SECOND RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
PERMIT TO OPERATE COMPOSTING FACILITY
PERMIT TO CONSTRUCT LEACHATE TREATMENT FACILITY
PERMIT TO OPERATE RESOURCE RECOVERY FACILITY
WASTE TIRE GENERAL PERMIT
AND
PERMIT TO MAINTAIN CLOSED CLASS I SANITARY LANDFILL
PREPARED FOR

Sumter County

BOARD OF COUNTY COMMISSIONERS
DEPARTMENT OF PUBLIC WORKS
222 EAST McCOLLUM AVENUE
BUSHNELL, FLORIDA 33513

JULY 29, 1992

92-1100.00

Springstead Engineering, inc.

Consulting Engineers — Planners — Surveyors
727 South 14th Street
Leesburg, Florida 34748
Lake (904) 787-1414
Sumter (904) 793-3639 Fax (904) 787-7221

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D. E. R.
JUL 29 1992
SOUTHWEST DISTRICT
TAMPA

PREPARED BY

Springstead Engineering, inc.

LEESBURG, FLORIDA

JULY 29, 1992

92-1100.00

W. SPRINGSTEAD
CERTIFICATE
No. 0579
FLORIDA
REGISTERED ENGINEER

D. E. R.

JUL 29 1992

SOUTHWEST DISTRICT
TAMPA

July 29, 1992

Mr. Kim B. Ford, P.E.
Solid Waste Section
Division of Waste Management
Florida Department of Environmental Regulation
4520 Oak Fair Boulevard
Tampa, Florida 33610-7347

RE: SUMTER COUNTY SOLID WASTE FACILITIES
PERMIT NO.: S060-211179 - SOLID WASTE COMPOSTING
WT60-211205 - WASTE TIRE STORAGE
SO60-211182 - M.R.F.
SF60-211255 - LONG-TERM CARE
SC60-211181 - LEACHATE TREATMENT
92-1100.00

Dear Mr. Ford:

We are in receipt of your letter dated April 28, 1992 in regards to the above referenced project. Please review the following responses:

1. Provide documentation of Sumter County's possession of an approved Comprehensive Quality Assurance Plan (CQAP) for the sampling and analysis as required for the referenced facility. You are requested to work directly with Ms. Sylvia Labie of the QA Section in Tallahassee to obtain approval of the quality assurance plan. Pending approval, current status is not adequate. Additional, documentation must show that the QA plan approved also covers compost testing. The attached QA Form is to be used for the compost.

1. **Springstead Engineering, Inc. shall perform the sampling at the Sumter County Solid Waste Management Facility for Sumter County. The letter from Ms. Sylvia S. Labie, QA Officer, Quality Assurance Section, FDER, Tallahassee, Florida was presented in the response to comments dated May 29, 1992. The letter states, "This means that your organization may begin performing work for these specific activities in FDER programs or activities that have been designated as Category 2 or 3 by the QA Rule." We contacted Ms. Labie by telephone in this regard, again being informed that our "approved pending status" is satisfactory for sampling. Please read Chapter 17-160, Florida Administrative Code. Again, we enclose the letter for your review. See Appendix A.**

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Thank you for sending the form, Quality Assurance Project Plan (QAPP) for Testing Compost Made from Solid Waste. The form has been completed except for the required signature of Sylvia S. Labie, FDER Quality Assurance Officer. Springstead Engineering, Inc. will perform the sampling of the compost and Flowers Chemical Laboratories, Inc. will perform the analysis of the compost pending approval of the QAPP specific to this facility. We have sent the completed QAPP to Ms. Labie as per the instructions on Page 1 of 1 in Section 2.0. Ms. Labie informed us that the QAPP would be sent to you for approval.

2. Updated financial responsibility cost estimates for long-term care of the closed landfill must be provided. The attached Financial Responsibility checklist is to be used for the cost estimates. Approved cost estimates will be forwarded to Mr. Fred Wick of the Solid Waste Section in Tallahassee. You are requested to work directly with him to obtain approval of Sumter County's financial responsibility documents.

2. **Mr. Garry Breeden, Director of Public Works, has been in contact with Mr. Wick's office in Tallahassee as requested to complete the updated financial responsibility cost estimates for long-term care of the closed landfill. Mr. Breeden has been unable to talk with Mr. Wick. The completed document will be forwarded to you under separate cover by August 7, 1992.**

3. Your response to Mary Yeargan's June 25, 1992 attached memorandum. Ms. Yeargan may be contacted at (813) 620-6100, extension 376.

<u>The response to Mary Yeargan's memorandum dated June 25, 1992 follows:</u>

1. A monitor well construction detail was provided which indicates that the wells were constructed

with 2 foot screens and no bentonite seal between the screen and the cement seal. According to the Appendix E of the Environmental Compliance Branch Standard Operating Procedure and Quality Assurance Manual for the U.S. Environmental Protection Agency which deals with well construction, a well screen less than 5 feet shall not be employed except for temporary monitor wells. It is also stated that a seal is to be placed on top of the filter pack which consists of a high solids, pure bentonite material. The specific construction details for all monitor wells should be provided.

1. **The well construction detail presented in our response dated May 29, 1992 was inadvertently taken from the original submission of the Groundwater Monitoring Plan, dated June 14, 1984, previously submitted to FDER and later revised at the request of FDER. The length of the screened interval was shown as being two (2) feet. This is inconsistent with the well completion reports prepared for the Southwest Florida Water Management District (SWFWMD) and the special well completion reports prepared for this project. The screened interval reported installed was five (5) feet. We suggest that the well completion reports be reviewed instead of the previously submitted well construction detail. The well completion reports and well construction details for each monitoring well are enclosed in Appendix B for your review and use.**

   A bentonite seal was installed above the filter pack material.

2. It should be noted that monitor well MW-3 was installed through garbage which is in direct contact with a limestone unit.

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2. Monitoring well MW-3 was apparently installed in a boring made through strata containing solid waste. This Monitoring well has been dry since shortly after installation.

3. The geologic cross-sections for this submittal were incomplete. Typically, geologic cross-sections illustrate the geologic relationships of the various lithologic units. Additionally, cross-section D-D' depicts monitor well MW-5 as being approximately 35' deep contrary to the lithology log which shows that monitor well MW-5 is approximately 170' deep.

3. The style of cross-section (strip logs shown in order and keyed to a line on a map) presented in our response dated May 29, 1992 have been submitted and accepted by FDER in the past. There is insufficient quality data to interpret the lithology at the Sumter County Solid Waste Management Facility to produce reliable cross-sections. Lithology strips presented in the cross-sections and in the boring logs were prepared from data collected by the water well drillers who installed the monitoring wells. One style of data collection in the water well drilling industry is to complete the well log after completing the well, logging the encountered lithologies in gross terms (i.e. sand, clay and limestone) with minimal differentiation, usually at ten (10) or at best five (5) foot intervals.

The strip log for MW-5 presented in the cross-sections was deliberately terminated at a depth of 35 feet to keep the log on the page and to maintain scale.

4. Water level information for each monitor well for each sampling event was provided and top of casing

elevations, ground elevations, and bottom elevations were provided. We are assuming that the well elevation data are NGVD and the water level data is actual depth to water measurements. The monitoring interval length was not provided. ← screen length

4. **The elevations given are N.G.V.D. The monitoring interval is quarterly.**

5. The Groundwater elevation contour maps in Appendix F need some explanation. The asterisks seem to denote monitor well locations, but do not coincide with monitor well locations on the map provided in Appendix D. The data by each asterisk does not appear to correspond with the data provided in tabular form. The contours do not reflect the numerical values printed by each asterisk.

5. **The bottom left-hand corner of the Groundwater Elevation Maps presented in our response dated May 29, 1992 corresponds to the southwest corner of the present facility. The asterisks did denote the location of the monitoring wells and did generally coincide with the locations shown on the map enclosed in Appendix D of the response dated May 29, 1992. The numbers should have been the well numbers. This has been corrected and revised Groundwater Elevation Maps are enclosed in Appendix C.**

6. Due to the depth(s) of the trenches within the Closed Class I landfill, the trenches should be illustrated on the cross-sections, when actual depths within an area are known. The water table should also be illustrated on the cross-sections.

6. **The depth of the trenches given in the response dated May 29, 1992 was an estimate. Accurate measurements of depth were not required; therefore,**

they were not performed and are not accurately known in any area of the facility. Elevations were not run and data was not kept regarding the cells prior to the placement of any solid waste. The actual depth of the trenches and water table is indeterminate.

The water table was shown in the cross-sections when known using the traditional symbol. The depth to water was measured upon completion of the borings; therefore, probably did not represent the actual groundwater table.

7. There have been extreme variations in analytical data for this facility which need to be addressed. A discussion of the groundwater quality at this site should be provided and the possibility that this site may need to be referred to the Compliance and Enforcement Section of Solid Waste should be evaluated.

7. **The graphs of the analytical data at the facility do show extreme variations. We request that the sampling and analysis of groundwater from the monitoring wells at the facility be done on a monthly basis for a period of one year per the CompQAP of Springstead Engineering, Inc. (sampling) and the CompQAP of Flowers Chemical Laboratories, Inc. (analysis) to see if trends develop or stabilize. This should be done before any conclusions are drawn.**

8. The issue of additional monitor wells associated with the new leachate collection system can not be addressed until the groundwater monitoring evaluation is complete.

8. **With liners and the proctoring of the liners as required by FDER and use of a low-pressure system**

(approximately 20 p.s.i.) in pipe rated at 150 p.s.i., the factor of safety is high; therefore, we maintain that additional monitoring wells are not needed.

9. Within Section 3, Leachate Treatment Facility, there was no discussion concerning the testing and disposal of sludges generated in the leachate treatment facility. An estimate of the range in volume of treated leachate that will be routed to the existing stormwater retention area and what range in volume the pond can handle should be provided.

9. Recirculation of the leachate is self-sufficient. The treatment was installed as a factor of safety for the discharge of leachate. Any sludge generated by the treatment plant will be aerobic and it will come from compost on the pads. Any sludge generated by the treatment facility will be periodically placed over the fluff going into the compost windrows. See the response to No. 8 in Kim Ford's letter.

10. Documentation of a Department approved CompQAP for all sampling and analyses should be provided.

10. Please see the response to No. 1 above in Kim Ford's letter.

<u>At this point the response to Mary Yeargan's memorandum ends and the response to Kim Ford's letter resume.</u>

4. A fire safety survey conducted and documented by the local fire protection authorities for the subject facilities must be provided.

4. **A fire safety survey was performed by the Lake Panasoffkee Fire Protection Association, dated July 15, 1992 is enclosed in Appendix D.**

5. Describe the "temporary contingency" use of the lined cell. This Department requires the location of a permanent disposal site for the residuals (30% of the total solid waste or 20 tons) that are not recycled or composted. This information is required for issuance of an operation permit.

5. **The lined cell is to be used for temporary contingency measures. The surplus and deficiency of milled MSW will be attenuated by storing in and removal from this cell.**

   Twenty (20) tons of "residuals" will be allowed to accumulate on site then they will be disposed of. This residual will be processed through the certified Lake County incinerator. No more than 20 tons of the material will be on hand and maintained at any time. The material will be transported from the Sumter County site to the Lake County incinerator by way of Sumter County Highway No. 470 and Lake County Road No. 33.

   We trust that the answer for the contingency and residuals above will be satisfactory and you can issue this permit.

<u>Composting</u>

6. How long will it take to empty the lined cell of fluff with use of the existing composting areas only and the two newly constructed composting areas Please provide waste balance calculations to verify the amount of time needed. You last response indicates there may be serious operational problems that need to be corrected before an operation permit can be issued if three to four years as required to remove the shredded waste from the lined cell. Please demonstrate that all waste entering the

facility can be composted with equipment presently constructed. In addition, determine how much waste entering the site will be disposed of elsewhere. Shredded waste will not be allowed to accumulate at the site, except in emergency situations for a specified limited amount of time.

6. Please find in Appendix E, a facsimile of a report prepared by Larry Oeth, P.E. of Americycle. As you are aware Americycle is presently under contract for the operation of the solid waste facility. Mr. Oeth projections includes the old as well as the two (2) newly constructed compost areas.

We have included waste balance calculations of time required to empty the cell using only the existing compost pad. As stated previously, it is imperative that compost be present on all three (3) areas in order to show a deficiency ~~any~~ AND start using fluff from the Class I cell.

As you can see from the Model Data, our estimate for emptying the Class I cell is less than 3 to 4 years as stated in your letter. This will require a new larger scarab to empty in 16 months, using a factor of safety, 24 months should be used. The current scarab will require 50 months.

The processing facility can handle approximately 15 tons/hr. All three (3) pads can handle 30 to 32 tons per day, and the screening and drying facility can handle compost removed from all three pads at the stated rate (32 tons). A new scarab will be necessary to reduce the time to less than the original estimate. Commission approval will be required to approve acquisition of the new equipment.

It is imperative that the leachate facility be permitted for the three composting pads so that they may be

utilized to accomplish the emptying of the Class I cell in the time shown on the budget.

Approximately 25% of the waste entering the site will be disposed of in other areas. This includes, but is not limited to, Construction and Demolition (C&D) materials, tires, plastics, paper and various other items that will be disposed of in their respective disposal areas.

These items will go to various vendors depending on the highest price which can be obtained at the time of sale or properly licensed disposal sites.

We do not anticipate the further accumulation of the shredded material at the site because once the three composting pads are in operation, the amount of MSW coming to the Solid Waste Facility will not exceed the volume that can be processed on the three (3) pads.

Leachate Treatment

7. Describe in detail your plans for effluent discharge. Treated leachate may not be discharged to the percolation pond or surface water management system unless data indicates that the discharge will meet drinking water standards. Construction plans and data are required to approve the construction of the treatment plant.

7. Treated effluent will not be discharged except under extreme conditions of excessive rainfall. It is anticipated that maintaining the desired moisture content will utilize all of the leachate and will require make up water. This is based upon operational conditions currently experienced at the facility. Should it be necessary to process any leachate, the plans are as follows:

   1. The water will be placed in a 100,000 gpd treatment plant for the purpose of aerobic treatment for BOD,

COD, suspended solids and other constituents. The water will then be placed through a sand filter of the same capacity as the treatment plant. The water from the sand filter should be 95% to 99% free of BOD, suspended solids, and other constituents. The effluent will then be routed through the ozonation process and utilizes the micron filters, ozonator and activated carbon filter. The current system will be utilized increasing the existing ozone system and the carbon filter from 25 gpm to 75 gpm. The water leaving the system filter will conform to the requirements as previously permitted by your department. This discharge will be placed a swale along the periphery of the solid waste site where it will be percolated through the soil.

This ozonator and carbon filter will bring the water to drinking water standards. It will be disinfected using the UV system.

Please find attached construction plans and data for the treatment plant, tertiary filter, and ozonator with the activated carbon filter and UV.

8. Provide water balance calculations to show the volume of leachate that can be evaporated by recirculation. These calculations shall include consideration of:

   1. how leachate will be recirculated;
   2. detailed plans for layout and operation
   3. capacity of the windrows to absorb leachate;
   4. hours of operation;
   5. extended period of rainfall and;
   6. conditions for no recirculation.

   Assuming it rains 18 inches in 60 days. Explain in detail each component of the composting, treatment, and recirculation operation.

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WATER BALANCE AT SUMTER COUNTY SOLID WASTE FACILITY

Water balance calculations to show the volume of leachate that can be evaporated by recirculation, assuming 18" of precipitation over a 60 day period, using proposed leachate treatment facilities.

GENERAL EQUATION: $P - E - T - CU - R = \Delta S$

WHERE:
- P = Precipitation
- E = Evaporation
- T = Transpiration
- CU = Consumptive Use
- R = Runoff
- ΔS = Change in storage

NOTE:
Questions addressed specifically will be noted in parenthesis.

(8.1.8.2) Conceptual plan as presented in Sheet 1 of 4, dated 3-27-92, shows the piping layout and details of the leachate treatment system. Sheet 1 of 4 is enclosed in Appendix F.

(8.3) The amount of water used to recirculate is dependant on the capacity of the windrow to absorb leachate in order to maintain optimum moisture content. (See calculation sheet #1)

(8.4) Hours of operation in recirculation are dependent on maintaining optimum moisture content, particularly the hours of operation of the MSW facility.

(8.5-8.6) During extended periods of rainfall, leachate will be recirculated according to the requirements of the windrow to maintain optimum moisture conditions. From the budget calculation one can deduce that as the rainfall increases on our system, the quantity of leachate pumped for recirculation is reduced. Therefore, a 100,000 gpd treatment plant

(TP) was included in the design. The STP was sized in order to treat the leachate from a 100 year 24 hour storm with zero recirculation from the ponds. Effluent from this TP will be directed to the stormwater retention area. This stormwater retention area was designed for the total impervious drainage basin of the existing plan and a 100 year 24 hour storm. Therefore, any volume of leachate that needs to be directed to the TP has already been accounted for in the stormwater capacity of the retention area.

GENERAL EQUATION: $P-E-T-CU-R = \Delta S$

WHERE:
- P = 18 in/60 days = 0.3 in/day
- E = 0.163 in/day
- T = included with CU
- CU = Consumptive use of windrows (Including capacity to absorb and transpire, see calculation sheet #1.)
- R = 0.0
- ΔS = Change in Storage

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Assuming it rains 18 inches in 60 days or 0.3 in/day, water balance calculations are as follows for the existing pad and pond facilities:

NORTH = Pad = 50090 ft^2
Pond = 14690 ft^2
Total = 64780 ft

MID = (EXISTING) Pad = 60800 ft^2
Pond = 12500 ft^2
Total = 73300 ft^2

SOUTH = Pad = 54000 ft^2
Pond = 19450 ft^2
Total = 73450 ft^2

TOTAL AREA = 211,530 FT^2

WHERE: P = 0.3 in/day
= 0.3 in/day (1/12) (211530 ft^2)(7.48 gal/ft^3)
= 39556 gpd Pad & Pond, 30834 gpd PAD ONLY

E = 0.163 in/day
= 0.163 in/day (1/12)(46640 ft^2)(7.48 gal/ft^3)
= 4739 gpd ponds only

T = INCLUDED IN CU_T

CU_T = Q_p(0.175) + 12656 gpd/AC.
Q_p = CU_{TAVE} - PRECIPITATION ON PAD
= 14531 gpd/AC (3.8 AC) - 30834 gpd
= 24384 gpd
= 24384 gpd (0.175) + 12656 gpd/AC (3.8)
= 52360 gpd

R = 0.0

ΔS = $P-E-R-QU_T$
= 39556 - 4739 - 0 - 52360
= - 17543 gpd
= Required amount to maintain optimum moisture.
(Negative Value)

Note:
If this value was positive, this would be the amount of excess leachate to be stored or treated for the given amount of rainfall of 18" in 60 days.

Volume of water that can be evaporated by recirculation for 18 in. of rainfall in 60 days.

$$
\begin{aligned}
ER &= Q_p(0.175) \\
&= 24384 \text{ gpd } (0.175) \\
&= 4267 \text{ gpd} \\
&= 256032 \text{ gal for 60 days}
\end{aligned}
$$

PROCESSING, COMPOSTING, TREATMENT AND RECIRCULATION OPERATIONS

The solid waste enters the facility, is weighed, and directed to the resource recovery building or to the recycling area. Material directed to the resource recovery building is placed on the tipping floor in the building. It is then pushed onto a conveyor belt where the material is preshredded and then passed under a magnetic belt separator to remove ferrous items and then onto a sorting conveyor where aluminum, HDPE, PETE, OCC, nonferrous metals, etc., are removed by hand sorters. The material then goes into a double rotor flail mill where it is shredded, then conveyed into trucks for transportation to the composting pad. The material is formed into windrows, injected with a proprietary starter, and composted for approximately 60 days. When the compost is cured, it is passed through a screen to remove film plastics and other undesirable materials prior to grading. The graded compost is then marketed into several types of agricultural applications.

The proposed system for the leachate treatment incorporates two commonly used methods for leachate treatment. The system is designed to treat the total volume of leachate which would be produced during a 100-year, 24-hour storm in the required time period of three weeks. The treatment would be performed using the processes of reapplication of the leachate to the composting pads and through an extended aeration package sewage treatment plant.

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The recirculation for reapplication treatment will incorporate a new flow equalization basin which will collect leachate pumped from the 3 ponds associated with the compost pads. The leachate will be pumped back to the composting pads through a distribution system designed to regulate the location of the reapplication. That is, the piping will have valves which can be operated to direct the leachate to pads or areas of pads which may require moisture or to prevent the spraying of leachate on compost which is being harvested.

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CALCULATION SHEET #1

Average consumptive use of the windrow is calculated below for actual existing conditions of the leachate treatment system during the rainy season.

WHERE: Q_{PAVE} = Average quantity of water recirculated.
= 15000 gpd

P_{AVE} = Average Daily Precipitation
= 0.141 in/day (or) 0.141 (1/12) (60800 ft^2)(7.48 gal/ft^3)
= 5344 gpd

CU_{TAVE} = Total Average Consumptive Use
= $QP_{AVE} + P_{AVE}$
= 20344 gpd (or) 14531 gpd/ac.

Using the equation below the Average Consumptive Use of the windrows is calculated:

$$CU_{TAVE} = (Q_{PAVE} * Ka) + (CU_{WAVE} * A)$$

WHERE: Ka = Irrigation Loss Factor
= (0.25 Day + 0.10 Night)/2
= 0.175

A = Acres of Windrow
= 60800 ft^2/43560 ft^2/AC
= 1.4 AC.

THEREFORE: CU_{WAVE} = Average Consumptive Use of the Windrows
= $[CU_{TAVE} - Q_{PAVE}(Ka)]/A$
= [20344 - 15000 (0.175)]/1.4
= 12656 gpd/Ac.

Assuming that CU_{WAVE} is constant, then the quantity of water pumped Q_p is CU_{TAVE} - precipitation on pad.

Q_P = CU_{TAVE} - P (on pad only)

9. Leachate in the lined cell shall be no more than 1 foot in depth. Explain how this will be assured at all times and verify the depth of leachate in the lined cell at this time.

9. Leachate in the lined Class I cell will be maintained at a depth no greater than 1 foot. The location of the depth of the maximum water surface elevation will be over the sand in the lowest part of the line cell (south end). At times of excessive rainfall, the elevation may be greater than 1 foot for a short time, but the desired water surface will be maintained as stated. The water surface elevation can be assured to be no greater than 1 foot by the placement of a submersible sump pump in the constructed manhole. The pump will collect the leachate from the 6-inch drainpipe entering the manhole. The pump will discharge into the existing leachate pond south of the Class I cell.

The depth of water in the leachate pond this date is 6.56 feet.

Long-Term Care

10. Please provide professional conclusions and recommendations regarding the evaluation of the landfill closure including the extent and effects of a recent gas migration investigation.

10. A gas migration plan was approved by FDER on March 31, 1988. The plan is enclosed in Appendix G. Due to the nature of the waste, the formation of gas should be less now than at the date of the survey. A copy of the results, which were submitted in the application dated March 30, 1992 is also presented in Appendix G.

A walk-through inspection revealed no "air bubbles" under the cover and the vents were working properly.

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Closure

Applications for five separate permits have been submitted simultaneously in the original report and were addressed in the first response to additional information and have been addressed in this second response request for additional information. We request that each permit be issued individually after all the requested information is reviewed and approved.

In particular, we request that the permit for leachate treatment be processed as expediently as possible so that we can begin the necessary tasks to put a system in operation. As you know, existing facilities are not in operation at this time pending the permitting, design and construction of the proposed system. Your help in facilitating this permit would be greatly appreciated.

We hope that the provided information meets your needs at the present time. Should you have any additional questions, or if you require additional information, please contact our office.

Very truly yours,

SPRINGSTEAD ENGINEERING, INC.

John W. Springstead, P.E.
President
Florida Reg. No. 8579

James A. Dunaway, P.G.
Engineering Geologist
Florida Reg. No. 39

Ralph W. Warnock, Jr., P.L.S.
Project Engineer
Florida Reg. No. 4322

JWS:JAD:DWS:RWW:jl/jad

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APPENDICES

PREPARED BY

Springstead Engineering, inc.

LEESBURG, FLORIDA

JULY 29, 1992

92-1100.00

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DEPARTMENT OF PUBLIC WORKS
222 EAST McCOLLUM AVENUE
BUSHNELL, FLORIDA 33513

APPENDIX A

LETTER FROM SYLVIA S. LABIE F.D.E.R. QA OFFICER

JULY 29, 1992

92-1100.00

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

May 1, 1992

RECEIVED
MAY 11 1992
SF/

James A. Dunaway
Springstead Engineering, Inc.
727 South 14th Street
Leesburg, FL 34748

SUBJECT: Quality Assurance Review; Springstead Engineering, Inc.
Comprehensive QA Plan #920119G
First Submittal

Dear Mr. Dunaway:

The Statement of Intent for the referenced Comprehensive QA Plan was received on April 30, 1992. The CompQAP for your organization has limited approved pending status for the following sampling activities: Groundwater, Surface Water, Wastewater, Potable Water, Soil, Sediment and Domestic Waste Sludges. This means that your organization may begin performing work for these specific activities in DER programs or activities that have been designated as Category 2 or 3 by the QA Rule.

Sections 6, 9 and 11 must be revised to reflect the use of the DER Interim SOPs. The instructions on how to revise your document are discussed in DER QAS #91-06 (attached). Before you submit these changes, please review your entire document to assure that all relevant CompQAP Review Checklist requirements for the other 13 sections have been discussed and make any additional corrections.

The revisions to the CompQAP must be received by the QA Section on or before August 7, 1992. Approval pending will automatically expire on that date unless you advise the QA Sections of any delays.

The DER Quality Assurance Section will schedule the laboratory portion of your QA Plan for review and will be issuing separate approvals for sampling and analysis capabilities.

If you have any questions concerning this matter, please call John Watts at (904) 488-2796.

Sincerely,

Sylvia S. Labie, QA Officer
Quality Assurance Section

SSL/dsk
Attachments (2): DER QAS # 91-06
CompQAP Review Checklist Full Service

Recycled Paper
Printed with Soy Based Inks

SECOND RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
PERMIT TO OPERATE COMPOSTING FACILITY
PERMIT TO OPERATE RESOURCE RECOVERY FACILITY
WASTE TIRE GENERAL PERMIT
AND
PERMIT TO MAINTAIN CLOSED CLASS I SANITARY LANDFILL
PREPARED FOR

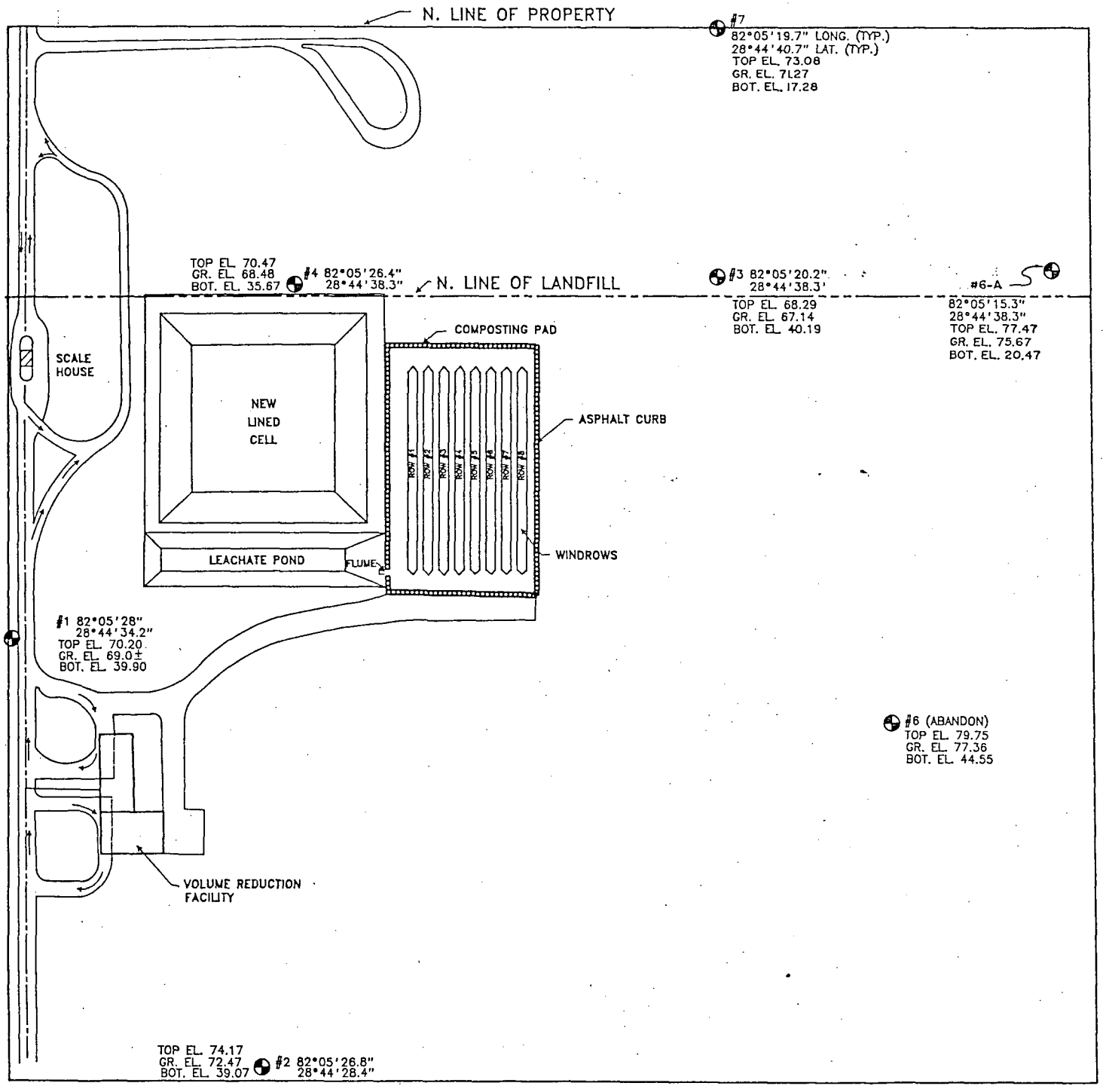
BOARD OF COUNTY COMMISSIONERS
DEPARTMENT OF PUBLIC WORKS
222 EAST McCOLLUM AVENUE
BUSHNELL, FLORIDA 33513

APPENDIX B

MONITORING WELL INFORMATION

JULY 29, 1992

92-1100.00



NOTE:

WELL #5 IS LOCATED 1280'± NORTH OF WELL #7

NOT TO SCALE

SUMTER COUNTY LANDFILL
SEC. 15, TWP 20 S, RNG. 22 E

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: N.E.

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

Depth of Well: 30.3ft.

Elevation (NVGD):

Top of Pipe 70.20 ft.

Ground 69.0 ft.

Top of screen 46.90 ft.

Bottom of screen 41.90 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.

Owner's Name Springstead + Associates

Permit Number: 407446 - 14

x Raymond Tourne 7 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

___ ¼ ___ ¼ ___ ¼ of Section 15

20 Township (N-S) 5 Range (E-W) 22 E

Locate in Section

Latitude Deg. Min. Sec. N

Longitude W

Optional may be required

X Rotary [ ] Cable Tool [ ] Jet [ ] Auger [ ] Other ___

Measured Static or Artesian Water Level ___ + ___ - ___ Ft.

Measured Pumping Water Level ___ + ___ - ___ Ft.

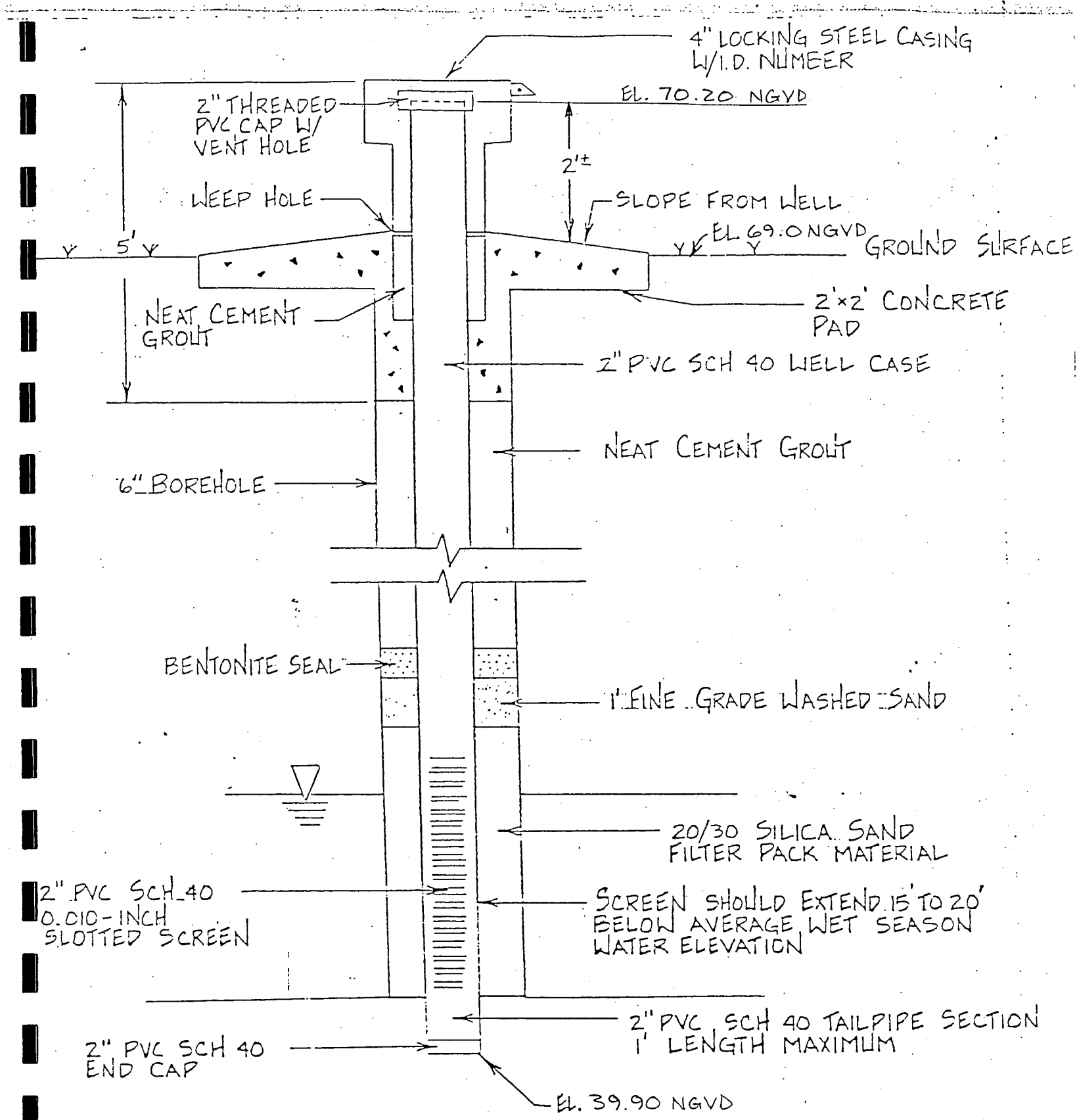
After ___ Hours At ___ G.P.M.

Measuring Pt. (Describe): ___

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

Depth (Ft.) From	To	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.
0	10	Brown Sand
10	15	Brown Sandy Clay
15	22	Brown Clay
22	32	White limestone

Driller's Name Rex Siglin



EXISTING GROUND WATER MONITOR WELL #1

SPRINGSTEAD ENGINEERING INC.
CONSULTING ENGINEERS

GROUND WATER MONITOR WELL

11-3-88 N.T.S. C-103 C-10

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: N.E.

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

Depth of Well: 35.1 ft.

Elevation (NVGD):

Top of Pipe 74.17 ft.

Ground 72.47 ft.

Top of screen 46.07 ft.

Bottom of screen 41.07 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.

Please complete in black ink or type

Form No. 25-18-5/83

WELL COMPLETION REPORT

Owner's Name: Springstead & Associates

Permit Number: 467447-19

x [signature] 19 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	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

___ ¼ ___ ¼ ___ ¼ of Section 15

Township 20 (N.S.) 5 Range 22 (E.W.) E

Locate in Section

Latitude: Deg. ___ Min. ___ Sec. ___ N

Longitude: Deg. ___ Min. ___ Sec. ___ W

Optional may be required

DRILL METHOD

X Rotary [ ] Cable Tool [ ] Jet [ ] Auger Other ___

Measured Static Water Level ___ + ___ - ___ Ft.

Measured Pumping Water Level ___ + ___ - ___ Ft.

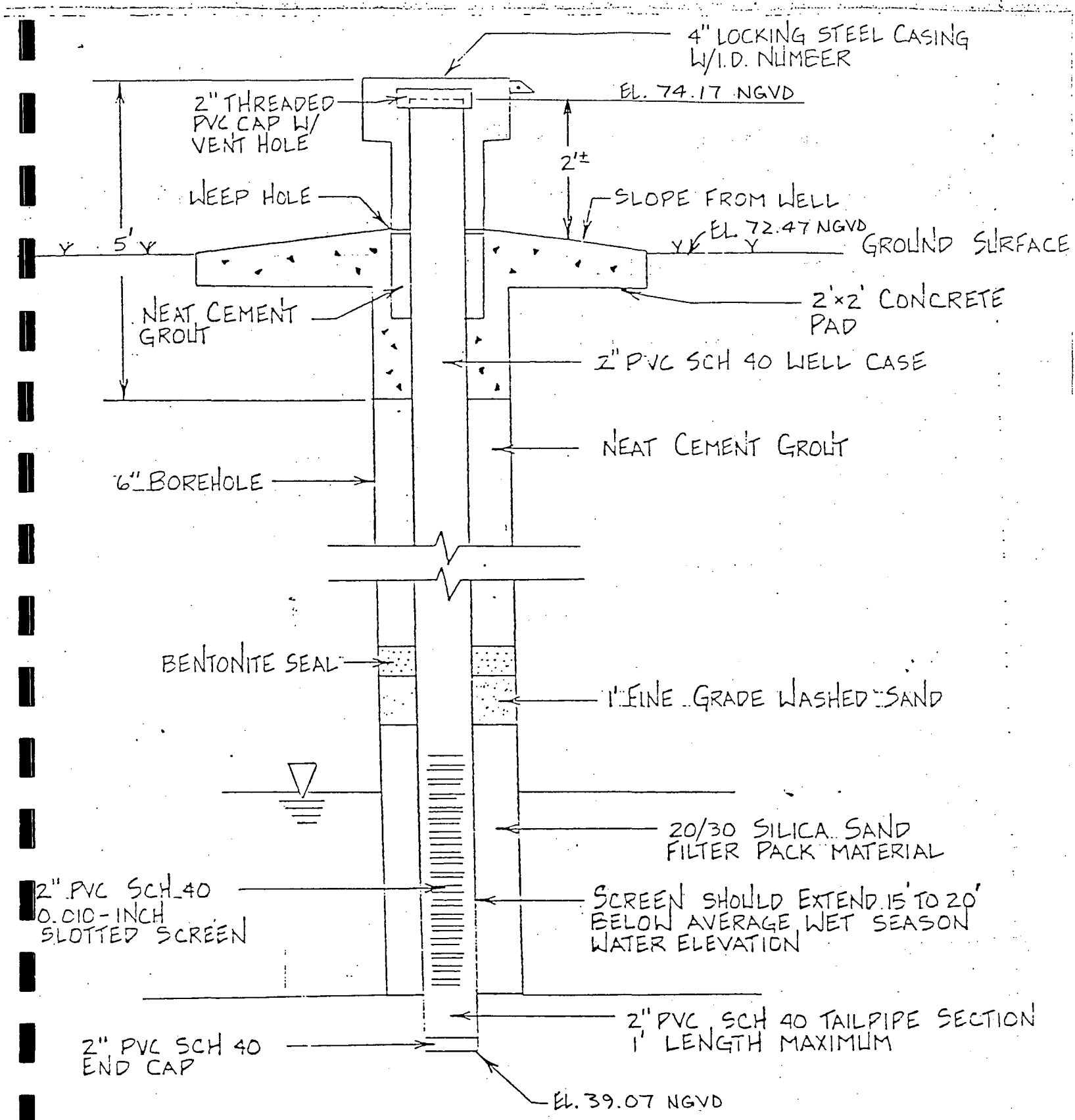
After ___ Hours At ___ G.P.M.

Measuring Pt. (Describe): ___

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

Depth (Ft.) From	To	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.
0	10	BROWN SAND
10	18	BROWN SANDY CLAY
18	30	BROWN CLAY
30	37	White limestone

Driller's Name: Rex Siglin



EXISTING GROUND WATER MONITOR WELL #2

SPRINGSTEAD ENGINEERING INC.
CONSULTING ENGINEERS

GROUND WATER MONITOR WELL

11-3-88 N.T.S. C-103 C-102

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: N.E.

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

Depth of Well: 28.1 ft.

Elevation (NVGD):

Top of Pipe 68.29 ft.

Ground 67.14 ft.

Top of screen 47.19 ft.

Bottom of screen 42.19 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.

Please complete in black ink or type

Form No. 25-18 5/83

WELL COMPLETION REPORT

Owner's Name Splinstead Associates

Permit Number: 407448-19

x Raymond Dumond 20 Sep 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.)
11 Bags		0	23
Sand		23	25

IRON: ___ ppm SULFATES: ___ ppm CHLORIDES: ___ ppm

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

WELL LOCATION

___ ¼ ___ ¼ ___ ¼ of Section 15

20 Township (N-S) 5 Range 22 (E-W)

Locate in Section

Latitude ___ Deg. ___ Min. ___ Sec. N

Longitude ___ Deg. ___ Min. ___ Sec. W

Optional may be required

DRILL METHOD

[X] Rotary [ ] Cable Tool [ ] Jet [ ] Auger Other ___

Measured Static Water Level ___ + ___ - ___ Ft.

Measured Pumping Water Level ___ + ___ - ___ Ft.

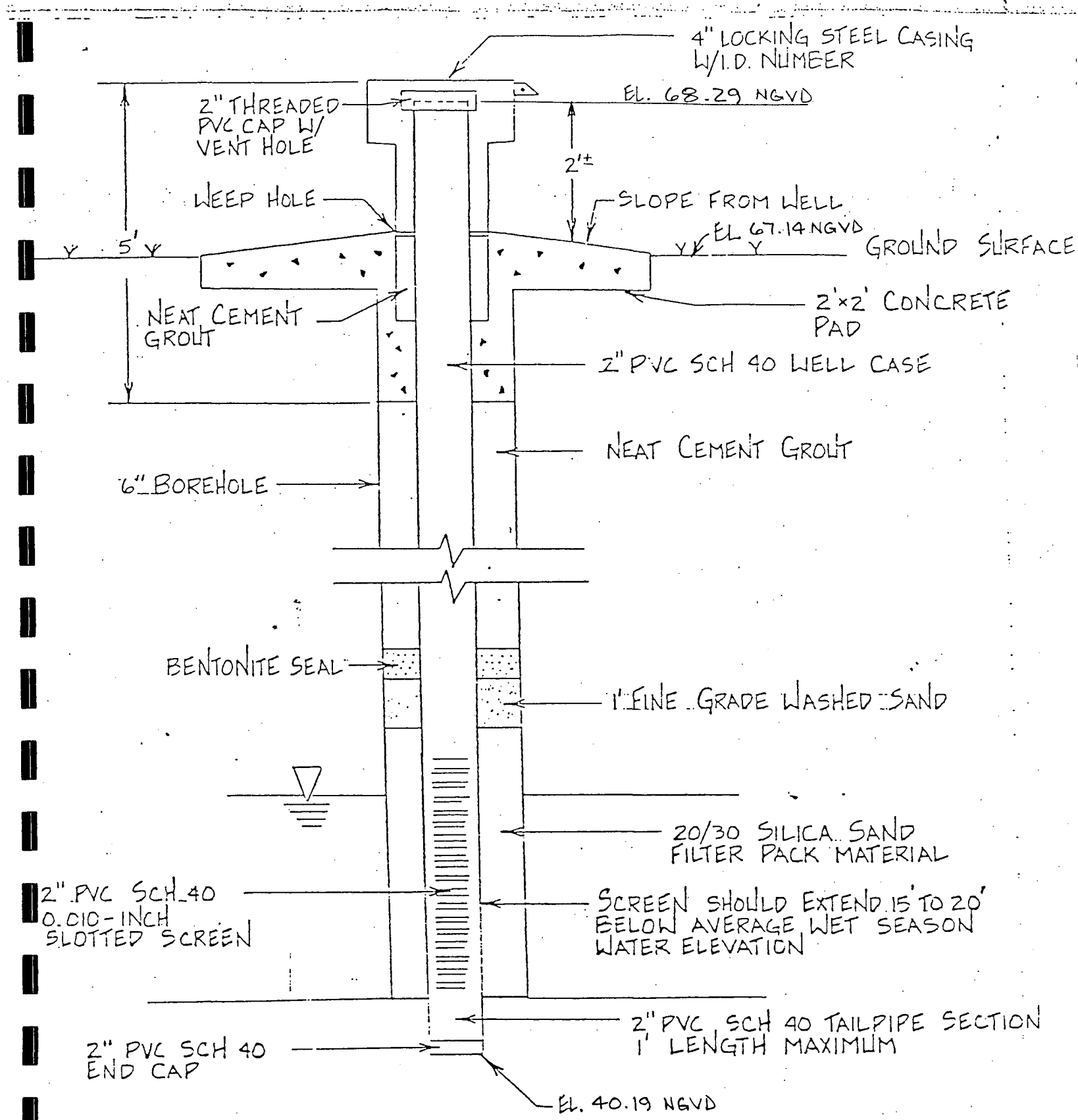
After ___ Hours At ___ G.P.M.

Measuring Pt. (Describe): ___

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

Depth (Ft.) From	Depth (Ft.) To	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.
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 Rabold



EXISTING GROUND WATER MONITOR WELL #3

SPRINGSTEAD ENGINEERING INC.
CONSULTING ENGINEERS

GROUND WATER MONITOR WELL

11-3-88 N.T.S. C-103 C-103

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: N.E.

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

Depth of Well: 34.8 ft.

Elevation (NVGD):

Top of Pipe 70.47 ft.

Ground 68.48 ft.

Top of screen 43.67 ft.

Bottom of screen 37.67 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.

Please complete in black ink or type

Form No. 25-18-5/83

WELL COMPLETION REPORT

Owner's Name Spencer Associates

Permit Number: 407449-19

x [signature] 20 Sep 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	30
PVC Sch 40	2 in	0	37
Gravel Pack		30	37
Neat Cement: No. of Bags		**From (Ft.)**	**To (Ft.)**
9 Bags		0	28
SAND		28	30

IRON: ___ ppm SULFATES: ___ ppm CHLORIDES: ___ ppm

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

WELL LOCATION

___ ¼ ___ ¼ ___ ¼ of Section 15

20 Township (N-S) 5 Range (E-W) E

Locate in Section

Latitude ___ Deg. ___ Min. ___ Sec. N

Longitude ___ Deg. ___ Min. ___ Sec. W

Optional may be required

DRILL METHOD

[X] Rotary [ ] Cable Tool [ ] Jet [ ] Auger Other ___

Measured Static Water Level ___ + ___ ___ Ft.

Measured Pumping Water Level ___ + ___ ___ Ft.

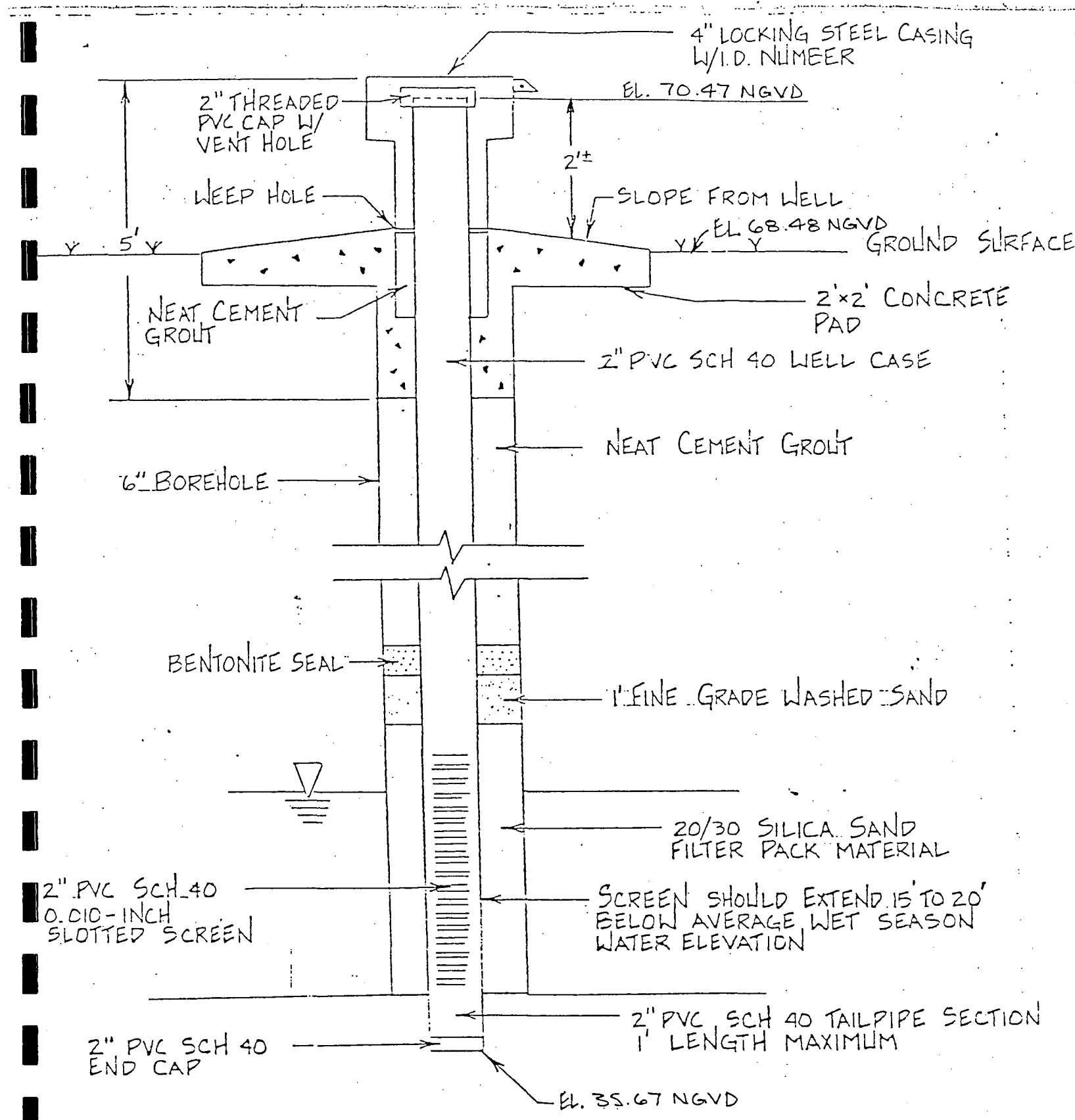
After ___ Hours At ___ G.P.M.

Measuring Pt. (Describe): ___

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

Depth (Ft.) From	Depth (Ft.) To	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.
0	10	BROWN SAND
10	20	BROWN SANDY CLAY
20	30	BROWN CLAY
30	37	White limestone

Driller's Name Chuck Rabold



EXISTING GROUND WATER MONITOR WELL #4

SPRINGSTEAD ENGINEERING INC.
CONSULTING ENGINEERS

GROUND WATER MONITOR WELL

11-3-88	N.T.S.	C-103	C-103
RI	VI	RI	

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: N.E.

Screen length: none Ft. type: Slot size:

Depth of Well: 150 ft.

Elevation (NVGD):

Top of Pipe 64.57 ft.

Ground 63.10 ft.

Top of screen none ft.

Bottom of screen none ft.

Pipe Diameter 4 in.

Casing Diameter: none in

Casing type: none casing length: ft.

SWFWMD Permit No: 407451-19

Attached: Driller's log; sketch

* Referenced point see sketch.

Please complete in black ink or type

Form No. 25-18-5/83

WELL COMPLETION REPORT

Owner's Name: Southwestern Associates

Permit Number: 45451-17

x Raymond Dammel — 30 Sept 85

Water Well Contractor's Signature — Completion Date

License No. 1157

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

___ ¼ ___ ¼ ___ ¼ of Section 15

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

Locate in Section

Latitude ___ Deg. ___ Min. ___ Sec. N

Longitude ___ Deg. ___ Min. ___ Sec. W

Optional may be required

DRILL METHOD

[ ] Rotary [ ] Cable Tool [ ] Jet [ ] Auger Other Combination

Measured Static Water Level 17 + ___ . ___ Ft.

Measured Pumping Water Level ___ + ___ . ___ Ft.

After ½ Hours At 50 G.P.M.

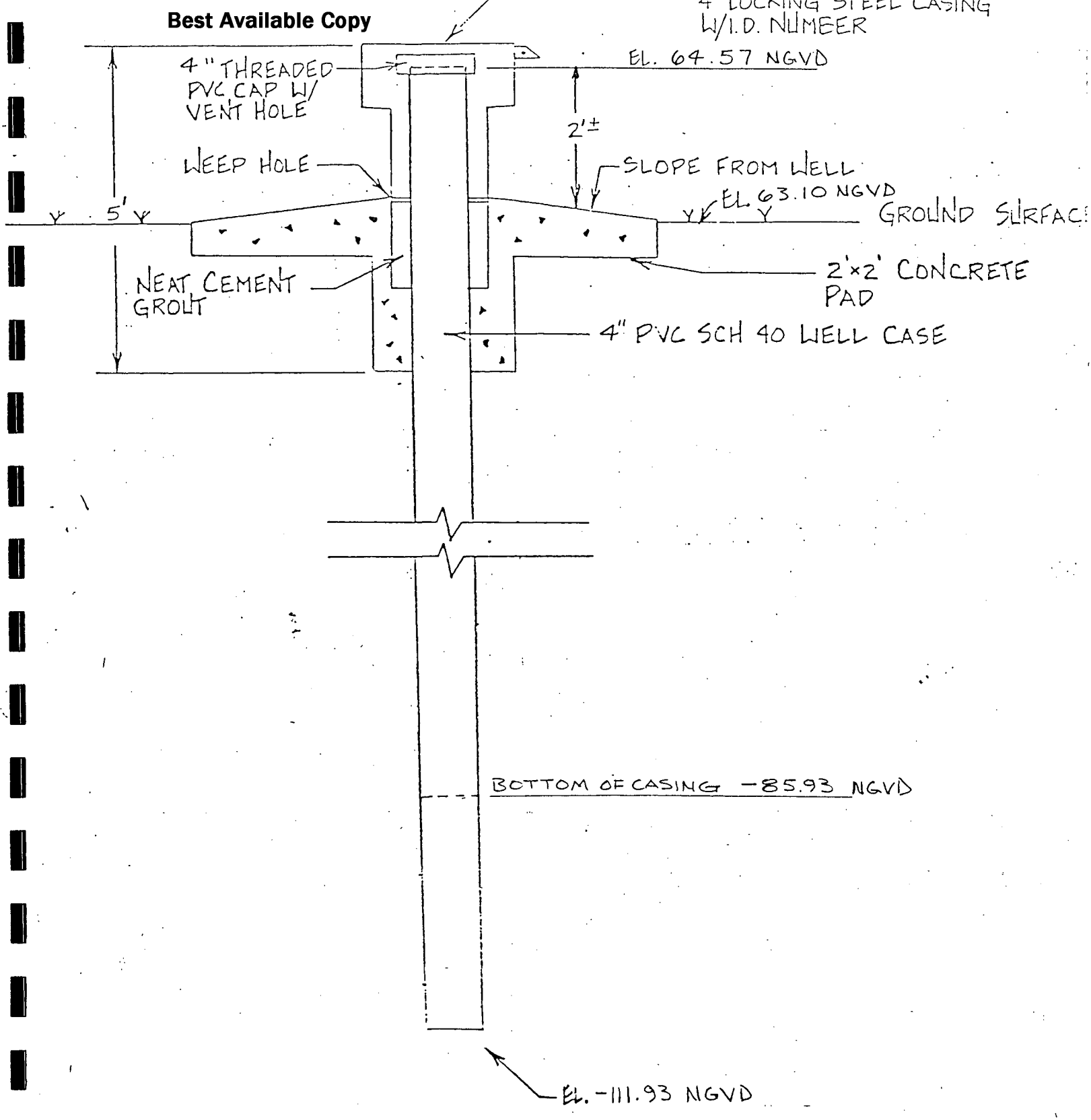
Measuring Pt. (Describe): Top 4" pipe

Which is 1½ Ft. [X] Above [ ] Below Land Surface

Depth (Ft.) From	To	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.
0	20	Dark Brown Sand
20	40	Dark Brown & 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

Best Available Copy



EXISTING GROUND WATER MONITOR WELL #5

SPRINGSTEAD ENGINEERING INC. consulting engineers	GROUND WATER MONITOR WELL			
	DATE 11-3-88	SCALE N.T.S.	FIG. C-103	C-10
	RL	VL	RL	-1

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: N.E.

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

Depth of Well: 33.2ft.

Elevation (NVGD):

Top of Pipe 79.75 ft.

Ground 77.36 ft.

Top of screen 51.55 ft.

Bottom of screen 46.55 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.

Best Available Copy

WELL COMPLETION REPORT

Owner's Name: Springstead - Associates

Permit Number: 407450-19

X [illegible] 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

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

___ ¼ ___ ¼ ___ ¼ of Section 15

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

Locate in Section

Latitude: Deg. ___ Min. ___ Sec. ___ N

Longitude: Deg. ___ Min. ___ Sec. ___ W

Optional may be required

~~Pit~~ Rotary [ ] Cable Tool [ ] Jet [ ] Hand

Measured Static or Level ___ + ___ ___ Ft.

Measured Pumping Water Level ___ + ___ ___ Ft.

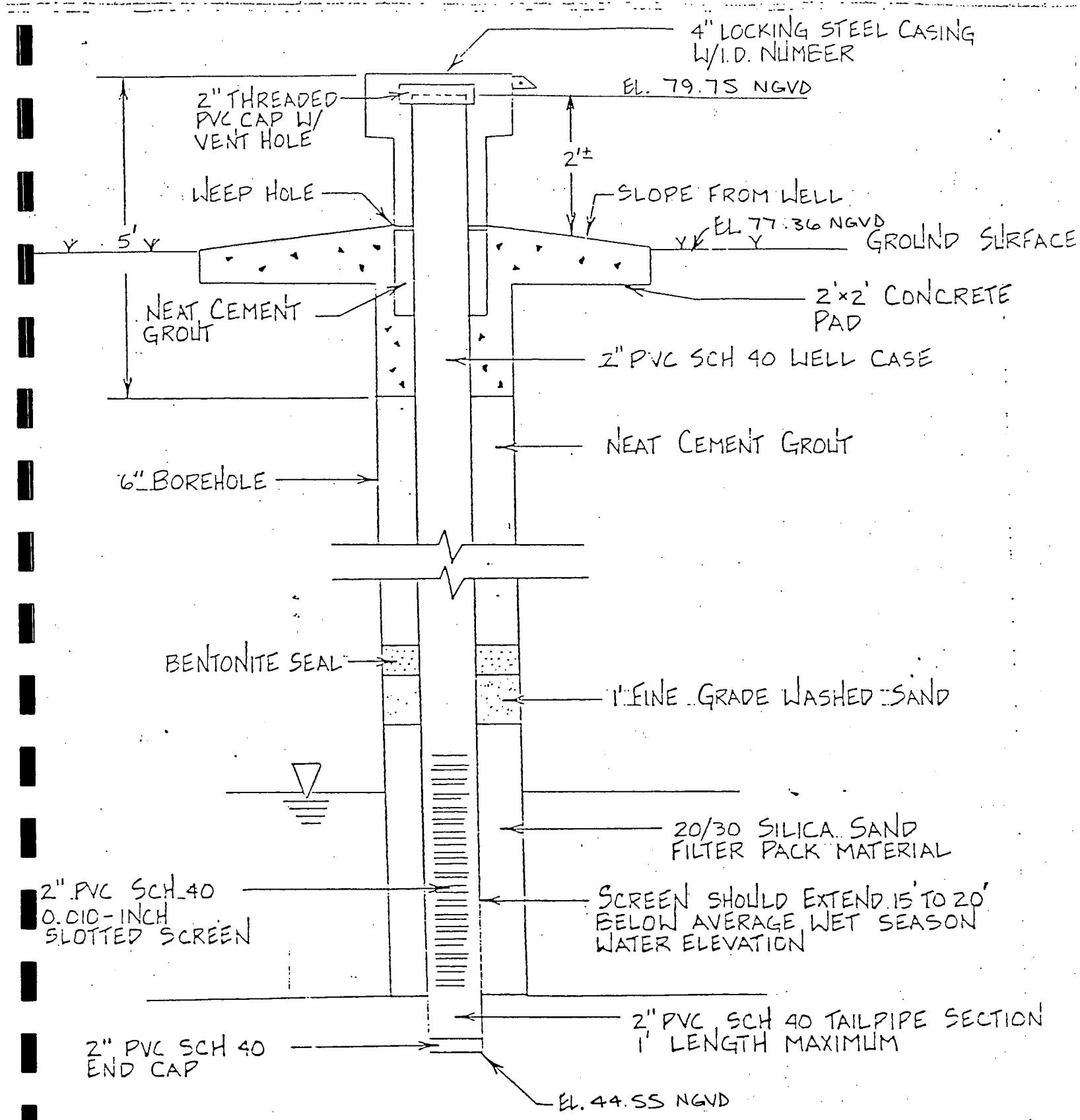
After ___ Hours At ___ G.P.M.

Measuring Pt. (Describe): ___

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

Depth (Ft.) From	To	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.
0	10	BROWN SAND
10	20	BROWN SANDY CLAY
20	30	BROWN CLAY
30	37	White Limestone

Driller's Name: Chuck Ralston



EXISTING GROUND WATER MONITOR WELL #6

(ABANDONED IN MAY 1989) ACCORDING TO CURRENT REGULATIONS AT TIME

SPRINGSTEAD ENGINEERING INC.

CONSULTING ENGINEERS

GROUND WATER MONITOR WELL

11-3-88 N.T.S. C-103 C-103

R1 VI R1

MONITORING WELL COMPLETION REPORT # 6-A

INSTALLATION METHOD: Hollow Stem Auger

INSTALLED BY: IT Environmental Services, Inc. -- Michael Sturdevant

2140 N.E. 36th Ave., Suite 300, Ocala, FL 32670

TOTAL DEPTH: 51 ft. (bls*) DEPTH TO TOP OF SCREEN: 44 ft. (bls)

SCREEN LENGTH: 5 ft. SCREEN SLOT SIZE: .010 SCREEN TYPE PVC

CASING DIAMETER: 2 in. CASING TYPE: Schedule 40 PVC

LENGTH OF CASING: 44 ft. FILTER PACK MATERIAL: 20/30 Sand

TOP OF CASING ELEVATION (NGVD): _____

GROUND SURFACE ELEVATION (NGVD): _____

COMPLETION DATE: 5-3-89 DEVELOPMENT METHOD: Hand Pump & Surge

POST DEVELOPMENT WATER ELEVATION (NGVD): _____

DATE AND TIME MEASURED: _____

REMARKS (Soils information, Stratigraphy, etc.): See attached well log for Southwest Florida Water Management District

NAME OF PERSON PREPARING REPORT: Michael Sturdevant

INCLUDE: SOIL BORING LOG FOR EACH WELL.

*(bls) = Below Land Surface.

19762 SINGER BUSINESS FORMS, INC. P.O. BOX 10245 TAMPA, FLORIDA 33679

Please complete in black ink or type

Form No. 25-18-5/83

WELL COMPLETION REPORT

Owner's Name: Board of Sumter County Com.

Permit Number: 479593-19

X _____ 5-3-89

Water Well Contractor's Signature — Completion Date

License No. 7039

SURFACE CASING, CASING AND LINER MATERIAL:

Types	Diam. (In.)	From (Ft.)	To (Ft.)
PVC Sch 40 Pipe	2"	0	44
PVC .010 Screen	2"	44	49
PVC sch 40 Pipe	2"	49	51

Neat Cement: No. of Bags	From (Ft.)	To (Ft.)
Portland Cement 7	0	42

IRON: ___ ppm SULFATES: ___ ppm CHLORIDES: ___ ppm

FINISH: Screen: 44-49 (Ft.) Open Hole: ___ (Ft.)

WELL LOCATION

___ ¼ ___ ¼ ___ ¼ of Section 15

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

Locate in Section

Latitude [ ][ ] Deg. [ ][ ] Min. [ ][ ] Sec. N

Longitude [ ][ ] Deg. [ ][ ] Min. [ ][ ] Sec. W

Optional may be required

DRILL METHOD

[ ] Rotary [ ] Cable Tool [ ] Jet [X] Auger Other ___

Measured Static Water Level ___ + ___ - ___ Ft.

Measured Pumping Water Level ___ + ___ - ___ Ft.

After ___ Hours At ___ G.P.M.

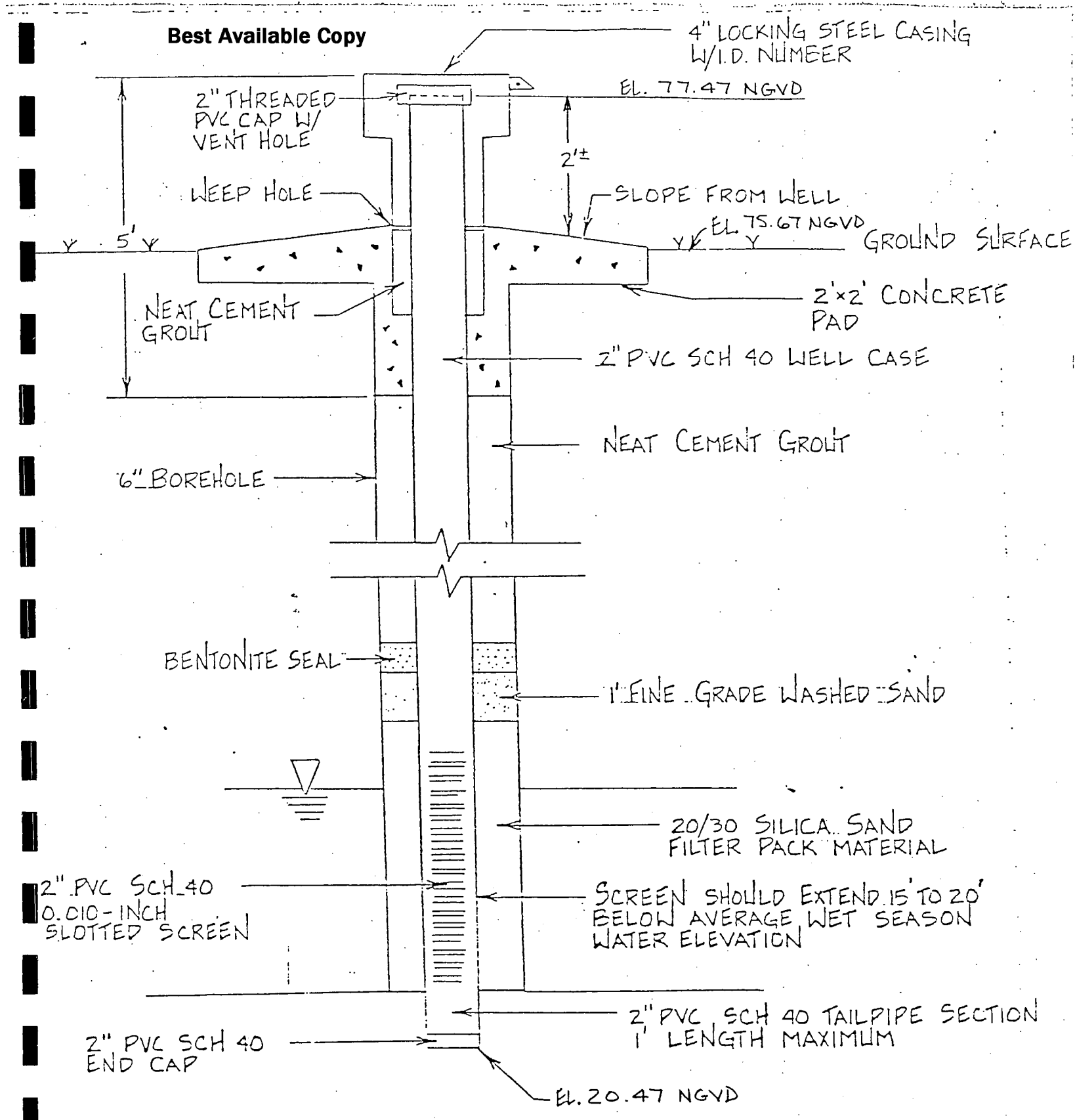
Measuring Pt. (Describe): ___

Which is 3 Ft. [ ] Above [X] Below Land Surface

Depth (Ft.) From	To	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.
0	20	Tan Sand
20	25	Tan Sand & Clay
25	28	White Clay & Sand
28	31	lime rock
31	34	gray clay
34	51	Lime rock

Driller's Name Michael Sturdevant

Best Available Copy



EXISTING GROUND WATER MONITOR WELL #6-A

SPRINGSTEAD ENGINEERING INC.
CONSULTING ENGINEERS

GROUND WATER MONITOR WELL

11-3-88 NTS. C-103 C-103

RI VL RI

#-7

MONITORING WELL COMPLETION REPORT

INSTALLATION METHOD: Hollow Stem Auger

INSTALLED BY: IT Environmental Services, Inc. - Michael Sturdevant, Contr.
2140 N.E. 36th Ave., Suite 300, Ocala, FL 32670

TOTAL DEPTH: 53 ft. (bls*) DEPTH TO TOP OF SCREEN: 46 ft. (bls)

SCREEN LENGTH: 5 ft. SCREEN SLOT SIZE: .010 SCREEN TYPE PVC

CASING DIAMETER: 2 in. CASING TYPE: Schedule 40 PVC

LENGTH OF CASING: 48 ft. FILTER PACK MATERIAL: 20/30 Sand

TOP OF CASING ELEVATION (NGVD): _____

GROUND SURFACE ELEVATION (NGVD): _____

COMPLETION DATE: 5-4-89 DEVELOPMENT METHOD: Hand Pump & Surge

POST DEVELOPMENT WATER ELEVATION (NGVD): _____

DATE AND TIME MEASURED: _____

REMARKS (Soils information, Stratigraphy, etc.): See attached well log for Southwest Florida Water Management District

NAME OF PERSON PREPARING REPORT: Michael Sturdevant

INCLUDE: SOIL BORING LOG FOR EACH WELL.

*(bls) = Below Land Surface.

19762 SINGER BUSINESS FORMS, INC. P.O. BOX 10245 TAMPA, FLORIDA 33679

Please complete in black ink or type

Form No. 25-18-5/83

WELL COMPLETION REPORT

Owner's Name Board of Sumter County Comm.

Permit Number 479594-19

x [signature] 5-4-89

Water Well Contractor's Signature — Completion Date

License No. 2039

SURFACE CASING, CASING AND LINER MATERIAL:

Types	Diam. (In.)	From (Ft.)	To (Ft.)
Sch. 40 PVC Pipe	2"	0	46
PVC .010 Screen	2"	46	51
Sch 40 PVC Pipe	2"	51	53

Neat Cement: No. of Bags	From (Ft.)	To (Ft.)
Portland Cement 8	0	44

IRON: ___ ppm SULFATES: ___ ppm CHLORIDES: ___ ppm

FINISH: Screen: 46-51 (Ft.) Open Hole: ___ (Ft.)

WELL LOCATION

___ ¼ ___ ¼ ___ ¼ of Section 15

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

Locate in Section

Latitude ___ Deg. ___ Min. ___ Sec. N

Longitude ___ Deg. ___ Min. ___ Sec. W

Optional may be required

DRILL METHOD

[ ] Rotary [ ] Cable Tool [ ] Jet [X] Auger Other ___

Measured Static Water Level ___ + ___ . ___ Ft.

Measured Pumping Water Level ___ + ___ . ___ Ft.

After ___ Hours At ___ G.P.M.

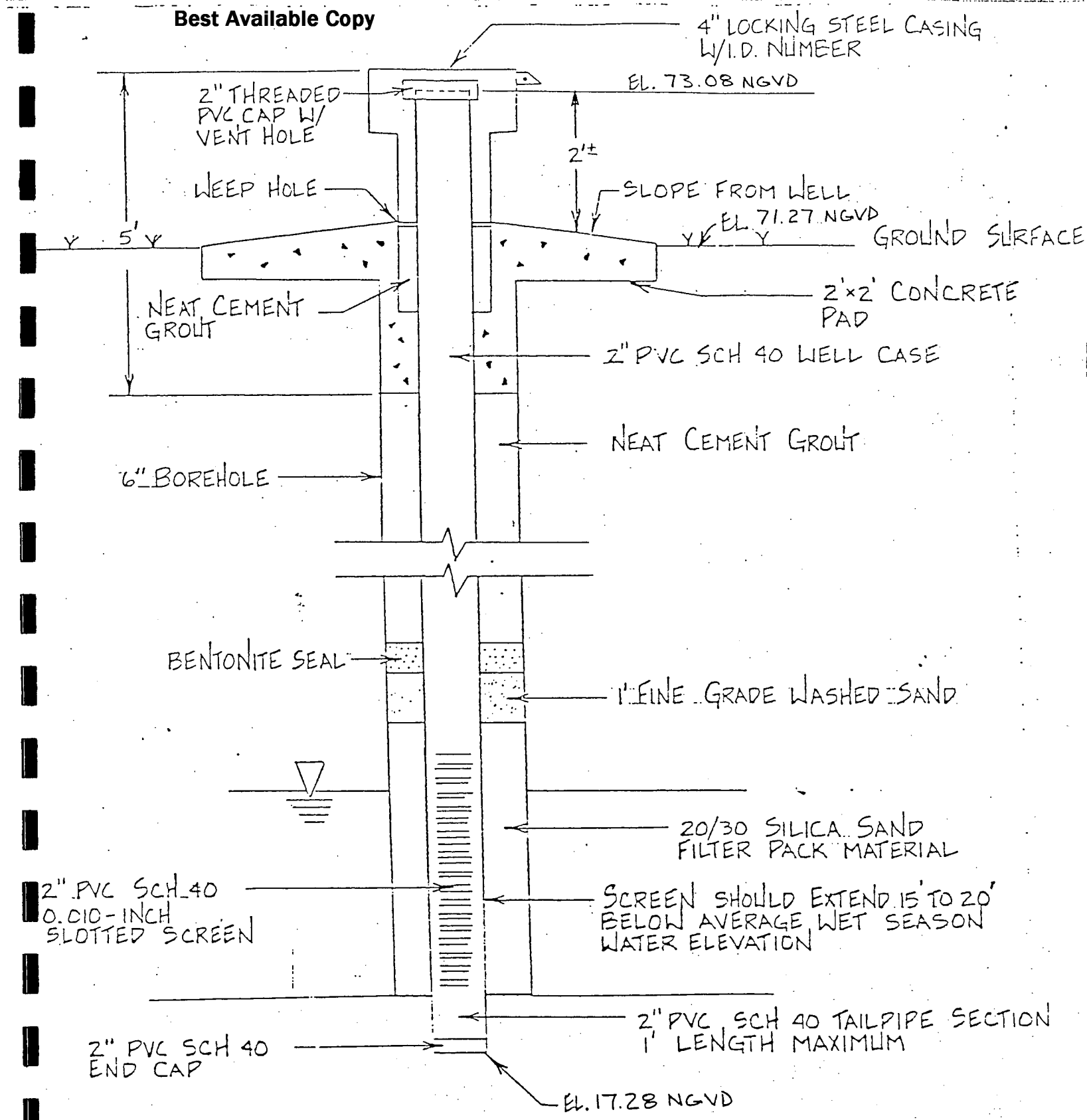
Measuring Pt. (Describe): Top of Well

Which is 28 Ft. [ ] Above [X] Below Land Surface

Depth (Ft.) From	Depth (Ft.) To	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.
0	20	Tan Sand
20	29	Gray Clay & Lime
29	51	Lime Stone

Driller's Name Michael Sturdevant

Best Available Copy



EXISTING GROUND WATER MONITOR WELL #7

SPRINGSTEAD ENGINEERING INC.
CONSULTING ENGINEERS

GROUND WATER MONITOR WELL

11-3-88 N.T.S. C-103 C-103

SECOND RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
PERMIT TO OPERATE COMPOSTING FACILITY
PERMIT TO OPERATE RESOURCE RECOVERY FACILITY
WASTE TIRE GENERAL PERMIT
AND
PERMIT TO MAINTAIN CLOSED CLASS I SANITARY LANDFILL
PREPARED FOR

BOARD OF COUNTY COMMISSIONERS
DEPARTMENT OF PUBLIC WORKS
222 EAST McCOLLUM AVENUE
BUSHNELL, FLORIDA 33513

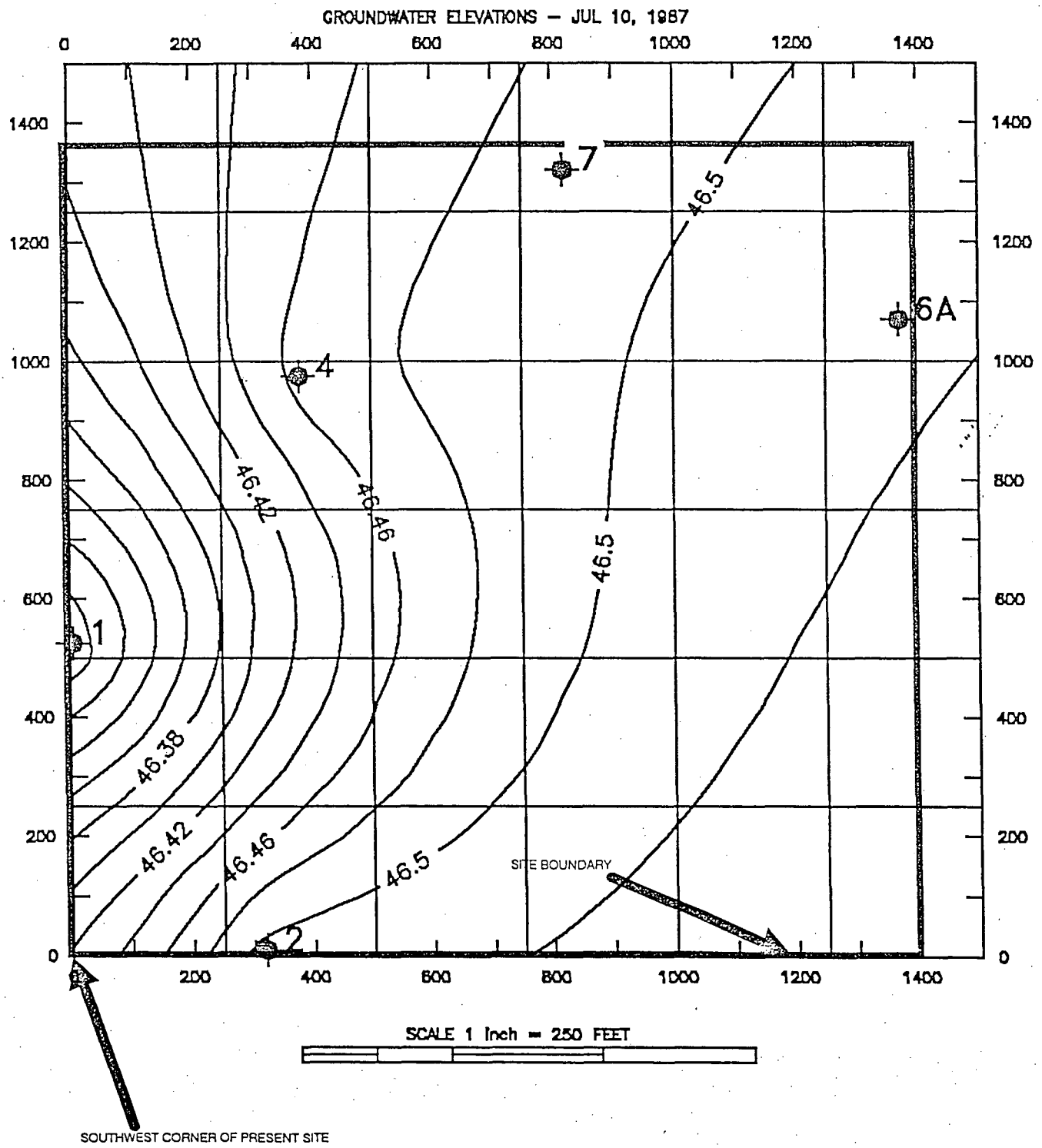
APPENDIX C

REVISED GROUNDWATER ELEVATIONS MAP

JULY 29, 1992

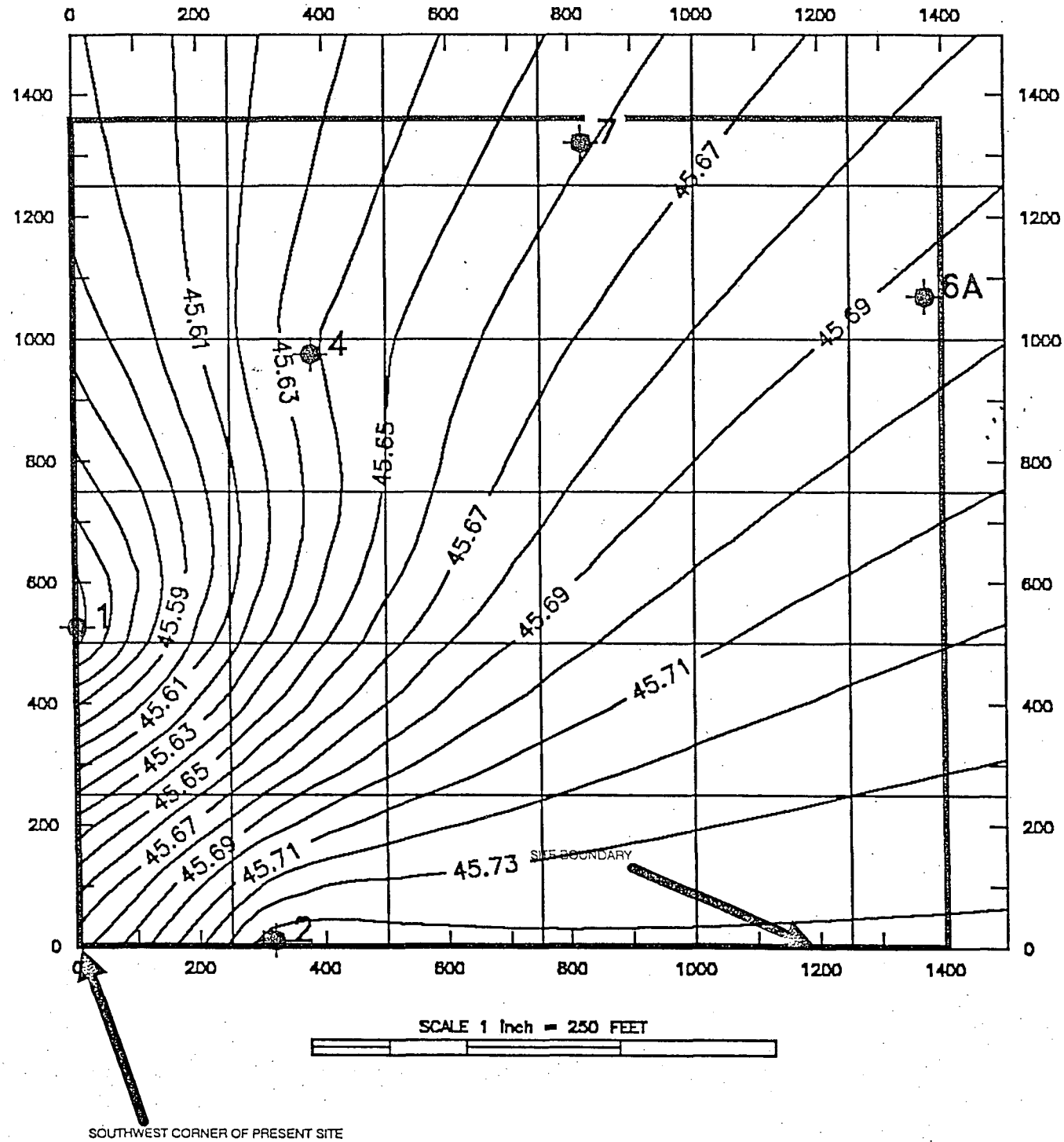
92-1100.00

SUMTER COUNTY SOLID WASTE MANAGEMENT FACILITY

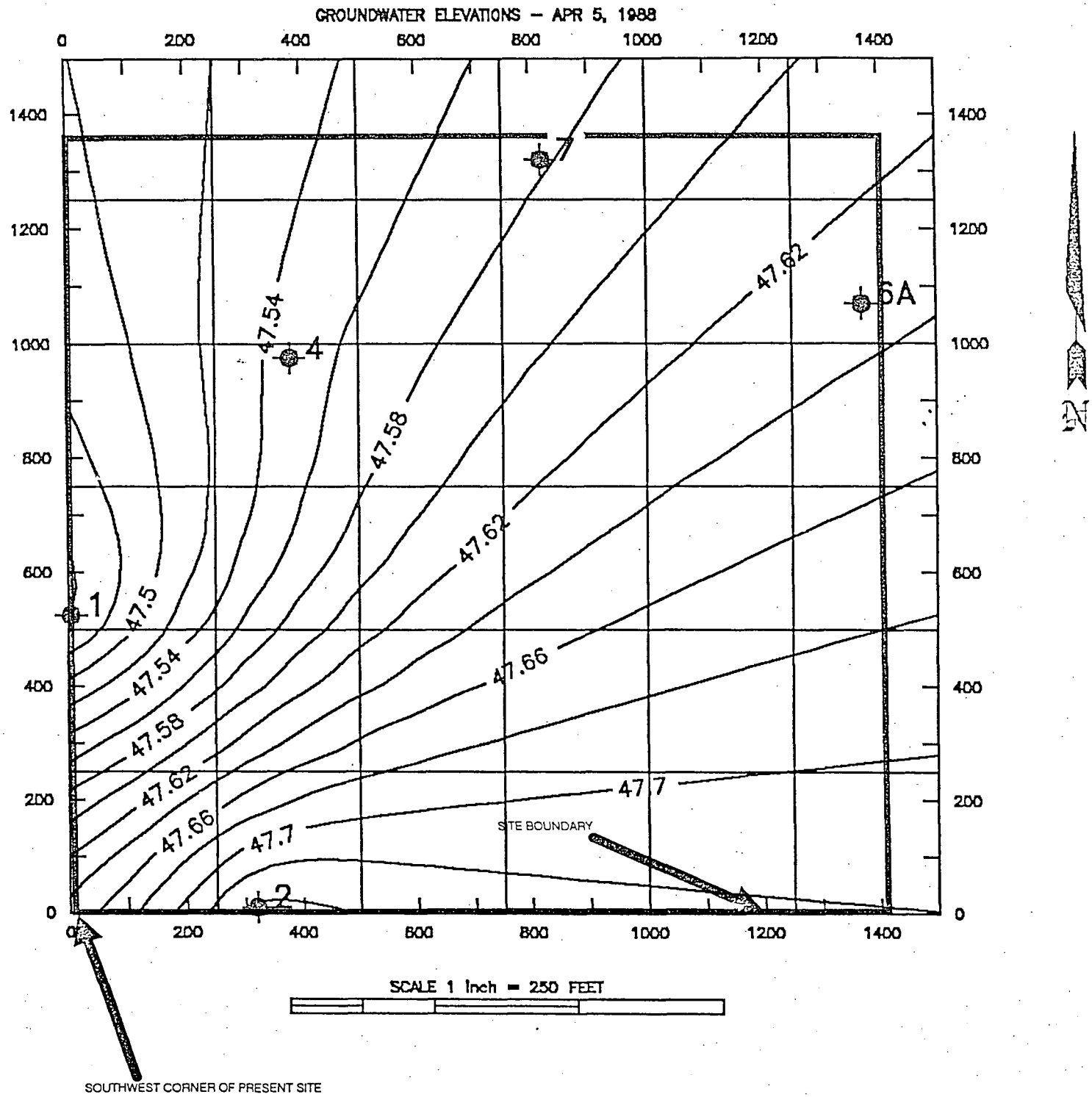


SUMTER COUNTY SOLID WASTE MANAGEMENT FACILITY

GROUNDWATER ELEVATIONS – JAN 18, 1988

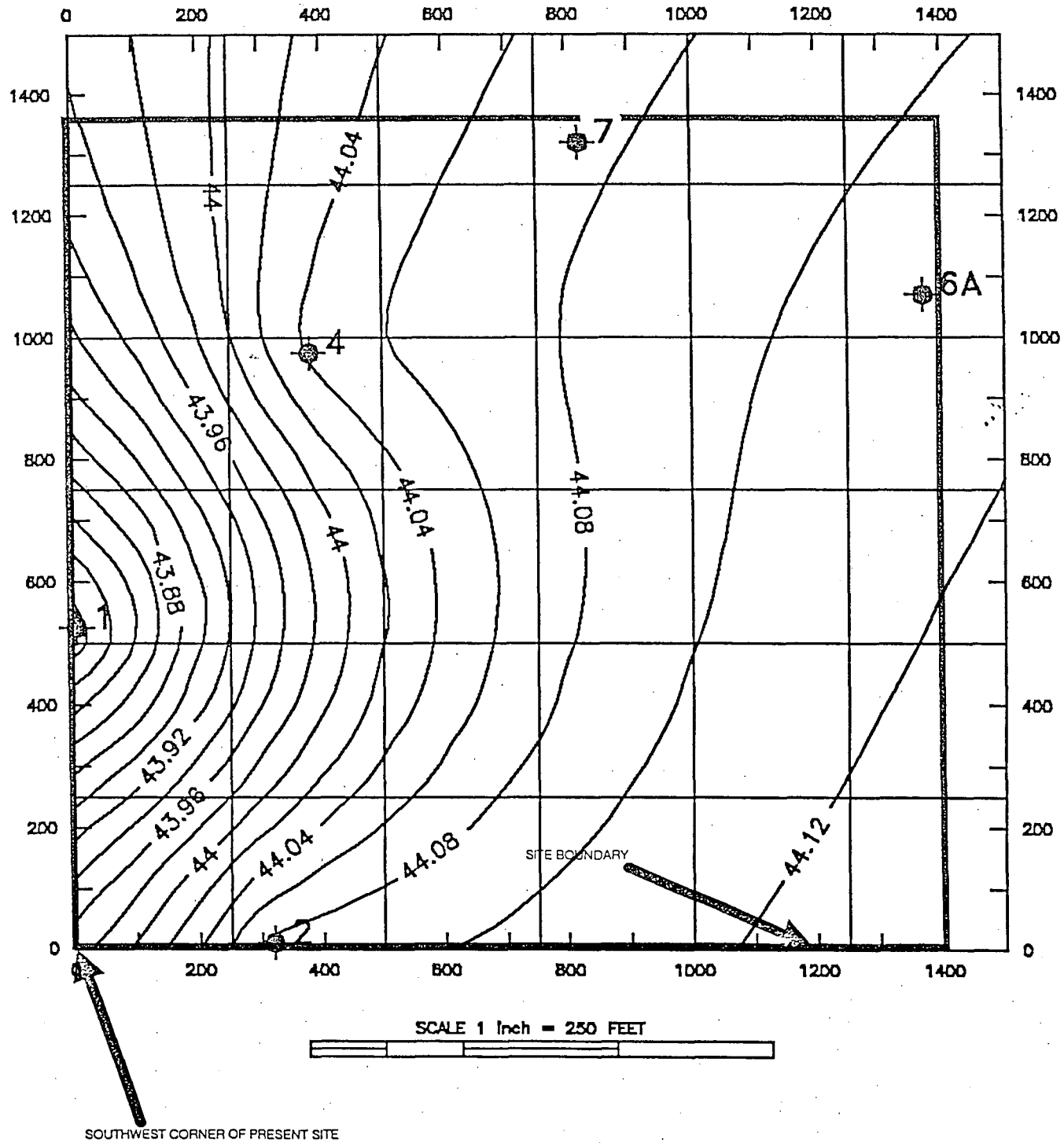


SUMTER COUNTY SOLID WASTE MANAGEMENT FACILITY

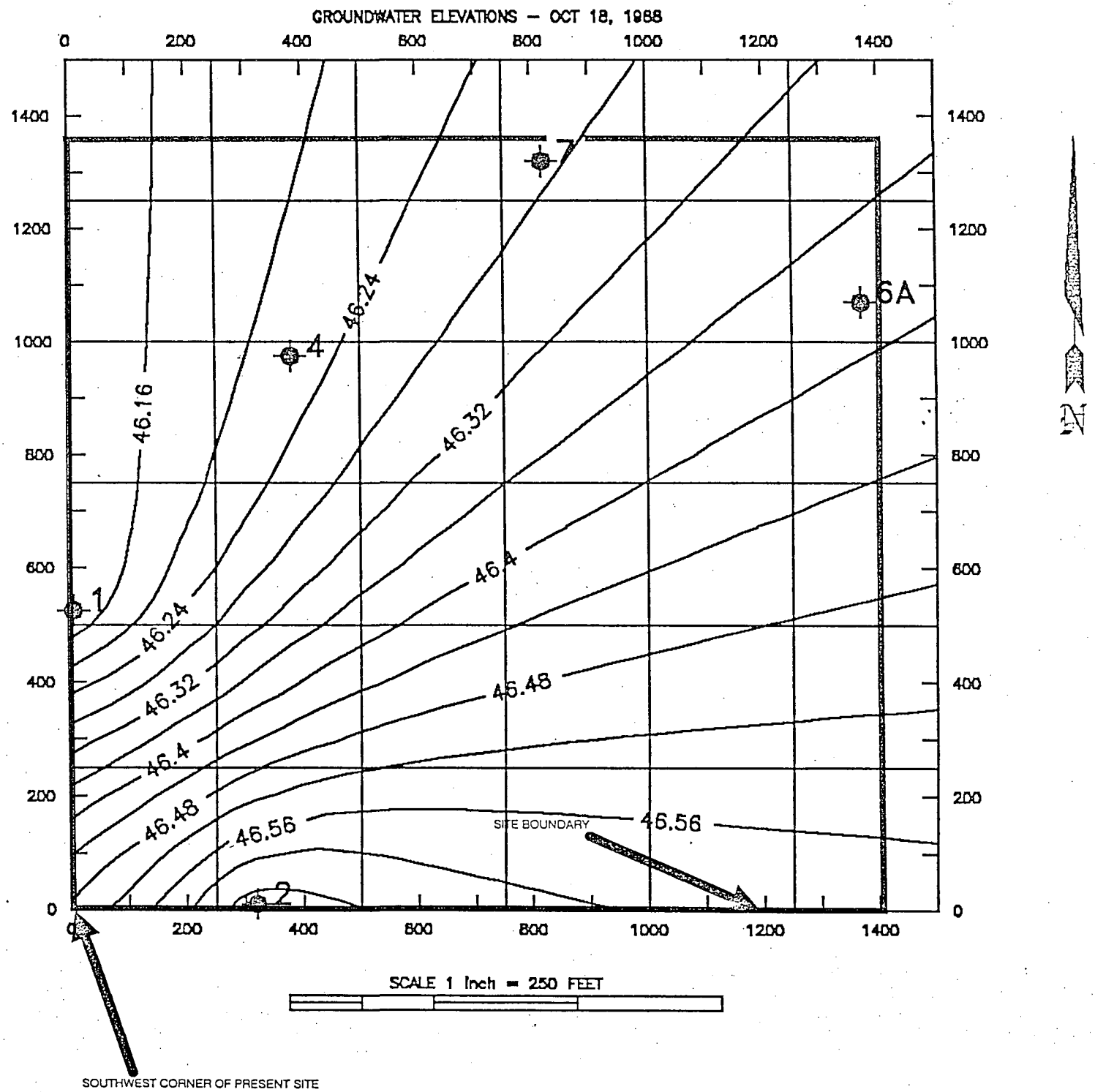


SUMTER COUNTY SOLID WASTE MANAGEMENT FACILITY

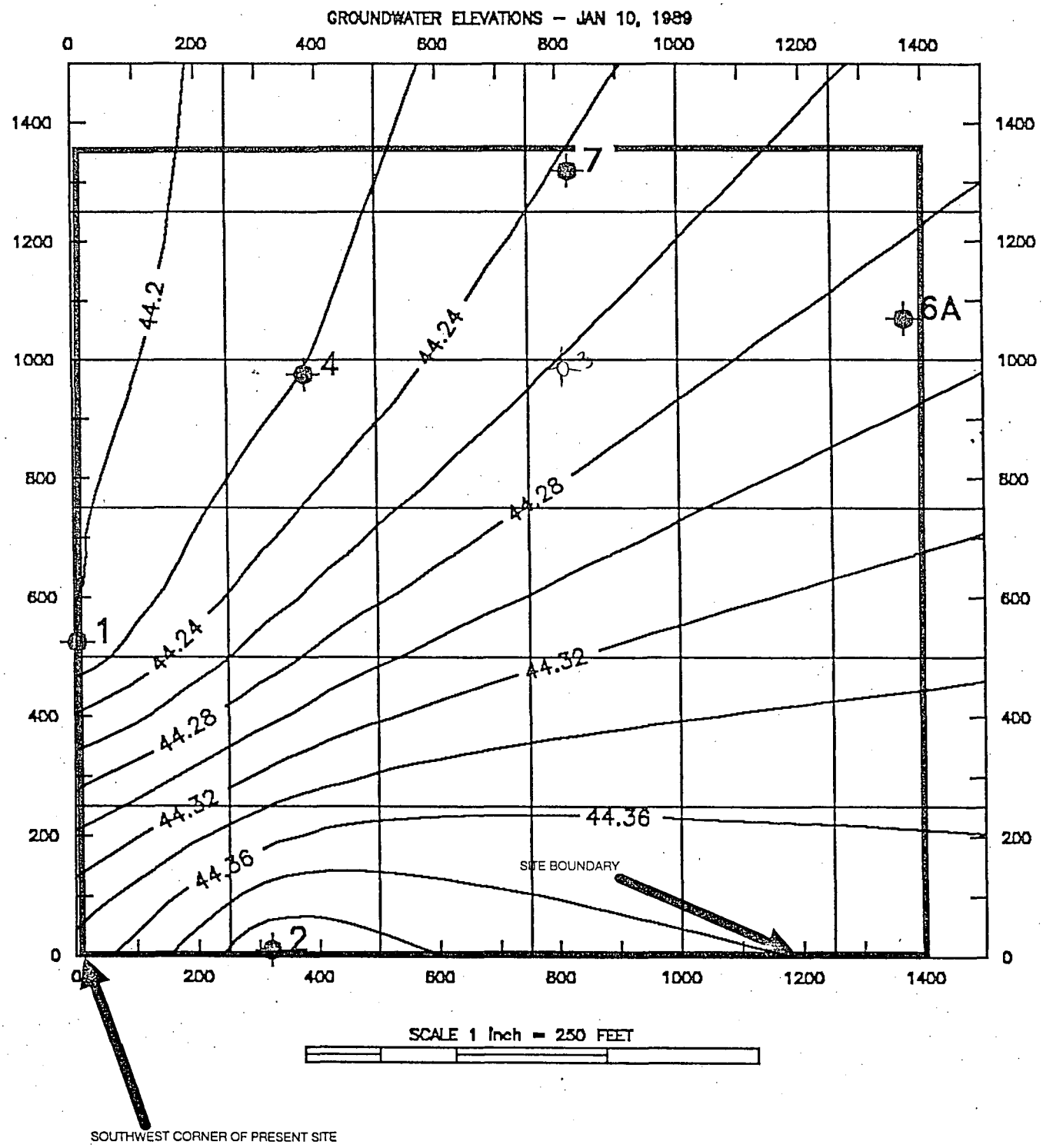
GROUNDWATER ELEVATIONS – JUL 11, 1988



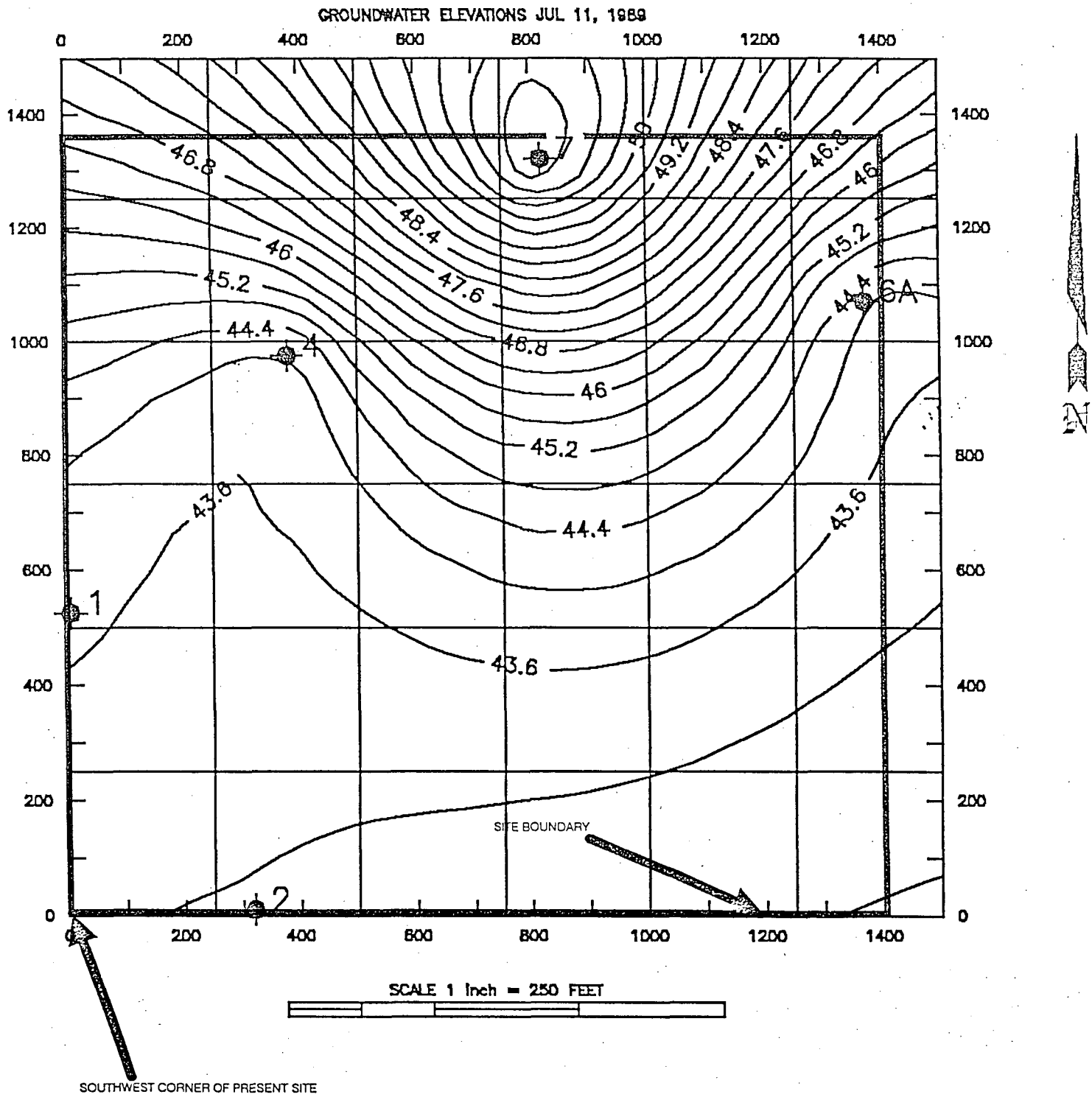
SUMTER COUNTY SOLID WASTE MANAGEMENT FACILITY



SUMTER COUNTY SOLID WASTE MANAGEMENT FACILITY

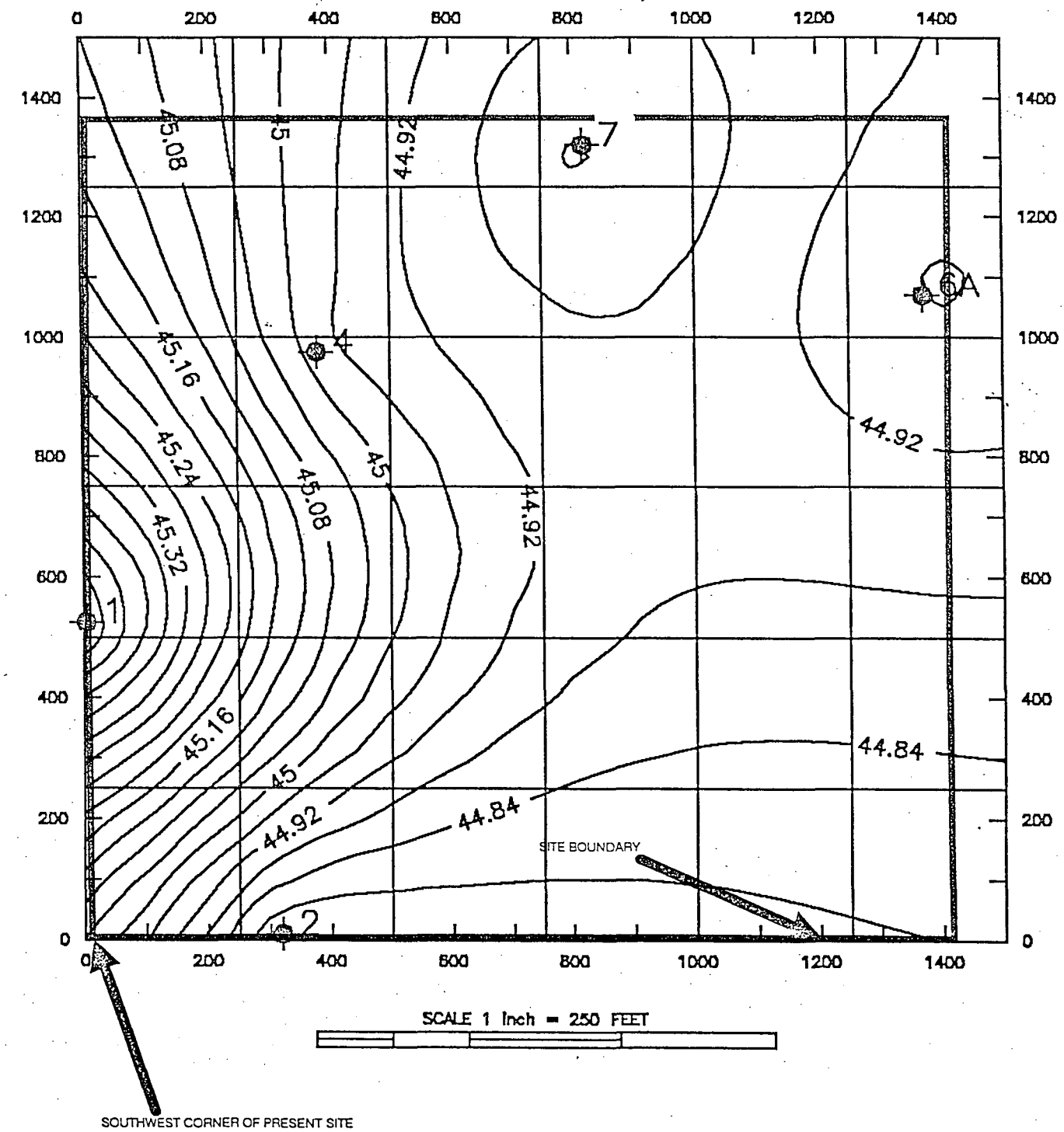


SUMTER COUNTY SOLID WASTE FACILITY

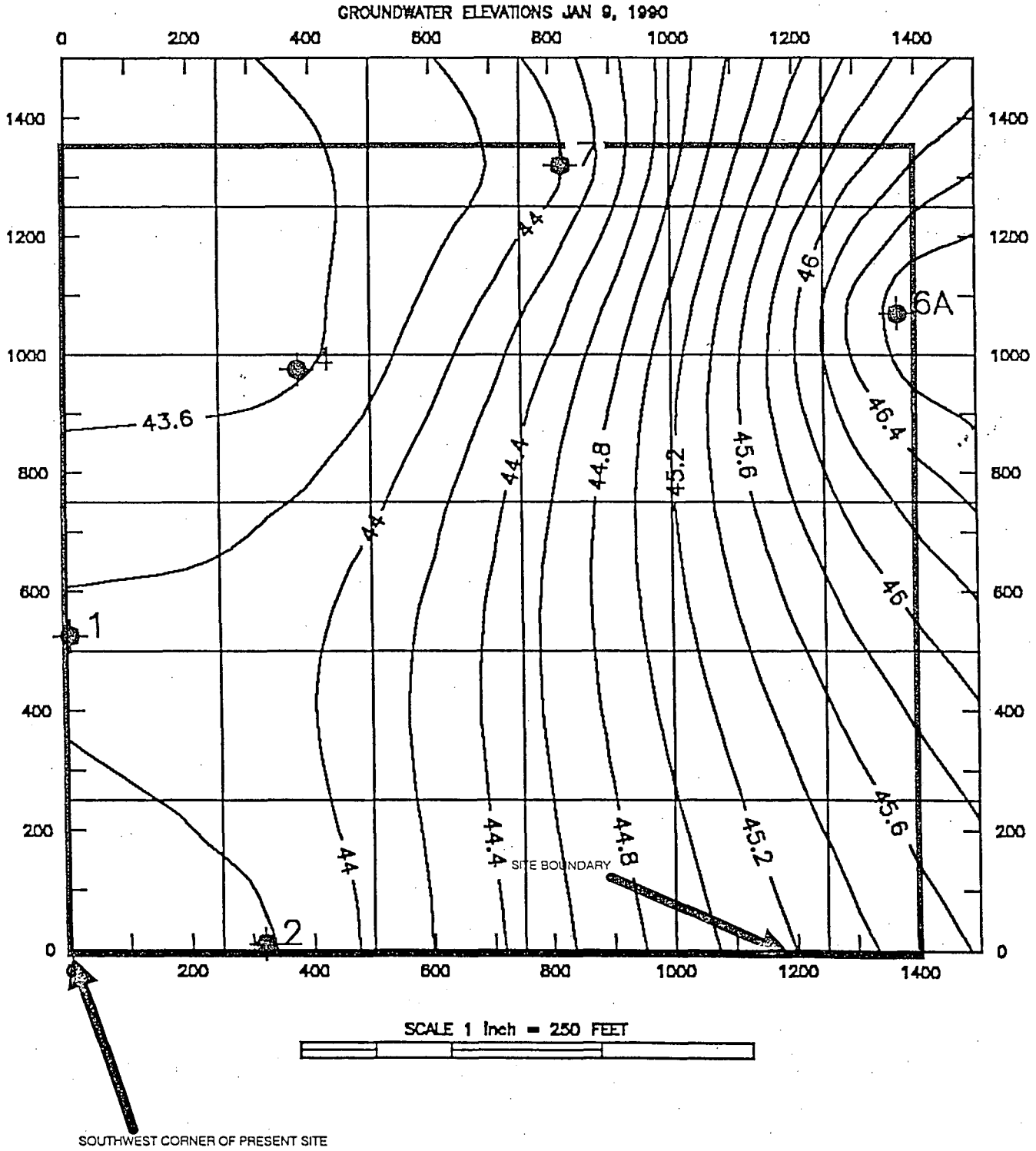


SUMTER COUNTY SOLID WASTE FACILITY

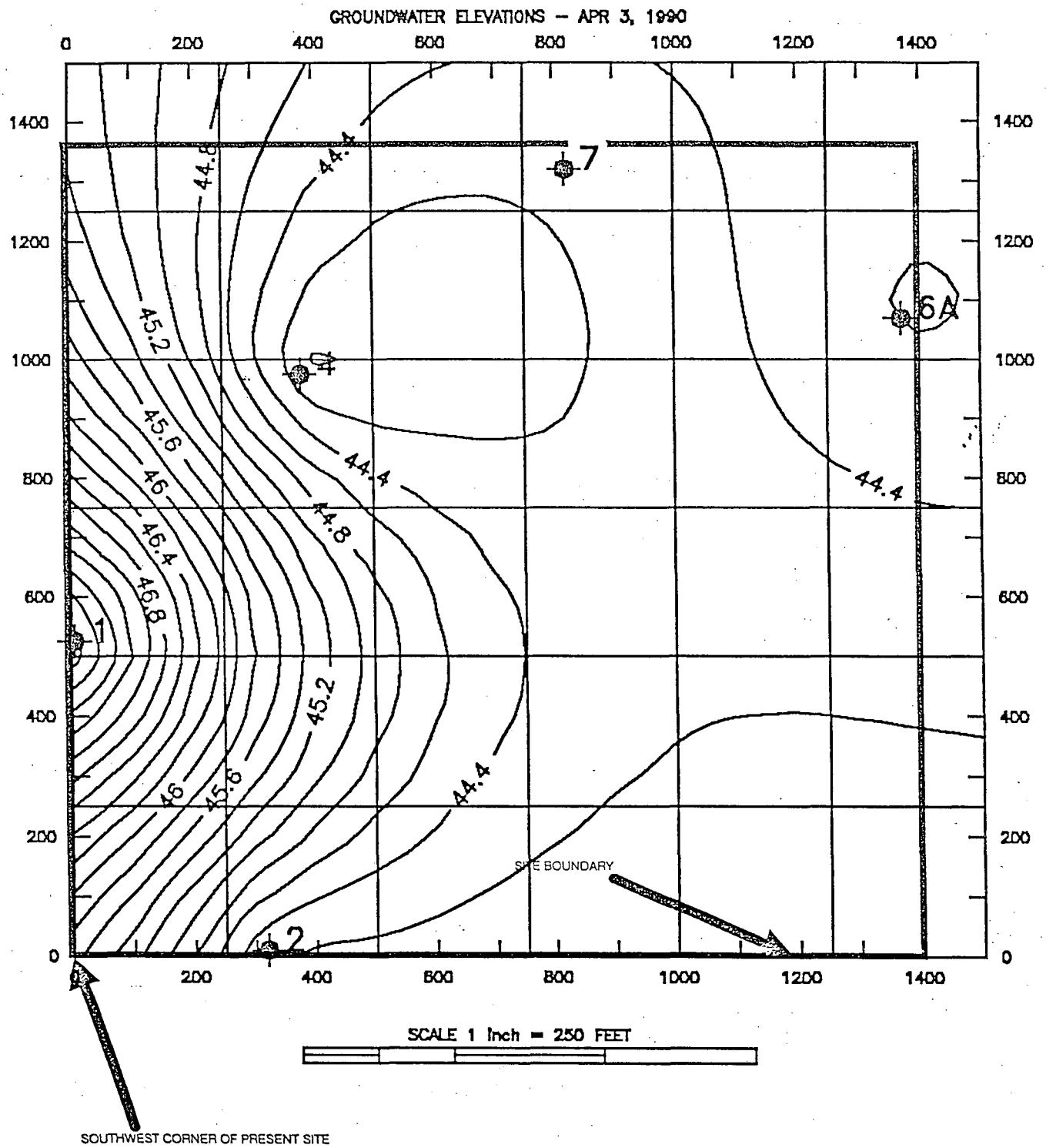
GROUNDWATER ELEVATIONS OCT 10, 1989



SUMTER COUNTY SOLID WASTE FACILITY

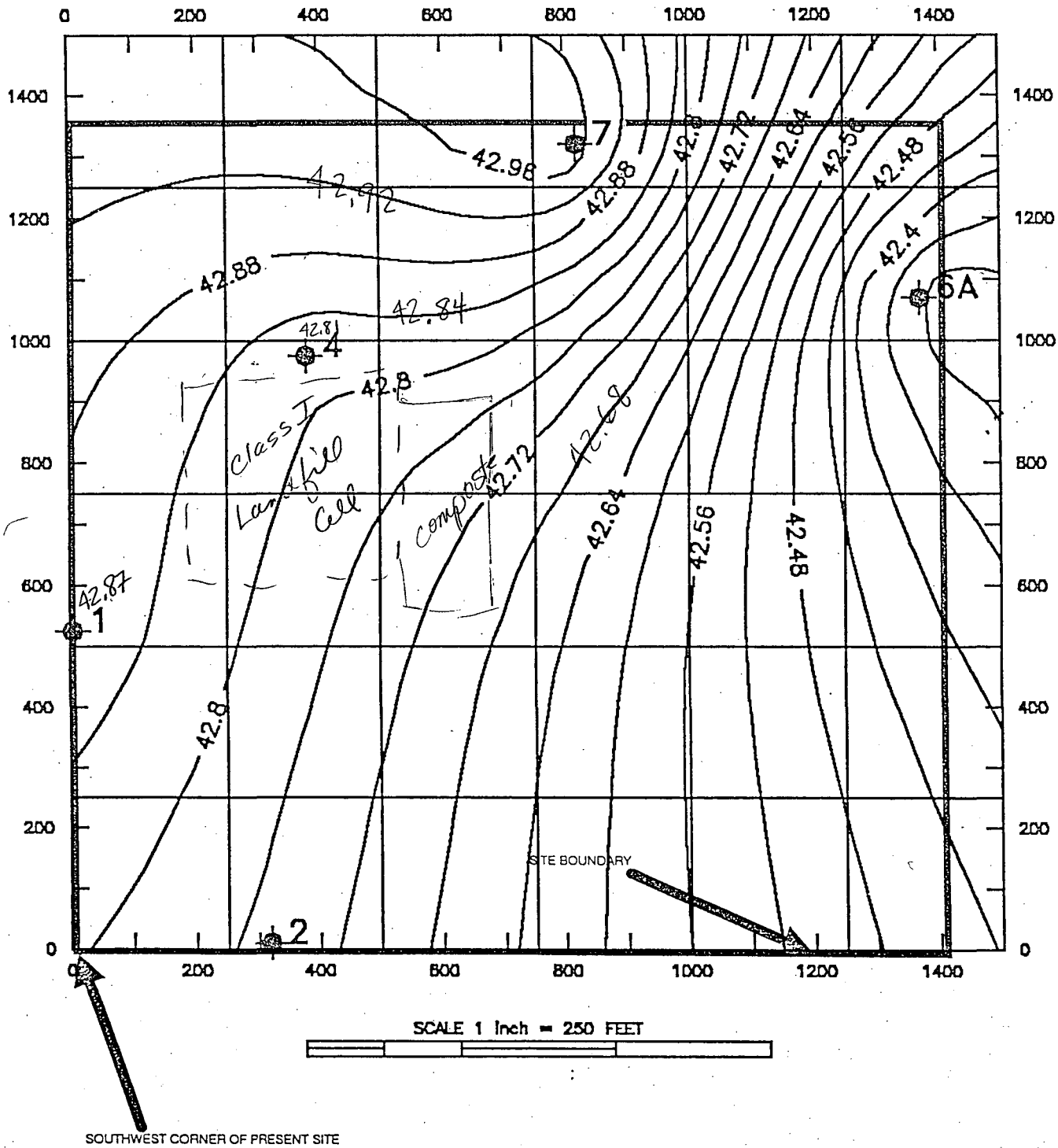


SUMTER COUNTY SOLID WASTE MANAGEMENT FACILITY



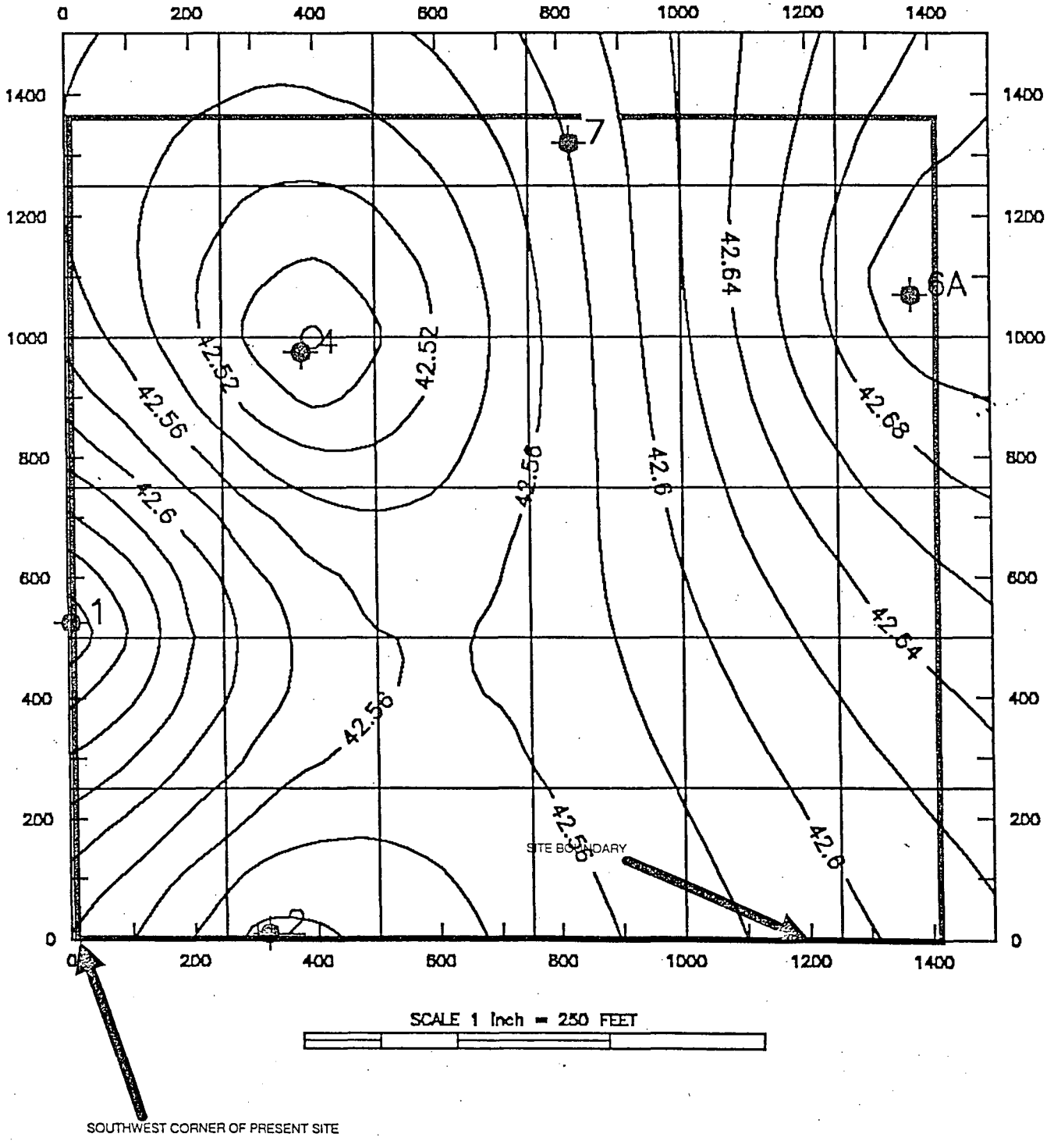
SUMTER COUNTY SOLID WASTE MANAGEMENT FACILITY

GROUNDWATER ELEVATIONS – JUL 10, 1990

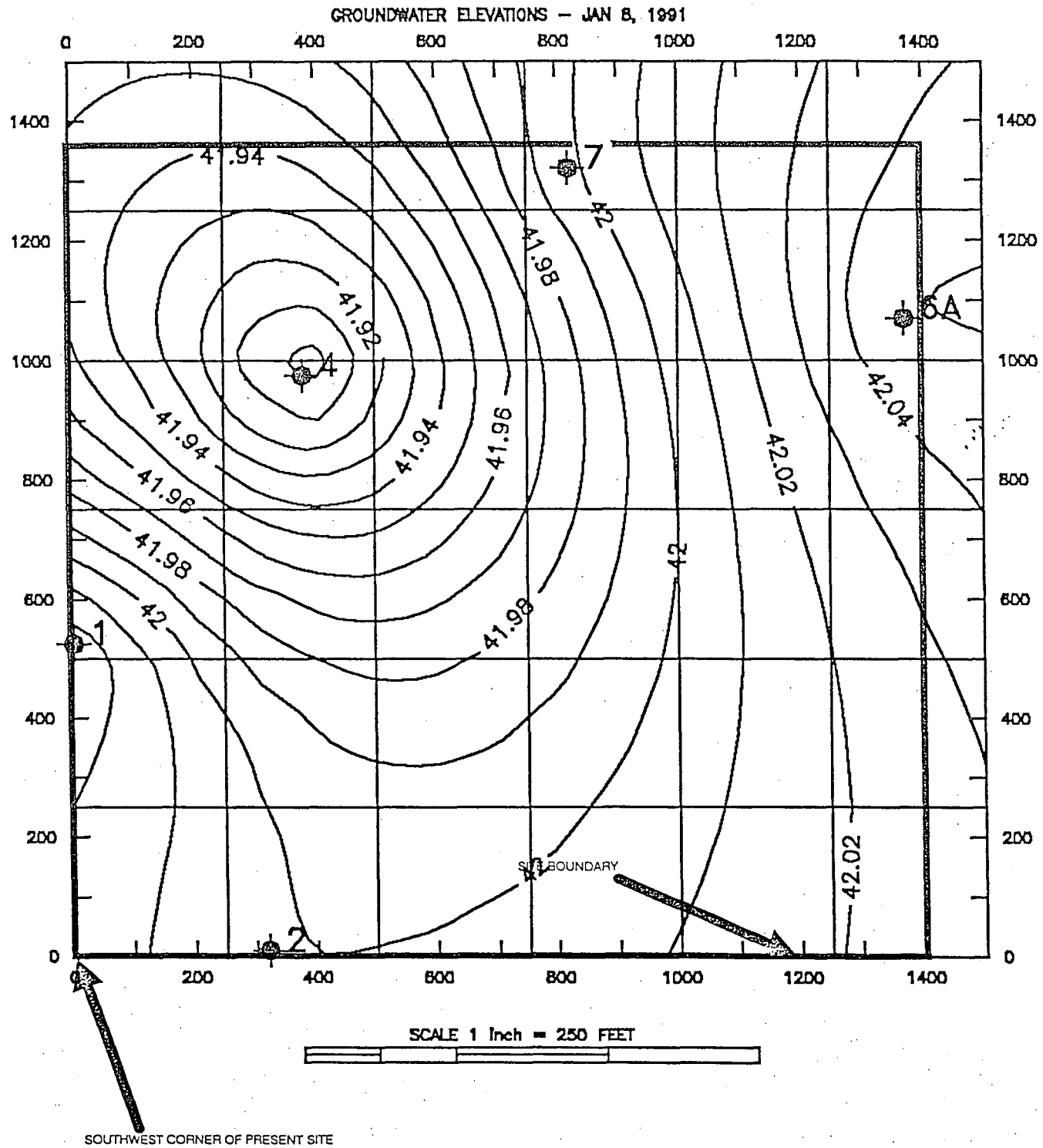


SUMTER COUNTY SOLID WASTE FACILITY

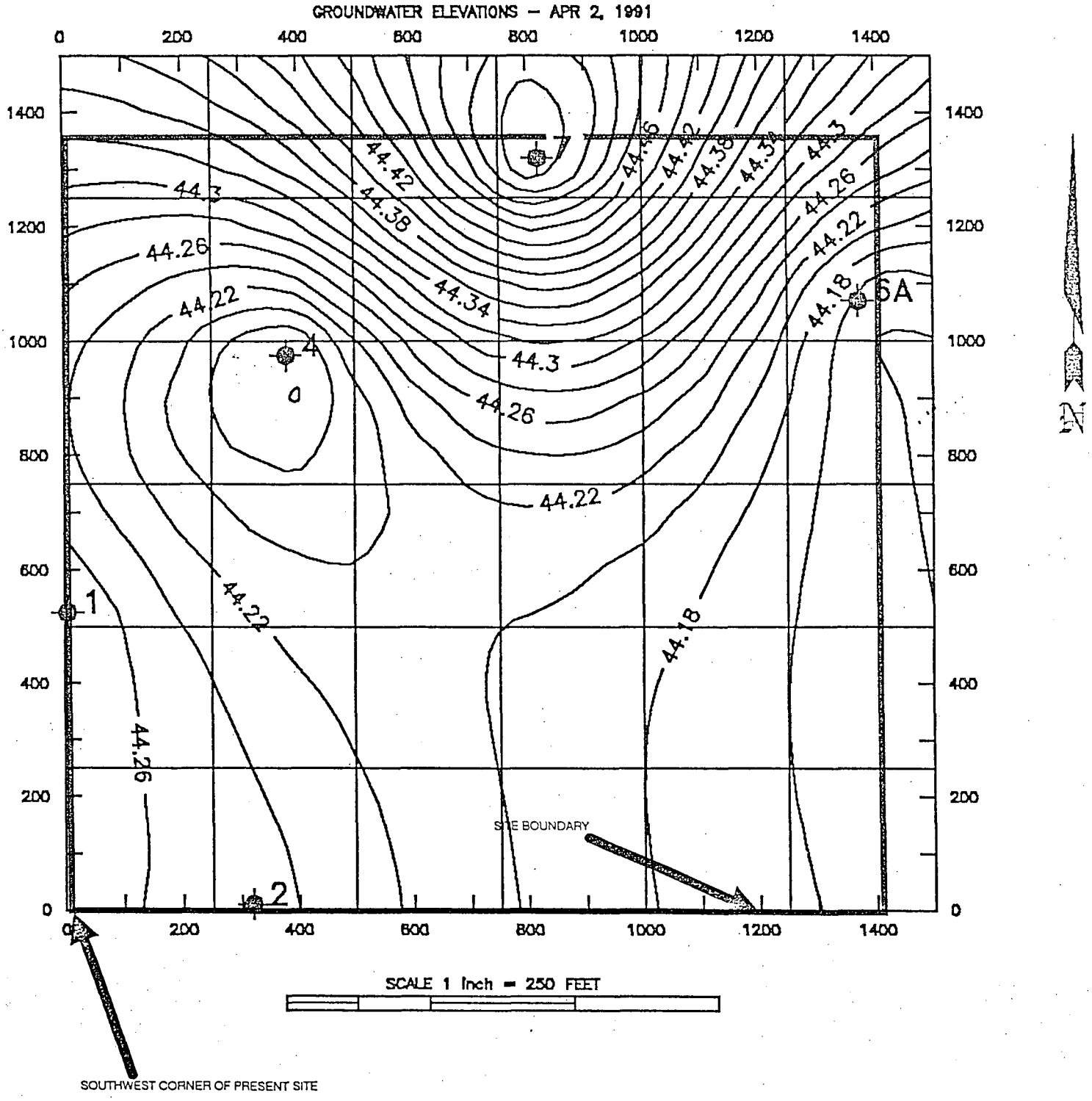
GROUNDWATER ELEVATIONS OCT 16, 1990



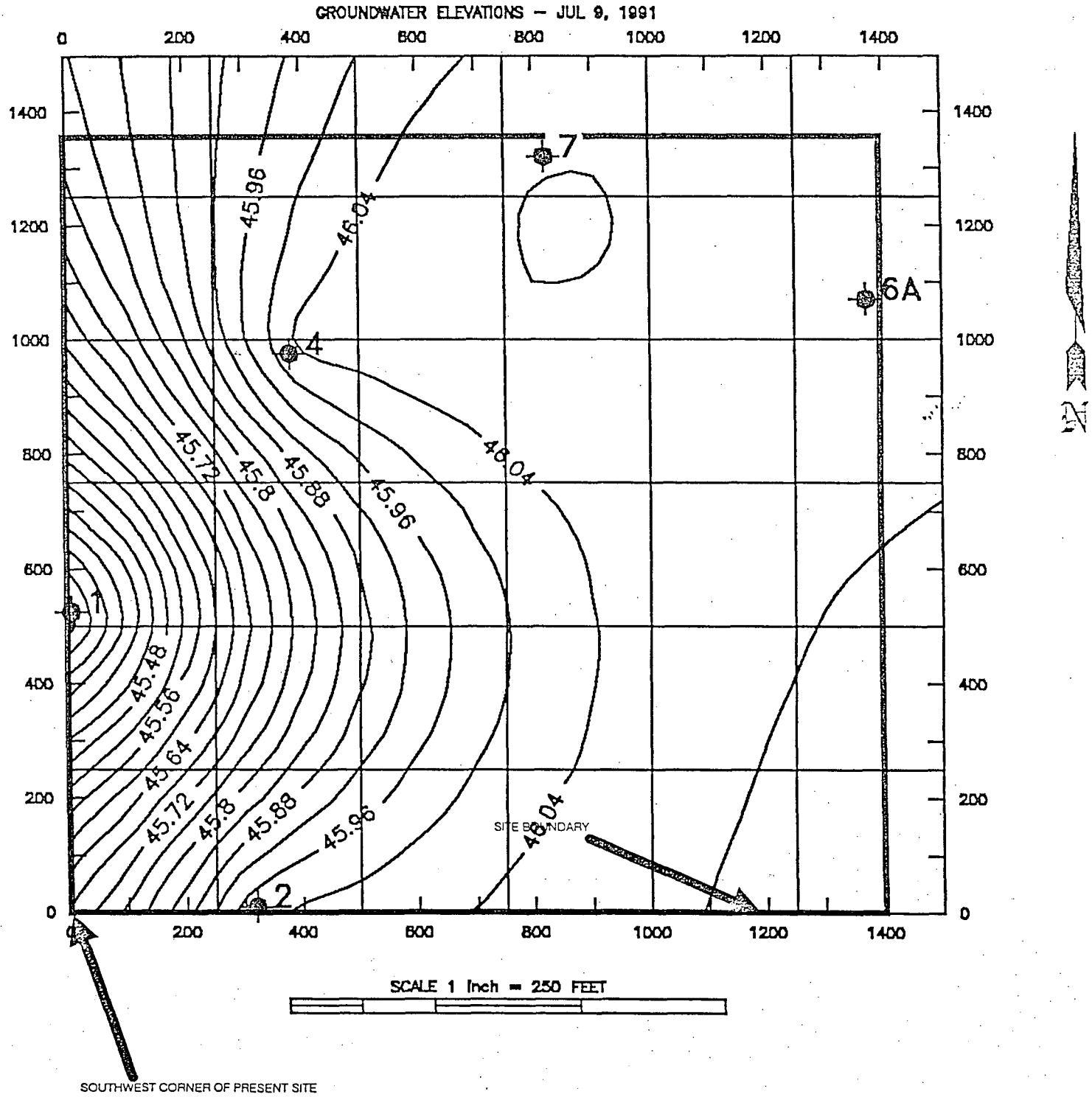
SUMTER COUNTY SOLID WASTE MANAGEMENT FACILITY



SUMTER COUNTY SOLID WASTE MANAGEMENT FACILITY

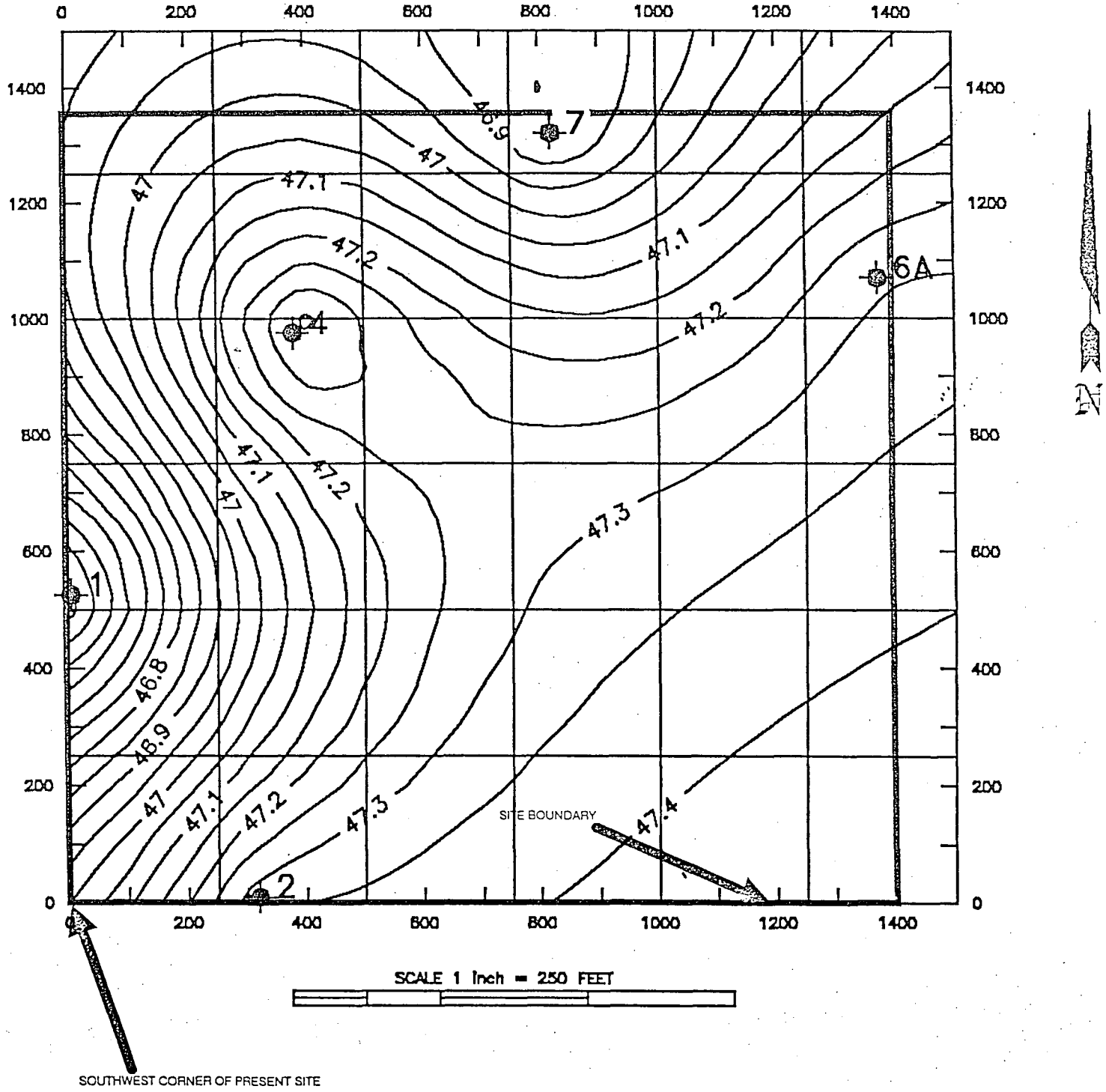


SUMTER COUNTY SOLID WASTE MANAGEMENT FACILITY

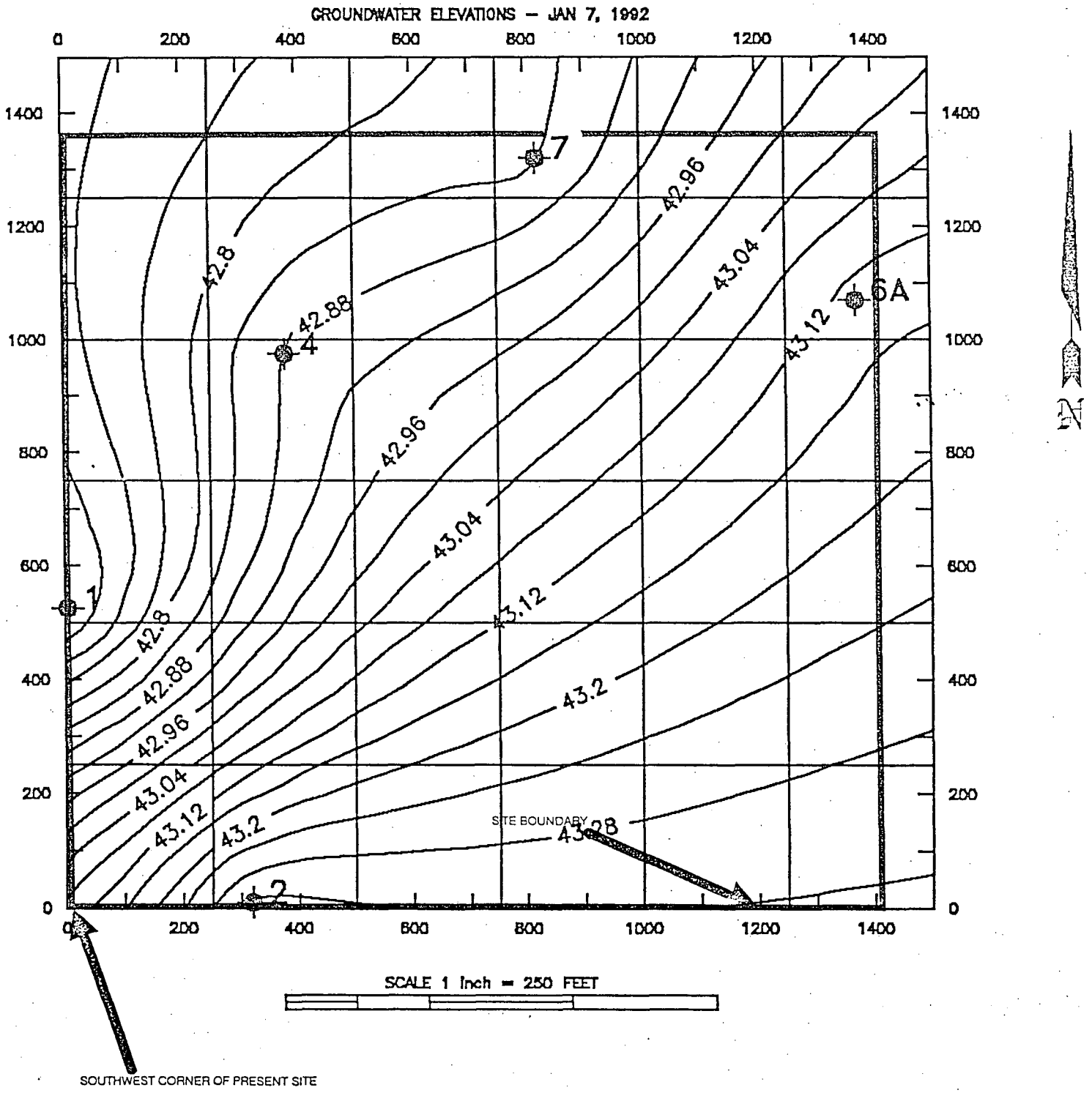


SUMTER COUNTY SOLID WASTE MANAGEMENT FACILITY

GROUNDWATER ELEVATIONS – OCT 1, 1991

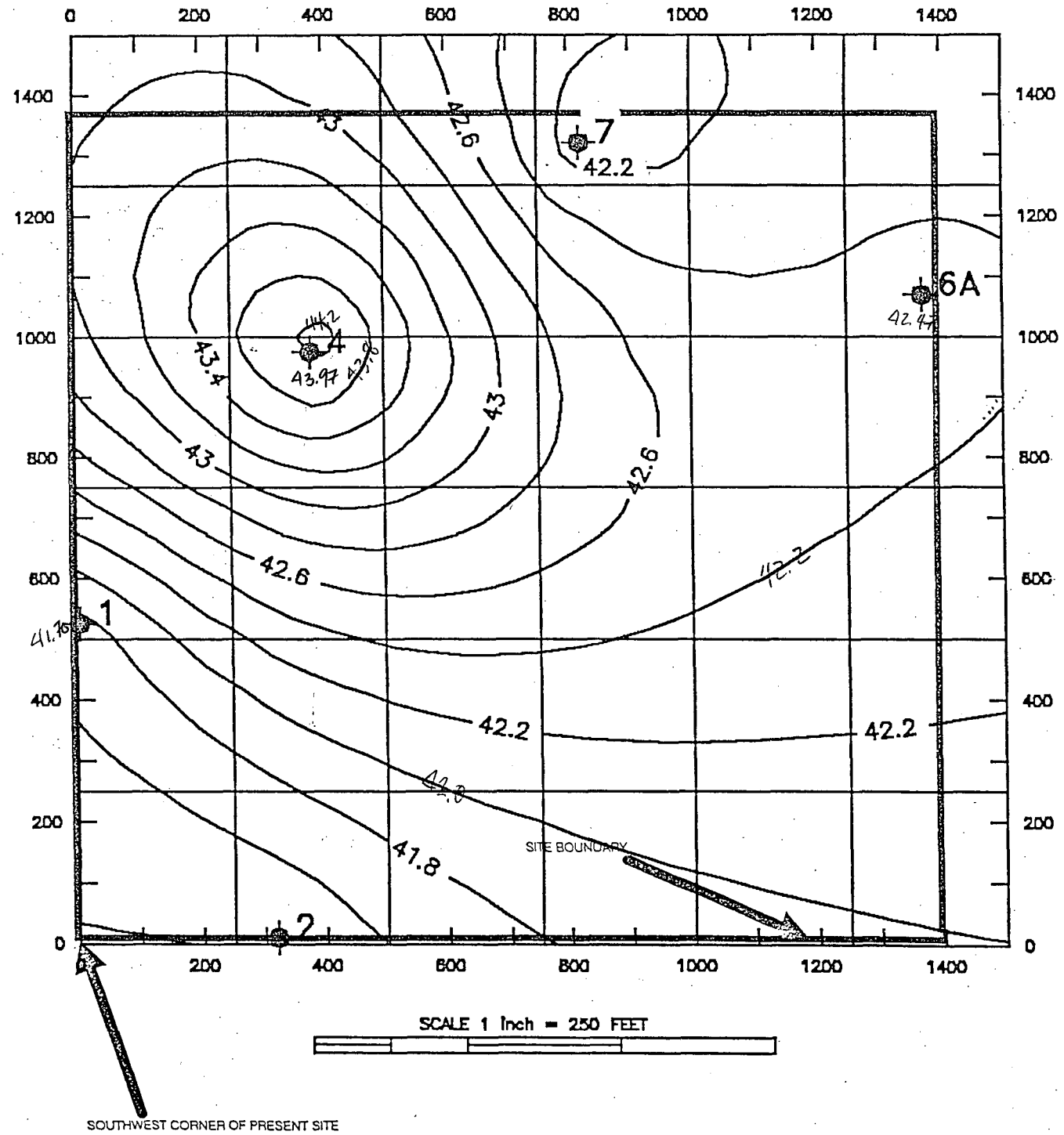


SUMTER COUNTY SOLID WASTE MANAGEMENT FACILITY



SUMTER COUNTY SOLID WASTE MANAGEMENT FACILITY

GROUNDWATER ELEVATIONS – APR 7, 1992



SECOND RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
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PERMIT TO OPERATE RESOURCE RECOVERY FACILITY
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AND
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DEPARTMENT OF PUBLIC WORKS
222 EAST McCOLLUM AVENUE
BUSHNELL, FLORIDA 33513

APPENDIX D

FIRE SAFETY SURVEY

JULY 29, 1992

92-1100.00

P.O. Box 708
33538

Lake Panasoffkee Protection Association

Emergency: 793-2621
Business: 793-4957

July 15, 1992

Gary Breden
Director
Sumter County Public Works Dept.

Gary;

Enclosed, please find the Fire Departments piliminary fire survey report for the landfill. Sorry it took so long to get it to you, but this type of inspection is new to us. Remember this is only a piliminary report that contains some recommendations.

A final report will be issued when we find out more from the EPA and DER.

Respectfully,

Robert Klien

Robert Klien
CHIEF L.P.F.R.D.

sh
cc: file

P.O. Box 708
33538

Lake Panasoffkee Protection Association

Emergency: 793-2621
Business: 793-4957

July 15, 1992

Sumter County Public Works
Landfill Program
West Hwy 470
Sumter County, FL.

RE: Waste Tire Storage Area
ATTN: Tommy Hurst
PILIMINARY REPORT

On May 26, 1992 a Fire Safety Survey was conducted at your Landfill Storage Yard, at which time it was recommended to move the present site to an area which provides a 50 Foot Fire Lane to surround area. This perimeter is to be unobstructed at all times and to include an effective Fire Prevention Maintenance Program, including control of weeds, grass, and other combustible materials.

In the event of a fire in the Waste Tire Yard the use of on site equipment will provide a valuable asset i.e. front end loader, bulldozers, dump trucks, etc. This equipment will aid in the creation of a dirt birm to contain contaminated water run off and to divert from main access road. The use of this equipment to move large amounts of soil to cover burning area should prove invaluable.

In the event of a fire in the storage yard the primary concerns are as follows. 1) Lack of any water supply to supplement Fire Department equipment. It is recommended, consideration be given to a hydrant system to supply a minimum of 1,000 GPM be installed on site. 2) Only one access road provided for emergency equipment. Depending on wind direction and amount of water used to combat the fire this road could become impassable.

Respectfully,
Roger Cheatham
Roger Cheatham
L.P.F.R.D.

sh
cc: file

SECOND RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
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AND
PERMIT TO MAINTAIN CLOSED CLASS I SANITARY LANDFILL
PREPARED FOR

Sumter County

BOARD OF COUNTY COMMISSIONERS
DEPARTMENT OF PUBLIC WORKS
222 EAST McCOLLUM AVENUE
BUSHNELL, FLORIDA 33513

APPENDIX E

FACSIMILE REPORT PREPARED BY LARRY OETH, P.E., AMERICYCLE

JULY 29, 1992

92-1100.00

THE AMERICAN RECYCLING COMPANY, INC.
10002 PRINCESS PALM AVENUE
SUITE 230
TAMPA, FLORIDA 33619
(813)564-0313
FAX: (813)626-9115

FAX COVER SHEET

DATE: 7/29/92
NUMBER OF PAGES: 2
(including cover sh

TO: Mr. John Springstead

FAX: 904-787-7221

FROM: Mr. Larry Oeth

Please call if document
is not received properly.

COMMENTS:

Reference Notes to Model

WINDROW UTILIZATION MODEL NOTES

The model contains all windrows, at their exact lengths, for the three pad Sumter facility. Pad A is located just east of the MRF/VRS, Pad B is nearest the office and Pad C is the currently permitted composting pad. As fluff exits the MRF/VRS, it is placed in the next available windrow on either Pad A or B, with Pad C held for "overflow". The model then counts how many times Pad C windrows must be utilized in the analysis period.

Output Labels:

RowID - Label identifying each windrow at Sumter. See computation sheets for layout.
Ltot - Total length of each windrow when filled to the maximum.
LfldTot - Current length of windrow filled for that process day.
Age - Weighted average age of the windrow. Note that a given windrow may take more than one day to fill, and combined windrows are of differing ages.
Status - E=Empty, F=Full, R=Ready for combining, C=Combined, H=Ready for Harvest (This never shows up).
Process Date - Number of Process Days since beginning of model run. There are 6 Process Days/Week and 312 Process Days/Year.

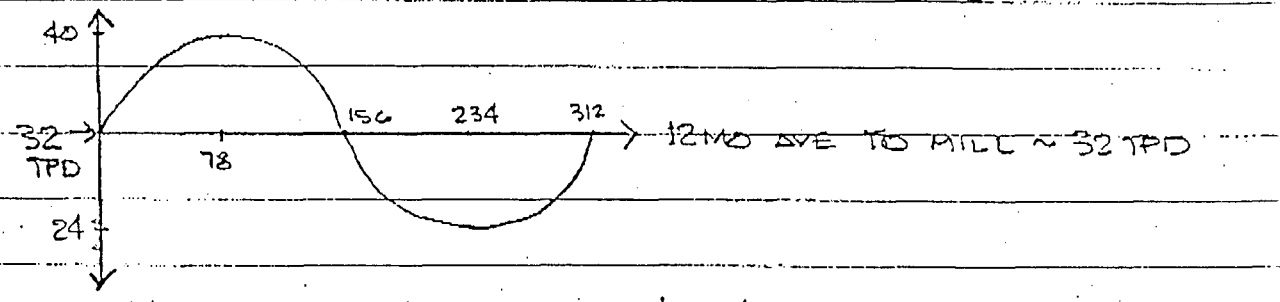
Fluff density, windrow volume and fluff fraction are per measurements made during operation of the facility.

LBO 7/27/92
1 OF 10

CELL EMPTYING

ASSUMPTIONS -

1) VOLUME IN CELL, SEE PAGES 2 & 3
2) NEW SCARAB, WINDROW VOL/LENGTH PER PAGE 4
3) PAD/WINDROW LAYOUTS, PAGES -
4) MAINTAIN CURRENT FLOW RATE @ 32 TPD
5) INCLUDE SEASONAL PEAKING @ .75 - 1.25

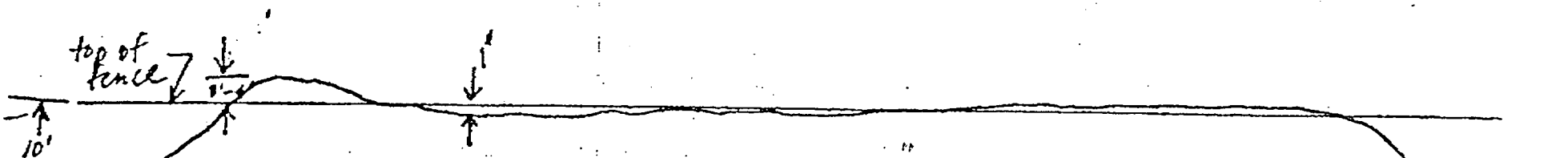


MODEL PEAKING EFFECT W/ SINUSOID

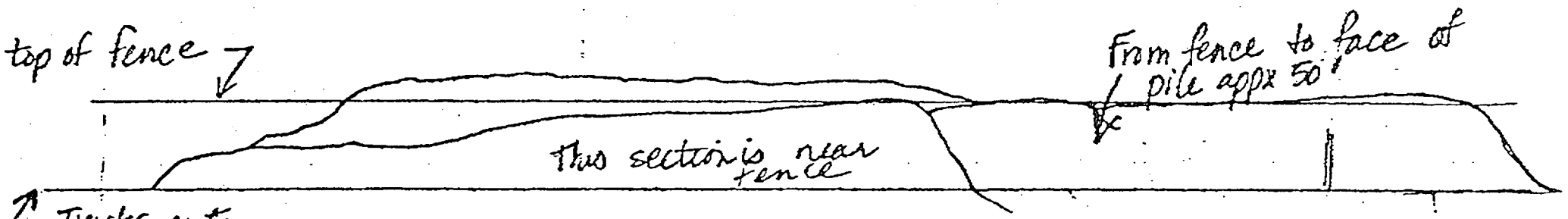
6) PAD TIME : 4 WKS TO COMBINE +
4 ADDN'L WEEKS TO HARVEST
7) SCREENING ON PAD C, BATCH MODE. SETUP EVERY 3RD MONTH FOR 20 PROCESS DAYS OF SCREENING. THUS, PAD C IS AVAILABLE TO WINDROW 9 WKS OUT OF 13 WKS PER QUARTER. ASSUME HARVEST/STOCKPILE RESULTS IN ONLY 8 ROWS FITTING ON PAD C.
8) FILL PAD A 1ST, THEN PAD B.

CAPACITY (& CELL EMPTYING RATE) WILL BE GOVERNED BY AVAILABILITY OF WINDROW SPACE ON PAD B.

RUN MODEL 3 PROCESS YEARS (= FLOW CYCLES) WHICH IS 936 PROCESS DAYS.



View from new compost pad looking south



View from Scale house area looking East

Post-it® brand fax transmittal memo 7671	# of pages ▸ 1
To Larry Gold	From Tom Tuchie
Co. Minnequa	Co.
Dept.	Phone #
Fax # 544 4944	Fax # 544 4944

7/31

LBG P.4/27 7/27/92

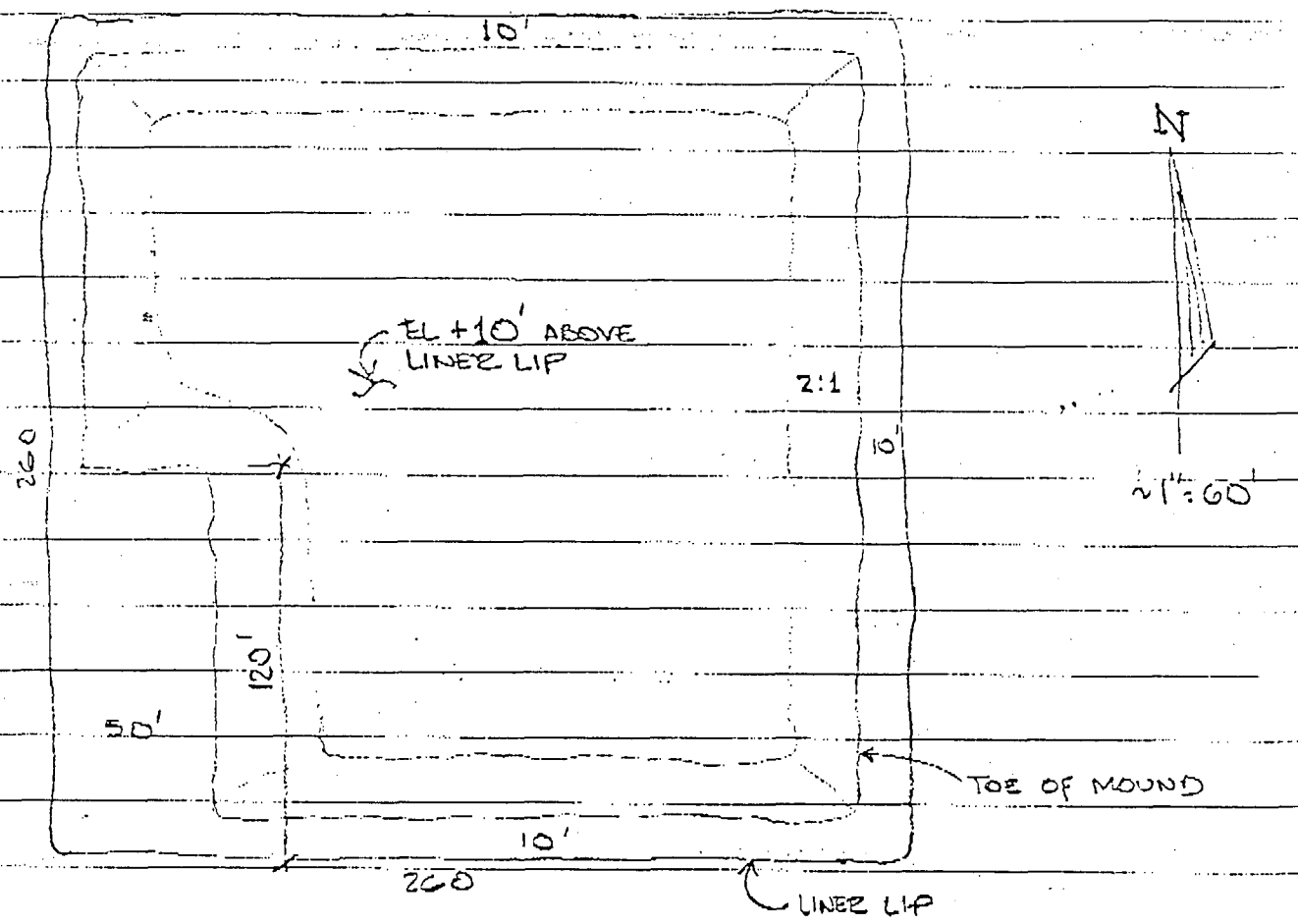
LBO 7/27/92
3 OF 10

VOLUME CURRENTLY STORED –

CELL VOLUME TO LIP = 27,000 CY ← SPRINGS... ENGINEERS PHONE 7/27 JOY.

MOUND VOLUME (APPROX.) = 16,346 CY

43,346 CY



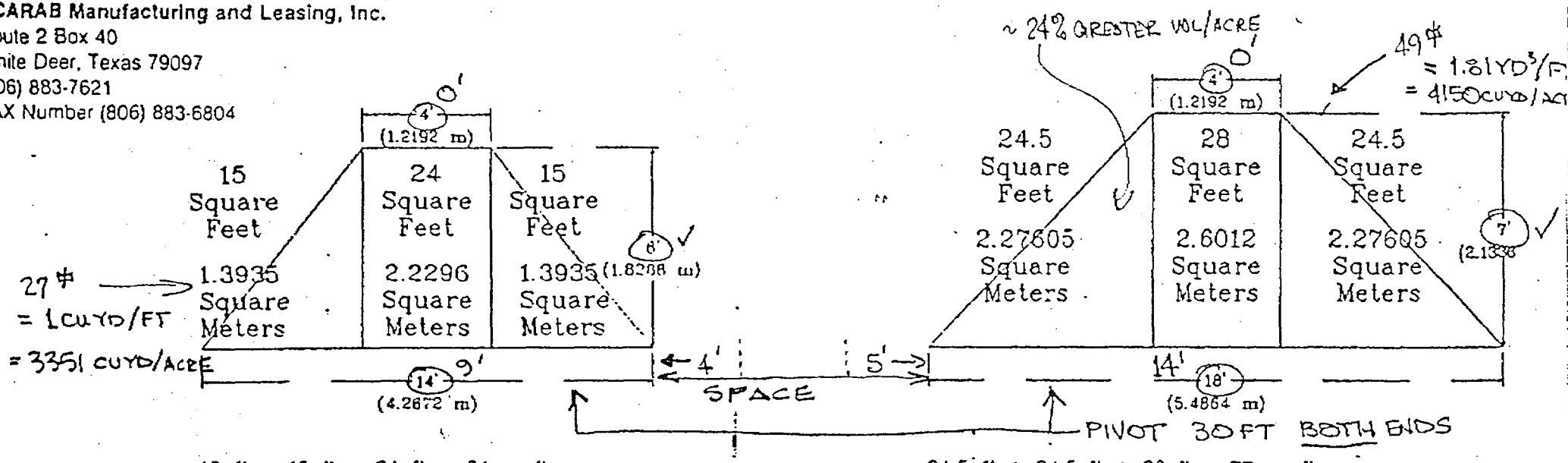
BASE AREA = 53,200 ft²
MID AREA = 44,000 ft²
TOP AREA = 35,600 ft²

$$VOL = \frac{h}{6}(A_t + 4A_m + A_b) = 16,346 \text{ CY}$$

PER FIG G.

SCARAB

SCARAB Manufacturing and Leasing, Inc.
Route 2 Box 40
White Deer, Texas 79097
(806) 883-7621
FAX Number (806) 883-6804



15 ft + 15 ft + 24 ft = 54 sq ft
1 ft of windrow x 54 sq ft = 54 cu ft
54 cu ft / 27 = 2 yards per foot of length

1 ft of windrow covers 14 ft + 6 ft between windrows = 20 sq ft

54 cu ft per 20 sq ft = 2.7 cu ft per sq ft

43,560 sq ft x 2.7 cu ft per sq ft = 117,612 cu ft of material per acre

24.5 ft + 24.5 ft + 28 ft = 77 sq ft
1 ft of windrow x 77 sq ft = 77 cu ft
77 cu ft / 27 = 2.852 yards per foot of length

1 ft of windrow covers 18 ft + 6 ft between windrows = 24 sq ft

77 cu ft per 24 sq ft = 3.21 cu ft per sq ft

43,560 sq ft x 3.21 cu ft per sq ft = 139,827.6 cu ft of material per acre

1.3935 m + 1.3935 m + 2.2296 m = 5.0166 sq m
1 m of windrow x 5.0166 sq m = 5.0166 cu m
5.0166 cu m / 27 = .1858 cu m per meter of length

1 m of windrow covers 4.2672 m + 1.8288 m between windrows = 6.096 sq m

5.0166 cu m per 6.096 sq m = .8229 cu m per sq m

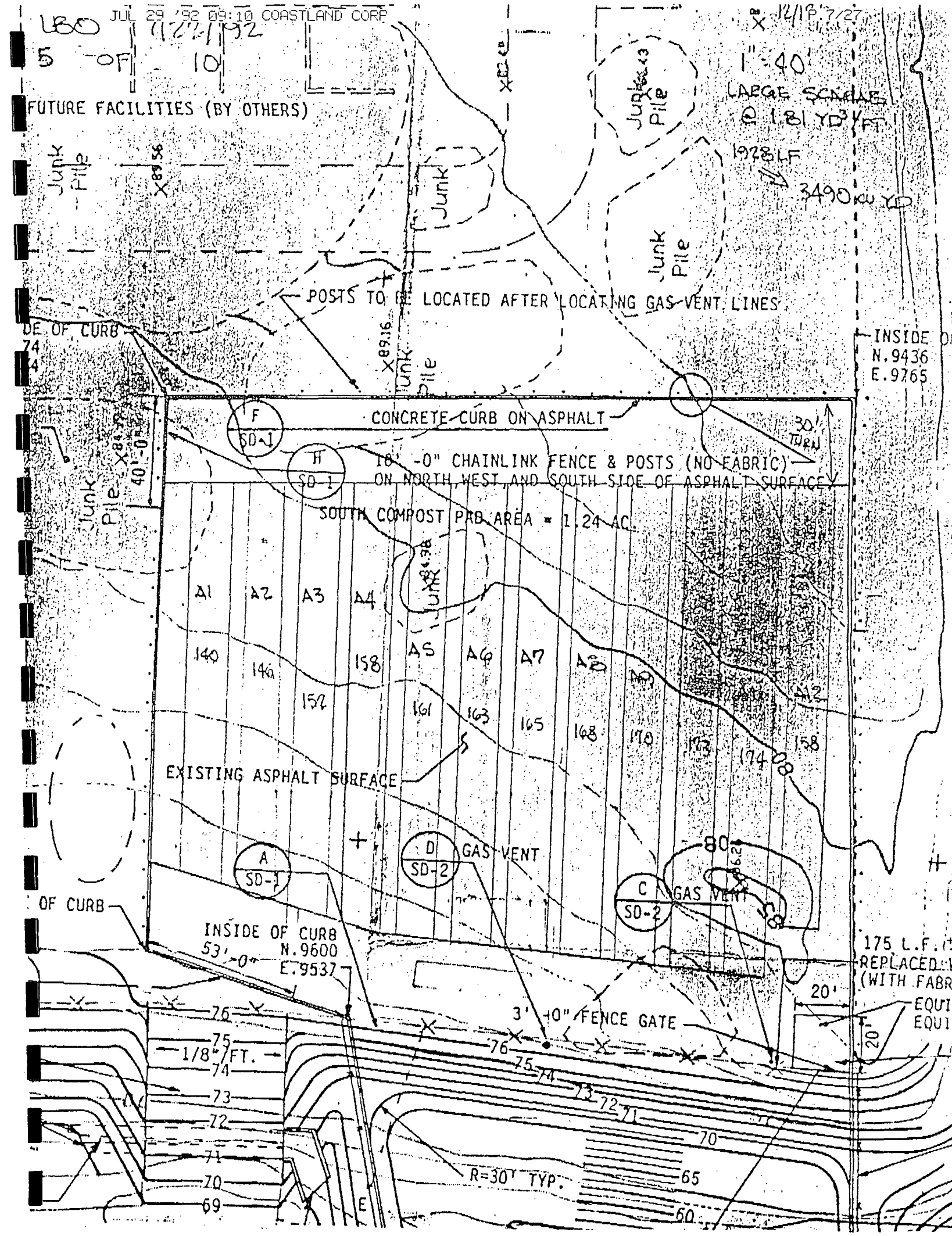
10,000 sq m x .8229 cu m per sq m = 8229.33 cu m of material per hectare

2.27605 m + 2.27605 m + 2.6012 m = 7.1542 sq m
1 m of windrow x 7.1542 sq m = 7.1542 cu m
7.1542 cu m / 27 = .2650 cu m per meter of length

1 m of windrow covers 5.4864 m + 1.8288 m between windrows = 7.3152 sq m

7.1542 cu m per 7.3152 sq m = .9780 cu m per sq m

10,000 sq m x .9780 cu m per sq m = 9780.01 cu m of material per hectare


12/18 7/27
1" = 40'
LARGE SCALE
@ 1.81 YD³/FT
1978 LF
3490 CU YD
FUTURE FACILITIES (BY OTHERS)
Junk Pile
POSTS TO BE LOCATED AFTER LOCATING GAS VENT LINES
DE OF CURB
INSIDE OF
N.9436
E.9765
CONCRETE CURB ON ASPHALT
F
SD-1
H
SD-1
10'-0" CHAINLINK FENCE & POSTS (NO FABRIC)
ON NORTH, WEST AND SOUTH SIDE OF ASPHALT SURFACE
30' TURN
40'-0"
SOUTH COMPOST PAD AREA = 1.24 AC.
A1
A2
A3
A4
A5
A6
A7
A8
A9
A12
140
146
152
158
161
163
165
168
170
174
158
EXISTING ASPHALT SURFACE
A
SD-1
D
SD-2
GAS VENT
C
SD-2
GAS VENT
80
OF CURB
INSIDE OF CURB
53'-0"
N.9600
E.9537
175 L.F.
REPLACED
(WITH FABR
20'
EQUI
EQUI
3'-0" FENCE GATE
1/8" = 1 FT.
76
75
74
73
72
71
70
69
65
60
R=30' TYP.
E

7/7/91

1" = 40'

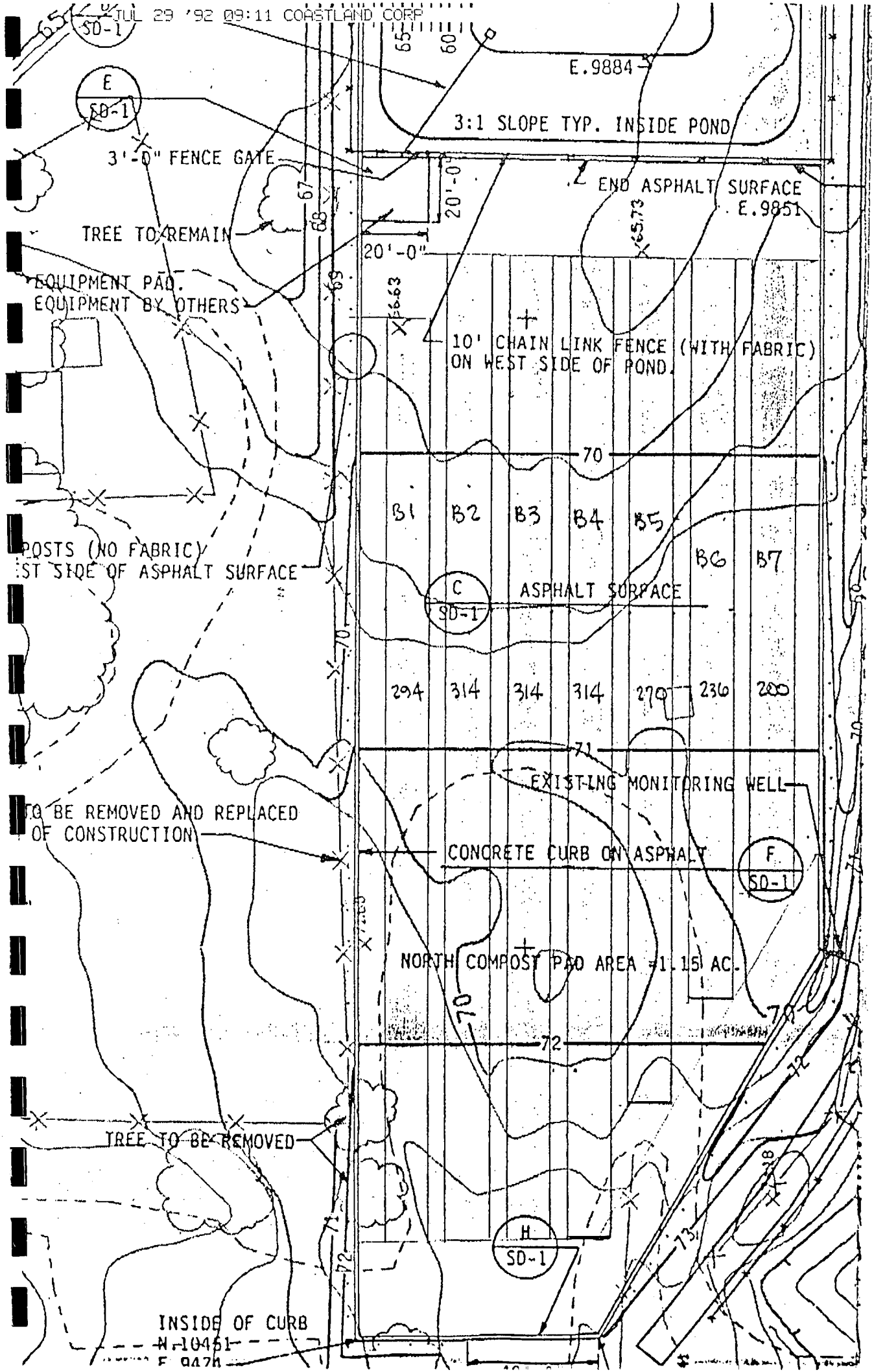
LARGE SCALE

@ 1.81 YD³/F

1942 LF

⇓

3515 CUYD



LBO
7/27/92

REVISED 7/21/92

CURING PILE → 4 WKS PRODUCTION

$= 213.6 * 4 * 6 / 2$

$= 2563 \text{ YD}^3$

1:2 SIDE SLOPES, PYRAMID $= 1/3 (A_{base})(\text{height})$

LONG PILE 132' E-W × 50' N-S

↳ $h = 12.5'$

$V = 12.5(50)(1/2)(132 - 2(12.5 * 2)) / 27$

$= 949$ CU YD TOO SMALL

WIDTH/HEIGHT REQ'D ≅ $w = 135'$ $h \cong 33'$

PYRAMID $V_{135} = 7425$ CU YD

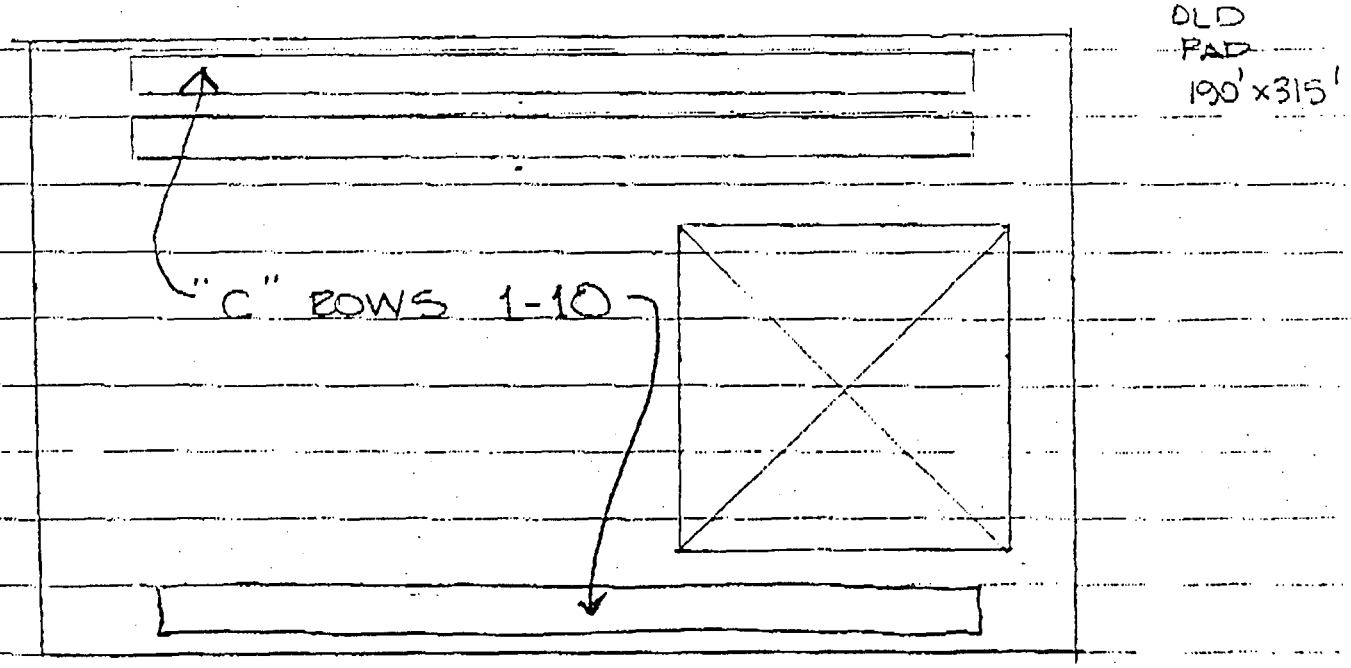
$w = 75'$ $h \cong 18.75'$

$V_{75} = 1302$ CU YD

$w = 90'$ $h \cong 22.5'$

$V_{90} = 2250$ CU YD

SAY PILE ~ 100' SQ BASE × 75' HIGH



PAD B AVAILABILITY — DAYS 1 - 936

- ASSUME EACH TIME FILLED REMOVES 8 WKS = 48 PROCESS DAYS
- IF 48 DAYS ARE OPEN BETWEEN RQ'D FILLINGS/HARVESTING (96 DAYS TOTAL), ROW IS AVAILABLE.

ROW	SEGMENTS AVAILABLE	LENGTH	AVAILABLE PROCESS DAYS
B1	(2) 165-263; (1) 311-357 (CLOSE ENOUGH); (1) 405-463; (1) 511-588; (1) 793-846	294	288
B2	(1) 221-303; (1) 351-405; (1) 453-519; (1) 567-651; (3) 764-913	314	336
B3	(1) 1-67; (3) 192-332; (3) 484-627; (2) 820-936	314	432
B4	(2) 1-98; (5) 146-386; (5) 434-688; (3) 786-936	314	720
B5	(5) 1-414; (9) 462-936	270	816
B6		236	936
B7		200	936
		(A)	(B)

TOTAL CUBIC YARD - DAYS = 1.81 * SUMPRODUCT (A) * (B)

= 2,136,379 CY-DAYS / 3 YRS

PAD C CY-DAYS = 8*255*1.81*(36-12)*20

= 2,304,058 CY-DAYS/3 YRS

AVERAGE FACILITY AVAILABLE/MONTH = $\frac{4,440,437}{36}$

= 123,345 CY-DAYS/MO

LBO 7/27/92

CELL EMPTYING TIME – • AVE PAD RETENTION TIME OF 6 WKS INCLUDING ROW COMBIN. EFFECTS [4 + 1/2 * 4 = 6 WKS]

• FLUFF FACTOR = 1.2, REPRESENTS "MEMORY" OR DE-COMPRESSION AVERAGE FROM TOP (1.0) TO BOTTOM (1.4) OF CELL + PILE.

• TAKE NO CREDIT FOR DECOMPOSITION WHICH HAS ALREADY OCCURED.

$$\text{MONTHS TO EMPTY} = \frac{1.2 * 43{,}346 * (6*6)}{123{,}345}$$

$$= 15.18$$

SAY ± 16 MONTHS TO EMPTY
DEFINITELY < 2 YEARS

EMPTYING TIME W/ EXSTG SCARAB -

PADS A & B FULL USED

PAD C - COMPUTER RUN @ 1 CY/LF WINDROW

3 YRS

AVAILABLE ROW DAYS -

ROW		DAYS	LF
C1	(2) 202 - 323 ; (3) 484 - 648 ; (3) 756 - 936	384	255
C2	(3) 177 - 350 ; (4) 459 - 658 ; (3) 780 - 936	480	↓
C3	(5) 110 - 354 ; (3) 497 - 673 ; (3) 757 - 936	528	↓
C4	(1) 1 - 75 ; (4) 152 - 388 ; (5) 436 - 697 ; (2) 806 - 936	576	↓
C5	(2) 1 - 107 ; (5) 155 - 399 ; (3) 771 - 936	480	↓
C6	ALL	936	↓
C7	↓	936	↓
C8	↓	936	↓
C9, C10 = 0, RESERVED FOR SCREENING STOCKPILE		(A)	(B)

$$\text{CY-DAYS/MO} = \frac{1.0 * \text{SUMPRODUCT (A)*(B)}}{36} = 37{,}230 \text{ CY-DAY/MO}$$

$$\text{MONTHS TO EMPTY} = \frac{1.2 * 43{,}346 * (6*6)}{37{,}230}$$

$$\boxed{\cong 50 \text{ MONTHS}}$$

SUMTER COUNTY WINDROW UTILIZATION MODEL
USING NEW SCARAB, 3 EXISTING PADS & CURRENT FLOW RATE

by Laurence B. Oeth PE

copyright December 1991

Tons per day into facility	=	32.00	TPD
Seasonal peaking factors	=	125.0%	High
		75.0%	Low
Fraction of facility input which becomes fluff	=	0.91	
Density of fluff placed into windrows, Lb/CuYd	=	600.00	
Fluff volume to be windrowed per day, CuYd	=	97.60	
Cubic Yard Volume per LF of windrow	=	1.81	
Daily windrow length filled by fresh fluff, LF	=	53.92	
Total length of windrows available, LF all pads	=	6420	

Process Date = 6 Increment = Weekly [6 Process Days/Week]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	140	4.18	F	**	A2	146	146	1.66	F
A3	152	47	0.00	P	**	A4	158	0	0.00	E
A5	161	0	0.00	E	**	A6	163	0	0.00	E
A7	165	0	0.00	E	**	A8	168	0	0.00	E
A9	170	0	0.00	E	**	A10	173	0	0.00	E
A11	174	0	0.00	E	**	A12	158	0	0.00	E
B1	294	0	0.00	E	**	B2	314	0	0.00	E
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 12 Increment = Weekly [6 Process Days/Week]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	140	10.18	F	**	A2	146	146	7.66	F
A3	152	152	4.99	F	**	A4	158	158	2.23	F
A5	161	79	0.50	P	**	A6	163	0	0.00	E
A7	165	0	0.00	E	**	A8	168	0	0.00	E
A9	170	0	0.00	E	**	A10	173	0	0.00	E
A11	174	0	0.00	E	**	A12	158	0	0.00	E
B1	294	0	0.00	E	**	B2	314	0	0.00	E
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 18 Increment = Weekly [6 Process Days/Week]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	140	16.18	F	**	A2	146	146	13.66	F
A3	152	152	10.99	F	**	A4	158	158	8.23	F
A5	161	161	5.47	F	**	A6	163	163	2.70	[illegible]
A7	165	106	0.50	P	**	A8	168	0	0.00	E
A9	170	0	0.00	E	**	A10	173	0	0.00	E
A11	174	0	0.00	E	**	A12	158	0	0.00	E
B1	294	0	0.00	E	**	B2	314	0	0.00	E
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 24 Increment = Weekly [6 Process Days/Week]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	140	22.18	R	**	A2	146	146	19.66	F
A3	152	152	16.99	F	**	A4	158	158	14.23	F
A5	161	161	11.47	F	**	A6	163	163	8.70	F
A7	165	165	5.93	F	**	A8	168	168	3.07	F
A9	170	133	1.00	P	**	A10	173	0	0.00	F
A11	174	0	0.00	E	**	A12	158	0	0.00	E
B1	294	0	0.00	E	**	B2	314	0	0.00	E
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 30 Increment = Weekly [6 Process Days/Week]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	140	26.90	C	**	A2	146	146	0.90	F
A3	152	152	22.99	R	**	A4	158	158	20.23	F
A5	161	161	17.47	F	**	A6	163	163	14.70	F
A7	165	165	11.93	F	**	A8	168	168	9.07	F
A9	170	170	6.28	F	**	A10	173	173	3.47	F
A11	174	13	0.00	P	**	A12	158	0	0.00	E
B1	294	0	0.00	E	**	B2	314	0	0.00	E
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 36 Increment = Weekly [6 Process Days/Week]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	140	32.90	C	**	A2	146	146	6.90	F
A3	152	152	27.58	C	**	A4	158	158	1.71	F
A5	161	161	23.47	R	**	A6	163	163	20.70	F
A7	165	165	17.93	F	**	A8	168	168	15.07	F
A9	170	170	12.28	F	**	A10	173	173	9.47	F
A11	174	174	4.30	F	**	A12	158	58	0.00	P
B1	294	0	0.00	E	**	B2	314	0	0.00	E
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 42 Increment = Weekly [6 Process Days/Week]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	140	38.90	C	**	A2	146	146	12.90	F
A3	152	152	33.58	C	**	A4	158	158	7.71	F
A5	161	161	28.08	C	**	A6	163	0	0.00	E
A7	165	165	23.93	R	**	A8	168	168	21.07	F
A9	170	170	18.28	F	**	A10	173	173	15.47	F
A11	174	174	10.30	F	**	A12	158	158	5.14	F
B1	294	285	3.00	P	**	B2	314	0	0.00	E
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 48 Increment = Weekly [6 Process Days/Week]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	140	44.90	C	**	A2	146	146	18.90	F
A3	152	152	39.58	C	**	A4	158	158	13.71	F
A5	161	161	34.08	C	**	A6	163	163	4.09	F
A7	165	165	28.49	C	**	A8	168	168	1.57	F
A9	170	170	24.28	R	**	A10	173	173	21.47	F
A11	174	174	16.30	F	**	A12	158	158	11.14	F
B1	294	294	4.81	F	**	B2	314	51	0.00	P
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 49 Increment = Daily

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	140	45.90	C	**	A2	146	146	19.90	F
A3	152	152	40.58	C	**	A4	158	158	14.71	F
A5	161	161	35.08	C	**	A6	163	163	5.09	F
A7	165	165	29.49	C	**	A8	168	168	2.57	F
A9	170	170	23.86	C	**	A10	173	0	0.00	E
A11	174	174	17.30	F	**	A12	158	158	12.14	F
B1	294	294	5.37	F	**	B2	314	117	0.50	P
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	F
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 50 Increment = Daily

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Sta
A1	140	140	46.90	C	**	A2	146	146	20.90	F
A3	152	152	41.58	C	**	A4	158	158	15.71	F
A5	161	161	36.08	C	**	A6	163	163	6.09	F
A7	165	165	30.49	C	**	A8	168	168	3.57	F
A9	170	170	24.86	C	**	A10	173	0	0.00	E
A11	174	174	18.30	F	**	A12	158	158	13.14	F
B1	294	294	5.93	F	**	B2	314	183	1.00	P
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 51 Increment = Daily

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	0	0.00	E	**	A2	146	146	21.90	F
A3	152	152	42.58	C	**	A4	158	158	16.71	F
A5	161	161	37.08	C	**	A6	163	163	7.09	F
A7	165	165	31.49	C	**	A8	168	168	4.57	F
A9	170	170	25.86	C	**	A10	173	0	0.00	[illegible]
A11	174	174	19.30	F	**	A12	158	158	14.14	F
B1	294	294	6.49	F	**	B2	314	249	2.00	P
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 52 Increment = Daily

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	1	0.00	P	**	A2	146	146	22.90	R
A3	152	152	43.58	C	**	A4	158	158	17.71	F
A5	161	161	38.08	C	**	A6	163	163	8.09	F
A7	165	165	32.49	C	**	A8	168	168	5.57	F
A9	170	170	26.86	C	**	A10	173	0	0.00	E
A11	174	174	20.30	F	**	A12	158	158	15.14	[illegible]
B1	294	294	7.05	F	**	B2	314	314	1.70	F
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 78 Increment = Monthly [26 Process Days/Month]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	140	23.13	C	**	A2	146	0	0.00	E
A3	152	152	19.70	F	**	A4	158	158	42.42	C
A5	161	161	14.78	F	**	A6	163	163	32.81	C
A7	165	165	5.33	F	**	A8	168	168	2.93	F
A9	170	148	1.00	P	**	A10	173	0	0.00	E
A11	174	174	17.19	F	**	A12	158	158	12.32	F
B1	294	294	21.64	F	**	B2	314	314	22.24	R
B3	314	314	7.17	F	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 104 Increment = Monthly [26 Process Days/Month]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Stat
A1	140	128	0.50	P	**	A2	146	146	25.34	C
A3	152	152	44.36	C	**	A4	158	158	19.28	F
A5	161	161	39.56	C	**	A6	163	163	7.34	F
A7	165	165	30.12	C	**	A8	168	0	0.00	E
A9	170	0	0.00	E	**	A10	173	173	21.80	F
A11	174	174	16.91	F	**	A12	158	158	9.80	F
B1	294	0	0.00	E	**	B2	314	314	7.93	F
B3	314	314	27.54	R	**	B4	314	314	2.77	F
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 130 Increment = Monthly [26 Process Days/Month]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	140	30.12	C	**	A2	146	146	1.72	F
A3	152	152	19.01	F	**	A4	158	158	46.60	C
A5	161	161	13.93	F	**	A6	163	60	0.00	F
A7	165	165	6.75	F	**	A8	168	168	24.04	F
A9	170	170	21.48	F	**	A10	173	173	16.51	
A11	174	174	39.53	C	**	A12	158	158	4.10	F
B1	294	294	6.27	F	**	B2	314	314	22.84	R
B3	314	0	0.00	E	**	B4	314	314	17.84	F
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 156 Increment = Monthly [26 Process Days/Month]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	140	5.67	F	**	A2	146	146	28.96	C
A3	152	152	43.68	C	**	A4	158	158	23.83	C
A5	161	161	36.29	C	**	A6	163	0	0.00	E
A7	165	165	2.91	F	**	A8	168	0	0.00	E
A9	170	170	19.78	F	**	A10	173	173	16.87	F
A11	174	174	13.90	F	**	A12	158	104	0.50	
B1	294	294	21.12	F	**	B2	314	314	42.95	C
B3	314	314	6.56	F	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 182 Increment = Monthly [26 Process Days/Month]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Stat
A1	140	140	36.23	C	**	A2	146	137	1.00	P
A3	152	152	20.02	F	**	A4	158	0	0.00	E
A5	161	161	10.38	F	**	A6	163	163	22.98	R
A7	165	165	27.47	C	**	A8	168	168	12.02	F
A9	170	170	44.31	C	**	A10	173	173	13.65	F
A11	174	0	0.00	E	**	A12	158	0	0.00	E
B1	294	294	29.73	C	**	B2	314	314	2.78	F
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 208 Increment = Monthly [26 Process Days/Month]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Stat
A1	140	140	9.26	F	**	A2	146	146	29.18	C
A3	152	0	0.00	E	**	A4	158	158	23.61	R
A5	161	161	38.07	C	**	A6	163	163	14.87	F
A7	165	165	1.50	F	**	A8	168	15	0.00	P
A9	170	170	16.56	F	**	A10	173	173	4.44	F
A11	174	174	9.66	F	**	A12	158	0	0.00	E
B1	294	0	0.00	E	**	B2	314	314	12.64	F
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 234 Increment = Monthly [26 Process Days/Month]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	140	36.30	C	**	A2	146	146	4.52	F
A3	152	152	14.83	F	**	A4	158	158	45.96	C
A5	161	161	9.45	F	**	A6	163	163	6.53	F
A7	165	165	20.72	F	**	A8	168	168	18.12	F
A9	170	170	12.53	F	**	A10	173	173	26.97	[illegible]
A11	174	0	0.00	E	**	A12	158	133	2.00	F
B1	294	0	0.00	E	**	B2	314	314	22.49	R
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 260 Increment = Monthly [26 Process Days/Month]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	140	8.01	F	**	A2	146	146	30.70	C
A3	152	152	36.22	C	**	A4	158	158	14.04	F
A5	161	161	2.86	F	**	A6	163	163	25.99	R
A7	165	165	43.88	C	**	A8	168	168	11.33	F
A9	170	170	5.82	F	**	A10	173	84	0.50	P
A11	174	174	17.60	F	**	A12	158	158	20.06	[illegible]
B1	294	0	0.00	E	**	B2	314	314	32.34	R
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 286 Increment = Monthly [26 Process Days/Month]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Sta
A1	140	140	30.43	C	**	A2	146	146	4.27	F
A3	152	152	11.32	F	**	A4	158	158	39.19	C
A5	161	161	23.79	C	**	A6	163	0	0.00	E
A7	165	165	10.99	F	**	A8	168	152	2.00	P
A9	170	0	0.00	E	**	A10	173	173	19.47	F
A11	174	174	5.85	F	**	A12	158	0	0.00	E
B1	294	294	11.50	F	**	B2	314	314	42.20	R
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 312 Increment = Monthly [26 Process Days/Month]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	140	1.46	F	**	A2	146	146	31.23	C
A3	152	152	40.21	C	**	A4	158	158	13.59	F
A5	161	36	0.00	P	**	A6	163	163	24.39	C
A7	165	0	0.00	E	**	A8	168	168	19.49	F
A9	170	170	14.58	F	**	A10	173	173	10.38	F
A11	174	0	0.00	E	**	A12	158	158	16.73	F
B1	294	294	25.83	R	**	B2	314	314	3.18	F
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

Process Date = 624 Increment = Yearly [312 Process Days/Year]

RowID	Ltot	LfldTot	Age	Status	**	RowID	Ltot	LfldTot	Age	Statu
A1	140	140	43.01	C	**	A2	146	146	20.89	F
A3	152	152	39.05	C	**	A4	158	158	14.64	F
A5	161	161	8.32	F	**	A6	163	163	28.45	C
A7	165	165	11.47	F	**	A8	168	168	5.21	F
A9	170	170	1.73	F	**	A10	173	173	17.82	[illegible]
A11	174	52	0.00	P	**	A12	158	158	17.78	F
B1	294	294	12.68	F	**	B2	314	314	34.01	R
B3	314	0	0.00	E	**	B4	314	0	0.00	E
B5	270	0	0.00	E	**	B6	236	0	0.00	E
B7	200	0	0.00	E	**					
C1	255	0	0.00	E	**	C2	255	0	0.00	E
C3	255	0	0.00	E	**	C4	255	0	0.00	E
C5	255	0	0.00	E	**	C6	255	0	0.00	E
C7	255	0	0.00	E	**	C8	255	0	0.00	E
C9	255	0	0.00	E	**	C10	255	0	0.00	E

PAD B STATISTICS

Windrow ID -->	B1	B2	B3	B4	B5	B6	B7
Times Filled->	9	9	8	4	1	0	0
PDay Filled-->	38	48	67	98	414	0	0
¦	117	88	144	386	0	0	0
¦	263	173	332	688	0	0	0
V	357	303	374	738	0	0	0
	463	405	436	0	0	0	0
	588	519	627	0	0	0	0
	677	651	705	0	0	0	0
	745	716	772	0	0	0	0
	846	913	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0

Times Bypassed to Landfill = 0

SECOND RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
PERMIT TO OPERATE COMPOSTING FACILITY
PERMIT TO OPERATE RESOURCE RECOVERY FACILITY
WASTE TIRE GENERAL PERMIT
AND
PERMIT TO MAINTAIN CLOSED CLASS I SANITARY LANDFILL
PREPARED FOR

BOARD OF COUNTY COMMISSIONERS
DEPARTMENT OF PUBLIC WORKS
222 EAST McCOLLUM AVENUE
BUSHNELL, FLORIDA 33513

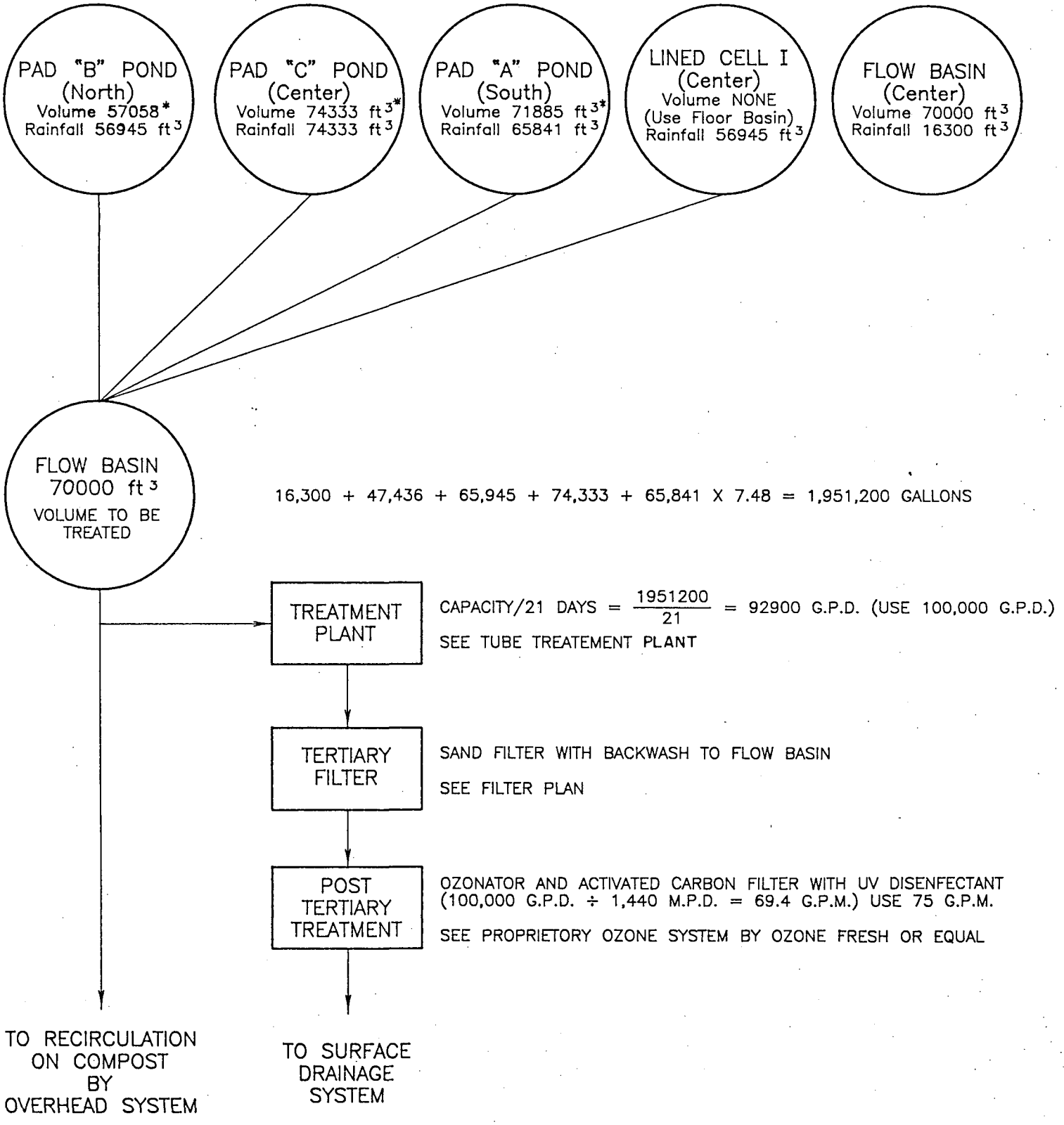
APPENDIX F

LEACHATE TREATMENT PLANS

JULY 29, 1992

92-1100.00

SCHEMATIC OF LEACHATE PROCESS
100 YEAR, 24 HOUR STORM
10.7 INCHES RAINFALL

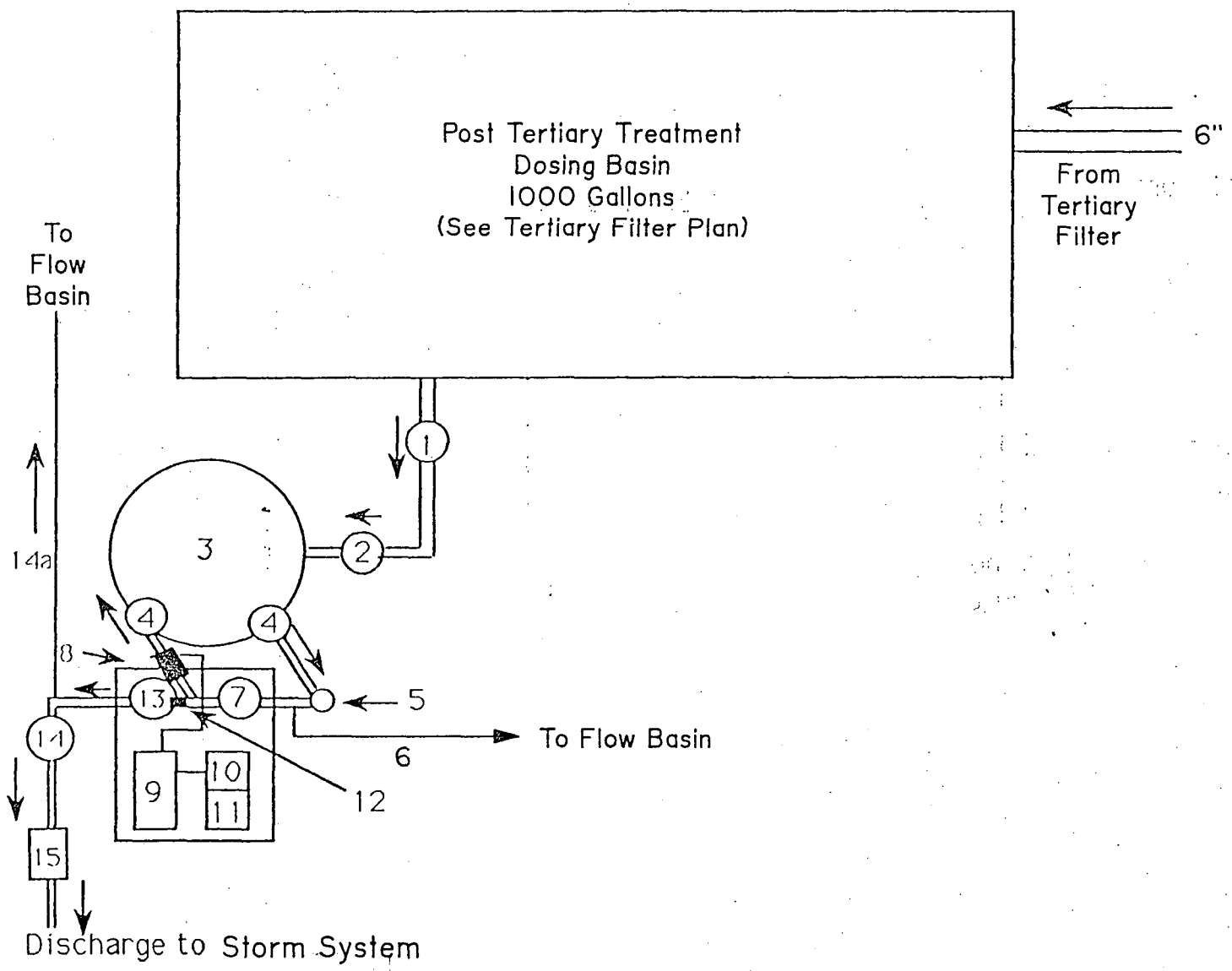


*100 YEAR FLOOD, 24 HOUR RAINFALL 10.7"

JOB NO.: 921100.00
SUMTER COUNTY

Sumter County. Florida

Ozone Fresh Leachate Treatment Plant



1. 25 micron bag filter (high capacity)
2. 3HP 100 gpm pump
3. 1500 gallon contact (treatment) tank
4. Manual shut-off valve
5. 3HP 100 gpm high head pump (recirculating)
6. Manual return to flow basin
7. High capacity 10 micron primary filter
8. Ozone contactor
9. 6 lb./day dual quad Ozone Fresh ozone generator
10. 25 ltr/min Ozone Fresh oxygen generator
11. Electrical panel, ppm controler, timer, etc.
12. Solenoid (T.D.S. controller)
13. 1 micron post ozonation filtration
14. Auto backwash H.D. G.A.C. filter

14a. Backwash Line to flow basin

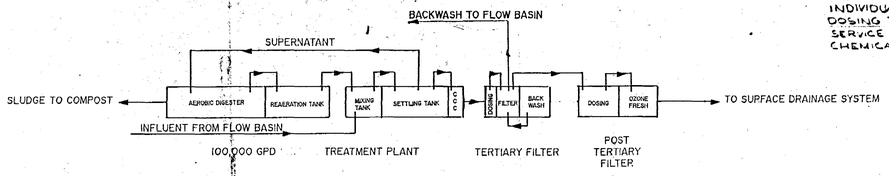
15. UV sterilizer

952904

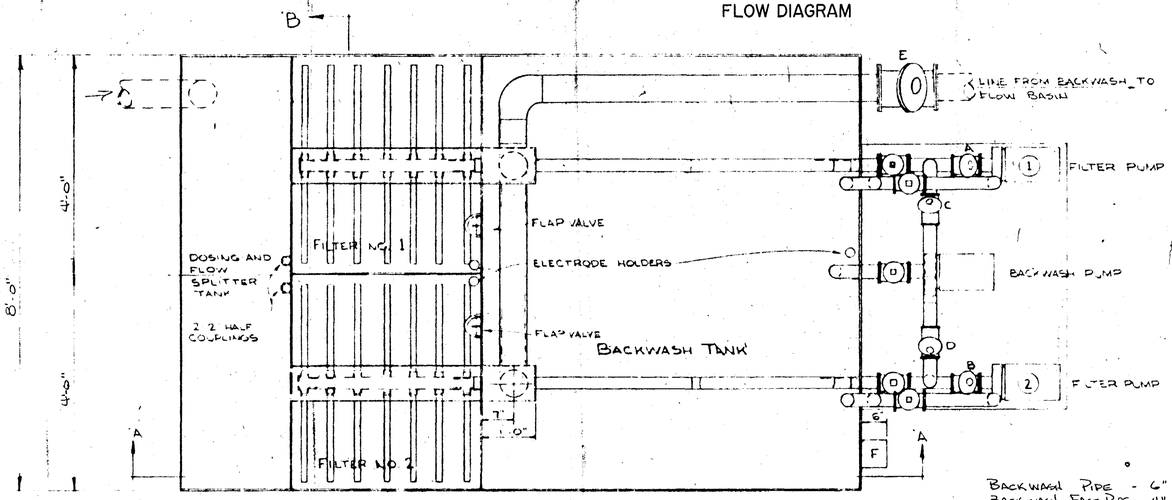
1

OPERATION

TIME CLOCK INITIATED & ALTERNATED BACKWASH HYDRAULICALLY OPERATED AUTOMATIC VALVES - A, B, C D & E.
1st CYCLE - STOP PUMP #1, CLOSE A, OPEN C & E, START BACKWASH PUMP, CUT OFF BACKWASH ON LOW WATER ELECTRODE, OR 8 MIN. (VARIABLE) AND RETURN TO SERVICE BY CLOSING C & E, OPENING A & STARTING PUMP #1
2nd CYCLE - STOP PUMP #2, CLOSE B OPEN D & E ETC.
FILTRATION - NORMALLY RUNS WITH RECYCLE 2½:1 THROUGH FLAP VALVE LOW WATER LEVEL ON FILTER STOPS & HIGH LEVEL STARTS INDIVIDUAL PUMPS.
DOSING TANK FLOW DIVIDES TO FILTER & ALTERNATES STAY IN SERVICE DURING BACKWASH. TANK IS SIZED FOR OPTIONAL CHEMICAL FEED & MIXING USE.



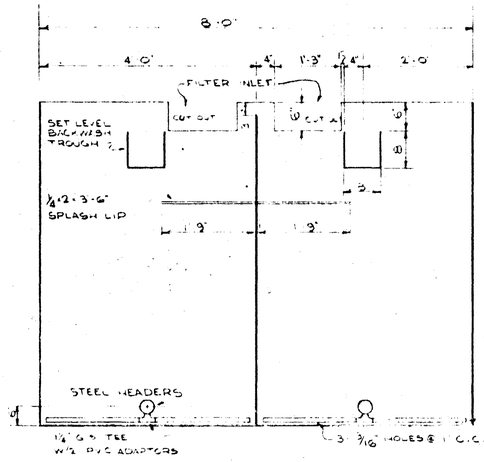
FLOW DIAGRAM



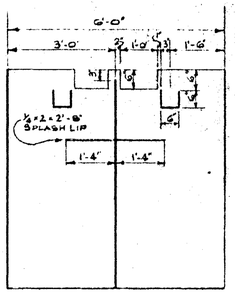
PLAN VIEW

B

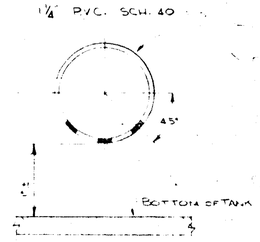
BACKWASH PIPE - 6"
BACKWASH FACE PIPE - 4"
FILTER FACE PIPE - 2"
FILTER PUMPS - 87 GPM
BACKWASH PUMPS - 261 GPM
FILTER SURFACE AREA - 34.6 S.F. TOTAL



SECTION B-B

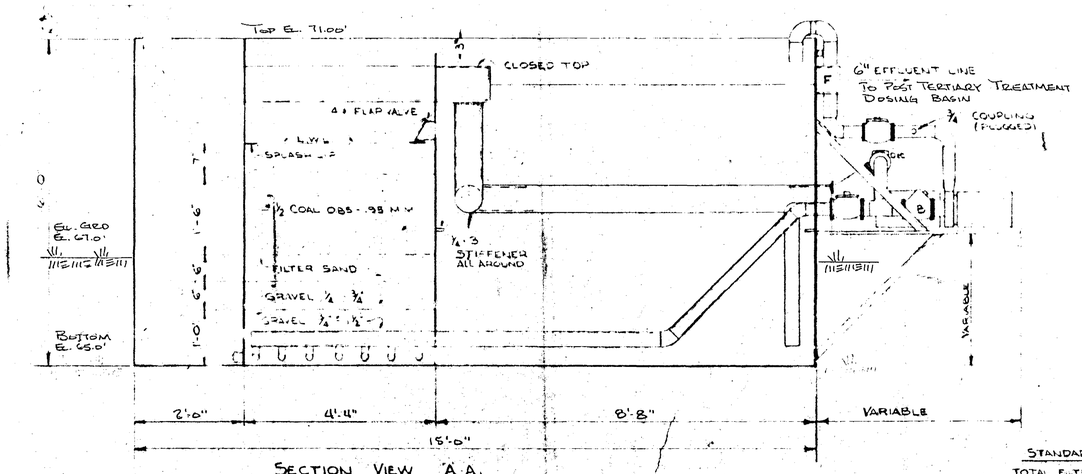


SECT ON BB FOR 6'-0" TANK
SCALE ½"=1'-0"

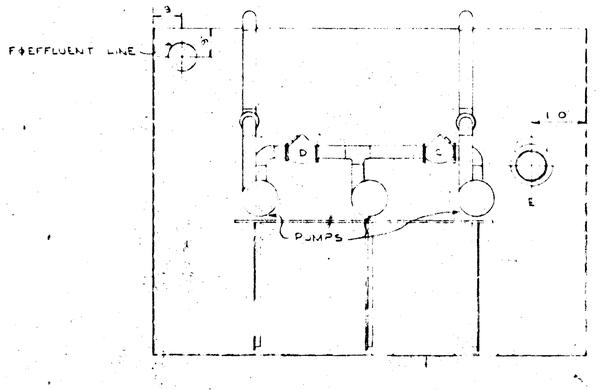


LATERAL PIPE HOLE DETAIL
SCALE 1"=1'-0"

INLET PIPING FROM STP



SECTION VIEW 'A A'



END VIEW

STANDARD SPECIFICATIONS - DUAL FILTER SYSTEM

TOTAL FILTER AREA - 2 G.P.M./SQ.FT. @ ADF
FILTER RATE - 1.5 G.P.M./SQ.FT. FOR MAX FLOW
BACKWASH RATE - 15 G.P.M./SQ.FT.
BACKWASH TANK - 8 MIN. AVAILABLE VOLUME
DOSING TANK - 10 MIN. @ ADF MINIMUM
PUMPS CENTRIFUGALS END SUCTION MECH. SEAL 208-230/460
VALVES - AQUAMATIC & MANUAL PLUGS
SHELL - CARBON STEEL W/FIBERGLASS OPTION
PAINT - #622 PRIME & RUSTARMOR 545 EXTERIOR
INTERIOR - COAL TAR - 2 MIL.

I certify that I have reviewed these plans and that I have reviewed the design calculations to verify the wastewater treatment plant design as shown on these plans. My signature and seal is affixed to this certification only. This certification is provided on these plans to comply with a requirement of the State of Florida Department of Environmental Regulation for the processing of a permit application. These plans were not prepared under my direct supervision. The physical dimensions and layout of the plant as constructed may be different from those shown on these plans, although as the project will be bid. The plant which will be constructed will not exceed the volumes, capacities, and treatment provided by the plans shown on these plans.

John W. Springstead, P.E., Florida Reg. No. 8579

D.E.R.
JUL 29 1992
SOUTHWEST DISTRICT
TAMPA

SPRINGSTEAD ENGINEERING INC.
consulting engineers
Leesburg — Bushnell

SUMTER COUNTY
SOLID WASTE FACILITY
100,000 GPD
TERTIARY FILTER

DATE	SCALE	FILE	JOB NO.
7-29-92	NTS	921100.00	921100.00
DESIGN	DRAWN	CHECKED JWS	SHEET 4 OF 4

1" = 40'-0"

(2)

INSIDE OF CURB N.10451 E.9951

9' TOP OF BERM TYP. AT EL. 68.5

4:1 SLOPE

CONCRETE CURB ON SOIL

TREE TO REMAIN

6' CHAIN LINK FENCE (WITH FABRIC) ON NORTH, EAST, AND SOUTH SIDE OF POND.

NORTH LEACHATE COLLECTION POND VOL. = 57,058 CU.FT. R=30' (TYP.)

HWL EL 68.5

BOTTOM EL. = 57.5

R=20' TYP.

HYDRO-MATIC SPRAY 300 GRINDER 2 H.P. 30 GPM @ 42'

3:1 SLOPE TYP. INSIDE POND

3'-0" FENCE GATE

END ASPHALT SURFACE E.9861

EQUIPMENT PAD. EQUIPMENT BY OTHERS

10' CHAIN LINK FENCE (WITH FABRIC) ON WEST SIDE OF POND.

10' CHAIN LINK FENCE POSTS (NO FABRIC) ON NORTH, SOUTH, AND WEST SIDE OF ASPHALT SURFACE

ASPHALT SURFACE

EXISTING MONITORING WELL

CONCRETE CURB ON ASPHALT

NORTH COMPOST PAD AREA = 1.15 AC.

INSIDE OF CURB N.10309 E.9600

INSIDE OF CURB N.10451 E.9478

INSIDE OF CURB N. 10377 E.9474

EXISTING OFFICE BUILDING

EXISTING CLASS 1 LANDFILL CELL

4:1 SLOPE TYP. OUTSIDE POND

MIDDLE COMPOST PAD AREA = 1.42 AC.

EXISTING LEACHATE COLLECTION POND VOL. = 74,333 CF

EXISTING PILOT PLANT

3'X 3' OVERFLOW TROUGH THROUGH BERM

HYDRO-MATIC SPRAY 300 GRINDER 2 H.P. 30 GPM @ 42'

SEE SHEET 2 FOR TP DETAILS

T.C.

8" GRAVITY

EX. STORM DRAIN

(2) 24" x 38" ELIPTICAL R.C.P. AT 0.5% SLOPE INV. EL. = 67.08

CONCRETE HEADWALL

INSIDE OF CURB N.9674 E.9754

CONCRETE CURB ON ASPHALT

10'-0" CHAIN LINK FENCE & POSTS (NO FABRIC) ON NORTH, WEST, AND SOUTH SIDE OF ASPHALT SURFACE.

SOUTH COMPOST PAD AREA = 1.24 AC.

INSIDE OF CURB N.9436 E.9265

EXISTING ASPHALT SURFACE

GAS VENT

INSIDE OF CURB N.9671 E.9573

INSIDE OF CURB N.9600 E.9537

ACCESS ROAD

1/8" / FT.

3'-0" FENCE GATE

EQUIPMENT PAD. EQUIPMENT BY OTHERS

EXISTING MONITORING WELL

6'-0" CHAIN LINK FENCE (WITH FABRIC) ON NORTH, SOUTH, AND WEST SIDE OF POND

GUY WIRE

SOUTH LEACHATE COLLECTION POND BOTTOM EL. = 57.0 VOL. = 71,885

HYDRO-MATIC SPRAY 300 GRINDER 2 H.P. 30 GPM @ 42'

INSIDE OF CURB N.9423 E.9425

4:1 SLOPE TYP. OUTSIDE POND

EXISTING TOWER

GUY WIRE

CONCRETE CURB ON SOIL

TOP OF BERM (TYP.) AT EL. 70.00 WIDTH VARIES

INSIDE OF CURB N.9548 E.9400

INSIDE OF CURB N.9574 E.9410

EXISTING SATELLITE DISH

GUY WIRE

EXISTING VOLUME REDUCTION STATION

EXISTING POWER LINE

LEACHATE FLOW EQUALIZATION BASIN VOL. = 70,000 CF

HYDRO-MATIC SPRAY 300 GRINDER 2 H.P. 30 GPM @ 42'

VERTICAL HOLLOW SHAFT TURBINE 400 GPM @ 280' TDH 40 H.P.

EFM

LFM

NELSON 100 SERIES BIG GUN PART CIRCLE 90 PSI, 68 GPM, 120' RADIUS

LEGEND

LFM: LEACHATE FORCE MAIN

EFM: EFFLUENT FORCE MAIN

★ = LOCATION OF IRRIGATION GUN

El. FENCE POST

2" BALL VALVE ANCHOR RISER TO POST WITH STRAP AT 2' C.C.

2" GIP

CONCRETE THRUST BLOCK AT BEND

4" P.V.C. MAIN

LINER

FINAL LEACHATE POND

6" TO IRRIGATION GUNS

48" ø ACCMPA ALL SEAMS WELDED

SPRAY PUMP DETAIL

18" ø ACCMP ALL SEAMS WELDED

PIPE - AWWA C-900 CLASS 200 P.V.C. - PIPE & FITTINGS

VALVES - 150 PSI WORKING PRESSURE - 300 PSI TEST PRESSURE

MUELLER OR EQUAL

D.E.R.

JUL 29 1992

SOUTHWEST DISTRICT

Tour A

DATE	REVISIONS AND RECORD OF ISSUE	NO.	BY	CK	APP

SPRINGSTEAD ENGINEERING INC.

consulting engineers

Leesburg — Bushnell

SUMTER COUNTY SOLID WASTE FACILITY PLAN FOR LEACHATE TREATMENT SYSTEM

DATE	SCALE	FILE	JOB NO.
3/27/92	1"=40'	92110	92110
DESIGN	DRAWN	CHECKED	SHEET 1 OF 4
JWS	BHP	JWS	

SECOND RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
PERMIT TO OPERATE COMPOSTING FACILITY
PERMIT TO OPERATE RESOURCE RECOVERY FACILITY
WASTE TIRE GENERAL PERMIT
AND
PERMIT TO MAINTAIN CLOSED CLASS I SANITARY LANDFILL
PREPARED FOR

Sumter County

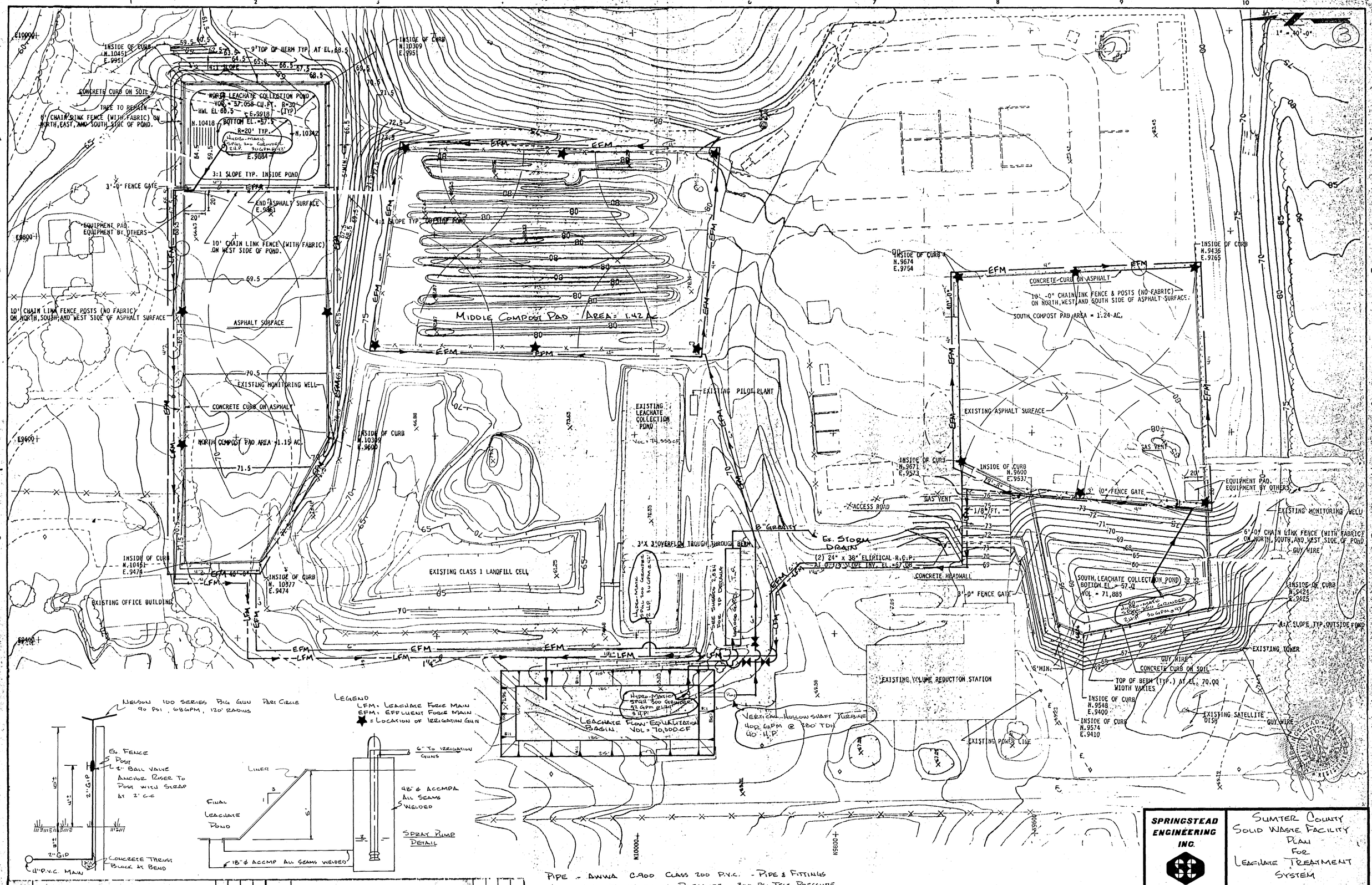
BOARD OF COUNTY COMMISSIONERS
DEPARTMENT OF PUBLIC WORKS
222 EAST McCOLLUM AVENUE
BUSHNELL, FLORIDA 33513

APPENDIX G

SHEET 1 of 4

JULY 29, 1992

92-1100.00



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SPRINGSTEAD ENGINEERING INC.
consulting engineers
Leesburg — Bushnell

SUMTER COUNTY SOLID WASTE FACILITY PLAN FOR LEACHATE TREATMENT SYSTEM

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BUSHNELL, FLORIDA 33513

APPENDIX H

GAS MIGRATION STUDY

JULY 29, 1992

92-1100.00

GAS MIGRATION INVESTIGATION
SUMTER COUNTY LANDFILL
C-103

The purpose of measuring gas generated on the Sumter County Landfill site is to determine if landfill gas is moving laterally and possibly causing a threat of explosion by gas buildup in nearby structures or migration to off-site locations.

Porous soils on site do not indicate the probability of gas buildup or lateral movement off-site. It is anticipated that all gas generated will be liberated by vertical movement through porous soil particles.

A grid system was developed and is represented on the attached aerial of the Sumter County Landfill indicating twenty-four (24) gas investigation locations. This approach was used to obtain sufficient areal information over the active portion of the landfill, inactive portions of the landfill, and adjacent undisturbed areas.

The following locations of gas probe vents are represented on the above mentioned aerial. Please refer to the aerial for location of each numbered reading.

FIELD TEST FOR GAS GENERATION
SUMTER COUNTY LANDFILL
C-103
February 2, 1988

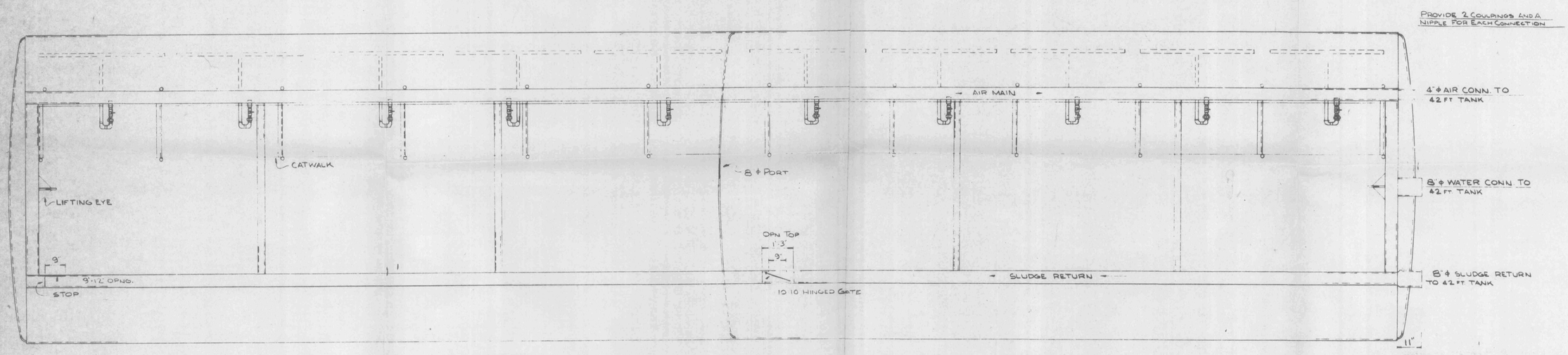
Test holes were prepared several days in advance of LEL readings being observed. Each hole was excavated to a depth of two (2) feet with annulus area of six (6) inches. Holes were left open to the ambient for maximum gas liberation benefit. Mr. Dale Pariett utilized a gas detection device manufactured by Control Power System, Model 780 to determine the presence of landfill gas. The gas meter probe was inserted into each hole and readings observed. The following is a report of Mr. Pariett's findings:

LOCATION OF GAS PROBE VENTS	GAS DETECTION READINGS
GI- 1	None Detected
GI- 2	None Detected
GI- 3	None Detected
GI- 4	None Detected
GI- 5	None Detected
GI- 6	None Detected
GI- 7	None Detected
GI- 8	None Detected
GI- 9	Active Area of Landfill
GI-10	None Detected
GI-11	None Detected
GI-12	None Detected
GI-13	None Detected
GI-14	None Detected
GI-15	None Detected
GI-16	None Detected
GI-17	None Detected
GI-18	None Detected
GI-19	None Detected
GI-20	None Detected
GI-21	None Detected
GI-22	None Detected
GI-23	None Detected
GI-24	None Detected

Based on negative readings observed, it can be assumed that the landfill gas being generated by decomposing materials is being liberated vertically through porous soils and not migrating laterally to off landfill site locations.

(4)

BEST AVAILABLE COPY



PLAN VIEW OF PART OF PLANT

I certify that I have reviewed these plans and that I have reviewed the design calculations to verify the wastewater treatment plant design as shown on these plans. My signature and seal is affixed to this certification only. This certification is provided on these plans to comply with a requirement of the State of Florida Department of Environmental Regulation for the processing of a permit application. These plans were not prepared under my direct supervision. The physical dimensions and layout of the plant as constructed may be different from those shown on these plans, inasmuch as the project will be built. The plant which will be constructed will meet or exceed the volumes, capacities, and treatment provided by the plant shown on these plans.

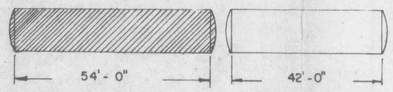
7/29/92

John W. Springstead, P.E., Florida Reg. No. 8979

SECTION THRU PART OF PLANT

TANK SIZES

	GALLONS
CHLORINE CONTACT CHAMBER	3000
FINAL SETTLING TANK	16600
MIXING TANK	12100
REAERATION TANK	19600
AEROBIC SLUDGE DIGESTER TANK	21100



54 FT. END OF A STD.

100,000 G.P.D. TREATMENT PLANT

D.E.R.
JUL 29 1992
SOUTHWEST DISTRICT
TAMPA

SPRINGSTEAD ENGINEERING INC.

consulting engineers

Leesburg — Bushnell

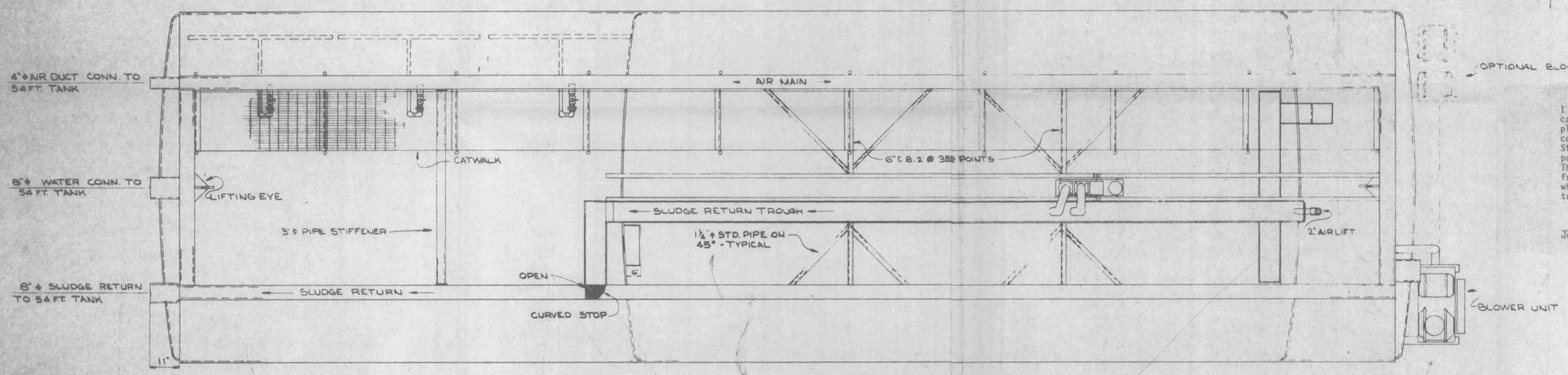
SUMTER COUNTY
SOLID WASTE FACILITY
100,000 G.P.D.
CONTACT STABILIZATION
LEACHATE TREATMENT PLANT

DATE	SCALE	FILE	JOB NO.
3/27/92	NTS	92110	92110
DESIGN	DRAWN	CHECKED JWS	SHEET 2 OF 4

5

GENERAL NOTES

BLOWER - ONE ROOTS CONNERSVILLE ROTARY BLOWER
TYPE AF, MODEL 615 W/10 H.P., 230 VOLT, 3 PHASE, 60 CYCLE
WEATHERPROOF MOTOR, BELT DRIVEN TO 850 RPM.
BLOWER SHALL BE CAPABLE OF DELIVERING 410 CFM @ 3 PSI



PLAN OF PART OF PLANT

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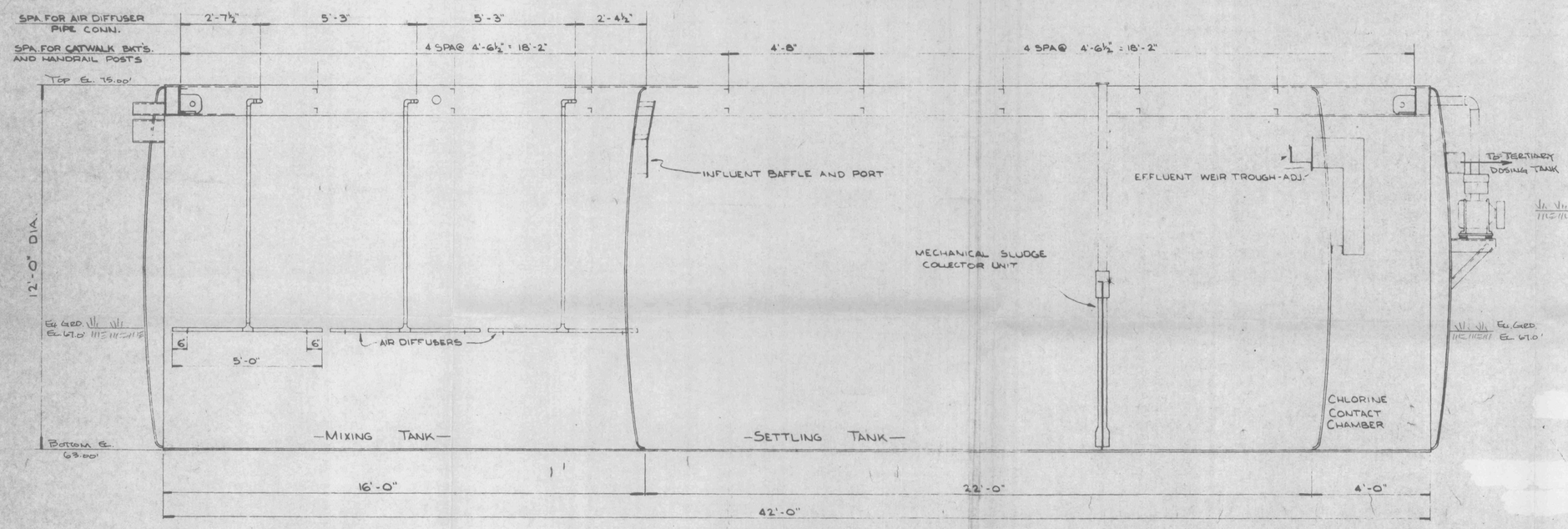
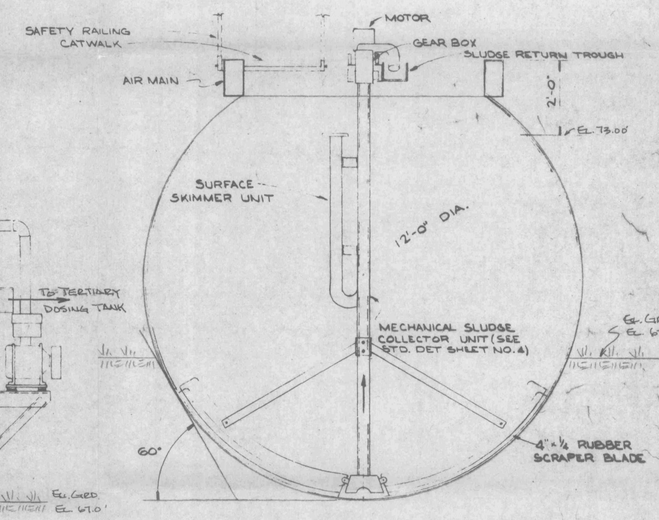
7/29/92

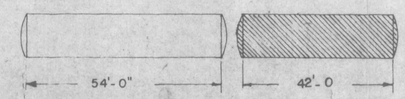
John W. Springstead, P.E., Florida Reg. No. 8579



SECTION THRU PART OF PLANT



TYPICAL SECTION THRU SETTLING TANK



42 FT. END OF A STD. 100,000 G.P.D. TREATMENT PLANT

D.E.R.
JUL 29 1992
SOUTHWEST DISTRICT
TAMPA

SPRINGSTEAD ENGINEERING INC. consulting engineers Leesburg — Bushnell	SUMTER COUNTY SOLID WASTE FACILITY 100,000 G.P.D. CONTACT STABILIZATION LEACHATE TREATMENT PLANT		
DATE 3/27/92	SCALE NTS	FILE 92110	JOB NO. 92110
DESIGN	DRAWN	CHECKED JWS	SHEET 3 OF 4