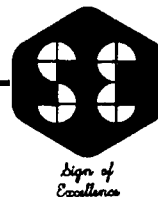


SPRINGSTEAD ENGINEERING, INC.

Consulting Engineers - Planners - Surveyors

727 S. 14TH ST.
P.O. BOX 448
LEESBURG, FLA. 32749-0448
(904) 787-1414



P.O. BOX 1448
BUSHNELL, FLA. 33513
(904) 793-3639

TO Florida Department of Environmental Regulation
Groundwater Section
4520 Oak Fair Boulevard
Tampa, Florida 33610-7347

DATE 11-18-88 JOB NO. C-103
ATTENTION Groundwater Section
RE Sumter County Landfill

GENTLEMEN:

WE ARE SENDING YOU ☒ Attached ☐ under separate cover via _____ the following items:

- ☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☒ Report

Copies	Date	No.	Description
1	11-10-88		Quarterly Report on Ground Water Monitoring

THESE ARE TRANSMITTED as checked below:

- ☐ For approval ☐ Approved as submitted ☐ Approved for payment
☒ For your use ☐ Approved as noted ☐ Resubmit _____ copies for approval
☐ As requested ☐ Returned for corrections
☐ For review and comment ☐ _____
☐ Material and/or prints returned after loan to us

REMARKS

COPY TO Garry Breeden, Sumter County

SIGNED:

Paul Bradley
Paul Bradley, P.E.

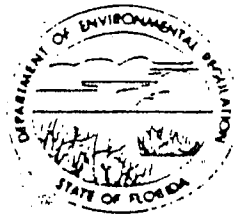
NOV 21 1988

SOUTH WEST DISTRICT
TAMPA

DEPARTMENT OF ENVIRONMENTAL REGULATION

RECEIVED

NOV 17 1988

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD SE
TALLAHASSEE, FLORIDA 32301-8241BOB GRAHAM
GOVERNORVICTORIA J. TSCHINKEL
SECRETARYQUARTERLY REPORT ON GROUND WATER MONITORING
Rule 17-4.245(6)(k)2.

GMS # 4060C00092

DATE 11-10-1988

DER PERMIT # SC 60-132071

SUMTER COUNTY LANDFILL

Installation Name

209 N. Florida Street

Bushnell

FL

33513

Sumter

Address

City

State Zip

County

Gary Breeden

Director of Public Works

Owner or Authorized Representative's Name

Title

Method of Discharge Groundwater Slowrate Infiltration

Type of Industry Landfill

Report for Period 10-1-1988 to 12-31-1988

date

date

Attach monitoring data as approved in monitoring plan using parameter monitoring report forms. When applicable, attach additional sheets describing any changes in the background water quality and the discharge plume since the last reported description. Include any changes in size, direction of movement, rate of movement, and concentration changes of plume constituents in violation of the applicable standards.

NOTE: Pursuant to Rule 17-4.245(6)(k)3., at any time there is a change in the permitted volume, location or chemical, physical or microbiological composition of the discharge plume, the permittee shall notify the department and, if required by the department, submit a new report stating the volume and chemical, physical and microbiological compositions of the discharge at the point of release or contact with the ground water at the site boundary.

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Owner or Authorized Representative's Signature

Date

11/15/88



NOV 21 1988

NTH WEST DISTRICT
TAMPA

CENTRAL TESTING LABORATORY

ENGINEERING AND MATERIALS TESTING

SOILS, CONCRETE, SOIL CEMENT, ASPHALT, AND SUB-SURFACE INVESTIGATIONS
WATER AND WASTEWATER ANALYSIS

November 11, 1988

Sumter County Commission
209 N. Florida Street
Bushnell, Florida 33513
Attn: Gary Breeden

P.O. BOX 883
J. HWY US 41
FLORAL CITY, FLORIDA 32636
PHONE (904) 726-6447

P.O. BOX 448
727 S. 14TH ST.
LEESBURG, FLORIDA 32749-0448
PHONE (904) 787-1268

J.W. SPRINGSTEAD, P.E.
FLA. REG. ENG. 8579

HRS ID No. 83302

RE: Sumter County Landfill

Dear Mr. Breeden,


Please find enclosed test results on State of Florida Department of Environmental Regulation (FDER) standard forms. Please sign page 1 and forward to Springstead Engineering, P. O. Box 448, Leesburg, Florida 32749-0448 for submittal to FDER.

We hereby certify that the enclosed results have been obtained by the noted methods which are standard ASTM, EPA, or EPA Approved Alternate Methods.

Should you have any questions, please contact our office.

Very truly yours,

CENTRAL TESTING LABORATORY


CHET MAIN, DIRECTOR

PARAMETER MONITORING REPORT
(Rule 17-3.402, 17-3.404 - 17-3.406)

GHS # 4060C0092

Sample Date 10-18-1988

Monitoring Well # 1

Well Type: ☐ Background
☐ Site Boundary
☒ Intermediate
☐ Compliance

Well Name Sumter County Landfill

Classification of Groundwater G-II

Well Developed* Prior to
Sample Collection (Yes/No) Yes

Ground Water Elevation
(above MSL) 46.2 ft

STORET Code	Parameter Monitored	Sampling Method	Analysis Method	Analysis Result	Units	Sample Filtered/Unfiltered	Preser- vatives Added
	Cadmium	Grab	EPA 213.1	< 0.0010	mg/l	Unfiltered	HNO ₃
	Chromium	Grab	EPA 218.1	0.07	mg/l	Unfiltered	HNO ₃
	Sodium	Grab	EPA 273.1	19.0	mg/l	Unfiltered	None
	Iron	Grab	EPA 236.1	0.18	mg/l	Unfiltered	HNO ₃
	Manganese	Grab	EPA 243.1	0.18	mg/l	Unfiltered	HNO ₃
	C. O. D.	Grab	HACH	< 1	mg/l	Unfiltered	H ₂ SO ₄
	Chloride	Grab	EPA 235.3	408	mg/l	Unfiltered	None
	Sulfate	Grab	EPA 375.4	3.0	mg/l	* Filtered	None
	Nitrate	Grab	STDM 418B	2.80	mg/a	Unfiltered	H ₂ SO ₄
	Total Or- ganic Carbon	Grab	ASTM D2579-59	16	mg/l	Unfiltered	None
	Turbidity	Grab	EPA 180.1	710	NTU	Unfiltered	None
	pH	Grab	EPA 150.1	6.7	pH Units	Unfiltered	None
	Conductivity	Grab	EPA 120.1	94	umhos/cm	Unfiltered	None
	Color	Grab	EPA 110.2	325	Color Units	Unfiltered	None
	Total dis- solved solids	Grab	STDM 208C	204	mg/l	Filtered	None
	Gross Alpha	Grab	EPA 900.0	-	pCi/l	Unfiltered	None

*Well development is the process of pumping the well prior to sampling in order to obtain a representative ground water sample.

DE. orm 17-1.216(2)

Effective January 1, 1983

Page of

* Unfiltered sample would not provide consistent results

PARAMETER MONITORING REPORT
(Rule 17-3.402, 17-3.404 - 17-3.406)

GHS # 4060C0092

Sample Date 10-18-1988

Monitoring Well # 2

Well Type: ☒ Background
☐ Site Boundary
☐ Intermediate
☐ Compliance

Well Name Sumter County Landfill

Classification of Groundwater G-II

Well Developed* Prior to
Sample Collection (Yes/No) Yes

Ground Water Elevation
(above MSL) 46.6 ft

STORET Code	Parameter Monitored	Sampling Method	Analysis Method	Analysis Result	Units	Sample Filtered/Unfiltered	Preservatives Added
	Cadmium	Grab	EPA 213.1	0.002	mg/l	Unfiltered	HNO ₃
	Chromium	Grab	EPA 218.1	0.05	mg/l	Unfiltered	HNO ₃
	Sodium	Grab	EPA 273.1	2.4	mg/l	Unfiltered	None
	Iron	Grab	EPA 236.1	0.29	mg/l	Unfiltered	HNO ₃
	Manganese	Grab	EPA 243.1	0.09	mg/l	Unfiltered	HNO ₃
	C. O. D.	Grab	HACH	< 1	mg/l	Unfiltered	H ₂ SO ₄
	Chloride	Grab	EPA 235.3	153	mg/l	Unfiltered	None
	Sulfate	Grab	EPA 375.4	13.0	mg/l	* Filtered	None
	Nitrate	Grab	STDM 418B	1.05	mg/a	Unfiltered	H ₂ SO ₄
	Total Organic Carbon	Grab	ASTM D2579-59	73	mg/l	Unfiltered	None
	Turbidity	Grab	EPA 180.1	360	NTU	Unfiltered	None
	pH	Grab	EPA 150.1	6.4	pH Units	Unfiltered	None
	Conductivity	Grab	EPA 120.1	363	umhos/cm	Unfiltered	None
	Color	Grab	EPA 110.2	125	Color Units	Unfiltered	None
	Total dissolved solids	Grab	STDM 208C	272	mg/l	Filtered	None
	Gross Alpha	Grab	EPA 900.0	-	pCi/l	Unfiltered	None

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DE. ors 17-1.216(2)
Effective January 1, 1983

Page of

* Unfiltered sample would not provide consistent results

PARAMETER MONITORING REPORT
(Rule 17-3.402, 17-3.404 - 17-3.406)

GMS # 4060C0092

Sample Date 10-18-1988

Monitoring Well # 4

Well Type: ☐ Background
☒ Site Boundary
☐ Intermediate
☐ Compliance

Well Name Sumter County Landfill

Classification of Groundwater G-II

Well Developed* Prior to Sample Collection (Yes/No) Yes

Ground Water Elevation (above MSL) 46.2 ft

STORE# Code	Parameter Monitored	Sampling Method	Analysis Method	Analysis Result	Units	Sample Filtered/Unfiltered	Preservatives Added
	Cadmium	Grab	EPA 213.1	0.003	mg/l	Unfiltered	HNO ₃
	Chromium	Grab	EPA 218.1	0.05	mg/l	Unfiltered	HNO ₃
	Sodium	Grab	EPA 273.1	3.7	mg/l	Unfiltered	None
	Iron	Grab	EPA 236.1	0.03	mg/l	Unfiltered	HNO ₃
	Manganese	Grab	EPA 243.1	0.03	mg/l	Unfiltered	HNO ₃
	C. O. D.	Grab	HACH	<1	mg/l	Unfiltered	H ₂ SO ₄
	Chloride	Grab	EPA 235.3	170	mg/l	Unfiltered	None
	Sulfate	Grab	EPA 375.4	5.0	mg/l	* Filtered	None
	Nitrate	Grab	STDM 418B	1.40	mg/a	Unfiltered	H ₂ SO ₄
	Total Organic Carbon	Grab	ASTM D2579-59	28	mg/l	Unfiltered	None
	Turbidity	Grab	EPA 180.1	940	NTU	Unfiltered	None
	pH	Grab	EPA 150.1	6.8	pH Units	Unfiltered	None
	Conductivity	Grab	EPA 120.1	256	umhos/cm	Unfiltered	None
	Color	Grab	EPA 110.2	75	Color Units	Unfiltered	None
	Total dissolved solids	Grab	STDM 208C	400	mg/l	Filtered	None
	Gross Alpha	Grab	EPA 900.0	-	pCi/l	Unfiltered	None

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DE. or 17-1.216(2)
Effective January 1, 1983

Page of

* Unfiltered sample would not provide consistent results

PARAMETER MONITORING REPORT
(Rule 17-3.402, 17-3.404 - 17-3.406)

GHS # 406000092

Sample Date 10-18-1988

Monitoring Well # 5

Well Type: ☐ Background
☐ Site Boundary
☐ Intermediate
☒ Compliance

Well Name Sumter County Landfill

Classification of Groundwater G-II

Well Developed* Prior to Sample Collection (Yes/No) YES

Ground Water Elevation (above MSL) 45.9 ft

STORE Code	Parameter Monitored	Sampling Method	Analysis Method	Analysis Result	Units	Sample Filtered/Unfiltered	Preservatives Added
	Cadmium	Grab	EPA 213.1	< 0.0010	mg/l	Unfiltered	HNO ₃
	Chromium	Grab	EPA 218.1	0.05	mg/l	Unfiltered	HNO ₃
	Sodium	Grab	EPA 273.1	5.0	mg/l	Unfiltered	None
	Iron	Grab	EPA 236.1	0.10	mg/l	Unfiltered	HNO ₃
	Manganese	Grab	EPA 243.1	0.06	mg/l	Unfiltered	HNO ₃
	C. O. D.	Grab	HACH	10	mg/l	Unfiltered	H ₂ SO ₄
	Chloride	Grab	EPA 235.3	163	mg/l	Unfiltered	None
	Sulfate	Grab	EPA 375.4	91	mg/l	* Filtered	None
	Nitrate	Grab	STDM 418B	1.00	mg/a	Unfiltered	H ₂ SO ₄
	Total Organic Carbon	Grab	ASTM D2579-69	8	mg/l	Unfiltered	None
	Turbidity	Grab	EPA 180.1	22	NTU	Unfiltered	None
	pH	Grab	EPA 150.1	6.6	pH Units	Unfiltered	None
	Conductivity	Grab	EPA 120.1	267	umhos/cm	Unfiltered	None
	Color	Grab	EPA 110.2	25	Color Units	Unfiltered	None
	Total dissolved solids	Grab	STDM 208C	324	mg/l	Filtered	None
	Gross Alpha	Grab	EPA 900.0	-	pCi/l	Unfiltered	None

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DE. ors 17-1.216(2)
Effective January 1, 1983

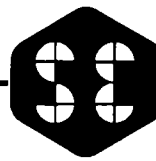
Page of

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SPRINGSTEAD ENGINEERING, INC.

Consulting Engineers - Planners - Surveyors

727 S. 14TH ST.
P.O. BOX 448
LEESBURG, FLA. 32749-0448
(904) 787-1414



Sign of
Excellence

P.O. BOX 1448
BUSHNELL, FLA. 33513
(904) 793-3639

TO

g Ford
Kim Ford
DER Southwest Dist
4520 Oak Fair Blvd.
Tampa Florida 33610-7347

DATE 5-12-88 JOB NO. C-103
ATTENTION Kim Ford
RE Sumter co. Landfill
DER Permit No. SC 60-132071

GENTLEMEN:

WE ARE SENDING YOU ☒ Attached ☐ under separate cover via _____ the following items:

- ☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐ _____

Copies	Date	No.	Description
1	5-5-88		Quarterly Report on Ground Water Monitoring.

THESE ARE TRANSMITTED as checked below:

- ☐ For approval ☐ Approved as submitted ☐ Approved for payment
☒ For your use ☐ Approved as noted ☐ Resubmit _____ copies for approval
☐ As requested ☐ Returned for corrections
☐ For review and comment ☐ _____
☐ Material and/or prints returned after loan to us

REMARKS

D. E. [Signature]

MAY 13 1988

SOUTH WEST DISTRICT
TAMPA

COPY TO

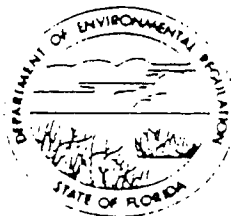
SIGNED:

Paul Bradley

Paul Bradley

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241



RECEIVED
MAY 10 1988
D. SEI PM

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

QUARTERLY REPORT ON GROUND WATER MONITORING
Rule 17-4.245(6)(k)2.

GMS # 4060C00092

DATE 5-5-1988

DER PERMIT # SC 60-132071

Sumter County Landfill
Installation Name

209 N. Florida Avenue Bushnell Florida 33513 Sumter
Address City State Zip County

Gary Breeden Director of Public Works
Owner or Authorized Representative's Name Title

Method of Discharge Groundwater Slowrate Infiltration

Type of Industry Landfill

Report for Period _____ to _____
date date

Attach monitoring data as approved in monitoring plan using parameter monitoring report forms. When applicable, attach additional sheets describing any changes in the background water quality and the discharge plume since the last reported description. Include any changes in size, direction of movement, rate of movement, and concentration changes of plume constituents in violation of the applicable standards.

NOTE: Pursuant to Rule 17-4.245(6)(k)3., at any time there is a change in the permitted volume, location or chemical, physical or microbiological composition of the discharge plume, the permittee shall notify the department and, if required by the department, submit a new report stating the volume and chemical, physical and microbiological compositions of the discharge at the point of release or contact with the ground water at the site boundary.

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

[Signature]
Owner or Authorized Representative's Signature

5/9/88
Date

D. E. R.

DER Form 17-1.216(2)
Effective January 1, 1983

Page 1 of 2

MAY 13 1988

SOUTH WEST DISTRICT
TAMPA

PARAMETER MONITORING REPORT
(Rule 17-3.402, 17-3.404 - 17-3.406)

GMS # 4060C0092

Sample Date 4-5-1988

Monitoring Well # 1

Well Type: ☐ Background
☐ Site Boundary
☒ Intermediate
☐ Compliance

Well Name Sumter County Landfill

Classification of Groundwater G-II

Well Developed* Prior to
Sample Collection (Yes/No) Yes

Ground Water Elevation
(above MSL) 45.6 ft

STORET Code	Parameter Monitored	Sampling Method	Analysis Method	Analysis Result	Units	Sample Filtered/Unfiltered	Preser- vatives Added
	Cadmium	Grab	EPA 213.1	< 0.0010	mg/l	Unfiltered	HNO ₃
	Chromium	Grab	EPA 218.1	0.11	mg/l	Unfiltered	HNO ₃
	Sodium	Grab	EPA 273.1	105	mg/l	Unfiltered	None
	Iron	Grab	EPA 236.1	0.42	mg/l	Unfiltered	HNO ₃
	Manganese	Grab	EPA 243.1	0.25	mg/l	Unfiltered	HNO ₃
	C. O. D.	Grab	HACH	55	mg/l	Unfiltered	H ₂ SO ₄
	Chloride	Grab	EPA 235.3	151	mg/l	Unfiltered	None
	Sulfate	Grab	EPA 375.4	13	mg/l	* Filtered	None
	Nitrate	Grab	STDM 418B	6.95	mg/l	Unfiltered	H ₂ SO ₄
	Total Or- ganic Carbon	Grab	ASTM D2579-59	9	mg/l	Unfiltered	None
	Turbidity	Grab	EPA 180.1	7000	NTU	Unfiltered	None
	pH	Grab	EPA 150.1	8.04	pH Units	Unfiltered	None
	Conductivity	Grab	EPA 120.1	110	umhos/cm	Unfiltered	None
	Color	Grab	EPA 110.2	425	Color Units	Unfiltered	None
	Total dis- olved solids	Grab	STDM 208C	740	mg/l	Filtered	None

*Well development is the process of pumping the well prior to sampling in order to obtain a representative ground water sample.

DE. orm 17-1.216(2)

Effective January 1, 1983

Page of

* Unfiltered sample would not provide consistent results

PARAMETER MONITORING REPORT
(Rule 17-3.402, 17-3.404 - 17-3.406)

GMS # 4060C0092

Sample Date 4-5-1988

Monitoring Well # 2

Well Type: ☒ Background
☐ Site Boundary
☐ Intermediate
☐ Compliance

Well Name Sumter County Landfill

Classification of Groundwater G-II

Well Developed* Prior to
Sample Collection (Yes/No) Yes

Ground Water Elevation
(above MSL) 47.9 ft

STORET Code	Parameter Monitored	Sampling Method	Analysis Method	Analysis Result	Units	Sample Filtered/Unfiltered	Preser- vatives Added
	Cadmium	Grab	EPA 213.1	< 0.0010	mg/l	Unfiltered	HNO ₃
	Chromium	Grab	EPA 218.1	0.04	mg/l	Unfiltered	HNO ₃
	Sodium	Grab	EPA 273.1	14	mg/l	Unfiltered	None
	Iron	Grab	EPA 236.1	2.25	mg/l	Unfiltered	HNO ₃
	Manganese	Grab	EPA 243.1	0.13	mg/l	Unfiltered	HNO ₃
	C. O. D.	Grab	HACH	20	mg/l	Unfiltered	H ₂ SO ₄
	Chloride	Grab	EPA 235.3	229	mg/l	Unfiltered	None
	Sulfate	Grab	EPA 375.4	1	mg/l	* Filtered	None
	Nitrate	Grab	STDM 418B	1.40	mg/l	Unfiltered	H ₂ SO ₄
	Total Or- ganic Carbon	Grab	ASTM D2579-59	6	mg/l	Unfiltered	None
	Turbidity	Grab	EPA 180.1	650	NTU	Unfiltered	None
	pH	Grab	EPA 150.1	6.55	pH Units	Unfiltered	None
	Conductivity	Grab	EPA 120.1	672	umhos/cm	Unfiltered	None
	Color	Grab	EPA 110.2	100	Color Units	Unfiltered	None
	Total dis- olved solids	Grab	STDM 208C	392	mg/l	Filtered	None

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DE. ora 17-1.216(2)
Effective January 1, 1983

Page of

* Unfiltered sample would not provide consistent results

PARAMETER MONITORING REPORT
(Rule 17-3.402, 17-3.404 - 17-3.406)

GMS # 4060C0092

Sample Date 4-5-1988

Monitoring Well # 3

Well Type: ☐ Background
☐ Site Boundary
☐ Intermediate
☐ Compliance

Well Name Sumter County Landfill

Classification of Groundwater G-II

Well Developed* Prior to
Sample Collection (Yes/No) NO

Ground Water Elevation
(above MSL) _____ ft

STORET Code	Parameter Monitored	Sampling Method	Analysis Method	Analysis Result	Units	Sample Filtered/Unfiltered	Preser- vatives Added
	Cadmium	Grab	EPA 213.1		mg/l	Unfiltered	HNO ₃
	Chromium	Grab	EPA 218.1		mg/l	Unfiltered	HNO ₃
	Sodium	Grab	EPA 273.1		mg/l	Unfiltered	None
	Iron	Grab	EPA 236.1		mg/l	Unfiltered	HNO ₃
	Manganese	Grab	EPA 243.1		mg/l	Unfiltered	HNO ₃
	C. O. D.	Grab	HACH		mg/l	Unfiltered	H ₂ SO ₄
	Chloride	Grab	EPA 235.3		mg/l	Unfiltered	None
	Sulfate	Grab	EPA 375.4		mg/l	* Filtered	None
	Nitrate	Grab	STDM 418B		mg/l	Unfiltered	H ₂ SO ₄
	Total Or- ganic Carbon	Grab	ASTM D2579-59		mg/l	Unfiltered	None
	Turbidity	Grab	EPA 180.1		NTU	Unfiltered	None
	pH	Grab	EPA 150.1		pH Units	Unfiltered	None
	Conductivity	Grab	EPA 120.1		umhos/cm	Unfiltered	None
	Color	Grab	EPA 110.2		Color Units	Unfiltered	None
	Total dis- solved solids	Grab	STDM 208C		mg/l	Filtered	None

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DE. ors 17-1.216(2)
Effective January 1, 1983

Page of

* Unfiltered sample would not provide consistent results

PARAMETER MONITORING REPORT
(Rule 17-3.402, 17-3.404 - 17-3.406)

GMS # 4060C0092

Sample Date 4-5-1988

Monitoring Well # 4

Well Type: ☐ Background
☒ Site Boundary
☐ Intermediate
☐ Compliance

Well Name Sumter County Landfill

Classification of Groundwater G-II

Well Developed* Prior to
Sample Collection (Yes/No) YES

Ground Water Elevation
(above MSL) 47.5 ft

STORET Code	Parameter Monitored	Sampling Method	Analysis Method	Analysis Result	Units	Sample Filtered/Unfiltered	Preser- vatives Added
	Cadmium	Grab	EPA 213.1	< 0.0010	mg/l	Unfiltered	HNO ₃
	Chromium	Grab	EPA 218.1	0.36	mg/l	Unfiltered	HNO ₃
	Sodium	Grab	EPA 273.1	11	mg/l	Unfiltered	None
	Iron	Grab	EPA 236.1	0.44	mg/l	Unfiltered	HNO ₃
	Manganese	Grab	EPA 243.1	0.13	mg/l	Unfiltered	HNO ₃
	C. O. D.	Grab	HACH	120	mg/l	Unfiltered	H ₂ SO ₄
	Chloride	Grab	EPA 235.3	215	mg/l	Unfiltered	None
	Sulfate	Grab	EPA 375.4	< 1	mg/l	* Filtered	None
	Nitrate	Grab	STDM 418B	3.55	mg/l	Unfiltered	H ₂ SO ₄
	Total Or- ganic Carbon	Grab	ASTM D2579-59	3	mg/l	Unfiltered	None
	Turbidity	Grab	EPA 180.1	1800	NTU	Unfiltered	None
	pH	Grab	EPA 150.1	7.49	pH Units	Unfiltered	None
	Conductivity	Grab	EPA 120.1	412	umhos/cm	Unfiltered	None
	Color	Grab	EPA 110.2	350	Color Units	Unfiltered	None
	Total dis- olved solids	Grab	STDM 208C	464	mg/l	Filtered	None

*Well development is the process of pumping the well prior to sampling in order to obtain a representative ground water sample.

DE. orm 17-1.216(2)

Effective January 1, 1983

Page of

* Unfiltered sample would not provide consistent results

PARAMETER MONITORING REPORT
(Rule 17-3.402, 17-3.404 - 17-3.406)

GMS # 4060C0092

Sample Date 4-5-1988

Monitoring Well # 5

Well Type: ☐ Background
☐ Site Boundary
☐ Intermediate
☒ Compliance

Well Name Sumter County Landfill

Classification of Groundwater G-II

Well Developed* Prior to Sample Collection (Yes/No) YES

Ground Water Elevation
(above MSL) 46.8 ft

STORET Code	Parameter Monitored	Sampling Method	Analysis Method	Analysis Result	Units	Sample Filtered/Unfiltered	Preservatives Added
	Cadmium	Grab	EPA 213.1	< 0.0010	mg/l	Unfiltered	HNO ₃
	Chromium	Grab	EPA 218.1	0.11	mg/l	Unfiltered	HNO ₃
	Sodium	Grab	EPA 273.1	10	mg/l	Unfiltered	None
	Iron	Grab	EPA 236.1	6.50	mg/l	Unfiltered	HNO ₃
	Manganese	Grab	EPA 243.1	0.18	mg/l	Unfiltered	HNO ₃
	C. O. D.	Grab	HACH	20	mg/l	Unfiltered	H ₂ SO ₄
	Chloride	Grab	EPA 235.3	133	mg/l	Unfiltered	None
	Sulfate	Grab	EPA 375.4	110	mg/l	* Filtered	None
	Nitrate	Grab	STDM 418B	0.68	mg/l	Unfiltered	H ₂ SO ₄
	Total Organic Carbon	Grab	ASTM D2579-59	3	mg/l	Unfiltered	None
	Turbidity	Grab	EPA 180.1	36	NTU	Unfiltered	None
	pH	Grab	EPA 150.1	7.89	pH Units	Unfiltered	None
	Conductivity	Grab	EPA 120.1	266	umhos/cm	Unfiltered	None
	Color	Grab	EPA 110.2	50	Color Units	Unfiltered	None
	Total dissolved solids	Grab	STDM 208C	288	mg/l	Filtered	None

*Well development is the process of pumping the well prior to sampling in order to obtain a representative ground water sample.

DE. ors 17-1.216(2)
Effective January 1, 1983

Page of

* Unfiltered sample would not provide consistent results

SPRINGSTEAD ENGINEERING, INC.

Consulting Engineers - Planners - Surveyors

727 S. 14TH ST.
P.O. BOX 448
LEESBURG, FLA. 32749-0448
(904) 787-1414



*Sign of
Excellence*

P.O. BOX 1448
BUSHNELL, FLA. 33513-1448
(904) 793-3639

September 10, 1987

~~Kim Ford~~ *STEVE*
State of Florida
Department of Environmental Regulation
4520 Oak Fair Boulevard
Tampa, Florida 33610-7347

RE: Sumter County Commission
Sumter County Landfill
FDER Permit No. SC 60-132071
C-103

Dear Mr. Ford:

Enclosed please find a Quarterly Report on Ground Water Monitoring and supporting data for the referenced project.

Please process the review the report at your earliest convenience for approval.

Should you have any questions, please contact our office.

Very truly yours,

SPRINGSTEAD ENGINEERING, INC.

Paul Bradley

Paul Bradley, P.E.
PB:sn
Encl.
cc: Garry Breeden, Sumter County

(C103L091087)

D. H. H.

SEP 11 1987

SOUTH WEST DISTRICT
TAMPA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

QUARTERLY REPORT ON GROUND WATER MONITORING
Rule 17-4.245(6)(k)2.

GMS # 4060C00092

DATE 8-27-1987

DER PERMIT # SC 60-132071

Sumter County Landfill
Installation Name

209 North Florida Street Bushnell FL 33513 Sumter
Address City State Zip County

Gary Breeden Director of Public Works
Owner or Authorized Representative's Name Title

Method of Discharge Groundwater Slowrate Infiltration

Type of Industry Landfill

Report for Period 7-87 to 9-87
date date

Attach monitoring data as approved in monitoring plan using parameter monitoring report forms. When applicable, attach additional sheets describing any changes in the background water quality and the discharge plume since the last reported description. Include any changes in size, direction of movement, rate of movement, and concentration changes of plume constituents in violation of the applicable standards.

NOTE: Pursuant to Rule 17-4.245(6)(k)3., at any time there is a change in the permitted volume, location or chemical, physical or microbiological composition of the discharge plume, the permittee shall notify the department and, if required by the department, submit a new report stating the volume and chemical, physical and microbiological compositions of the discharge at the point of release or contact with the ground water at the site boundary.

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Gary Breeden
Owner or Authorized Representative's Signature

9/3/87
Date

PARAMETER MONITORING REPORT
(Rule 17-3.402, 17-3.404 - 17-3.406)

GMS # 4060C0092

Sample Date 7/10/87

Monitoring Well # 1

Well Type: ☐ Background
☐ Site Boundary
☒ Intermediate
☐ Compliance

Well Name Sumter County Landfill

Classification of Groundwater G-II

Well Developed* Prior to
Sample Collection (Yes/No) Yes

Ground Water Elevation
(above MSL) 46.3 ft

STORET Code	Parameter Monitored	Sampling Method	Analysis Method	Analysis Result	Units	Sample Filtered/Unfiltered	Preser- vatives Added
	Cadmium	Grab	EPA 213.1	2.0010	mg/l	Unfiltered	HNO ₃
	Chromium	Grab	EPA 218.1	2.0050	mg/l	Unfiltered	HNO ₃
	Sodium	Grab	EPA 273.1	2.0	mg/l	Unfiltered	HNO ₃
	Iron	Grab	EPA 236.1	3.41	mg/l	Unfiltered	HNO ₃
	Manganese	Grab	EPA 243.1	.321	mg/l	Unfiltered	HNO ₃
	Bromo di- chloromethane	Grab	EPA 624.0	1.0	mg/l	Unfiltered	None
	Bromoform	Grab	EPA 624.0	1.0	mg/l	Unfiltered	None
	Chloroform	Grab	EPA 624.0	1.09	mg/l	Unfiltered	None
	Dibromo- chloromethane	Grab	EPA 624.0	1.0	mg/l	Unfiltered	None
	Total Trihalomethane	Grab	EPA 510.1	1.09	mg/l	Unfiltered	None
	C.O.D.	Grab	HACH	0.0	mg/l	Unfiltered	H ₂ SO ₄
	Chloride	Grab	EPA 325.3	5.0	mg/l	Unfiltered	None ⁴
	Sulfate	Grab	EPA 375.4	1.0	mg/l	Filtered *	None
	Ammonia	Grab	STDM 417E	.2	mg/l	Unfiltered	H ₂ SO ₄
	Nitrate	Grab	STDM 418B	.002	mg/l	Unfiltered	H ₂ SO ₄
	Turbidity	Grab	EPA 180.1	29.0	NTU	Unfiltered	None ⁴
	PH	Grab	EPA 150.1	6.75	PH units	Unfiltered	None
	Conductivity	Grab	EPA 120.1	.0221	umhos/cm	Unfiltered	None

*Well development is the process of pumping the well prior to sampling in order to obtain a representative ground water sample.

DE. orm 17-1.216(2)
Effective January 1, 1983

Page 2 of 2

* Unfiltered sample would not provide consistent results.

PARAMETER MONITORING REPORT
(Rule 17-3.402, 17-3.404 - 17-3.406)

GMS # 4060C0092

Sample Date 7/10/87

Monitoring Well # 2

Well Type: ☒ Background
☐ Site Boundary
☐ Intermediate
☐ Compliance

Well Name Sumter County Landfill

Classification of Groundwater G-II

Well Developed* Prior to
Sample Collection (Yes/No) Yes

Ground Water Elevation
(above MSL) 46.5 ft

STORET Code	Parameter Monitored	Sampling Method	Analysis Method	Analysis Result	Units	Sample Filtered/Unfiltered	Preser- vatives Added
	Cadmium	Grab	EPA 213.1	< .0010	mg/l	Unfiltered	HNO ₃
	Chromium	Grab	EPA 218.1	< .0050	mg/l	Unfiltered	HNO ₃
	Sodium	Grab	EPA 273.1	4.7	mg/l	Unfiltered	HNO ₃
	Iron	Grab	EPA 236.1	1.61	mg/l	Unfiltered	HNO ₃
	Manganese	Grab	EPA 243.1	.379	mg/l	Unfiltered	HNO ₃
	Bromo di- chloromethane	Grab	EPA 624.0	< 1.0	mg/l	Unfiltered	None
	Bromoform	Grab	EPA 624.0	< 1.0	mg/l	Unfiltered	None
	Chloroform	Grab	EPA 624.0	< 1.0	mg/l	Unfiltered	None
	Dibromo- chloromethane	Grab	EPA 624.0	< 1.0	mg/l	Unfiltered	None
	Total Trihalomethane	Grab	EPA 510.1	< 1.0	mg/l	Unfiltered	None
	C.O.D.	Grab	HACH	0.0	mg/l	Unfiltered	H ₂ SO ₄
	Chloride	Grab	EPA 325.3	5.0	mg/l	Unfiltered	None ⁴
	Sulfate	Grab	EPA 375.4	0.0	mg/l	Filtered *	None
	Ammonia	Grab	STDM 417E	.4	mg/l	Unfiltered	H ₂ SO ₄
	Nitrate	Grab	STDM 418B	.007	mg/l	Unfiltered	H ₂ SO ₄
	Turbidity	Grab	EPA 180.1	450.0±5	NTU	Unfiltered	None ⁴
	PH	Grab	EPA 150.1	7.15	PH units	Unfiltered	None
	Conductivity	Grab	EPA 120.1	.0641	µmhos/cm	Unfiltered	None

*Well development is the process of pumping the well prior to sampling in order to obtain a representative ground water sample.

DE. orm 17-1.216(2)

Effective January 1, 1983

Page 2 of 2

* Unfiltered sample would not provide consistent results.

PARAMETER MONITORING REPORT
(Rule 17-3.402, 17-3.404 - 17-3.406)

GMS # 4060C0092

Sample Date 7/10/87

Monitoring Well # 4

Well Type: ☐ Background
☒ Site Boundary
☐ Intermediate
☐ Compliance

Well Name Sumter County Landfill

Classification of Groundwater G-II

Well Developed* Prior to
Sample Collection (Yes/No) Yes

Ground Water Elevation
(above MSL) 46.5 ft

STORET Code	Parameter Monitored	Sampling Method	Analysis Method	Analysis Result	Units	Sample Filtered/Unfiltered	Preservatives Added
	Cadmium	Grab	EPA 213.1	< .0010	mg/l	Unfiltered	HNO ₃
	Chromium	Grab	EPA 218.1	< .0050	mg/l	Unfiltered	HNO ₃
	Sodium	Grab	EPA 273.1	7.0	mg/l	Unfiltered	HNO ₃
	Iron	Grab	EPA 236.1	7.85	mg/l	Unfiltered	HNO ₃
	Manganese	Grab	EPA 243.1	.267	mg/l	Unfiltered	HNO ₃
	Bromo di-chloromethane	Grab	EPA 624.0	<1.0	mg/l	Unfiltered	None
	Bromoform	Grab	EPA 624.0	<1.0	mg/l	Unfiltered	None
	Chloroform	Grab	EPA 624.0	<1.0	mg/l	Unfiltered	None
	Dibromo-chloromethane	Grab	EPA 624.0	<1.0	mg/l	Unfiltered	None
	Total Trihalomethane	Grab	EPA 510.1	<1.0	mg/l	Unfiltered	None
	C.O.D.	Grab	HACH	0.0	mg/l	Unfiltered	H ₂ SO ₄
	Chloride	Grab	EPA 325.3	8.0	mg/l	Unfiltered	None
	Sulfate	Grab	EPA 375.4	1.0	mg/l	Filtered *	None
	Ammonia	Grab	STDM 417E	.4	mg/l	Unfiltered	H ₂ SO ₄
	Nitrate	Grab	STDM 418B	.001	mg/l	Unfiltered	H ₂ SO ₄
	Turbidity	Grab	EPA 180.1	59.0	NTU	Unfiltered	None
	PH	Grab	EPA 150.1	6.18	PH units	Unfiltered	None
	Conductivity	Grab	EPA 120.1	.0490	µmhos/cm	Unfiltered	None

*Well development is the process of pumping the well prior to sampling in order to obtain a representative ground water sample.

DE. orm 17-1.216(2)
Effective January 1, 1983

Page 2 of 2

* Unfiltered sample would not provide consistent results.

PARAMETER MONITORING REPORT
(Rule 17-3.402, 17-3.404 - 17-3.406)

GMS # 4060C0092

Sample Date 7/10/87

Monitoring Well # 5

Well Type: ☐ Background
☐ Site Boundary
☐ Intermediate
☒ Compliance

Well Name Sumter County Landfill

Classification of Groundwater G-II

Well Developed* Prior to
Sample Collection (Yes/No) Yes

Ground Water Elevation
(above MSL) 46.2 ft

STORET Code	Parameter Monitored	Sampling Method	Analysis Method	Analysis Result	Units	Sample Filtered/Unfiltered	Preser- vatives Added
	Cadmium	Grab	EPA 213.1	2.0010	mg/l	Unfiltered	HNO ₃
	Chromium	Grab	EPA 218.1	2.0050	mg/l	Unfiltered	HNO ₃
	Sodium	Grab	EPA 273.1	4.7	mg/l	Unfiltered	HNO ₃
	Iron	Grab	EPA 236.1	16.8	mg/l	Unfiltered	HNO ₃
	Manganese	Grab	EPA 243.1	.616	mg/l	Unfiltered	HNO ₃
	Bromo di- chloromethane	Grab	EPA 624.0	1.0	mg/l	Unfiltered	None
	Bromoform	Grab	EPA 624.0	1.0	mg/l	Unfiltered	None
	Chloroform	Grab	EPA 624.0	1.0	mg/l	Unfiltered	None
	Dibromo- chloromethane	Grab	EPA 624.0	1.0	mg/l	Unfiltered	None
	Total Trihalomethane	Grab	EPA 510.1	1.0	mg/l	Unfiltered	None
	C.O.D.	Grab	HACH	0.0	mg/l	Unfiltered	H ₂ SO ₄
	Chloride	Grab	EPA 325.3	9.0	mg/l	Unfiltered	None
	Sulfate	Grab	EPA 375.4	22.0	mg/l	Filtered *	None
	Ammonia	Grab	STDM 417E	.4	mg/l	Unfiltered	H ₂ SO ₄
	Nitrate	Grab	STDM 418B	2.001	mg/l	Unfiltered	H ₂ SO ₄
	Turbidity	Grab	EPA 180.1	57.0	NTU	Unfiltered	None
	PH	Grab	EPA 150.1	6.75	PH units	Unfiltered	None
	Conductivity	Grab	EPA 120.1	.0513	umhos/cm	Unfiltered	None

*Well development is the process of pumping the well prior to sampling in order to obtain a representative ground water sample.

DE. orm 17-1.216(2)
Effective January 1, 1983

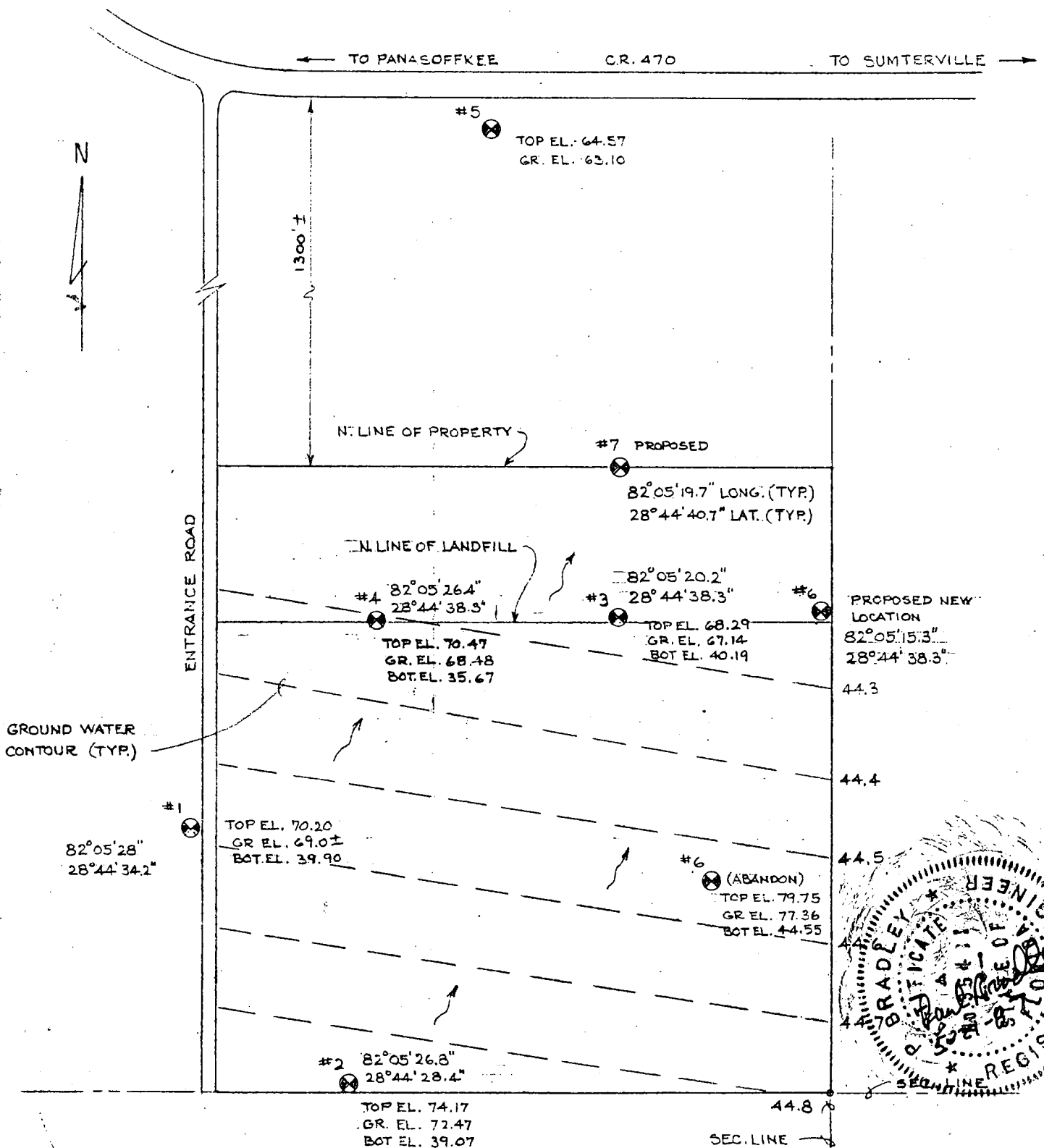
Page 2 of 2

* Unfiltered sample would not provide consistent results.

D. E. R.

SEP 11 1987

SOUTH WEST DISTRICT
TAMPA



D. E. R.
MAY 21 1987
SOUTH WEST DISTRICT

NOTES:

1. GROUND WATER CONTOURS ESTABLISHED JAN. 84.
2. WELLS #6 & #3 WERE DRY WHEN CHECKED - 10/86

REVISE - #6 & #7 WELLS 3-13-87

SPRINGSTEAD
AND
ASSOC. INC.

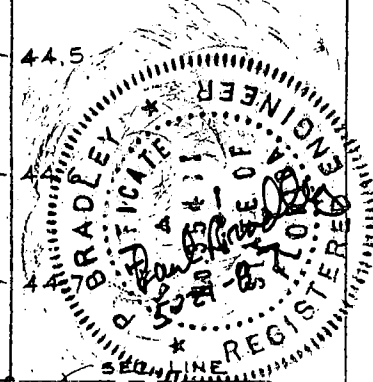


consulting
engineers

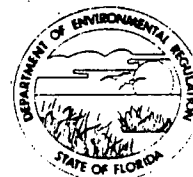
Leesburg -- Bushnell

MONITORING WELLS
PLAN
(LATITUDES & LONGITUDES)
SUMTER COUNTY
LANDFILL

DATE 1-27-87	SCALE 1"=300'	FILE C-103	JOB NO. C103
DESIGN JMD	DRAWN RLD	CHECKED P.B.	SHEET OF 1



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION



Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: _____ LOCTN: _____
To: _____ LOCTN: _____
To: _____ LOCTN: _____
FROM: _____ DATE: _____

TO: Kim Ford, Solid Waste Section

FROM: Judy Richter, Groundwater Section
Gardner Strasser, Groundwater Section

DATE: April 15, 1987

SUBJECT: Sumter County Landfill
SC60-132017
Groundwater Monitoring Plan Modifications

Springstead Engineering, Inc. has requested a permit modification for select monitor well locations, sampling frequency and the number of sampling parameters. Upon review of the permit conditions and the requested changes the Groundwater Section agrees to these changes. However, in lieu of the fact that Sumter County is operating with an expired permit the revised specific conditions will be attached to the new construction permit. We have consolidated and revised all the conditions as they relate to the Groundwater Monitoring Plan to alleviate any future confusion.

The well completion data submitted 2/17/87 is still missing latitude and longitude for each monitor well. The latitude/longitude given references all the wells to the southeast corner of the property.

Jr/lr
Attachments

MEMORANDUM
Kim Ford
Sumter County Landfill
SC60-1320171

SPECIFIC CONDITIONS:

1. In accordance with Chapter 17-4, Florida Administrative Code (F.A.C.), the permittee has installed and placed into operation a Groundwater Monitoring System. The Groundwater Monitoring System is designed and constructed in accordance with the plans submitted on June 18, 1984 by Springstead Engineering, Inc. and the additional information submitted January 28, 1985 and March 16, 1987.

2. The groundwater monitoring wells are located as follows:

<u>Well Number</u>	<u>Aquifer</u>	<u>Location</u>
MW-1	Surficial	As per attached map, revised 3/13/87.
MW-2	Surficial	As per attached map-
MW-3	(Inactive)	As per attached map-
MW-4	Surficial	As per attached map-
MW-5	Floridan	As per attached map-
MW-6	Abandon	As per attached map-
MW-6A	Surficial	As per attached map-
MW-7	Surficial	As per attached map-

3. If any monitoring well becomes damaged or inoperable, the permittee shall submit a written report to the Department within fourteen (14) days of discovery of the problem. Any well in which a water sample cannot be taken is considered inoperable. The report shall detail what has occurred and shall include the corrective measures performed to restore the damaged well to its initial state. All monitor well design and replacement shall be approved by the Department prior to installation.

4. All groundwater monitor wells shall be sampled quarterly for the following parameters. However, additional sample(s), well(s), and parameter(s) may be required based upon subsequent analyses.

PRIMARY STANDARDS

Cadmium	mg/l
Chromium	mg/l
Nitrate	mg/l
Sodium	mg/l
Turbidity	NTU
Gross Alpha*	pCi/l

MEMORANDUM
Kim Ford
Sumter County Landfill
SC60-1320171

SECONDARY STANDARDS

Chloride	mg/l
Color	color units
Iron	mg/l
Manganese	mg/l
pH	std. units
Sulfate	mg/l
Total Dissolved Solids (TDS)	mg/l

OTHERS

Chemical Oxygen Demand (COD)	mg/l
Specific Conductance	umhos
Total Organic Halide	mg/l
Water Levels	N.G.V.D.

* One-time analysis

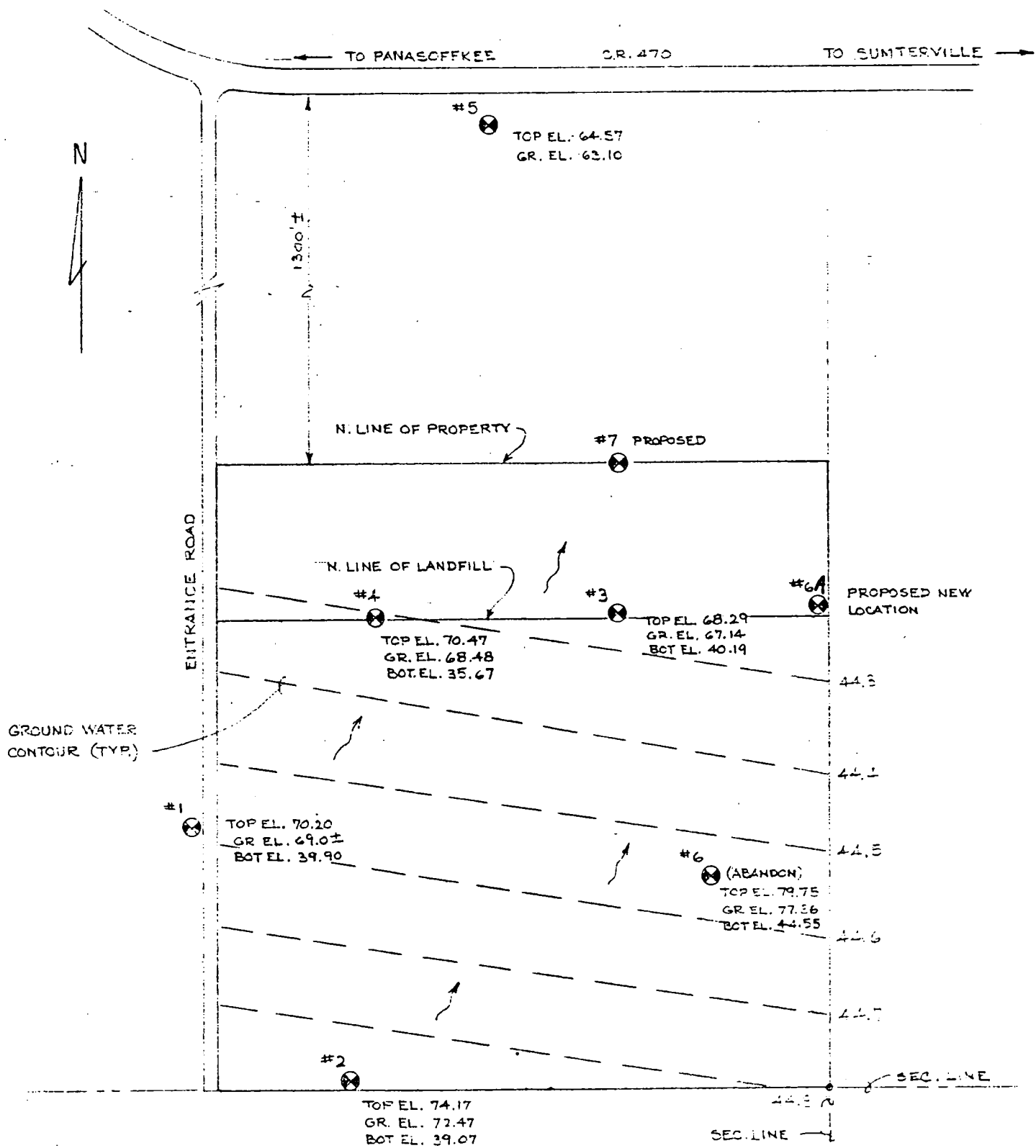
5. The field testing, sample collection and preservation and laboratory testing, including quality control procedures, shall be in accordance with methods approved by the Department in accordance with Chapter 17-4.246 and 17-3.401, F.A.C.. Approved methods as published by the Department or as published in Standard Methods, A.S.T.M. or EPA methods shall be used. Approved methods for chemical analyses are summarized in the Federal Register, December 1, 1976 (41FR52780) except that turbidity shall be measured by the Nephelometric Method.

6. All groundwater monitoring analyses shall be reported on the Department Form 17-1.216(2), Quarterly Report on Groundwater Monitoring. The permittee shall submit to the Department the results of the groundwater monitoring well water quality analysis no later than the fifteenth (15) day of the month immediately following the end of the sampling period. The results shall be sent to the Department of Environmental Regulation, Southwest District Office, 7601 Highway 301 North, Tampa, Florida 33637-9544.

7. The permittee shall ensure that the water quality standards for Class G-II groundwaters will not be exceeded at the boundary of the zone of discharge according to Sections 17-3.402 and 17-3.404, F.A.C..

8. The permittee shall ensure that the minimum criteria for groundwater specified in Section 17-3.402, F.A.C. shall not be violated within the zone of discharge.

9. The zone of discharge shall extend horizontally from the point of discharge to the permittee's north county property line and vertically to the base of the shallow aquifer according to Chapter 17-4.245 (4), F.A.C..



S.E. COR. OF PROPERTY
N. LAT. - 28°44' 28"
W. LONG. 83°45' 16"

Paul Bradley
3-13-87

NOTES:

- GROUND WATER CONTOURS ESTABLISHED JAN. 86
- WELLS #6 & #2 WERE DRY WHEN CHECKED - 10/86

REVISE - #6 & #7 WELLS 3-13-87

SPRINGSTEAD
AND
ASSOC. INC.



consulting
engineers

Leesburg - Rushwell

MONITORING WELLS
PLAN

SUNTER COUNTY
LANDFILL

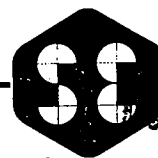
DATE	SCALE	FILE	JOB NO.
1-27-87	1"=300'	C-103	C-103
DESIGN	DRAWN	CHECKED	SHEET
JMD	RLD	P.B.	1 OF 1

SPRINGSTEAD ENGINEERING, INC.

Consulting Engineers - Planners - Surveyors

RECEIVED
3/17/87
GW

727 S. 14TH ST.
P.O. BOX 448
LEESBURG, FLA. 32749-0448
(904) 787-1414



E. R.

P.O. BOX 1448
BUSHNELL, FLA. 33513-1448
(904) 793-3639

MAR 16 1987

March 13, 1987

Ms. Judy Richtar
Groundwater Section
State of Florida
Department of Environmental Regulation
7601 U. S. Highway 301, North
Tampa, Florida 33610-9544

RE: Sumter County Landfill
Permit No. SO60-30674
C-103

Dear Ms. Richtar:

We respectfully request the following changes be made to the
Groundwater Monitoring Plan for Permit No. SO60-30674:

Quarterly sampling in place of monthly
Addition of Cadmium and Chromium to the parameter list
Replacement of TOC with COD on the parameter list
Abandonment of Well No. 6 and construction of a new Well No. 6
as shown on the attached location map
Addition of Well No. 7 as shown on the attached location map
Well No. 3 declared inactive
Zone of discharge to be considered the boundary of County
property

We look forward to your response to this request.

Very truly yours,

SPRINGSTEAD ENGINEERING, INC.

Paul Bradley

Paul Bradley, P. E.

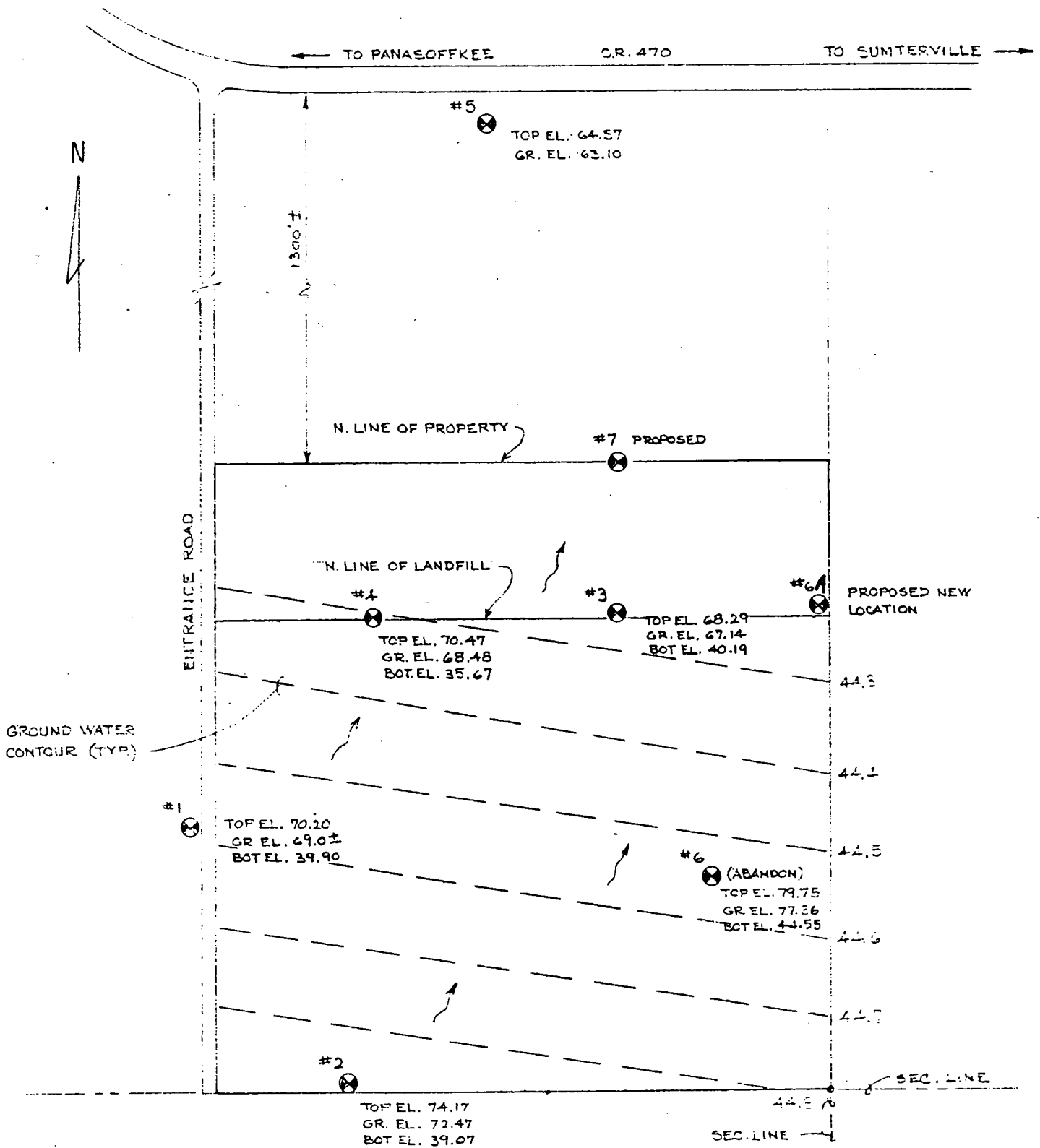
Jonathan M. Diller

Jonathan M. Diller, E. I. T.

PB/JMD:mm

cc: Mr. Garry Breeden
(C103L031087)

*Kim,
For your files.
Judy*



S.E. COR. OF PROPERTY

N. LAT. - 28° 44' 25"

W. LONG. 82° 03' 16"

NOTES:

1. GROUND WATER CONTOUR ESTABLISHED JAN. 86
2. WELLS #6 & #3 WERE DRY WHEN CHECKED - 10/86

REVISE - #6 & #7 WELLS 3-13-87

**SPRINGSTEAD
AND
ASSOC. INC.**



consulting
engineers

Leesburg - Bushnell

**MONITORING WELLS
PLAN**

**SUMTER COUNTY
LANDFILL**

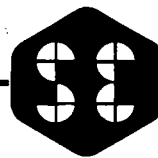
DATE	SCALE	FILE	JOB NO.
1-27-87	1"=300'	C-103	C-103
DESIGN	DRAWN	CHECKED	SHEET
JMD	RLD	P.B.	1 OF 1

Paul Bradley
3-13-87

SPRINGSTEAD ENGINEERING, INC.

Consulting Engineers - Planners - Surveyors

D. E. A.



727 S. 14TH ST.
P.O. BOX 448
LEESBURG, FLA. 32749-0448
(904) 787-1414

P.O. BOX 1448
BUSHNELL, FLA. 33513
(904) 793-3639

FEB 17 1987

TO Kim Ford
State of Florida
Department of Environmental Regulation
Solid Waste Section
7601 Highway 301, North
Tampa, Florida 33610

SOUTH WEST DISTRICT
TAMPA

DATE 2/12/87

JOB NO. C-103

ATTENTION

RE Sumter County Landfill

GENTLEMEN:

WE ARE SENDING YOU

☒ Attached

☐ under separate cover via _____ the following items:

☐ Shop drawings

☐ Prints

☐ Plans

☐ Samples

☐ Specifications

☐ Copy of letter

☐ Change order

☐ _____

Copies	Date	No.	Description
			See attached sheet.

THESE ARE TRANSMITTED as checked below:

☐ For approval

☐ Approved as submitted

☐ Resubmit _____ copies for approval

☒ For your use

☐ Approved as noted

☐ Submit _____ copies for distribution

☒ As requested

☐ Returned for corrections

☐ Return _____ corrected prints

☐ For review and comment

☐ _____

☐ Material and/or prints returned after loan to us

REMARKS

COPY TO George Ellsworth, w/encl.

SIGNED: _____

Paul Bradley

Copies	Date	No.	Description
1			Well No. 1 - Monitoring Well Completion Report.
1			Well No. 2 - Monitoring Well Completion Report.
1			Well No. 3 - Monitoring Well Completion Report.
1			Well No. 4 - Monitoring Well Completion Report.
1			Well No. 5 - Monitoring Well Completion Report.
1			Well No. 6 - Monitoring Well Completion Report.
1	1/31/87	8287-8287	Flowers Chemical Laboratories Analysis.
1	1/31/87	8288-8288	Flowers Chemical Laboratories Analysis.
1	1/16/87	S-6074	Radiochemical Analysis of Drinking Water.
1	1/16/87	S-6097	Radiochemical Analysis of Drinking Water.
1	1/16/87	S-6098	Radiochemical Analysis of Drinking Water.
1	1/20/87	Page 1	Post, Buckley, Schuh & Jernigan, Inc. Report Lab #86-12-177
1	1/1/87	Page 4	Post, Buckley, Schuh & Jernigan, Inc. Report Lab #87-01-001
1	1/27/87	1 of 1	Monitoring Wells Plan, Sumter County Landfill.

Monitoring Well Completion Report

Source Name: Sumter County Landfill

DER Permit No.: S060-30674

Well No.: 1

28 ° 44 ' 28 " N 82 ° 05 ' 16 " E *

Aquifer: Surficial

Flow: NNE

Screen length: 5 Ft. type: PVC Slot size: 0.010 in.

Depth of Well: 32.3ft.

Elevation (NVGD):

Top of Pipe 70.20 ft.

Ground 69.0 ft.

Top of screen 44.9 ft.

Bottom of screen 39.9 ft.

Pipe Diameter 2 in. *

Casing Diameter: 6 in

Casing type: PVC casing length: 20 ft.

SWFWMD Permit No: 407446-19

Attached: Driller's log; sketch

* Referenced point see sketch.

Form No. 25-18-5/83

COMPLETION REPORT

17 Sept 85
Completion Date

License No. 1150





**SURFACE CASING, CASING
AND LINER MATERIAL:**

Types	Diam. (In.)	From (Ft.)	To (Ft.)
PVC Sch 40	6 in	0	20
PVC Sch 40	2 in	0	32
GRAVEL PACK		25	32
Neat Cement: No. of Bags		From (Ft.)	To (Ft.)
6 BAGS		0	23
SAND		23	25

IRON: _____ ppm SULFATES: _____ ppm CHLORIDES: _____ ppm
FINISH: Screen: 5 (Ft.) Open Hole: 0 (Ft.)

WELL LOCATION

____ % ____ % ____ % of Section 15

Township (N-S) Range (E-W)

Latitude	<input type="text"/>	<input type="text"/>	<input type="text"/>	N W Optional may be required
	Deg.	Min.	Sec.	
Longitude	<input type="text"/>	<input type="text"/>	<input type="text"/>	

DRILL METHOD

☒ Rotary ☐ Cable Tool ☐ Jet ☐ Auger: Other _____

Measured Pumping Water _____ Ft.

After _____ Hours At _____ G.P.M. _____ Ft.

Measuring Pt. (Describe):

Which is _____ Ft. ☐ Above ☐ Below Land Surface

[illegible]

Driller's Name _____

Rex Siglin

Monitoring Well Completion Report

Source Name: Sumter County Landfill

DER Permit No.: S060-30674

Well No.: 2

28 ° 44 ' 28 " N 82 ° 05 ' 16 " E *

Aquifer: Surficial Flow: NNE

Screen length: 5 Ft. type: PVC Slot size: 0.010 in.

Depth of Well: 36.8 ft.

Elevation (NVGD):

Top of Pipe 70.47 ft.

Ground 68.48 ft.

Top of screen 40.67 ft.

Bottom of screen 35.67 ft.

Pipe Diameter 2 in. *

Casing Diameter: 6 in

Casing type: PVC casing length: 30 ft.

SWFWMD Permit No: 407447-19

Attached: Driller's log; sketch

* Referenced point see sketch.

Form No. 25-18-5/83

COMPLETION REPORT


army Number: 407447-19

License No. 1150

Types	Diam. (In.)	From (Ft.)	To (Ft.)
PVC Sch 40	6 in	0	30
PVC Sch 40	2 in	0	37
Gravel Pack		30	37
Next Cement: No. of Bags		From (Ft.)	To (Ft.)
6 BAGS		0	28
SAND		28	30

IRON: _____ ppm SULFATES: _____ ppm CHLORIDES: _____ ppm
FINISH: Screen: 5 (Ft.) Open Hole: 0 (Ft.)

— ¼ — ¼ — ¼ of Section 15



Locate in Section

Latitude N
 Longitude W

Optional may be required

☒ Rotary ☐ Cable Tool ☐ Jet ☐ Auger Other _____

Measured Static Water Level _____ + _____ = _____ Ft.

Measured Pumping Water Level _____ + _____ - _____ Ft.
After _____ + _____ - _____ Ft.

After _____ Hours At _____ G.P.M.

Measuring Pt. (Describe): _____

Which is _____ Ft. [] Above [] Below Land Surface

[illegible]

Driller's Name

Monitoring Well Completion Report

Source Name: Sumter County Landfill

DER Permit No.: S060-30674

Well No.: 3

28 ° 44 ' 28 " N 82 ° 05 ' 16 " E *

Aquifer: Surficial

Flow: NNE

Screen length: 5 Ft. type: PVC Slot size: 0.010 in.

Depth of Well: 30.1 ft.

Elevation: (NVGD):

Top of Pipe 68.29 ft.

Ground 67.14 ft.

Top of screen 45.19 ft.

Bottom of screen 40.19 ft.

Pipe Diameter 2 in. *

Casing Diameter: 6 in

Casing type: PVC casing length: 20 ft.

SWFWMD Permit No: 407448-19

Attached: Driller's log; sketch

* Referenced point see sketch.

Form No. 25-10.5/83

2. COMPLETION REPORT

License No. 1150

Types	Diam. (In.)	From (Ft.)	To (Ft.)
PVC Sch 40	6 in	0	20
PVC Sch 40	2 in	0	32
GRAVEL Pack		25	32
Neat Cement: No. of Bags		From (Ft.)	To (Ft.)
11 Bags		0	23
SAND		23	25

FINISH: Screen: 5 (Ft.) Open Hole: 0 (Ft.)

____ % ____ % ____ % of Section 25

Locate in Section

Latitude N } Optional
Deg. Min. Sec. may be
Longitude W } required

Which is _____ Ft. ☐ Above ☐ Below Land Surface

[illegible]

Driller's Name

Chuck Rebold

Monitoring Well Completion Report

Source Name: Sumter County Landfill

DER Permit No.: S060-30674

Well No.: 4

28 ° 44 ' 28 " N 82 ° 05 ' 16 " E *

Aquifer: Surficial

Flow: NNE

Screen length: 5 Ft. type: PVC Slot size: 0.010 in.

Depth of Well: 36.8ft.

Elevation: (NVGD):

Top of Pipe 70.47 ft.

Ground 68.48 ft.

Top of screen 40.67 ft.

Bottom of screen 35.67 ft.

Pipe Diameter 2 in. *

Casing Diameter: 6 in

Casing type: PVC casing length: 30 ft.

SWFWMD Permit No: 407449-19

Attached: Driller's log; sketch

* Referenced point see sketch.

her's Name Springstead & Associates

Group Number: HO 7449-19

Water Well Contractor's Signature

20 Sept 85
Completion Date

License No. 1150

**SURFACE CASING, CASING
AND LINER MATERIAL:**

Types	Diam. (In.)	From (Ft.)	To (Ft.)
PVC Sch 40	6 in	0	30
PVC Sch 40	2 in	0	37
Gravel Pack		30	37
Neat Cement: No. of Bags		From (Ft.)	To (Ft.)
2 Bags		0	28
SAND		28	30

IRON: _____ ppm SULFATES: _____ ppm CHLORIDES: _____ ppm
FINISH: Screen: 5 (Ft.) Open Hole: 0 (Ft.)

WELL LOCATION

____ % ____ % ____ % of Section 15

Township (N-S) Range (E-W)

Latitude N
 Longitude W

Optional may be required

Locate in Section

DRILL A. 2 HOD

Form No. 25-18.5/83

☒ Rotary ☐ Cable Tool ☐ Jet ☐ Auger Other _____

Measured Static Water Level _____ + _____ = _____ Ft.

Measured Pumping Water Level _____ + _____ Ft.
After _____ + _____ Ft.

Measuring Pt. (Describe):

Which is _____ Ft. [] Above [] Below Land Surface

[illegible]

Driller's Name

Monitoring Well Completion Report

Source Name: Sumter County Landfill

DER Permit No.: S060-30674

Well No.: 5

28 ° 44 ' 28 " N 82 ° 05 ' 16 " E *

Aquifer: Floridan Flow: NE

Screen length: n/a Ft. n/a type: n/a Slot size: n/a

Depth of Well: 149ft.

Elevation (NVGD):

Top of Pipe 64.57 ft.

Ground 63.10 ft.

Top of screen none ft.

Bottom of screen none ft. (open hole 26 feet)

Pipe Diameter 4 in. *

Casing Diameter: none in

Casing type: none casing length: none ft.

SWFWMD Permit No: 407451-19

Attached: Driller's log; sketch

* Referenced point see sketch.

Form No. 25-18-5/83

COMPLETION REPORT

Section Report
Name: Springstead + Associates
Firm Number: 40745118

Permit Number: 487451-19

Water Work Contractor's Signature

30 Sept 85
Completion Date

License No. 11577

**SURFACE CASING, CASING
AND LINER MATERIAL:**

Types	Diam. (In.)	From (Ft.)	To (Ft.)
Schedule 40	4"	0	149
Neat Cement: No. of Bags	From (Ft.)	To (Ft.)	

IRON: _____ ppm SULFATES: _____

IRON: _____ ppm SULFATES: _____ ppm CHLORIDES: _____ ppm
FINISH: Screen: _____ (Ft.) Open Hole: 26 (Ft.)
WELL LOG

WELL LOCATION

____ 1/4 ____ 1/4 ____ 1/4 of Section 15

Township 20 (N-S) Range 22 (E-W)

Latitude Range (E-W)

Longitude Deg. Min.

Locate in Section

Optional
may be
required

DRILL METHOD

Rotary ☐ Cable Tool ☐ Jet ☐ Auger ☐ Other Combination

Measured Static Water Level 17 +

Measured Pumping Rate _____

Measured Pumping Water Level _____ + _____ Ft.
After 2 Hours At 50 GPM _____ + _____ Ft.

Measuring Pt. (Describe): Top 4" pipe
Which is 1.2 Ft. ☒ Above ☐ Below Land Surface

[illegible]

Monitoring Well Completion Report

Source Name: Sumter County Landfill

DER Permit No.: S060-30674

Well No.: 6

28 ° 44 ' 28 " N 82 ° 05 ' 16 " E *

Aquifer: Surficial

Flow: NNE

Screen length: 5 Ft. type: pvc Slot size: 0.010 in.

Depth of Well: 37.2ft.

Elevation: (NVGD):

Top of Pipe 79.75 ft.

Ground 77.36 ft.

Top of screen 49.55 ft.

Bottom of screen 44.55 ft.

Pipe Diameter 2 in. #

Casing Diameter: 6 in

Casing type: PVC casing length: 20 ft.

SWFWMD Permit No: 407450-19

Attached: Driller's log; sketch

* Referenced point see sketch.

License No. 1150

Types	Diam. (In.)	From (Ft.)	To (Ft.)
PVC Sch 40	6 in	0	20
PVC Sch 40	2 in	0	37
GRAVEL PACK		30	37
Neat Cement: No. of Bags		From (Ft.)	To (Ft.)
8 BAGS		0	28
SAND		28	30

IRON: _____ ppm SULFATES: _____ ppm CHLORIDES: _____ ppm
FINISH: Screen: 5 (Ft.) Open Hole: 0 (Ft.)

WELL LOCATION

____ % ____ % ____ % of Section 15

Township (N-S) Range (E-W)

Latitude

 N

Longitude

 W

Deg. Min. Sec.

Optional
may be
required

Locate in Section

Rotary ☐ Cable Tool ☐ Jet ☐ Auger Other ☐

Measured Static Water Level _____ + _____ = _____ Ft.

Measured Pumping Water Level _____ + _____ - _____ Ft.

After _____ Hours At _____ G.P.M.

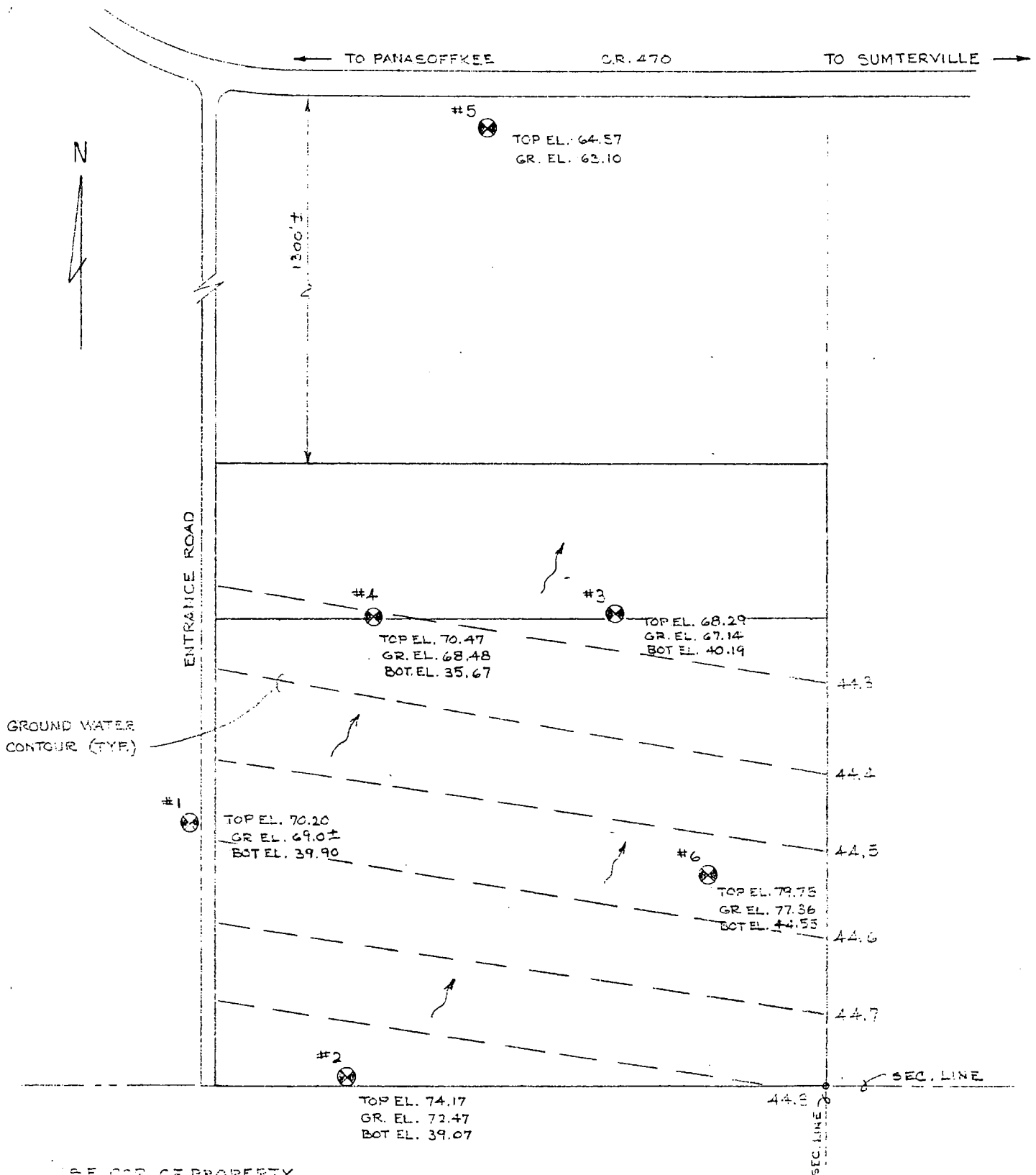
Measuring Pt. (Describe):

Which is _____ Ft. [] Above [] Below Land Surface

[illegible]

Driller's Name

Chuck Raloff



S.E. COR. OF PROPERTY
N. LAT. $28^{\circ}44'28''$
W. LONG. $82^{\circ}05'16''$

NOTES:

1. GROUND WATER CONTOURS ESTABLISHED JAN. 84
2. WELLS #6 & #3 WERE DRY WHEN CHECKED - 10/86

**SPRINGSTEAD
AND
ASSOC. INC.**



consulting
engineers

Leesburg — Bushnell

**MONITORING WELLS
PLAN**

**SUMTER COUNTY
LANDFILL**

DATE 1-27-87	SCALE 1"=300'	FILE C-103	JOB NO. C-103
DESIGN JMD	DRAWN RLD	CHECKED P.S.	SHEET OF 1



FLOWERS CHEMICAL LABORATORIES

ANALYTICAL & CONSULTING CHEMISTS

Received From:
SSpringstead Enginee
PO Box 448
Leesburg, FL 32749

Date Reported: Jan31 1987

DHRS Lab# : 83139
DER Lab# : EL0096
AIHA Lab# : 253

For: NO3 GA CL S04 FE HS NH4 TOC CF DCB DBC BF TTHM

Date Received: Jan15 1987 Lab Numbers: 8287-8287


REPORT OF ANALYSIS

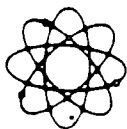
Parameter	Unit	Method	%ACC	%PRC	8287	
					SUNTER	LANDF.
		Detection				WELL 5
		Limit				
Nitrates	mgN/L	0.01	99.6	0	0.01	
Gross_Alpha	pCl/L	DHRS	13106		<3	
Chlorides	mgCl/L	0.01	101	.65	25.1	
Sulfates	mgS04/L	1	101	1.18	217	
Iron	mgFe/L	0.003	99.2	0	0.118	
Sulfides	mgH2S/L	0.004			0.127	
Ammonia	mgN/L	0.05	97.2	3.8	0.08	
Tot.Org.Carbon	mgTOC/L	1	100	.9	33	
Chloroform	ppb	1	99.1	1.92	192	
Bromodichl_Meth	ppb	1	98.3	2.37	<1	
diBromochl_Meth	ppb	1	101	1.11	<1	
Bromoform	ppb	1	96.1	2.04	<1	
Total_THM	ppb	1			192	

RECEIVED
FEB 5 1987
S & A / C103
CC: JB
JD

Data Release Authorization

Sample integrity and reliability certified by Lab personnel prior to analysis.
Methods of analysis in accordance with FCL QA and EPA approved methodology.


Jefferson S. Flowers, Ph.D.
Technical Director



FLOWERS CHEMICAL LABORATORIES

ANALYTICAL & CONSULTING CHEMISTS

Received From:
SPRINGSTEAD ENG.

Date Reported: Jan31 1987

*
**

DHRS Lab# : 83139
DER Lab# : EL0096
AIHA Lab# : 253

RECEIVED

FEB 3 1987

S & A/

For: VO

Date Received:

Jan15 1987

Lab Numbers: 8288-8288

REPORT OF ANALYSIS

Parameter	Unit	Method	%ACC	%PRC	8288
					SUMTER
					LANDFL WELL 5
Trichloroethylene	ug/L	1	106	1.15	<1
Tetrachloroethylene	ug/L	0.3	106	1.15	<0.30
Carbon_Tetrachloride	ug/L	1	106	1.15	<1
Vinyl_Chloride	ug/L	0.5	106	1.15	<0.50
1,1,1-Trichloroethan	ug/L	2	106	1.15	<2
1,2-Dichloroethane	ug/L	1	106	1.15	<1
Benzene	ug/L	0.5	106	1.15	<0.50
Ethylene_Dibromide	ug/L	0.005	106	1.15	<0.005

Data Release Authorization

Sample integrity and reliability certified by Lab personnel prior to analysis.
Methods of analysis in accordance with FCL QA and EPA approved methodology.


Jefferson S. Flowers, Ph.D.
Technical Director



POST, BUCKLEY, SCHUH & JERNIGAN, INC.

ORLANDO, FLORIDA

PAGE 1

RECEIVED: 12/29/86

PBSJ LABORATORY

REPORT

LAB # 86-12-177

01/20/87 16:04:50

REPORT SPRINGSTEAD ENGINEERING INC.
TO P.O. BOX 448
727 S. 14TH STREET
LEESBURG, FL. 32749-0448
ATTEN JONATHAN DILLER

PREPARED PBS&J Laboratory
BY 889 N. Orange Ave.
Orlando, Florida 32801
DHRS# 83170, AIHA# 213
ATTEN Kimberly Kunihiro
PHONE (305) 423-7275

K. Kunihiro
CERTIFIED BY

CONTACT KUNIHIRO

CLIENT SPRINGSTEAD SAMPLES 1
COMPANY SPRINGSTEAD ENGINEERING INC.
FACILITY SUMTER COUNTY LANDFILL SAMPLE

We are pleased to provide this report of analysis. If you
have any questions regarding this report or further analysis
please feel free to telephone.

WORK ID JOB #C-103
TAKEN ONE WATER ANALYSIS
TRANS _____
TYPE _____
P.O. # _____
INVOICE under separate cover

FRACTION 01
GROSS ALPHA(pCi/L)
SETTLED SUPERNATANT 25.2+/-9.8
FILTERED 19.2+/-8.9

Duplicate of report of 12/30/86.

SAMPLE IDENTIFICATION
01 SUMTER COUNTY LANDFILL

PBSJ LABORATORY TEST CODES and NAMES used on this report
GAW GROSS ALPHA IN WATER

RECEIVED
JAN 22 1987
S & A / C103
C103



POST, BUCKLEY, SCHUH & JERNIGAN, INC.

ORLANDO, FLORIDA

PAGE 4
RECEIVED: 01/01/87

PBSJ LABORATORY REPORT
Results by Sample

LAB # 87-01-001

SAMPLE ID SHED

SAMPLE # 01 FRACTIONS: A

Date & Time Collected 12/30/86 12:30:00 Category _____

GAW 62.0
pci/l

SAMPLE ID #1

SAMPLE # 02 FRACTIONS: A

Date & Time Collected 12/30/86 12:30:00 Category _____

GAW 778+/-176
pci/l

SAMPLE ID #2

SAMPLE # 03 FRACTIONS: A

Date & Time Collected 12/30/86 12:30:00 Category _____

GAW 96+/-26.5
pci/l

RADIOCHEMICAL ANALYSIS OF DRINKING WATER

Public Water System; Name and Address

Send Results to: Name and Address

PWS ID					

SUMTER COUNTY LANDFILL

Job No. C-103

Jonathan Diller
Springstead Engineering, Inc.
P. O. Box 448
Leesburg, FL 32749-0448

904/787-1414

SAMPLE ID#

S - 6074

Contaminant ID			
4	0	0	0

CONTAMINANT NAME
Gross Alpha

ANALYSIS METHOD
4 0 1

ANALYSIS RESULTS			
		2	0 .0
			.
			.
			.
			.
			.
			.

ANALYSIS ERROR
6 .0

ANALYSIS DATE		
MO.	DAY	YR.
0	1	1 6 8 7

SAMPLE ANALYZED BY
J. Escalante

SAMPLE PRESERVATION	
HNO ₃	X
HCL	
Other: Specify	
Lab: Specify	

LAB ID#

1 3 1 8 6

ALL RESULTS IN PICOCURIES PER LITER (pCi/L)

CHECK ONE:
<input type="checkbox"/> 1st Quarter
<input type="checkbox"/> 2nd Quarter
<input type="checkbox"/> 3rd Quarter
<input type="checkbox"/> 4th Quarter
<input type="checkbox"/> COMPOSITE

LOCATION		
CODE	NAME	
	C-103	

SAMPLE DATE		
MO.	DAY	YR.
1	2	2 3 8 6

SAMPLE	
TYPE	TIME
	1 5 3 0

SAMPLE COLLECTED BY:
J. Diller

LAB NAME
DHRS

SAMPLE TYPE KEY
C. Check Sample
D. Regular Distribution Sample
P. Plant Tap Sample
R. Raw Water Sample
S. Special Sample
N. Non-Community Samples

State of Florida
HRS-Office of Radiation Control
P.O. Box 15490
Orlando, FL 32858-5490
Attn: Safe Drinking Water Lab

(305) 299-0580

RECEIVED
JAN 29 1987
S & A/C-103
W. P. D.

Prepared By _____ Date ____/____/____ Approved By _____ Date ____/____/____

*FOR LAB USE ONLY

PRESS HARD. YOU ARE MAKING 4 COPIES

RADIOCHEMICAL ANALYSIS OF DRINKING WATER

Public Water System; Name and Address

Send Results to: Name and Address

PWS ID				

SUMTER COUNTY LANDFILL SAMPLES

Job No. C-103

Jonathan Diller
Springstead Engineering, Inc.
P. O. Box 448
Leesburg, FL 32749-0448

904/787-1414

* SAMPLE ID#

S - 6097

Contaminant ID			
1	0	0	0

CONTAMINANT NAME
Gross Alpha

ANALYSIS METHOD		
4	0	1

ANALYSIS RESULTS			
		2	7 .0
			.
			.
			.
			.
			.
			.

ANALYSIS ERROR	
	4 .0
	.
	.
	.
	.
	.
	.

ANALYSIS DATE					
MO.	DAY	YR.			
0	1	1	6	8	7

SAMPLE ANALYZED BY
J. Escalante

SAMPLE PRESERVATION	
HNO ₃	X
HCL	
Other: Specify	
Lab: Specify	

* LAB ID#					
1	3	1	8	6	

ALL RESULTS IN PICOCURIES PER LITER (pCi/L)

CHECK ONE:
<input type="checkbox"/> 1st Quarter
<input type="checkbox"/> 2nd Quarter
<input type="checkbox"/> 3rd Quarter
<input type="checkbox"/> 4th Quarter
<input type="checkbox"/> COMPOSITE

LOCATION	
CODE	NAME
	#1

SAMPLE DATE					
MO.	DAY	YR.			
1	2	3	0	8	6

SAMPLE	
TYPE	TIME
NO	TIME

SAMPLE COLLECTED BY:
J. Diller

* LAB NAME
DHRS

SAMPLE	TYPE	KEY
C.	Check Sample	
D.	Regular Distribution Sample	
P.	Plant Tap Sample	
R.	Raw Water Sample	
S.	Special Sample	
N.	Non-Community Samples	

State of Florida
HRS-Office of Radiation Control
P.O. Box 15490
Orlando, FL 32815-5490
Attn: Safe Drinking Water Lab

(305) 299-0580

Prepared By _____ Date ____/____/____ Approved By _____ Date ____/____/____

*FOR LAB USE ONLY

PRESS HARD. YOU ARE MAKING 4 COPIES

RADIOCHEMICAL ANALYSIS OF DRINKING WATER

Public Water System; Name and Address

Send Results to: Name and Address

PWS ID					

SUMTER COUNTY LANDFILL SAMPLES

Job No. C-103

Jonathan Diller
 Springstead Engineering, Inc.
 P. O. Box 448
 Leesburg, FL 32749-0448

904/787-1414

* SAMPLE ID#

S - 6098

Contaminant ID			
4	0	0	0

CONTAMINANT NAME
Gross Alpha

ANALYSIS METHOD
4 0 1

ANALYSIS RESULTS			
		4	.0
			.
			.
			.
			.
			.

ANALYSIS ERROR
2 .0

ANALYSIS DATE		
MO.	DAY	YR.
0	1	1
1	6	8
6		7

SAMPLE ANALYZED BY
J. Escalante

SAMPLE PRESERVATION	
HNO ₃	X
HCL	
Other: Specify	
Lab: Specify	

* LAB ID#

1 3 1 8 6

ALL RESULTS IN PICOCURIES PER LITER (pCi/L)

CHECK ONE:
<input type="checkbox"/> 1st Quarter
<input type="checkbox"/> 2nd Quarter
<input type="checkbox"/> 3rd Quarter
<input type="checkbox"/> 4th Quarter
<input type="checkbox"/> COMPOSITE

LOCATION		
CODE	NAME	
	2	

SAMPLE DATE		
MO.	DAY	YR.
1	2	3
0	8	6

SAMPLE	
TYPE	TIME
NO	TIME

SAMPLE COLLECTED BY:
J. Diller

* LAB NAME

DHRS

SAMPLE	TYPE	KEY
C.	Check Sample	
D.	Regular Distribution Sample	
P.	Plant Tap Sample	
R.	Raw Water Sample	
S.	Special Sample	
N.	Non-Community Samples	

State of Florida
 HRS-Office of Radiation Control
 P.O. Box 15490
 Orlando, FL 32858-5490
 Attn: Safe Drinking Water Lab

(305) 299-0580

Prepared By _____ Date ____/____/____ Approved By _____ Date ____/____/____

*FOR LAB USE ONLY

PRESS HARD. YOU ARE MAKING 4 COPIES

State of Florida
 DEPARTMENT OF ENVIRONMENTAL REGULATION
 INTEROFFICE MEMORANDUM

For Routing To District Offices And/or To Other Than The Addressee			
To: _____	Locn.: _____		
To: _____	Locn.: _____		
To: _____	Locn.: _____		
From: _____	Date: _____		
Reply Optional []	Reply Required []	Info. Only []	
Date Due: _____	Date Due: _____		

ROUTING SLIP

TO: Gardner Strasser
 FROM: K. Ford
 DATE: 2/25/87
 SUBJECT: SUMTER County
 FACILITY: CENTRAL CANNING

PATS #: 5060-30674

Attached is a groundwater monitoring plan (GMP), data generated from an existing GMP or other groundwater data received on

2/17/87

Any questions you wish to ask for a permitting completeness letter must be received in writing by N/A.

Your comments regarding the adequacy of the plan or monitoring data with Section 17-4.245, F.A.C., are also needed by the requested date. Any priority request which needs quick turn-around time should be so indicated and described in the following section:

PLEASE REPLY BY 3/5/87 OR SOONER.

IN LIGHT OF RECENT MEETINGS FROM

G.W. SECTION AND THE WILLINGNESS

OF THE COUNTY OFFICIAL TO DEAL WITH

COMPLIANCE AT THIS TIME, A

COMPLETE EVALUATION OF THE

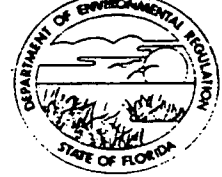
G.W.M. PLAN AND IMPLEMENTATION DATA

IS REQUESTED AT THIS TIME. THANK YOU.

BE THE WAY - THIS IS ORIGINAL DATA

NO COPIES HAVE BEEN MADE AT

THIS TIME - PLEASE RETURN FOR FILING.



Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: _____	Locn: _____
To: _____	Locn: _____
To: _____	Locn: _____
From: _____	Date: _____

TO: Kim Ford, Solid Waste Section

FROM: George Ellsworth, Groundwater Section
Gardner Strasser, Groundwater Section

DATE: February 16, 1987

SUBJECT: Sumter County Landfill
S060-30674
Groundwater Monitoring Plan

We have reviewed the recently submitted sampling data and find that groundwater contamination exists. Cadmium and Chromium were found at elevated levels in MW-4, which is a downgradient well in limestone. Observed levels were 0.053 mg Cd/L and 0.08 mg Cr/L, which are above the maximum contamination levels of 0.010 mg Cd/L and 0.05 mg Cr/L.

Because there is groundwater contamination by toxic heavy metals (Cd, Cr) at a site where the Floridan is unconfined (unprotected) and shallow and the existing Groundwater Monitoring Plan is ineffective, immediate action should be taken. The Groundwater Monitoring Plan (GMP) is ineffective because several of the wells are consistently dry and regular reporting has not yet occurred.

The Groundwater Section recommends that a site inspection be made as soon as possible prior to setting up a meeting between the permittee and DER to address the groundwater contamination and the ineffective GMP.

GE/lrs

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION



Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: _____ LOCTN: _____
To: _____ LOCTN: _____
To: _____ LOCTN: _____
From: _____ DATE: _____

TO: Nick Bruno, Solid Waste Section

FROM: Judy Richtar, Groundwater Section *R*
Gardner Strasser, Groundwater Section *GA*

DATE: December 5, 1986

SUBJECT: Sumter County Landfill
S060-30674

George Ellsworth's memorandum of November 4, 1986 still applies. The applicant has yet to submit DER well completion reports for the six monitor wells. They should include:

Well identification	Driller's Log
Latitude/longitude	Total depth of well
Aquifer monitored	Casing diameter
Screen type and slot size	Casing type and length
Screen length	Direction of groundwater flow
Elevation at top of pipe	in screened zone
Elevation at land surface	SWFWMD well construction permit
Elevation at top and bottom of collection zone	numbers

The well completion report that was submitted is incomplete. The above-mentioned data is necessary to adequately evaluate the groundwater monitoring program. Each report must specify the referenced well.

JR/lrs

INTEROFFICE MEMORANDUM

For Routing To District Offices Ar To Other Than The Addressee		
To: _____	Locn.: _____	
To: _____	Locn.: _____	
To: _____	Locn.: _____	
From: _____	Date: _____	
Reply Optional []	Reply Required []	Info. Only []
Date Due: _____	Date Due: _____	

ROUTING SLIP

TO: Gardner Strasser
FROM: Nick
DATE: 12-2-86
SUBJECT: Sumter County
FACILITY: Landfill PATS #: _____

Attached is a groundwater monitoring plan (GMP), data generated from an existing GMP or other groundwater data received on 11-24-86.

Any questions you wish to ask for a permitting completeness letter must be received in writing by 12-15-86.

Your comments regarding the adequacy of the plan or monitoring data with Section 17-4.245, F.A.C., are also needed by the requested date. Any priority request which needs quick turn-around time should be so indicated and described in the following section:

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION



Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: _____ LOCTN: _____
To: _____ LOCTN: _____
To: _____ LOCTN: _____
FROM: _____ DATE: _____

TO: Nick Bruno, Solid Waste Section
FROM: George Ellsworth, Groundwater Section
Gardner Strasse, Groundwater Section
DATE: November 4, 1986
SUBJECT: Sumter County Central Landfill
SO60-30674
Groundwater Monitoring

We have reviewed the initial analysis submitted October 28, 1986 and find that the data partially meets compliance with Specific Condition No. 3. Our concern is that in only three of the required monitor wells samples were obtained.

We recommend the following:

1. The permittee should attempt to sample the dry well for full Primary and Secondary Drinking Water Standards analysis as soon as possible. If the wells are dry for three consecutive months, the permittee should submit a plan to redrill the wells.
2. Manganese and Total Dissolved Solids should be added to the monthly sampling parameter list. Once a full sampling suite is obtained (all six wells), the permittee could request a change in sample frequency from monthly to quarterly.
3. The Total Trihalomethanes and Radionuclides, which are part of the Primary and Secondary Drinking Water Standards (Ch. 17-22.104(1) (e & f), F.A.C.) should be submitted for the first three (3) wells sampled and included in the initial analysis for the three (3) unsampled wells.

A representative from the Groundwater Section would like to accompany you on your next inspection to observe the site and the monitor wells.

GE/lis

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION



Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: _____ LOCTN: _____
To: _____ LOCTN: _____
To: _____ LOCTN: _____
FROM: _____ DATE: _____

TO: Nick Bruno, Solid Waste Section
FROM: George Ellsworth, Groundwater Section
Gardner Strasser, Groundwater Section
DATE: August 7, 1986
SUBJECT: Sumter County Central Landfill
Groundwater Monitoring Plan
S060-30674

We have reviewed the files and found that no data has been submitted in compliance with Specific Conditions Nos. 3 - 7. Insufficient data has been submitted to determine if compliance has been made with Specific Conditions Nos. 1 - 2.

The permittee (or applicant) should submit the required data to meet compliance and to assist in the review and hopefully, subsequent approval of future permit applications.

GE/lis

Please complete in black ink or type

Form No. 25-18-5/83

WELL COMPLETION REPORT

Owner's Name Springstead & Associates

Permit Number: 407447-19

Water Well Contractor's Signature Raymond J. Janssen Completion Date 20 Sept 85

License No. 1150

SURFACE CASING, CASING AND LINER MATERIAL:

Types	Diam. (In.)	From (Ft.)	To (Ft.)
PVC Sch 40	6 in	0	30
PVC Sch 40	2 in	0	37
Gravel Pack		30	37
Neat Cement: No. of Bags		From (Ft.)	To (Ft.)
6 BAGS		0	28
SAND		28	30

IRON: _____ ppm SULFATES: _____ ppm CHLORIDES: _____ ppm

FINISH: Screen: 5 (Ft.) Open Hole: 0 (Ft.)

WELL LOCATION

____ % ____ % of Section 15

☒ 20 Township (N-S) ☒ 5 Range (E-W) ☒ E
 Latitude _____ Longitude _____
 Deg. _____ Min. _____ Sec. _____
 Optional may be required

DRILL M OD

☒ Rotary ☐ Cable Tool ☐ Jet ☐ Auger Other _____

Measured Static Water Level _____ + _____ Ft.

Measured Pumping Water Level _____ + _____ Ft.

After _____ Hours At _____ G.P.M.

Measuring Pt. (Describe): _____

Which is _____ Ft. | Above | Below Land Surface

Depth (Ft.)		Examine cuttings at 20 ft. or smaller intervals and at changes. Give color, grain-size and type of material. Note any cavities. Indicate producing zones. Attach additional sheets if necessary.
From	To	
0	10	BROWN SAND
10	20	BROWN SANDY CLAY
20	30	BROWN CLAY
30	37	White limestone

D. E. R.

(OCT 21 1985)

SOUTH WEST DUCK H
TAMPA

Driller's Name Chuck Rabold

Please complete in black ink or type

Form No. 25-18-5/83

WELL COMPLETION REPORT

Owner's Name Springstead & Associates

Permit Number: 407447-19

Water Well Contractor's Signature Raymond J. Janssen Completion Date 19 Sept 85

License No. 1150

SURFACE CASING, CASING AND LINER MATERIAL:

Types	Diam. (In.)	From (Ft.)	To (Ft.)
PVC Sch 40	6 in	0	30
PVC Sch 40	2 in	0	37
Gravel Pack		30	37
Neat Cement: No. of Bags		From (Ft.)	To (Ft.)
6 BAGS		0	28
SAND		28	30

IRON: _____ ppm SULFATES: _____ ppm CHLORIDES: _____ ppm

FINISH: Screen: 5 (Ft.) Open Hole: 0 (Ft.)

WELL LOCATION

____ % ____ % of Section 15

☒ 20 Township (N-S) ☒ 5 Range (E-W) ☒ E
 Latitude _____ Longitude _____
 Deg. _____ Min. _____ Sec. _____
 Optional may be required

DRILL M OD

☒ Rotary ☐ Cable Tool ☐ Jet ☐ Auger Other _____

Measured Static Water Level _____ + _____ Ft.

Measured Pumping Water Level _____ + _____ Ft.

After _____ Hours At _____ G.P.M.

Measuring Pt. (Describe): _____

Which is _____ Ft. | Above | Below Land Surface

Depth (Ft.)		Examine cuttings at 20 ft. or smaller intervals and at changes. Give color, grain-size and type of material. Note any cavities. Indicate producing zones. Attach additional sheets if necessary.
From	To	
0	10	BROWN SAND
10	18	BROWN SANDY CLAY
18	30	BROWN CLAY
30	37	White limestone

Driller's Name Rex Siglin

Please complete in black ink or type

WELL COMPLETION REPORT

Owner's Name Springstead + Associates
 Permit Number: 407446-19
 x Raymond Samuel 18 Sept 85
 Water Well Contractor's Signature Completion Date
 License No. 1150

SURFACE CASING, CASING AND LINER MATERIAL:

Types	Diam. (In.)	From (Ft.)	To (Ft.)
PVC Sch 40	6 in	0	20
PVC Sch 40	2 in	0	32
GRAVEL PACK		25	32
Neat Cement: No. of Bags		From (Ft.)	To (Ft.)
6 BAGS		0	23
SAND		23	25

IRON: ___ ppm SULFATES: ___ ppm CHLORIDES: ___ ppm
 FINISH: Screen: 5 (Ft.) Open Hole: 0 (Ft.)

WELL LOCATION

___ % ___ % ___ % of Section 15

<u>20</u>	<u>5</u>	<u>22</u>	<u>12</u>
Township (N-S)	Range	(E-W)	

Latitude N } Optional may be required
 Longitude W }

SURFACE CASING, CASING AND LINER MATERIAL:

Types	Diam. (In.)	From (Ft.)	To (Ft.)
Schedule 40	4"	0	149
Neat Cement: No. of Bags		From (Ft.)	To (Ft.)

IRON: ___ ppm SULFATES: ___ ppm CHLORIDES: ___ ppm
 FINISH: Screen: ___ (Ft.) Open Hole: 26 (Ft.)

WELL LOCATION

___ % ___ % ___ % of Section 15

<u>20</u>	<u>5</u>	<u>22</u>	<u>12</u>
Township (N-S)	Range	(E-W)	

Latitude N } Optional may be required
 Longitude W }

Form No. 25-18-5/83

DRILL METHOD

☒ Rotary ☐ Cable Tool ☐ Jet ☐ Auger Other ___
 Measured Static Water Level ___ + ___ Ft.
 Measured Pumping Water Level ___ + ___ Ft.
 After ___ Hours At ___ G.P.M.
 Measuring Pt. (Describe): ___
 Which is ___ Ft. ☐ Above ☐ Below Land Surface

Depth (Ft.)	Examine cuttings at 20 ft. or smaller intervals and at changes. Give color, grain-size and type of material. Note any cavities. Indicate producing zones. Attach additional sheets if necessary.
From To	
0 10	BROWN SAND
10 15	BROWN SANDY CLAY
15 22	BROWN CLAY
22 32	White limestone

Driller's Name Rex Siglin

Form No. 25-18-5/83

DRILL METHOD

☐ Rotary ☐ Cable Tool ☐ Jet ☐ Auger Other Combination
 Measured Static Water Level 17 + ___ Ft.
 Measured Pumping Water Level ___ + ___ Ft.
 After 2 Hours At 50 G.P.M.
 Measuring Pt. (Describe): Top 4" pipe
 Which is 2 Ft. ☒ Above ☐ Below Land Surface

Depth (Ft.)	Examine cuttings at 20 ft. or smaller intervals and at changes. Give color, grain-size and type of material. Note any cavities. Indicate producing zones. Attach additional sheets if necessary.
From To	
0 20	Dark Gray Sand
20 40	Dark Grey & White Clay
40 60	" " " "
60 70	" " " "
70 80	Hard white lime
80 105	Sand & Soft Brown Rock
105 120	Black Sandy Clay
120 140	Brown Sandy Clay
140 149	Brown limestone
149 169	Brown & white limestone Hard
169 175	" " " " Soft

Driller's Name Chuck Rabold

Please complete in black ink or type

WELL COMPLETION REPORT

Owner's Name Springstead Associates
 Permit Number: 407450-19
 X Raymond Jensen 21 Sept 85
 Water Well Contractor's Signature Completion Date
 License No. 1150

SURFACE CASING, CASING
AND LINER MATERIAL:

Types	Diam. (In.)	From (Ft.)	To (Ft.)
PVC Sch 40	6 in	0	20
PVC Sch 40	2 in	0	37
Gravel Pack		30	37
Net Cement: No. of Bags		From (Ft.)	To (Ft.)
8 BAGS		0	28
SAND		28	30

IRON: _____ ppm SULFATES: _____ ppm CHLORIDES: _____ ppm
 FINISH: Screen: 5 (Ft.) Open Hole: 0 (Ft.)

WELL LOCATION

____ % ____ % ____ % of Section 15

20 5 22 E
 Township (N-S) Range (E-W) Locate in Section
 Latitude _____ N
 Longitude _____ W
 Deg. Min. Sec. } Optional may be required

DRILL METHOD

☒ Rotary ☐ Tool ☐ Jet ☐ Auger Other _____
 Measured Static Water Level _____ + _____ - _____ Ft.
 Measured Pumping Water Level _____ + _____ - _____ Ft.
 After _____ Hours At _____ G.P.M.
 Measuring Pt. (Describe): _____
 Which is _____ Ft. ☐ Above ☐ Below Land Surface

Depth (Ft.)		Examine cuttings at 20 ft. or smaller intervals and at changes. Give color, grain-size and type of material. Note any cavities. Indicate producing zones. Attach additional sheets if necessary.
From	To	
0	10	BROWN SAND
10	20	BROWN SANDY CLAY
20	30	BROWN CLAY
30	37	White limestone

Driller's Name

Chuck Rebold

Please complete in black ink or type

WELL COMPLETION REPORT

Owner's Name Springstead Associates
 Permit Number: 407448-19
 X Raymond Jensen 20 Sept 85
 Water Well Contractor's Signature Completion Date
 License No. 1150

SURFACE CASING, CASING
AND LINER MATERIAL:

Types	Diam. (In.)	From (Ft.)	To (Ft.)
PVC Sch 40	6 in	0	20
PVC Sch 40	2 in	0	32
Gravel Pack		23	32
Net Cement: No. of Bags		From (Ft.)	To (Ft.)
11 BAGS		0	23
SAND		23	25

IRON: _____ ppm SULFATES: _____ ppm CHLORIDES: _____ ppm
 FINISH: Screen: 5 (Ft.) Open Hole: 0 (Ft.)

WELL LOCATION

____ % ____ % ____ % of Section 15

20 5 22 E
 Township (N-S) Range (E-W) Locate in Section
 Latitude _____ N
 Longitude _____ W
 Deg. Min. Sec. } Optional may be required

Form No. 25-18-5/83

DRILL METHOD

☒ Rotary ☐ Cable Tool ☐ Jet ☐ Auger Other _____
 Measured Static Water Level _____ + _____ - _____ Ft.
 Measured Pumping Water Level _____ + _____ - _____ Ft.
 After _____ Hours At _____ G.P.M.
 Measuring Pt. (Describe): _____
 Which is _____ Ft. ☐ Above ☐ Below Land Surface

Depth (Ft.)		Examine cuttings at 20 ft. or smaller intervals and at changes. Give color, grain-size and type of material. Note any cavities. Indicate producing zones. Attach additional sheets if necessary.
From	To	
0	10	BROWN SAND + GARBAGE
		metal, glass, etc.
10	15	BROWN SANDY CLAY
		+ GARBAGE
15	20	BROWN CLAY + GARBAGE
20	32	White limestone

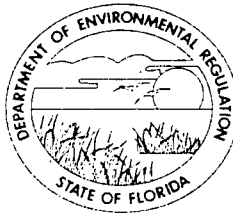
Driller's Name

Chuck Rebold

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

DR. RICHARD D. GARRITY
DISTRICT MANAGER

March 22, 1985

Board of Sumter County Comm.
209 N. Florida Street
Bushnell, FL 33513

Sumter County
Sumter County Landfill

Dear Sirs:

Re: Groundwater Monitoring Plan Permit Modification for
Sumter County Landfill

According to the requirements of Section 17-4.245 and 17-4.08, F.A.C., your groundwater plan has been reviewed and groundwater monitoring requirements have been established for your facility. The following conditions shall become a part of Permit No. SO60-30674:

1. The permittee shall construct and install 5 shallow monitoring wells, and 1 deep monitoring well constructed in the confined aquifer. Locations of the wells shall be as shown in a letter dated January 25, 1985 from Springstead and Associates, Inc., with the addition of a shallow well midway along the eastern boundary of the landfill.
2. Construction of the monitoring wells shall be in accordance with methods approved by the Department and EPA recommended methods as contained in "Procedures Manual for Groundwater Monitoring at Solid Waste Disposal Facilities" (EPA 530/SW-611).
3. Upon completion of the construction of the wells, the permittee shall perform a one-time analysis on all 6 wells for Primary and Secondary drinking water standards (including volatile organics).
4. After initial sampling for Primary and Secondary standards, the permittee shall sample monthly for 1 year and quarterly thereafter, for the following parameters:

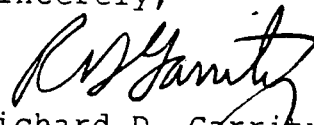
Water levels
pH (field)
Specific Conductance (field)
Ammonia
Sulfate
Sulfide

Total Organic Carbon
Total Organic Halide - TOX
Chloride
Nitrate
Iron

Based on results of sampling, this parameter list may be subject to modifications.

5. The samples collection, preservation, and laboratory testing (including quality control procedures) shall be in accordance with methods approved by the Department. Approved methods as published by the Department or as published in Standard Methods, A.S.T.M. or EPA methods shall be used.
6. Analyses shall be performed by laboratories which are approved by the Department of Health and Rehabilitative Services to conduct analyses pursuant to Section 403.863, F.S., the State Public Water Supply Laboratory Certification Program.
7. The permittee shall submit to the Department's Southwest District Office the results of the groundwater monitoring requirements no later than the 15th day of the month immediately following the end of the sampling period.
8. The zone of discharge shall extend horizontally no more than 100 feet from the site boundary or to the permittee's property line, whichever is less, and vertically to the base of the shallow water table aquifer according to Section 17-4.245(4), F.A.C.
9. The permittee shall ensure that the water quality standards for Class G-II groundwaters will not be exceeded at the boundary of the zone of discharge according to Sections 17-3.402 and 17-3.404, F.A.C.
10. The permittee shall ensure that the minimum criteria for groundwater specified in Section 17-3.402, F.A.C. shall not be violated within the zone of discharge.
11. The permittee shall initiate implementation of the groundwater monitoring program within 90 days after Department approval, pursuant to Section 17-4.245(6)(f), F.A.C.

Sincerely,



Richard D. Garrity, Ph.D.
District Manager

ASB/lgb

cc: Gardner Strasser
Springstead and Associates, Inc.

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

Routing To District Offices To Other Than The Addressee		
To: _____	Locn.: _____	
To: _____	Locn.: _____	
To: _____	Locn.: _____	
From: _____	Date: _____	
Reply Optional []	Reply Required []	Info. Only []
Date Due: _____	Date Due: _____	

TO: Richard D. Garrity

THRU: ~~Harry Kerns~~
① Ed Snipes

FROM: Andy Berry *asb*

DATE: March 19, 1985

SUBJECT: Sumter County Landfill Groundwater Monitoring Program

Sumter County has submitted a groundwater monitoring plan for the existing county landfill.

The plan has been reviewed by myself and the Groundwater Section. After several letters and phone conversations, we have developed a plan suitable for this site, and which meets the requirements of Section 17-4.245, F.A.C.

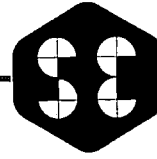
I recommend that this permit modification be issued.

/lgb

SPRINGSTEAD AND ASSOCIATES, INC.

Consulting Engineers - Planners - Surveyors

800 N. LEE ST.
P.O. BOX 448
LEESBURG, FLA. 32749-0448
(904) 787-1414



WEST HWY 476
P.O. BOX 1448
BUSHNELL, FLA. 33513-1448
(904) 793-3639

January 25, 1985

Mr. Andrew S. Berry
Environmental Specialist
State of Florida
Department of Environmental Regulation
7601 Highway 201, North
Tampa, Florida 33610-9544

RE: Sumter County Landfill
Groundwater Monitoring Plan
C-103

Dear Mr. Berry:

This letter will confirm my telephone conversation on Wednesday, January 23, 1985 with Mr. Paul Putzier concerning the location of monitoring wells at the referenced site.

Well No. 1 was relocated on the West boundary of the landfill at a point agreed upon by Mr. Putzier and me. The enclosed revised drawing dated January 23, 1985 shows the new location.

We agreed to advise your office by letter in advance of the installation of the monitoring wells.

Thank you for your continued cooperation concerning this project. Should you have any questions, please feel free to contact our office.

Very truly yours,

SPRINGSTEAD AND ASSOCIATES, INC.

Garry Breeden, P.E.

Encl.

cc: Mr. Garry Breeden

D.E.R.

JAN 28 1985

SOUTH WEST DISTRICT
TAMPA

(C103L,2)

Well #5
(Downgradient, Floridan Monitoring Well)

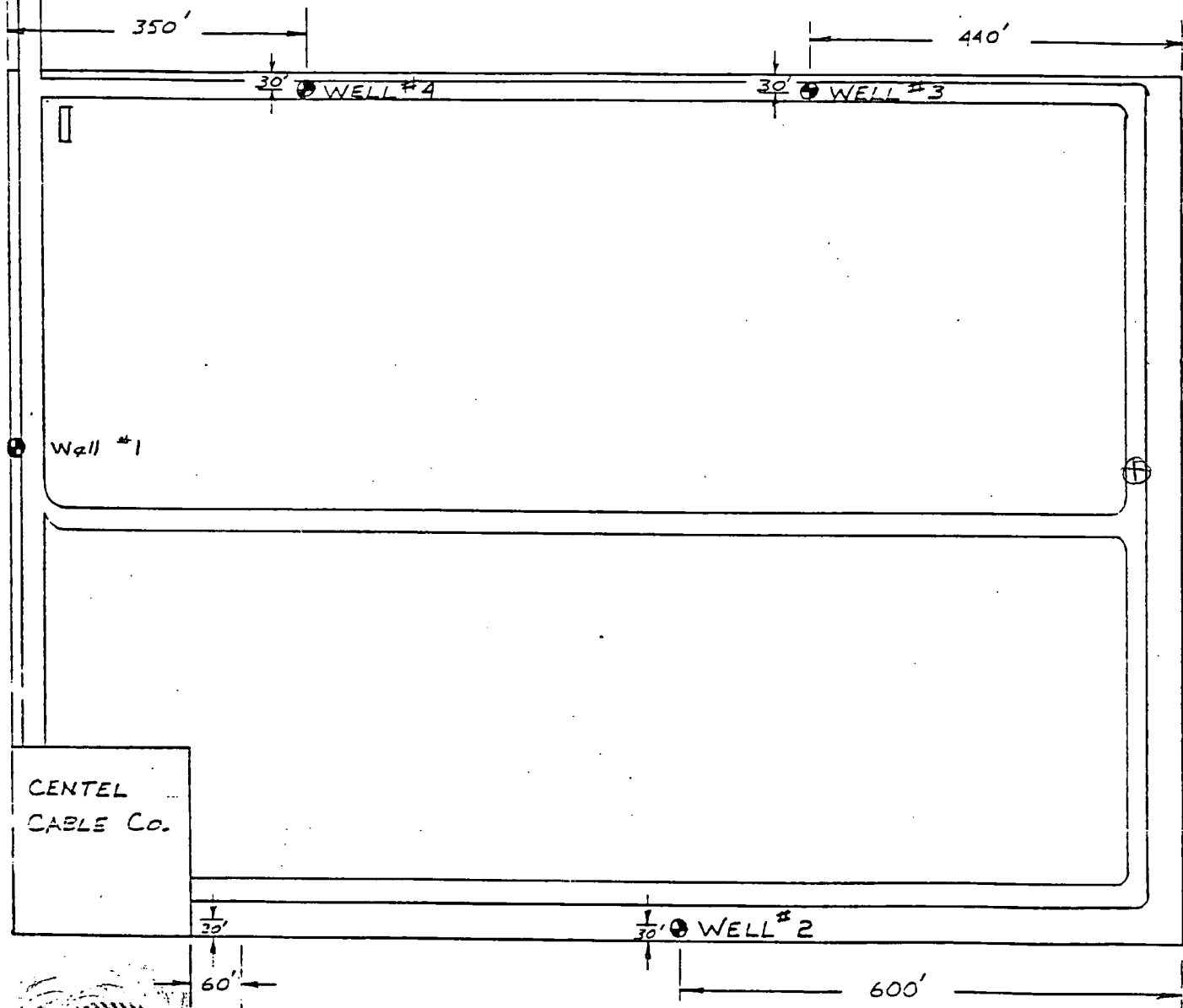


FIG. 19

SUMTER COUNTY LANDFILL

PROPOSED MONITORING WELL LOCATIONS

D.E.R.

JAN 28 1985

SOUTH WEST DISTRICT
TAMPA

INTEROFFICE MEMORANDUM

Routing To District Offices or Other Than The Addressee	
To: _____	Locn.: _____
To: _____	Locn.: _____
To: _____	Locn.: _____
From: _____	Date: _____
Reply Optional []	Reply Required []
Date Due: _____	Date Due: _____
Info. Only []	

TO: File

FROM: Ground Water Section

DATE: Jan. 24, 1985

SUBJECT: Ground Water Monitoring Plan Completeness

The Ground Water Monitoring Plan for the specified facility has been reviewed and deemed complete by the Ground Water Section.

FACILITY: Sumpter County Landfill

PERMIT #:

COUNTY: Sumpter

COMMENTS:

GROUND WATER SECTION REPRESENTATIVE: Gardner Strasser

(print)

Gardner Strasser
(sign)

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date Jan 23, 1985 Subject Sumpter County Landfill
Time Afternoon Permit No. _____
County _____
M John Springstead Telephone No. 904-793-3639
Representing Springstead and Assoc. & Sumpter County
[] Telephoned Me [x] Was Called [] Scheduled Meeting [] Unscheduled Meeting
Other Individuals Involved in Conversation/Meeting _____

Summary of Conversation/Meeting _____

I called Mr. Springstead to clarify some details of the groundwater monitoring plan for the landfill.

I told him that it was doubtful that MW-1, or MW-2 will be good background wells. They may be affected by mounding from the landfill because they are so close to the fill. He agreed. However, no new 'background wells' will be installed until the county purchases adjacent property. This will not be a condition of the GWMP.

East, west and south of the landfill are all pasture land, generally undeveloped. The county may purchase the land to the south.

Finally, it was agreed to move MW-1 to the west side of the site, in the middle, and add a fifth shallow monitoring well to the east side. So that there will

be a total of five(5) shallow wells, two on the north, one on each other side, and
(continue on another sheet, if necessary)

Signature

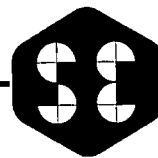
Title

one deep well as proposed, MW-5.

SPRINGSTEAD AND ASSOCIATES, INC.

Consulting Engineers - Planners - Surveyors

800 N. LEE ST.
P.O. BOX 448
LEESBURG, FLA. 32749-0448
(904) 787-1414



WEST HWY 476
P.O. BOX 1448
BUSHNELL, FLA. 33513-1448
(904) 793-3639

January 10, 1985

Mr. Andrew S. Berry
Environmental Specialist
State of Florida
Department of Environmental Regulation
7601 Highway 301, North
Tampa, Florida 33610-9544

RE: Sumter County Landfill
Groundwater Monitoring Plan
C-103

Dear Mr. Berry:

The following is in reply to your letter dated December 11, 1984, concerning the referenced project:

1. The three (3) wells (No. 3, 4, & 6) mentioned in your letter as inappropriate for monitoring the landfill site will be superseded by a single well positioned adjacent to the North property line (See attached figure). This downgradient well will be constructed ten (10) to twenty (20) feet below the encountered upper boundary of the Floridan Aquifer.
2. Construction of all monitoring wells shall be in accordance with the Florida Department of Environmental Regulation's recommendations set forth in "Monitoring Well Design and Installation" and the Environmental Protection Agency's report "Procedures Manual for Ground Water Monitoring at Solid Waste Disposal Facilities". Screen length for these wells will be ten (10) feet and will have a minimum slot size of 0.010 inches. All PVC fittings will be threaded/slip couplings. Identification, elevation in reference to National Geodetic Vertical Datum, and the location of all monitoring wells (active and abandoned) by the Cartesian Coordinate System shall be furnished upon completion of all well construction.
3. A one-time analysis for Primary and Secondary drinking water standards (including volatile organics) will be initiated upon completion of construction of the three downgradient wells.

D. E. R.

JAN 14 1985
SOUTH WEST DISTRICT
TAMPA

January 10, 1985
Mr. Andrew S. Berry
Environmental Specialist
C-103

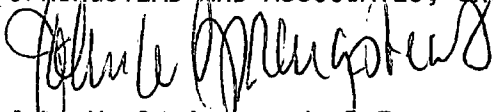
Page Two

4. A monthly sampling interval of the monitoring wells will be implemented the first year, as per your recommendations. A quarterly interval will be utilized after this time period. Also, water levels and ammonia will be included with the list of parameters to be examined during each sample interval.

Should you have any further questions regarding the referenced project, please feel free to contact our office.

Very truly yours,

SPRINGSTEAD AND ASSOCIATES, INC.



John W. Springstead, P.E.



Ron Barlow, Engineer

JWS/RB:sh

Encl.

D.E.R.
JAN 14 1984
SOUTH WEST DISTRICT
TAMPA

Well #5
(Downgradient, Floridan Monitoring Well)

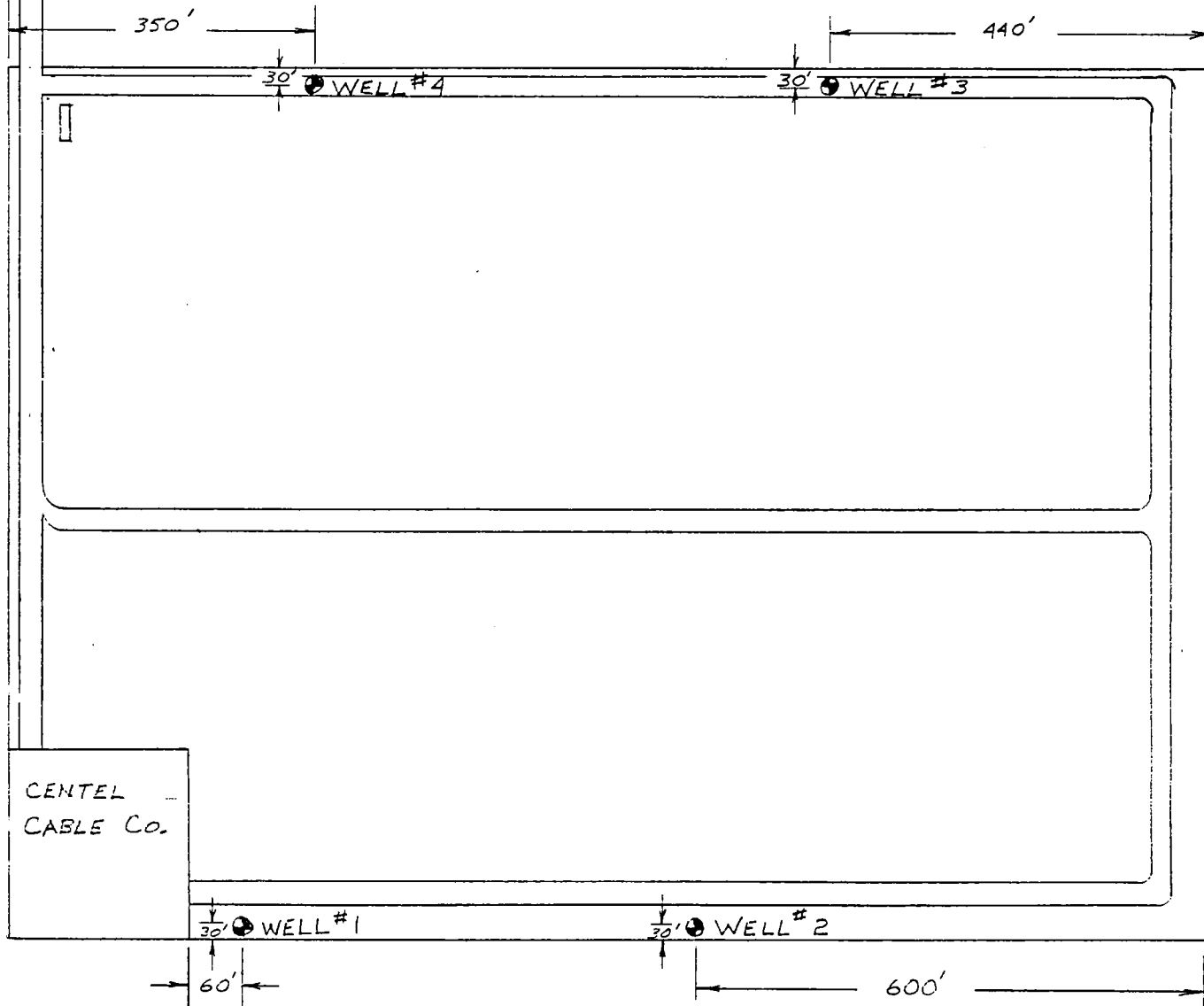


FIG. 19
SUMTER COUNTY LANDFILL
PROPOSED MONITORING WELL LOCATIONS

D. B. R. R.
JAN 14 1984
SOUTH WEST DISTRICT
TAMPA

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610-9544



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

RICHARD D. GARRITY, PH.D.
DISTRICT MANAGER

August 23, 1984

Mr. John W. Springstead, P.E.
Springstead and Associates, Inc.
Post Office Box 448
Leesburg, FL 32749-0448

Dear Mr. Springstead:

The application for the ground water monitoring plan for the Sumter County Landfill has been reviewed by our Groundwater Section and found to be incomplete.

The following additional information is needed to complete the application:

1. The extent of recharge to the Floridan aquifer is not defined. According to information recorded in this report and compared to the USGS open-file report 82-331, and the Florida DNR, Bureau of Geology Map Series #98 and #99 this is an area of high recharge to the Floridan aquifer. The clay layers in this region tend to be discontinuous and do not constitute an effective confining layer above the aquifer. It would therefore be necessary to monitor the Floridan.
2. There is no mention in the report of the depth to which the landfill cells are trenched (F.A.C. Section 17-4.245(6)(d)13.). Since this is evidently an unlined landfill this concern should definitely be addressed.
3. There is no discussion of the parameters to be sampled, an essential part of any monitoring plan (F.A.C Section 17-4.245(6)(c)2.).

Very truly yours,

E. G. Snipes
E. G. Snipes

Professional Engineer II

EGS/ab
cc: Karen Busen

INTEROFFICE MEMORANDUM

R6

Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Locn.: _____	
To: _____	Locn.: _____	
To: _____	Locn.: _____	
From: _____	Date: _____	
Reply Optional []	Reply Required []	Info. Only []
Date Due: _____	Date Due: _____	

TO: Mr. Pat Lewis, Environmental Specialist
Southwest District

Mr. Ed Snipes, Professional Engineer
Southwest District

D. E. R.

THROUGH: Dr. Richard D. Garrity, District Manager
Southwest District

JUN 29 1984

Dr. Rodney S. DeHan, Administrator
Groundwater Section

**SOUTH WEST DISTRICT
TAMPA**

Mr. James E. McNeal Environmental Supervisor
Groundwater Section

FROM: Karen Busen, Environmental Specialist
Groundwater Section

SC 2783601

DATE: June 28, 1984

SUBJECT: Sumter County Landfill

I have reviewed this plan for completeness and, although overall this is a well-prepared presentation, there are the following deficiencies:

1) The extent of recharge to the Floridan aquifer is skirted quite adroitly (F.A.C. Section 17-4.245(6)(d)(1)(b)). According to information recorded in this report and compared to the USGS open-file report 82-331, and the Florida DNR, Bureau of Geology Map Series #98 and #99 this is an area of high recharge to the Floridan aquifer. The clay layers in this region tend to be discontinuous and do not constitute an effective confining layer above the aquifer. It would therefore be desirable to monitor the Floridan.

2) There is no mention in the report of the depth to which the landfill cells are trenched (F.A.C. Section 17-4.245(6)(d)13.). Since this is evidently an unlined landfill this concern should definitely be addressed.

3) There is no discussion of the parameters to be sampled, an essential part of any monitoring plan (F.A.C. Section 17-4.245(6)(c)2.).

If you would care to discuss this project further please feel free to contact me. I would very much appreciate a copy of your recommendations to the county.

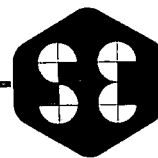
KB/mj

SPRINGSTEAD AND ASSOCIATES, INC.

Consulting Engineers - Planners - Surveyors

MP-Lewis
JATS sheet

800 N. LEE ST.
P.O. BOX 448
LEESBURG, FLA. 32749-0448
(904) 787-1414



WEST HWY 476
P.O. BOX 1448
BUSHNELL, FLA. 33513-1448
(904) 793-3639

June 15, 1984

Mr. E. G. Snipes, Jr., P.E.
Water Engineering Section
State of Florida
Department of Environmental Regulation
7601 U. S. Highway 301, North
Tampa, Florida 33610-9544

Re: Sumter County Landfill
C-103

CERTIFIED: P481 618 286

Dear Mr. Snipes:

Please find enclosed four (4) copies of an Application for Monitoring Plan Approval (Existing Sources).

We are also enclosing four (4) copies of a Groundwater Monitoring Plan report dated June 14, 1984, for the referenced project.

Please review the enclosed for approval.

Should you have any questions, please feel free to contact our office.

Very truly yours,

SPRINGSTEAD AND ASSOCIATES, INC.


John W. Springstead, P.E.

JWS/vq

Encl.

cc: Bill McRae, Enforcement w/ Encl.
Garry Breeden w/ Encl.

D. E. R.

JUN 18 1984

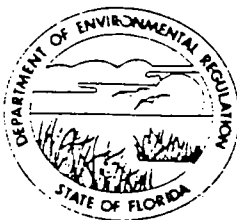
SOUTH WEST DISTRICT
TAMPA

7

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

ST. JOHNS RIVER
DISTRICT

3319 MAGUIRE BOULEVARD
SUITE 232
ORLANDO, FLORIDA 32803



D. E. R.

JUN 18 1984

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

ALEX SENKEVICH
DISTRICT MANAGER

SOUTH WEST DISTRICT
TAMPA

APPLICATION FOR MONITORING PLAN APPROVAL
(Existing Sources)

INSTRUCTIONS: Submit four copies of this application and four copies of supporting information such as laboratory reports, maps and other documents to the appropriate District Office.

PART I - General Information

In compliance with Florida Administrative Code Rule 17-4.245(6)(c)2., the undersigned installation owner applies for approval from the Department for the monitoring criteria on the following property owned by:

<u>Board of Sumter County Commissioners</u>				<u>S060-30674</u>	
Corporation or Owner's Name				Permit No.	
<u>Sumter County Landfill</u>					
Installation Name				SIC Code	
<u>209 N. Florida Street,</u>	<u>Bushnell,</u>	<u>33513</u>	<u>Sumter</u>	<u>28° 44' 30" N</u>	<u>82° 05' 24" W</u>
Street Address	City	Zip	County	Latitude	Longitude
<u>1/4 SE 1/4 SE 1/4 of</u>				<u>15</u>	<u>20 South 22 East</u>
				Section, Township, Range	

OWNER OR AUTHORIZED REPRESENTATIVE (If representative, attach letter of authorization.)

<u>Mr. W. Tom Blackmon, Chairman of Sumter County Commissioners</u>		
Name and Official Title (Print or Type)		
<u>209 North Florida Street,</u>	<u>Bushnell, Fl.</u>	<u>33513</u>
Street	City	State Zip
		<u>(904)793-2848</u>
		Telephone Number
Signature: <u>W. Tom Blackmon</u>		Date: <u>6-12-84</u>

PART II - Content of Monitoring Plan

Pursuant to Rule 17-4.245(6)(d), the plan shall contain findings, recommendations and plans for ground water monitoring derived from site specific information. For the type of information to be considered in the development and assessment of the plan, see page two of this form. In any case, the following items must be included:

1. Location(s) of proposed well(s) to sample natural unaffected background water quality and the intermediate and compliance well(s) in the down gradient direction.
2. Construction details of the monitor well(s), including type of casing material, diameter of casing, depth of casing and location of screens.
3. A water sampling and chemical analysis procedure which can determine the natural unaffected background quality of the ground water, and the quality of the receiving ground water in the downgradient intermediate and compliance wells.

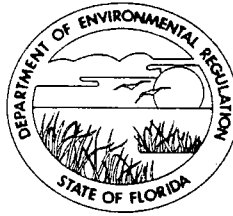
The following information is the type generally required for detailed assessment of the most complex plans, with less complex cases not needing this degree of evaluation:

1. Hydrogeological, physical and chemical data for the site, including:
 - a. Direction and rate of ground water flow, and background ground water quality;
 - b. Porosity, horizontal and vertical permeability for the aquifer(s) and the depth to, and lithology of, the first confining bed(s);
 - c. Vertical permeability, thickness, and extent of any confining beds;
 - d. Topography, soil information and surface water drainage systems surrounding the site;
2. Waste disposal rate and frequency, chemical composition, method of discharge, pond volume, spray-field dimension, or other applicable site specific information;
3. Toxicity of waste;
4. Present and anticipated wastewater volume, seepage rate to the receiving ground water, physical, chemical, microbiological (whichever is applicable) characteristics of the leachate;
5. Disposal system water balance;
6. Present and reasonably expected future pollution sources located within one mile radius of the site;
7. Inventory depth, construction details, and cones of depression of water supply wells and monitor wells located within one mile radius of the site or potentially affected by the discharge;
8. Site specific economic and feasibility considerations;
9. Chronological information on water levels in the monitor wells and water quality data on water supplies collected from the water supply and monitor wells;
10. Type and number of waste disposal facilities within the installation;
11. Chronological information on surface water flows and water quality upstream and downstream from the site;
12. Construction and operation details of disposal facilities;
13. History of construction and land development in the vicinity of the site.

A monitoring program instituted under some other state, federal, or local government regulation or permit may be substituted (or referenced if contained in an existing department permit) if such program is in substantial compliance with Part II.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION



SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610-9544

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

WILLIAM K. HENNESSEY
DISTRICT MANAGER

May 10, 1983

Sumter

Mr. Gary Breeden, Director
Sumter County Public Works Department
P.O. Box 8
Bushnell, FL 33513

Re: Chapters 17-3, 17-4, Florida Administrative Code

Dear Mr. Breeden:


Effective January 1, 1983 the above referenced regulations were amended. Some of the changes which are directly related to your existing landfill operations are:

1. Existing solid waste disposal sites shall submit to the department an acceptable monitoring plan on or before May 1983 (Attached DER Form 17-1.216(1)).
2. The operating authority shall initiate implementation of the monitoring plan within 90 days after submission and department approval of the plan, unless specifically exempted by the department.
3. Compliance with groundwater standards shall be determined by analyses of unfiltered groundwater standards, unless a filtered sample is as or more representative of the particular groundwater quality.
4. For existing facilities, besides minimum criteria for groundwater set forth in Section 17-3.402, F.A.C., waters classified as Class G-I and G-II groundwater shall meet the primary and secondary drinking water quality standards for public water systems established pursuant to the Florida Safe Drinking Water Act except as provided in Section 17-4.245(8), F.A.C.
5. For new facilities the attached DER Form 17-1.216(3) shall be submitted with supporting documents as part of the permit application.

Mr. Gary Breeden
Bushnell, Florida
Page Two

If you have any questions concerning this matter, contact Pat Lewis at
telephone number 813/985-7402.

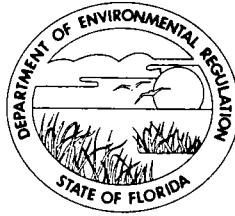
Sincerely,


E. G. Snipes

Professional Engineer II

bc

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION



SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH
TAMPA, FLORIDA 33610-9544

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

DR. RICHARD D. GARRITY
DISTRICT MANAGER

December 11, 1984

Mr. John W. Springstead, P.E.
Springstead and Associates, Inc.
P.O. Box 448
Leesburg, Florida 32749-0448

Re: Sumter County Landfill
Groundwater Monitoring
Plan

Dear Mr. Springstead:

Your letter dated November 9, 1984, regarding the Sumter County Landfill monitoring plan has been reviewed by our Groundwater Section.

The following criteria must be met or provided before the groundwater monitoring plan can be approved:

1. The three (3) wells (No. 3, 4, & 6) referenced in your letter are inappropriate for monitoring the landfill. In addition to the four (4) shallow monitoring wells proposed in your monitoring plan, one (1) deep well, constructed in the Floridan, or confined aquifer is required. This well should be located with either of the shallow monitoring wells along the north property line.
2. Screen lengths for all monitoring wells should be a minimum of five to ten feet.
3. A one-time analysis for Primary and Secondary drinking water standards, including volatile organics, is needed for all three (3) downgradient wells.
4. In order to develop a good data base, sampling of monitoring wells should take place on a monthly basis, for at least the first year, for all the parameters listed in your letter of November 9, 1984. Please add water levels and ammonia to that list.

Sincerely,

Andrew S. Berry

Andrew S. Berry
Environmental Specialist

AB/af

DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

Andy

Routing To District Offices And/or To Other Than The Addressee	
To: _____	Locn.: _____
To: _____	Locn.: _____
To: _____	Locn.: _____
From: _____	Date: _____

TO: ED SNIPES
 THRU: GARDNER STRASSER *cl*
 DATE: NOV. 27 84
 FROM: P PUTZIER

SUBJECT: SUMPTER COUNTY LANDFILL

THE FOLLOWING CRITERIA MUST BE MET OR PROVIDED BEFORE THE
 GROUNDWATER MONITORING PLAN WILL BE APPROVED.

1. The three (3) wells (no. 3, 4, & ⁶~~5~~) referenced in your November 9, 1984 letter are inappropriate for monitoring the landfill.

One (1) deep well, constructed in the Floridan, or confined aquifer is required. This well should be located with either of the shallow monitoring wells along the north property line.

2. Screen lengths for all monitoring wells should be a minimum of five to ten feet.
3. A one-time analysis for Primary, Secondary, EPA 601 & 602 parameters in all three (3) down gradient wells is needed.

This analysis may be required again at the time of permit renewal.

4. Sampling of monitoring wells must take place on a monthly basis for all the parameters listed in your letter of Nov. 9, 1984.

Please add water levels and ammonia to that list.

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)

Karen Busen

Initial

Date

2.

Groundwater

Initial

Date

3.

Initial

Date

4.

Initial

Date

REMARKS:

50 mtr G.
Landfill

If you have
any comments please
submit them by
12/7/89

INFORMATION

Review & Return

Review & File

Initial & Forward

DISPOSITION

Review & Respond

Prepare Response

For My Signature

For Your Signature

Let's Discuss

Set Up Meeting

Investigate & Report

Initial & Forward

Distribute

Concurrence

For Processing

Initial & Return

FROM:

E. Jones

DATE

11/16/89

PHONE

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Locn.: _____	
To: _____	Locn.: _____	
To: _____	Locn.: _____	
From: _____	Date: _____	
Reply Optional []	Reply Required []	Info. Only []
Date Due: _____	Date Due: _____	

TO: Gardner Strasser
THRU: Dan Williams
FROM: *D* E.G. Snipes
DATE: 11/16/84
SUBJECT: *Sumter* County
Sumter County Land Fill

11/13/_____, 1984. Attached is the groundwater monitoring plan data received on

Any questions you wish to ask for the completeness letter

12/5/84

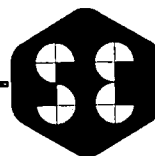
Your comments regarding the adequacy of the plan in compliance with Chapter 17-4.245 F.A.C. are also needed.

EGS/af

SPRINGSTEAD AND ASSOCIATES, INC.

Consulting Engineers - Planners - Surveyors

800 N. LEE ST.
P.O. BOX 448
LEESBURG, FLA. 32749-0448
(904) 787-1414



WEST HWY 476
P.O. BOX 1448
BUSHNELL, FLA. 33513-1448
(904) 793-3639

November 9, 1984

Mr. E.G. Snipes, P.E.
Water Engineering Section
State of Florida
Department of Environmental Regulation
7601 U.S. Highway 301, North
Tampa, Florida 33610-9544

Re: Sumter County Board of County Commissioners
Sumter County Landfill
C-103

D. E. R.

NOV 13 1984

SOUTH WEST DISTRICT
TAMPA

Dear Mr. Snipes:

We are in receipt of your letter dated Thursday, August 23, 1984, regarding the referenced application and have the following comments:

1. The original exploration drillings suggests the underlying clay layer to be discontinuous and an ineffective confining layer above the Floridan aquifer. Additional drillings were taken to provide a better understanding of the nature and extent of this clay strata. Additional boring holes, No. 6 and 7 (See attached figures), at the western boundary of the site revealed the clay layer to be continuous and at least ten (10) feet in thickness. Thus, this clay layer does provide an effective boundary above the Floridan aquifer.

There are three (3) wells (No. 3, 4, & 5) located North of the landfill site (See Figure 21 of the Monitoring Plan) that will be initially sampled at six month intervals to assure no horizontal movement of landfill groundwater discharge. If these sampled wells do not detect groundwater contamination originating from the landfill site over a one (1) year period, the sampling interval will increase from six (6) months to one (1) year. Only the detection of groundwater contamination by these wells will shorten this sampling interval. Pertinent information regarding these wells, such as well size, depth and driller's logs, was almost nonexistent due to ownership change of the respective property or unkept records.

2. The maximum depth of existing and proposed landfill cells is six (6) to ten (10) feet below the existing grade depending upon the slope of the respective area.

How
will this
be determined
in the
field?

(C103L, WORDS2)

November 9, 1984
Mr. E.C. Snipes, P.E.
C-103

Page 2

3. Monitoring wells located on the site will be sampled on a quarterly basis for the following parameters:


- | | |
|-------------------------|--|
| -pH (Field Measurement) | -Specific Conductivity (Field Measurement) |
| -Total Organic Carbon | -Total Organic Halide |
| - Sulphide | - Iron |
| -Chloride | -Sulfate |
| - Nitrate | - <i>water levels</i> |
| | - <i>ammonia</i> |

Sulfates, nitrates and chlorides will be the chief indicators of pollution movement within the water table and aquifer, since these ions are not readily absorbed by sand and clay material.

Should you have any questions, please contact our office.

Very truly yours,

SPRINGSTEAD AND ASSOCIATES, INC.



John W. Springstead, P.E.



Ronald D. Barlow, Engineer

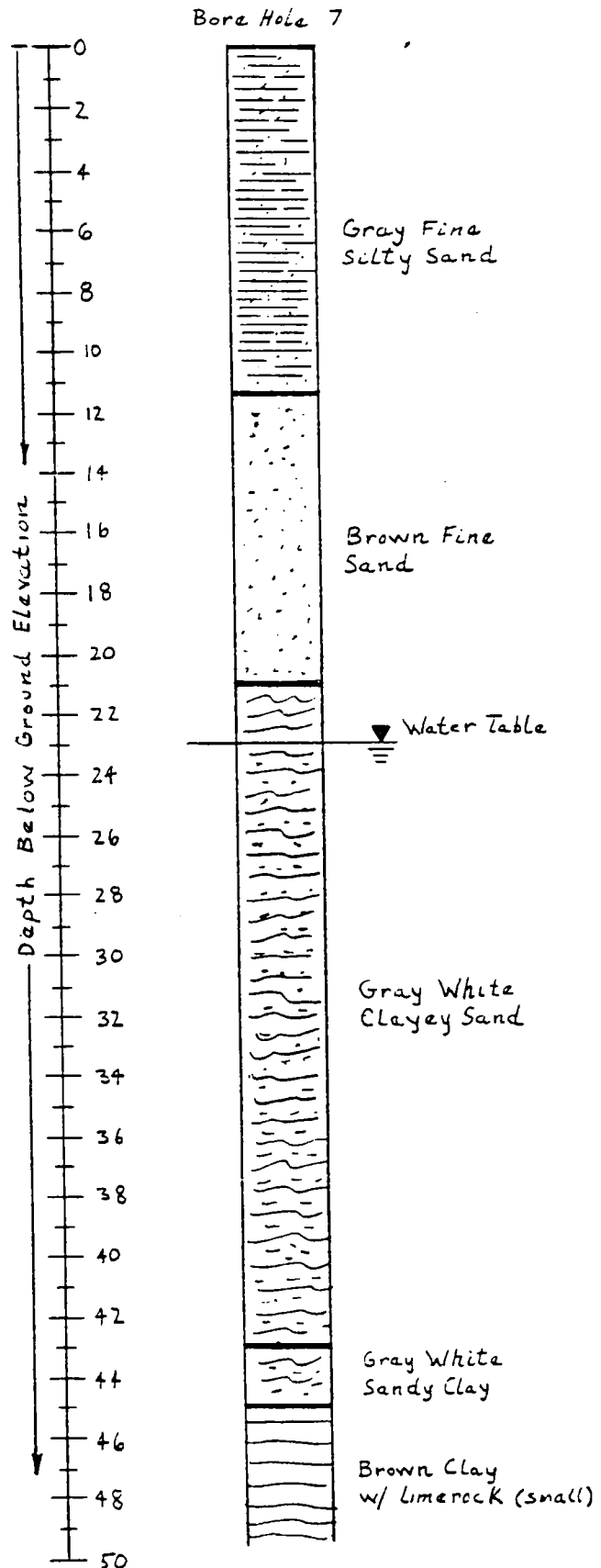
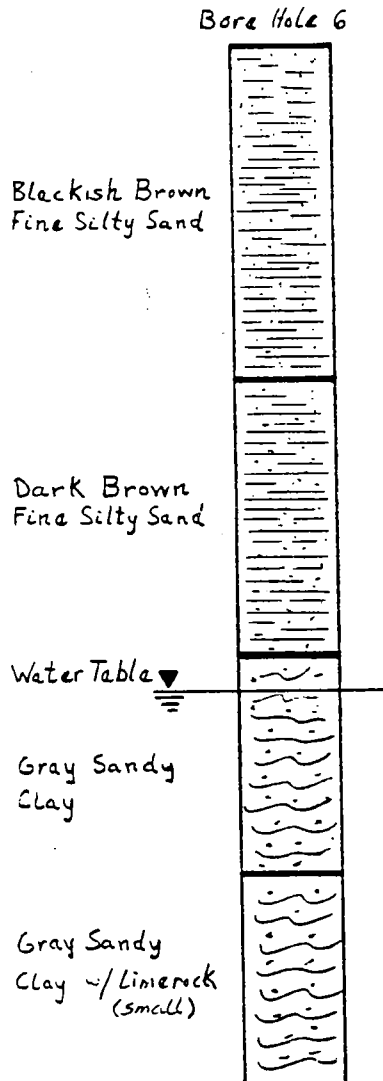
JWS:RDB:vq

Encl.

cc: Garry Breeden

(C103L, WORDS2)

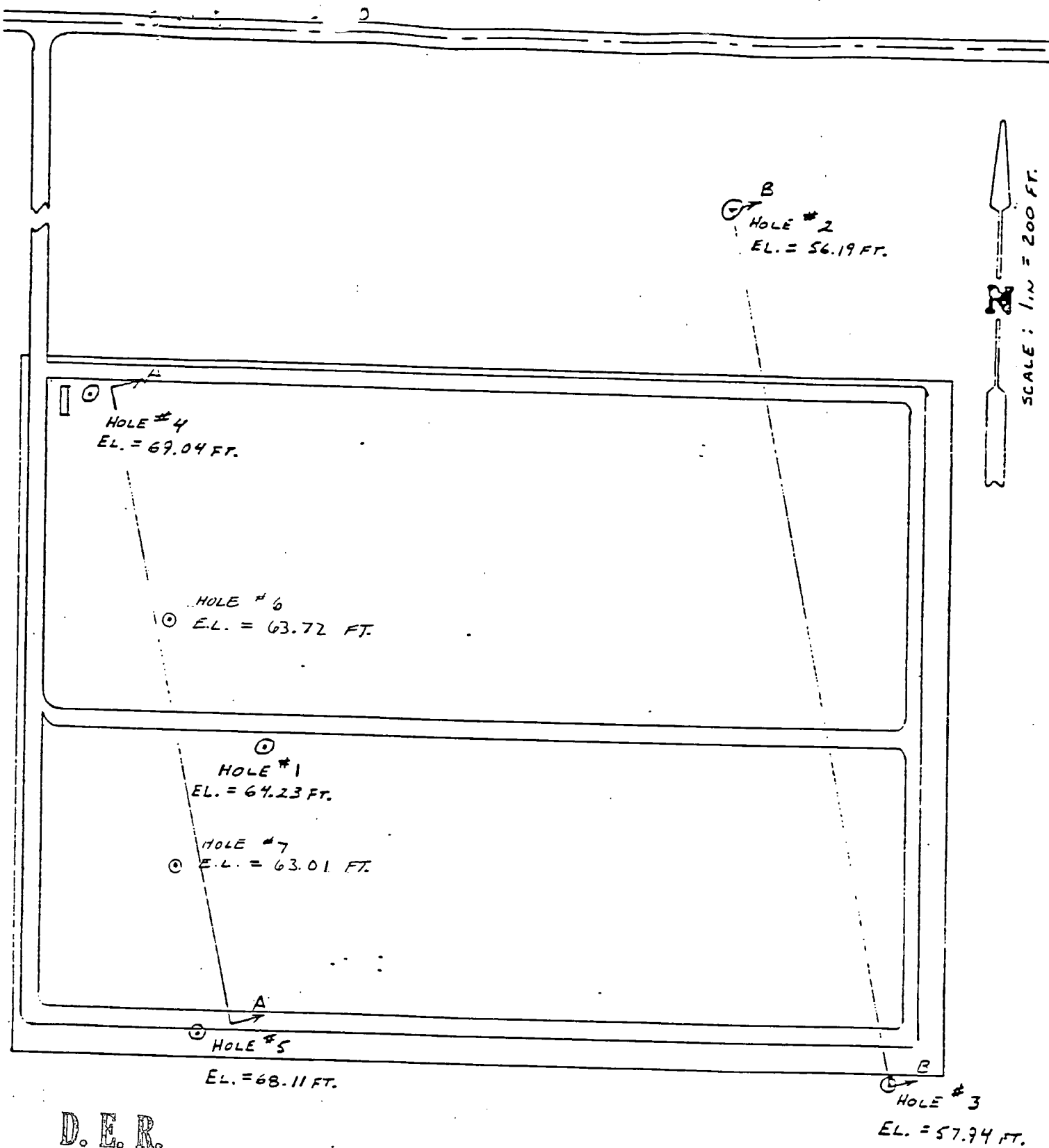
ADDITIONAL EXPLORATORY BORINGS



D. E. R.

NOV 13 1984

SOUTH WEST DISTRICT
TAMPA



D. E. R.

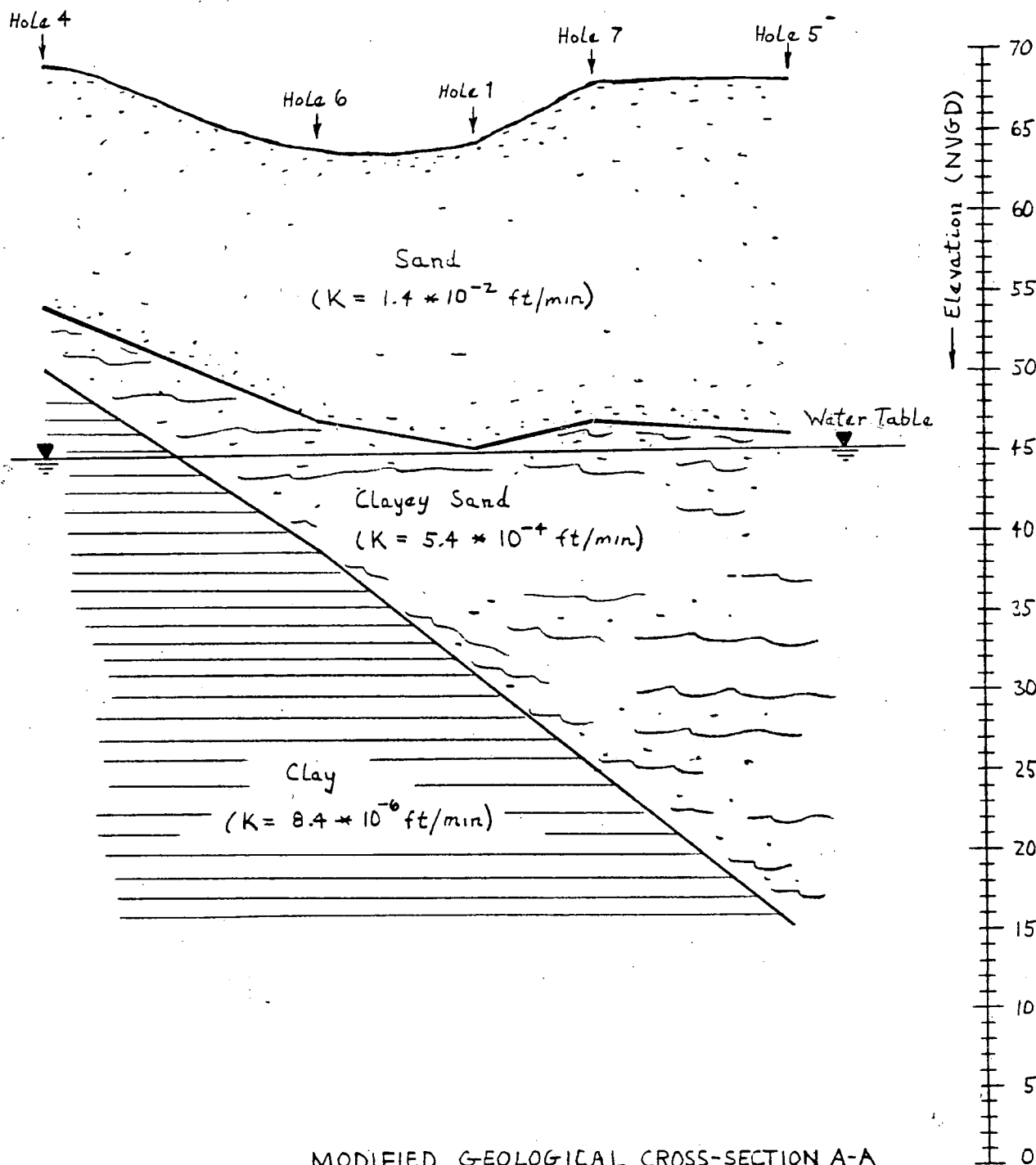
NOV. 13 1984

SUMTER COUNTY LANDFILL

SOUTH WEST DISTRICT
TAMPA

EXPLORATORY TEST BORINGS

(BOREHOLE LOCATIONS AND ELEVATIONS)



MODIFIED GEOLOGICAL CROSS-SECTION A-A

Horizontal Scale: 1" = 200'

D. E. R.

NOV 13 1984

SOUTH WEST DISTRICT
TAMPA