NEW WELL INSTALLATIONS AND GROUNDWATER MONITORING ANNUAL REPORTS FOR THE CITRUS COUNTY CENTRAL LANDFILL

PERMIT NO.S SO09-187229 AND SF09-211030

for

Citrus County, Florida

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DEPARTMENT OF PUBLIC WORKS

DIVISION OF SOLID WASTE MANAGEMENT

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October, 1994

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NEW WELL INSTALLATIONS
AND
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NEW WELLS AND ABANDONED WELLS

During the past several months, six new groundwater monitoring wells (MW-4, MW-5, MW-6, MW-1(R)(abandoned), MW-1(R)(active) and MW-AA) were installed on these two sites and three were abandoned (MW-A, MW-1 and MW-1[R]). Attachment 1 is a surveyed drawing of the location of all wells included in the groundwater monitoring systems, including existing wells, new wells and abandoned wells. Attachment 2 is a table of well construction characteristics for all new wells, along with a diagram of each. Attachment 3 lists the required information on the abandoned wells. Attachment 4 consists of drillers logs and other information, if any, provided by the contractor.

All wells except MW-1(R)(active) have been sampled and analyses submitted to DEP. MW-1(R) was sampled for the first time in early October.

Several problems developed during construction of these wells. In addition to long delays in finishing the project and lack of delivery of paperwork, those most pertinent to Department concerns were: Wells 4, 5, and 6 continue to produce sediment after months of development using a wide variety of pumping equipment and bailers; the damage during redevelopment requiring subsequent abandonment of well 1; inability of the contractor to develop well 1(R)(abandoned), its contamination by pumping equipment and its subsequent abandonment; replacement of well 1(R)(abandoned) with 1(R)(active) with a longer screen section to offset the finer sand pack grain size and smaller screen slot size. This well was also left without being completely developed by the driller; the County has attempted bailing to improve performance. A different drilling firm will be retained to perform any additional required work.

GROUNDWATER MONITORING SYSTEM EVALUATION

WATER LEVELS

Water levels were measured on a monthly basis in all wells at both sites for a year, June 1993 to May 1994, with the exception of October 1993, when an equipment malfunction prevented measurements. Additional measurements were made in July 1994. Measurements were made by County personnel for each event except July 1993, January and April 1994. Attachment 5 includes contour maps developed from each data set.

Groundwater flow is generally from east to west across the sites. The 6-foot groundwater elevation runs through the site consistently throughout the period. The maximum observed water level elevation was 7.39 feet in June 1993 at well 2 in the northeast corner of the active site. The minimum observed water level elevation was 2.07 feet in well A at the west side of the closed site in July 1993. This reading is questionable because the equipment used by the contract lab was interfered with by the dedicated pump which was in place at that time. The lowest reading we are confident is reliable was 4.29 feet in well C at the southwest corner of the closed site in January 1994. The maximum gradient observed during this period is about 1 foot vertical per 500 feet horizontal; the minimum is about 1 foot vertical per 3000 feet horizontal.

Comparison of observed water levels with maps prepared by the SWFWMD and USGS of regional Floridan aquifer levels shows that these are equivalent. Site specific hydrogeologic information confirms that the Floridan is essentially unconfined. First water occurs either in the interbedded sediments or limestone depending on the highly variable elevation of the top of limestone. None of the identified clayey units are continuous across the site. The annual fluctuation of water levels is extremely slight.

The addition of wells around the percolation ponds provided more detail to the central section along the boundary between sites. Data from July 1994 show that the water table elevation in this area is about two feet above that in wells 1-R and B. Normal rules of contouring illustrate a mound extending across a large section of the active site. Because of the lack of data points in the middle of the active site it is unknown whether this is a true depiction of this mound.

The existing wells intercept the top of the water table (unconfined Floridan aquifer) and thus are appropriate depth to monitor the site. The location of wells relative to groundwater flow direction is also appropriate and designations as to background (upgradient) and compliance (downgradient) are likewise accurate.

WELL CONSTRUCTION AND SAMPLING

The construction of wells with sand pack and screen, if finished in sediment or incompetent limestone, or open hole, if finished in competent limestone, is adequate. However, the nature of the sediments is such that development of the wells is difficult and time consuming and rarely successful. The consequences are that very little water is produced and that which is produced is very turbid.

For example, well 1-R which was purged one day and sampled the next, did not produce sufficient water in one day to complete the required initial analysis (Primary and Secondary Drinking Water Standards). Development of wells 4, 5, and 6 to their present condition involved twice or three times daily bailing for a two month period. These wells, plus wells B and 3 are still regularly bailed dry within less than an hour; full recharge takes longer than eight hours.

All wells which are part of these monitoring systems have high turbidity, 3, 4, 5, 6, AA and 1-R have turbidity levels hundreds of times the standard. The first sample from wells 4, 5, and 6, were so turbid that the lab could not perform the tests for asbestos. An experiment was performed with filtered and unfiltered samples from these three wells to determine whether the metals content was affected by the turbidity. Attachment 6 includes a comparison data set for filtered and unfiltered samples from these wells. The levels of barium, chromium, lead, mercury, aluminum, iron, manganese and zinc were decreased by filtration of the samples. The concentration of lead, aluminum and iron which were in some instances above standards in the unfiltered samples were reduced to levels which were acceptable in the filtered samples.

Citrus County hereby requests permission to have our contracted laboratory field-filter all groundwater samples which are to be analyzed for metals. They, Orlando Laboratories, Inc., would follow the procedures outlined in their quality assurance plan, which was approved August 5, 1994 or updated versions as may be in effect during the course of their contract with the County.

WATER QUALITY TRENDS

Attachment 6 lists the water quality data collected from wells on the site for this year. Turbidity, which was discussed above, color, and iron, are parameters of non-compliance in essentially all wells each time they are sampled. We feel this is due to naturally occuring sediment conditions in the sampling zone.

Because of changes in the permit, Primary and Secondary Drinking Water Standards analyses performed in July 1993 were not repeated in July 1994 for the closed 60-acre site wells. Therefore, trend analysis is impossible for many parameters.

The exceedences of standards in the 1993 data, other than the above, included odor in wells A, C, D, and 1. Wells A and 1 have since been replaced. Aluminum exceeded standards in B and 1 and was probably due to stripping of clay minerals by acidification of the samples. Manganese exceeded standards in wells A and D. Well A showed elevated concentrations of benzene. Leaks in the casing, observed on video, were thought to be the cause of this contamination and the well was replaced.

Analyses in October 1993 and January 1994 confirmed contamination by organics (benzene and vinyl chloride) in Well A. The persistence of these parameters in the replacement well has triggered assessment monitoring in that well and in a proposed new well downgradient. Other noncompliant parameters in A included low pH in October, and lead and total solids exceeding standards in January.

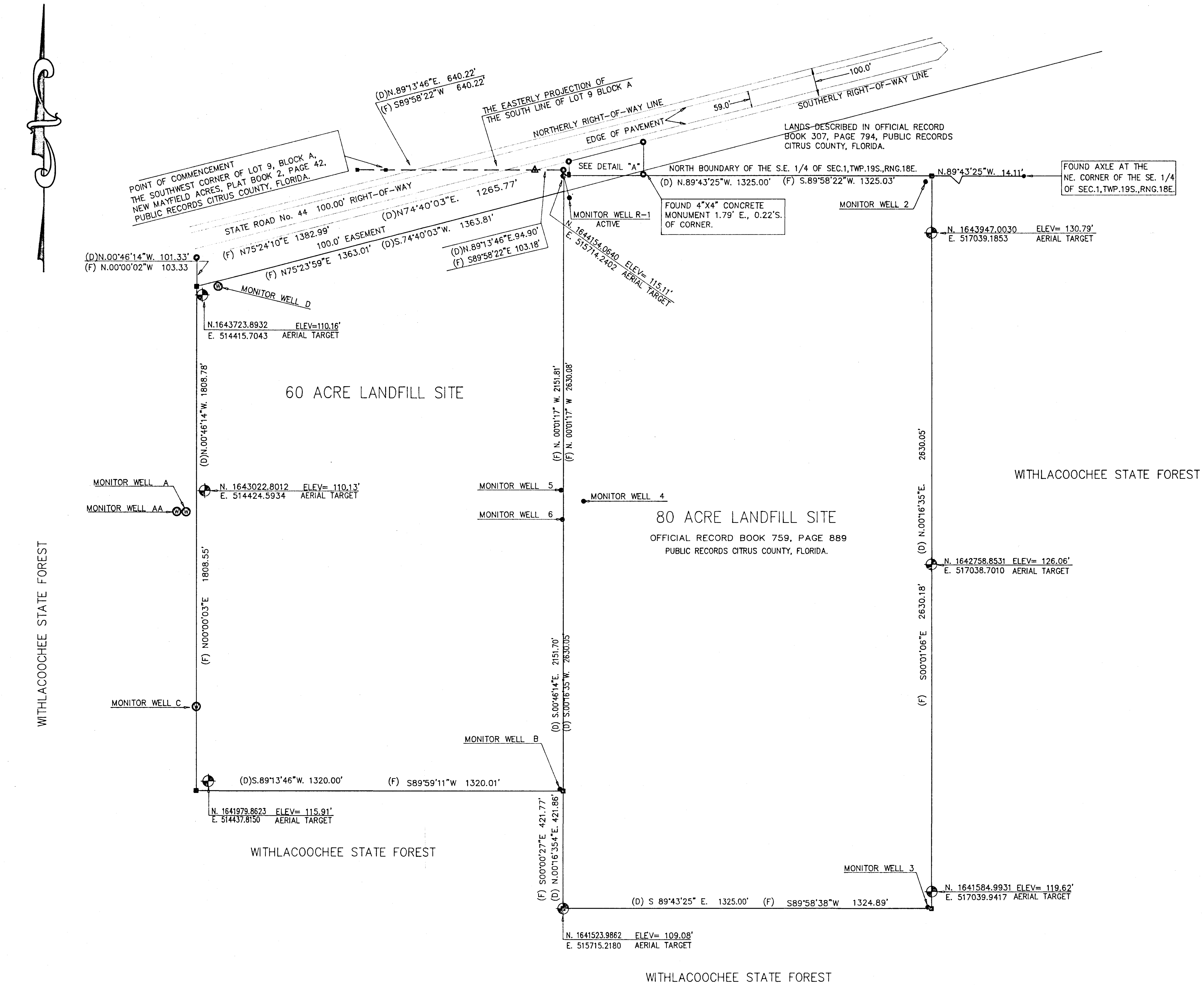
Lead and chromium were detected in Well 1 in October and January. This well was later destroyed and has been replaced. No data has been received from the replacement well as yet.

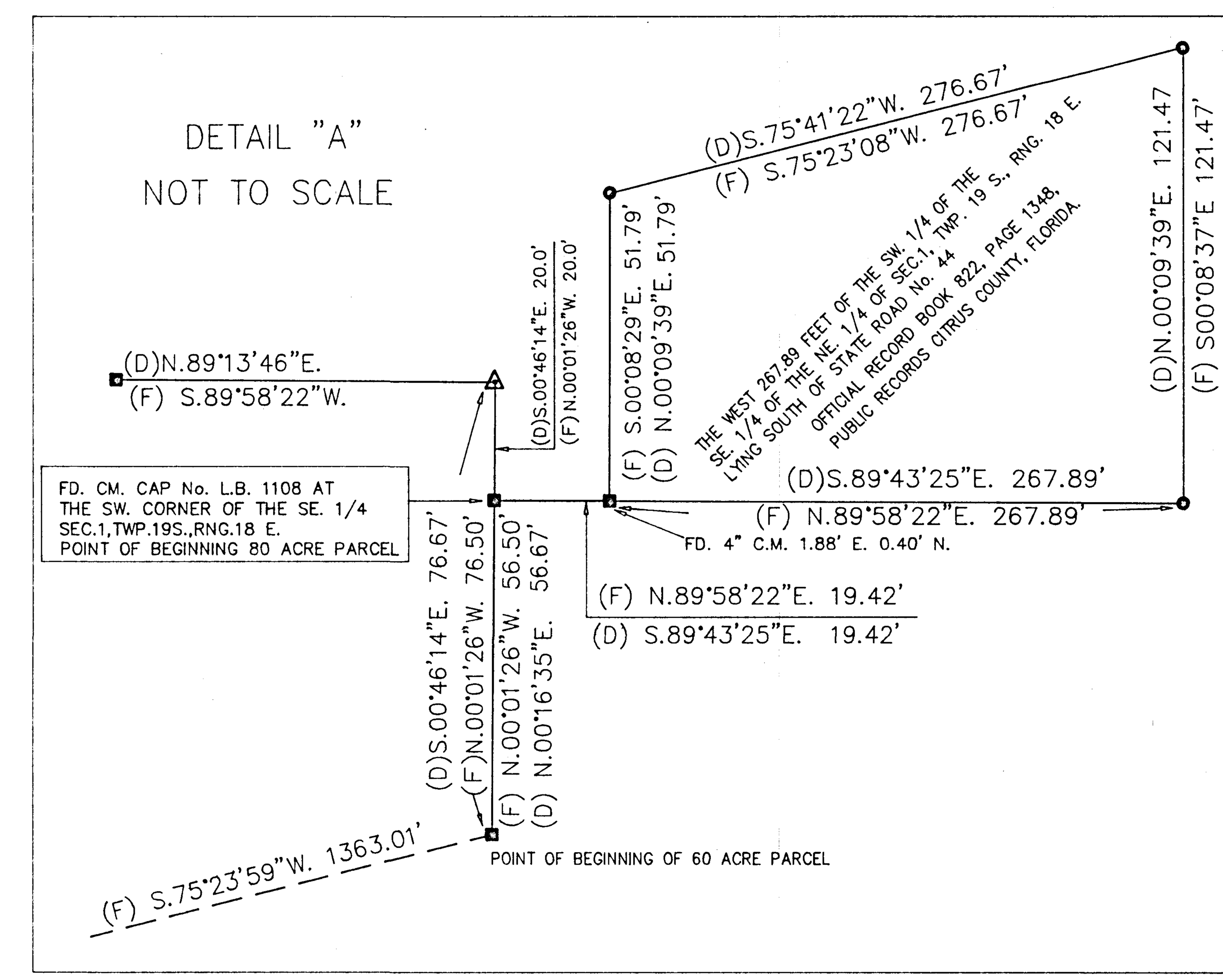
Well B has consistently low pH values during quarterly sampling events this year, a change from the July 1993 values. Well 2 had slightly low pH values in the April and July sample sets.

The initial sampling of Wells 4, 5, and 6 located near the leachate effluent disposal ponds and close to the closed and unlined 60-acre site revealed that pH is low in Well 4, and nitrate, one constituent of the treated effluent is above the standard in well 6. All of these wells show the presence of three or more organic compounds including representatives of the trihalomethanes, volatiles and base neutral groups. Since these compounds are <u>not</u> characteristic of treated leachate, it is felt that the most likely source for the organics is the unlined closed 60-acre landfill which is adjacent to the perc ponds. Permitting for Phase 2 of the active landfill will take into account these water quality trends and site use will be modified to reduce the impact.

ATTACHMENT 1

SURVEYED LOCATION MAP





DESCRIPTIONS AS FURNISHED

1027946

THE WEST 267.89 FEET OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 1, TOWHSHIP 19 SOUTH, RANGE 18 EAST LYING SOUTH OF STATE ROAD No. 44, CITRUS COUNTY, FLORIDA. AS RECORDED IN OFFICIAL RECORD BOOK 822, PAGE 1348, PUBLIC RECORDS CITRUS COUNTY, FLORIDA.

A PORTION OF SECTION 1, TOWNSHIP 19 SOUTH, RANGE 18 EAST, CITRUS COUNTY, FLORIDA DESCRIBED AS FOLLOWS: COMMENCE AT THE SOUTHWEST CORNER OF LOT 9, BLOCK A, NEW MAYFIELD ACRES, AS RECORDED IN PLAT BOOK 2, PAGE 42, PUBLIC RECORDS OF CITRUS COUNTY, FLORIDA, THENCE S.89°43'25"E AN AN EASTERLY PROJECTION OF THE SOUTH LINE OF SAID LOT 9, BLOCK A, A DISTANCE OF 640.22 FEET, THENCE S.00°16'35"W 20.00 FEET TO THE POINT OF BEGINNING, SAID POINT BEING ON THE NORTH LINE OF THE SE 1/4 OF SAID SECTION 1, THENCE CONTINUE S00°16'35"W 2630.05 FEET, THENCE S 89°43'25" E PARALLEL TO SAID NORTH LINE A DISTANCE OF 1325.00 FEET, THENCE N 00°16'35" E 2630.05 FEET TO A POINT ON SAID NORTH LINE, THENCE N 89°43'25" W ALONG SAID NORTH LINE A DISTANCE OF 1325.00 FEET TO THE POINT OF BEGINNING. CONTAINING 80 ACRES MORE OR LESS.

A PORTION OF SECTION 1, TOWNSHIP 19 SOUTH, RANGE 18 EAST BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE SOUTHWEST CORNER OF LOT 9, BLOCK A, NEW MAYFIELD ACRES AS RECORDED IN PLAT BOOK 2, PAGE 42, PUBLIC RECORDS OF CITRUS COUNTY, FLORIDA, THENCE N 89°13'46" E ON AN EASTERLY PROJECTION OF THE SOUTH LINE OF SAID LOT 9, BLOCK A, A DISTANCE OF 640.22 FEET, THENCE S 00°46'14" E A DISTANCE OF 76.67 FEET TO A POINT THAT IS 150 FEET FROM, MEASURED AT A RIGHT ANGLES TO, THE CENTERLINE OF STATE ROAD No. 44, SAID POINT ALSO BEING THE POINT OF BEGINNING, THENCE CONTINUE S 00°46'14" E A DISTANCE OF 2151.70 FEET, THENCE S 89°13'46" W A DISTANCE OF 1320.00 FEET, THENCE N 00°46'14" W A DISTANCE OF 1808.78 FEET TO A POINT 150 FEET FROM, MEASURED AT A RIGHT ANGLE TO, THE CENTERLINE OF SAID STATE ROAD No. 44, THENCE N 74°40'03" E, PARALLEL TO AND 150 FEET FROM THE CENTERLINE OF STATE ROAD No. 44 A DISTANCE OF 1363.81 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH AN EASEMENT FOR INGRESS AND EGRESS OVER THE FOLLOWING DESCRIBED LANDS: COMMENCE AT THE SOUTHWEST CORNER OF LOT 9, BLOCK A, NEW MAYFIELD ACRES, AS RECORDED IN PLAT BOOK 2, PAGE 42, PUBLIC RECORDS OF CITRUS COUNTY, FLORIDA, THENCE N 89°13'46" E ON AN EASTERLY PROJECTION OF THE SOUTH LINE OF SAID LOT 9, BLOCK A, A DISTANCE OF 640.22 FEET, THENCE S 00°46'14" E A DISTANCE OF 76.67 FEET TO A POINT THAT IS 150 FEET FROM, MEASURED AT A RIGHT ANGLE TO, THE CENTERLINE OF STATE ROAD No. 44, SAID POINT ALSO BEING THE POINT OF BEGINNING, THENCE S 74°40'03" W PARALLEL TO AND 150 FEET FROM THE CENTERLINE OF STATE ROAD No. 44, A DISTANCE OF 1363.81 FEET, THENCE N 00°46'14" W A DISTANCE OF 101.33 FEET TO THE SOUTHERLY RIGHT-OF-WAY LINE OF STATE ROAD No. 44, THENCE N 74°40'03" E ALONG SAID RIGHT-OF-WAY LINE A DISTANCE OF 1265.77 FEET, THENCE N 89°13'46" E A DISTANCE OF 94.90 FEET, THENCE S 00°46'14" E A DISTANCE OF 76.67 FEET TO THE POINT OF BEGINNING.

MONITOR WELL No.	X COORDINATE	Y COORDINATE	LATITUDE	LONGITUDE	ELEVATION TOP OF WELL CASING
A ABANDONED 3-22-94	514359.520	1642944.584	82°26'34.75084" W.	28°51'09.22641" N.	105.32'
B ACTIVE	515703.188	1641952.201	82°26'19.59919" W.	28°50'59.45064" N.	111.94
C ACTIVE	514397.562	1642247.058	82°26'34.29378" W.	28°51'02.32191" N.	115.18'
D ACTIVE	514472.380	1643753.584	82°26'33.51558" W.	28°51'17.24014" N.	109.77'
R-1 ABANDONED 9-26-94	515746.387	1644088.835	82°26'19.20218" W.	28°51'20.60614" N.	118.25'
2 ACTIVE	517016.947	1644134.0121	82°26'04.91534" W.	28°51'21.09969" N.	136.29'
3 ACTIVE	517026.689	1641528.493	82°26'04.69852" W.	28°50'55.30387" N.	120.47'
AA ACTIVE	514330.1915	1642944.6946	82°26'35.08066" W.	28°51'09.22643" N.	106.11
5 ACTIVE	515706.7199	1643027.5870	82°26'19.60416" W.	28°51'10.09772" N.	121.14
6 ACTIVE	515710.8712	1642921.8127	82°26'19.55309" W.	28°51'09.05065" N.	118.48
4 ACTIVE	515787.5197	1642987.2443	82°26'18.69384" W.	28°51'09.70125" N.	122.62
R-1 ACTIVE	515734.4675	1644075.0314	82°26'19.33566" W.	28°51'20.46904" N.	118.08
1 ABANDONED 2-09-94	515745.434	1644077.441	82°26'19.21242" W.	28°51'20.49330" N.	117.57

1. THIS SURVEY IS OF VISIBLE SURFACE FEATURES ONLY, UNDERGROUND ENCROACHMENTS, IF ANY, WERE NOT LOCATED.
2. THIS SURVEY IS BASED ON EXISTING MONUMENTATION FOUND IN PLACE, RECORDS OF WHICH ARE MAINTAINED IN THIS OFFICE.
3. LANDS SHOWN HEREON WERE NOT ABSTRACTED FOR DEED EASEMENTS OR RIGHTS-OF-WAY OF RECORD.
4. ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION THIS MUST BE CONSIDERED WHEN OBTAINING SCALE DATA.
5. REFERENCE BENCHMARK, FLORIDA DEPARTMENT OF TRANSPORTATION BENCHMARK No. 54, ELEVATION 115.05' N.G.V.D. 1929
6. THERE ARE INTERAL IMPROVEMENTS THAT WAS NOT LOCATED BY THIS SURVEY.
7. BEARINGS AND DISTANCES SHOWN HEREON ARE MEASURED AND BASED ON THE STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83 UNLESS OTHERWISE SHOWN, THE NORTH BOUNDARY OF THE SOUTHEAST 1/4 OF SECTION 1, TOWNSHIP 19 SOUTH, RANGE 18 EAST, BEING N. 89°58'22" E.

FIELD DATE: MARCH 14,1994
REVISION DATE: MARCH 22,1994
ADD MONITOR WELLS No. AA, 4, 5 & 6

FIELD DATE: JUNE 15, 1994
REVISION DATE: JUNE 16,1994
DELETE MONITOR WELL No. 1, ADD MONITOR WELL No. R-1
CHANGE MONITOR WELL No. 4 TO MONITOR WELL No. 5
CHANGE MONITOR WELL No. 5 TO MONITOR WELL No. 6
CHANGE MONITOR WELL No. 6 TO MONITOR WELL No. 4

FIELD DATE: SEPTEMBER 29,1994
REVISION DATE: SEPTEMBER 30,1994
DELETE MONITOR WELL R-1 ABANONED, ADD MONITOR WELL R-1 ACTIVE

A BOUNDARY SURVEY FOR CITRUS COUNTY, FLORIDA
OF PROPERTY IN THE SOUTHEAST 1/4 OF SECTION 1, TOWNSHIP 19 SOUTH, RANGE 18 EAST, CITRUS COUNTY, FLORIDA.

Proj. No. 89-615
Drawn by: P.L.H.
Approved by:
Date:
Scale: 1"= 200'
Sheet No. 1 OF 1
Field Date: JUNE 16, 1992
Field Book: 8-B 8-C
Pages: 14-18 1-2
SEC. 1 TWP. 19S RNG. 18E

Citrus County
Department of Technical Services
Division of Engineering
P.O. BOX 440 Lecanto, FL. 34461
Phone: (904)746-2694

SURVEYOR'S CERTIFICATION
I hereby certify that the herein described land survey and plat are true and correct and was prepared under my direction and supervision and conforms to the minimum technical standards set forth by the Florida Board of Professional Land Surveyors in Chapter 61G17-6 Florida Administrative Code, pursuant to Section 472.027, Florida Statutes.
Dated this 30 day of September 1994
Patrick L. Henson Florida Registered Surveyor's No. 4547
Not vaild without an original signature and seal.

FOUND 4"X4" CONCRETE MONUMENT
SET 4"X4" CONCRETE MONUMENT COUNTY CAP
DESCRIPTIVE POINT
FOUND IRON ROD
SET 5/8" DIA. IRON ROD COUNTY CAP
FOUND IRON ROD SET 4"X4" CONCRETE MONUMENT
ELEVATION
R/W RIGHT-OF-WAY
CENTERLINE
= POWER POLE
= BENCHMARK
= WELL
= GUY POLE
P.O.B. = POINT OF BEGINNING
P.O.C. = POINT OF COMMENCEMENT
P.R.C.C.F. = PUBLIC RECORDS OF CITRUS COUNTY, FLORIDA
(P)= PLAT, (D) = DEED, (F) FIELD
O.R.B. = OFFICIAL RECORD BOOK
P.B. = PLAT BOOK
P.R.M. = PERMAMENT REFERENCE MONUMENT
T.B.M. = TEMPORARY BENCHMARK
P.C.P. = PERMANENT CONTROL POINT
C.B.S. = CONCRETE BLOCK STRUCTURE
C/S = CONCRETE SLAB

ATTACHMENT 2

TABLE OF WELL CONSTRUCTION CHARACTERISTICS

ATTACHMENT 2
NEW MONITORING WELL DATA

WELL IDENTIFICATION	**MW-4, perc pond upgradient**
LATITUDE/LONGITUDE	28 ° 51'09.70"N/82 ° 26'18.69"W
AQUIFER MONITORED	Floridan
SCREEN TYPE & SLOT SIZE	Schedule 40 PVC, 10 slot
SCREEN LENGTH	10 feet
ELEVATION, TOP OF CASING	122.62 feet
ELEVATION, LAND SURFACE	121.4 feet
DRILLER'S LOG AVAILABLE	yes, see Attachment 4
TOTAL DEPTH OF THE WELL	124.50 feet below TOC
CASING DIAMETER	2 inches
CASING TYPE AND LENGTH	Schedule 40 PVC, threaded, 110 feet
SWFWMD PERMIT #	548067-03
LANDFILL PERMIT #	SO-09187229

WELL IDENTIFICATION	**MW-5, perc pond compliance**
LATITUDE/LONGITUDE	28 ° 51'10.10"N/82 ° 26'19.60"W
AQUIFER MONITORED	Floridan
SCREEN TYPE & SLOT SIZE	Schedule 40 PVC, 10 slot
SCREEN LENGTH	10 feet
ELEVATION, TOP OF CASING	121.14 feet
ELEVATION, LAND SURFACE	118.6 feet
DRILLER'S LOG AVAILABLE	yes, see Attachment 4 (MW5 & MW6)
TOTAL DEPTH OF THE WELL	121.58 feet below TOC
CASING DIAMETER	2 inches
CASING TYPE AND LENGTH	Schedule 40 PVC,threaded, 110 feet
SWFWMD PERMIT #	548067-02 (Note: same as MW-6)
LANDFILL PERMIT #	SO09-187229

WELL IDENTIFICATION	**MW-6, perc pond compliance**
LATITUDE/LONGITUDE	28 ° 51'09.05"N/82 ° 26'19.55"W
AQUIFER MONITORED	Floridan
SCREEN TYPE & SLOT SIZE	Schedule 40 PVC, 10 slot
SCREEN LENGTH	10 feet
ELEVATION, TOP OF CASING	118.48 feet
ELEVATION, LAND SURFACE	115.8 feet
DRILLER'S LOG AVAILABLE	yes, see Attachment 4 (MW5 & MW6)
TOTAL DEPTH OF THE WELL	122.83 feet below TOC
CASING DIAMETER	2 inches
CASING TYPE AND LENGTH	Schedule 40 PVC, threaded, 110 feet
SWFWMD PERMIT #	548067-02 (Note: same as MW-5)
LANDFILL PERMIT #	SO09-187229

WELL IDENTIFICATION	**MW1-R(x) Note: abandoned before use**
LATITUDE/LONGITUDE	28 ° 51'20.60"N/82 ° 26'19.20"W
AQUIFER MONITORED	NA
SCREEN TYPE & SLOT SIZE	Schedule 40 PVC, 10 slot
SCREEN LENGTH	10 feet
ELEVATION, TOP OF CASING	118.25 feet
ELEVATION, LAND SURFACE	115.5 feet
DRILLER'S LOG AVAILABLE	See note below
TOTAL DEPTH OF THE WELL	121 feet
CASING DIAMETER	2 inches
CASING TYPE AND LENGTH	Schedule 40 PVC, about 120 feet
SWFWMD PERMIT #	550667-01
LANDFILL PERMIT #	SO09-187229 & SF09-211030

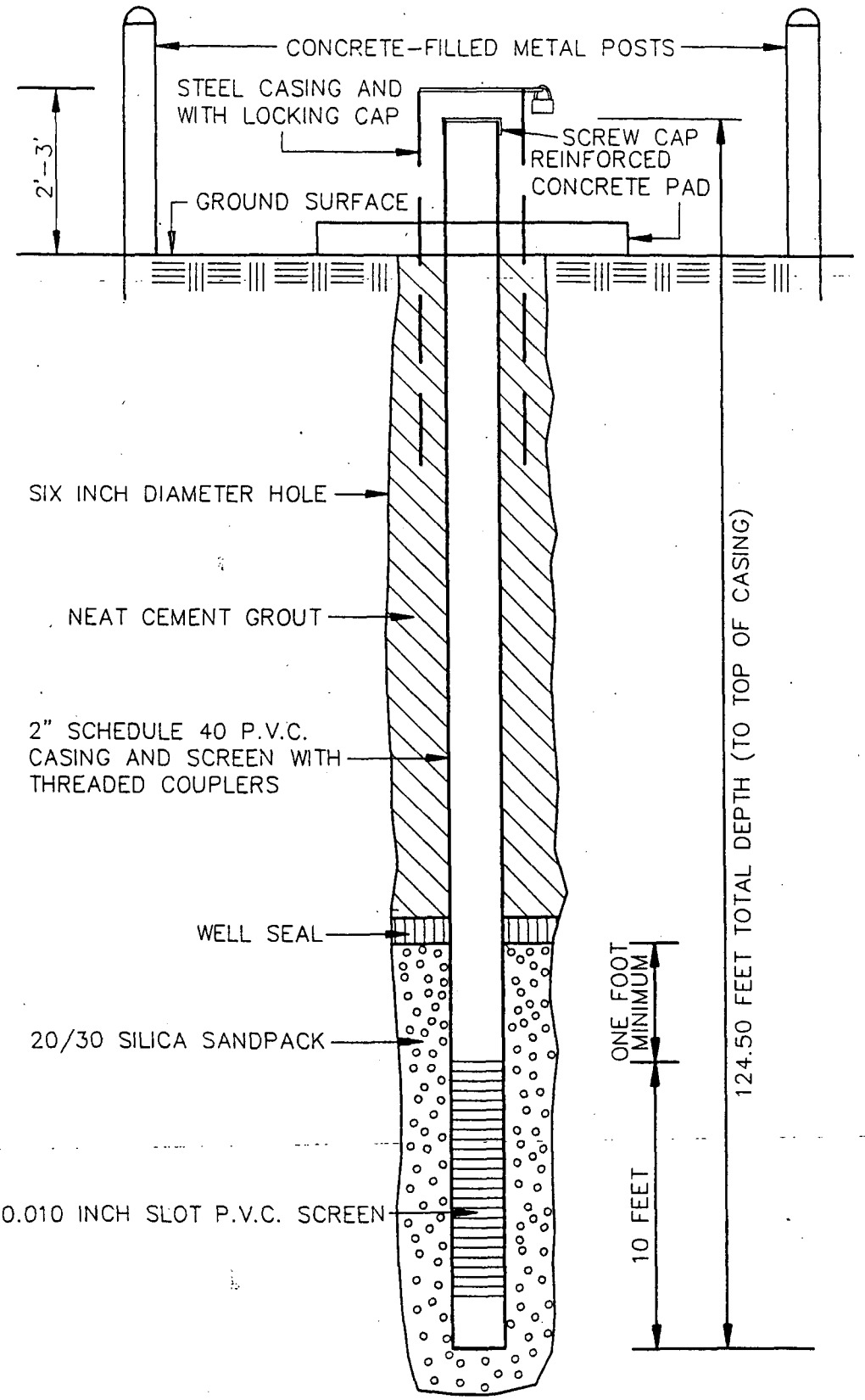
WELL IDENTIFICATION	**MW-1(R), Compliance and Background**
LATITUDE/LONGITUDE	28 ° 51' 20.47"N/82 ° 26' 19.34"W
AQUIFER MONITORED	Floridan
SCREEN TYPE & SLOT SIZE	Schedule 40 PVC, 6 slot
SCREEN LENGTH	20 feet
ELEVATION, TOP OF CASING	118.08 feet
ELEVATION, LAND SURFACE	115.3 feet
DRILLER'S LOG AVAILABLE	No, see note below
TOTAL DEPTH OF THE WELL	126.0 feet below TOC
CASING DIAMETER	2 inches
CASING TYPE AND LENGTH	Schedule 40 PVC, threaded, 106 feet
SWFWMD PERMIT #	unknown, see note below
LANDFILL PERMIT #	SO09-187229 & SF09-211030

*SWFWMD well construction permit dated 4/8/94, #550667-01, is the correct time frame for well MW1-R(x), the well completion report/drillers log with this permit number apparently describes the first replacement well (MW1-R(x) with 10 feet of screen but carries the completion date (9/94) for the second replacement well. The abandonment permit and report indicates a different well depth than these documents (127 vs 121 feet) for the first replacement well. No other paperwork was received from the driller, despite repeated requests.

WELL IDENTIFICATION	**MW-AA, Compliance**
LATITUDE/LONGITUDE	28 ° 51'09.23"N/82 ° 26'35.08"W
AQUIFER MONITORED	Floridan
SCREEN TYPE & SLOT SIZE	Schedule 40 PVC, 10 slot
SCREEN LENGTH	10 feet
ELEVATION, TOP OF CASING	106.11 feet
ELEVATION, LAND SURFACE	104.7 feet
DRILLER'S LOG AVAILABLE	yes, see Attachment 4
TOTAL DEPTH OF THE WELL	116.42 feet below TOC
CASING DIAMETER	2 inches
CASING TYPE AND LENGTH	Schedule 40 PVC, 103 feet
SWFWMD PERMIT #	548067-01
LANDFILL PERMIT #	SF09-211030

MONITOR WELL DETAIL

MW–4



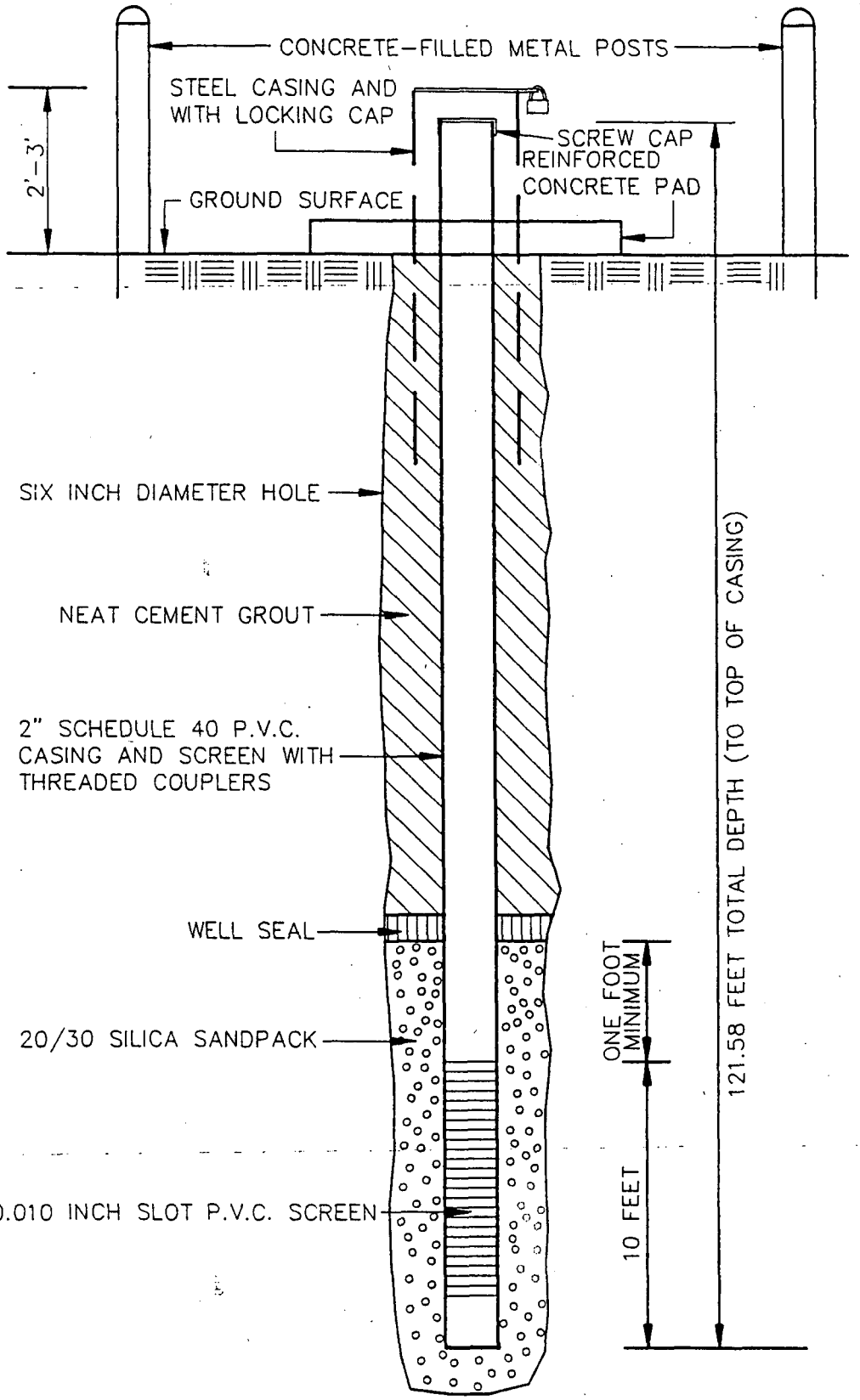
REVISED 10/4/94

Citrus County Department of Technical Services
Division of Engineering
P.O. BOX 440 Lecanto, FL. 32661
Phone: (904)746-2694

Proj. No.	90 – 614
Drawn by: J.M.M. Date:	10/8/93
Scale:	NOT TO SCALE
Sec. 1 Twp. 19 Rng. 18	

MONITOR WELL DETAIL

MW5



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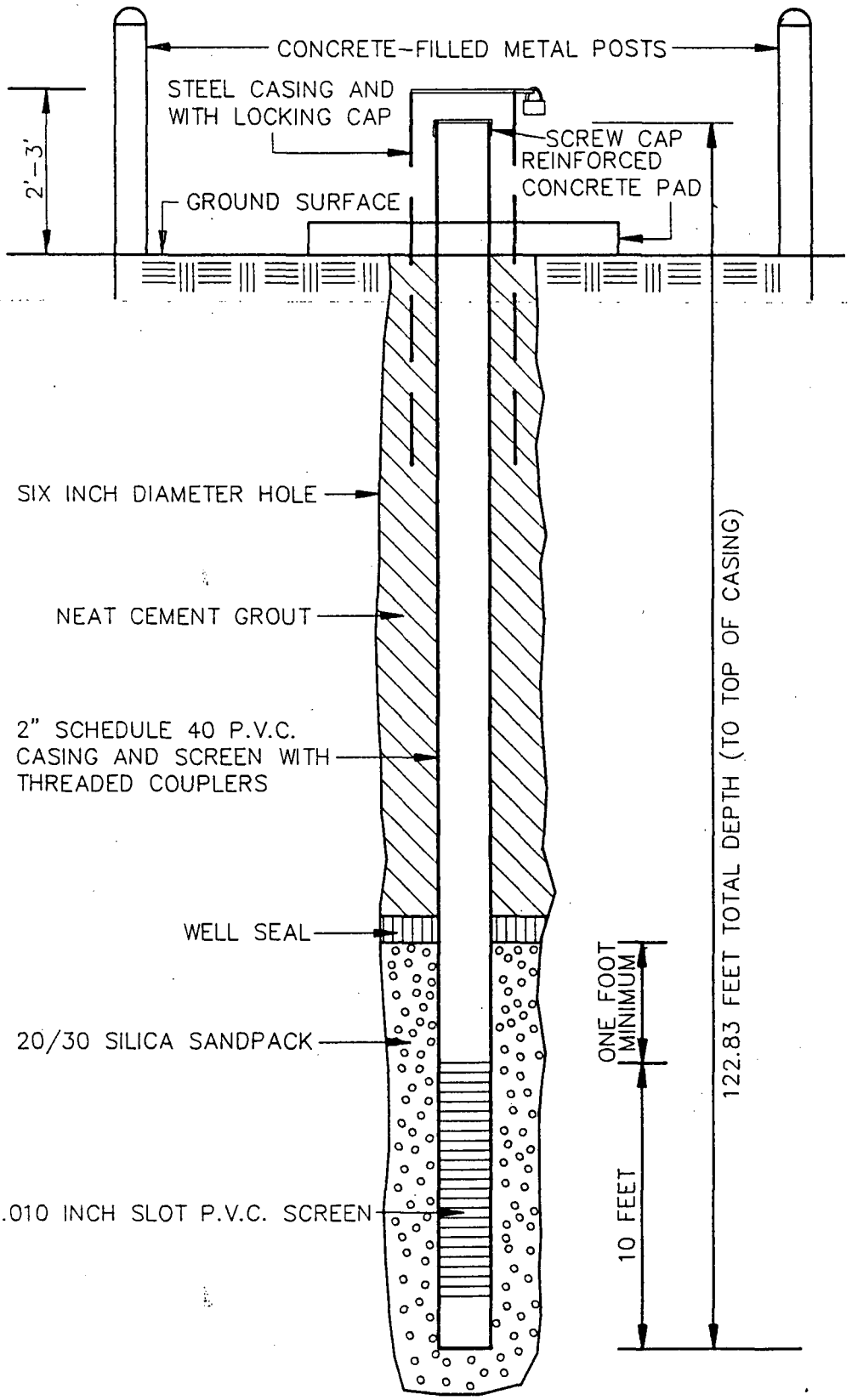
Scale:	NOT TO SCALE
Sec. 1 Twp. 19 Rng.	18

MONITOR WELL DETAIL

MW-6



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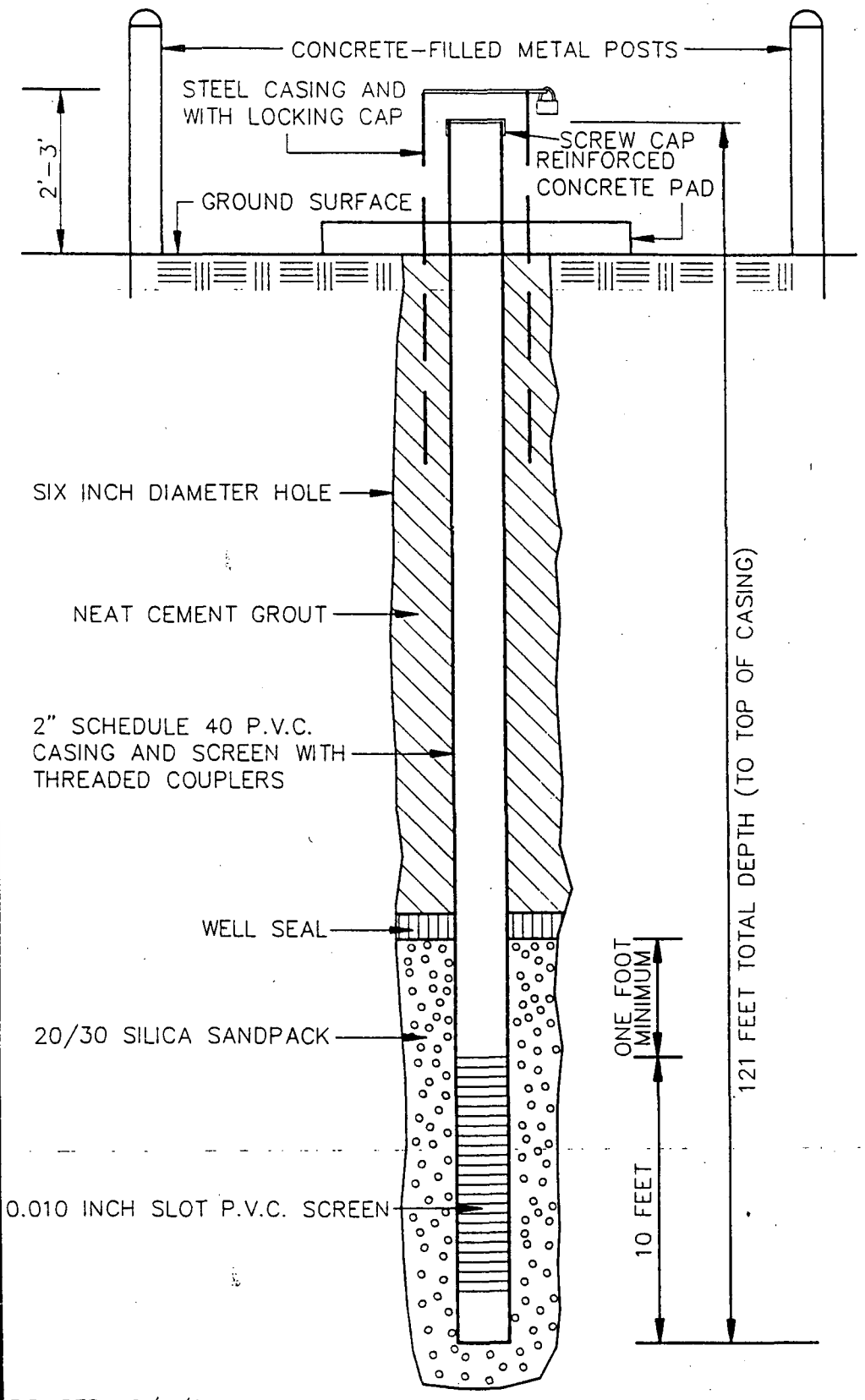
Scale:	NOT TO SCALE
Sec. 1 Twp. 19 Rng.	18

MONITOR WELL DETAIL
MW-R-1-ABANDONED



REVISED 10/4/94

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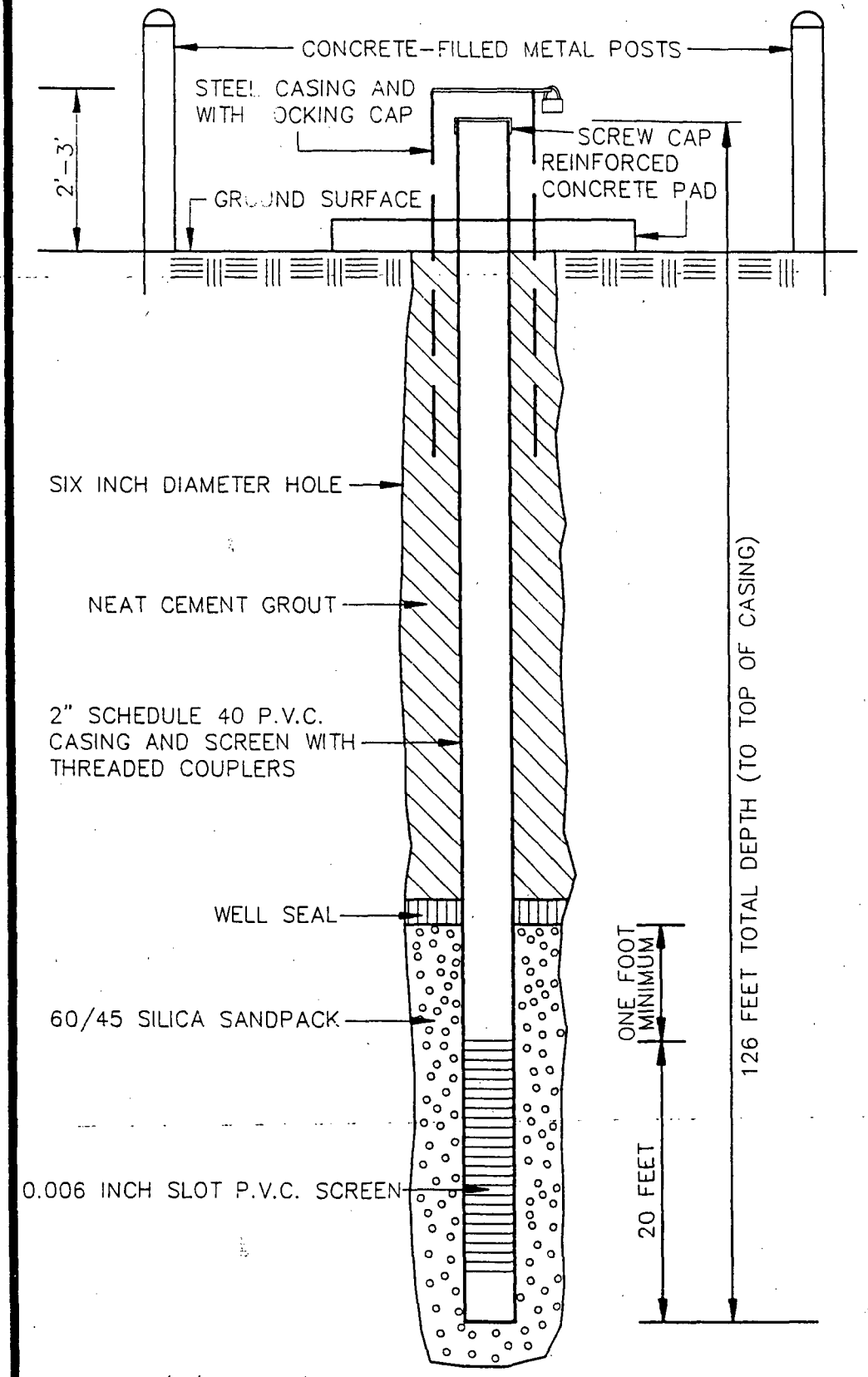
Sec. 1 Twp. 19 Rng.	18

MONITOR WELL DETAIL

MW-R-1 ACTIVE



REVISED 10/4/94

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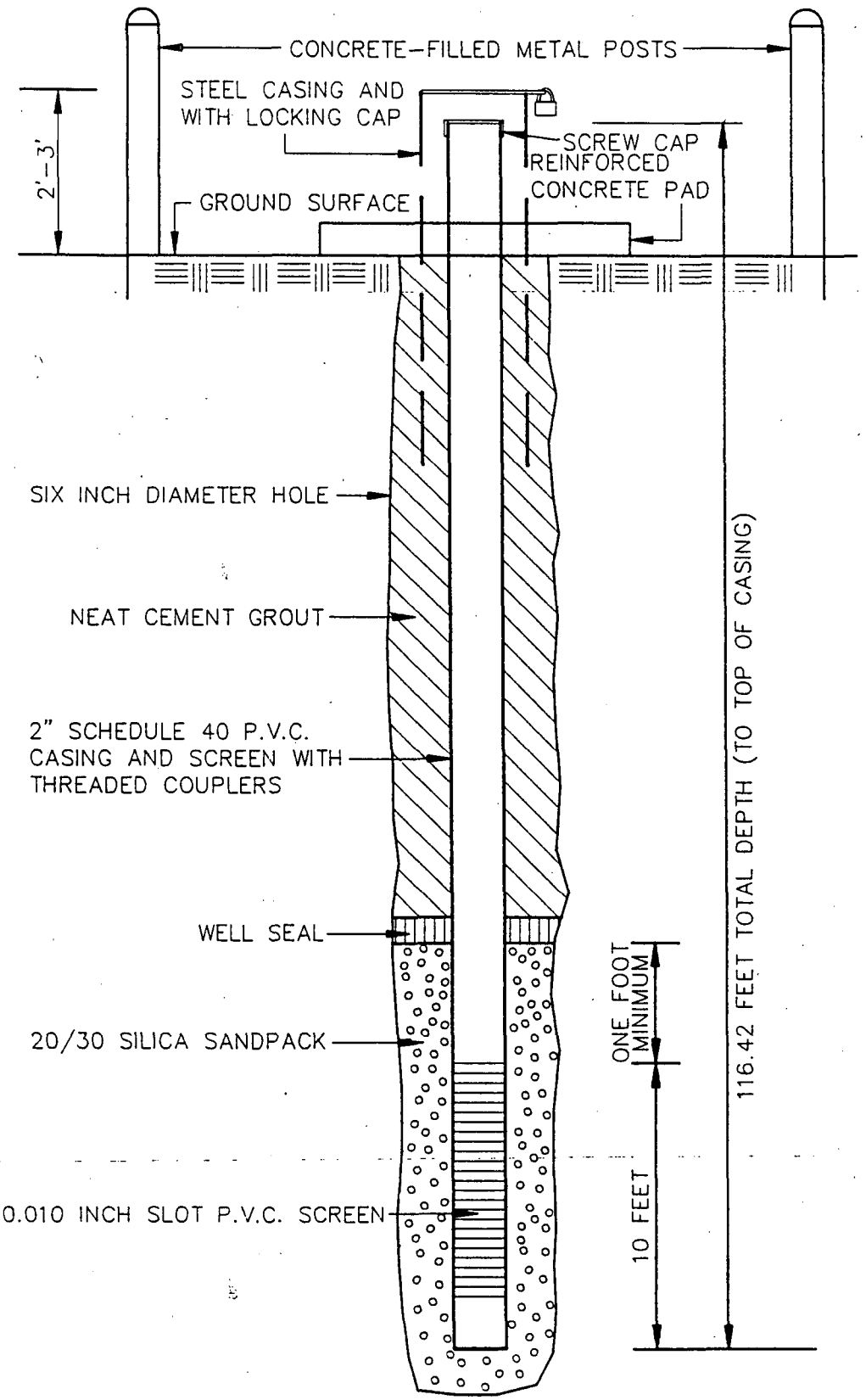
Scale:	NOT TO SCALE
Sec. 1 Twp. 19 Rng. 18	

MONITOR WELL DETAIL

MW–AA



REVISED 10/4/94

Citrus County Department of Technical Services
Division of Engineering
P.O. BOX 440 Lecanto, FL. 32661
Phone: (904)746–2694

Proj. No.	90 – 614
Drawn by: J.M.M. Date:	10/8/93
Scale:	NOT TO SCALE
Sec. 1 Twp. 19 Rng.	18

ATTACHMENT 3

REQUIRED INFORMATION ON ABANDONED WELLS

ATTACHMENT 3
ABANDONED MONITORING WELL DATA

WELL IDENTIFICATION	**MW-A**
LATITUDE/LONGITUDE	28 ° 51'09.23"N/82 ° 26'34.75"W
DRILLERS REPORT AVAILABLE	Yes, see Attachment 4
TOTAL DEPTH OF THE WELL	138 feet
CASING DIAMETER	4 inches
SWFWMD ABANDONMENT PERMIT #	548066.01
LANDFILL PERMIT #	SF09-211030
WELL IDENTIFICATION	**MW-1**
LATITUDE/LONGITUDE	28 ° 51'20.49"N/82 ° 26'19.21"W
TOTAL DEPTH OF THE WELL	128 feet
CASING DIAMETER	2 inches
SWFWMD ABANDONMENT PERMIT #	None provided by driller
LANDFILL PERMIT #	SO09-187229 & SF09-211030
WELL IDENTIFICATION	**MW-1(R)x**
LATITUDE/LONGITUDE	28 ° 51'20.61"N/82 ° 26'19.20"W
TOTAL DEPTH OF THE WELL	121 feet
CASING DIAMETER	2 inches
SWFWMD ABANDONMENT PERMIT #	Temp. 0301771
LANDFILL PERMIT #	SO09-187229 & SF09-211030

ATTACHMENT 4

DRILLERS LOGS

MW "A"

Form No. 25-18-9/92

Please complete in black ink or type

WELL COMPLETION REPORT

Owner's Name Citrus County Land Fill

Permit Number 548067-001

Water Well Contractor's Signature

2-94
Completion Date

License No. 9053

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): L. S.

Which is 10.5 Ft. [ ] Above [X] Below Land Surface

SURFACE CASING, CASING AND LINER MATERIAL:

Types	Diam. (In.)	From (Ft.)	To (Ft.)
P.V.C.	2"	+ 2'	103'

Neat Cement: No. of Bags	From (Ft.)	To (Ft.)
18	0'	98'

IRON:_____ppm SULFATE:_____ppm CHLORIDES:_____ppm

FINISH: Screen: 10" (.010) (Ft.) 103-113 Open Hole:_____(Ft.)

WELL LOCATION:

County Citrus

Qtr: N-W Qtr: S-E Sec: 1 Twp: 18-S Rge: 18-E

WELL USE

Public_____ Irrigation_____ 17-524_____

Domestic_____ Monitor X (Land Fill) Other_____

Depth (Ft.) From	To	Examine cutting at 20ft. 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		Tan Fi. Sa.
	20	
26		ORG. to Dk. Br. Fi. Cl. Sa.
	90'	
9		ORG. Si. Cl.
	115	
115		Wht. Si. Peatly Cemented
	130	Sa. w/ trace L.S. Frags

I certify that the information provided in this report is accurate and true.

Driller's Name: Lee E. Wade

4+

Form No. 25-18-9/92

Please complete in black ink or type

WELL COMPLETION REPORT

Owner's Name CITRUS COUNTY LANDFILL

Permit Number 548067-003

Water Well Contractor's Signature

4-94
Completion Date

License No. 9053

DRILL METHOD

[X] Rotary [ ] Cable Tool [ ] Jet [ ] Auger Other_____

Measured Static Water Level 117 +_____-_____Ft.

Measured Pumping Water Level_____+_____-_____Ft.

After_____ Hours At_____G.P.M.

Measuring Pt. (Describe): TOC

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

SURFACE CASING, CASING AND LINER MATERIAL:

Types	Diam. (In.)	From (Ft.)	To (Ft.)
SCH40 PVC	2"	0	110

Neat Cement: No. of Bags	From (Ft.)	To (Ft.)
18	0	108

IRON:_____ppm SULFATE:_____ppm CHLORIDES:_____ppm

FINISH: Screen:_____(Ft.) Open Hole:_____(Ft.)

Depth (Ft.) From	Depth (Ft.) To	Examine cutting at 20ft. 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	40	TAN FINE SAND
40	80	4 TAN CLAY SAND
80	130	4 TAN FINE SAND

WELL LOCATION:

County CITRUS

Qtr: NW Qtr: SE Sec: 1 Twp: 18S Rge: 18E

WELL USE

Public_____ Irrigation_____ 17-524_____

Domestic_____ Monitor X Other_____

I certify that the information provided in this report is accurate and true.

Driller's Name: GENEWADE

BBF BETTER BUSINESS FORMS

Form No. 25-18-9/92

Please complete in black ink or type

506

WELL COMPLETION REPORT

Owner's Name CITRUS COUNTY LANDFILL

Permit Number 548967-02

Water Well Contractor's Signature

2-94
Completion Date

License No. 9053

SURFACE CASING, CASING AND LINER MATERIAL:

Types*	Diam. (In.)	From (Ft.)	To (Ft.)
SCH 40 PVC	2"	0	110
Neat Cement: No. of Bags		From (Ft.)	To (Ft.)
18		0	108

IRON:____ ppm SULFATE:____ ppm CHLORIDES: ppm

FINISH: Screen: 10 (Ft.) Open Hole: (Ft.)

WELL LOCATION:

Qtr: NW Qtr: SE Sec: 1 Twp: 18S Rge: 18E County CITRUS

WELL USE

Public_____ Irrigation_____ 17-524_____

Domestic_____ Monitor X Other_____

DRILL METHOD

[X] Rotary [ ] Cable Tool [ ] Jet [ ] Auger Other_____

Measured Static Water Level 10.7 + _____ - _____ Ft.

Measured Pumping Water Level + _____ - _____ Ft.

After Hours At G.P.M.

Measuring Pt. (Describe): TOR

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

Depth (Ft.) From	To	Examine cutting at 20ft. 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	30	TAN CLAYSAND
30	70	LT TAN SLTY CLAY
70	100	TAN SLTY SAND
100	170	TAN SAND
		ALLELS THE SAME

I certify that the information provided in this report is accurate and true.

Driller's Name: TAKEMADE

WELL COMPLETION REPORT (Please complete in black ink or type.) Form 25-18 Rev. 4/94

PERMIT NUMBER 550667-01

WATER WELL CONTRACTOR'S SIGNATURE

COMPLETION DATE 9-94

OWNER'S NAME CITRUS COUNTY LANDFILL

LICENSE # 9053

DRILL METHOD [X] Rotary [ ] Cable Tool [ ] Combination [ ] Jet [ ] Auger Other

WELL USE: Public ____ Irrigation ____ 17-524 ____ Domestic ____ Monitor X Other

Neat Cement: No. of Bags		From (Ft.)	To (Ft.)
Bentonite: No. of Bags			

WELL LOCATION: County CITRUS

Qtr: NW Qtr: SE Sec: 1 Twp: 18S Rge: 18E

DATE STAMP

Official Use Only

Sketch of well location on property

GULF TO LAKE

Give distances from septic tank and house or other reference points

CHEMICAL ANALYSIS

Iron:____ ppm Sulfate:____ ppm

Chlorides:____ ppm

[ ] Lab Test [ ] Field Test Kit

Pump Type

[ ] Centrifugal [ ] Jet [ ] Submersible [ ] Turbine

Horsepower _____ Capacity _____ G.P.M. _____

Intake/Injection Depth _____ Ft.

Measured Static Water Level 11.7

Measured Pumping Water Level _____

After ____ Hours at ____ G.P.M.

Measuring Pt. (Describe): TOC

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

Casing: [ ] Black Steel [ ] Galv. [X] PVC Other _____

[1] Casing [2] Screen	Depth (Ft.)		DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes. Give color, grain size, and type of material. Note cavities, depth to producing zones.
Diameter & Depth (Ft.)	From	To	
Diameter 2"	0	14	LT BROWN SANDY CLAY
From ±3	14	45	ORANGE SANDY CLAY
To 11.7	45	53	TAN SANDY CLAY
	53	78	ORANGE/TAN FINE SANDY CLA
Diameter 2"	78	127	TAN SANDY CLAY
From 11.7			
To 127			
Diameter ____			
From ____			
To ____			

I certify that the information provided in this report is accurate and true.

Driller's Name: D. Sigler

(print or type)

APPLICATION TO CONSTRUCT, REPAIR, MODIFY OR ABANDON WELL

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

2379 Broad Street, Brooksville, FL 34609-6899 Ph: (904) 796-7211

Permit No. 530667-01

Stipulations Required: 2 | 17-524 Well:

WUP Application No.: | Owner No.:

ABOVE THIS LINE — FOR OFFICIAL USE ONLY

1. CITRUS COUNTY LANDFILL 230 W. GULF TO LAKE HWY INVERNESS FL 34461
Owner, Legal Name of Entity If Corporation | Address | City | Zip | Telephone Number

2. SAME
Well Location — Address, Road Name or Number, City, Zip

3. AMERICAN DRILLING 4-8-94 9053
Drilling Contractor | Date | License No.

14811 N. 12th ST
Address

LUTZ, FL 33549
City | State | Zip

4. **Number of Wells:** 1 *Check the Use of Well:*

___ Domestic	___ Irrigation	___ Livestock	___ Test (WUP)
___ Public Water Supply	___ Heat Pump/AC Supply	___ Industrial	X Monitor (type: MONITORING)
___ Recovery	___ Class V Heat Pump/AC Return	___ Class I Injection Well	___ Other ( )

5. **Application for:**
X New Construction
___ Repair/Modify
___ Abandonment

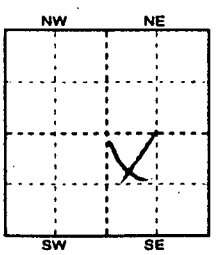
6. **Casing** X **or Liner** ___ (check one)
___ Black Steel
___ Galvanized
X PVC
___ Other (specify:)
Seal Material: PORTLAND CEMENT
Diameter: 2"

7. **Method of Construction:** X Rotary ___ Cable Tool ___ Combination ___ Auger ___ Other (specify:)

8. CITRUS
County | Subdivision Name | Lot | Block | Unit

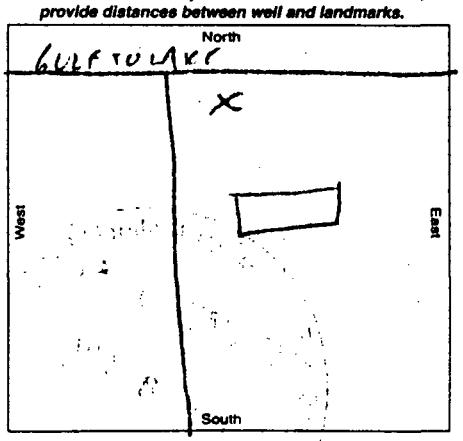
9. **Quarter Quarter Section** NW SE (Indicate Well On Chart)

10. **Section** 1 **Township** 18S **Range** 18E



11. **On 6-Inch Wells or Larger:**
Latitude | Longitude

Draw a map of well location and indicate well site with an "X." Identify known roads and landmarks; provide distances between well and landmarks.



12. *I hereby certify that I will comply with the rules of Chapter 40-D-3, Florida Administrative Code, and that a water use permit or artificial recharge permit, if needed, has been or will be obtained prior to commencement of well construction. I further certify that all information provided on this application is accurate and that I will obtain necessary approval from other federal, state, or local governments, if applicable. I agree to provide a well completion report to the District within 30 days after drilling operations cease.*

Signature of Contractor | License No. 9053

13. *Is this well or any other well or water withdrawal on the owner's contiguous property covered under a Water Use Permit (WUP) or WUP Application?* ___ *Yes* X *No*

If Yes, provide WUP No. ___ *Well I.D. No.* ___

I certify that I am the owner of the property, that the information provided on well location is accurate, and that I am aware of my responsibilities under Chapter 373, Florida Statutes, to maintain or properly abandon this well; or, I certify that I am the agent for the owner, that the information provided is accurate, and that I have informed the owner of his responsibilities as stated above.

Owner or Agent's Signature

DO NOT WRITE BELOW THIS LINE — FOR OFFICIAL USE ONLY

Granted By: | Title: | Date: 4/8/94

Owner Number: | Fee Received: $50.00 | Receipt No.: 01919 | Check No.: 5196

THIS PERMIT NOT VALID UNTIL PROPERLY SIGNED BY AN OFFICER OF SWFWMD(R). IT SHALL BE AVAILABLE AT THE WELL SITE DURING ALL DRILLING OPERATIONS.

SF 306 (3) REV. 9/92

PRINTED WITH SOY INK

WHITE: SWFWMD FILE COPY
YELLOW: DRILLING CONTRACTOR COPY/1
PINK: DRILLING CONTRACTOR COPY/2

Please complete in black ink or type

WELL COMPLETION REPORT

Owner's Name CITRUS COUNTY LANDFILL

Permit Number 548066.01

X _____ 2-94

Water Well Contractor's Signature — Completion Date

License No. 9053

SURFACE CASING, CASING AND LINER MATERIAL:

Types	Diam. (In.)	From (Ft.)	To (Ft.)
SCH 40 PVC	4"		

Neat Cement: No. of Bags	From (Ft.)	To (Ft.)

IRON:_____ppm SULFATE:_____ppm CHLORIDES:_____ppm

FINISH: Screen:_____(Ft.) Open Hole:_____(Ft.)

WELL LOCATION: County_____

Qtr:_____ Qtr:_____ Sec:_____ Twp:_____ Rge:_____

WELL USE

Public_____ Irrigation_____ 17-524_____

Domestic_____ Monitor X Other_____

DRILL METHOD

[ ] Rotary [ ] Cable Tool [ ] Jet [ ] Auger Other_____

Measured Static Water Level _____+_____-_____Ft.

Measured Pumping Water Level_____+_____-_____Ft.

After_____ Hours At_____G.P.M.

Measuring Pt. (Describe):_____

Which is_____Ft. [ ] Above [ ] Below Land Surface

Depth (Ft.) From	Depth (Ft.) To	Examine cutting at 20ft. 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.
		ABANDON WELL
		4"X 138'
		WITH 11 BAGS CEMENT
		GROUT

I certify that the information provided in this report is accurate and true.

Driller's Name: E. CLAY

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
WELL ABANDONMENT INSPECTION REPORT

Abandonment Permit No. 548066.01 Section 1 Township 18 Range 18

Drilling Contractor American Drilling License No. 9053

Address of Well: Street 230 W. Gulf to Lake Hwy.

County Citrus City Lecanto Zip 34461

Property Owner Citrus Co. Landfield CUP No.

WELL SPECIFICATIONS

T.D. of Well 138'

Casing: Diameter 4" Depth —

Material - Black Steel, Galv. Steel, PVC, Other

Is well information verified by driller's log? Yes, No (Explain in Comments)

GROUT SPECIFICATIONS AND INSPECTION

Date	2-14-94		
Time arrived at site	2:30		
Grout Interval	138' to 0'		
*Estimated No. of 94 lb. sacks or yds. of cement	10.7 bags		
Time grout started	2:30		
Time grout completed	4:20		
Actual No. of 94 lb. sacks or yds. of cement (specify type of cement)	Type I 11 bags		
Gallons of water per 94 lb. sack or yds. of cement	5.5		
**Special grout additives, type, amount	None		
Grout method (see terms on back of page)	Tremie		
Time departed site	4:25		

*Estimate before grouting begins (see back of page for grout tables).
**See Bentonite Table on back of page.

COMMENTS

Desired returns to surface was observed

Attach a Field Investigation Report for unsatisfactory work.

Drillers Signature [signature] Date 2-14-94

Observers Signature Carl Ratliff Date 2-14-94

Work satisfactorily completed in accordance with Chapter 17-21. F.A.C.

Supervisors Signature _____ Date _____
(Not official unless signed by SWFWMD Supervisor)

DRILLER COPY

WELL COMPLETION REPORT (Please complete in black ink or type.)

Form 25-18 Rev. 4/94

PERMIT NUMBER Temp # 0301771

WATER WELL CONTRACTOR'S SIGNATURE Mike A. White

COMPLETION DATE 9-26-94

WELL USE: Public ____ Irrigation ____ 17-524 ____ Domestic ____ Monitor ✓ Other ____

OWNER'S NAME Citrus County Land Fill.

LICENSE # 9053

DRILL METHOD [ ] Rotary [ ] Cable Tool [ ] Combination [ ] Jet [ ] Auger Other ABANDONMENT.

Neat Cement: No. of Bags		From (Ft.)	To (Ft.)
4BAGS	2"	0	121
Bentonite: No. of Bags			

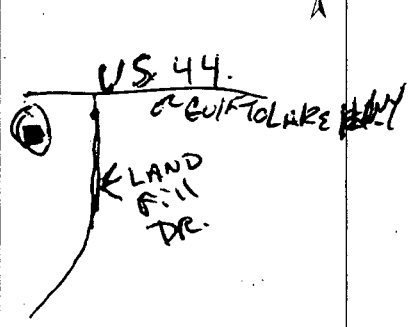
WELL LOCATION: County Citrus

Qtr: NW Qtr: SE Sec: 1 Twp: 18S Rge: 18E

DATE STAMP

Official Use Only

Sketch of well location on property



Give distances from septic tank and house or other reference points

CHEMICAL ANALYSIS

Iron: ____ ppm Sulfate: ____ ppm

Chlorides: ____ ppm

[ ] Lab Test [ ] Field Test Kit

Pump Type

[ ] Centrifugal [ ] Jet [ ] Submersible [ ] Turbine

Horsepower ____ Capacity ____ G.P.M. ____

Intake/Injection Depth ____ Ft.

Measured Static Water Level 117

Measured Pumping Water Level ____

After ____ Hours at ____ G.P.M.

Measuring Pt. (Describe): ____

Which is ____ Ft. [✓] Above [ ] Below Land Surface

Casing: [ ] Black Steel [ ] Galv. [✓] PVC Other ____

[ ] Casing [ ] Screen Diameter & Depth (Ft.)	Depth (Ft.) From	To	DRILL CUTTINGS LOG Examine cuttings every 20 ft. or at formation changes. Give color, grain size, and type of material. Note cavities, depth to producing zones.
Diameter 2 From 0 To 121			grout
Diameter ____ From ____ To ____			
Diameter ____ From ____ To ____			

I certify that the information provided in this report is accurate and true.

Driller's Name: *(print or type)* Duncan Singleton

Temp 0301771

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
WELL ABANDONMENT INSPECTION REPORT

Abandonment Permit No. ____ Section 16 Township 18 Range 18

Drilling Contractor AMERICAN License No. 9053

Address of Well: Street 220 W. Gulf to Lake

County Citrus City Lecanto Zip 34461

Property Owner Citrus County Landfill CUP No. ____

WELL SPECIFICATIONS

T.D. of Well 121

Casing: Diameter 2" Depth ____

Material - Black Steel, Galv. Steel, PVC, Other ____

Is well information verified by driller's log? Yes, No (Explain in Comments)

GROUT SPECIFICATIONS AND INSPECTION

SPS - 151X

Date	9-26-94		
Time arrived at site	10:20		
Grout interval	121 - 0		
*Estimated No. of 94 lb. sacks or yds. of cement	2.42 Bags		
Time grout started	10:25		
Time grout completed	11:00		
Actual No. of 94 lb. sacks or yds. of cement (specify type of cement)	Type I 4 Bags		
Gallons of water per 94 lb. sack or yds. of cement	5.5 G		
**Special grout additives, type, amount			
Grout method (see terms on back of page)	Tremie		
Time departed site	11:05		

*Estimate before grouting begins (see back of page for grout tables).
**See Bentonite Table on back of page.

COMMENTS

Return to surface observed

Attach a Field Investigation Report for unsatisfactory work.

Drillers Signature DW Sigh Date 9-26-94

Observers Signature [signature] Date 9-26-94

Work satisfactorily completed in accordance with Chapter 17-21. F.A.C.

Supervisors Signature ____ Date ____

(Not official unless signed by SWFWMD Supervisor)

DRILLER COPY

The following grouting techniques and procedures shall be adhered to. Failure to do so could jeopardize the approval of the well abandonment due to the grouting technique used.

1. District representative must calculate a theoretical amount of cement needed prior to the beginning of the grouting operation.

2. Cement and water shall be mixed at a ratio of 5.2 to 5.5 gallons of water to one 94 lb. bag of portland cement. No other mix will be accepted unless approved by the Well Construction Hydrologist.

3. Should the cement return to the surface with less than the acceptable amount, then the tremie pipe should be moved to clear the annulus.

The following table is the minimum acceptable amount of cement per ft. at 5.2 gallons of water per 94 lb. sack of cement (yields 8.82 gallons of slurry/sack) for neat cement slurry to be used in grouting wells. Table assumes no formation loss. Quantity actually used may be rounded up to the nearest ¼ sack.

Hole Diameter	Hole Volume Gallons/one ft.	Bags/one ft.
2"	.16	.02
4"	.65	.08
5"	1.02	.12
6"	1.47	.17
8"	2.61	.30
10"	4.08	.46
12"	5.87	.66
16"	10.44	1.16
20"	16.32	1.82

Bentonite Additive Table

Gallons of water required per 94 lb. sack of cement when dry mixed with Bentonite.

A dispersant may be added if slurry becomes difficult to pump.

% Bentonite	Gallons of water/ sack of cement	Slurry yield gallons/ sack of cement	Multiply for sacks of cement required
10	11.7	15.78	.55
8	10.4	14.36	.61
6	9.1	12.94	.68
4	7.8	11.59	.76
2	6.5	10.17	.86
0	5.2	8.82	1.00

Grout Methods: Tremie, Dump Bailer, Other (explain).

APPLICATION TO CONSTRUCT, REPAIR, MODIFY OR ABANDON WELL

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

2379 Broad Street, Brooksville, FL 34609-6899 Ph: (904) 796-7211

Permit No. 248166-01

Stipulations Required: 8 | 17-524 Well:

WUP Application No.: | Owner No.:

ABOVE THIS LINE -- FOR OFFICIAL USE ONLY

1. CITRUS COUNTY LANDFILL 230 W. GULF TO LAKE HWY LECANTO, FL 34461
Owner, Legal Name of Entity If Corporation | Address | City | Zip | Telephone Number

2. SAME AS ABOVE
Well Location — Address, Road Name or Number, City, Zip

3. AMERICAN DRILLING | 2-8-94 | 9053
Drilling Contractor | Date | License No.

1481 N. 12 ½ ST
Address

LUTZ, FL 33549
City | State | Zip

Fold at this line in order that address is viewable through envelope window

4. **Number of Wells:** 1 *Check the Use of Well:*

___ Domestic	___ Irrigation	___ Livestock	___ Test (WUP)
___ Public Water Supply	___ Heat Pump/AC Supply	___ Industrial	X Monitor (type WATER QUALITY)
___ Recovery	___ Class V Heat Pump/AC Return	___ Class I Injection Well	___ Other ( )

5. **Application for:**
___ New Construction
___ Repair/Modify
X Abandonment

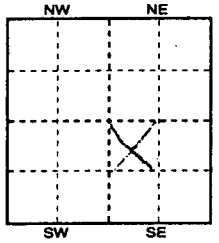
6. **Casing** X **or Liner** ___ (check one)
___ Black Steel
___ Galvanized
X PVC
___ Other (specify:)
Seal Material: NEAT CEMENT
Diameter: 2

7. **Method of Construction:** ___ Rotary ___ Cable Tool ___ Combination ___ Auger ___ Other (specify: TREMIE)

8. CITRUS | | | | |
County | Subdivision Name | Lot | Block | Unit

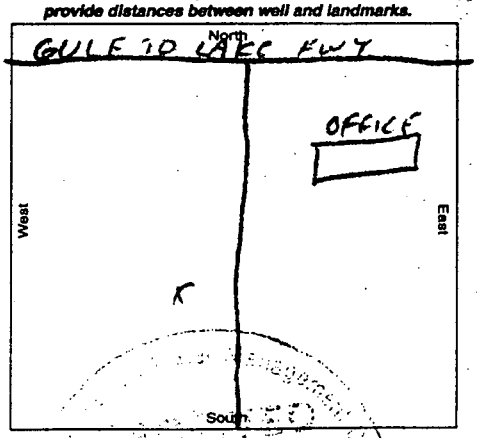
9. **Quarter Quarter Section** NWSE (Indicate Well On Chart)

10. **Section** 1 **Township** 18S **Range** 18E



11. **On 6-Inch Wells or Larger:**
Latitude | Longitude

Draw a map of well location and indicate well site with an "X." Identify known roads and landmarks; provide distances between well and landmarks.



12. *I hereby certify that I will comply with the rules of Chapter 40-D-3, Florida Administrative Code, and that a water use permit or artificial recharge permit, if needed, has been or will be obtained prior to commencement of well construction. I further certify that all information provided on this application is accurate and that I will obtain necessary approval from other federal, state, or local governments, if applicable. I agree to provide a well completion report to the District within 30 days after drilling operations cease.*

Signature of Contractor | License No. 9053

13. *Is this well or any other well or water withdrawal on the owner's contiguous property covered under a Water Use Permit (WUP) or WUP Application?* ___ Yes X No

If Yes, provide WUP No. ___ *Well I.D. No.* ___

FEB 9 1994

I certify that I am the owner of the property, that the information provided on well location is accurate, and that I am aware of my responsibilities under Chapter 373, Florida Statutes, to maintain or properly abandon this well; or, I certify that I am the agent for the owner, that the information provided is accurate, and that I have informed the owner of his responsibilities as stated above.

Owner or Agent's Signature

DO NOT WRITE BELOW THIS LINE -- FOR OFFICIAL USE ONLY

Granted By: | Title: | Date: 2/7/94

Owner Number: | Fee Received: $50.00 | Receipt No.: 41-3 | Check No.: 4329

THIS PERMIT NOT VALID UNTIL PROPERLY SIGNED BY AN OFFICER OF SWFWMD(R). IT SHALL BE AVAILABLE AT THE WELL SITE DURING ALL DRILLING OPERATIONS.

SF 306 (3) REV. 9/92

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WHITE: SWFWMD FILE COPY
YELLOW: DRILLING CONTRACTOR COPY/1
PINK: DRILLING CONTRACTOR COPY/2

SOUTHWEST FLORIDA
WATER MANAGEMENT DISTRICT
7601 HWY 301 NORTH, TAMPA, FL 33637

DISTRICT
RECEIPT
NO. TA94-01253

****

DATE OF RECEIPT: 02/09/94

COUNTER RECEIPT

TRANSACTION: WATER WELL CONSTRUCTION

REFERENCE #: 9053

PAID BY: CHECK

CHECK DATE: 02/09/94

CHECK NBR: 2379

AMOUNT: $50.00

AMERICAN DRILLING, INC.
14811 NORTH 12TH STREET
LUTZ, FL 33549

Jan A. Edwards
CASHIER

****

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

BROOKSVILLE SERVICE OFFICE

STIPULATION # 8 - TEST/MONITOR WELL

A. This well is to be used as a test/monitor well. If it is to be converted into a production well, an additional permit shall be obtained prior to conversion.

B. There shall be no injection of fluids into the monitor well without prior written approval from the District. This includes, but is not limited to treated ground water, or the introduction of microbes for In-Situ aquifer restoration.

C. While drilling the well, if confining beds (i.e. clay or hardpan intervals) are encountered, then the well shall be constructed in such a manner as to prevent the unauthorized interchange of water between different water bearing zones as per Chapter 17-532.500(2)(C), Florida Administrative Code, (F.A.C.). This includes, but is not limited to the screened or open hole interval and the annular space.

D. Prior written approval from the District shall be required if the monitor well will be pumped for use in hydrodynamic control and/or contaminant plume management.

E. In the event the well needs to be abandoned, an abandonment permit shall be obtained prior to commencing with abandonment procedures.

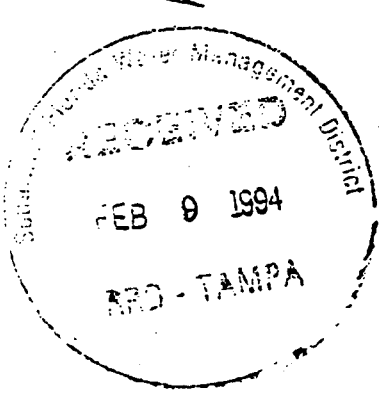
F. An observer from our Field Office is required on all abandonments to ensure compliance with Chapter 17-532, F.A.C. Please contact our Enforcement Coordinator, Sandy Semegen, in our Enforcement Department at (904) 796-7211 for additional information.

Approved by: _____

Permit # 348066-01

Date: _____

Stip #8
(2/93)
COPY TO OWNER



SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

BROOKSVILLE SERVICE OFFICE

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Approved by: _____

Permit # 3480606-01

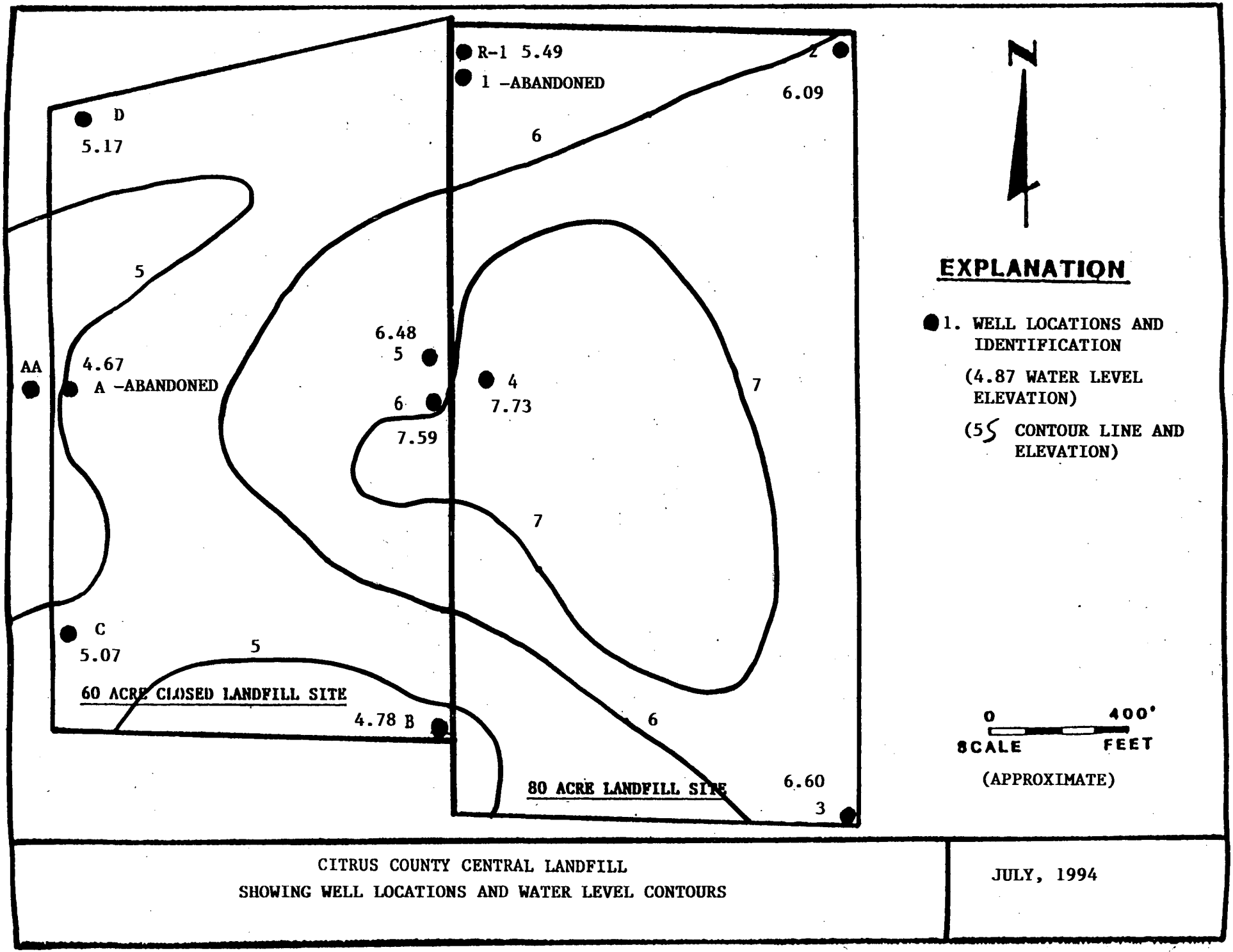
Date: _____

Stip #8
(2/93)
COPY TO OWNER

Southwest Florida Water Management District
RECEIVED
FEB 9 1994
ARD - TAMPA

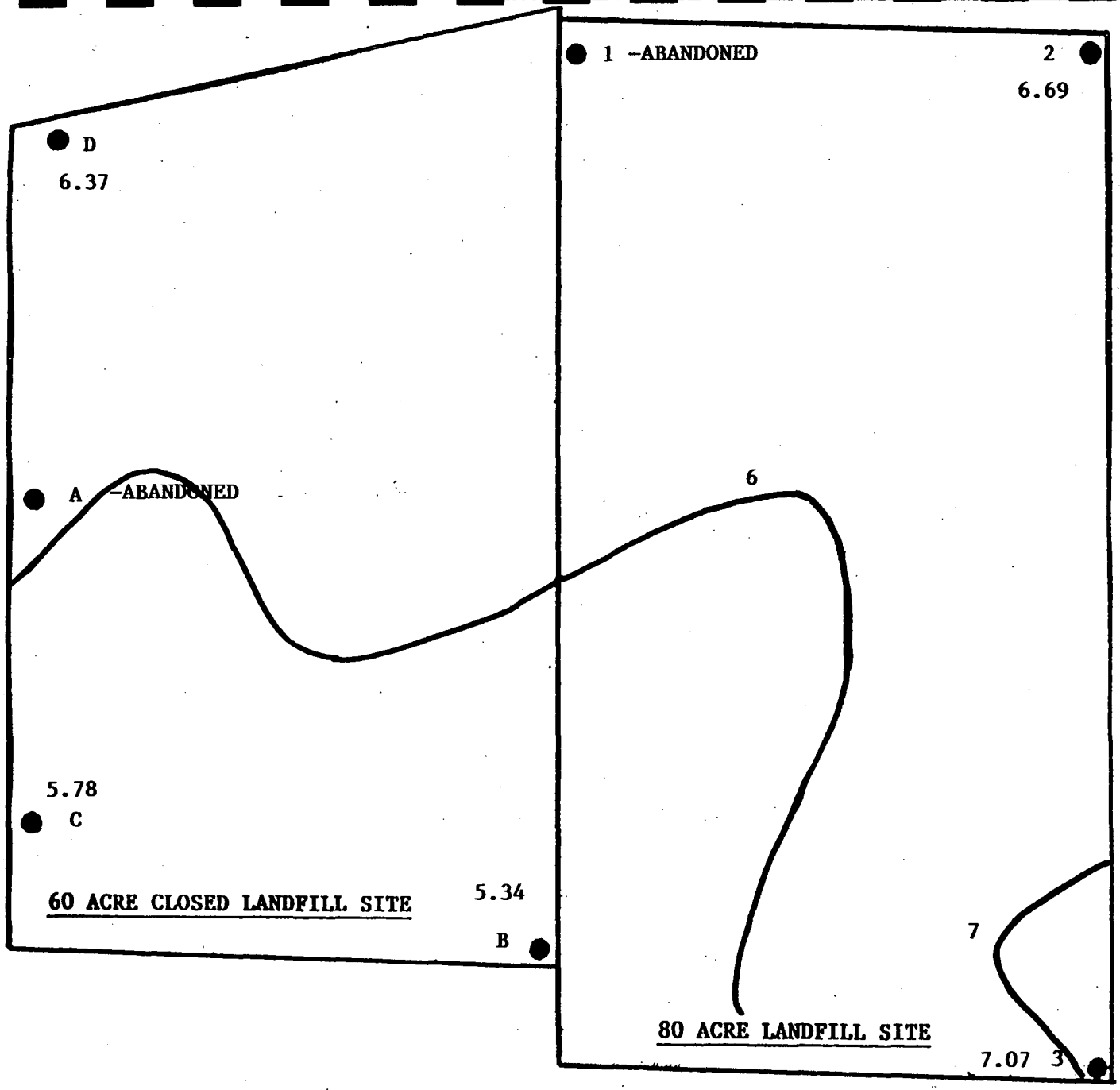
ATTACHMENT 5

WATER LEVEL MAPS



CITRUS COUNTY CENTRAL LANDFILL
SHOWING WELL LOCATIONS AND WATER LEVEL CONTOURS

JULY, 1994



N

EXPLANATION

● 1. WELL LOCATIONS AND IDENTIFICATION

(4.87 WATER LEVEL ELEVATION)

(5 CONTOUR LINE AND ELEVATION)

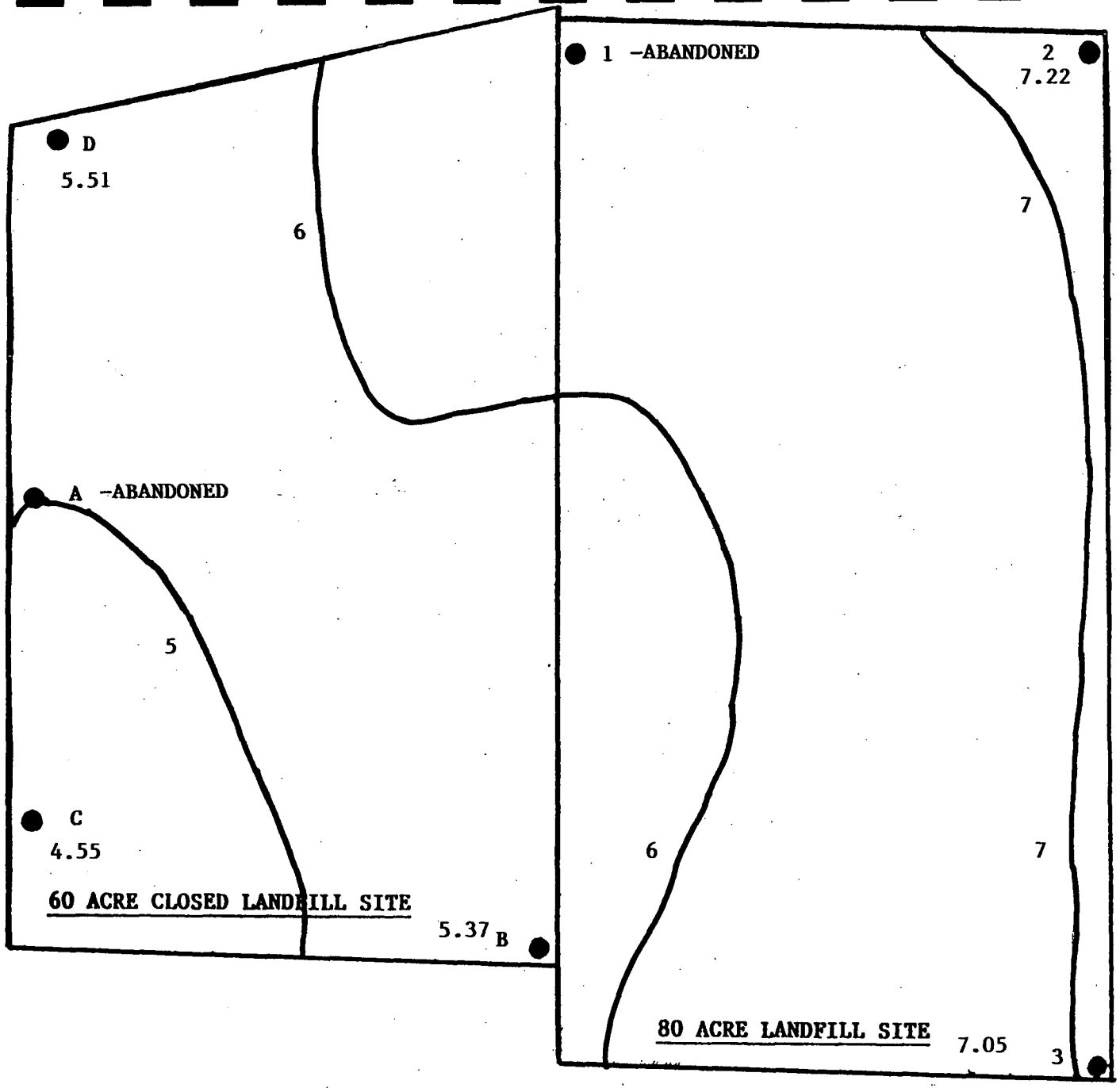
0 400'

SCALE FEET

(APPROXIMATE)

CITRUS COUNTY LANDFILL SITE MAP
SHOWING WELL LOCATIONS AND WATER LEVEL CONTOURS

MAY, 1994



N

EXPLANATION

● 1. WELL LOCATIONS AND IDENTIFICATION

(4.87 WATER LEVEL ELEVATION)

(5 CONTOUR LINE AND ELEVATION)

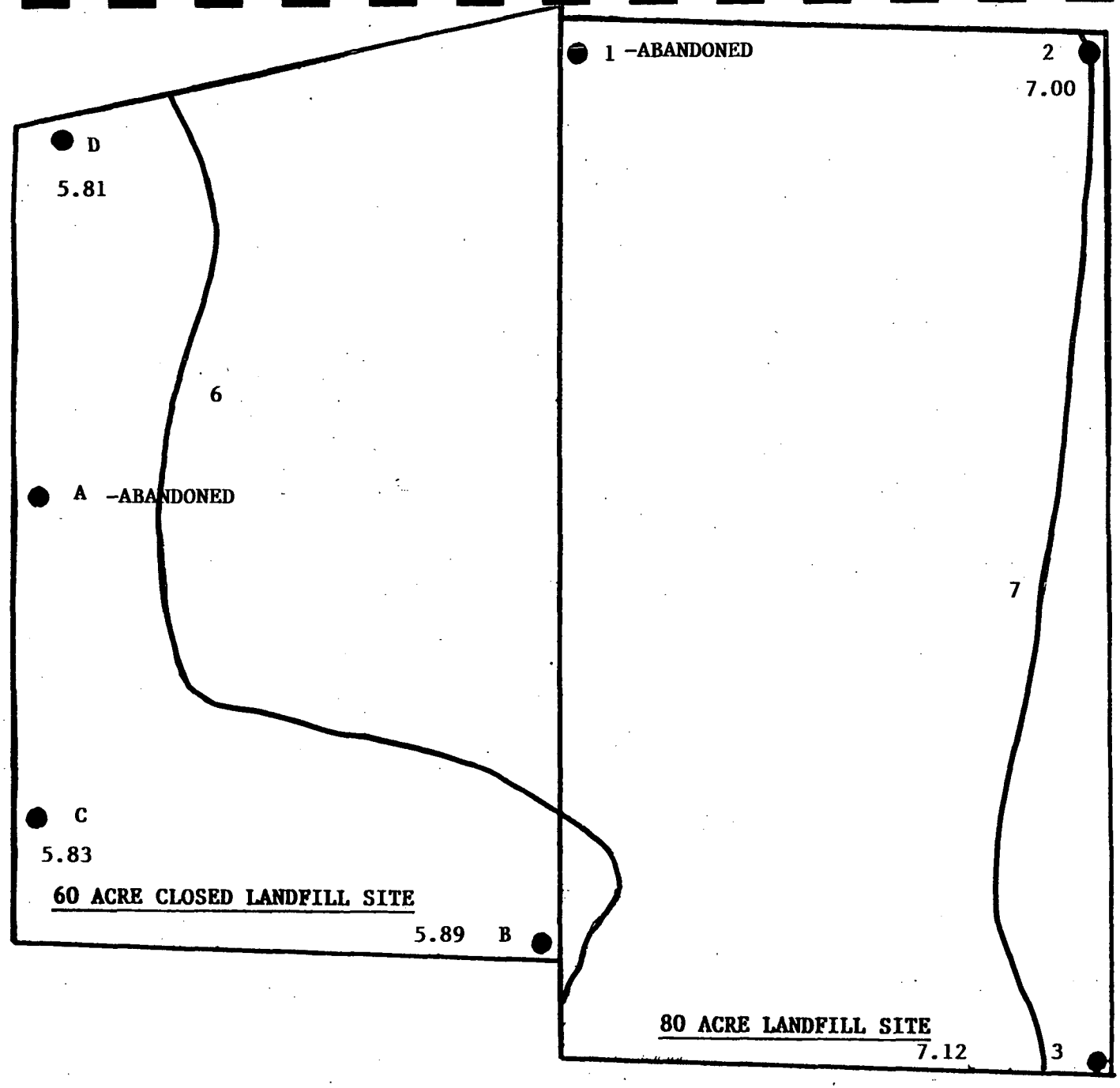
0 400'

SCALE FEET

(APPROXIMATE)

CITRUS COUNTY LANDFILL SITE MAP
SHOWING WELL LOCATIONS AND WATER LEVEL CONTOURS

APRIL, 1994



N

EXPLANATION

● 1. WELL LOCATIONS AND IDENTIFICATION

(4.87 WATER LEVEL ELEVATION)

(5 5 CONTOUR LINE AND ELEVATION)

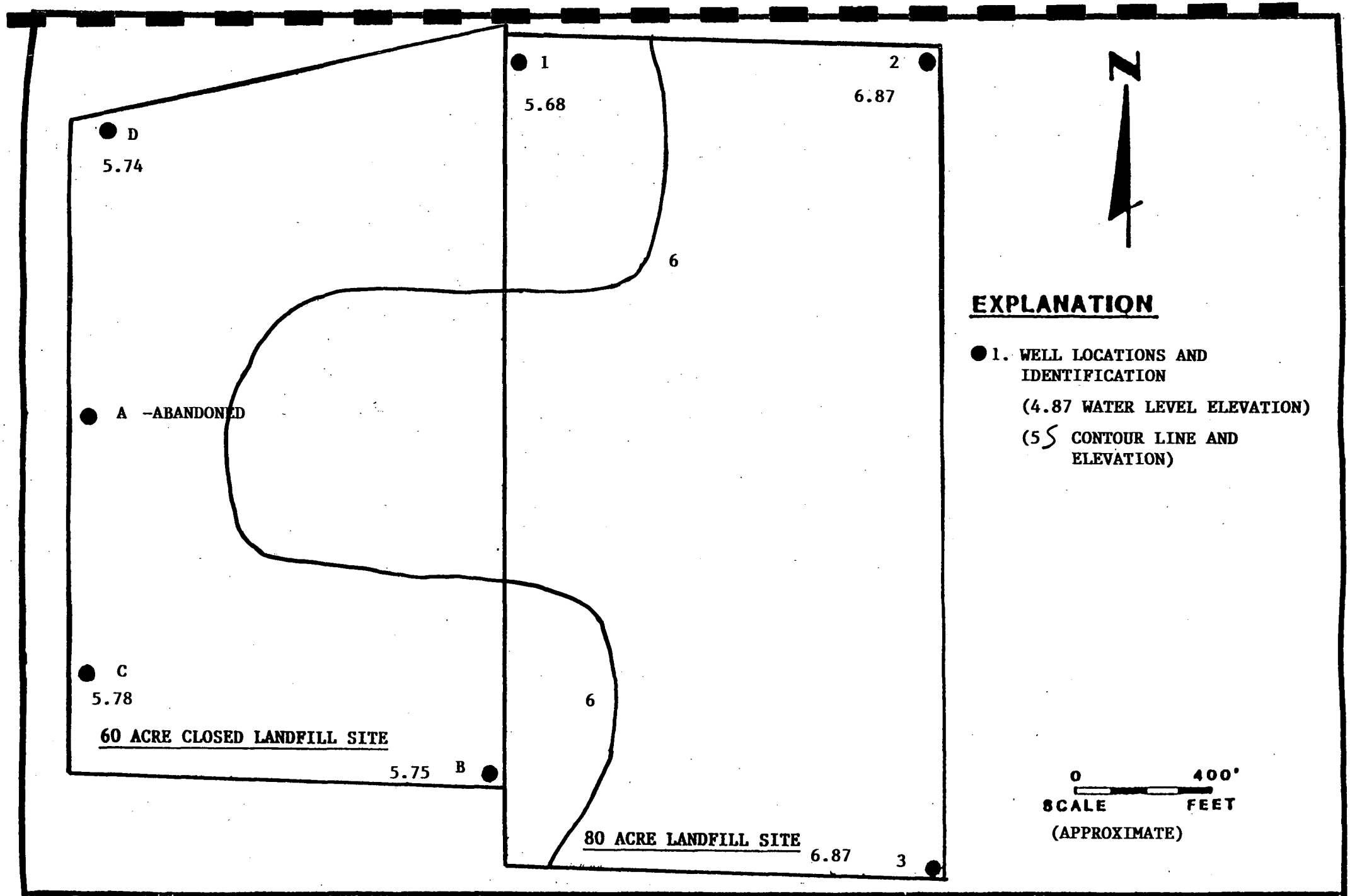
0 400'

SCALE FEET

(APPROXIMATE)

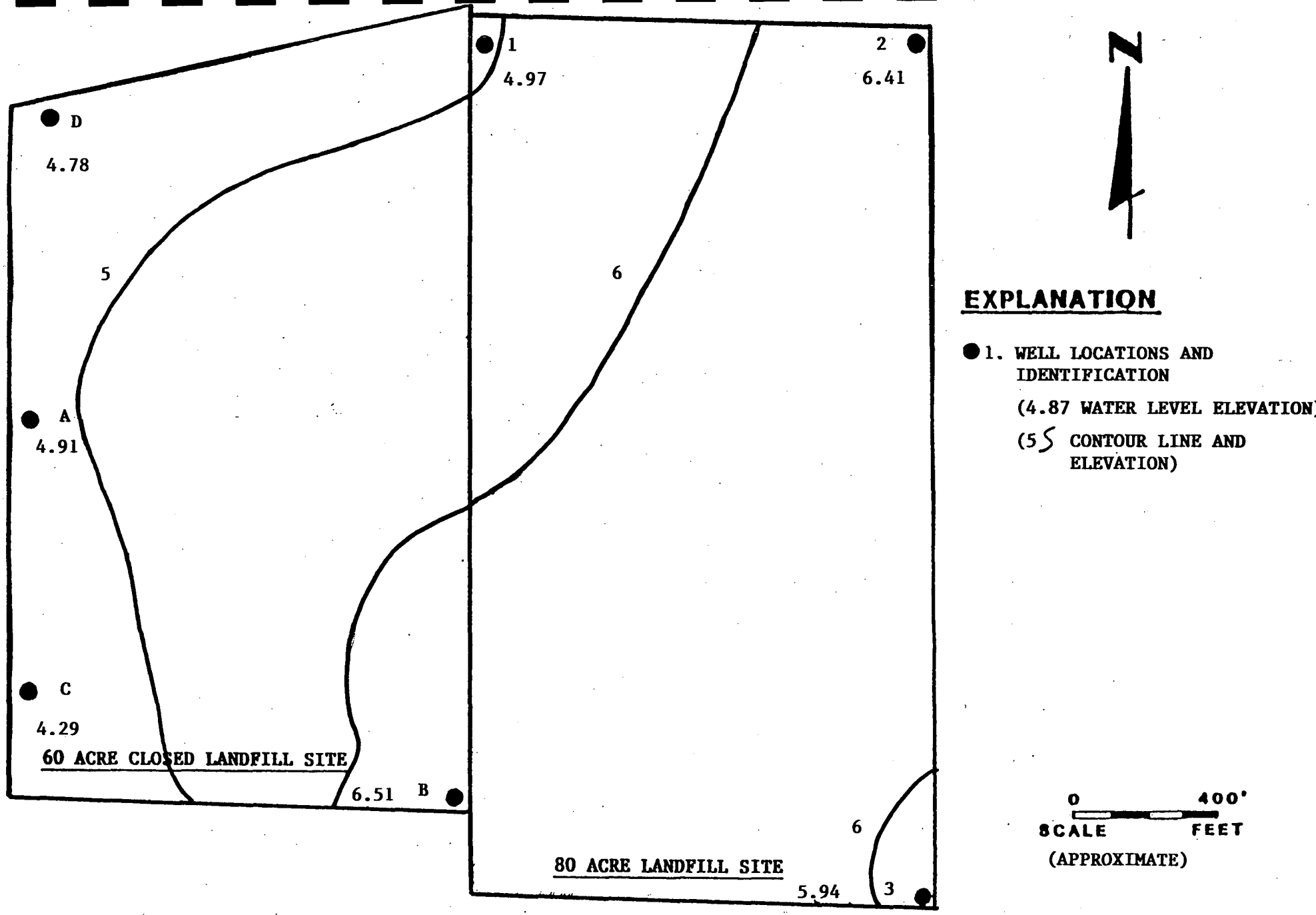
CITRUS COUNTY LANDFILL SITE MAP
SHOWING WELL LOCATIONS AND WATER LEVEL CONTOURS

MARCH, 1994



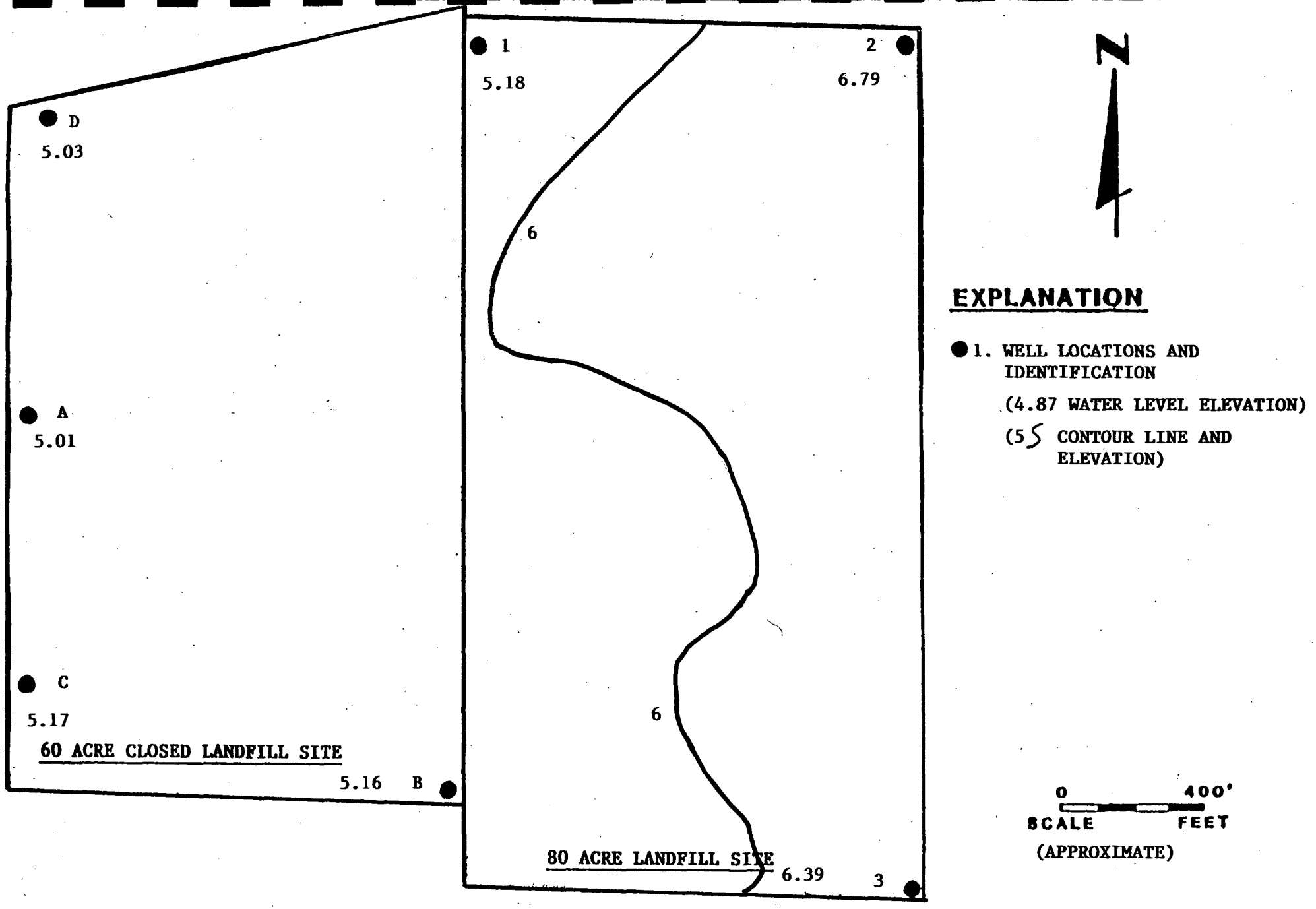
CITRUS COUNTY LANDFILL SITE MAP
SHOWING WELL LOCATIONS AND WATER LEVEL CONTOURS

FEBRUARY, 1994



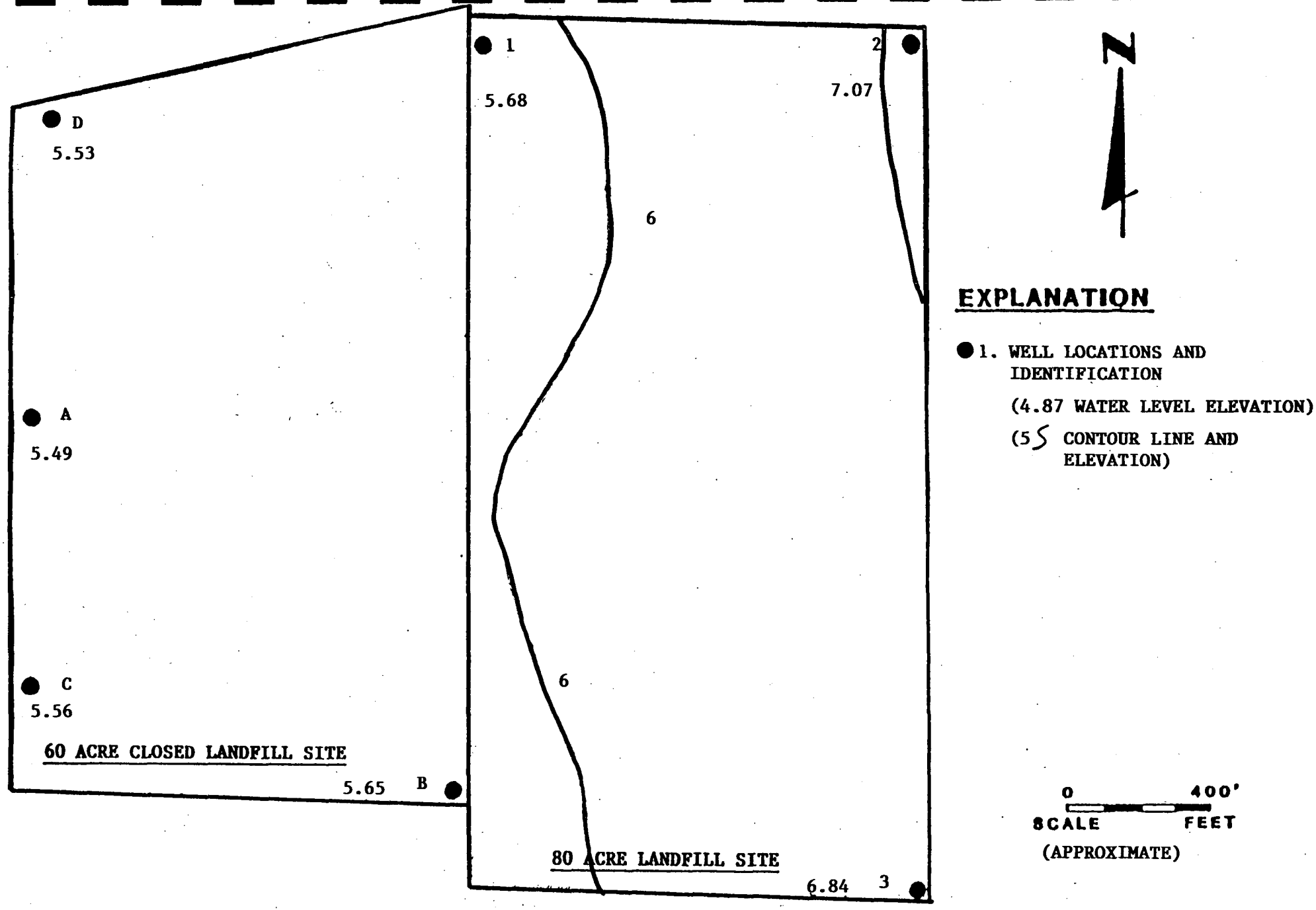
CITRUS COUNTY LANDFILL SITE MAP
SHOWING WELL LOCATIONS AND WATER LEVEL CONTOURS

JANUARY, 1994



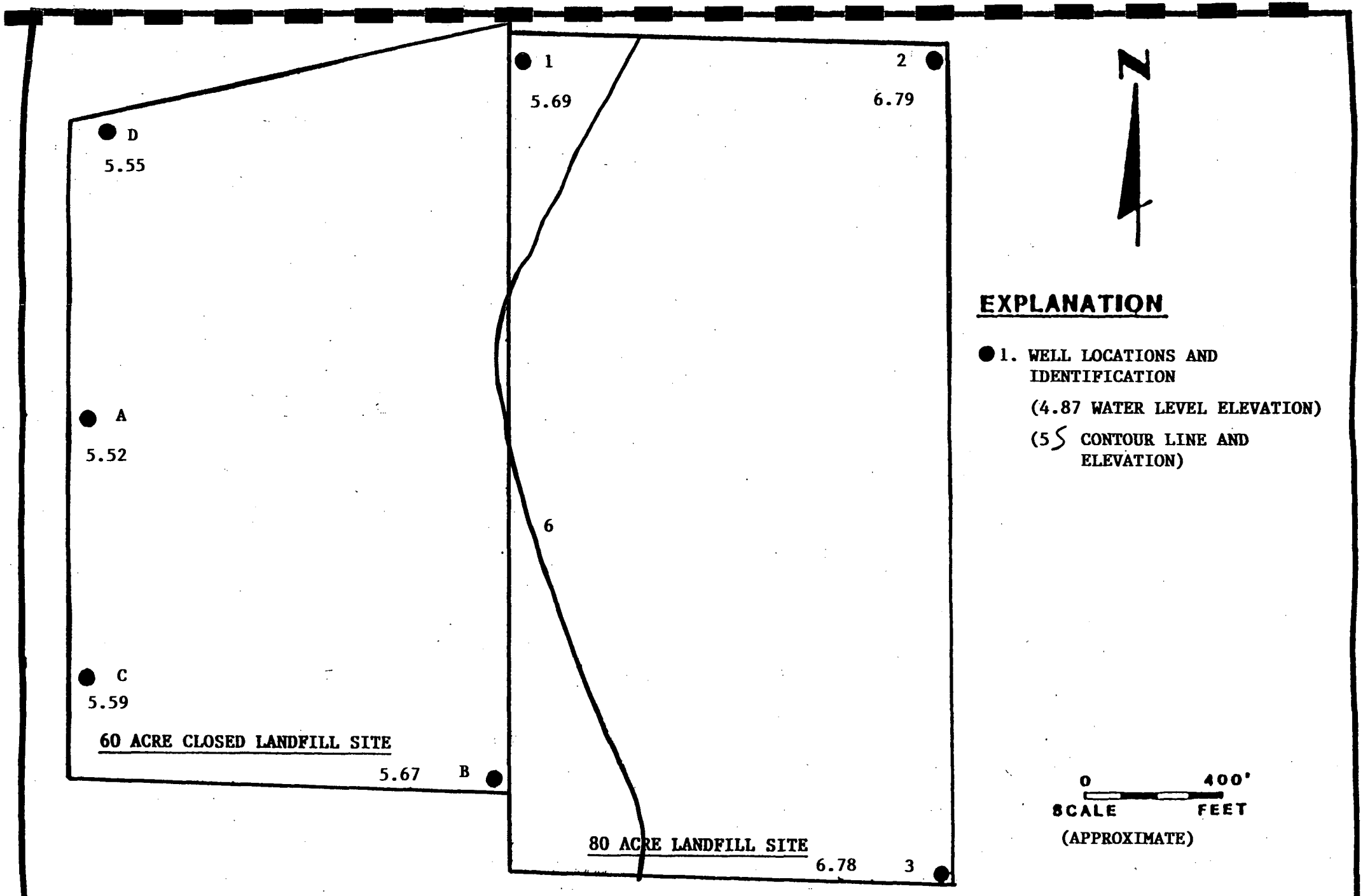
CITRUS COUNTY LANDFILL SITE MAP
SHOWING WELL LOCATIONS AND WATER LEVEL CONTOURS

DECEMBER, 1993



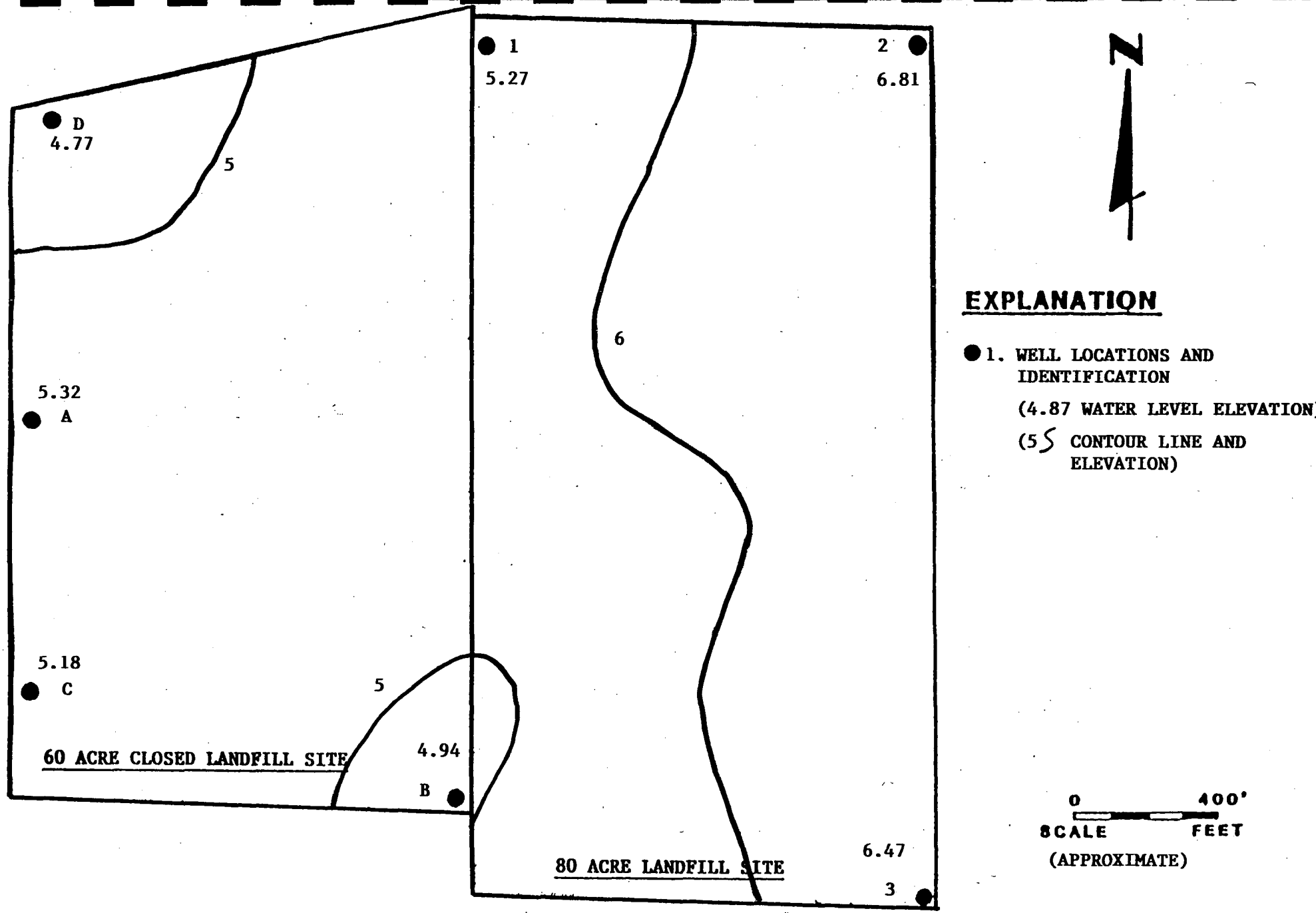
CITRUS COUNTY LANDFILL SITE MAP
SHOWING WELL LOCATIONS AND WATER LEVEL CONTOURS

NOVEMBER, 1993



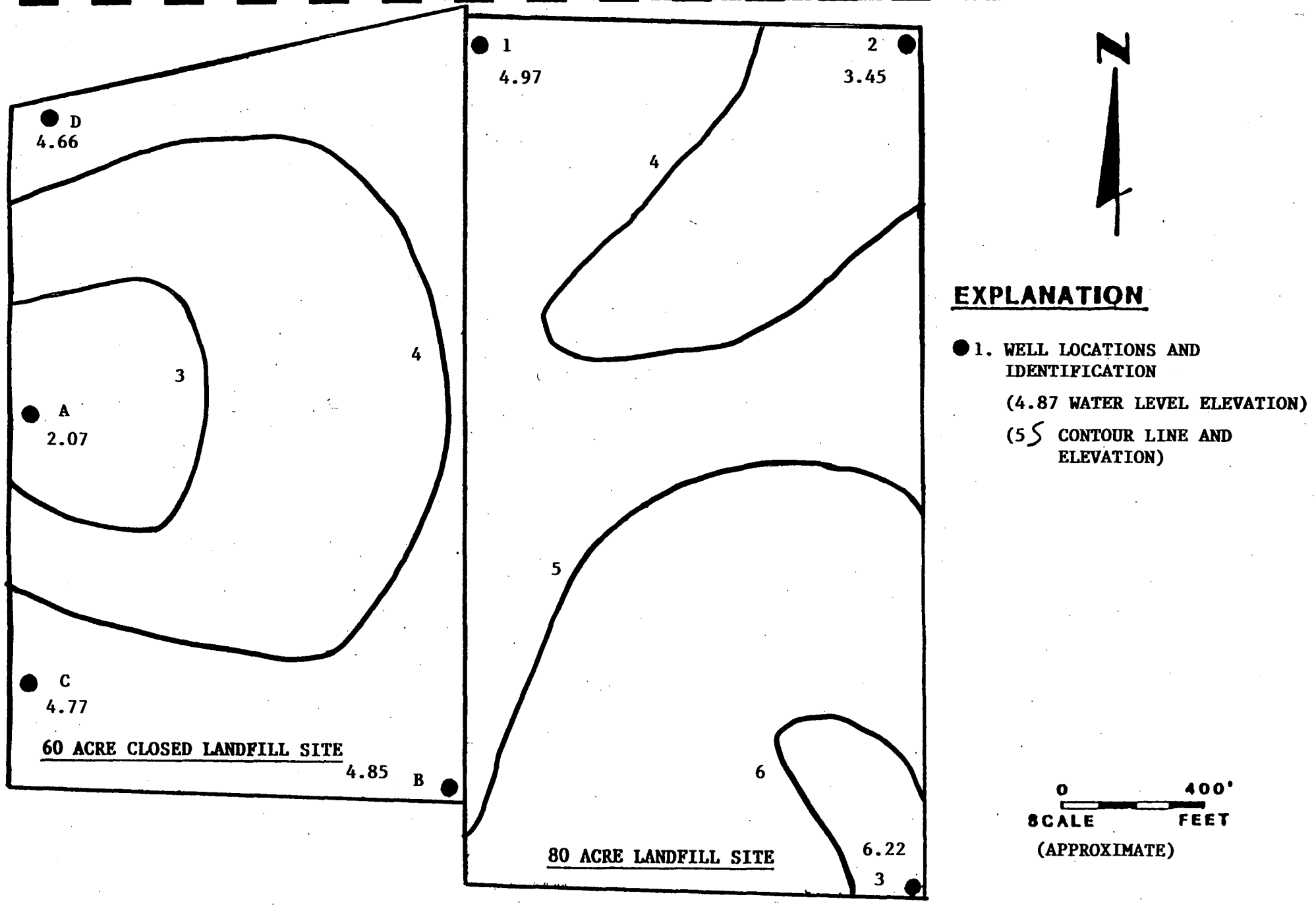
CITRUS COUNTY LANDFILL SITE MAP
SHOWING WELL LOCATIONS AND WATER LEVEL CONTOURS

SEPTEMBER, 1993



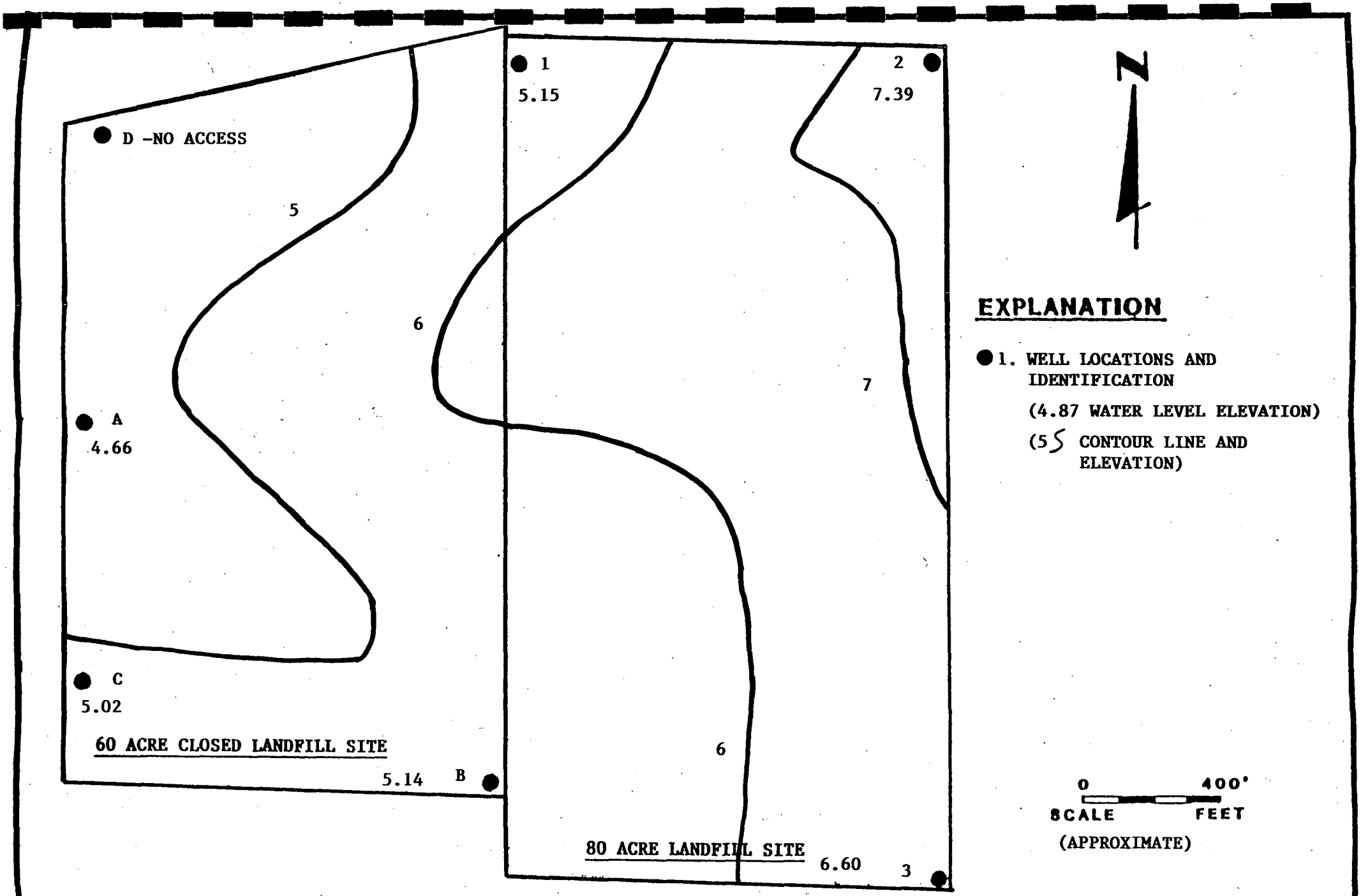
CITRUS COUNTY LANDFILL SITE MAP
SHOWING WELL LOCATIONS AND WATER LEVEL CONTOURS

AUGUST, 1993



CITRUS COUNTY LANDFILL SITE MAP
SHOWING WELL LOCATIONS AND WATER LEVEL CONTOURS

JULY, 1993



CITRUS COUNTY LANDFILL SITE MAP
SHOWING WELL LOCATIONS AND WATER LEVEL CONTOURS

JUNE, 1993

ATTACHMENT 6

TABLES OF WATER QUALITY DATA

CITRUS COUNTY CENTRAL LANDFILL

GROUNDWATER MONITORING - BACKGROUND ANALYSIS - 17-550 F.A.C.

PAGE ONE

DATE: JULY, 1994	MCL MG/L	MW-4	FILTERED MW-4	MW-5	FILTERED MW-5	MW-6	FILTERED MW-6	MW-AA	FILTERED MW-AA	RE-SAMPLING MW-AA (8-94)
PARAMETERS:										
ANTIMONY	0.006	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
ARSENIC	0.05	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
ASBESTOS	7 MFL	*	---	*	---	*	---	0.00	---	
BARIUM	2	0.21	<0.010	0.79	<0.010	0.25	0.014	0.42	0.024	
BERYLLIUM	0.004	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	
CADMIUM	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
CHROMIUM	0.1	0.023	<0.010	0.058	<0.010	0.032	<0.010	0.036	<0.010	
CYANIDE	0.2	<0.010	---	<0.010	---	<0.010	---	<0.010	---	
FLUORIDE	4.0	<0.20	---	<0.20	---	<0.20	---	<0.20	---	
LEAD	0.015	0.013	<0.0050	0.060	<0.0050	0.013	<0.0050	0.014	<0.0050	
MERCURY	0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0005	<0.0002	
NICKEL	0.1	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	
NITRATE-N	10	<0.050	---	<0.050	---	11	---	<0.050	---	
NITRITE-N	1	<0.050	---	<0.050	---	0.17	---	<0.050	---	
NITRATE + NITRITE - N	10	<0.050	---	<0.050	---	11	---	<0.050	---	
SELENIUM	0.05	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
SODIUM	160	7.4	6.9	7.3	4.8	71	68	18	18	
THALLIUM	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
TURBIDITY	1 NTU	240	---	320	---	500	---	360	---	
TOTAL COLIFORM MF CAL/100 MGL		<1	<1	<1	<1	<1	<1	<1	<1	
GROSS ALPHA, pCi/l(ANALYSIS +/-)		2.0/1.2	<2.0	2.1/1.5	2.7/1.2	9.9/3.5	4.4/2.9	19/5.0	4.9/3.8	
GROSS BETA, pCi/l (ANALYSIS +/-)		<2.0	<2.0	<2.0	<2.0	2.6/4.7	2.0/4.7	4.6/6.3	3.9/6.3	
ALUMINIUM	0.2	7.5	<0.20	53	<0.20	26	<0.20	19	<0.20	
CHLORIDE	250	4.8	---	4.8	---	68	---	5.8	---	
COLOR, PCU	15	25	---	5	---	20	---	15	---	
COPPER	1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
SURFACTANTS (MBAS-EPA 425.1)		<0.10	---	<0.10	---	<0.10	---	<0.10	---	
IRON	0.3	6.6	3.5	8.5	0.37	6.0	0.052	21	8.4	
MANGANESE	0.05	0.15	0.13	0.16	0.094	0.12	0.087	4.0	3.9	
ODOR, TON	3	16	---	32	---	4	---	4	---	
PH, UNITS	6.5-8.5	5.7	---	6.1	---	6.2	---	6.6	---	
SILVER	0.1	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	
SULFATE AS SO4	250	<5.0	---	<5.0	---	<5.0	---	12	---	
TOTAL DISSOLVED SOLIDS	500	270	---	130	---	440	---	460	---	
ZINC	5	0.21	0.13	0.10	0.032	0.093	0/039	0.033	<0.020	
TRIHALOMETHANES:										
BROMOFORM	0.10	<0.005	---	<0.005	---	<0.005	---	<0.005	---	<0.005
CHLOROFORM	0.10	<0.005	---	<0.005	---	0.011	---	<0.005	---	<0.005
DICHLOROBROMOMETHANE	0.10	<0.005	---	<0.005	---	0.0052	---	<0.005	---	<0.005
DIBROMOCHLOROMETHANE	0.10	<0.005	---	<0.005	---	<0.005	---	<0.005	---	<0.005

*REJECTED: TO MUCH PARTICULATE MATTER

CITRUS COUNTY CENTRAL LANDFILL

GROUNDWATER MONITORING - BACKGROUND ANALYSIS - 17-500 F.A.C.
PAGE TWO

DATE:	MCL MG/L	MW-4	MW-5	MW-6	MW-AA	RE-SAMPLING MW-AA (8-94)
PARAMETERS:						
PRIMARY/ORGANICS-VOLATILES						
VINYL CHLORIDE	0.001	0.0064	0.0049	0.0032	0.0076	0.0067
BENZENE	0.001	0.0019	0.0040	<0.001	0.0021	0.0021
CARBON TETRACHLORIDE	0.003	<0.003	<0.003	<0.003	<0.003	<0.003
1,2-DICHLOROETHANE	0.003	<0.003	<0.003	<0.003	<0.003	<0.003
TRICHLOROETHENE	0.003	0.0092	0.0042	<0.003	<0.003	<0.003
1,4-DICHLOROBENZENE	0.075	<0.005	<0.005	<0.005	0.017	0.015
1,1-DICHLOROETHENE	0.007	<0.005	<0.005	<0.005	<0.005	<0.005
1,1,1-TRICHLOROETHANE	0.2	<0.005	<0.005	<0.005	<0.005	<0.005
CIS-1,2-DICHLOROETHYLENE	0.07	<0.005	0.0059	<0.005	0.0079	0.0062
1,2-DICHLOROPROPANE	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
ETHYLBENZENE	0.7	0.0055	0.046	<0.005	<0.005	<0.005
CHLOROBENZENE	0.1	<0.005	<0.005	<0.005	<0.005	<0.005
1,2-DICHLOROBENZENE	0.6	<0.005	<0.005	<0.005	<0.005	<0.005
STYRENE	0.1	<0.005	0.017	<0.005	<0.005	<0.005
TETRACHLOROETHENE	0.003	0.0071	<0.003	<0.003	<0.003	<0.003
TOLUENE	1	<0.005	0.036	<0.005	0.0063	<0.005
TRANS-1,2-DICHLOROETHYLENE	0.1	<0.005	<0.005	<0.005	<0.005	<0.005
XYLENES	10	0.090	0.061	<0.005	<0.005	<0.005
METHYLENE CHLORIDE	0.005	<0.005	0.030	<0.005	<0.005	<0.005
1,2,4-TRICHLOROBENZENE	0.07	<0.005	<0.005	<0.005	<0.005	<0.005
1,1,2-TRICHLOROETHANE	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
PRIMARY ORGANICS-PESTICIDES:						
ALACHLOR	0.002	<0.001	<0.001	<0.001	<0.001	
ATRAZINE	0.003	<0.001	<0.001	<0.001	<0.001	
SIMAZINE	0.004	<0.001	<0.001	<0.001	<0.001	
CHLORDANE	0.002	<0.0001	<0.0001	<0.0001	<0.0001	
ENDRIN	0.00002	<0.00002	<0.00002	<0.00002	<0.00002	
HEPTACHLOR	0.0004	<0.00001	<0.00001	<0.00001	<0.00001	
HEPTACHLOR EPOXIDE	0.0002	<0.00002	<0.00002	<0.00002	<0.00002	
GAMMA-BHC	0.0002	<0.00001	<0.00001	<0.00001	<0.00001	
METHOXYCHLOR	0.04	<0.0005	<0.0005	<0.0005	<0.0005	
TOXAPHENE	0.003	<0.001	<0.001	<0.001	<0.001	
PCB-1016	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
PCB-1221	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
PCB-1232	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
PCB-1242	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
PCB-1248	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
PBC-1254	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
PCB-1260	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	

CITRUS COUNTY CENTRAL LANDFILL

GROUNDWATER MONITORING - BACKGROUND ANALYSIS - 17-550 F.A.C.

PAGE THREE

DATE:	MCL MG/L	MW-4	MW-5	MW-6	MW-AA
PARAMETERS:					
PRIMARY ORGANICS-HERBICIDES:					
2,4-D	0.07	<0.0005	<0.0005	<0.0005	<0.0005
DALAPON	0.2	<0.010	<0.010	<0.010	<0.010
DINOSEB	0.007	<0.0005	<0.0005	<0.0005	<0.0005
PENTACHLOROPHENOL	0.001	<0.001	<0.001	<0.001	<0.001
PICLORAM	0.5	<0.0005	<0.0005	<0.0005	<0.0005
2,4,5-TP SILVEX	0.050	<0.0005	<0.0005	<0.0005	<0.0005
PRIMARY ORGANICS:					
CARBOFURAN	0.04	<0.001	<0.001	<0.001	<0.001
OXAMYL	0.2	<0.001	<0.001	<0.001	<0.001
GLYPHOSATE	0.7	<0.350	<0.350	<0.350	<0.350
ENDOTHALL	0.1	<0.010	<0.010	<0.010	<0.010
DIQUAT	0.02	<0.001	<0.001	<0.001	<0.001
PRIMARY ORGANICS-FUMIGANTS:					
1,2-DIBROMOETHANE (EDB)	0.00002	<0.00002	<0.00002	<0.00002	<0.00002
1,2-DIBROMO-3-CHLOROPROPANE	0.00002	<0.00002	<0.00002	<0.00002	<0.00002
PRIMARY ORGANICS-BN:					
BENZO (a) PYRENE	0.0002	<0.0002	<0.0002	<0.0002	<0.0002
BIS (2-ETHYL HEXYL) ADIPATE	0.006	<0.002	<0.002	<0.002	<0.002
BIS (2-ETHYLHEXYL) PHTHALATE	0.006	0.013	0.004	<0.002	<0.002
HEXACHLOROBENZENE	0.001	<0.001	<0.001	<0.001	<0.001
HEXACHLOROCYCLOPENTADINE	0.05	<0.001	<0.001	<0.001	<0.001
WATER LEVEL (FROM TOP OF CASING)		114.89	114.66	110.91	101.44

CITRUS COUNTY CENTRAL LANDFILL

GROUNDWATER MONITORING - QUARTERLY PARAMETERS (QUARTLYG.WK4)

JULY, 1994 - 17-701 F.A.C.	MCL mg/l	MW-A & 1 DELETED	MW-B	MW-C	MW-D	MW-2	MW-3
WATER LEVEL (TO TOP OF CASING) FEET			107.16	110.11	104.60	130.20	114.31
SPECIFIC CONDUCTANCE			34	220	320	37	47
PH UNITS	6.5-8.5		5.4	8.0	7.7	6.1	6.6
DISSOLVED OXYGEN			1.5	3.9	1.3		
TURBIDITY NTU	1		8.3	14	7.4	4.4	160
TEMPERATURE AT SAMPLING DEG. C			26	24	26	24	22
COLOR, PCU	15		<5	20	10	<5	20
AMMONIA - N UNIONIZED MG/L AS N			<0.010	<0.010	<0.010		
ARSENIC	0.05		<0.010	<0.010	<0.010		
ALKALINITY (TO PH 4.5) AS CaCO3			6.0	100	140		
CADMIUM	0.005		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
CHLORIDE	250		3.2	4.3	5.3	3.7	4.3
CHROMIUM	0.1		<0.011	<0.010	<0.010	<0.010	0.015
IRON	0.3		0.67	1.6	0.74	0.79	2.9
LEAD	0.015		<0.0050	<0.0050	<0.0050		
MERCURY	0.002		<0.00020	<0.00020	<0.00020		
NITRATE - N	10		0.75	<0.050	1.2	<0.050	<0.050
SODIUM	160		3.7	2.6	2.9	2.5	4.8
TOTAL DISSOLVED SOLIDS	500		12	110	160	20	32
TOTAL ORGANIC CARBON			<1.0	1.1	<1.0	1.6	2.6
PURGEABLE HALOCARBONS (601):							
BROMODICHLOROMETHANE			<0.001	<0.001	<0.001		
BROMOFORM	0.10		<0.005	<0.005	<0.005		
BROMOMETHANE			<0.001	<0.001	<0.001		
CARBON TETRACHLORIDE	0.003		<0.001	<0.001	<0.001		
CHLOROBENZENE	0.1		<0.001	<0.001	<0.001		
CHLOROETHANE			<0.001	<0.001	<0.001		
2-CHLOROETHYLVINYL ETHER			<0.010	<0.010	<0.010		
CHLOROFORM	0.10		<0.001	<0.001	<0.001		

CITRUS COUNTY CENTRAL LANDFILL

GROUNDWATER MONITORING - QUARTERLY PARAMETERS

JULY, 1994 - 17-701 F.A.C.	MCL mg/l	MW-A & 1 DELETED	MW-B	MW-C	MW-D	MW-2	MW-3
PURGEABLE HALOCARBONS (601): (CONTINUED)							
CHLOROMETHANE			<0.001	<0.001	<0.001		
DIBROMOCHLOROMETHANE			<0.001	<0.001	<0.001		
1,2-DICHLOROBENZENE	0.6		<0.001	<0.001	<0.001		
1,3-DICHLOROBENZENE			<0.001	<0.001	<0.001		
1,4-DICHLOROBENZENE	0.075		<0.001	<0.001	<0.001		
DICHLORODIFLUOROMETHANE			<0.001	<0.001	<0.001		
1,1-DICHLOROETHANE	0.007		<0.001	<0.001	<0.001		
1,2-DICHLOROETHANE	0.003		<0.001	<0.001	<0.001		
1,1-DICHLOROETHENE	0.007		<0.001	<0.001	<0.001		
cis/trans-1,2-DICHLOROETHYLENE			<0.001	<0.001	<0.001		
1,2-DICHLOROPROPANE	0.005		<0.001	<0.001	<0.001		
cis/1,3-DICHLOROPROPENE	0.001		<0.001	<0.001	<0.001		
trans-1,3-DICHLOROPROPENE			<0.001	<0.001	<0.001		
METHYLENE CHLORIDE	0.005		0.004	<0.001	<0.001		
1,1,2,2-TETRACHLOROETHANE			<0.001	<0.001	<0.001		
TETRACHLOROETHENE	0.003		0.0014	<0.001	<0.001		
1,1,1-TRICHLOROETHANE	0.2		<0.001	<0.001	<0.001		
1,1,2-TRICHLOROETHANE			<0.001	<0.001	<0.001		
TRICHLOROETHENE			<0.001	<0.001	<0.001		
TRICHLOROFLUOROMETHANE			<0.001	<0.001	<0.001		
VINYL CHLORIDE	0.001		<0.001	<0.001	<0.001		

CITRUS COUNTY CENTRAL LANDFILL

GROUNDWATER MONITORING - QUARTERLY PARAMETERS

JULY, 1994 - 17-701 F.A.C.	MCL mg/l	MW-A & 1 DELETED	MW-B	MW-C	MW-D	MW-2	MW-3
PURGEABLE AROMATICS (602):							
BENZENE	0.001		<0.001	<0.001	<0.001		
CHLOROBENZENE	0.1		<0.001	<0.001	<0.001		
1,2-DICHLOROBENZENE	0.6		<0.001	<0.001	<0.001		
1,3-DICHLOROBENZENE			<0.001	<0.001	<0.001		
1,4-DICHLOROBENZENE	0.075		<0.001	<0.001	<0.001		
ETHYLBENZENE	0.7		<0.001	<0.001	<0.001		
TOLUENE	1		<0.001	<0.001	<0.001		
XYLENES	10		<0.001	<0.001	<0.001		
METHYL-TERT-BUTYL ETHER			<0.010	<0.010	<0.010		
TOTAL VOLATILE ORGANIC AROMATICS			<0.001	<0.001	<0.001		
COPPER	1					0.079	0.029
CORROSIVITY (SATURATION INDEX)						-4.0	-2.6
MANGANESE	0.05					0.044	0.050
ODOR, TON	3					8	1
SULFATE AS SO4	250					<5.0	<5.0
ZINC	5					0.10	0.12
FECAL COLIFORM MF CAL/100 ML						<1	<1
TKN						0.21	0.43

CITRUS COUNTY CENTRAL LANDFILL

GROUNDWATER MONITORING - QUARTERLY PARAMETERS (QUARTLYG.WK3)

APRIL, 1994 - 17-701 F.A.C.	MCL mg/l	MW-A & 1 DELETED	MW-B	MW-C	MW-D	MW-2	MW-3
WATER LEVEL (TO TOP OF CASING) FEET			106.57	110.63	104.26	129.07	113.42
SPECIFIC CONDUCTANCE			37	250	350	35	60
PH UNITS	6.5-8.5		5.2	7.5	7.3	6.3	6.5
DISSOLVED OXYGEN			1.3	4.1	1.5		
TURBIDITY NTU	1		4.0	13	4.3	11	1000
TEMPERATURE AT SAMPLING DEG. C			24	24	26	24	24
COLOR, PCU	15		<5	20	5	5	400
AMMONIA - N UNIONIZED MG/L AS N			<0.010	<0.010	<0.010		
ARSENIC	0.05		<0.010	<0.010	<0.010		
ALKALINITY (TO PH 4.5) AS CaCO3			7.0	100	150		
CADMIUM	0.005		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
CHLORIDE	250		2.7	4.3	4.8	1.6	2.7
CHROMIUM	0.1		<0.010	<0.010	<0.010	<0.010	0.033
IRON	0.3		0.42	0.52	0.55	0.53	6.7
LEAD	0.015		<0.0050	<0.0050	<0.0050		
MERCURY	0.002		<0.00020	<0.00020	<0.00020		
NITRATE - N	10		0.47	<0.050	<0.050	<0.050	<0.050
SODIUM	160		3.2	2.5	2.7	2.1	4.8
TOTAL DISSOLVED SOLIDS	500		30	130	180	28	56
TOTAL ORGANIC CARBON			1.4	1.4	1.0	<1.0	2.1
PURGEABLE HALOCARBONS (601):							
BROMODICHLOROMETHANE			<0.001	<0.001	<0.001		
BROMOFORM	0.10		<0.005	<0.005	<0.005		
BROMOMETHANE			<0.001	<0.001	<0.001		
CARBON TETRACHLORIDE	0.003		<0.001	<0.001	<0.001		
CHLOROBENZENE	0.1		<0.001	<0.001	<0.001		
CHLOROETHANE			<0.001	<0.001	<0.001		
2-CHLOROETHYLVINYL ETHER			<0.001	<0.001	<0.001		
CHLOROFORM	0.10		<0.001	<0.001	<0.001		

CITRUS COUNTY CENTRAL LANDFILL

GROUNDWATER MONITORING - QUARTERLY PARAMETERS

APRIL, 1994 - 17-701 F.A.C.	MCL mg/l	MW-A & 1 DELETED	MW-B	MW-C	MW-D	MW-2	MW-3
PURGEABLE HALOCARBONS (601): (CONTINUED)							
CHLOROMETHANE			<0.001	<0.001	<0.001		
DIBROMOCHLOROMETHANE			<0.001	<0.001	<0.001		
1,2-DICHLOROBENZENE	0.6		<0.001	<0.001	<0.001		
1,3-DICHLOROBENZENE			<0.001	<0.001	<0.001		
1,4-DICHLOROBENZENE	0.075		<0.001	<0.001	<0.001		
DICHLORODIFLUOROMETHANE			<0.001	<0.001	<0.001		
1,1-DICHLOROETHANE	0.007		<0.001	<0.001	<0.001		
1,2-DICHLOROETHANE	0.003		<0.001	<0.001	<0.001		
1,1-DICHLOROETHENE	0.007		<0.001	<0.001	<0.001		
cis/trans-1,2-DICHLOROETHYLENE			<0.001	<0.001	<0.001		
1,2-DICHLOROPROPANE	0.005		<0.001	<0.001	<0.001		
cis/1,3-DICHLOROPROPENE	0.001		<0.001	<0.001	<0.001		
trans-1,3-DICHLOROPROPENE			<0.001	<0.001	<0.001		
METHYLENE CHLORIDE	0.005		0.004	<0.001	<0.001		
1,1,2,2-TETRACHLOROETHANE			<0.001	<0.001	<0.001		
TETRACHLOROETHENE	0.003		0.0014	<0.001	<0.001		
1,1,1-TRICHLOROETHANE	0.2		<0.001	<0.001	<0.001		
1,1,2-TRICHLOROETHANE			<0.001	<0.001	<0.001		
TRICHLOROETHENE			<0.001	<0.001	<0.001		
TRICHLOROFLUOROMETHANE			<0.001	<0.001	<0.001		
VINYL CHLORIDE	0.001		<0.001	<0.001	<0.001		

CITRUS COUNTY CENTRAL LANDFILL

GROUNDWATER MONITORING - QUARTERLY PARAMETERS

APRIL, 1994 - 17-701 F.A.C.	MCL mg/l	MW-A & 1 DELETED	MW-B	MW-C	MW-D	MW-2	MW-3
PURGEABLE AROMATICS (602):							
BENZENE	0.001		<0.001	<0.001	<0.001		
CHLOROBENZENE	0.1		<0.001	<0.001	<0.001		
1,2-DICHLOROBENZENE	0.6		<0.001	<0.001	<0.001		
1,3-DICHLOROBENZENE			<0.001	<0.001	<0.001		
1,4-DICHLOROBENZENE	0.075		<0.001	<0.001	<0.001		
ETHYLBENZENE	0.7		<0.001	<0.001	<0.001		
TOLUENE	1		<0.001	<0.001	<0.001		
XYLENES	10		<0.001	<0.001	<0.001		
METHYL-TERT-BUTYL ETHER			<0.001	<0.001	<0.001		
TOTAL VOLATILE ORGANIC AROMATICS			<0.001	<0.001	<0.001		
COOPER	1					0.048	0.21
CORROSIVITY (SATURATION INDEX)						-3.6	-2.5
MANGANESE	0.05					0.041	0.13
ODOR, TON	3					8	1
SULFATE AS SO4	250					<5.0	<5.0
ZINC	5					0.046	0.39
FECAL COLIFORM MF CAL/100 ML						<1	<1
TKN						<0.10	0.46

CITRUS COUNTY CENTRAL LANDFILL

GROUNDWATER MONITORING - QUARTERLY PARAMETERS

JANUARY, 1994 - 17-701 F.A.C.	MCL mg/l	MW-A	MW-B	MW-C	MW-D	MW-1
WATER LEVEL (TO TOP OF CASING) FEET		110.41	105.43	110.89	104.99	112.60
SPECIFIC CONDUCTANCE		970	34	210	280	79
PH UNITS	6.5-8.5	6.6	5.5	7.9	7.7	6.9
DISSOLVED OXYGEN		<1.0	1.2	4.0	1.7	5.3
TURBIDITY NTU	1	31.0	4.6	26.0	3.8	250.0
TEMPERATURE AT SAMPLING DEG. C		26	24	25	25	24
COLOR, PCU	15	180.0	<5.0	450.0	<5.0	180.0
AMMONIA - N UNIONIZED MG/L AS N		<0.010	<0.010	<0.010	<0.010	<0.010
ARSENIC	0.05	0.013	<0.010	<0.010	<0.010	<0.010
ALKALINITY (TO PH 4.5) AS CaCO3		530.0	7.0	100.0	140.0	33.0
CADMIUM	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
CHLORIDE	250	29.0	4.2	21.0	5.8	4.7
CHROMIUM	0.1	<0.010	<0.010	<0.010	<0.010	0.20
IRON	0.3	15.0	0.60	2.8	0.71	7.3
LEAD	0.015	0.055	<0.0050	<0.0050	<0.0050	0.028
MERCURY	0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
NITRATE - N	10	0.065	0.14	<0.050	<0.050	1.6
SODIUM	160	6.4	3.1	2.4	2.9	4.4
TOTAL DISSOLVED SOLIDS	500	600.0	38.0	130.0	170.0	94.0
TOTAL ORGANIC CARBON		4.1	<1.0	<1.0	<1.0	300.0
PURGEABLE HALOCARBONS (601):						
BROMODICHLOROMETHANE		<0.001	<0.001	<0.001	<0.001	<0.001
BROMOFORM	0.10	<0.005	<0.005	<0.005	<0.005	<0.005
BROMOMETHANE		<0.001	<0.001	<0.001	<0.001	<0.001
CARBON TETRACHLORIDE	0.003	<0.001	<0.001	<0.001	<0.001	<0.001
CHLOROBENZENE	0.1	0.0058	<0.001	<0.001	<0.001	<0.001
CHLOROETHANE		<0.001	<0.001	<0.001	<0.001	<0.001
2-CHLOROETHYLVINYL ETHER		<0.010	<0.010	<0.010	<0.010	<0.010
CHLOROFORM	0.10	<0.001	<0.001	<0.001	<0.001	<0.001

CITRUS COUNTY CENTRAL LANDFILL

GROUNDWATER MONITORING - QUARTERLY PARAMETERS

JANUARY, 1994 - 17-701 F.A.C.	MCL mg/l	MW-A	MW-B	MW-C	MW-D	MW-1
PURGEABLE HALOCARBONS (601):						
CHLOROMETHANE		<0.001	<0.001	<0.001	<0.001	<0.001
DIBROMOCHLOROMETHANE		<0.001	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROBENZENE	0.6	<0.001	<0.001	<0.001	<0.001	<0.001
1,3-DICHLOROBENZENE		<0.001	<0.001	<0.001	<0.001	<0.001
1,4-DICHLOROBENZENE	0.075	0.019	<0.001	<0.001	<0.001	<0.001
DICHLORODIFLUOROMETHANE		0.0056	<0.001	<0.001	<0.001	<0.001
1,1-DICHLOROETHANE	0.007	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROETHANE	0.003	<0.001	<0.001	<0.001	<0.001	<0.001
1,1-DICHLOROETHENE	0.007	<0.001	<0.001	<0.001	<0.001	<0.001
cis/trans-1,2-DICHLOROETHYLENE		0.0011	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROPROPANE	0.005	<0.001	<0.001	<0.001	<0.001	<0.001
cis/1,3-DICHLOROPROPENE		<0.001	<0.001	<0.001	<0.001	<0.001
trans-1,3-DICHLOROPROPENE		<0.001	<0.001	<0.001	<0.001	<0.001
METHYLENE CHLORIDE		<0.001	<0.001	<0.001	<0.001	0.0026
1,1,2,2-TETRACHLOROETHANE		<0.001	<0.001	<0.001	<0.001	<0.001
TETRACHLOROETHENE		<0.001	<0.001	<0.001	<0.001	<0.001
1,1,1-TRICHLOROETHANE	0.2	<0.001	<0.001	<0.001	<0.001	<0.001
1,1,2-TRICHLOROETHANE		<0.001	<0.001	<0.001	<0.001	<0.001
TRICHLOROETHENE		<0.001	<0.001	<0.001	<0.001	<0.001
TRICHLOROFLUOROMETHANE		<0.001	<0.001	<0.001	<0.001	<0.001
VINYL CHLORIDE	0.001	0.0086	<0.001	<0.001	<0.001	<0.001

CITRUS COUNTY CENTRAL LANDFILL

GROUNDWATER MONITORING - QUARTERLY PARAMETERS

JANUARY, 1994 - 17-701 F.A.C.	MCL mg/l	MW-A	MW-B	MW-C	MW-D	MW-1
PURGEABLE AROMATICS (602):						
BENZENE	0.001	0.0031	<0.001	<0.001	<0.001	<0.001
CHLOROBENZENE	0.1	0.0061	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROBENZENE	0.6	<0.001	<0.001	<0.001	<0.001	<0.001
1,3-DICHLOROBENZENE		<0.001	<0.001	<0.001	<0.001	<0.001
1,4-DICHLOROBENZENE	0.075	0.019	<0.001	<0.001	<0.001	<0.001
ETHYLBENZENE	0.7	<0.001	<0.001	<0.001	<0.001	<0.001
TOLUENE	1	<0.001	<0.001	<0.001	<0.001	0.0037
XYLENES	10	<0.001	<0.001	<0.001	<0.001	0.0044
METHYL-TERT-BUTYL ETHER		<0.010	<0.010	<0.010	<0.010	<0.010
TOTAL VOLATILE ORGANIC AROMATICS		0.0031	<0.001	<0.001	<0.001	0.0081

CITRUS COUNTY CENTRAL LANDFILL

GROUNDWATER MONITORING - QUARTERLY PARAMETERS (QUARTLYG.WK1)

OCTOBER, 1993 - 17-701 F.A.C.	MCL mg/l	MW-A	MW-B	MW-C	MW-D	MW-1
WATER LEVEL (TO TOP OF CASING) FEET		105.66	106.49	113.21	104.75	112.45
SPECIFIC CONDUCTANCE		850	27	210	360	120
PH UNITS	6.5-8.5	6.4	5.1	7.9	7.2	6.8
DISSOLVED OXYGEN		<1.0	4.9	1.2	1.5	<1.0
TURBIDITY NTU	1	70	6.1	50	22	400
TEMPERATURE AT SAMPLING DEG. C		29	28	29	31	24
COLOR, PCU	15	160	<5	35	30	70
AMMONIA - N UNIONIZED MG/L AS N		<0.010	<0.010	<0.010	<0.010	<0.010
ARSENIC	0.05	0.015	<0.010	<0.010	<0.010	<0.010
ALKALINITY (TO PH 4.5) AS CaCO3		430	6.0	110	180	52
CADMIUM	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
CHLORIDE	250	3.6	2.6	4.1	5.6	3.6
CHROMIUM	0.1	<0.010	<0.010	<0.010	<0.010	0.62
IRON	0.3	16	0.73	7.1	1.6	30
LEAD	0.015	<0.0050	<0.0050	<0.0050	0.017	0.10
MERCURY	0.002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
NITRATE - N	10	<0.050	0.13	<0.050	<0.050	0.14
SODIUM	160	6.7	3.0	2.5	3.6	8.1
TOTAL DISSOLVED SOLIDS	500	490	32	130	220	82
TOTAL ORGANIC CARBON		5.5	1.0	1.6	2.0	3.9
PURGEABLE HALOCARBONS (601).						
BROMODICHLOROMETHANE		<0.001	<0.001	<0.001	<0.001	<0.001
BROMOFORM	0.10	<0.005	<0.005	<0.005	<0.005	<0.005
BROMOMETHANE		<0.001	<0.001	<0.001	<0.001	<0.001
CARBON TETRACHLORIDE	0.003	<0.001	<0.001	<0.001	<0.001	<0.001
CHLOROBENZENE	0.1	0.0054	<0.001	<0.001	<0.001	<0.001
CHLOROETHANE		<0.001	<0.001	<0.001	<0.001	<0.001
2-CHLOROETHYLVINYL ETHER		<0.010	<0.010	<0.010	<0.010	<0.010
CHLOROFORM	0.10	<0.001	<0.001	<0.001	<0.001	<0.001

CITRUS COUNTY CENTRAL LANDFILL

GROUNDWATER MONITORING - QUARTERLY PARAMETERS

OCTOBER, 1993 - 17-701 F.A.C.	MCL mg/l	MW-A	MW-B	MW-C	MW-D	MW-1
PURGEABLE HALOCARBONS (601):						
CHLOROMETHANE		<0.001	<0.001	<0.001	<0.001	<0.001
DIBROMOCHLOROMETHANE		<0.001	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROBENZENE	0.6	<0.001	<0.001	<0.001	<0.001	<0.001
1,3-DICHLOROBENZENE		<0.001	<0.001	<0.001	<0.001	<0.001
1,4-DICHLOROBENZENE	0.075	0.022	<0.001	<0.001	0.0011	<0.001
DICHLORODIFLUOROMETHANE		0.0033	<0.001	<0.001	<0.001	<0.001
1,1-DICHLOROETHANE	0.007	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROETHANE	0.003	<0.001	<0.001	<0.001	<0.001	<0.001
1,1-DICHLOROETHENE	0.007	<0.001	<0.001	<0.001	<0.001	<0.001
cis/trans-1,2-DICHLOROETHYLENE		0.001	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROPROPANE	0.005	<0.001	<0.001	<0.001	<0.001	<0.001
cis/1,3-DICHLOROPROPENE		<0.001	<0.001	<0.001	<0.001	<0.001
trans-1,3-DICHLOROPROPENE		<0.001	<0.001	<0.001	<0.001	<0.001
METHYLENE CHLORIDE		<0.001	<0.001	<0.001	<0.001	<0.001
1,1,2,2-TETRACHLOROETHANE		<0.001	<0.001	<0.001	<0.001	<0.001
TETRACHLOROETHENE		<0.001	<0.001	<0.001	<0.001	<0.001
1,1,1-TRICHLOROETHANE	0.2	<0.001	<0.001	<0.001	<0.001	<0.001
1,1,2-TRICHLOROETHANE		<0.001	<0.001	<0.001	<0.001	<0.001
TRICHLOROETHENE		<0.001	<0.001	<0.001	<0.001	<0.001
TRICHLOROFLUOROMETHANE		<0.001	<0.001	<0.001	<0.001	<0.001
VINYL CHLORIDE	0.001	0.0066	<0.001	<0.001	<0.001	<0.001

CITRUS COUNTY CENTRAL LANDFILL

GROUNDWATER MONITORING -- QUARTERLY PARAMETERS

OCTOBER, 1993 - 17-701 F.A.C.	MCL mg/l	MW-A	MW-B	MW-C	MW-D	MW-1	RB-SAMPLING 11/16/93 MW-1
PURGEABLE AROMATICS (602):							
BENZENE	0.001	0.0029	<0.001	<0.001	<0.001	0.0071	<0.001
CHLOROBENZENE	0.1	0.0052	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROBENZENE	0.6	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,3-DICHLOROBENZENE		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,4-DICHLOROBENZENE	0.075	0.020	<0.001	<0.001	<0.001	<0.001	<0.001
ETHYLBENZENE	0.7	<0.001	<0.001	<0.001	<0.001	0.0091	<0.001
TOLUENE	1	<0.001	<0.001	<0.001	0.0013	0.043	<0.001
XYLENES	10	<0.001	<0.001	<0.001	<0.001	0.055	<0.001
METHYL-TERT-BUTYL ETHER		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
TOTAL VOLATILE ORGANIC AROMATICS		0.0029	<0.001	<0.001	0.0013	0.1142	<0.001

80 ACRE SITE GWM803/WK1

MONITOR WELL 3

PRIMARY	CONTAMINENT LEVEL	1991 SEPTEMBER	1991 OCTOBER	1992 JANUARY	1992 APRIL	1992 JULY	1992 OCTOBER
Nitrate-N	10	-----	0.093	0.077	0.16	<0.050	<0.050
Sodium	160	-----	12	8.5	12	8.8	8.0
Turbidity	1	-----	45	750	800	350	500
Cadmium	0.010	-----	<0.0050	<0.0050	0.0075	<0.0050	<0.0050
Chromium	0.05	-----	0.063	0.030	0.095	0.022	<0.046
Chloride	250	-----	<1.0	4.0	6.0	5.0	4.9
Color	15	-----	550	<0.025	20	20	10
Copper	1	-----	0.029	<0.025	0.041	<0.025	0.041
Corrosivity	-0.2 to +0.2	-----	-2.0	-2.2	-2.1	-2.3	-2.5
Iron	0.3	-----	15	6.0	23	5.2	11
Manganese	0.05	-----	0.14	0.042	0.27	0.046	0.13
Odor	3	-----	2	2.0	2	2	2
PH Units	6.5 - 8.5	-----	6.9	7.0	6.9	7.0	6.6
Sulfate	250	-----	<5.0	6.9	<5.0	9.3	<5.0
TDS	500	-----	6.0	210	280	28	44
Zinc	5	-----	0.30	0.081	0.66	0.15	0.29
Temperature	N/A	-----	21	20	23	24	24
TOC	N/A	-----	1.9	1.4	2.3	2.0	1.4
Specific Cond.	N/A	-----	50	48	50	50	43
Water Level	-----	-----	112.01'	113.15'	113.85'	115.00'	113.73
Fecal Coliform	N/A	-----	<1	<1	<1	<1	<1
TKN	N/A	-----	0.16	0.23	0.30	0.26	0.46

80 ACRE SITE

MONITOR WELL 3

PRIMARY	CONTAMINENT LEVEL	1993 JANUARY	1993 APRIL	1993 JULY	1993 OCTOBER	1994 JANUARY	1994 APRIL
Nitrate-N	10	<0.050	0.050	<0.050	<0.050	<0.050	
Sodium	160	5.4	5.0	6.1	8.8	4.5	
Turbidity	1	220	120	650	310	250	
Cadmium	0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Chromium	0.05	<0.014	<0.010	0.037	0.062	0.11	
Chloride	250	3.6	5.4	3.8	3.1	4.7	
Color	15	15	20	160	400	400	
Copper	1	<0.025	<0.025	<0.025	<0.025	<0.025	
Corrosivity	-0.2 to +0.2	-2.9	-3.1	-2.0	-5.6	-3.1	
Iron	0.3	2.2	1.3	9.6	13	2.2	
Manganese	0.05	0.028	0.018	0.13	0.13	0.034	
Odor	3	2	2	2	2	1	
PH Units	6.5 - 8.5	6.7	6.6	7.3	6.6	6.5	
Sulfate	250	<5.0	<5.0	<5.0	<5.0	<5.0	
TDS	500	18	32	40	34	46	
Zinc	5	0.15	0.066	0.51	0.064	0.088	
Temperature	N/A	24	23	23	23	22	
TOC	N/A	3.2	1.8	1.2	1.7	2.8	
Specific Cond.	N/A	42	37	43	32	36	
Water Level	-----	112.55	113.40'	114.25'	-------	114.53'	
Fecal Coliform	N/A	<1	<1	<1	<1	<1	
TKN	N/A	0.12	<0.10	0.19	<0.10	0.24	

80 ACRE SITE GWM802/WK1

MONITOR WELL 2

PRIMARY	CONTAMINENT LEVEL	1991 SEPTEMBER	1991 OCTOBER	1992 JANUARY	1992 APRIL	1992 JULY	1992 OCTOBER
Nitrate-N	10	<0.50	-----	0.050	<0.050	<0.50	<0.050
Sodium	160	5.6	-----	8.0	5.4	5.9	2.8
Turbidity	1	15	-----	15	4.1	18	6.1
Cadmium	0.010	<0.0050	-----	0.0060	<0.0050	<0.0050	<0.0050
Chromium	0.05	<0.010	-----	<0.010	<0.010	<0.010	<0.010
Chloride	250	3.9	-----	3.9	2.8	3.0	2.0
Color	15	5	-----	20	20	25	20
Copper	1	<0.025	-----	0.043	<0.025	<0.025	0.12
Corrosivity	-0.2 to +0.2	-2.2	-----	-1.6	-1.9	-1.2	-2.8
Iron	0.3	1.6	-----	2.7	2.1	2.6	1.3
Manganese	0.05	0.063	-----	0.12	0.10	0.12	0.054
Odor	3	1	-----	5.0	32	65	65
PH Units	6.5 - 8.5	7.0	-----	7.2	6.9	7.5	6.5
Sulfate	250	<5.0	-----	<5.0	<5.0	<5.0	<5.0
TDS	500	72	-----	66	56	56	24
Zinc	5	0.024	-----	0.065	0.043	0.14	0.042
Temperature	N/A	22.8	-----	17	22	23	23
TOC	N/A	5.2	-----	1.4	9.9	15	4.5
Specific Cond.	N/A	59	-----	91	90	94	45
Water Level	-----	128.79'	-----	128.48'	128.90'	135.05'	129.63'
Fecal Coliform	N/A	<1	-----	<1	<1	<1	<1
TKN	N/A	0.46	-----	2.8	0.98	2.5	0.67

80 ACRE SITE

MONITOR WELL 2

PRIMARY	CONTAMINENT LEVEL	1993 JANUARY	1993 APRIL	1993 JULY	1993 OCTOBER	1994 JANUARY	1994 APRIL
Nitrate-N	10	<0.050	<0.050	<0.050	<0.050	<0.050	
Sodium	160	2.7	2.4	2.3	2.1	2.1	
Turbidity	1	13	6.9	6.9	5.5	2.1	
Cadmium	0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Chromium	0.05	<0.010	<0.010	<0.010	<0.010	<0.010	
Chloride	250	4.9	3.6	2.7	2.1	5.8	
Color	15	10	<5	<5	<5	<5	
Copper	1	<0.025	<0.025	<0.025	<0.025	<0.025	
Corrosivity	-0.2 to +0.2	-2.6	-2.9	-2.8	-4.5	-4.2	
Iron	0.3	1.7	1.4	1.2	0.67	0.78	
Manganese	0.05	0.074	0.055	0.045	0.027	0.030	
Odor	3	260	260	260	8	2	
PH Units	6.5 - 8.5	6.5	6.6	6.9	6.3	6.0	
Sulfate	250	<5.0	<5.0	<5.0	<5.0	<5.0	
TDS	500	26	14	20	38	36	
Zinc	5	0.070	0.053	<0.020	<0.020	<0.020	
Temperature	N/A	22	23	24	24	24	
TOC	N/A	26	14	8.4	1.4	<1.0	
Specific Cond.	N/A	56	46	43	21	27	
Water Level	-----	128.02'	128.72'	132.14'	----------	129.88	
Fecal Coliform	N/A	<1	<1	<1	<1	<1	
TKN	N/A	1.2	0.66	0.64	0.16	0.24	

80 ACRE SITE GWM801.WK1

MONITOR WELL 1

PRIMARY	CONTAMINENT LEVEL	1991 SEPTEMBER	1991 OCTOBER	1992 JANUARY	1992 APRIL	1992 JULY	1992 OCTOBER
Nitrate-N	10	<0.050	-----	0.057	<0.050	0.27	<0.050
Sodium	160	4.5	-----	4.1	5.0	5.2	2.6
Turbidity	1	46	-----	15	450	90	24
Cadmium	0.010	<0.0050	-----	<0.0050	<0.0050	<0.0050	<0.0050
Chromium	0.05	<0.010	-----	<0.010	0.035	<0.010	<0.010
Chloride	250	5.6	-----	4.3	4.3	4.5	3.9
Color	15	<5	-----	<5.0	<5	5	<5
Copper	1	<0.025	-----	<0.025	<0.025	0.099	0.029
Corrosivity	-0.2 to +0.2	-2.5	-----	-1.2	-0.66	-1.2	-2.3
Iron	0.3	0.75	-----	0.18	5.6	0.54	0.21
Manganese	0.05	<0.010	-----	<0.010	0.10	0.014	<0.010
Odor	3	<1	-----	4.0	<1	2	<1
PH Units	6.5 - 8.5	6.8	-----	7.8	8.0	7.6	6.7
Sulfate	250	<5.0	-----	<5.0	<5.0	<5.0	<5.0
TDS	500	47	-----	40	56	60	24
Zinc	5	0.090	-----	0.026	0.14	0.14	0.062
Temperature	N/A	23.2	-----	21	24	24	25
TOC	N/A	8.7	-----	1.8	3.1	5.4	4.0
Specific Cond.	N/A	57	-----	69	80	88	45
Water Level	-----	110.48'	-----	111.89'	112.11'	114.07'	109.82'
Fecal Coliform	N/A	<1	-----	<1	<1	<1	<1
TKN	N/A	0.83	-----	<0.10	<0.10	0.40	<0.10

80 ACRE SITE

MONITOR WELL 1

PRIMARY	CONTAMINENT LEVEL	1993 JANUARY	1993 APRIL	1993 JULY	1993 OCTOBER	1994 JANUARY	1994 APRIL
Nitrate-N	10	<0.050	<0.050	NOTE: MW-1			
Sodium	160	3.1	4.0	INCLUDED WITH			
Turbidity	1	12	6.0	60 ACRE SITE			
Cadmium	0.010	<0.0050	<0.0050	PARAMETERS PER			
Chromium	0.05	<0.010	<0.010	PERMIT			
Chloride	250	6.8	13	CONDITIONS -			
Color	15	<5	15	LONG TERM CARE			
Copper	1	<0.025	<0.025	EFFECTIVE 7/93			
Corrosivity	-0.2 to +0.2	-1.5	-2.7				
Iron	0.3	0.13	0.22				
Manganese	0.05	<0.010	<0.010				
Odor	3	1	1				
PH Units	6.5 - 8.5	7.3	6.7				
Sulfate	250	<5.0	<5.0				
TDS	500	22	34				
Zinc	5	0.043	0.099				
Temperature	N/A	24	24				
TOC	N/A	5.9	5.2				
Specific Cond.	N/A	69	50				
Water Level	-----	111.33'	112.20'				
Fecal Coliform	N/A	<1	<1				
TKN	N/A	<0.10	0.17				

CITRUS COUNTY CENTRAL LANDFILL

GROUNDWATER MONITORING:

ANNUAL PARAMETERS	MCL'S 07/93	MW-A	MW-B	MW-C	MW-D	MW-1
ANTIMONY	0.006	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
ARSENIC	0.05	0.012	<0.010	<0.010	<0.010	<0.010
ASBESTOS	7 MFL*	0.00*	0.00*	0.00*	0.00*	0.00*
BARIUM	2	0.13	<0.010	<0.010	0.071	0.080
BERYLLIUM	0.004	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
CADMIUM	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
CHROMIUM	0.1	<0.010	<0.010	<0.010	<0.010	<0.010
CYANIDE	0.2	<0.010	<0.010	<0.010	<0.010	<0.010
FLUORIDE	4.0	<0.20	<0.20	<0.20	<0.20	<0.20
LEAD	0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.0066
MERCURY	0.002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
NICKEL	0.1	<0.040	<0.040	<0.040	<0.040	<0.040
NITRATE-N	10	<0.050	0.097	0.058	<0.050	<0.050
NITRITE-N	1	<0.050	<0.050	<0.050	<0.050	<0.050
NITRATE + NITRITE - N	10	<0.050	0.097	0.058	<0.050	<0.050
SELENIUM	0.05	<0.010	<0.010	<0.010	<0.010	<0.010
SODIUM	160	7.0	3.0	2.6	4.0	3.0
THALLIUM	0.002	<0.010	<0.010	<0.010	<0.010	<0.010
TURBIDITY	1 NTU	120	2.4	6.4	12	28
TOTAL COLIFORM MF CAL/100 MG		<1	<1	<1	<1	<1
GROSS ALPHA pC1/l		6.6+1.1	0.6+0.1	0.9+0.3	<0.5+0.3	2.5+0.4
GROSS BETA pC1/l		8.9+0.9	1.4+0.2	1.0+0.4	<1.4+0.6	3.1+0.3
ALUMINUM	0.2	<0.20	0.49	<0.20	<0.20	3.6
CHLORIDE	250	5.4	2.2	3.8	3.2	4.3
COLOR, PCU	15	180	<5	20	25	10
COPPER	1	<0.025	<0.025	<0.025	<0.025	<0.025
SURFACTANTS (MBAS=EPA 425.1)		<0.10	<0.10	<0.10	<0.10	<0.10
IRON	0.3	15	0.29	6.5	1.4	1.0
MANGANESE	0.05	1.6	<0.010	0.015	0.71	0.014
ODOR, TON	3	8	<1	4	8	4
PH, UNITS	6.5 - 8.5	6.5	7.3	8.2	7.1	7.0
SILVER	0.1	<0.010	<0.010	<0.010	<0.010	<0.010
SULFATE AS SO4	250	7.1	<5.0	<5.0	<5.0	<5.0
TOTAL DISSOLVED SOLIDS	500	480	10	110	190	30
ZINC	5	<0.020	0.049	0.028	0.067	0.041

*MILLION FIBERS/LITER

14112 G.B.

GROUNDWATER MONITORING

ANNUAL PARAMETERS	MCL'S 07/93	MW-A	MW-B	MW-C	MW-D	MW-1
TRIHALOMETHANES:						
BROMOFORM	0.10	<0.001	<0.001	<0.001	<0.001	<0.001
CHLOROFORM	0.10	<0.001	<0.001	<0.001	<0.001	<0.001
DICHLOROBROMOMETHANE	0.10	<0.001	<0.001	<0.001	<0.001	<0.001
DIBROMOCHLOROMETHANE	0.10	<0.001	<0.001	<0.001	<0.001	<0.001
PRIMARY/ORGANICS-VOLATILES:						
VINYL CHLORIDE	0.001	0.008	<0.001	<0.001	<0.001	<0.001
BENZENE	0.001	0.0032	<0.001	<0.001	<0.001	<0.001
CARBON TETRACHLORIDE	0.003	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROETHANE	0.003	<0.001	<0.001	<0.001	<0.001	<0.001
TRICHLOROETHENE	0.003	<0.001	<0.001	<0.001	<0.001	<0.001
1,4-DICHLOROBENZENE (para)	0.075	0.002	<0.001	<0.001	0.0012	<0.001
1,1-DICHLOROETHENE	0.007	<0.001	<0.001	<0.001	<0.001	<0.001
1,1,1-TRICHLOROETHANE	0.2	<0.001	<0.001	<0.001	<0.001	<0.001
cis-1,2-DICHLOROETHYLENE	0.07	0.0012	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROPROPANE	0.005	<0.001	<0.001	<0.001	<0.001	<0.001
ETHYLBENZENE	0.7	<0.001	<0.001	<0.001	<0.001	<0.001
CHLOROBENZENE	0.1	0.0052	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROBENZENE	0.6	<0.001	<0.001	<0.001	<0.001	<0.001
STYRENE	0.1	<0.001	<0.001	<0.001	<0.001	<0.001
TETRACHLOROETHENE	0.003	<0.001	<0.001	<0.001	<0.001	<0.001
TOLUENE	1	<0.001	<0.001	<0.001	<0.001	<0.001
trans-1,2-DICHLOROETHYLENE	0.1	<0.001	<0.001	<0.001	<0.001	<0.001
XYLENES	10	<0.001	<0.001	<0.001	<0.001	<0.001
METHYLENE CHLORIDE: (DICHLOROMETHANE)	0.005	<0.001	<0.001	<0.001	<0.001	<0.001
1,2,4-TRICHLOROBENZENE	0.7	<0.001	<0.001	<0.001	<0.001	<0.001
1,1,2-TRICHLOROETHANE	0.005	<0.001	<0.001	<0.001	<0.001	<0.001

GROUNDWATER MONITORING ANNUAL PARAMETERS	MCL'S 07/93	MW-A	MW-B	MW-C	MW-D	MW-1
PRIMARY ORGANICS-PESTICIDES:						
ALACHLOR	0.002	<0.001	<0.001	<0.001	<0.001	<0.001
ATRAZINE	0.003	<0.001	<0.001	<0.001	<0.001	<0.001
SIMAZINE	0.004	<0.001	<0.001	<0.001	<0.001	<0.001
CHLORDANE	0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
ENDRIN	0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
HEPTACHLOR	0.0004	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
HEPTACHLOR EPOXIDE	0.0002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
GAMMA-BHC (LINDANE)	0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
METHOXYCHLOR	0.04	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TOXAPHENE	0.003	<0.001	<0.001	<0.001	<0.001	<0.001
POLYCHLORINATED BIPHENYLS:						
PCB-1016	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PCB-1221	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PCB-1232	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PCB-1242	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PCB-1248	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PCB-1254	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PCB-1260	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PRIMARY ORGANICS - HERBICIDES:						
2,4-D	0.07	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
DALAPON	0.2	<0.01	<0.01	<0.01	<0.01	<0.01
DINOSEB	0.007	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
PENTACHLOROPHENOL	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PICLORAM	0.5	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2,4,5-TP SILVEX	0.050	<0.0005	<0.0005	<0.0005	<0.00005	<0.0005
CARBOFURAN	0.04	<0.001	<0.001	<0.001	<0.001	<0.001
OXAMYL	0.2	<0.001	<0.001	<0.001	<0.001	<0.001
GLYPHOSATE	0.7	<0.350	<0.350	<0.350	<0.350	<0.350
ENDOTHALL	0.1	<0.025	<0.025	<0.025	<0.025	<0.025
DIQUAT	0.02	<0.001	<0.001	<0.001	<0.001	<0.001

GROUNDWATER MONITORING ANNUAL PARAMETERS	MCL'S 07/93	MW-A	MW-B	MW-C	MW-D	MW-1
PRIMARY ORGANICS-FUMIGANTS:						
1,2-DIBROMOETHANE (EDB) (ETHYLENE DIBROMIDE)	0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
1,2-DIBROMO-3-CHLOROPROPANE (AKA DIBROMOCHLOROPROPANE)	0.0002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
PRIMARY-ORGANICS-BN:						
BENZO (a) PYRENE	0.0002	<0.001	<0.001	<0.001	<0.001	<0.001
BIS (2-ETHYL HEXYL) ADIPATE	0.006	<0.010	<0.010	<0.010	<0.010	<0.010
BIS (2-ETHYLHEXYL)PHTHALATE	0.006	<0.006	<0.006	<0.006	<0.006	<0.006
HEXACHLOROBENZENE	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
HEXACHLOROCYCLOPENTADINE	0.05	<0.010	<0.010	<0.010	<0.010	<0.010
WATER LEVEL (TOP OF CASING) FEET		103.25	107.09	110.41	105.11	112.6

14112 G.B.