNTec CONTINUES TO OBSERVE SAND REMOVAL.

1700 PERSONNEL DISCONTINUES ACTIVITIES FOR THIS SHIFT AND DEPARTS SITE.

PERSONNEL ON SITE.

BARCO • 1 OPERATOR, 1 GRADE ALL.

NSC. • 1 Supt.

GEOSYNTec • 3 PERSONNEL

WMMA • 6 LABORERS.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 10.0

Per: [Signature]



GEO SYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 1 of 2

Project: Trail Ridge Landfill

Phase: I & II

Project No. FQ2030

Date: (mo/dy) FEB. 2

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

0700 GEO SYNTEC ARRIVES ON SITE. SITE CONDITIONS IS DRY, LIGHT WIND, AND CLEAR SKIES. NOEL ON SITE (1 SPT.). BARCO/ DUNAL ON SITE, PERSONNEL (1 OPERATOR, 1 GRADE-ALL), BEGINS TO REMOVE THE SAND MATERIAL ALONG THE WEST SECTION OF FLAP LOCATED @ I-C/II-C. GEO SYNTEC OBSERVES 6 PERSONNEL REMOVING THE SAND MATERIAL (ABOVE THE GEOSYNTHETICS WHICH HAS BEEN LEAT BY THE GRADE-ALL MACHINE), USING SHOVELS. GEO SYNTEC ALSO CONTINUES TO OBSERVE THE REMAINING 3 INCHES (APPROX.) OF SAND MATERIAL TO ENSURE THAT THE GRADE-ALL HAS NOT DAMAGED THE UNDERLYING GEOSYNTHETICS.

0805 GEO SYNTEC BEGINS MEASUREMENT OF THE PAVED STORMWATER LOCATED IN PHASE II BEING; II-A EAST @ 65', II-A WEST @ 73', II-B EAST @ 174', AND II-B WEST @ 202'. GEO SYNTEC ALSO RECEIVES DAILY LEACHATE STATUS REPORT FROM MR. LARRY AIRSH (WMDA), FOR FEBRUARY 1, 1993. GEO SYNTEC FAX'S INFORMATION TO MR. ALI KHATAMI (GEO SYNTEC) IN CORPORATE OFFICE. GEO SYNTEC ALSO CONTINUES TO SET UP GRID FOR LEAK SENSOR TESTING LOCATED ON THE SOUTHEAST SECTION OF PHASE II-B.

1030 GEO SYNTEC CONTINUES LEAK SENSOR TESTING LOCATED @ PHASE II-B SOUTH SECTION ALONG FLAP.

1200 PERSONNEL DISCONTINUES FOR LUNCH.

1300 PERSONNEL RETURNS FROM LUNCH. BARCO CONTINUES EXCAVATION LOCATED @ II-C/II-C. GEO SYNTEC CONTINUES TO OBSERVE ACTIVITIES.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 10.0

Per:

[Signature]



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 2 of 2

Project: Trail Ridge Landfill

TUESDAY

Phase: I & II

Project No. FQ2030

Date: (moldy) FEB. 2

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

1515 GEOSYNTEC INFORMS WMAA THAT A HIGH LEAK
SENSOR READING HAS BEEN LOCATED ON THE NORTH SECTION
OF PHASE II-B NORTH (EAST SECTION). GEOSYNTEC CONTINUES
LEAK SENSOR READINGS WEST OF II-B 15 FT. FLAP.

1700 PERSONNEL DISCONTINUES ACTIVITIES FOR THE SHIRT AND
DEPARTS JOBSITE.

PERSONNEL ON SITE

NSC. • 1 SUPT.

SARCO • 1 OPERATOR, 1 GRADE-ALL.

WMAA • 6 LABORERS.

GEOSYNTEC • 3 PERSONNEL NOTE: MR. NEWTON BROOKS (GEOSYNTEC)
ARRIVED ON SITE @ 1400 HRS.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 10.0

Per:

John D. [Signature]



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 1 of 5

Project: Trail Ridge Landfill WEDNESDAY **Phase:** I & II
Project No. FQ2030 **Date: (mo/dy)** FEB. 3 **Year:** 1993
Location: Jacksonville, Florida **Contractor:** National Seal Company

- 0747 I ARRIVE ON SITE UPON PICKUP OF EQUIPMENT USED FOR LEAK SENSOR DETECTION DEVICE (I.E. 1000 FT. OF NO.12 STRANDED WIRE). NSC ON SITE, PERSONNEL CONSIST OF 1 SUPT., AND 2 TECHNICIANS. NSC'S EQUIPMENT CONSIST OF 2 HAND EXTRUDERS, 1 ELECTRIC GAUGE TENSOMETER, 1 VACUUM PUMP W/VIEW BOX, AND 1 ROLL OF HDPE 40ML PEOMEMBRANE ROLL NO. C04L2608-1109-062 AND 15'X1650' IN SIZE. BARCO/DUNA ON SITE, PERSONNEL CONSIST OF 1 OPERATOR AND 1 GRADE-ALL. WIMPA PERSONNEL (6) ON SITE TO AID IN THE HAND REMOVAL OF THE SAND MATERIAL UPON EXCAVATION COMPLETED BY BARCO.
- 0825 (GEOSYNTEC RECEIVED DUMPED VOLUMES FROM CELLS A, B, AND C FROM MR. LARRY HARSH (WIMPA), FOR THE 2ND OF FEBRUARY 1993. GEOSYNTEC TRANSMITS INFORMATION BY MEANS OF ~~TELEPHONE~~ FAX TO MR. AL KHATAMI (GEOSYNTEC).
- 0840 BARCO CONTINUES TO EXCAVATE ALONG THE EAST SIDE OF TEMPORARY 15 FT. FLAP LOCATED IN PHASE I-C. NSC PREPARES TO CUT THE 15 FT. FLAP (SOUTH OF LEACHATE TRENCH), IN PREPARATION TO REPLACE WITH A 40ML HDPE 15 FT. FLAP LOCATED @ I-C / II-C. GEOSYNTEC CONTINUES TO OBSERVE AND DOCUMENT ACTIVITIES. GEOSYNTEC ALSO CONTINUES LEAK SENSOR READINGS LOCATED @ PHASE II-B / I-B (15' FLAP). (2) WIMPA PERSONNEL CONTINUES TO DO TEST HOLES ON A 30' GRID TO ISOLATE DAMAGED AREAS IN THE PEOMEMBRANE LINER SYSTEM.
- 0905 GEOSYNTEC BEGINS TO LOCATE AND DOCUMENT REPAIR LOCATIONS IN PHASES I-C / II-C FLAP PRIOR TO REMOVAL. IT APPEARS THAT DAMAGED AREAS IN FLAP MAY BE CAUSED BY HEAVY

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 9.75

Per: John Jillyard



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 2 of 5

Project: Trail Ridge Landfill WEDNESDAY Phase: I & II
Project No. FQ2030 Date: (mo/dy) FEB. 3 Year: 1993
Location: Jacksonville, Florida Contractor: National Seal Company

EQUIPMENT. FOR REPAIR LOCATIONS AND SIZES, SEE ATTACHMENT "A" FOR DETAILS.

0930 NSC BEGINS TO CUT THE FLAP LOCATED @ IFC/IEC USING A HOOK BLADE RAZOR KNIFE TO ENSURE THAT NO DAMAGE OCCURS TO THE UNDERLYING GEOSYNTHETICS. GEOSYNTEC CONTINUES TO OBSERVE REMOVAL PROCEDURES.

1040 NSC HAS COMPLETED REMOVING THE SOUTH SECTION OF FLAP LOCATED @ IFC/IEC AND CONTINUES TO SWEEP THE EXISTING SAND MATERIAL IN PREPARATION OF INSTALLING THE 40 MIL HDPE 15' FLAP. GEOSYNTEC CONTINUES LEAK SENSOR READINGS LOCATED ON THE NORTHEAST SECTION OF PHASE IIR (IIR/IIR FLAP).

1150 GEOSYNTEC INFORMS MR. TOM NELSON (NIMPA) THAT A SUSPECT AREA NORTH OF LEACHER TRUCK (APPROX 25' IN WIDTH) IN PHASES IIR/IIR SHOWS MODERATE METER DEFLECTIONS. GEOSYNTEC FLAGS AREA AND CONTINUES LEAK SENSOR READING FROM THE SOUTH TO NORTH DIRECTION.

1200 CONTRACTORS DISCONTINUE ACTIVITIES FOR LUNCH.

1300 CONTRACTORS RETURN FROM LUNCH. NSC PREPARES FOR EXTENSION TRIAL SEAM SAMPLES AND 40 MIL HDPE 15' FLAP INSTALLATION.

1310 GEOSYNTEC OBSERVES AND DOCUMENTS TRIAL SEAM SAMPLES, INFO. AS FOLLOWS. TECHNICIANS NO. 2023 AND 2024 USING EXTENSION WELDER NO. 16 WITH TEMPERATURE SETTINGS @ 265° AND 275° C. TEST RESULTS BEING: TECHNICIAN NO. 2023 PEEL MODE 87 PPI / 117 PPI. SHEAR 135 PPI / 102 PPI. TECH. NO. 2024 PEEL 92 PPI / 94 PPI. SHEAR 118 PPI / 116 PPI.

Copy to: Trail Ridge Landfill, Inc. Total Hrs.: 9.75 Per: [Signature]



GEOSYNTec CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 3 of 5

Project: Trail Ridge Landfill

WEDNESDAY

Phase: I & II

Project No. FQ2030

Date: (mo/dy) FEB 3

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

GEOSYNTec RECEIVES CALIBRATION CERTIFICATE FOR TENSOMETER AND FILES IN ON-SITE BINDER.

1530 GEOSYNTec SHIPS TRACING WIRE DETECTOR BACK TO OWNERS AS NSC MR. TOM NELSON BY MEANS OF FEDERAL EXPRESS.

1605 BARCO CONTINUES EXCAVATION @ THE SOUTH SECTION (FROM LACHATE COLLECTIONS TRENCH), IN PHASE IC. NSC CONTINUES TO EXTENSION WELD THE 15 FT. 40 MIL FLAP @ II-C/I-C (TECH. NO. 2023). GEOSYNTec CONTINUES TO OBSERVE AND DOCUMENT ACTIVITIES. TECH. NO. 2023 EXTENSION WELDING SEAM.

1700 ALL PERSONNEL DISCONTINUE WORK FOR THIS SHIFT AND DEPART SITE.

NOTE: AT 1530 HRS. GEOSYNTec MEASURED BACKUP LENGTHS IN PHASE II BEING; II-A EAST @ 50', II-A WEST @ 80', II-B EAST @ 170', AND II-B WEST @ 196'.

PERSONNEL ON SITE

NSC. • 1 Supt., 2 TECHNICIANS.

BARCO • 1 OPERATOR, 1 GRADE-ALL.

WMMA • 6 LABORERS.

GEOSYNTec • 3 PERSONNEL.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 9.75

Per: John Dilligal



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 4 of 25

Project: Trail Ridge Landfill WEDNESDAY Phase: I & II

Project No. FQ2030 Date: (mo/dy) FEB. 3 Year: 1993

Location: Jacksonville, Florida Contractor: National Seal Company

ATTACHMENT "A"

<u>DISTANCE</u> <u>FROM</u> <u>NORTH TO SOUTH</u>	<u>DISTANCE</u> <u>FROM</u> <u>EXTENSION (WBL)</u>	<u>REPAIR</u> <u>TYPE</u> * ²	<u>SIZE</u> * ²
<u>0'</u>	<u>6'</u>	<u>PATCH</u>	<u>1'x1'</u>
<u>3'</u>	<u>4 1/6'</u>	<u>"</u>	<u>2'x2' / 1'x1'</u>
<u>6'</u>	<u>1'</u>	<u>"</u>	<u>1'x1'</u>
<u>10'</u>	<u>4 1/2'</u>	<u>"</u>	<u>3'x1' / 2'x2'</u>
<u>14'</u>	<u>4'</u>	<u>"</u>	<u>1'x1'</u>
<u>16'</u>	<u>4"</u>	<u>"</u>	<u>1'x1'</u>
<u>19'</u>	<u>4'</u>	<u>"</u>	<u>1'x1'</u>
<u>23'</u>	<u>4'</u>	<u>"</u>	<u>4'x1'</u>
<u>38'</u>	<u>6'</u>	<u>"</u>	<u>5'x1'</u>
<u>43'</u>	<u>4'</u>	<u>"</u>	<u>1'x1'</u>
<u>50'</u>	<u>6'</u>	<u>"</u>	<u>1'x1'</u>
<u>57'</u>	<u>6'</u>	<u>"</u>	<u>1'x1'</u>
<u>76'</u>	<u>4"</u>	<u>"</u>	<u>1'x1'</u>
<u>84'</u>	<u>3'</u>	<u>"</u>	<u>2'x2'</u>
<u>103'</u>	<u>6"</u>	<u>"</u>	<u>3'x1'</u>
<u>121'</u>	<u>6'</u>	<u>"</u>	<u>1'x1'</u>
<u>129'</u>	<u>6'</u>	<u>"</u>	<u>2'x3'</u>
<u>145'</u>	<u>2'</u>	<u>"</u>	<u>2'x2'</u>
<u>178'</u>	<u>1'</u>	<u>"</u>	<u>5'x3'</u>
<u>183'</u>	<u>2'</u>	<u>"</u>	<u>1'x1'</u>
<u>188'</u>	<u>2'</u>	<u>"</u>	<u>2'x1'</u>
<u>207'</u>	<u>1'</u>	<u>"</u>	<u>1'x1'</u>

Copy to: Trail Ridge Landfill, Inc. Total Hrs.: _____ Per: [Signature]



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 25 of 25

Project: Trail Ridge Landfill WESTMIDWAY Phase: I & II

Project No. FQ2030 Date: (mo/dy) FEB 3 Year: 1993

Location: Jacksonville, Florida Contractor: National Seal Company

ATTACHMENT "A"

DISTANCE FROM NORTH TO SOUTH	DISTANCE FROM EXTENSION WELL	REPAIR TYPE * ²	SIZE * ²
218'	1'	PATCH	2'x1'
240'	2'	"	2'x2'
245'	2.5'	"	2'x2'
256'	3'	"	1'x1'
* ¹ 294'	3' (WEST)	"	1'x1'

*¹ NOTE: LOCATED ON BOTTOM OF CELL, DAMAGE IN GEOTEXTILE, PLY-DET, AND 60 MIL HDPE LINER SYSTEM.

*² NOTE: REPAIR Type and Size refers to the CQA Managers initial assessment of corrective action necessary to repair existing holes observed on 2/3/92 in the leachate control flap (60 mil HDPE geomembrane). However, the damaged portions of the existing leachate control flap (north and south of Cell Ic leachate collection trench) were removed and replaced with a 40-mil (1.0-mm) thick HDPE geomembrane and the corrective actions mentioned above weren't needed.

Copy to: Trail Ridge Landfill, Inc. Total Hrs.: Per: [Signature]



GEOSYNTec CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 1 of 3

Project: Trail Ridge Landfill THURSDAY Phase: I & II
Project No. FQ2030 Date: (mo/dy) FEB. 4 Year: 1993
Location: Jacksonville, Florida Contractor: National Seal Company

0700 GEOSYNTec ARRIVES ON SITE. SITE CONDITIONS IS CLEAR SKIES, CALM WIND, AND DRY. NSC. ARRIVES ON SITE, PERSONNEL PREPARES EQUIPMENT FOR EXTRUSION TRIAL SEAM. SAMPLES AND REMOVAL OF THE 60 MIL HDPE, 15 FT FLAP LOCATE @ I-C/II-C, NORTH SECTION. BARCO ON SITE, OPERATOR BEGINS SAND EXCAVATION LOCATED ON THE EAST SIDE OF I-C TEMPORARY 15 FT. HDPE FLAP. GEOSYNTec BEGINS TO DOCUMENT TRIAL SEAM RESULTS SAMPLES, AS FOLLOWS: (0720 HRS). TECHNICIAN NO. 2024, EXTRUSION WELDER NO. 16, TEMPERATURE SETTINGS 265°C/275°C, AMBIENT TEMPERATURE 48°F. RESULTS IN PEEL MODE ARE 127 PPI AND 123 PPI, SHEAR MODE 134 PPI AND 132 PPI.

0830 GEOSYNTec CONTINUES TO OBSERVE EXTRUSION REPAIRS LOCATED ON PHASES I-C/II-C FLAP. GEOSYNTec ALSO CONTINUES LEAK SENSOR READINGS LOCATED ON THE NORTHEAST SECTION OF PHASE II-A. READINGS SHOW A DEFINITE INDICATION OF ~~CONNECTION~~ HYDRAULIC CONNECTION BETWEEN PHASES I-A/II-A 3 FT. FLAP.

1000 NSC. BEGINS NON-DESTRUCTIVE (VACUUM) TESTING ON YESTERDAY'S FLAP INSTALLATION (SOUTH SECTION). GEOSYNTec CONTINUES TO OBSERVE AND ~~LOCATE ANY LEAKS THAT~~ ^{LOCATE ANY LEAKS THAT} ARE FOUND IN EXTRUSION WELDED SEAM.

1030 MR. JULES WINFREE (GEOSYNTec), INDICATED THAT STRUNG METER READINGS HAVE BEEN LOCATED ON THE NORTHEAST BOTTOM (APPROX. 80 FT WEST OF FLAP I-A/II-A), OF PHASE II-A. MR. WINFREE ALSO INDICATED THAT AREA HAS BEEN FLAGGED OFF.

1145 WMAA INDICATED THAT UPON COMPLETION OF LEAK SURVEY ON THE

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Total Hrs.: 10.0

Per: *[Signature]*



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 2 of 5

Project: Trail Ridge Landfill

THURSDAY

Phase: I & II

Project No. FQ2030

Date: (m/d/y) FEB. 4

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

EAST SECTION OF PHASE II, GEOSYNTEC WILL CONTINUE SURVEY LOCATED IN THE PONDED WATER LOCATED IN PHASES II-A WEST AND II-B WEST (INTERMEDIATE 15 FT. FLAP).

1200 CONTRACTORS DISCONTINUE FOR LUNCH.

1300 PERSONNEL RETURNS FROM LUNCH. NSC. BEGINS PM. TRIAL SEAM SAMPLE IN PREPARATION OF EXTRUSION WELDING THE NEWLY PLACED 40 MIL HDPE 15 FT. FLAP LOCATED ON THE NORTH SECTION OF PHASE II-C, ~~WEST~~ EAST. GEOSYNTEC OBSERVE TRIAL SEAM TESTING, RESULTS AS FOLLOWS; TECHNIKIAN NO. 2024, EXTRUDER NO. 16, TEMPERATURE SETTINGS 265°C AND 275°C, PEEL MODE 106 PPI AND 108 PPI. SHEAR MODE 129 PPI AND 140 PPI.

1420 GEOSYNTEC CONTINUES TO OBSERVE EXTRUSION WELDING BEING PERFORMED ON THE 40 MIL FLAP ATTACHED TO THE PRIMARY LINER (COMC) SYSTEM.

1540 NSC. COMPLETES EXTRUSION WELDING AND CONTINUES NON-DESTRUCTIVE (VACUUM) TESTING. GEOSYNTEC OBSERVES TECH. NO. 2024 PERFORMING TESTING PROCEDURES.

1610 NSC. COMPLETES VACUUM TESTING FINDING POSITIVE RESULTS. GEOSYNTEC CONTINUES TO OBSERVE EXCAVATION BEING PERFORMED ON THE WEST SECTION OF THE I-C TEMPORARY 15 FT. FLAP. GEOSYNTEC ALSO COMPLETES THE DRY LAND TESTING OF PHASE II-A FINDING NEGATIVE RESULTS ALONG PHASES I-A/II-A FLAP.

1650 PERSONNEL DISCONTINUES ACTIVITIES FOR THIS

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Per: John J. [Signature]



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Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 3 of 3

Project: Trail Ridge Landfill THURSDAY Phase: I & II

Project No. FQ2030 Date: (mo/dy) FEB. 4 Year: 1993

Location: Jacksonville, Florida Contractor: National Seal Company

SHIFT AND DEPARTS JOBSITE.

1700 GEOSYNTEC COMPLETES DAILY CQA. DOCUMENTATION
AND DEPARTS JOBSITE.

PERSONNEL ON SITE.

NISC. • 1 SUPT., 2 TECHNICIANS, AND 1 FRONTEND LOADER

BARCO • 1 OPERATOR, 1 GRADE ALL.

WMNA • 6 LABORERS.

GEOSYNTEC • 3 PERSONNEL.

Copy to: Trail Ridge Landfill, Inc. Total Hrs.: 10.0 Per: [Signature]



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 1 of 3

Project: Trail Ridge Landfill

FRIDAY

Phase: I ETL

Project No. FQ2030

Date: (m/d/y) FEB. 5

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

0700 GEOSYNTEC ARRIVES ON SITE. SITE CONDITIONS IS WET DUE TO OVERNIGHT RAINS, LIGHT WIND, AND CLOUDY. NSC ON SITE, PERSONNEL PREPARES TO OBSERVE SAND REMOVAL PERFORMED BY BARCO LOCATED @ THE TEMPORARY 15 FT. FLAP LOCATED IN PHASE II-C. GEOSYNTEC REGULAR LEAK SENSOR TESTING LOCATED IN THE PONDED WATER IN PHASE II-B, EAST SECTION.

0930 BARCO CONTINUES SAND REMOVAL LOCATED IN PHASE I-C USING A GRADE-ALL MACHINE TO REMOVE APPROX 1.5 FT. OF THE SAND MATERIAL AND 4 LASERS USING SHOVELS TO REMOVE THE REMAINING SAND. GEOSYNTEC CONTINUES TO OBSERVE ACTIVITIES TO ENSURE THAT NO DAMAGE OCCURS TO THE UNDERLYING GEOSYNTHETIC LAYERS.

1045 MR. JULES WINTER (GEOSYNTEC) INDICATED THAT THE LEAK SENSOR TESTING SHOWS POSITIVE TESTING RESULTS IN PHASE II-B (PONDED WATER), EAST SECTION.

1200 PERSONNEL DISCONTINUES ACTIVITIES FOR LUNCH.

1300 PERSONNEL RETURNS FROM LUNCH. BARCO RESUMES EXCAVATION LOCATED IN PHASE I-C, TEMPORARY FLAP. GEOSYNTEC RESUMES LEAK SENSOR READINGS LOCATED IN THE PONDED WATER ON THE EAST SECTION OF PHASE II-C. GEOSYNTEC ALSO CONTINUES TO OBSERVE SAND REMOVAL TO ENSURE THAT NO DAMAGE OCCURS TO THE UNDERLYING GEOSYNTHETIC LAYERS.

1335 CONVERSATION WITH MR. JIM WILKINS (WINNA), MR. PHIL WELTER (NSC).

POINTS OF INTEREST:

• WINNA INDICATED THAT LEAK SENSOR READINGS SHOWS

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Per:

John J. [Signature]



GEO SYNTec CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 2 of 3

Project: Trail Ridge Landfill

FRIDAY

Phase: I-E II

Project No. FQ2030

Date: (mo/dy) FEB 5

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

- NEGATIVE RESULTS AROUND RISER PIPE IN PHASE II-C
WEST AND LEACHATE PIPE WILL BE CHECKED FOR PERFORATIONS.
- WINNA INDICATED THAT II-A, II-B, AND II-C (WEST AREAS) WILL BE EXCAVATED AND THE LEACHATE PIPES WILL BE CHECKED FOR PERFORATIONS.
 - WINNA INDICATED THAT THE RISER PIPE LOCATED IN PHASE I-C (TEMPORARY FLAP), WILL BE REMOVED AND CAPPED USING HDPE FLAT STOCK. THE DUTCHMAN® (PANCAKE PIPE BLOCK), WILL ALSO BE REMOVED TO ALLOW FLOW THROUGH LEACHATE PIPE.
 - WINNA INDICATED IF THE LEACHATE PIPE HAS PERFORATIONS, GEO SYNTec WILL NOT CONDUCT THE LEAK SENSOR TESTING, IF LEACHATE PIPES HASN'T ANY PERFORATIONS, GEO SYNTec WILL CONDUCT LEAK SENSOR TESTING ON THE WEST SECTION OF PHASE II (INTERMEDIATE FLAP).
 - WINNA INDICATED THAT THE GRISEL THAT WILL BE REMOVED FROM LEACHATE TRENCHES (WHEN OBSERVED FOR PERFORATIONS), WILL BE REPLACED WITH 1 ADDITIONAL LOAD OF GRAVEL THAT WILL ARRIVE TODAY PM OR TOMORROW AM.

1540 GEO SYNTec CONTINUES LEAK SENSOR READINGS LOCATED IN THE POURED WATER LOCATED IN THE EAST SECTION OF PHASE II-C. BARCO CONTINUES SAND REMOVAL LOCATED IN PHASE I-C. GEO SYNTec ALSO CONTINUES TO OBSERVE ACTIVITIES.

1700 MR. JULES WINFREE (GEO SYNTec), INDICATED THAT LEAK SENSOR READINGS SHOWS POSITIVE TEST RESULTS IN POURED WATER LOCATED IN PHASES II-C EAST AND II-B EAST.

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Per:

[Signature]



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 3 of 3

Project: Trail Ridge Landfill

FRIDAY

Phase: I & II

Project No. FQ2030

Date: (mo/dy) FEB 5

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

GEOSYNTEC OBSERVES PERSONNEL DISCONTINUING ACTIVITIES FOR THIS SHIFT AND DEPARTS SITE.

PERSONNEL ON SITE.

BARCO • 2 OPERATORS, 1 GRADE-ALL, 1 FRONTEND LOADER.

NSC • 1 SUPT., 2 TECHNICIANS.

WMA • 6 LABORERS

GEOSYNTEC • 4 PERSONNEL.

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Total Hrs.: 10.0

Per: *[Signature]*



GEOSYNTec CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 1 of 3

Project: Trail Ridge Landfill

SATURDAY

Phase: I & II

Project No. FQ2030

Date: (mo/dy) FEB. 6

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

0700 GEOSYNTec ARRIVES ON SITE. SITE CONDITIONS WET FROM OVERNIGHT RAIN, FOGGY WITH LIGHT MIST, AND CALM WIND. NSC. ON SITE, PERSONEL BEGINS TO CUT OPEN THE GEOTEXTILES LOCATED @ II-C WEST INTERMEDIATE FLAP FOR OBSERVATION OF THE 8" Ø HDPE PERFORATED LEACHATE PIPE. BARCO ON SITE. OPERATOR WITH GRADE-ALL MACHINE PREPARES TO REMOVE THE SAND MATERIAL LOCATED AT THE INTERSECTION OF PHASES I-C/II-C AND I-B/II-B IN PREPARATION TO EXPOSE THE 15 FT. AND 3 FT. HDPE FLAPS. GEOSYNTec CONTINUES TO OBSERVE SAND REMOVAL LOCATED @ INTERSECTION.

0730 MR. JIM KRAMER (GEOSYNTec), ARRIVES ON SITE TO AID IN THE MONITORING ACTIVITIES, PERFORMED BY NSC, BARCO, AND WINDA. GEOSYNTec OBSERVES WINDA SETTING PUMPS LOCATED @ II-B WEST AND II-A WEST FOR DRAINING THE PAVED WATER @ FLAP (INTERSECTION OF LEACHATE TRENCHES. GEOSYNTec ALSO OBSERVES WINDA CONTINUING TO DRAIN PHASE II-C WEST.

0820 BARCO COMPLETES SAND REMOVAL @ I-C/II-C AND I-B/II-B INTERSECTION AND PERSONEL CONTINUES TO REMOVE THE REMAINING 3 INCHES (APPROX.) OF SAND USING SHOVELS. GEOSYNTec CONTINUES TO OBSERVE ACTIVITIES TO ENSURE THAT NO DAMAGE OCCURS TO THE UNDERLYING GEOSYNTHETICS. WINDA INFORMS GEOSYNTec THAT THE NO. 3 GRAVEL HAS ARRIVED ON SITE AND IS STOCKPILED ON THE SOUTHWEST CORNER OF THE LANDFILL.

1045 NSC. INDICATED THAT THE LEACHATE PIPE LOCATED @ FLAP IN II-C WEST HAS NO PERFORATION HOLES. GEOSYNTec BEGINS TO SETUP EQUIPMENT FOR LEAK DETECTION. GEOSYNTec ALSO CONTINUES

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Total Hrs.: 8.5

Per:

John J. Jollyard



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Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 2 of 3

Project: Trail Ridge Landfill

SATURDAY

Phase: I & II

Project No. FQ2030

Date: (mo/dy) FEB. 6

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

TO OBSERVE SAND REMOVAL.

1140 MR. JIM LUKINS (WMAA), ON SITE. MR. LUKINS INDICATED THAT THE SECONDARY SYSTEM LOCATED AT CELL C SUMP HAS PUMPED DRY CAUSING NO CONNECTION FROM AROUND WIRE TO LIQUID. MR. LUKINS ALSO INDICATED THAT THE SECONDARY PUMP HAS BEEN TURNED OFF.

1200 PERSONNEL DISCONTINUES ACTIVITIES FOR LUNCH.

1300 PERSONNEL RETURNS FROM LUNCH. NSC INDICATED THAT THE HDPE FLAT STOCK HAS ARRIVED ON SITE (6'x12"), FOR CAPPING THE REMOVED RISER LOCATED IN THE INTERMEDIATE FLAP IN PHASE I-C. NSC ALSO BEGINS TO CUT THE CENTER OF THE DUTCHMAN® (I.E. PIPE BLOCK) TO ALLOW FLOW THROUGH THE 8" HDPE PERFORATED LEACHATE PIPE. GEOSYNTec CONTINUES TO OBSERVE ACTIVITIES.

1410 NSC COMPLETE CAPPING THE REMOVE RISER PIPE AND CONTINUES TO REPLACE THE GRAVEL WITH ACCEPTABLE MATERIAL.

1450 LIGHT RAIN BEGINS. NSC CONTINUES TO ADD ADDITIONAL GEOTEXTILE THAT ENCAPSULATES THE PIPE AND GRAVEL. GEOSYNTec CONTINUES TO OBSERVE.

1510 NSC DISCONTINUES ACTIVITIES UPON COMPLETION OF GEOTEXTILE DUE TO RAIN INCREASING. BARCO BEGINS TO BACKFILL AREA WITH THE 2 FT. ± SAND MATERIAL (PROTECTIVE/DRAINAGE LAYER). GEOSYNTec CONTINUES TO OBSERVE BACKFILLING TO ENSURE THAT NO DEBRIS HARMS THE UNDERLYING GEOSYNTHETICS.

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Total Hrs.: 8.5

Per: John Dillig



Daily Field Report

Sheet No.: 3 of 3

Project: Trail Ridge Landfill

SATURDAY

Phase: 137

Project No. FQ2030

Date: (mo/dy) FEB 6

Year: 1993

Location: Jacksonville, Florida

Contractor: *National Seal Company*

1520 BARCO COMPLETES BACK FILLING AND DISCONTINUES
ACTIVITIES FOR THIS SHIFT. MR. JULES WINFREE
(GEOLOGIST) INDICATED THAT RAIN IS CAUSING OFF
READINGS FROM THE LEAK DETECTION DEVICE. MR.
WINFREE ALSO INDICATED THAT II-C WEST IS COM-
PLETED AND FINDINGS SHOW POSITIVE RESULTS, II-B
WEST IS COMPLETED (WITH EXCEPTION OF II-A/II-B
CREST), MR. WINFREE INDICATED THAT TESTING CAN-
NOT BE COMPLETED DUE TO LACK OF WATER IN
PHASE II-A.

1527 UNION COMPETING COA - REPORTS GEOSYNTEC DEPARTS
LORRAINE.

PERSONNEL ON SITE

NSC • 1 SVPT, 2 TECHNICIANS.
BORCO • 2 OPERATORS, 1 GRADE-ALL, 1 FRONT END LOADER
WIMPA • 6 LOADERS (2 LOADERS DEPART SITE @
APPROX 10:30 HRS.).
BEASITEC • 4 PERSONNEL.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 8.5

Per:



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 1 of 1

Project: Trail Ridge Landfill THURS. Phase: I & II

Project No. FQ2030 Date: (mo/dy) FEB 2^{JK} 4 Year: 1993

Location: Jacksonville, Florida Contractor: National Seal Company

MOBILIZE FROM PARK FALLS, WIS. to
SIKESTON MO. (770 miles)

Copy to: Trail Ridge Landfill, Inc. Total Hrs.: 13 HRS. Per: Jim Kramer



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Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 1 of 1

Project: Trail Ridge Landfill

FRI.

Phase: I & II

Project No. FQ2030

Date: (mo/dy) 2-5

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

MOBILIZE FROM SIXESTON Mo. to BALDWIN, FLA.
(1021 mi.)

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 17 HRS.

Per: Jim Kramer



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Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 1 of 2

Project: Trail Ridge Landfill

SAT.

Phase: I & II

Project No. FQ2030

Date: (mo/dy) 2-6

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

07:30

ARRIVED ONSITE.

SKY OVERCAST. TEMP. + 52°. WIND LIGHT.

N.S.C. & OTHER GeoSYNTec PERSONEL ONSITE.

07:45

MEET WITH GeoSYNTec PERSONEL TO OBTAIN SCOPE OF WORK BEING PERFORMED.

AM INFORMED OF LEAKS & POSSIBLE FURTHER LEAKS THRU RAIN FLAP IN IC WEST TO 2C EAST & 2C EAST TO 2C WEST.

Note:

SOME OF SAID LEAKS HAVE ALREADY BEEN LOCATED PRIOR TO THE UNDERSIGNED'S ARRIVAL ONSITE AS PER MR. JULES WINFREE. (GeoSYNTec LAB PERSONEL) THIS WAS DONE USING AN ELECTRONIC CONDUCTANCE LEAK DETECTOR. (CONTINUITY WITH WATER AS THE CONDUCTOR.)

08:17

N.S.C. BEGINS UNCOVERING COLLECTION PIPE JUST EAST OF 2C EAST, 2C WEST SEPARATION BURN TO DETERMIN IF SAID PIPE IS PERFORATED, & THUS PREVENTING 2-C WEST FROM HOLDING WATER.

09:35

COLLECTION PIPE NOW EXPOSED, N.S.C. FINDS NO PERFORATIONS FROM SCR. BURN EAST TO PIPE CONNECTION FLANGE. Note: GeoSYNTec OBSERVES THAT WITHIN SAID CONNECTION FLANGE WAS PREVIOUSLY INSTALLED AN H.D.P.E. "PANCAKE" OR OBSTRUCTION PREVENTING WATER FLOW BETWEEN 2-C EAST & 2-C WEST.

Note:

SEE PHOTO DOCUMENTATION.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.:

Per:

Jim Kramer



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 2 of 2

Project: Trail Ridge Landfill

SAT.

Phase: I & II

Project No. FQ2030

Date: (mo/dy) 2-6

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

Note: (CONT.) SAID OBSTRUCTED FLANGE IS LOCATED WITHIN ONE FT. OF 2-C EAST RISER PIPE.

N.S.C. CUTS SAID RISER PIPE WITHIN 16" OF ^{THE} GROUND ENABLING PHYSICAL CONFORMATION OF TOTAL BLOCKAGE.

11:45 N.S.C. PERSONEL BEGIN REPLACING STONE & GEOTEXTILE IN ABOVE NAMED AREA. N.S.C. REPAIRS RISER PIPE.

12:00 BREAK FOR LUNCH.

13:00 N.S.C. BEGINS AFT. WORK. N.S.C. CONTINUES REPAIRS ON ABOVE NAMED AREA.

Note: N.S.C. ALSO WORKING REPAIRS IN I-C. OTHER GEOSYNTEC PERSONEL COVER SAID WORK.

13:00 RECIEVE INSTRUCTION FROM MR. JULES WINFREE ON OPERATION OF CONDUCTANCE LEAK DETECTOR. CHECK 2-C EAST & 2-B EAST IN GRID PATTERN WITH SAID DETECTOR.

FOUND ONE SUSPECT AREA IN 2-B HOWEVER READING MAY BE FAULTY DUE TO LACK OF MOISTURE.

Note: SEE MR. WINFREE'S NOTES.

15:10 LIGHT RAIN BEGINS

15:20 RAIN HEAVIER. N.S.C. CEASES PRODUCTION WORK.

15:40 N.S.C. & GEOSYNTEC LEAVE SITE.
(RAIN CONTINUES.)

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 8.25 Hrs, Per: Jim Kramer



Daily Field Report

Sheet No.: / of /

Project: Trail Ridge Landfill

Mon.

Phase: I & II

Project No. FQ2030

Date: (mo/dy) FEB 8

Year: 1993

Location: Jacksonville, Florida

Contractor: *National Seal Company*

06:45 ARRIVED ONSITE. Sky OVERCAST. Temp +42° Wind Light.

07:00 N.S.C. ARRIVES ONSITE. OVERNITE & WEEK END RAINS
HAVE SITE & ACCESS SATURATED.

07:10 Met with N.S.C. Supt. As per days activities & work is on hold pending meeting with waste management.

07:45 As Per ABOVE NAMED MEETING & SITE CONDITIONS,
CONSENSUS IS TO CALL A WEATHER DAY.

08:00 BRING PREVIOUS WEEKS REPORTS TO CURRENT STATUS.

08:45 N.S.C. & GeoSyNTEC Leave site.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 2 Hrs.

Per:

Jim Kramer



GEO SYNTec CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No. 1

of 1

Project: Trail Ridge Landfill

MONDAY

Phase: I & II

Project No.: FQ2030

Date: (mo/day) FEB. 8

Year: 1992

Location: Jacksonville, Florida

Contractor: National Seal Company

0700 GEO SYNTec ARRIVES ON SITE. SITE CONDITIONS IS WET
AND CONTINUING TO DRIZZLE. NSC ON SITE. MR. PHIL
WELER (NSC), INDICATED THAT NO WORK WILL BE PER-
FORMED THIS SHIFT DUE TO WEATHER.

0800 GEO SYNTec DEPARTS JOBSITE.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 1.0

Per: [Signature]



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 1 of 2

Project: Trail Ridge Landfill Tues. **Phase:** I & II
Project No. FQ2030 **Date: (mo/dy)** FEB. 9 **Year:** 1993
Location: Jacksonville, Florida **Contractor:** National Seal Company

06:45	ARRIVED ONSITE. Sky P. Cloudy. Temp +49°. Wind Light.
07:10	N.S.C. ARRIVES ONSITE. MET WITH SUPT. & DAYS ACTIVITIES WILL BE TO COMPLETE 15' - 40 MIL. RAIN FLAP BETWEEN I-C & 2-C. ALSO TIE IN ABOVE NAMED FLAP TO 3' FLAP BETWEEN IB & I-C, & BACKFILL ALL OF THE ABOVE.
07:30	BARCO DUVAL BEGINS EXCAVATION OF ABOVE NAMED TIE IN. BARCO USES BANTAM GRADEALL FOR SAND REMOVAL. N.S.C. LABORERS HAND SHOVEL FINAL REMOVAL.
09:00	GeoSYNTEC INSURES INTEGRITY OF GEOMEMBRANE. TRIAL SCAM ON EXT. #6-16, TECH. #2023 TEMPS. ²⁶⁵ / ₁₂₅ PEEL ¹²⁰ / ₁₁₇ SHEAR ¹²⁹ / ₁₂₈ .
09:16	BARCO/N.S.C. BEGIN BACKFILL OF I-C/2-C - 15' FLAP. (40 to 60 mil.)
Note:	AS PER WASTE MANAGEMENT BACKFILL OF SAID FLAP TO BE AT THE 2' SAND COVER LEVEL WITH FLAP VERTICAL TO THIS POINT. REMAINDER TO BE FOLDED OVER.
10:20	
11:10	EXCAVATION, POSITIONING OF & BACKFILL OF I-C, 2-C FLAP IS BEING PERFORMED IN APPROX. 100' SEGMENTS & CONTINUES.
12:12	N.S.C. BREAKS FOR LUNCH. Sky Mostly Cloudy. Temp +70°. Wind Lite.
13:05	AFT. WORK BEGINS. N.S.C. TECHS & LABORERS RESUME WORK ON I-C, 2-C, 15' RAIN FLAP.
13:15	N.S.C. TECH. #2023 & EXT. #6-16 BEGIN PLACING CAPS OVER SLICED SECTIONS OF ABOVE NAMED RAIN FLAPS.
Note:	BARCO USES KOMATSU 632 & CAT D-8 FOR BACKFILL PURPOSES.
Note:	N.S.C. HAS ONE SUPT, TWO TECHS. & 4 LABORERS ONSITE.
15:35	EXT. #16 IS DOWN FOR REPAIRS.
16:06	TRIAL SCAM ON EXT. #19, TECH. #2023, TEMPS. ²⁶⁵ / ₁₂₅ , PEELS ¹⁰² / ₇₂ SHEARS ¹¹⁴ / ₁₁₃ (40 to 40 mil.)

Copy to: Trail Ridge Landfill, Inc. **Total Hrs.:** 10.75 HRS. **Per:** Jim Kramer



Daily Field Report

Sheet No.: 2 of 2

Project: Trail Ridge Landfill

Tues.

Phase: I & II

Project No. FQ2030

Date: (mo/dy) FEB. 7

Year: 1993

Location: Jacksonville, Florida

Contractor: *National Seal Company*

16-12 N.S.C. TECH. # 2023 & EXT. # 19 Resume WELDING OF REPAIR
CAPS OVER SLICES IN I-C-2-C-15' RAIN FLAP.

17:00 N.S.C. LABORERS LEAVE SITE.

17:06 N.S.C. TECHS. COMPLETE WELDING OF CAPS ON I-C-2-C RAIN FLAP.

17:10 BARCO RESUMES FINAL BACKFILL OF ABOVE NAMED AREA.

Note: GeoSyntec Advises N.S.C. Supt. THAT REPAIRED AREAS MUST BE NON-DESTRUCTIVELY TESTED.

17:20	N.S.C. COMPLIES & TECH. #2024 V-Boxes CAPPED AREAS. BARCO RESUMES BACKFILL.
-------	--

17:25 N.S.C. CEASES DAYS PRODUCTION WORK. PICKS UP EQUIP.

17:30 N.S.C. & GeoSyNTec LEAVE SITE.

Note: I-C, 2-C is NOT yet complete. (RAIN FLAP.)
 Remaining work is tie in of 15' I-C, 2-C FLAP
 to 3' I-B, I-C FLAP.
 With daylight fading, N.S.C. Elects to complete
 this work in A.M. of 2-10-93 - Wed.

Note: As in all remaining repair work Sec. Photo. documentation for clarification of daily reports.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 10.75 HRS. Per: Jim Kramer



Daily Field Report

Sheet No.: / of /

Project: Trail Ridge Landfill

Wco.

Phase: *I & II*

Project No. FQ2030

Date: (mo/dy) Feb. 10

Year: 1993

Location: Jacksonville, Florida

Contractor: *National Seal Company*

06:45 ARRIVED ON SITE. Fog. Temp. +51. Wind Light.

07:15 N.S.C. ARRIVES ON SITE.

MEET WITH JOHN GILLYARD (GeoSyntec) &
COORDINATE 2-9-93, & CURRENT N.S.C. WORK.

07:45 | Leave Site.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 1 HR.

Per: Jim Kramer



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No. 1 of 3

Project: Trail Ridge Landfill WEDNESDAY Phase: I & II
Project No.: FQ2030 Date: (mo/dy) FEB. 10 Year: 1992
Location: Jacksonville, Florida Contractor: National Seal Company

0700 GEOSYNTEC ARRIVES ON SITE. SITE CONDITIONS IS WET FROM OVERNIGHT RAIN, FOGGY, AND LIGHT WIND. NSC ON SITE, PERSONNEL PREPARES EQUIPMENT AND MATERIALS FOR TRIAL SEAM SAMPLES AND CONNECTION OF PHASES I-B/I-C 3 FT. HDPE FLAP TO PHASES I/II 15 FT. FLAP. BARCO ON SITE, PERSONNEL PREPARES GRADE-ALL MACHINE FOR THE EXCAVATION OF THE SUSPECT AREA FOUND IN PHASE II-A (EAST SECTION), FROM PRIOR USE OF THE LEAK DETECTION DEVICE.

0740 GEOSYNTEC OBSERVES TRIAL SEAM SAMPLE TESTING, RESULTS AS FOLLOWS:

TECHNICIAN NO. 2024, EXTRUSION WELDER NO. 19, EXTRUSION WELDER TEMPERATURES @ 265°C AND 275°C. RESULTS IN PEEL MODE BEING; 105 PPI/120 PPI AND SHEAR MODE BEING; 126 PPI/127 PPI.

0805 BARCO BEGINS TO EXCAVATE THE 2 FT. SAND LAYER LOCATED IN PHASE II-A, NORTHEAST SECTION. GEOSYNTEC OBSERVES BARCO USING A GRADE-ALL MACHINE TO REMOVE APPROX. 1.7 FT. OF THE MATERIAL AND REMOVING THE REMAINING SAND ABOVE THE GEOSYNTHETICS WITH SHOVELS.

0840 BARCO COMPLETES SAND REMOVAL AND MOVES EQUIPMENT TO THE NORTHEAST SECTION OF PHASE II-B. GEOSYNTEC CONTINUES TO OBSERVE SAND BEING REMOVED AND THE PUMPED WATER ELEVATION BEING APPROX. 1 FT. FROM SAND ELEVATION. MR. PHIL WELER (NSC), INDICATED THAT EXCAVATION WILL CEASE UNTIL AREA IS DEWATERED.

Copy to: Trail Ridge Landfill, Inc. Total Hrs.: 9.0

Per: [Signature]



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No. 2 of 5

Project: Trail Ridge Landfill WEDNESDAY Phase: II-E
Project No.: FQ2030 Date: (mo/dy) FEB 10 Year: 1992
Location: Jacksonville, Florida Contractor: National Seal Company

0905 NSC CONTINUES TO EXTRUSION WELD (TECHNICIAN NO. 2024), THE PHASES I/II 15 FT. FLAP IN PREPARATION TO CONNECT THE 3 FT FLAP THAT RUNS EAST TO WEST BETWEEN PHASES I-R/I-C. GEOSYNTEC CONTINUES TO OBSERVE.

1105 NSC COMPLETES ATTACHMENT OF THE 3 FT. FLAP TO THE 15 FT. FLAP AND BEGINS NON-DESTRUCTIVE (VACUUM) TESTING, TECH. NO. 2023 ²⁰²³ (2023)

1140 NSC COMPLETES VACUUM TESTING @ INTERSECTION OF FLAPS FINDING PASSING RESULTS. GEOSYNTEC BEGINS TO OBSERVE BACKFILLING OF AREA AND TO ENSURE FLAPS REMAIN IN A VERTICAL POSITION. THIS COMPLETES CONSTRUCTION ACTIVITIES IN PHASE I-C.

1145 PERSONNEL DISCONTINUES FOR LUNCH.

1245 PERSONNEL RETURNS FROM LUNCH. NSC CONTINUES TO PLACE A 40 MIL PATCH ON THE 15 FT. FLAP BETWEEN PHASES I/II. GEOSYNTEC OBSERVES PATCH BEING PLACED IN PHASE II-B, SOUTH SECTION. GEOSYNTEC ALSO OBSERVES DIM TRIAL SEAM BEING;

TECHNICIAN NO. 2024, EXTRUSION WELDER NO. 19, EXTRUSION TEMPERATURES @ 265°C AND 275°C. RESULTS IN PEEL MODE BEING 100 PPI/109 PPI AND SHEAR BEING 122 PPI/121 PPI.

1340 NSC COMPLETES FLAP REPAIRS AND NON-DESTRUCTIVE (VACUUM) TESTING FINDING PASSING RESULTS. NSC TECHNICIANS BEGINS TO CUT THE GEOTEXTILE AND POLY-NET LAYERS IN THE NORTHEAST SECTION OF PHASE II-A (SUSPECT AREA). GEOSYNTEC OBSERVES ACTIVITIES AND LOCATES AREA BEING APPROX. 612 FT. FROM THE INTERMEDIATE FLAP ON THE WEST SECTION OF PHASE

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GEOSYNTec CONSULTANTS
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Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No. 3 of 3

Project: Trail Ridge Landfill WEDNESDAY Phase: I & II
Project No.: FQ2030 Date: (mo/dy) FEB. 10 Year: 1992
Location: Jacksonville, Florida Contractor: National Seal Company

TL-A AND APPROX. 14.5 FT. NORTH OF THE LEACHATE TRENCH ALSO IN PHASE I & II. GEOSYNTec ALSO OBSERVES NSC. PERSONNEL REMOVING THE POLY-NET LAYER TO ENSURE THAT NO SAND MATERIAL ENTERS THE LINING SYSTEM. MR. PHIL WELCH (NSC), INDICATED THAT SINCE THERE ARE NO REPAIRS AROUND THE SUSPECT AREA, NSC. WILL TRIM THE FLAP OFF OF THE FUSION WELDED SEAM (60 MIL PRIMARY LINER SYSTEM), AND NON-DESTRUCTIVELY TEST IT USING A VACUUM TESTING BOX.

1440 NSC. COMPLETES VACUUM TESTING THE 60 MIL PRIMARY LINER SYSTEM FINDING PASSING RESULTS. (GEOSYNTec AND NSC. CONTINUES TO OBSERVE AREA FINDING NO DAMAGED AREA IN THE PRIMARY SYSTEM.

1457 BARCO BEGINS BACKFILLING OF AREA USING A FRONTEND LOADER UPON COMPLETION OF REPAIRING THE POLY-NET AND GEOTEXTILE LAYERS. (GEOSYNTec AND WMAA PERSONNEL CONTINUES TO REMOVE ANY WOOD DEBRIS FROM THE SAND MATERIAL PRIOR TO BACKFILLING.

1555 BARCO COMPLETES BACKFILLING. CONTRACTORS DISCONTINUES ACTIVITIES FOR THIS SHIFT AND REPORTS JOBSITE.

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Total Hrs.: 9.0

Per: [Signature]



GEOSYNTec CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 1 of 1

Project: Trail Ridge Landfill THURS. **Phase:** I & II

Project No. FQ2030 **Date: (moldy)** FEB. 11 **Year:** 1993

Location: Jacksonville, Florida **Contractor:** National Seal Company

06:40	ARRIVED ONSITE. Fog. Temp. +52°. Wind Light.
07:30	N.S.C. ARRIVES ONSITE. Met with Supt. & days work SCHEDULED WILL BE TO REMOVE WATER FROM IB, 2B TIE IN AREA SO AS TO UNCOVER SUSPECT LEAK AREA.
07:50	WASTE MANAGEMENT BEGINS. REMOVAL OF SAND & OTHER DEBRIS FROM IA, 2A TIE IN AREA SO AS TO EXPOSE 3' RAIN FLAP FOR REPLACEMENT WITH 15' FLAP.
Note:	GeoSYNTEC MONITORS THIS OPERATION TO INSURE INTEGRITY OF GEOMEMBRANE. W.M.N.A. USES TRACKHoe (CAT.) FOR SAND/DIRT REMOVAL BEGINNING AT SOUTH END OF IA, 2A & WORKING NORTH.
08:10	N.S.C. PUMPING WATER FROM IB, 2B TIE IN AREA.
11:00	N.S.C. TAKES 2 HR. LUNCH BREAK. Sky OVERCAST. Temp. +62°. BARCO DUVAL OPERATOR RELIEVES W.M.N.A. OPERATOR & REMOVAL OF SAND/DEBRIS FROM IA, 2A TIE IN CONTINUES.
Note:	THREE FT. RAIN FLAP HAS BEEN LOCATED. REMOVAL OF FINAL 2' LAYER OF SAND TO BE DONE WITH GRADCALL TO PROTECT GEOMEMBRANE. (BANTAM #740)
12:50	N.S.C. BACK ONSITE. ONE Supt. TWO TECHS. & 3 LABORERS. N.S.C. Rigs ADDITIONAL Pump AT IA, 2A TIE IN.
14:25	DUE TO IMPENDING WEATHER & TIME OF DAY, N.S.C. ELECTS TO PUT OFF REMOVAL OF FINAL 2' SAND COVER UNTIL A.M. 2-12-93. N.S.C. TECHS. LEAVE SITE.
15:30	Light RAIN BEGINS. (No GeoSYNTHETICS WORK THIS DATE.)
15:45	GeoSYNTEC LEAVES SITE.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 9 HRS.

Per: Jim Kramer



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No. 1 of 2

Project: Trail Ridge Landfill FRIDAY Phase: I & II
Project No.: FQ2030 Date: (mo/dy) FEB. 12 Year: 1992
Location: Jacksonville, Florida Contractor: National Seal Company

0700 GEDSYNTEC ARRIVES ON SITE. SITE CONDITIONS IS FOGGY, MODERATE WIND, AND AN AMBIENT AIR TEMPERATURE OF 47°F. NSC ON SITE, PERSONNEL BEGINS TO REMOVE THE 3 FT. HDPE FLAP LOCATED ON THE SOUTH SECTION OF PHASE II-A/I-A. BARCO ON SITE, OPERATOR BEGINS TO REMOVE THE 2 FT. SAND (DEBRIS) LAYER TO EXPOSE THE FLAP FOR REMOVAL. WIMMA ON SITE, PERSONNEL REMOVES THE REMAINING 3 TO 4 INCHES OF SAND MATERIAL FROM THE GEDSYNTHETIC LAYERS USING SHOVELS.

PERSONNEL ON SITE ARE AS FOLLOWS:

NSC • 1 Supt., 2 TECHNICIANS
BARCO • 2 OPERATORS, 1 GRAD-ALL, 1 FRONT END LOADER
WIMMA • 6 LABORSERS.

GEDSYNTEC CONTINUES TO OBSERVE SAND EXCAVATION BEING PERFORMED BY 1 GRAD-ALL AND 6 PERSONNEL USING SHOVELS. PRODUCTION STARTING IN THE SOUTH SECTION AND WORKING TO THE NORTH SECTION.

1005 BARCO CONTINUES TO EXCAVATE THE SAND MATERIAL ON THE EAST AND WEST SIDES OF FLAP. BARCO ALSO BEGINS TO STOCK-PILE THE SAND MATERIAL LOCATED @ THE CREST OF PHASE II-A / II-B EAST SECTION IN PREPARATION FOR BACKFILLING AND HOLDING FLAP IN A VERTICAL POSITION.

1155 PERSONNEL DISCONTINUES FOR LUNCH UPON COMPLETING SAND REMOVAL UP TO THE LEACHATE COLLECTIONS TRINCH.

1300 PERSONNEL RETURNS FROM LUNCH. BARCO RESUMES SAND

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Per: John J. Jellard



GEOSYNTec CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No. 2 of 2

Project: Trail Ridge Landfill FRIDAY Phase: I & II
Project No.: FQ2030 Date: (m/d/y) FEB 12 Year: 1992
Location: Jacksonville, Florida Contractor: National Seal Company

REMOVAL LOCATED @ THE LEACHATE COLLECTION TRENCH (LEAVING THE 3 FT. FLAP APPROX. 10 FT. ON BOTH SIDES OF TRENCH, TO ATTACH THE FUTURE 15 FT. FLAP INSTALLATION TO THE 3 FT. FLAP). IN PHASES I-A/II-A, NRC. RESUMES THE REMOVAL OF THE 3 FT. FLAP UPON COMPLETION OF EXCAVATION, TRIMMING THE 3 FT. FLAP LEVEL WITH THE PRIMARY LNR SYSTEM.

1510 SAND EXCAVATION CONTINUES. GEOSYNTec CONTINUES TO OBSERVE SAND AND FLAP REMOVAL TO ENSURE THAT NO DAMAGE OCCURS TO THE UNDERLYING GEOSYNTHETIC LAYERS.

1600 PERSONNEL DISCONTINUES ACTIVITIES FOR THIS SHIFT AND DEPARTS SITE.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 9.0

Per: [Signature]



GEOSYNTec CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 1 of 2

Project: Trail Ridge Landfill SAT. **Phase:** I & II
Project No. FQ2030 **Date: (m/d/y)** FEB. 13 **Year:** 1993
Location: Jacksonville, Florida **Contractor:** National Seal Company

06:45	ARRIVED ONSITE. Sky P. Cloudy. Temp. +46°. Wind Mod.
07:15	N.S.C. ARRIVES ONSITE. ONE SUPT., TWO TECHS. & 6 LABORERS. MET WITH SUPT. & DAYS ACTIVITIES WILL BE TO BEGIN INSTALLATION OF 15' RAIN FLAP AT IA, 2A TIE IN AREA.
07:40	BARCO DUVAL CONTINUES TO REMOVE FINAL 2' SAND COVER WITH BANTAM 744 GRADER. N.S.C. LABORERS REMOVE EXCESS WITH SHOVELS. BARCO BEGINS JUST NORTH OF RISER PIPE & WORKS NORTH. SOUTH OF SAID AREA WAS EXPOSED 2-12-93 & N.S.C. WILL BEGIN 15' FLAP IN THIS AREA.
Note:	SAID FLAP TO BE 60 MIL 10' EITHER SIDE OF RISER PIPE & 40 MIL FOR REMAINDER OF IA, 2A TIE IN AREA
08:30	TRIAL SEAM ON EXT. #19 - TECH #2023, TEMP. #25/285 - PCL = 97/118 Shear = 196/149 (60 to 60 mil)
08:40	N.S.C. TECHS. BEGIN 15' FLAP INSTALLATION IN RISER PIPE AREA. GeoSyntec MONITORS THIS & SAND REMOVAL FOR POSSIBLE DAMAGE TO GEOMEMBRANE. Sky now OVERCAST.
09:10	ADDITIONAL BARCO OPERATOR IS STOCKPILING FRESH SAND TO WORK AREA FOR FUTURE BACKFILL WITH KOMATSU ENDLOADER.
09:20	RECEIVE LEACHATE VOLUME REPORT FROM W.M.N.A FOR 2-13-93. N.S.C. CONTINUES TO PUMP WATER FROM BOTH IA, 2A, & IB, 2B RISER PIPES.
10:10	N.S.C. TECHS. BEGIN INSTALLATION OF 15' 40 MIL FLAP FROM 60 MIL FLAP SOUTH TO IB, 2B.
11:30	N.S.C. BREAKS FOR LUNCH. Sky overcast. Temp +56°. Wind Mod. PICK UP PROCESSED FILM IN MCKLENNY.
12:30	AFT. WORK BEGINS. TWO FT. SAND COVER HAS BEEN

Copy to: Trail Ridge Landfill, Inc. **Total Hrs.:** 10 HRS. **Per:** Jim Khamur



Daily Field Report

Sheet No.: 2 of 2

Project: Trail Ridge Landfill

SAT.

Phase: I & II

Project No. FQ2030

Date: (mo/dy) FEB 13

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

Removed TO CLAY BURM AT NORTH END OF IA, 2A.

FLAP CONTINUES UNDER CLAY BURM BUT DIGGING HAS
CEASED AT THIS POINT. N.S.C. WORK WILL NOT REACH THIS
POINT THIS DATE THERE FOR A DECISION TO CONTINUE OR
STOP WILL BE ADDRESSED ON MON. A.M. 2-15-93.

13:30 P.M. TRIAL SCRM ON EXT. G-19-TECH 2023, Temp. 26.5° /75, Peel 65° /12 Shear 116° /120. 40 to 60 mil.

13:40 N.S.C. TECHS. Resume INST. OF 40 MIL. FLAP FROM RISER TO S. END.
N.S.C. LABORERS Resume HAND CLEANING OF EXPOSED LINER.
GeoSYNTEC OBSERVES NO VISIBLE MACHINE DAMAGE TO LINER.
BARCO Resumes STOCKPILE OF SAND TO WORK AREA.

15:00 BARCO WITH GRADCALL DIGS OUT IA+2A tie INTO IB+2B

15:10 N.S.C. TECHS. BEGIN INST. OF 40 MIL FLAP NORTH OF IA, 2A RISER.

16:06	BARCO PERSONEL (2) CEASE DAYS WORK.
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16:32	N.S.C. CEASES DAYS PRODUCTION WORK. PICKS UP EQUIPMENT
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16:45	N.S.C. & GeoSynTec LEAVE SITE.
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Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 10 HRS.

Per:

Jim Kramer



GEOSYNTec CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No. 1 of 3

Project: Trail Ridge Landfill MONDAY Phase: II ETL
Project No.: FQ2030 Date: (mo/dy) FEB. 15 Year: 1992
Location: Jacksonville, Florida Contractor: National Seal Company

0700 GEOSYNTec ARRIVES ON SITE. SITE CONDITIONS IS CLEAR
SKIES, LIGHT WIND, AND AN AMBIENT TEMPERATURE OF 42°F.
0715 NSC. ON SITE, PERSONNEL BEGINS TO LIESTER (HEAT JACK) THE
15 FT. HDPE 40 MIL FLAP LOCATED ON THE NORTHEAST SECTION
OF PHASE II-A. BARCO ON SITE, PERSONNEL BEGINS TO REMOVE
THE SAND MATERIAL LOCATED ON THE NORTHEASTERN SECTION OF
PHASE II-B USING A GRADE-ALL. BARCO ALSO BEGINS TO
STOCKPILE THE SAND MATERIAL ON THE SOUTHEASTERN SECTION
OF PHASE II-A IN PREPARATION FOR BACK-FILLING THE 15 FT.
FLAP USING A FRONT END LOADER. GEOSYNTec CONTINUES TO
OBSERVE SAND REMOVAL TO OBSERVE THE PRIMARY 60 MIL
LINER SYSTEM FOR A ⁽³⁾ THAT WAS INDICATED AS A SUSPECT
AREA USING THE LEAK SENSOR DEVICE.
0905 BARCO COMPLETES SAND REMOVAL. GEOSYNTec AND NSC. OBSERVE
TECHNICIANS CUTTING THE GEOTEXTILE AND POLY-RET LAYERS TO
EXPOSE THE PRIMARY LINER SYSTEM.
0920 GEOSYNTec AND NSC. OBSERVES THE LINER SYSTEM FINDING
NO VISUAL DAMAGE. MR. PHIL WELCHER (NSC.), INDICATED
THAT THE FUSION WELDED SEAM WILL BE VACUUM TESTED TO
ENSURE NO PASSING LIQUID THRU SEAM BY CUTTING THE
OVERLAP. GEOSYNTec ALSO OBSERVES NO REPAIRS IN AREA.
0935 NSC. COMPLETES VACUUM TESTING ^{THE} FUSION WELDED SEAMS FINDING
PASSING RESULTS. NSC. HAS ALSO COMPLETED EXTRUSION TRIAL
SEAM SAMPLE, SEE INFO. BELOW

TECHNICIAN NO. 2023, EXTREME TEMPERATURES @ 265°C / 275°C

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 9.0

Per: [Signature]



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No. 2 of 3

Project: Trail Ridge Landfill Monday Phase: I & II
Project No.: FQ2030 Date: (mo/dy) FEB. 15 Year: 1992
Location: Jacksonville, Florida Contractor: National Seal Company

EXTRUDER NO. 19, AMBIENT TEMPERATURE 51°F., PEEL MODE @ 110 ppi/100 ppi. SHEAR MODE @ 130 ppi/128 ppi.

1030 NSC. CONTINUES EXTRUSION WELDING THE 15 FT. 40 MIL HDPE FLAP TO THE 60 MIL HDPE PRIMARY LNER SYSTEM LOCATED IN THE NORTHEAST SECTION OF PHASE II-A (NORTH TO SOUTH DIRECTION). GEOSYNTEC CONTINUES TO OBSERVE.

1115 PERSONNEL DISCONTINUES FOR LUNCH.

1215 PERSONNEL RETURNS FROM LUNCH. NSC. PREPARES FOR PM TRIAL SEAM SAMPLE, RESULTS AND INFO. AS FOLLOWS:

TECHNICIAN NO. 2023, EXTRUDER TEMPERATURES @ 265°C/275°C, EXTRUDER NO. 19, AMBIENT TEMPERATURE @ 68°F., PEEL MODE @ 126 ppi/115 ppi, SHEAR MODE 135 ppi/86 ppi.

1305 NSC. CONTINUES TO PREPARE THE 15 FT. FLAP TIE-IN (II-A, II-B EAST SECTION). BAKCO PREPARES TO BACKFILL THE SUSPECT AREA LOCATED IN THE NORTHEASTERN SECTION OF PHASE II-B L UPON COMPLETION OF REPAIRING THE POLY-RET AND GEOTEXTILE LAYERS. GEOSYNTEC CONTINUES TO OBSERVE ACTIVITIES.

1330 BAKCO COMPLETES BACKFILLING AREA USING A FRONTEND LOADER. NSC. CONTINUES TO PREPARE THE FLAP TIE-INS OF PHASES I-A/II-A AND I-B/II-B, INTERSECTION.

1450 NSC. COMPLETES THE TIE-IN OF THE 15 FT. FLAP LOCATED BETWEEN PHASES I/II AND II-A/II-B (EXCLUDING THE TIE-IN OF THE 3 FT. FLAP RUNNING EAST TO WEST BETWEEN PHASES I-A/I-B).

* SEE NOTE.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 9.0

Per: [Signature]



GEOSYNTec CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No. 3 of 3

Project: Trail Ridge Landfill MONDAY Phase: I & II
Project No.: FQ2030 Date: (mo/dy) FEB. 15 Year: 1992
Location: Jacksonville, Florida Contractor: National Seal Company

1505 NSS. BEGINS NON-DESTRUCTIVE (VACUUM) TESTING THE 15 FT. HDPE 40 MIL FLAP TO THE 60 MIL PRIMARY LINER SYSTEM LOCATED AT THE NORTH SECTION OF PHASES I/II TIE-IN WORKING IN THE SOUTH DIRECTION. GEOSYNTec CONTINUES TO OBSERVE TESTING PROCEDURE.

1535 NSS COMPLETES VACUUM TESTING OF THE 15 FT. FLAP LOCATED ON THE NORTHEAST SECTION OF PHASE II-A AND THE CONNECTION OF THE FLAP INTO PHASE II-B FINDING PASSING RESULTS. BARCO BEGINS BACKFILLING THE WEST SIDE OF THE 15 FT. FLAP BEGINNING AT THE NORTH END AND WORKING IT TO THE SOUTH DIRECTION. WMMA PERSONNEL CONTINUES TO REMOVE WOOD DEBRIS PRIOR TO BACKFILLING. GEOSYNTec CONTINUES TO OBSERVE ACTIVITIES.

1600 BARCO COMPLETES BACKFILLING THE NORTH SECTION OF PHASE II-A, WEST SIDE OF FLAP AND CONTRACTORS DISCONTINUES ACTIVITIES FOR THIS SHIFT AND DEPARTS SITE.

*NOTE: LOCATION OF SUSPECT AREA INDICATED BY THE LEAK SENSOR DEVICE IS APPROX. 35 FT. FROM PHASE II-B 15 FT FLAP AND APPROX. 10 FT. SOUTH OF PHASE II-A/II-B CREST. AREA APPROX. 25 FT. DIAMETER.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 9.0

Per: John J. Jilg



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 1 of 2

Project: Trail Ridge Landfill Tues **Phase:** I & II

Project No. FQ2030 **Date:** (moldy) FEB. 16 **Year:** 1993

Location: Jacksonville, Florida **Contractor:** National Seal Company

06:40	ARRIVED ONSITE. Sky P. Cloudy. Temp. +48°. Wind Light
06:50	N.S.C. ARRIVES ONSITE. Met with Supt. & Days Activities will be BACKFILL OF IA, 2A, 15' RAIN FLAP.
07:10	BARCO OPERATOR BACKFILLS IB, 2B RISER PIPE AREA.
Note:	N.S.C. HAS ONE Supt., TWO TECHS & 4 LABORERS ONSITE.
07:40	N.S.C. TECHS & LABORERS FOLD RAIN FLAP WEST OVER BACKFILL SO AS TO BEGIN BACKFILL OF EAST SIDE OF FLAP.
Note:	DUE TO STANDING WATER IN IA, 2A RISER PIPE AREA & LENGTH OF 15' FLAP, (APPROX. 380'), SAID FLAP WILL BE CUT INTO THREE SECTIONS FOR EASE OF BACKFILL WORK. CUTS WILL THEN BE CAPPED & NON-DESTRUCTIVELY TESTED.
09:35	W.M.N.A OPERATOR USES CAT-325 TRACKHOC TO PLACE 2' OF FRESH SAND ON EAST SIDE, NORTH END OF RAIN FLAP.
11:00	TRIAL SEAM ON EXT. #19, TECH. #2023 Temp. 265°/275° Peel 90°/70° Shear 120°/98° (40 to 60 mil.)
11:12	TECH. #2023 & EXT. #19 PATCH MACHINE DAMAGES TO RAIN FLAP IN CENTRAL IB-2B. (1-4x5' PATCH)
	W.M.N.A OPERATOR USES CAT-325 TRACKHOC TO BUILD 3' BERM AT IA, 2A TIE IN. (NORTH SECTION).
	GEOSYNTEC MONITORS WORK AREAS.
	N.S.C. PUMPING WATER FROM IA, 2A, RISER PIPE AREA.
12:05	N.S.C. BREAKS FOR LUNCH. Sky overcast. Temp. +77°. Wind Light.
13:00	AFT. WORK BEGINS. N.S.C. TECH. #2024 V-BOXES A.M. REPAIR.
	W.M.N.A. RESUMES BUILDING OF 3' BERM, N. IA, 2A TIE IN.
	BARCO OPERATOR STOCKPILES SAND TO WORK AREA.
13:40	W.M.N.A BEGINS 2' OF FRESH SAND PLACEMENT, CENTRAL IA, 2A.

Copy to: Trail Ridge Landfill, Inc. **Total Hrs.:** 9.5 hrs. **Per:** Jim Thamer



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 2 of 2

Project: Trail Ridge Landfill

Tues.

Phase: I & II

Project No. FQ2030

Date: (mo/dy) FEB. 16

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

13:40

N.S.C. TECHS. & LABORERS HAND SHOVEL SAND IN CRITICAL AREAS.

14:32

LIGHT RAIN BEGINS. W.M.N.A. USES D-6 DOZER TO DRESS UP EAST SIDE OF 1A, 2A FLAP.

14:45

RAIN CEASES. WORK CONTINUES.

15:45

MODERATE RAIN BEGINS.

16:04

RAIN HEAVIER. N.S.C. CEASES DAYS PRODUCTION WORK.

16:15

N.S.C. & GEOSYNTEC LEAVE SITE.

Note:

BARCO OPERATOR TO REMAIN ONSITE TO CONTINUE STOCKPILE OF SAND FOR 2-17-93 BACKFILL.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 9.5 HRS.

Per:

Jim Kramer



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 1 of 2

Project: Trail Ridge Landfill

WEO.

Phase: I & II

Project No. FQ2030

Date: (m/d/y) Feb. 17

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

06:45	ARRIVED ONSITE. SKY OVERCAST. TEMP. +56°. WIND LIGHT.
07:00	N.S.C. ARRIVES ONSITE. ONE SUPT., TWO TECHS. & 2 LABORERS. MET WITH SUPT. & DAYS WORK SCHEDULE IS TO COMPLETE BACKFILL OF IA, 2A RAIN FLAP & CHECK TWO SUSPECT AREAS IN 2-C.
07:20	W.M.N.A. OPERATOR RESUMES BACKFILL OF SOUTH END OF ABOVE NAMED FLAP. BARCO OPERATOR STOCKPILES SAND TO WORK AREA WITH KOMATSU END LOADER.
	N.S.C. LABORERS HAND SHOVEL SAND IN CRITICAL AREAS.
08:35	TRIAL SEAM ON EXT. #6-19 TECH. #2023 TEMPS. ²⁶⁵ 1275, PEEL ⁷⁹ 1645, SHEAR ¹⁰⁷ 1110 (40 to 40 mi.)
08:50	N.S.C. TECHS. & EXT. #6-19 BEGIN CAPS ON TWO SLICES IN RAIN FLAP CUT TO PROPERLY BACKFILL SAME.
	RECEIVE LEACHATE VOLUME REPORTS FOR 2-1642-17-93.
09:47	W.M.N.A. COMPLETES BACKFILL OF 4' BURN EAST OF FLAP.
10:39	N.S.C. TECHS. COMPLETE CAPS OVER SLICES IN IA, 2A RAIN FLAP & BEGIN TIE INTO IB, 2B FLAP.
	N.S.C. TECH. #2024 V-BOXES ABOVE NAMED CAPS.
11:18	N.S.C. COMPLETES IA, 2A FLAP TIE INTO IB, 2B FLAP.
11:25	N.S.C. TECH. #2024 V-BOXES SAME.
11:33	N.S.C. BREAKS FOR LUNCH. SKY P. CLOUDY. TEMP. +60°. WIND MOD.
12:40	AFT. WORK BEGINS. BARCO OPERATOR USES BANTAM GRADE-ALL TO EXCAVATE SUSPECT LEAK AREAS FOUND BY LEAK DETECTOR IN 2-C AT I-C, 2C RISER PIPE AREA.
13:00	N.S.C. TECHS. & LABORERS HAND SHOVEL FINAL 2 TO 3". GEOSYNTEC MONITORS EXCAVATION PROCESS.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 9 HRS

Per: Jim Kramer



GEOSYNTEC CONSULTANTS
Boynton Beach, Florida



Trail Ridge Landfill, Inc.

Daily Field Report

Sheet No.: 2 of 2

Project: Trail Ridge Landfill

Web. Phase: I & II

Project No. FQ2030

Date: (m/d/y) Feb. 17

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

13:40 PRIMARY LINER SYSTEM IN SUSPECT AREAS NOW EXPOSED & FREE OF WATER & OTHER DEBRIS. GeoSYNTEC OBSERVES NO VISIBLE ^{LEAKS}/HOLES IN THESE AREAS.

14:05 N.S.C. TECHS. REPLACE GEONET & GEOTEXTILE IN ABOVE NAMED AREAS.

14:30 N.S.C. COMPLETES ALL REPAIRS & OTHER KNOWN WORK. N.S.C. PICKS UP EQUIPMENT & LOADS TRAILER.

14:00 BARCO OPERATOR BACKFILLS SUSPECT AREA HOLES.

Note: See PHOTO DOCUMENTATION FOR LOCATIONS OF ABOVE NAMED SUSPECT AREAS AS 2-C RISER PIPE IS VISIBLE.

14:00 COORDINATE ALL NECESSARY PAPERWORK WITH N.S.C. SUPT.

WASTE MANAGEMENT, N.S.C. SUPT. & GeoSYNTEC MEET AS P.R. JOBS END.

14:45 N.S.C. & GeoSYNTEC LEAVE SITE.

15:00 (OFFSITE) BRING PAPERWORK TO CURRENT STATUS.

15:45 CEASE DAYS WORK.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 9 HRS.

Per: Jim Kramer



Daily Field Report

Sheet No.: / of /

Project: Trail Ridge Landfill

THURS.

Phase: I & II

Project No. FQ2030

Date: (mo/dy) FEB 18

Year: 1993

Location: Jacksonville, Florida

Contractor: National Seal Company

07:30

MEET WITH JOHN GILLYARD (GeoSynTec) TO
COORDINATE GeoSynTec PAPERWORK.

Note:

ALL OF THE UNDERSIGNED'S PAPERWORK & FILM IS
TURNED OVER TO MR. GILLYARD.

09:30

Детов.

Copy to: Trail Ridge Landfill, Inc.

Total Hrs.: 2 HRS

Per: Jim Kramer



England-Thims & Miller, Inc.

Consulting & Design Engineers
3131 St. Johns Bluff Road So Jacksonville, FL 32246

DATE	INVOICE	AMOUNT
	Permit	
	91-156-2	

DATE 3-4-93

63-4
630

8842

PAY TWO HUNDRED FIFTY AND 00/100-----DOLLARS

CHECK
AMOUNT

TO
THE ORDER
OF
Florida Department of Environmental
Regulation

\$ **250.00

BARNETT BANK
JACKSONVILLE, FLORIDA

ENGLAND - THIMS & MILLER, INC.

Melinda C. Thims
[Signature]

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

206112

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from ENGLAND - THIMS & MILLER, INC Date 3-5-93
Address 3131 St Johns Bluff Rd, S Jax FL 32246 Dollars \$ 250.00
Applicant Name & Address TRAIL RIDGE LANDFILL, INC
P. O. BOX 6987 JAX FL 32236
Source of Revenue Trail Ridge Landfill Phasing Modification
Revenue Code 001055 ck 8842 Application Number SC 16-227169
By Gloria Badger



England-Thims & Miller, Inc.

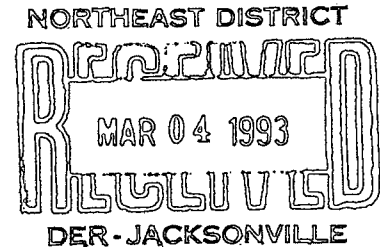
Consulting & Design Engineers
3131 St. Johns Bluff Road So. Jacksonville, FL 32216
904-642-8990

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.

March 3, 1993

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



Reference: Trail Ridge Landfill, Inc.
Permit No. SC16-184444 (Modification Request)
ET&M No. E91-156-3

Dear Ms. Nogas:

In accordance with Rule 17-4.080(2), F.A.C. and on behalf of Trail Ridge Landfill, Inc., we hereby request a minor modification of the subject permit. Attached is a check for \$250.00 to cover the modification fee (Rule 17-4.050(4)(p)5., F.A.C.).

This request includes the following:

1. The phasing sequence of operation of Phases I and II be modified to the following sequence: Phase IA, Phase IB, Phase IIA, Phase IIB, Phase IC and Phase IIC. This sequence of phasing is shown on the attached Drawing No. 9. This modification maximizes separation of leachate and stormwater.
2. According to Specific Condition No. 38.b.(2) of the subject permit, "Initial sampling and analysis of compliance wells for each additional phase shall be conducted and the analytical results submitted to (the) Department sixty (60) days prior to acceptance of waste in that phase". The wells for Phase II (B-16S and B-17S, I, D) were sampled, and analyzed, with the results submitted to the Department on February 26, 1993. We request that for Phase II, the condition be modified to require submittal of results 20 days prior to acceptance of waste in that phase.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

ENGLAND, THIMS & MILLER, INC.


Douglas C. Miller, P.E.
Vice President

cc: Bill Preston
Tom Nelson
Jim Lukens

Attachment: Drawing No. 9
Modification Fee

SAFE DRINKING WATER ANALYTE SHEET

LABORATORY: WMI Environmental Monitoring Labs, Inc.
 CERTIFICATION NUMBER: 87367

PAGE 1

DATE:

MARCH 2, 1993

Supercedes previous analyte sheet dated: -

MICROBIOLOGY

METHODS

___ Membrane Filter
 ___ Multiple Tube Fermentation
 ___ MMO-MUG
 ___ P/A
 ___ Fecal/E.Coli

X indicates ANALYTE CERTIFIED

PRIMARY INORGANIC

AA(FL)

AA(FUR)

ICP

OTHER

1. METALS

___ ANTIMONY
 X ARSENIC 206.2 200.7
 ___ BERYLLIUM
 X BARIUM 208
 X CADMIUM 213.2
 X CHROMIUM 200.7
 X LEAD 239.2
 X MERCURY 245.1
 ___ NICKEL
 X SELENIUM 270.2
 X SODIUM 200.7
 ___ THALLIUM

2. LEAD AND COPPER

X LEAD 239.2
 X COPPER 200.7

3. NITRATE AND NITRITE

X NITRATE 353.1/300.0
 X NITRITE 353.1/300.0
 ___ TOTAL NO2-NO3

4. CYANIDE

___ CYANIDE

5. FLUORIDE

X FLUORIDE 340.2

6. ASBESTOS

___ ASBESTOS

SECONDARY INORGANIC

AA(FL)

AA(FUR)

ICP

OTHER

___ ALUMINUM
 X CHLORIDE 325.2/300.0
 ___ COLOR
 X COPPER 200.7
 X FLUORIDE 340.2
 ___ FOAMING AGENTS
 X IRON 200.7
 X MANGANESE 200.7
 ___ ODOR
 X PH 150.1
 X SILVER 200.7
 X TDS 160.1
 X ZINC 200.7

PESTICIDES AND PCB'S

GC

GC/MS

HPLC

1. INSECTICIDES

___ ALACHLOR
 ___ ATRAZINE
 X CHLORDANE 608
 X ENDRIN 608,509A
 X HEPTACHLOR 608
 ___ HEPTACHLOR EPOXIDE
 X LINDANE 608,509A
 X METHOXYCHLOR 608,509A
 X TOXAPHENE 608,509A
 ___ HEXACHLORO BENZENE
 ___ HEXACHLOROCYCLOPENTADIENE
 ___ SIMAZINE

2. HERBICIDES

X 2,4-D 509B
 ___ PENTACHLOROPHENOL
 X 2,4,5-TP (SILVEX) 509B
 ___ DALAPON
 ___ DINOSEB
 ___ PICLORAM

3. CARBAMATES

___ CARBOFURAN
 ___ OXAMYL (VYDATE)

4. DISINFECTANT BY-PRODUCTS/VOC'S

X 1,2-DIBROMO-3-CHLOROPROPANE 504
 X ETHYLENE DIBROMIDE 504

5. MISCELLANEOUS SOC'S

___ ENDOTHALL
 ___ GLYPHOSATE
 ___ DIQUAT

6. PCB'S

X DECACHLOROBIPHENYL 608

7. ADIPATES AND PHTHALATES

___ DI(2-ETHYLHEXYL) ADIPATE
 ___ DI(2-ETHYLHEXYL) PHTHALATE

8. PAH

___ BENZO(a)PYRENE

SAFE DRINKING WATER ANALYTE SHEET

PAGE 2

LABORATORY: WMI Environmental Monitoring Labs, Inc.

CERTIFICATION NUMBER: 87367

DATE:

MARCH 2, 1993

Supersedes previous analyte sheet dated: -

OTHER REGULATED CONTAMINANTS

1. VOLATILE ORGANIC COMPOUNDS	GC	GC/MS
X TRICHLOROETHYLENE	_____	524.2
X TETRACHLOROETHYLENE	_____	524.2
X CARBON TETRACHLORIDE	_____	524.2
X VINYL CHLORIDE	_____	524.2
X 1,1,1-TRICHLOROETHANE	_____	524.2
X 1,2-DICHLOROETHANE	_____	524.2
X BENZENE	_____	524.2
X p-DICHLOROBENZENE	_____	524.2
X 1,1-DICHLOROETHYLENE	_____	524.2
X cis-1,2-DICHLOROETHYLENE	_____	524.2
X 1,2-DICHLOROPROPANE	_____	524.2
X ETHYLBENZENE	_____	524.2
X CHLOROBENZENE	_____	524.2
X o-DICHLOROBENZENE	_____	524.2
X STYRENE	_____	524.2
X TOLUENE	_____	524.2
X trans-1,2-DICHLOROETHYLENE	_____	524.2
X TOTAL XYLENES	_____	524.2
X DICHLOROMETHANE	_____	524.2
X 1,2,4-TRICHLOROBENZENE	_____	625
X 1,1,2-TRICHLOROETHANE	_____	524.2

2. TRIHALOMETHANES

X BROMODICHLOROMETHANE	_____	524.2
X BROMOFORM (TRIBROMOMETHANE)	_____	524.2
X CHLORODIBROMOMETHANE	_____	524.2
X CHLOROFORM (TRICHLOROMETHANE)	_____	524.2
X TOTAL TRIHALOMETHANES	_____	524.2

GROUP I UNREGULATED CONTAMINANTS

1. CARBAMATES	GC	GC/MS	HPLC
ALDICARB	_____	_____	_____
ALDICARB SULFOXIDE	_____	_____	_____
ALDICARB SULFONE	_____	_____	_____
CARBARYL	_____	_____	_____
3-HYDROXYCARBOFURAN	_____	_____	_____
METHOMYL	_____	_____	_____

2. HERBICIDES

X ALDRIN	608	_____	_____
BUTACHLOR	_____	_____	_____
DICAMBA	_____	_____	_____
X DIELDRIN	608	_____	_____
METOLACHLOR	_____	_____	_____
METRIBUZIN	_____	_____	_____
PROPACHLOR	_____	_____	_____

X indicates ANALYTE CERTIFIED

GROUP II UNREGULATED CONTAMINANTS

1. PURGEABLES	GC	GC/MS
X BROMOBENZENE	_____	524.2
X BROMODICHLOROMETHANE	_____	524.2
X BROMOFORM	_____	524.2
X BROMOMETHANE	_____	524.2
X CHLOROETHANE	_____	524.2
X CHLOROFORM	_____	524.2
X CHLOROMETHANE	_____	524.2
X DIBROMOCHLOROMETHANE	_____	524.2
X DICHLORODIFLUOROMETHANE	_____	524.2
p-CHLOROTOLUENE	_____	_____
DIBROMOMETHANE	_____	_____
X 1,1-DICHLOROETHANE	_____	524.2
X trans-1,3-DICHLOROPROPENE	_____	524.2
X cis-1,2-DICHLOROETHYLENE	_____	524.2
X 1,3-DICHLOROPROPANE	_____	524.2
X cis-1,3-DICHLOROPROPENE	_____	524.2
X 2,2-DICHLOROPROPANE	_____	524.2
X 1,1,2-TRICHLOROETHANE	_____	524.2
X TRICHLOROFLUOROMETHANE	_____	524.2
X 1,2,3-TRICHLOROPROPANE	_____	524.2
X m-DICHLOROBENZENE	_____	524.2
X 1,1,1,2-TETRACHLOROETHANE	_____	524.2
X METHYL tert-BUTYL ETHER	_____	524.2
X 1,1-DICHLOROPROPENE	_____	524.2
X o-CHLOROTOLUENE	_____	524.2

2. BASE/NEUTRAL EXTRACTABLES

X BUTYL BENZYL PHTHALATE	_____	625
X DI-n-BUTYL PHTHALATE	_____	625
X DIETHYL PHTHALATE	_____	625
X DIMETHYL PHTHALATE	_____	625
X 2,4-DINITROTOLUENE	_____	625
X DI-n-OCTYL PHTHALATE	_____	625
X ISOPHORONE	_____	625

3. ACID EXTRACTABLES

X 2-CHLOROPHENOL	_____	625
X 2-METHYL-4,6-DINITROPHENOL	_____	625
X PHENOL	_____	625
X 2,4,6-TRICHLOROPHENOL	_____	625

DIOXIN

2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN _____

LABORATORY: WMX ENVIRONMENTAL LAB, INC
 CERTIFICATION NUMBER: E87190
 DATE: June 14, 1993

PAGE 1

METALS	AA (FL)	AA (FUR)	ICP	HYDRIDE	OTHER
X ALUMINUM			200.7		
X ANTIMONY		204.2	200.7		
X ARSENIC		206.2	200.7		
X BARIUM			200.7		
X BERYLLIUM			200.7		
X BORON			200.7		
X CADMIUM		213.2	200.7		
X CALCIUM			200.7		
X CHROMIUM		218.2	200.7		
X COBALT			200.7		
X COPPER		220.2	200.7		
GOLD					
IRIDIUM					
IRON			200.7		
X LEAD		239.2	200.7		
X MAGNESIUM			200.7		
X MANGANESE			200.7		
X MERCURY					245.1
X MOLYBDENUM			200.7		
X NICKEL			200.7		
OSMIUM					
PALLADIUM					
PLATINUM					
X POTASSIUM			200.7		
RUTHENIUM					
RHODIUM					
X SELENIUM		270.2	200.7		
SILICON					
X SILVER			200.7		
X SODIUM			200.7		
X THALLIUM		279.2	200.7		
X TIN			200.7		
TITANIUM					
X VANADIUM			200.7		
X ZINC			200.7		

NUTRIENTS	METHODS
X NH4-N	350.1
X TKN	351.1
X NO3-N	352.1
X NO3-NO2	353.2
X NO2-N	354.1
X ORGANIC N	CALCN (TKN-NH4)
UN-IONIZED NH4	
ORTHOPHOSPHATE-P	
X TOTAL PHOSPHORUS	365.4

DEMANDS	METHODS
5 DAY BOD	
5 DAY CARBON BOD	
X COD	410.4 HACH
X TOC	415.1

GENERAL CATEGORY I	METHODS
X ACIDITY	305.1
ALKALINITY	
BROMINE	
BROMIDE	
BROMATES	
X CALCIUM	200.7
X CHLORIDE	325.1/TRAACS
COLOR	
COPPER	
X FLUORIDE	340.2
X HARDNESS	SM314B
X PH	150.1
X IRON	200.7
X MAGNESIUM	200.7
X MANGANESE	200.7
X TOTAL RESIDUE	160.3
X FILTERABLE RESIDUE	160.1
X NON-FILTER RESIDUE	160.2
X SETTLEABLE RESIDUE	160.5
X VOLATILE RESIDUE	160.4
X SULFATE	375.2/TRAACS
X NITRATE	353.2
TURBIDITY	
X ZINC	200.7

GENERAL CATEGORY II	METHODS
RESIDUAL CHLORIDE	
X TOTAL CYANIDE	335.3
X CYANIDE TO CHLORINATION	335.1
X OIL & GREASE	413.1
DISSOLVED OXYGEN	
X TOTAL PHENOLS	420.2
ELEMENTAL PHOSPHORUS	
DISSOLVED SILICA	
X SPECIFIC CONDUCTANCE	120.1
SULFIDE	
SULFITE	
SURFACTANTS	
TEMPERATURE	
TOTAL DISSOLVED GASES	
TRANSPARENCY	
CORROSIVITY	
ODOR	
TASTE	
SALINITY	

HAZARDOUS WASTE	METHODS
CHARACTERIZATIONS	
WASTE IGNITABILITY	
WASTE CORROSIVITY	
WASTE REACTIVITY	
EP-TOX. EXTRACTION	

MICROBIOLOGY

DRINKING WATER

___ TOTAL COLIFORM

___ FECAL COLIFORM

MF

MPN

ENVIRONMENTAL WATER

___ FECAL COLIFORM

___ FECAL IN CL

___ TOTAL COLIFORM

___ TOTAL IN CL

___ FECAL STREP

MF

MPN

EXTRACTABLE ORGANICS

	GC	MS	LC	HW
X ACENAPHTHENE	___	625	___	8270
X ACENAPHTHYLENE	___	625	___	8270
X ANTHRACENE	___	625	___	8270
X BENZIDINE	___	625	___	8270
X BENZO(A)ANTHRACENE	___	625	___	8270
___ BENZOIC ACID	___	___	___	___
X BENZO(A)PYRENE	___	625	___	8270
X BENZO(B)FLUORANTHENE	___	625	___	8270
X BENZO(G,H,I)PERYLENE	___	625	___	8270
X BENZO(K)FLUORANTHENE	___	625	___	8270
X BENZYL BUTYL PHTHALATE	___	625	___	8270
___ BIPHENYL	___	___	___	___
X BIS(2-CHLOROETHOXY)METHANE	___	625	___	8270
X BIS(2-CHLOROETHYL)ETHER	___	625	___	8270
___ BIS(2-ETHYLHEXYL)PHTHALATE	___	625	___	8270
X 4-BROMOPHENYLPHENYL ETHER	___	625	___	8270
___ CARBAZOLE	___	___	___	___
X 4-CHLORO-3-METHYLPHENOL	___	625	___	8270
X 2-CHLORONAPHTHALENE	___	625	___	8270
X 2-CHLOROPHENOL	___	625	___	8270
X 4-CHLOROPHENYLPHENYL ETHER	___	625	___	8270
X CHRYSENE	___	625	___	8270
___ p-CYME	___	___	___	___
___ n-DECANE	___	___	___	___
X DIBENZO(A,H)ANTHRACENE	___	625	___	8270
___ DIBENZOFURAN	___	___	___	___
___ DIBENZOTHIOPHENE	___	___	___	___
X 1,2-DICHLOROBENZENE	___	625	___	8270
X 1,3-DICHLOROBENZENE	___	625	___	8270
X 1,4-DICHLOROBENZENE	___	625	___	8270
X 3,3'-DICHLOROBENZIDENE	___	625	___	8270
X 2,4-DICHLOROPHENOL	___	625	___	8270
X DIETHYL PHTHALATE	___	625	___	8270
X 2,4-DIMETHYLPHENOL	___	625	___	8270
X DIMETHYL PHTHALATE	___	625	___	8270
X DI-N-BUTYL PHTHALATE	___	625	___	8270
X DI-N-OCTYL PHTHALATE	___	625	___	8270
X 2,4-DINITROPENOL	___	625	___	8270
X 2,4-DINITROTOLUENE	___	625	___	8270
X 2,6-DINITROTOLUENE	___	625	___	8270
___ DIPHENYLAMINE	___	___	___	___
___ DIPHENYL ETHER	___	___	___	___
___ 1,2-DIPHENYLHYDRAZINE	___	___	___	___

	GC	MS	LC	HW
___ n-DOCOSANE	___	___	___	___
___ n-DOECANE	___	___	___	___
___ n-EICOSANE	___	___	___	___
X FLUORANTHENE	___	625	___	8270
X FLUORENE	___	625	___	8270
X HEXACHLOROBENZENE	___	625	___	8270
X HEXACHLOROBUTADIENE	___	625	___	8270
X HEXACHLOROCYCLOPENTADIENE	___	625	___	8270
X HEXACHLOROETHANE	___	625	___	8270
___ n-HEXACOSANE	___	___	___	___
___ n-HEXADECANE	___	___	___	___
___ HEXANOIC ACID	___	___	___	___
X IDENO (1,2,3-cd)PYRENE	___	625	___	8270
X ISOPHORONE	___	625	___	8270
X 2-METHYL-4,6-DINITROPHENOL	___	625	___	8270
X NAPHTHALENE	___	625	___	8270
___ B-NAPHTHYLAMINE	___	___	___	___
X NITROBENZENE	___	625	___	8270
X 2-NITROPHENOL	___	625	___	8270
X 4-NITROPHENOL	___	625	___	8270
X N-NITROSODIMETHYLAMINE	___	625	___	8270
X N-NITROSODI-N-PROPYLAMINE	___	625	___	8270
X N-NITROSODIPHENYLAMINE	___	625	___	8270
___ n-OCTACOSANE	___	___	___	___
___ n-OCTADECANE	___	___	___	___
___ 2,2-OXYBIS(1-CHLOROPROPANE)	___	___	___	___
X PENTACHLOROPHENOL	___	625	___	8270
X PHENANTHRENE	___	625	___	8270
X PHENOL	___	625	___	8270
___ a-PICOLINE	___	___	___	___
X PYRENE	___	625	___	8270
___ STYRENE	___	___	___	___
___ a-TERPINEOL	___	___	___	___
___ 2,3,7,8-TETRACHLORO-DIBENZO	___	___	___	___
___ -p-DIOXIN (2,3,7,8-TCDD)	___	___	___	___
___ n-TETRACOSANE	___	___	___	___
___ TOLUENE	___	___	___	___
___ n-TRIACONTANE	___	___	___	___
___ 1,2,3-TRICHLOROBENZENE	___	___	___	___
X 1,2,4-TRICHLOROBENZENE	___	625	___	8270
___ 2,3,6-TRICHLOROPHENOL	___	___	___	___
___ 2,4,5-TRICHLOROPHENOL	___	___	___	___
X 2,4,6-TRICHLOROPHENOL	___	625	___	8270

PESTICIDES-HERBICIDES-PCB'S

	GC	MS	HW
X ALDRIN	608		
X alpha-BHC	608		
X beta-BHC	608		
X delta-BHC	608		
X gamma-BHC (Lindane)	608		
CHLORDANE			
CHLOROBENZILATE			
CHLORONEB			
CHLOROPROPYLATE			
CHLOROTHALONIL			
DCPA			
X 4,4'-DDD	608		
X 4,4'-DDE	608		
X 4,4'-DDT	608		
DIBROMOCHLOROPROPANE			
DICHLORAN			
X DIELDRIN	608		
X ENDOSULFAN I	608		
X ENDOSULFAN II	608		
X ENDOSULFAN SULFATE	608		
X ENDRIN	608		
X ENDRIN ALDEHYDE	608		
ETRICIAZOLE			
X HEPTACHLOR	608		
X HEPTACHLOR EPOXIDE	608		
METHOXYCHLOR			
PCNB			
PERMETHRIN			
PROPACHLOR			
X TOXAPHENE	608		
AZINPHOS METHYL			
DEMETON-O			
DEMETON-S			
DIAZINON			
DIOXATHION			
DISULFOTON			
EPN			
ETHION			
MALATHION			
PARATHION ETHYL			
PARATHION METHYL			
TERBUFOS			
X 2,4-D	SM509B		
2,4-DB			
DALAPON			
DICAMBA			
DICHLORPROP			
DINOSEB			
X 2,4,5-T	SM509B		
X 2,4,5-TP	SM509B		
MCPA			
MCPD			

	GC	MS	HW
CAPTAN			
CARBOPHENOTHION			
DICOFOL			
ISODRIN			
MIREX			
X PCB-1016	608		
X PCB-1221	608		
X PCB-1232	608		
X PCB-1242	608		
X PCB-1248	608		
X PCB-1254	608		
X PCB-1260	608		
PERTHANE			
STROBANE			
TRIFLURALIN			
TRIFLURALIN			
CHLOROPICRIN			
ETHYLENEDIBROMIDE (EDB)			
ETHYLENEDIBROMIDE (EDB)			
AMETRYN			
ATRAZON			
ATRAZINE			
PROMETON			
PROMETRYNE			
PROPAZINE			
SECBUMETON			
SIMAZINE			
TERBUTHYLAZINE			
TERBUTRYN			
ASPON			
BOLSTAR			
CHLORPYRIFOS			
CHLORPYRIFOS METHYL			
COUMAPHOS			
DICHLOFENTHION			
DICHLORVOS			
ETHOPROP			
FAMPHUR			
FENITROTHION			
FENSULFOTHION			
FENTHION			
FONOPHUS			
MERPHOS			
MEVINPHOS			
NALED			
PARATHION METHYL			
PHORATE			
PHOSMET			
RONNEL			
STIROFOS			
THIONAZIN			
TOKUTHION			
TRICHLORONATE			

PESTICIDES-HERBICIDES-PCB'S (continued)

	GC	MS	LC	HW
— BENFLURALIN	—	—	—	—
— ETHALFLURALIN	—	—	—	—
— ISOPROPALIN	—	—	—	—
— PROPLURALIN	—	—	—	—
— TRIFLURALIN	—	—	—	—
— PROPLURALIN	—	—	—	—
— CYANAZINE	—	—	—	—
— STIROFOS	—	—	—	—
— BROMACIL	—	—	—	—
— DEET	—	—	—	—
— HEXANINONE	—	—	—	—
— METRIBUZIN	—	—	—	—
— TERBACIL	—	—	—	—
— TRIADIMEFON	—	—	—	—
— TRICYCLAZOLE	—	—	—	—
— TRIADIMEFON	—	—	—	—
— ALACHLOR	—	—	—	—
— BUTACHLOR	—	—	—	—
— DIPHENAMID	—	—	—	—
— FLURIDONE	—	—	—	—
— LETHANE	—	—	—	—
— NORFLURAZON	—	—	—	—
— LETHANE	—	—	—	—
— BENOMYL	—	—	—	—
— AMINOCARB	—	—	—	—
— BARBAN	—	—	—	—
— CARBARYL	—	—	—	—
— CARBOFURAN	—	—	—	—
— CHLOROPROPHAM	—	—	—	—
— DIURON	—	—	—	—
— FENURON	—	—	—	—
— FENURON-TCA	—	—	—	—
— FLUOMETURON	—	—	—	—
— LINURON	—	—	—	—
— METHIOCARB	—	—	—	—
— METHOMYL	—	—	—	—
— MEXACARBATE	—	—	—	—
— MONURON	—	—	—	—
— MONURON-TCA	—	—	—	—
— NAPROPAMIDE	—	—	—	—
— NEBURON	—	—	—	—
— OXAMYL	—	—	—	—
— PROPANIL	—	—	—	—
— PROPHAM	—	—	—	—
— PROPOXUR	—	—	—	—
— SIDURON	—	—	—	—
— SWEP	—	—	—	—
— VACOR	—	—	—	—
— BIPHENYL	—	—	—	—
— o-PHENYLPHENOL	—	—	—	—
— BENTAZON	—	—	—	—
— PICLORAM	—	—	—	—

PURGEABLE ORGANICS	GC	MS	LC	HW
— ACETONE	—	—	—	—
X ACROLEIN	603	—	—	8240
X ACRYLONITRILE	603	—	—	8240
X BENZENE	602	624	—	8240
X BENZYLCHLORIDE	—	624	—	8240
X BROMODICHLOROMETHANE	601	624	—	8240
X BROMOETHANE	—	624	—	8240
X BROMOFORM	601	624	—	8240
X BROMOMETHANE	601	624	—	8240
X CARBON TETRACHLORIDE	601	624	—	8240
X CHLOROETHANE	601	624	—	8240
X CHLOROBENZENE	601/602	624	—	8240
X 2-CHLOROETHYL VINYL ETHER	601	624	—	8240
X CHLOROFORM	601	624	—	8240
X CHLOROMETHANE	601	624	—	8240
X DIBROMOCHLOROBENZENE	—	624	—	8240
X DIBROMOCHLOROMETHANE	601	624	—	8240
X 1,2-DIBROMOETHANE (EDB)	—	624	—	8240
X DICHLOROBENZENE	—	624	—	8240
X 1,2-DICHLOROBENZENE	601/602	624	—	8240
X 1,3-DICHLOROBENZENE	601/602	624	—	8240
X 1,4-DICHLOROBENZENE	601/602	624	—	8240
X DICHLORODIFLUOROMETHANE	601	—	—	—
X 1,1-DICHLOROETHANE	601	624	—	8240
X 1,2-DICHLOROETHANE	601	624	—	8240
X 1,1-DICHLOROETHENE	601	624	—	8240
X 1,2-DICHLOROPROPANE	601	624	—	8240
X C-1,3-DICHLOROPROPENE	601	624	—	8240
X T-1,3-DICHLOROPROPENE	601	624	—	8240
— DIETHYL ETHER	—	—	—	—
— p-DIOXANE	—	—	—	—
— EPICHLOROHYDRIN	—	—	—	—
X ETHYLBENZENE	602	624	—	8240
X METHYLENE CHLORIDE	601	624	—	8240
— METHYL ETHYL KETONE	—	—	—	—
X 1,1,2,2-TETRACHLOROETHANE	601	624	—	8240
X TETRACHLOROETHENE	601	624	—	8240
— n-TETRADECANE	—	—	—	—
X TOLUENE	602	624	—	8240
X 1,1,1-TRICHLOROETHANE	601	624	—	8240
X 1,1,2-TRICHLOROETHANE	601	624	—	8240
X TRICHLOROETHENE	601	624	—	8240
X TRICHLOROFLUOROMETHANE	601	624	—	8240
X VINYL CHLORIDE	601	624	—	8240

NAME: WMX ENVIRONMENTAL LAB, INC

DATE: June 14, 1993

BIOASSAY

ACUTE REFERENCE TOXICANT

ACUTE

FRESHWATER ORGANISMS

METHODS

ACUTE

SALTWATER ORGANISMS

METHODS

CHRONIC REFERENCE TOXICANT

CHRONIC

FRESHWATER ORGANISMS

METHODS

CHRONIC

SALTWATER ORGANISMS

METHODS

MOBILE LABORATORY

UNIT #1

UNIT #2

SERIAL NUMBER

MAKE/MODEL

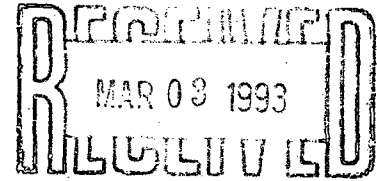
CATEGORIES/TESTS

Trail Ridge Landfill, Inc.
5110 U.S. Highway 301
P.O. Box 548
Baldwin, Florida 32234
904/289-9100



A Waste Management Company

NORTHEAST DISTRICT



DER-JACKSONVILLE

March 1, 1993

Ms. Mary Nogas
Florida Department of Environmental Regulation
7825 Bay Meadows Way
Suite B200
Jacksonville, FL 32256-7577

Re: Hours of Operation at Trail Ridge

Dear Ms. Nogas,

I have just received the attached notice from the City on a change to the Saturday operating hours at Trail Ridge Landfill. Unless your department objects, I will comply as directed by the owner.

Sincerely,

Tom Nelson
General Manager

TN:mm
attachment

Equal Opportunity Employer

DEPARTMENT OF PUBLIC UTILITIES
Solid Waste Disposal DivisionMEMORANDUM

TO: Tom Nelson
Trail Ridge Landfill

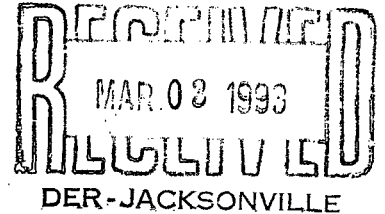
FROM: William C. Boyle
Manager

DATE: February 25, 1993

SUBJECT: Hours of Operation

Chris Pearson

NORTHEAST DISTRICT



In response to your telephone conversation with Scott Kelly, we accept the proposed change in operation hours for Saturday. As we understand, the hours will change to 6:00 am to 1:00 pm. In order to have an appropriate time of notification to our haulers and citizens, this change will not take place until March 6, 1993.

If you have any questions, please contact me at 630-0973.

:lsm

cc: Chris Pearson
Gene Howell
Rachel Welsh
Rick Harvey
Tim Ghee
Reading File
LOFS

FAX		DATE	2/25	# PGS	1
TO	Tom Nelson				
CO					
FROM	Bill Boyle				
CO					
MESSAGE		FAX#	289-9013		
		PHONE#	630-0973		
		AVERY FAX-5			



AREA CODE 904 / 630-0973 / 37-2 WEST 1st STREET / JACKSONVILLE, FLORIDA 32206



England-Thims & Miller, Inc.

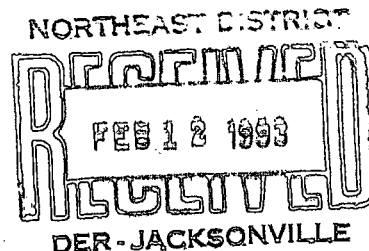
Consulting & Design Engineers
3131 St. Johns Bluff Road So. Jacksonville, FL 32216
904-642-8990

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 8, 1993

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



Reference: Trail Ridge Landfill - Phase IC
FDER Permit No. SC16-184444
ET&M No. E91-156-3 (Certification File)

Dear Ms. Nogas:

Please find herewith the Certification of Construction Completion for the Trail Ridge Landfill Phase IC in accordance with specific condition #19 of the subject permit. Phase IC As-Built Surveys, Supplemental Liner and Soils Quality Assurance documentation are enclosed. Phase IA, Phase IB and the Phase I Stormwater Management System and Leachate Storage Facility were previously certified on May 15, 1992, June 18, 1992 and September 15, 1992, respectively. No additional stormwater facilities are associated with Phase IC.

Please note that the majority of the Phase II liner and soils quality assurance documentation is included with the Phase IC submittal. However, Phase II is not a part of this certification.

Subject to your site inspection, Trail Ridge Landfill, Inc. respectfully requests your written authorization to accept Class I Solid Waste in Phase IC of the Trail Ridge Landfill.

Should you have any questions concerning this matter, please do not hesitate to contact me.

Sincerely,

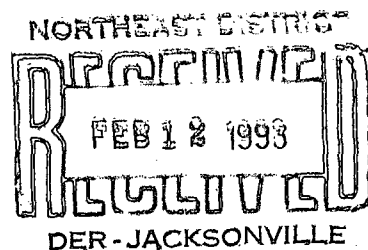
ENGLAND, THIMS & MILLER, INC.

Douglas C. Miller, P.E.
Vice President

Enclosures: As-Built Survey, Sunshine State Surveyors, Inc.
Phase IC and Phase II Construction Quality Assurance Monitoring of the Geosynthetic
Lining System, GeoSyntech, Inc.
Phase IC and Phase II Soils Quality Assurance Testing, Law Engineering, Inc.

cc: Luke DeBock
Tom Nelson
Jim Lukens

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 - Phase IC

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

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

Type of Project: Class I Landfill - Phase IC

Cost: Estimated \$ 3,456,000 Actual \$ 2,762,000

Site Design: Quantity: 2,600 (Avg) Ton/day Site Acreage: 9.1± Acres

Population: 659,000± (1990) Dumping Fees: \$ 55 /Ton

Deviations from Plans and Application Approved by DER: _____

Deviations are shown in the Contruction Quality Assurance documentation and

As-Built surveys. Note: The Phase I Stormwater Management System was previously
certified.

Water Monitoring Data Submitted to DER, Date: January 11, 1993

Address and Telephone No. of Site: 5110 U.S. Highway 301

Baldwin, Florida 32234; (904) 289-9100

Name(s) of Site Supervisor: Tom Nelson

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

SC16-184444 and

authorized by Construction Permit No.: Modifications Dated: Permit 12/24/91

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

Date: 2-12-93

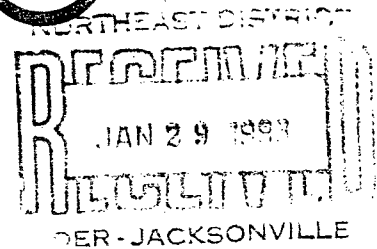
[Signature]
Signature of Professional Engineer

Trail Ridge Landfill, Inc.
5710 U.S. Highway 301
P.O. Box 546
Baldwin, Florida 32234
904/289-9100

*Original
given to Mike
Eaton 1/29/93*



A Waste Management Company



January 28, 1993

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

**Re: Trail Ridge Landfill
Permit #SC16-1S4444
Specific Condition 48**

Dear Ms. Nogas,

In accordance with specific condition #48I(b), the first annual Wetland Monitoring Report is submitted for your review. The report was prepared by Environmental Services, Inc. and is based on their monitoring of the wetland areas surrounding the Class I stormwater pond.

If you have any questions concerning this report, please call.

Sincerely,

Tom Nelson
Tom Nelson
General Manager

TN:mm
enclosure

cc: Jim Lukens
Byron Peacock (ESI)

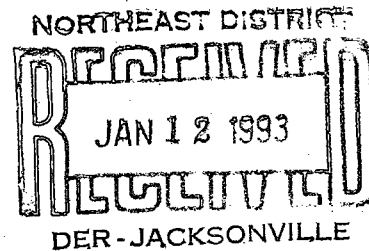
Trail Ridge Landfill, Inc.
5110 U.S. Highway 301
P.O. Box 548
Baldwin, Florida 32234
904/289-9100



A Waste Management Company

January 6, 1993

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



**Re: Trail Ridge Landfill, SC16-184444
Water Quality Data
Fourth Quarter, 1992**

Dear Ms. Nogas,

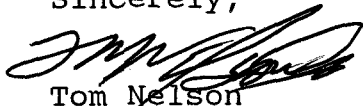
Two copies of the water quality data are hereby submitted in accordance with the above permit. The samples were taken November 2 through 5 and subsequently analyzed by the Environmental Monitoring Laboratory.

Our review of the data is as follows:

- Turbidity exceeded the Florida Primary Drinking Water Standard (FPDWS) in most sample points, including the background.
- pH was low in most sampling points, including the background.
- Iron exceeded the Florida Secondary Drinking Water Standard (FSDWS) in most sample points, including the background.
- Chromium exceeded the FPDWS in MW11I, but is within the historical range for this well. The chromium level may be attributed to the sediment in the sample, as total dissolved solids and turbidity were high.
- Benzene was detected above the FPDWS in MW22S and toluene was detected at low levels in MW19S, 25S, 27S and the field blank. These wells were resampled and the results will be forwarded upon receipt. Since toluene was detected in the field blank, these parameters are believed to have been contaminated during sampling.

Our next sampling event is scheduled for the week of February, 1993. Should you have any questions concerning this submittal please call.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tom Nelson', written over the printed name.

Tom Nelson
General Manager

cc: Gary Adams
Jim Lukens
Hank Ludwig

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

RECEIVED
JAN 07 1993
RECEIVED
DER-JACKSONVILLE

PROJECT NAME: Trail Ridge Landfill
PROJECT NUMBER: FQ-2030
OWNER: City of Jacksonville/WMNA, Inc.
LOCATION: Baldwin, FL 32206

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: SECONDARY 60 MIL GEOMEMBRANE PANEL
NO'S S-496 THRU S-503, PHASE IIA.

NATIONAL SEAL REPRESENTATIVE:

Date: Nov 30 1992
Signature: [Signature]
Name: ~~Phillip Weller~~ JACK MAHUGH
Title: Superintendent

OWNERS REPRESENTATIVE:

Date: NOV 30, 1992
Signature: [Signature]
Name: John Gillyard
Title: C.Q.A. Manager
Company: GeoSyntec Consultants

GEOSYNTEC CONSULTANTS

Construction Quality Assurance Division

1200 South Federal Highway, Suite 204

Boynton Beach, Florida 33435

(407) 736-5400

To Florida Dept. of Env. Regulation
7825 Bay Meadows Way - Ste. B200
Jacksonville, Florida 32256-7577

TRANSMITTAL

Date <i>NOV 30, 1992</i>	Job No. FQ2030
Attention Ms. Mary Nogas, P.E.	
Re: Trail Ridge Landfill	
Phases I and II	
JAN 07 1993	

DER - JACKSONVILLE
the following items:

We are sending you

XY attached

☐ under separate covers via

Drawings

 **Prints**

Plans

Specifications

Samples

Reports

 Copy of Letter

☒ Other Installer's Certificate of Subgrade Acceptance.

[illegible]

These are transmitted as checked below:

☐ For approval

For your use

☐ As you requested

☐ Approved as submitted

☐ Approved as noted

☐ Returned for corrections

Resubmit _____ copies for approval

Submit _____ copies for distribution

☐ Return _____ corrected prints

Remarks

Copy to WMI-F

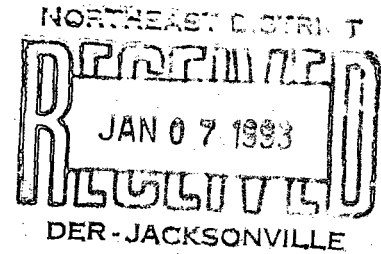
Signed

CQA CONSULTANT

Trail Ridge Landfill, Inc.
5110 U.S. Highway 301
P.O. Box 548
Baldwin, Florida 32234
904/289-9100



A Waste Management Company



December 30, 1992

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

Re: Trail Ridge Landfill
Tire Processing

Dear Ms. Nogas,

This is to confirm that the tires stored in the temporary tire storage area will be processed at the temporary area. On December 10, 1992 you verbally concurred that we could process the tires currently stored in the temporary area, rather than moving them to the permitted storage/process area. This procedure is consistent with the original permit application.

If you have any questions concerning this activity, please call.

Sincerely,

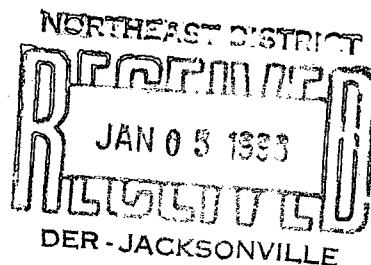
Tom Nelson
General Manager

TN:mm

Trail Ridge Landfill, Inc.
5110 U.S. Highway 301
P.O. Box 548
Baldwin, Florida 32234
904/289-9100



A Waste Management Company



December 15, 1992

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

Re: Trail Ridge Landfill
Permit #SC16-184444

Dear Ms. Nogas,

In accordance with specific condition #37 of the above referenced permit a detailed chemical characterization of a representative sample of the leachate was performed. The sample was taken within six months of waste acceptance and analyzed by the Environmental Monitoring Laboratory.

A copy of the analytical report is submitted for your review. Following your review, we understand a routine sampling schedule and analytical list will be established by permit modification.

Please contact Jim Lukens at 289-9100 if you have any questions concerning the results on in establishing the permit modification.

Sincerely,

Tom Nelson
General Manager

cc: Jim Lukens



WMI ENVIRONMENTAL MONITORING LABORATORIES, INC

CLIENT REPORT

NORTHEAST REGION
JAN 05 1993
Page 1
DER-JACKSONVILLE

Site: 446 - Trail Ridge Landfill, Inc.

5110 US Highway 301
Baldwin FL 32234Sample Point: TRLC01
Sample Type: LEACHATE
Sample Number: AF9522ENS: 92-13030
MP: 446923
REV: 00Sampled: 2-NOV-1992
Received: 3-NOV-1992
Reported: 25-NOV-1992

Analyte	Result	EML RL	Units	Comments	Method
FIELD DATA:					
PH FIELD	6.68		PH UNITS		FDPHSING01
SPECIFIC CONDUCTANCE FIELD	8680.		UMHOS/CM		FDSPCOND01
WATER TEMPERATURE IN DEGREES CELSIUS	24.4		DEGREES C		FDXTEMP01
CHEMICAL METHODS & ROBOTICS:					
CYANIDE, TOTAL	ND	0.020	MG/L		CRCNTTLX01
INORGANICS:					
ANTIMONY-TOTAL	ND	250.000	UG/L	DL	INICPTOTSB
ARSENIC-TOTAL	13.7	5.000	UG/L		INGFAATOAS
BERYLLIUM-TOTAL	ND	25.000	UG/L	DL	INICPTOTBE
CADMIUM-TOTAL	ND	25.000	UG/L	DL	INICPTOTCD
CHROMIUM-TOTAL	ND	50.000	UG/L	DL	INICPTOTCR
COPPER-TOTAL	ND	125.000	UG/L	DL	INICPTOTCU
LEAD-TOTAL	ND	5.000	UG/L		INGFAATOPB
MERCURY-TOTAL	.20	0.200	UG/L		INCVAATOHG
NICKEL-TOTAL	ND	200.000	UG/L	DL	INICPTOTNI
SELENIUM-TOTAL	ND	5.000	UG/L		INGFAATOSE
SILVER-TOTAL	31.3	10.000	UG/L		INICPTOTAG
THALLIUM-TOTAL	ND	10.000	UG/L		INGFAATOTL
SEMI-VOLATILE ORGANICS:					
1,2,4-TRICHLOROBENZENE	ND	140.000	UG/L	SU	SVMS1BNA06
1,2-DICHLOROBENZENE	ND	140.000	UG/L	SU	SVMS1BNA06
1,2-DIPHENYLHYDRAZINE	ND	140.000	UG/L	SU	SVMS1BNA06
1,3-DICHLOROBENZENE	ND	140.000	UG/L	SU	SVMS1BNA06
1,4-DICHLOROBENZENE	ND	140.000	UG/L	SU	SVMS1BNA06
2,4,6-TRICHLOROPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
2,4-DICHLOROPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
2,4-DIMETHYLPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
2,4-DINITROPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
2,4-DINITROTOLUENE	ND	140.000	UG/L	SU	SVMS1BNA06
2,6-DINITROTOLUENE	ND	140.000	UG/L	SU	SVMS1BNA06
2-CHLORONAPHTHALENE	ND	140.000	UG/L	SU	SVMS1BNA06
2-CHLOROPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
2-NITROPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
3,3'-DICHLOROBENZIDINE	ND	140.000	UG/L	SU	SVMS1BNA06
4,4'-DDD	ND	0.240	UG/L	NQ	SVGC1PTP01
4,4'-DDE	ND	0.100	UG/L		SVGC1PTP01
4,4'-DDT	ND	0.240	UG/L	NQ	SVGC1PTP01
4,6-DINITRO-2-METHYLPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
4-BROMOPHENYL-PHENYL ETHER	ND	140.000	UG/L	SU	SVMS1BNA06
4-CHLORO-3-METHYLPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
4-CHLOROPHENYL-PHENYL ETHER	ND	140.000	UG/L	SU	SVMS1BNA06
4-NITROPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
ACENAPHTHENE	ND	140.000	UG/L	SU	SVMS1BNA06
ACENAPHTYLENE	ND	140.000	UG/L	SU	SVMS1BNA06
ALDRIN	ND	0.400	UG/L		SVGC1PTP01
ALPHA-BHC	ND	0.360	UG/L		SVGC1PTP01

NA = Not Analyzed

ND = Not Detected

TBK = Trip Blank

Item	Additional Comment Explanations (NQ/DL)
ANTIMONY-TOTAL	Dilution factor 5 applied.
BERYLLIUM-TOTAL	Dilution factor 5 applied.
CADMIUM-TOTAL	Dilution factor 5 applied.
CHROMIUM-TOTAL	Dilution factor 5 applied.
COPPER-TOTAL	Dilution factor 5 applied.
NICKEL-TOTAL	Dilution factor 5 applied.
SVGC1PTP01	Dilution factor 4 applied.
SVMS1BNA06	Dilution factor 14 applied.
4,4'-DDD	HIGH BACKGROUND INTERFERENCE FOR THESE ANALYTES MAKES QUANTITATION SUSPECT.
4,4'-DDT	HIGH BACKGROUND INTERFERENCE FOR THESE ANALYTES MAKES QUANTITATION SUSPECT.



WMI ENVIRONMENTAL MONITORING LABORATORIES, INC

CLIENT REPORT

Site: 446 - Trail Ridge Landfill, Inc.

5110 US Highway 301
Baldwin FL 32234Sample Point: TRLC01
Sample Type: LEACHATE
Sample Number: AF9522ENS: 92-13030
MP: 446923
REV: 00Sampled: 2-NOV-1992
Received: 3-NOV-1992
Reported: 25-NOV-1992

Analyte	Result	EML RL	Units	Comments	Method
ANTHRACENE	ND	140.000	UG/L	SU	SVMS1BNA06
AROCLOR-1016	ND	4.000	UG/L		SVGC1PTP01
AROCLOR-1221	ND	4.000	UG/L		SVGC1PTP01
AROCLOR-1232	ND	4.000	UG/L		SVGC1PTP01
AROCLOR-1242	ND	3.840	UG/L		SVGC1PTP01
AROCLOR-1248	ND	4.000	UG/L		SVGC1PTP01
AROCLOR-1254	ND	3.920	UG/L		SVGC1PTP01
AROCLOR-1260	ND	1.000	UG/L		SVGC1PTP01
BENZIDINE	ND	140.000	UG/L	SU	SVMS1BNA06
BENZO[A]PYRENE	ND	140.000	UG/L	SU	SVMS1BNA06
BENZO[B]FLUORANTHENE	ND	140.000	UG/L	SU	SVMS1BNA06
BENZO[G,H,I]PERYLENE	ND	140.000	UG/L	SU	SVMS1BNA06
BENZO[K]FLUORANTHENE	ND	140.000	UG/L	SU	SVMS1BNA06
BENZ[A]ANTHRACENE	ND	140.000	UG/L	SU	SVMS1BNA06
BETA-BHC	ND	0.400	UG/L	BL	SVGC1PTP01
BIS(2-CHLOROETHOXY)METHANE	ND	140.000	UG/L	SU	SVMS1BNA06
BIS(2-CHLOROETHYL)ETHER	ND	140.000	UG/L	SU	SVMS1BNA06
BIS(2-CHLOROISOPROPYL)ETHER	ND	140.000	UG/L	SU	SVMS1BNA06
BIS(2-ETHYLHEXYL)PHTHALATE	ND	140.000	UG/L	SU	SVMS1BNA06
BUTYLBENZYLPHthalate	ND	140.000	UG/L	SU	SVMS1BNA06
CHLORDANE	ND	3.240	UG/L		SVGC1PTP01
CHRYSENE	ND	140.000	UG/L	SU	SVMS1BNA06
DELTA-BHC	ND	0.200	UG/L		SVGC1PTP01
DI-N-BUTYLPHthalate	ND	140.000	UG/L	SU	SVMS1BNA06
DI-N-OCTYLPHthalate	ND	140.000	UG/L	SU	SVMS1BNA06
DIBENZ[A,H]ANTHRACENE	ND	140.000	UG/L	SU	SVMS1BNA06
DIELDRIN	ND	0.280	UG/L		SVGC1PTP01
DIETHYLPHthalate	ND	140.000	UG/L	SU	SVMS1BNA06
DIMETHYLPHthalate	ND	140.000	UG/L	SU	SVMS1BNA06
ENDOSULFAN I	ND	0.200	UG/L		SVGC1PTP01
ENDOSULFAN II	ND	0.240	UG/L	NQ	SVGC1PTP01
ENDOSULFAN SULFATE	ND	0.800	UG/L	NQ	SVGC1PTP01
ENDRIN	ND	0.240	UG/L	NQ	SVGC1PTP01
ENDRIN ALDEHYDE	ND	0.400	UG/L	NQ	SVGC1PTP01
FLUORANTHENE	ND	140.000	UG/L	SU	SVMS1BNA06
FLUORENE	ND	140.000	UG/L	SU	SVMS1BNA06
HEPTACHLOR	ND	0.200	UG/L		SVGC1PTP01
HEPTACHLOR EPOXIDE	ND	0.500	UG/L		SVGC1PTP01
HEXACHLOROBENZENE	ND	140.000	UG/L	SU	SVMS1BNA06
HEXACHLOROBUTADIENE	ND	140.000	UG/L	SU	SVMS1BNA06
HEXACHLOROCYCLOPENTADIENE	ND	560.000	UG/L	SU	SVMS1BNA06
HEXACHLOROETHANE	ND	140.000	UG/L	SU	SVMS1BNA06
INDENO[1,2,3-CD]PYRENE	ND	140.000	UG/L	SU	SVMS1BNA06
ISOPHORONE	ND	140.000	UG/L	SU	SVMS1BNA06
LINDANE (GAMMA-BHC)	ND	0.160	UG/L		SVGC1PTP01
N-NITROSODI-N-PROPYLAMINE	ND	140.000	UG/L	SU	SVMS1BNA06
N-NITROSODIMETHYLAMINE	ND	140.000	UG/L	SU	SVMS1BNA06
N-NITROSODIPHENYLAMINE	ND	140.000	UG/L	NN, SU	SVMS1BNA06
NAPHTHALENE	ND	140.000	UG/L	SU	SVMS1BNA06
NITROBENZENE	ND	140.000	UG/L	SU	SVMS1BNA06
PENTACHLOROPHENOL	ND	140.000	UG/L	SU	SVMS1BNA06
PHENANTHRENE	ND	140.000	UG/L	SU	SVMS1BNA06
PHENOL	2100.	140.000	UG/L	SU	SVMS1BNA06

NA = Not Analyzed

ND = Not Detected

TBK = Trip Blank

Item	Additional Comment Explanations (NQ/DL)
ENDOSULFAN II ENDOSULFAN SULFATE	FLORISIL CLEANUP CAUSES LOW RECOVERY OF THIS ANALYTE. FLORISIL CLEANUP CAUSES LOW RECOVERY OF THIS ANALYTE. HIGH BACKGROUND INTERFERENCE FOR THESE ANALYTES MAKES QUANTITATION SUSPECT.
ENDRIN	HIGH BACKGROUND INTERFERENCE FOR THESE ANALYTES MAKES QUANTITATION SUSPECT.
ENDRIN ALDEHYDE	FLORISIL CLEANUP CAUSES LOW RECOVERY OF THIS ANALYTE. HIGH BACKGROUND INTERFERENCE FOR THESE ANALYTES MAKES QUANTITATION SUSPECT.



WMI ENVIRONMENTAL MONITORING LABORATORIES, INC

CLIENT REPORT

Site: 446 - Trail Ridge Landfill, Inc.

5110 US Highway 301
Baldwin FL 32234

Sample Point: TRLC01

Sample Type: LEACHATE

Sample Number: AF9522

ENS: 92-13030

MP: 446923

REV: 00

Sampled: 2-NOV-1992

Received: 3-NOV-1992

Reported: 25-NOV-1992

Analyte	Result	EML RL	Units	Comments	Method
PYRENE	ND	140.000	UG/L	SU	SVMS1BNA06
TOXAPHENE	ND	3.720	UG/L		SVGC1PTP01
VOLATILE ORGANICS:					
1,1,1-TRICHLOROETHANE	ND	50.000	UG/L		VOGCAAN203
1,1,2,2-TETRACHLOROETHANE	ND	50.000	UG/L		VOGCAAN203
1,1,2-TRICHLOROETHANE	ND	25.000	UG/L		VOGCAAN203
1,1-DICHLOROETHANE	130.	50.000	UG/L		VOGCAAN203
1,1-DICHLOROETHENE	ND	50.000	UG/L		VOGCAAN203
1,2-DICHLOROBENZENE	ND	50.000	UG/L		VOGCAAN203
1,2-DICHLOROBENZENE	ND	50.000	UG/L	PX	VOGCBAN101
1,2-DICHLOROETHANE	ND	50.000	UG/L		VOGCAAN203
1,2-DICHLOROPROPANE	ND	50.000	UG/L		VOGCAAN203
1,3-DICHLOROBENZENE	ND	50.000	UG/L		VOGCAAN203
1,3-DICHLOROBENZENE	ND	50.000	UG/L	PX	VOGCBAN101
1,4-DICHLOROBENZENE	ND	50.000	UG/L		VOGCAAN203
1,4-DICHLOROBENZENE	ND	50.000	UG/L	PX	VOGCBAN101
2-CHLOROETHYL VINYL ETHER	ND	50.000	UG/L	ST	VOGCAAN203
ACROLEIN	ND	250.000	UG/L		VOMSDAA101
ACRYLONITRILE	ND	250.000	UG/L		VOMSDAA101
BENZENE	ND	35.000	UG/L	PX	VOGCBAN101
BROMODICHLOROMETHANE	ND	50.000	UG/L		VOGCAAN203
BROMOFORM	ND	50.000	UG/L		VOGCAAN203
BROMOMETHANE	ND	50.000	UG/L		VOGCAAN203
CARBON TETRACHLORIDE	ND	50.000	UG/L		VOGCAAN203
CHLOROBENZENE	ND	50.000	UG/L		VOGCAAN203
CHLOROBENZENE	ND	50.000	UG/L	PX	VOGCBAN101
CHLOROETHANE	ND	50.000	UG/L		VOGCAAN203
CHLOROFORM	ND	50.000	UG/L		VOGCAAN203
CHLOROMETHANE	ND	50.000	UG/L		VOGCAAN203
CIS-1,3-DICHLOROPROPENE	ND	50.000	UG/L		VOGCAAN203
DIBROMOCHLOROMETHANE	ND	50.000	UG/L		VOGCAAN203
DICHLORODIFLUOROMETHANE	ND	50.000	UG/L		VOGCAAN203
ETHYLBENZENE	ND	50.000	UG/L	PX	VOGCBAN101
METHYLENE CHLORIDE	69.	50.000	UG/L		VOGCAAN203
TETRACHLOROETHENE	ND	50.000	UG/L		VOGCAAN203
TOLUENE	740.	50.000	UG/L	PX	VOGCBAN101
TRANS-1,2-DICHLOROETHENE	ND	25.000	UG/L		VOGCAAN203
TRANS-1,3-DICHLOROPROPENE	ND	50.000	UG/L		VOGCAAN203
TRICHLOROETHENE	ND	50.000	UG/L		VOGCAAN203
TRICHLOROFLUOROMETHANE	ND	50.000	UG/L		VOGCAAN203
VINYL CHLORIDE	ND	50.000	UG/L		VOGCAAN203

NA = Not Analyzed

ND = Not Detected

TBK = Trip Blank

Item	Additional Comment Explanations (NQ/DL)
VOGCAAN203	Dilution factor 50 applied.
VOGCBAN101	Sample foamed therefore dilution was necessary.
VOMSDAA101	Dilution factor 50 applied.
	Sample foamed therefore dilution was necessary.
	Dilution factor 25.00 applied.
	Sample foamed therefore dilution was necessary.



WMI ENVIRONMENTAL MONITORING LABORATORIES, INC

CLIENT REPORT

Site: 446 - Trail Ridge Landfill, Inc.

5110 US Highway 301
Baldwin FL 32234

Sample Point: TBK-TRLC01

Sample Type: LEACHATE

Sample Number: AF9522

ENS: 92-13030

MP: 446923

REV: 00

Sampled: 2-NOV-1992

Received: 3-NOV-1992

Reported: 25-NOV-1992

Analyte	Result	EML RL	Units	Comments	Method
VOLATILE ORGANICS:					
1,2-DICHLOROBENZENE	ND	1.000	UG/L		VOGCBAN101
1,3-DICHLOROBENZENE	ND	1.000	UG/L		VOGCBAN101
1,4-DICHLOROBENZENE	ND	1.000	UG/L		VOGCBAN101
ACROLEIN	ND	10.000	UG/L	PY	VOMSDAA101
ACRYLONITRILE	ND	10.000	UG/L	PY	VOMSDAA101
BENZENE	ND	1.000	UG/L		VOGCBAN101
CHLOROBENZENE	ND	1.000	UG/L		VOGCBAN101
ETHYLBENZENE	ND	1.000	UG/L		VOGCBAN101
TOLUENE	ND	1.000	UG/L		VOGCBAN101

NA = Not Analyzed

ND = Not Detected

TBK = Trip Blank



Subcontract To: Environmental Monitoring Laboratories, Inc.

AquaPak™ PREP AP1079 mp 10647
 AquaPak™ # AP6464
 Date Sealed 9/21/02 YY / MM / DD
 Seal # 0037286
 By: _____

FIELD CHAIN-OF-CUSTODY RECORD

SITE/FACILITY # 146 SITE NAME: Trail Ridge Landfill, Inc.

Sample Point: C7RZC01
Source Code

SAMPLE DATE: - 9/21/02
YY / MM / DD

SAMPLE TIME: 1:16:45
(2400 HR.)

MATRIX CODE: C

Water.....(W) Leachate.....(C)
 Soil.....(S) Other.....(X)

Source Codes:

Well.....(W) Leachate System.....(C) Pretreatment Facility.....(P) River/Stream/Brook.....(R) Soil.....(S) Generation Pt.....(G)
 Dewatering/Pressure Relief.....(D) Gas Condensate.....(M) Influent.....(U) Lake or Ocean.....(L) Bottom Sediment.....(B) Other.....(X)
 Surface Water Impoundment.....(I) Air.....(A) Effluent.....(T) Outfall.....(O) Noise.....(N) Specify _____

ENS # 92-13030 AquaPak™ CONTENT

SAMPLE I.D.	# OF BOTTLES	BOTTLE TYPE	PRESERVATIVE TYPE	ANALYTES/LAB GROUPS	FILTER Y - N	FIELD COMMENTS	E.M.L. COMMENTS
AF9522-A	01	P	NAOH/COOL	4 DEG C CR	Y		
AF9522-B	01	P	HNO3	IN	Y		
AF9522-C	01	P	HNO3	IN	Y		
AF9522-D	04	G	NONE/COOL	4 DEG C SV	Y		
AF9522-E	04	G	NONE/COOL	4 DEG C SV	Y		
AF9522-F	04	G	HCL/COOL	4 DEG C VO	Y		
AF9522-G	04	G	NONE/COOL	4 DEG C VO	Y		
AF9522-H	04	G	PH 4-5/COOL	4 DEG C VO	Y		
AF9522-I	01	G	HCL/COOL	4 DEG C VO	Y		
AF9522-J	01	G	NONE/COOL	4 DEG C VO	Y		
AF9522-K	01	G	PH 4-5/COOL	4 DEG C VO	Y		
					Y		
					Y		
					Y		
					Y		
					Y		
					Y		

CHAIN OF CUSTODY CHRONICLE

1. AquaPak™ Opened By: (print) Jim Dolbow Date: 11/13/92 Time: 12:30
 Signature: _____ Seal #: 37286 Intact: ✓
2400 HR.

I have received these materials in good condition from the above person.

2. Name: _____ Signature: _____
 Date: 1/1/ Time: : Remarks: _____
2400 HR.

I have received these materials in good condition from the above person.

3. Name: _____ Signature: _____
 Date: 1/1/ Time: : Remarks: _____
2400 HR.

4. AquaPak™/Sub Contr. # 1079 Sealed By: Jim Dolbow Date: 11/13/92 Time: 17:40
 Signature: _____ Seal #: 37632 Intact: ✓
(Print) 2400 HR.

LAB USE ONLY
 Opened By: (Signature) Paul Hefner Date: 11/13/92 Time: 10:35
 AquaPak™/Sub. Contr. # 1079 Temp.°C 2 Seal # 37632 Intact: ✓
2400 HR.

FIELD INFORMATION FORM

PURGING INFORMATION



PURGING AND SAMPLING EQUIPMENT

Purging Equipment Dedicated ☒ Y ☐ N (circle one)

Sampling Equipment Dedicated ☒ Y ☐ N (circle one)

Purging Device	☒ A-Submersible Pump	☐ D-Gas Lift Pump	☐ G-Bailer	X- _____ PURGING OTHER (SPECIFY)
Sampling Device	☒ B-Peristaltic Pump	☐ E-Venturi Pump	☐ H-Scoop/Shovel	X- _____ SAMPLING OTHER (SPECIFY)
	☐ C-Bladder Pump	☐ F-Dipper/Bottle	☐ I-Piston Pump	
Purging Material	☒ A-Teflon	☐ C-Polypropylene	☐ E-Polyethylene	X- _____ PURGING OTHER (SPECIFY)
Sampling Material	☒ B-Stainless Steel	☐ D-PVC		X- _____ SAMPLING OTHER (SPECIFY)
Tubing-Purging	☒ A-Teflon	☐ D-Polypropylene	☐ F-Silicon	X- _____ PURGING OTHER (SPECIFY)
Tubing-Sampling	☒ B-Tygon	☐ E-Polyethylene	☐ G-Combination teflon/ Polypropylene	X- _____ SAMPLING OTHER (SPECIFY)
	☒ C-Rope X- _____ (SPECIFY)			
Filtering Devices 0.45 μ :	☒ A-In-line Disposable	☐ B-Pressure	☐ C-Vacuum	

FIELD MEASUREMENTS

Well Elevation	<u> </u> (ft/msl)	Land Surface Elevation	<u> </u> (ft/msl)
Depth to water	<u> </u> (ft)	Depth to water	<u> </u> (ft)
From top of well casing		From land surface	
Groundwater Elevation	<u> </u> (ft/msl)	Groundwater Elevation	<u> </u> (ft/msl)
Well Depth	<u> </u> (ft)	Stickup	<u> </u> (ft)

1st <u>6.68</u> (STD) ph	1st <u>8680</u> μ m/cm at 25° C spec. cond.	Sample Temp. <u>24.4</u> (° C): <u> </u> (other parameter) <u> </u> value <u> </u> units <u> </u> (other parameter) <u> </u> value <u> </u> units <u> </u> (other parameter) <u> </u> value <u> </u> units
2nd <u> </u> (STD) ph	2nd <u> </u> μ m/cm at 25° C spec. cond.	
3rd <u> </u> (STD) ph	3rd <u> </u> μ m/cm at 25° C spec. cond.	
4th <u> </u> (STD) ph	4th <u> </u> μ m/cm at 25° C spec. cond.	

FIELD COMMENTS

Sample Appearance: Dark (if applicable) Odor: Strong Color: Black Turbidity: 63.3

Weather Conditions: Wind Speed 0-5 Direction W Precipitation 0/N Outlook Cloudy Light Rain

Specific Comments: TRL01 = Leachate; Taken from Tank #4

Ph: 6.68 sc: 8680 Temp: 24.4

I certify that sampling procedures were in accordance with applicable EPA, State and WMI protocols.

11/2/92 (Date) [Signature] (Signature) Employer: WMI/AS