

August 31, 1983

Mr. Gene E. Jordan, P.E., Director
Department of Public Works and Utilities
Pinellas County
315 Court Street
Clearwater, Florida 33516

Dear Mr. Jordan:

The Department of Environmental Regulation has reviewed your letter of August 3, 1983, concerning the boiler loading rate. We have no objection to modifying Condition of Certification XIV.1.C. to 87,5000 pounds per hour at a fuel quality of 5000 Btu/pound. The department, however, cannot make such a change by letter.

There are two ways that Condition of Certification XIV.1.C. can be modified. You may submit a stipulation for agreement pursuant to subsection 403.516(2), Florida Statutes. The stipulation, if agreed to by all parties to the original proceedings, would be submitted to the Power Plant Siting Board for approval. The second way of modifying the condition is to revise that condition as part of the proceedings for certifying the Phase II boiler.

Please advise as to which course of action is most appropriate or convenient to the County.

Sincerely,

Hamilton S. Oven, Jr., P.E.
Administrator
Power Plant Siting Section

HSO/sb

cc: Bill Deane
Bill Hennessey

LAW OFFICES
BRYANT, MILLER AND OLIVE, P.A.

700 BARNETT BANK BUILDING
TALLAHASSEE, FLORIDA 32301

(904) 222-6611

WILTON R. MILLER
W. ROBERT OLIVE
HUGH M. TAYLOR
ELISE F. JUDELLE
ROBERT J. KELLY
MICHAEL D. WILLIAMS
C. FARRIS BRYANT
OF COUNSEL

TELEX 548424
TELECOPIER
(904) 224-1544

August 29, 1983

Received DER

AUG 31 1983

ERS

The Honorable Steven C. Tribble
Commission Clerk
Florida Public Service Commission
The Fletcher Building
101 East Gaines Street
Tallahassee, Florida 32301

Re: Pinellas County, Florida/Petition for Determination of
Need for a Solid Waste-Fired Cogeneration Power Plant

Dear Mr. Tribble:

Enclosed for filing is the original and sixteen copies of the
Petition referred to above.

Yours truly,



Wilton R. Miller

WRM:lms

Enclosures

BEFORE THE STATE OF FLORIDA PUBLIC SERVICE COMMISSION

Received DER

In Re:)
Pinellas County, Florida,)
Petitioner.)
_____)

Docket No. AUC 81 1983

P.S.S

PETITION FOR DETERMINATION OF NEED FOR A
SOLID WASTE-FIRED COGENERATION POWER PLANT

PETITIONER, PINELLAS COUNTY, FLORIDA, pursuant to the provisions of Section 403.519, Florida Statutes, and Section 25-22.80, Florida Administrative Code, requests a determination of need for a solid waste-fired cogeneration power plant, and in support of the request states as follows:

1. The name and address of Petitioner is Pinellas County, 315 Court Street, Clearwater, Florida 33516. The name and address of the attorney representing Pinellas County is Wilton R. Miller, 700 Barnett Bank Building, Tallahassee, Florida 32301.

2. Pinellas County currently owns an existing solid waste-fired power plant containing a single 50.9-megawatt (gross) turbine generator and two incinerator/boilers located near Pinellas Park in Pinellas County, Florida and has an existing Power Plant Site Certification for the facility.

3. Pinellas County proposes to construct and operate an additional incinerator/boiler, and a single 29-megawatt (gross) turbine generator facility at the same site. The proposed incinerator/boiler will be similar to the two incinerator/boilers currently owned by the County and will have capacity to burn up to 1,050 tons per day of 5000 BTU per pound solid waste. The County proposes to continue utilizing both private and public solid waste haulers to deliver solid waste to the facility.

4. Pinellas County has filed with the Florida Department of Environmental Regulation (DER) an application for a site certification pursuant to the Florida Electrical Power Plant Siting Act (Chapter 403.51, et seq, Florida Statutes). A copy of the site certification application has been furnished to the Public Service Commission by DER and is incorporated herein by reference.

5. The steam generated by the proposed incinerator/boiler plant will be used to drive a single 29-megawatt (gross) turbine generator which will produce electricity that will be sold to Florida Power Corporation. It is estimated that the addition of a third incinerator will provide sufficient capacity to process all Class I solid waste in Pinellas County until 1996.

6. The projected in-service date for the unit is July, 1986 with construction scheduled to begin in the summer of 1984.


7. The third incinerator/boiler and the second turbine generator will be constructed on the same site near Pinellas Park in Pinellas County, Florida as the existing facility which has been granted a Power Plant Site Certification. The projected capital costs for the expansion are approximately \$50 million, plus escalation.

WHEREFORE, Pinellas County, Florida respectfully requests that the Public Service Commission:

1. Expeditiously review this petition;
2. Enter an order, which will constitute the report of the Public Service Commission required by Section 403.507(1)(b), Florida Statutes, finding that there is a need for the proposed Pinellas County single 29-megawatt (gross) solid waste-fired cogeneration power plant expansion; and
3. Grant such other relief as may be appropriate.

Dated this 29th day of August, 1983.

Respectfully submitted,


Wilton R. Miller
BRYANT, MILLER AND OLIVE, P.A.
700 Barnett Bank Building
Tallahassee, Florida 32301
(904) 222-8611

W. Gray Dunlap
Pinellas County Attorney
315 Court Street
Clearwater, Florida 33516
(813) 462-3354

Attorneys for PINELLAS COUNTY,
FLORIDA

I certify that a copy of the foregoing was hand delivered to William S. Bilenky, General Counsel, Public Service Commission, Fletcher Building, 101 East Gaines Street, Tallahassee, Florida 32301, this 29th day of August, 1983.


Wilton R. Miller

Copies furnished to:

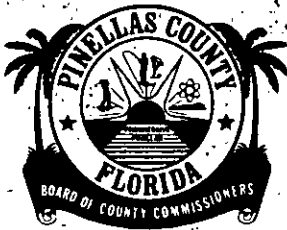
Hamilton S. Oven, Jr., P.E., Esquire
Department of Environmental Regulation
Twin Towers Office Building
2600 Blairstone Road
Tallahassee, Florida 32301

C. Laurence Keesey, Esquire
Department of Community Affairs
Room 530, Carlton Building
Tallahassee, Florida 32301

William W. Deane, Esquire
Department of Environmental Regulation
Twin Towers Office Building
2600 Blairstone Road
Tallahassee, Florida 32301

Bonnie E. Davis, Esquire
Legal Department
Public Service Commission
Fletcher Building
101 East Gaines Street
Tallahassee, Florida 32301

Jim Hoffsis
Electric and Gas Department
Public Service Commission
Fletcher Building
101 East Gaines Street
Tallahassee, Florida 32301



BOARD OF COUNTY COMMISSIONERS

DEPARTMENT OF SOLID WASTE MANAGEMENT
2800 110TH AVENUE NORTH
ST. PETERSBURG, FLORIDA 33702
PHONE (813) 825-1565

P.O. BOX 21623
ST. PETERSBURG, FLORIDA 33742-1623



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BARBARA SHEEN TODD, CHAIRMAN
JOHN CHESNUT, JR., VICE-CHAIRMAN
GABRIEL CAZARES
CHARLES E. RAINEY
BRUCE TYNDALL

August 24, 1983

Received DER

AUG 29 1983

BBS

Mr. Hamilton S. Oven, Jr., Administrator
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32301

Re: Bentonite-Soil Slurry Wall Proposal

Dear Mr. Oven:

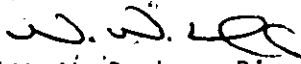
On Wednesday, July 6, 1983, I met with Messrs. Boyes and Lewis, staff members of the Tampa DER office to discuss proposed projects at the Refuse-to-Energy Facility and to formulate a plan of action which is briefly outlined below.

We will proceed with the first step in providing permanent leachate control via a bentonite-soil slurry wall by conducting a detailed hydro-geologic survey of the site. Using a combination of remote sensing techniques and site specific borings, a study will provide the necessary data by which the environmental suitability of the slurry wall project can be evaluated. We are particularly interested in defining the continuity and physical-chemical integrity of the underlying confining layer. The results of the survey will be submitted to your office for staff review.

If the project is deemed feasible, wall design and construction will proceed.

My apologies for tardiness of this update. As we discussed in Tallahassee on August 17, 1983, in the future, you will be copied on all correspondence sent to the Tampa DER office and vice versa.

Very truly yours,


W. W. Dasher, Director
Public Works Operations

WWD:ltl



State of Florida
DEPARTMENT OF NATURAL RESOURCES

DR. ELTON J. GISSENDANNER
Executive Director
Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard, Tallahassee, Florida 32303

BOB GRAHAM
Governor
GEORGE FIRESTONE
Secretary of State
JIM SMITH
Attorney General
GERALD A. LEWIS
Comptroller
BILL GUNTER
Treasurer
DOYLE CONNER
Commissioner of Agriculture
RALPH D. TURLINGTON
Commissioner of Education

August 23, 1983

Received DER

Mr. Hamilton S. Oven
Department of Environmental Regulation
Twin Towers Office Building
2600 Blairstone Road
Tallahassee, Florida 32301

AUG 26 1983

P P S

Dear Mr. Oven:

SUBJECT: Pinellas County Resource Recovery Project - Phase II
Power Plant Site Certification Application

The Department of Natural Resources has completed a review of the referenced project application. Based on the information provided in this application, it does not appear that the proposed activity will affect the plans, programs and objectives of this Department.

If we can be of further assistance to you, please advise.

Sincerely,

Ellison E. Hardee, Chief
Bureau of Environmental Land Management
Division of Recreation and Parks

EEH:ckh

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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

TO: Hamilton Oven

THRU: W.K. Hennessey *WKH*

THRU: *ES* E. G. Snipes/H. Kerns

FROM: Pat Lewis *PL*

DATE: August 26, 1983

SUBJECT: Pinellas County Resource Recovery Facility
Proposed Hydrogeological Investigation

We have reviewed the conceptual hydrogeological investigation presented for the above subject by Ardaman & Associates, Inc., in letter dated August 9, 1983.

We feel that this is a comprehensive preliminary survey which should be adequate to provide the necessary information for slurry wall feasibility and groundwater monitor plan at a later date.

PWL/bc

TO: Ed Snipes
FROM: Hamilton S. Oven, Jr.
DATE: August 25, 1983
SUBJECT: Pinellas County Resource
Recovery Project Travel

When traveling to or from functions concerning the Pinellas County Resource Recovery Project, please use Module 8188 and indicate the Power Plant Siting Number PPS-PA 83-18 on your pay voucher as well as your own cost center.

Attached is a copy of a revised page of your time sheet as submitted to Finance and Accounts with your recent travel voucher.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOTAL HOURS	RATE	TOTAL				
4000 Training																																						
5003 Permitting																																						
5623 PERMITTING																																						
8188 TIA & R O																																						
Pinellas County RPF																																						

INDIRECT TIME

ANNUAL LEAVE	0810																																			(1)
SICK LEAVE	0811																																			(2)
FAMILY SICK LEAVE	0811																																			(3)
ADMINISTRATIVE LEAVE	0813																																			(4)
REGULAR COMP USED	0805																																			(5)
SPECIAL COMP USED	0805																																			(6)
PERSONAL HOLIDAY																																				(7)
DISABILITY LEAVE	0812																																			
LEAVE WITHOUT PAY	0816																																			
HOLIDAY	0809																																			
TOTAL DIRECT & INDIRECT TIME																																				
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SPECIAL COMP EARNED (Explain on Comp Time Earned Form)																																				(6)
OVERTIME WITH PAY																																				
SUPERVISOR INITIALS																																				

EXPLANATION OF HOURS NOT WORKED AS REFLECTED IN APPROVED FLEXTIME SCHEDULE

DATE	FROM	TIME	DATE	TO	TIME	TYPE OF LEAVE	PURPOSE AND/OR FAMILY RELATIONSHIP	SUPV INITIALS
8/2/03		3:00	8/2/03		4:00	AL	USC - car repair	
8/3/03		9:00	8/3/03		10:00	AL	" " "	
8/5/03		12:30	8/5/03		4:00	AL	" - yard	

EMP SIG & DATE
Edward A. Smith

SUPV SIG & DATE

Received DER

AUG 24 1983

P. P. S

August 19, 1983

Mr. Patrick W. Lewis
Environmental Specialist II
State of Florida Department of Environmental Regulation
Southwest District
7601 Highway 301 North
Tampa, FL 33610-9544

Re: Aggregate Cover

Dear Mr. Lewis:

We shall end our 30-day trial period of applying aggregate in our Class III landfill this Saturday, August 20. I feel the experience has been most successful in allowing trouble-free placement and better than anything previously experienced in maneuvering surface in landfills.

Would you please schedule a few moments early next week to review the site and suggest an approach to permanent clearance to so use this material? We will discontinue application until that review is complete.

Thank you.

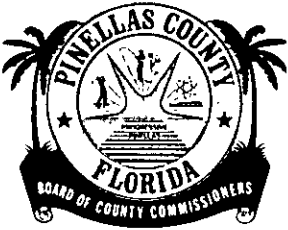
Very truly yours,


Robert S. Becker
Solid Waste Operations Manager

RSB:ltl

bcc: W. Gray Dunlap, County Attorney
Buck Oven, DER

cc John Neese
Don Kell



BOARD OF COUNTY COMMISSIONERS
PINELLAS COUNTY, FLORIDA

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING - OPERATIONS - SOLID WASTE - WATER - SEWER
315 COURT STREET
CLEARWATER, FLORIDA 33516
Phone: (813) 462-3251

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JOHN CHESNUT, JR., VICE-CHAIRMAN
GABRIEL CAZARES
CHARLES E. RAINEY
BRUCE TYNDALL

August 19, 1983

Received DER

AUG 24 1983

P P S

Mr. Hamilton S. Oven, Jr., Administrator
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

Subject: Proposed Monitoring Plan

Dear Mr. Oven:

As discussed in your office on Wednesday, August 17, 1983, please find attached one copy of the Proposed Groundwater Monitoring Plan for the Bridgeway Acres Phase I extension landfill, a Class III facility adjacent to the County's Resource Recovery Plant. To our knowledge, this document reflects the recommendations made by Mr. Hennessey's staff on July 6, 1983.

This document was submitted to the Southwest District Office of the Florida Department of Environmental Regulation in Tampa on July 28, and I apologize for not copying your office at that time.

We hope that your staff will find the information contained within to be sufficient for your review and if you have any questions, please do not hesitate to call.

Very truly yours,

W. W. Dasher, Director
Public Works Operations

Enclosure

PROPOSED GROUND WATER MONITORING PLAN
BRIDGEWAY ACRES PHASE I EXTENSION LANDFILL

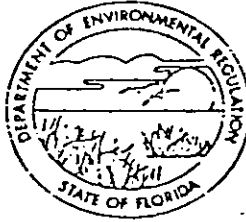
SUBMITTED TO THE SOUTHWEST DISTRICT OFFICE
FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
TAMPA, FLORIDA

JULY, 1983

PINELLAS COUNTY DEPARTMENT OF SOLID WASTE MANAGEMENT
HENNINGSON, DURHAM AND RICHARDSON, INC.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

APPLICATION FOR MONITORING PLAN APPROVAL
(Existing Sources)

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

PART I - General Information

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

Pinellas County Board of County Commissioners/Solid
Corporation or Owner's Name Waste Management Department

Permit No. _____

Bridgeway Acres Phase I Extention
Installation Name

SIC Code _____

110th Ave. North and 34th St., Pinellas Park Pinellas
Street Address City Zip County

27°15'18"N 82°41'48"W
Latitude Longitude

1/4 1/4 1/4 of 15 305 16E
Section, Township, Range

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

Gene E. Jordan, P.E., Director of Public Works and Utilities
Name and Official Title (Print or Type)

315 Court Street Clearwater Florida 33516
Street City State Zip

(813) 462-3251
Telephone Number

Signature: _____

Date: _____

PART II - Content of Monitoring Plan

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

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

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

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

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

INTRODUCTION

Pursuant to Florida Administration Code Rule 17-4.245(6)(c)2., a monitoring plan must be submitted for all sanitary landfills in the State of Florida. This document is presented to fulfill this requirement for the Bridgeway Acres Phase I Extension landfill (BWI), a Class III facility located in Pinellas County, Florida.

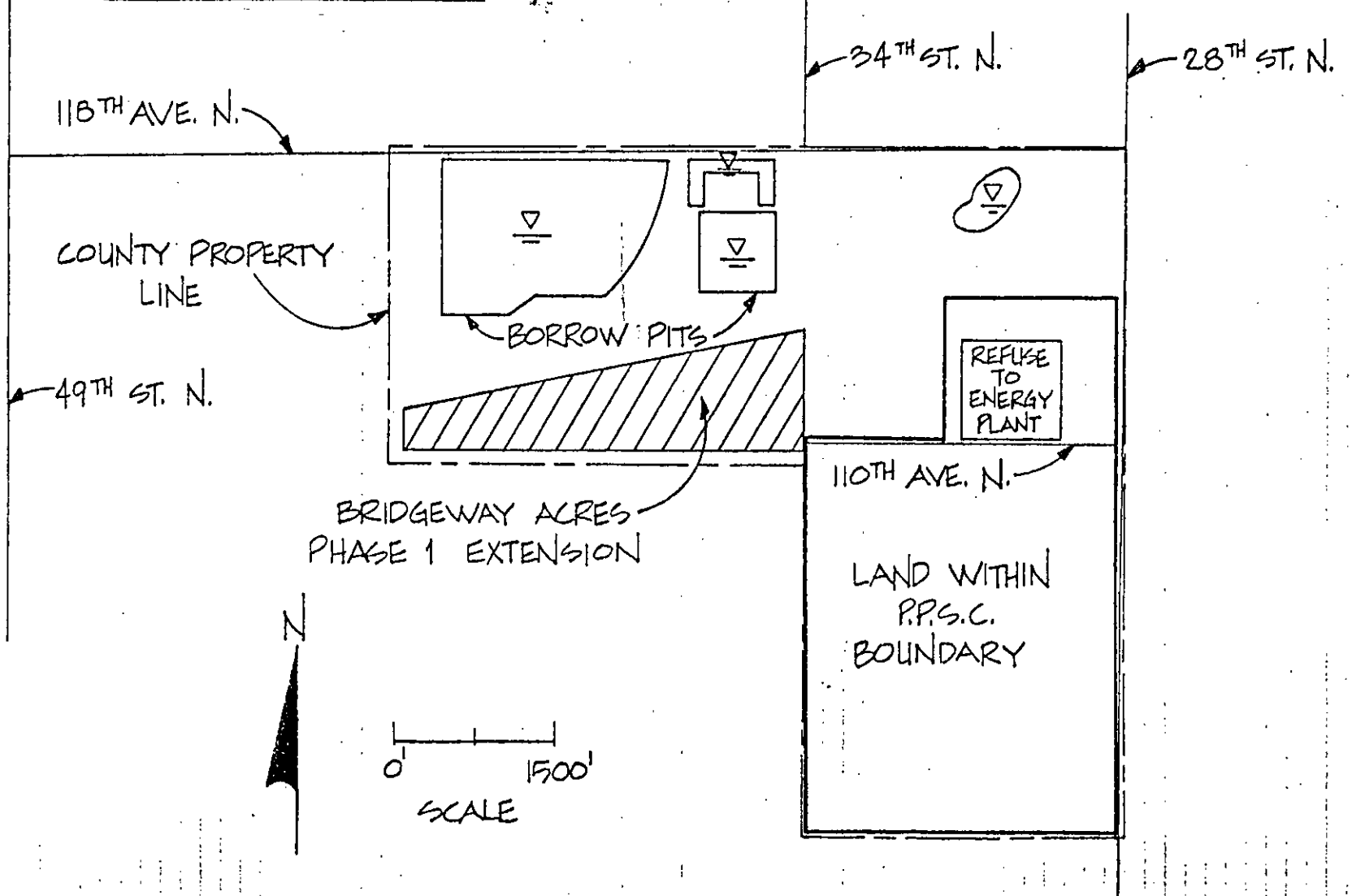
The BWI encompasses 49 acres of land lying approximately 1/2 mile west of the County's Refuse to Energy facility (Figure 1). An estimated 1/4 of the total usable land at this site has been filled with trash, rubbish, and construction debris. Class I material was deposited in the western-most corner of this tract during the last decade (Figure 2). This activity was ceased as soon as the Bridgeway Acres I tract was opened.

Surface waters surrounding the site are generally eutrophic. Cattail (Typha spp.) dominate the shorelines of ponds, lakes and ditches; approximately 60% of all water surfaces are covered by water fern (Azolla caroliniana). Ponds and borrow pits are well mixed all year although some density stratification in the deeper parts of borrow pits is possible. Surface water ecosystems support a diverse wildlife population, notably sunfishes (Centrarchidae), wading birds (Ardeidae), and alligators (Alligator mississippiensis)

Undisturbed lands consist of pine flatwoods communities dominated by slash pine (Pinus elliottii), saw palmetto (Serenoa repens), and wire grass (Aristida stricta). In areas disturbed by man's activities the exotic Brazillian pepper (Schinus terebinthifolius) forms dense thickets.

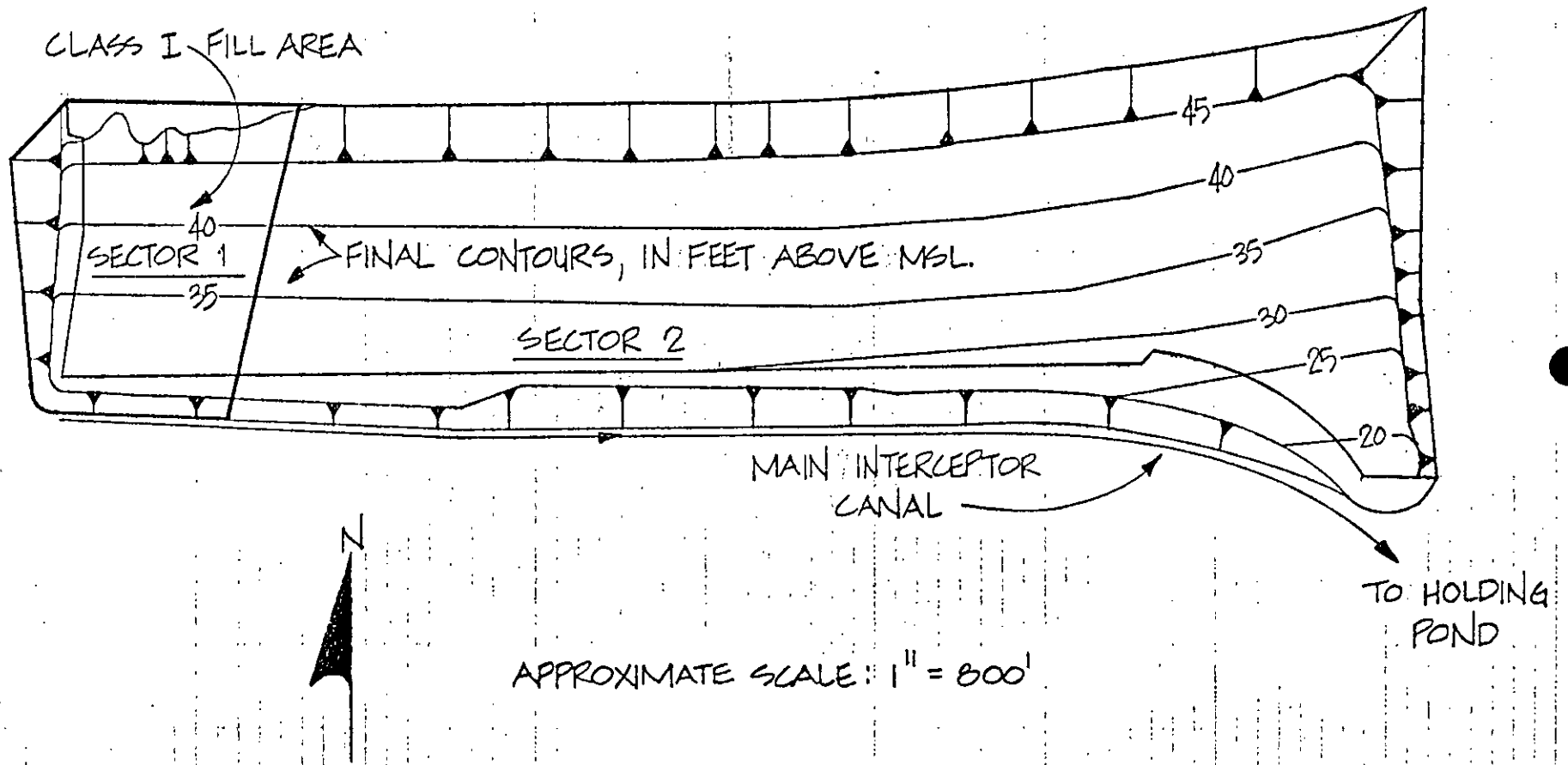
This report follows a format which includes the information requested in Part II of the monitoring plan application which prefaces this document. Section 1 addresses the three minimum requirements for all plans: well location, well construction details, and water quality sampling details. Section 2 provides the information requested for more detailed assessments. Calculation methods are appended.

FIGURE 1: STUDY AREA



43

FIGURE 2: PLAN VIEW OF BRIDGEWAY ACRES PHASE I EXTENSION



SECTION 1

1. LOCATION OF MONITORING WELLS

Figure 3 identifies the location of monitoring wells. The wells were sited after analysis of groundwater flow directions. Well 1 is upgrate of the landfill and will be used to evaluate background conditions. Well 2 lies within the zone of discharge (ZOD). Well 3 lies at the downgrade edge of the ZOD under existing grade conditions; Well 4 is at the downgrade edge of the ZOD as anticipated once all cells are contoured as shown in Figure 2. Well 5 is located further up hydrologic grade from the ZOD; this well will assist in evaluating water movement at the site.

2. MONITORING WELL CONSTRUCTION

Each well cluster will contain two wells and will be installed so as to monitor the most permeable zones (Figure 4). All wells will be drilled using a water-rotary rig and constructed using 2-inch, schedule 40, flush-fitting, threaded PVC casing and screen. No glue or solvents will be used during construction.

The first well of each cluster will be drilled to the top of the confining layer. The average depth to this layer below grade is approximately 40 ft. Grab samples will be taken every 5 ft., and all lithologic changes will be noted on the drilling log. Well screen and casing will be installed in the completed hole. The casing will extend approximately 2 ft. above the land surface; the well will be screened throughout the more permeable sand-marl strata. The annulus around the screen will be packed with sand to a point approximately 2 ft. above the top of the screen. A 2-ft bentonite seal will be placed above the sand pack to prevent vertical migration of water in the borehole. The hole will then be grouted to the surface and a 4-in. protective steel casing installed. The second well of the cluster will penetrate the surficial aquifer and confining layer and terminate in the Floridan aquifer. The depth of penetration into that formation will be sufficient so that a zone of high transmissivity is encountered. This well will be grouted and cased as described above. All wells will be developed by pumping until the water runs clear.

Should a leachate plume be detected by a surface aquifer well, additional wells will be constructed and screened so that the vertical distribution of the plume and the conveying stratum(a) can be identified.

Hydraulic testing (commonly called slug testing) will be performed on all newly installed monitor wells and selected existing wells to determine hydraulic conductivity of the surficial aquifer. The slug tests will be performed using the following procedure:

Small-diameter pressure transducers will be lowered into the wells and the pressure that corresponds to the water level will be recorded using an Envirolab 2-channel pressure recorder. After the well has been allowed to stabilize, a mechanical slug will be placed into the well to quickly raise

FIGURE 3

Water Table Contours

All elevations in feet above sea level

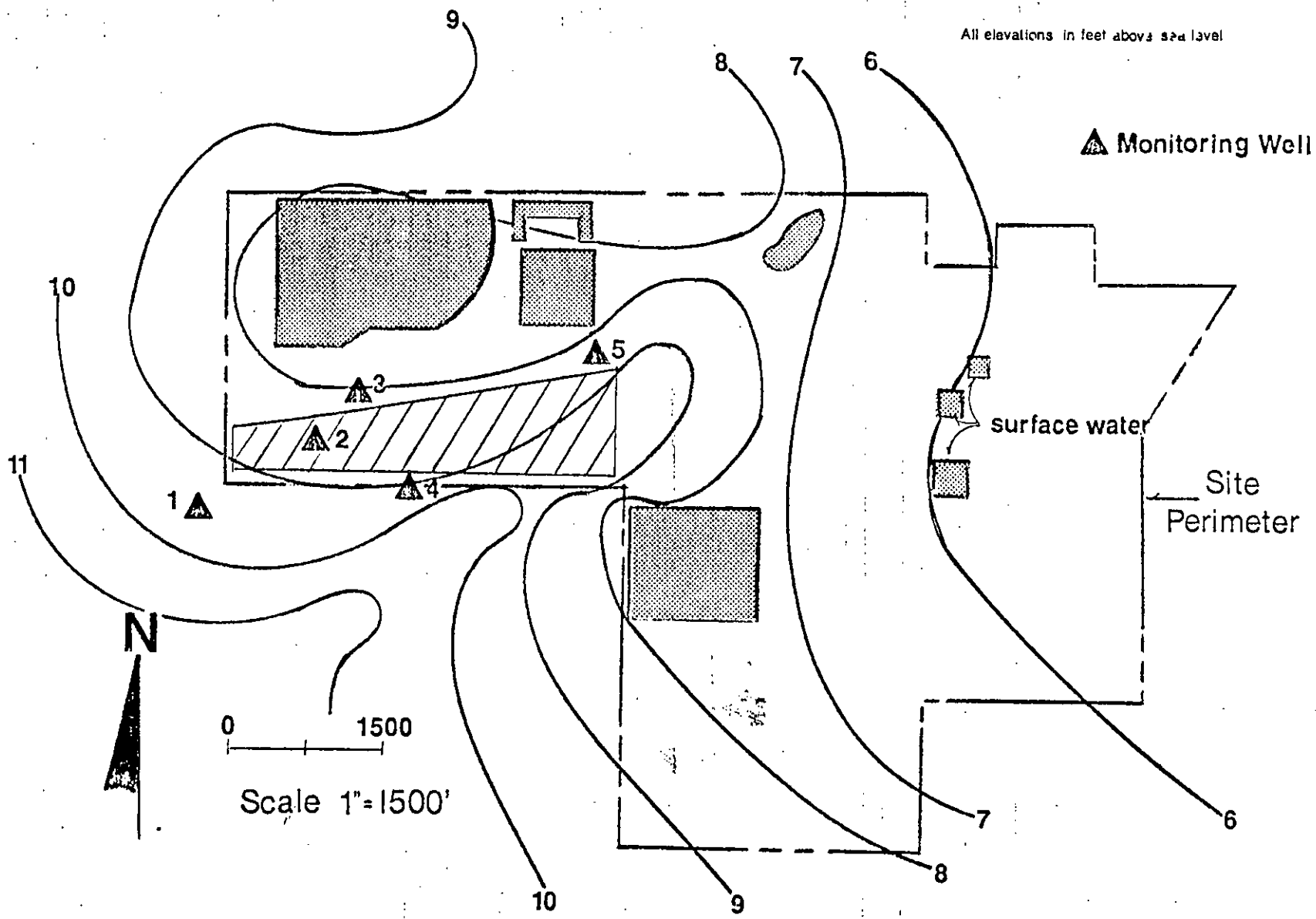
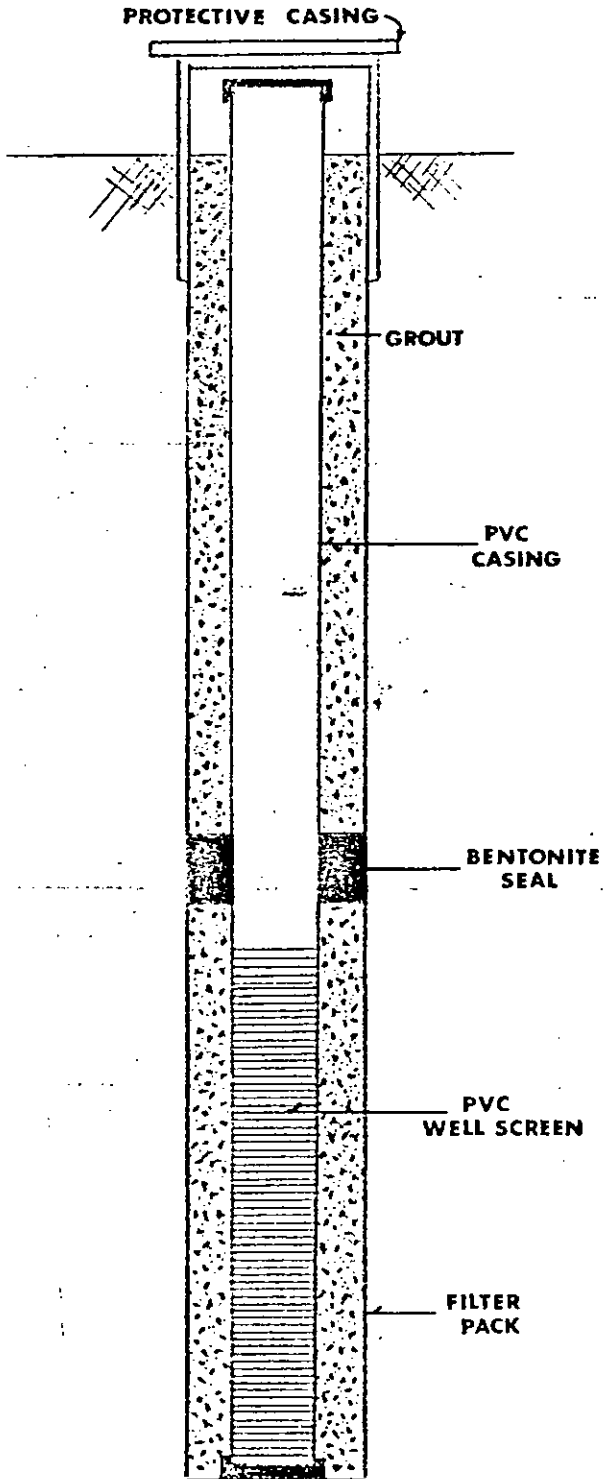


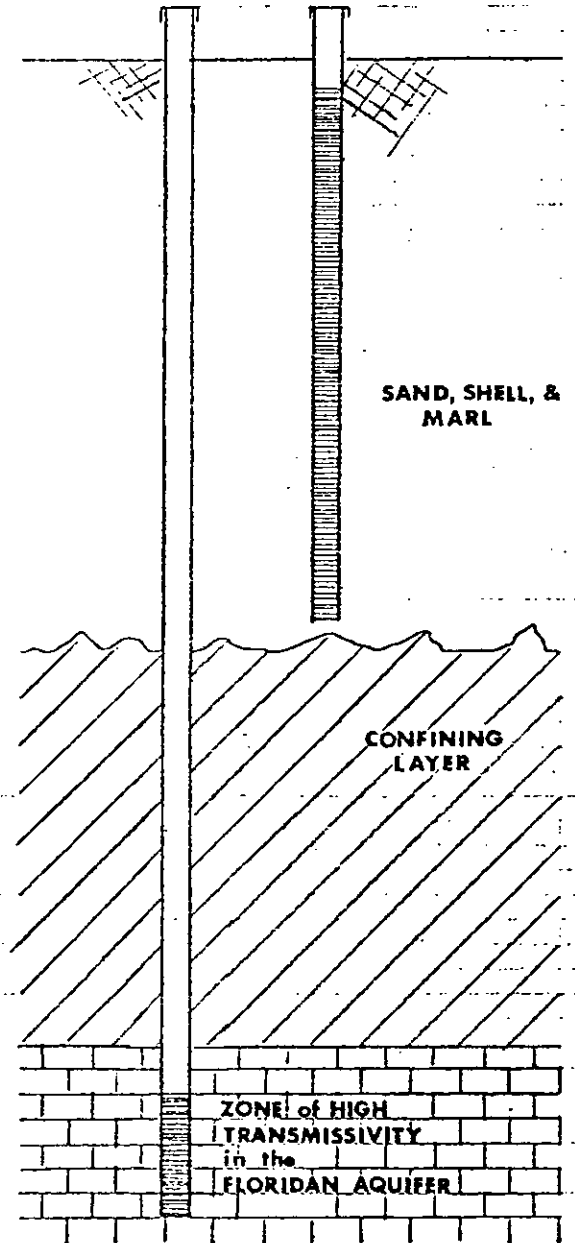
FIGURE 4

MONITORING WELL PLAN

Well Configuration



Cluster Configuration



the water level in the well. The slug will remain in place while the water levels are recorded at 1-second intervals until the well has reached equilibrium. At that point the slug is removed and the water levels are recorded until equilibrium is reached again.

3. WATER QUALITY SAMPLING PROCEDURE

Ten (10) separate samples will be collected (one from each well) on a quarterly basis. Each well will be evacuated for a minimum of 3 well volumes. Conductivity and temperature, and pH will be measured onsite using portable S-C-T meters and pH meters which have been calibrated at the beginning of each trip. Sampling will be accomplished using a bailer constructed of inert (PVC) materials. The samples will be collected in a manner which will minimize aeration and prevent oxidation of reduced compounds. All containers will be filled to the top and tightly stoppered. All samples will be chilled, preserved as appropriate, and transported to the laboratory for analysis; all equipment will be rinsed between collections to avoid any possible cross-contamination.

Samples will be drawn using a peristaltic pump and a vacuum bottle. The vacuum bottle used will be the actual samples bottles. A separate Teflon tube and stopper will be provided for each sampling station. The pump will create a vacuum in the sample container which will in turn draw the sample out of the well.

The 10 samples will be preserved upon arrival at the laboratory as follows:

Metals fraction: HNO₃ to pH 2

COD fraction: H₂SO₄ to pH 2

Samples will be unfiltered and analyzed for the following total parameters:

pH	HCO ₃
NH ₃ ⁺	Na ⁺
NO ₃ ⁻	Total Dissolved Solids
Cl ⁻	Total Organic Carbon
SO ₄ ⁻	Conductivity
K ⁺	Fe ⁺

Analysis of metals (As, Ba, Cd, Pb, Cr, Hg, Se, Ag, Al, Cu, Ni, and Zn) will be conducted annually.

SECTION 2

I. HYDROGEOLOGY

Site geology (Figure 5) is typical of coastal Florida landforms. The upper 10 ft. of soil consists of Plio-Pleistocene sands which grade into marl and clay with increasing depth. Discontinuous shell beds intermixed with fine sand occur between 5 and 15 ft. below grade. The clays form an underlying confining layer which is part of the Hawthorne formation. It contains hard sandstones and sandy clays and is impregnated in some areas with phosphate and chert fragments. Isolated lenses of sand may also be present. The confining layer has an average thickness of 37 ft.; a permeability of less than 0.10 ft./yr. is typical. Beneath the Hawthorne formation lies the Tampa limestone, a hard sandy layer of lower Miocene Age. This limestone has an average thickness of 125 ft.

A surficial aquifer exists above the confining layer within the sand and marl layers. Water yields are low from this aquifer; wells tapping it provide less than 5 gpm of flow. Within the Tampa limestone, exists the artesian Floridan aquifer. The potentiometric surface of this aquifer varies seasonally from 2.0 to 5.0 ft. above mean sea level; highest potentials occur in late summer and early autumn and coincide with the end of the rainy season. The water level in the surficial aquifer also fluctuates directly with rainfall. It varies in elevation above mean sea level from 8.0 to 13.0 ft. During as much as seven months of the year the water table is at the land surface.

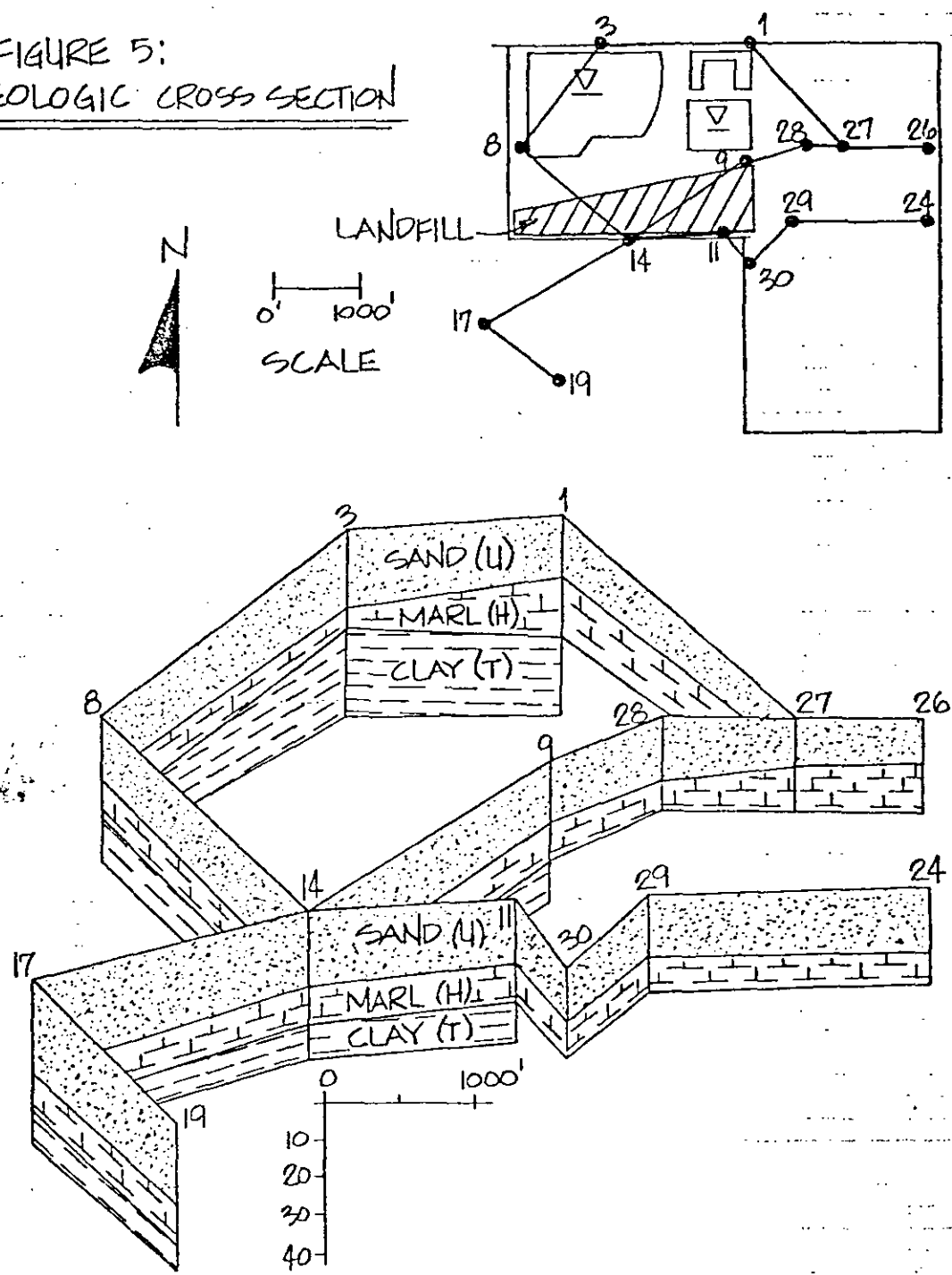
Ground water flow velocity and direction are controlled by differences in water table elevations (Figure 3). Discharge areas are located wherever surface excavations exceed the depth to the water table. Based on vertically weighted permeability value of 274 ft/yr, the average horizontal flow velocity beneath the site is 1.41 ft/yr. This is based on a worst case hydraulic head of 1.55×10^{-3} ft/ft observed at the site. As you approach a discharge area, such as the canal south of the landfill, the flow accelerates due to the increase in hydraulic gradient. A velocity value of 20 ft/yr. is typical here. Vertical flow velocity through the confining layer is estimated at .31 ft/yr. This rate will depend on the differences in elevation between the potentiometric surface in the Florida aquifer and the water table elevation in the shallow aquifer.

Using the horizontal and vertical velocity components derived above, a two dimensional velocity of 1.46 ft./yr. in a direction 9.6 degrees below grade is calculated. Based on this, it is concluded that ground water flow follows a nearly horizontal path.

Soils at the site are of the Felda and Eldred series. The land surface is generally flat, and broken only by excavations, dirt mounds, and completed trash cells. The finished design landfill topography is shown in Figure 2. The average undisturbed land elevation is 14 ft. above sea level.

Surface water features in the area are composed of roadside ditches, shallow natural ponds, perimeter canals, and borrow pits. Runoff in undisturbed areas travels by sheet flow into ditches and eventually to

FIGURE 5:
GEOLOGIC CROSS SECTION



EXPLANATION:
 17 SITE OF DRILLING AND COLLECTION OF CORE SAMPLES;
 AFTER WHICH A MONITORING SITE WAS ESTABLISHED.
 (U) UNDIFFERENTIATED SURFICIAL DEPOSITS.
 (H) HAWTHORN FORMATION.
 (T) TAMPA FORMATION.

ponds and borrow pits. Finished landfill cells in BWI are contoured to promote surface drainage southward into an interceptor canal which conveys the water into a detention pond to the southwest (Figure 2).

Water Quality in the Study Area

Mean and maxima concentrations in shallow aquifer wells and surface waters at the site are reported in Table 1. Locations of the monitoring sites featured in Table 1 are shown in Figure 6. The second column of the table shows applicable Chapter 17-3 standards for site ground water. Comparison of the average Fe, color and turbidity values with respective standards show violations at most wells. Nitrate nitrogen concentrations, reported as N, are extremely high in shallow wells underlying the sod farm site. This has resulted from the land application of domestic wastewater sludges over the past decade. Note also that maximum values for As, Cd, Cr, and Hg in some wells violate standards. Surface water quality is better with the exception of coliform bacteria.

2. WASTE DISPOSAL RATE

Class III solid waste will be continuously deposited at the site during normal landfill operating hours: 6:00 A.M. -- 5:00 P.M., Monday through Saturday. Cells are designed to be filled at a density of 1000 lbs/ft³.

3. TOXICITY OF WASTE

The material disposed of at the site consists of yard rubbish, tree clippings, and, occasionally, construction debris. Toxic substances are not permitted at BWI.

4. LEACHATE PRODUCTION AND CHARACTERISTICS

Under saturated soil and trash conditions leachate would be produced approximately 20 months after completion of the cell. It is anticipated that the leachate would be a low pH, highly colored stream with a high dissolved carbon content.

5. DISPOSAL SYSTEM WATER BALANCE - not pertinent.

6. PRESENT AND FUTURE POLLUTION SOURCES

- A. Bridgeway Acres II - Class I landfill.
- B. Sod Farm - Sludge spray field.
- C. Toytown Landfill - Solid waste landfills are now closed but sludge lagoons are active.

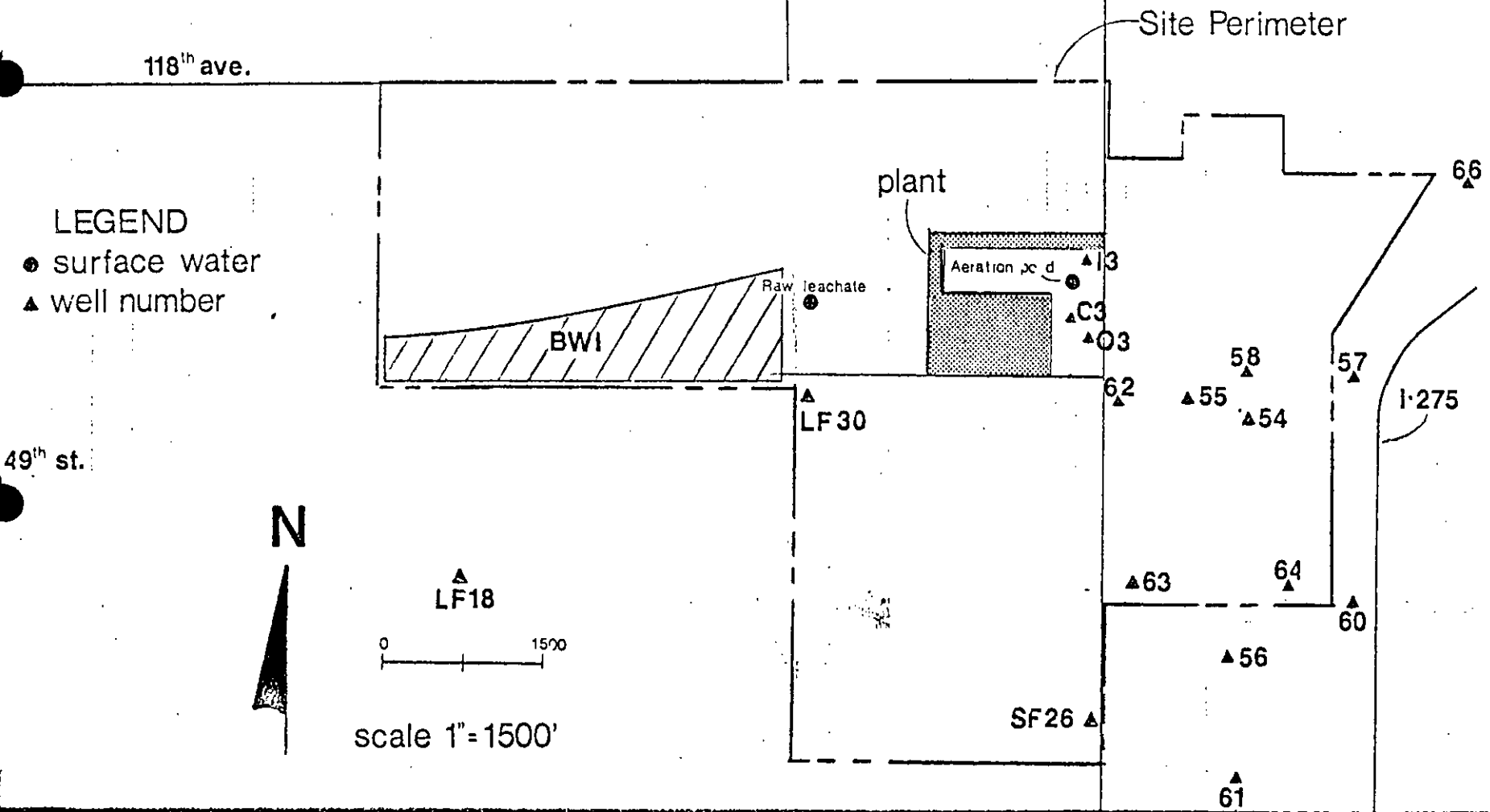
TABLE 1

SITE PARAMETER ¹	1° & 2° DRINKING WATER STANDARDS	GROUNDWATER															
		C3	I3	O3	LF18	LF30	63S	SF26	54D	54S	55D	55S	56	57	58	60	61
		MEAN MAX	MEAN MAX	MEAN MAX	MEAN MAX	MEAN MAX	MEAN MAX	MEAN MAX	MEAN MAX	MEAN MAX	MEAN MAX	MEAN MAX	MEAN MAX	MEAN MAX	MEAN MAX	MEAN MAX	MEAN MAX
Zn	2	.018 .02	.04 .1	.024 .04	.033 .18	.063 .1	.058 .12	.049 .15	.033 .15	.06 .15	.03 .07	.018 .03	.054 .25	.149 .99	.051 .13	.062 .23	.075
SO ₄	250	6.8 18	—	—	9.3 16	—	—	—	—	—	—	—	—	—	—	—	—
pH ² (MN)	6.5	6.0 6.15	6.83 6.28	6.88 6.3	6.84 6.08	7.31 7.1	—	7.2 6.3	7.5 6.7	7.4 6.4	7.4 7.0	7.2 6.9	7.4 6.7	7.5 6.6	7.2 6.4	7.5 6.7	7.4
Fe	.3	4.78 6.0	.356 1.0	2.06 8.7	9.34 14	1 1.0	2.84 18	6.1 7.8	2.34 4.4	2.16 9.6	2.1 3.3	2.6 4.0	4.9 8.2	13.1 110	5.7 24	4.96 6.9	6.4
Cu	1	.0017 .005	.0025 .001	.0019 .004	.0088 .003	.0071 .011	—	.014 .041	.027 .045	.015 .18	.0023 .004	.0038 .006	.02 .07	.019 .6	.022 .057	.018 .130	.029
Color ³	15	3 5	—	—	50 50	—	63.3 100	118 150	108 20	46 83	3.5 10	151.3 200	723 130	62.3 100	46.7 60	58.3 90	18
Cl	250	181.5 260	162 330	133.6 210	232 430	6.2 6.9	123.3 230	214 280	98 210	151 230	200 230	741 124	81 200	43.1 89	32.8 110	132.2 110	113
As	.05	.0084 .007	.0076 .01	.0098 .01	.0048 .008	.0031 .004	.0058 .042	.003 .011	.002 .006	.0033 .007	.0015 .003	.0015 .002	.005 .007	.009 .050	.0008 .012	.0075 .036	.0033
Cd	.01	.0024 .012	.0103 .054	.0024 .008	.0033 .013	.0023 .001	.0008 .005	.0004 .002	.0007 .003	.0007 .004	.0003 .001	.0003 .001	.0012 .004	.0019 .015	.0004 .002	.002 .007	0
Cr	.05	.019 .03	.019 .032	.0146 .03	.017 .03	.02 .02	.019 .03	.014 .02	.011 .02	.013 .03	.0009 .001	.0008 .002	.012 .03	.034 .14	.006 .01	.036 .20	0
Pb	.05	.0016 .023	.0036 .018	.0036 .01	.017 .049	.0037 .007	.046 .17	.02 .042	.05 .16	.023 .08	.003 .006	.0038 .015	.041 .14	.071 .32	.01 .085	.043 .100	.19
Hg	.002	.0003 .0005	.00036 .0006	.00027 .0008	.00048 .001	.0005 .0005	.00026 .0018	.0002 .0007	.0002 .0006	.0006 .0007	.0011 .0011	.0005 .0005	.002 .0005	.0002 .0007	.0001 .0005	.0002 .0004	—
Se	.01	.0004 .001	.0009 .001	.0008 .001	.0003 .001	—	—	—	—	—	—	—	—	—	—	—	—
Ag	.05	.0008 .002	.0008 .003	.0008 .002	.0003 .001	—	—	—	—	—	—	—	—	—	—	—	—
No	160	107.7 160	202.3 320	89 110	107.8 280	4.9 5.3	72.1 120	107 160	642 120	103.3 130	77 78	30.7 30	21.3 30	24.7 31	23.6 48	84.7 110	98
NO ₃ -N	10	.02 .11	.015 .03	.12 .07	.006 .02	.37 1.1	91.8 300	.07 .32	2.1 18	23.1 120	.01 .01	.01 .02	.02 .11	.06 .19	7.3 84	.03 .14	0
Turbidity	1 - MONTHLY 5 - 2-DAY	38.1 80	29 40	318 110	48 100	35 85	—	—	—	—	—	—	—	—	—	—	—
Coliform(MPN)	1/100 ml 4/100 ml	4 4 (MF)(MF)	—	—	1,54 4,600	—	1,715 1,000	182 2,300	234 2,400	106 9300	46 46	800 12,000	26 150	1,226 11,000	1,123 4,000	2,597 35,000	410

1. ALL IN MG/L UNLESS NOTED
 2. PH UNITS
 3. Pb - Cu UNITS
 4. NTU

FIGURE 6

LOCATION of MONITORING SITES



7. WATER SUPPLY WELLS

<u>LOCATION</u>	<u>EXPOSED DEPTH</u>	<u>SIZE</u>	<u>CASING LENGTH</u>	<u>OWNER</u>
12099-44th St., N. Inactive	115 3/4' - 201'	4" 75 gpm	115 3/4'	M. Prusan
12295 Automobile Dr. (46th St.) Inactive	200'	3" 100 gpm	200' (?)	Mears Ind. Complex
118th Ave. N. 44th St.	201'	3" 40 gpd	99'	N & B Properties
13155 40th St. July, 1974 Active (Outside)	-	2" Nom.	-	Rebel Int.
June, 1974 126th Ave. & 44 St. Active (Outside)	101' - 127'	4" 70 gpm	100	Small World
12175 46th St. N. Inactive	-	-	-	Rich N Mix

8. ECONOMIC CONSIDERATIONS

BWI is the most effective site for a Class III landfill, due to the limited amount of land available and its location in direct line with the north-south runway of the St. Petersburg-Clearwater airport.

9. CHRONOLOGICAL WATER LEVELS

Water levels in the shallow aquifer have maintained a long-term equilibrium in the region. The lowest elevations are observed in May and maximum elevations noted at the end of the rainy season in September.

10. NUMBER OF WASTE DISPOSAL FACILITIES

BWI has two main fill sectors (Figure 2). Landfill operations commenced at the far western boundary of the site and are proceeding eastward.

11. WATER QUALITY - described in 1, above.

12. OPERATION DETAILS

The Class III material will be filled to within 2 ft. of the final grade elevation shown in Figure 2. A 2 ft. final cover of clayey material will follow; the finished cells will be seeded on top, sodded on side slopes, and planted in pines. A daily cover of local soil will be applied during landfilling.

13. HISTORICAL DEVELOPMENT

The area surrounding BWI has been a regional dumping ground for over 60 years. There are many abandoned landfills in the vicinity of the site, notably north of 118th Ave. N., the Windisch landfill just east of 34th St. N., and the Bridgeway Acres I site immediately north of the Refuse to Energy plant. Bridgeway Acres II, a Class I landfill, is actively being used just south of the plant.

The surrounding region was sparsely populated until the late '60's. At that time light manufacturing operations began developing along 49th St. N. and 118th Ave. N. At present, most of the land surrounding the landfill is zoned for commercial and light industrial land uses.

In the early 1970's residential developments were constructed to the south of BWI. The closest homes are located approximately 3/4 of a mile away.

CALCULATION METHODS

In early 1983, NFS Services, Inc., conducted site borings adjacent to Bridgeway Acres Phase I Extension. Data from these borings were used to:

1. Independently verify the geologic stratigraphy reported by the USGS (see Figure 5), and
2. Provide permeability values to employ in flow equations.

The attached exhibits describe the results.

GROUND WATER FLOW

Horizontal flow velocity through the surface aquifer was computed using the relationship

$$V = KI/n$$

where V is the horizontal velocity, I is the hydraulic gradient, K is the average permeability of the aquifer and n is the effective porosity of the soil. Values of K and I were taken from site borings; a value of effective porosity of .30 was employed. Leakage through the underlying confining layer was estimated by the expression

$$Q = (P/m) hA$$

where Q is the leakage flow, P is the permeability of the confining layer, m is its average thickness, A is the cross-sectional area of leakage and h is the head difference between each side of the layer. The h value used represents the difference between the water table elevation and the potentiometric surface of the Florida aquifer, the latter taken from SWFWMD data. Two dimensional groundwater velocity and direction was estimated by vector addition of horizontal and vertical velocity components.

WATER QUALITY AND BACTERIOLOGY

Water quality data from water quality monitors were retrieved from the U. S. Geological Survey's WATSTORE data network. These data are from samples taken quarterly from 1975 through 1980. A statistical analysis program provided means, maxima, and standard deviations for 18 water quality parameters.

LEACHATE PRODUCTION

The time for leachate production to begin was estimated from a procedure outlined in the following document:

Metry, Amir and Frank L. Cross. Leachate Control and Treatment. Vol 7, Environmental monograph series. Technomic Publishing Co. 1976.

FIGURE 2

Geologic Detail

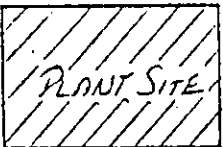
N

EXHIBIT A

geologic detail

114th AVE.

110th AVE.

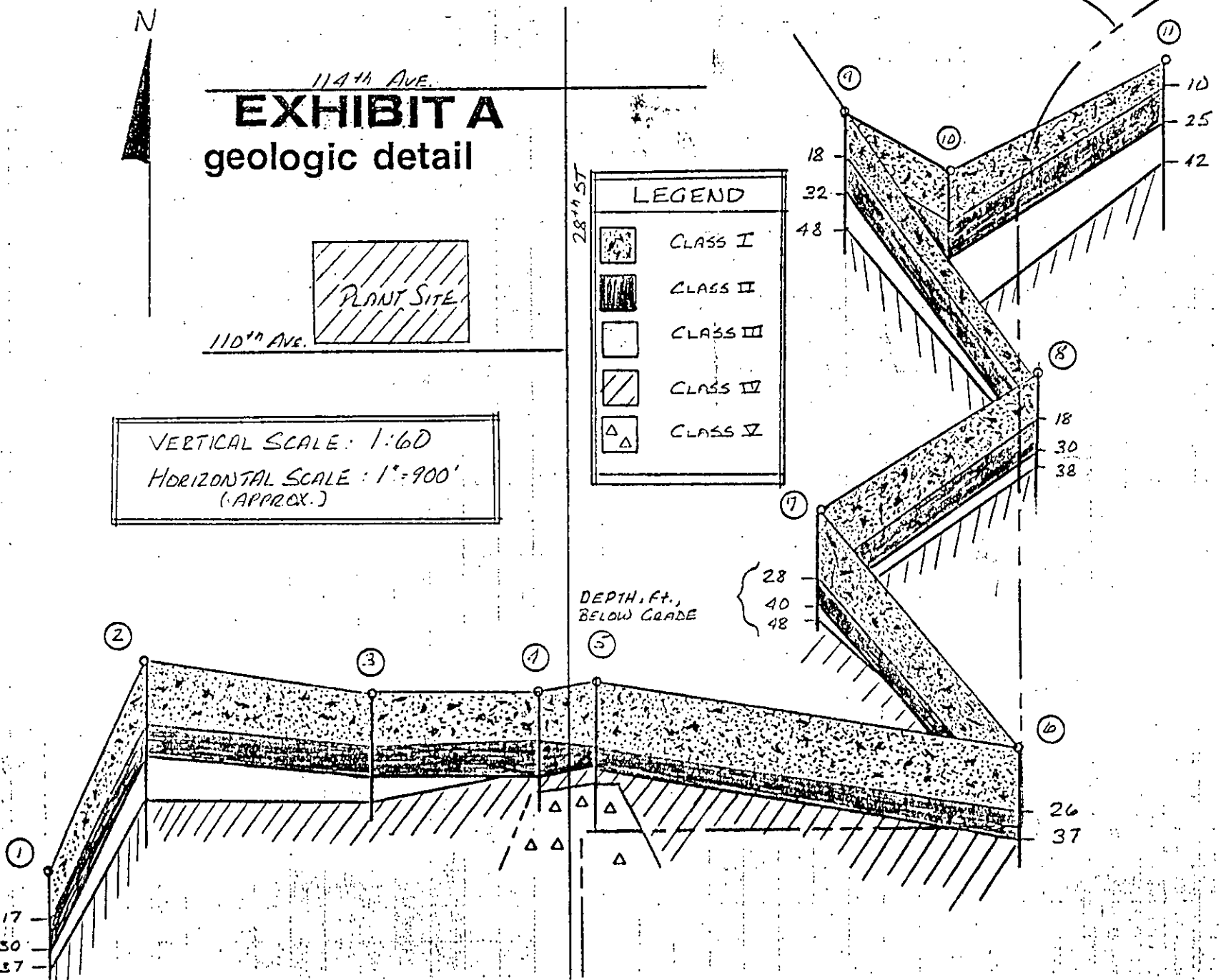


VERTICAL SCALE: 1:60
HORIZONTAL SCALE: 1"=900'
(APPROX.)

LEGEND	
	CLASS I
	CLASS II
	CLASS III
	CLASS IV
	CLASS V

DEPTH, Ft.,
BELOW GRADE

PROPERTY LINE



HDR

PROJECTS _____

SUBJECT _____

COMPUTED _____ CHECKED _____ DATE _____

PAGE _____ OF _____

EXHIBIT B

GENERALIZED SOIL STRATIGRAPHY

CLASS	DESCRIPTION OF SOIL HORIZONS AND PERMEABILITY (cm/sec)
I	Loose to medium dense brown, tan, and grey brown fine sand with variable silt; clay and shell fragments..... 1×10^{-3}
II	Very soft to stiff light green calcareous clayey silt with small white cemented fragments and variable sand content..... 1×10^{-5}
III	Medium dense to dense green-grey to green clayey fine sand with clay and sand lenses..... 1×10^{-4}
IV	Firm to hard cemented green sandy clay to clay..... 1×10^{-7}
V	Very soft to hard cream colored sandy to clayey limestone.....?

DER Pinellas County 8/17/83

Buck Owen DER 488-0130

JIM ANDREWS HDR (904) 432-2481

BOB VAN DEMAN HDR 813-577-9455

JOE MURDOCH TAMPA 813-223-8071

Tom ROGERS DER (904) 488-1344

Bob King DER (904) 488-1344

E. G. Snipes DER TAMPA 985-7402

Joop Homburg Signal/RESCO 813-576-9163

WILLEN MILLET BMMO - TAMPA 984-222-8611

ANDREW SZURGOT SIGNAL RESCO 312/391-3744

BILL DASHER Pinellas County - Operations 462-3183 (813)

ACE ACENBRACK P/C S/W MGR 825-1565

Don Kell DER 204-488-3601

JOHN REESE DER

Karen Anthony DER/PPS 488-0130

(partial) Bill Hennessey

Don Schiesswhol DER/BWM+G 488-2582



State of Florida
LT. GOVERNOR WAYNE MIXSON
Secretary of Commerce

Received DER

AUG 16 1983

P. P. S

August 11, 1983

Mr. Hamilton S. Oven, Jr.
Administrator
Power Plant Siting Section
Florida Department of Environmental
Regulation
2600 Blainstone Road
Tallahassee, Florida 32301-8241

Dear Mr. Oven:

I was pleased to receive the material describing the Pinellas County Resource Recovery Power Plant project.

This project is consistent with the goals and objectives of the Florida Department of Commerce. Using waste material as fuel eliminates the need for burying it in a landfill, thereby freeing that land for better uses. This is particularly important in Pinellas County since it is the most densely populated area in Florida.

In addition to having direct economic benefits, this plant will be a very visible high technology facility which will contribute to Pinellas County's image of a progressive area. This will assist us in selling Pinellas as a plant site in the extremely competitive endeavor of recruiting high technology industries.

Sincerely

A handwritten signature in cursive script, appearing to read "Wayne Mixson".

Lieutenant Governor
Secretary of Commerce

WM/jgb



Received DER

FLORIDA DEPARTMENT OF STATE
George Firestone
Secretary of State
DIVISION OF ARCHIVES,
HISTORY AND RECORDS MANAGEMENT
The Capitol, Tallahassee, Florida 32301
(904) 488-1480

AUG 15 1983

P.P.S

August 4, 1983

In Reply Refer to:

Mr. Frederick P. Gaske
Historic Sites Specialist
(904) 487-2333

Mr. Hamilton S. Oven, Jr.
Administrator
Power Plant Siting Section
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

Re: Your Letter of July 29, 1983
Cultural Resource Assessment Request
Proposed Phase II Addition to Resource Recovery
Facility, Electrical Power Plant Siting Certification
Application, Pinellas County, Florida

Dear Mr. Oven:

As per the provisions of Chapter 17-17, Florida Administrative Code ("Rules of State of Florida Department of Environmental Regulation, Electrical Power Plant Siting"), we have reviewed the above referenced project for potential impact to significant archaeological and historical sites and properties.

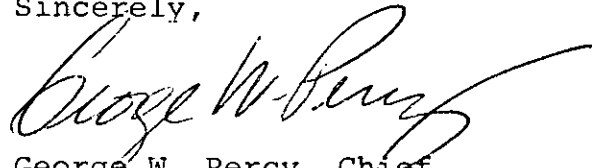
A review of the Florida Master Site File indicates that no archaeological or historical sites are recorded for the project area. Furthermore, because of the location of the project, it is considered highly unlikely that any significant, unrecorded sites exist in the vicinity. Therefore, it is the opinion of this office that the proposed project will have no effect on any sites of national, state or local significance.

If you have any questions concerning our comments, please do not hesitate to contact us.

Mr. Hamilton S. Owen, Jr.
Page Two
August 4, 1983

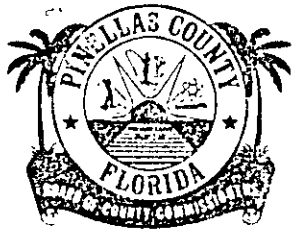
Your interest and cooperation in helping to protect Florida's
archaeological and historical resources are appreciated.

Sincerely,

A handwritten signature in cursive script, appearing to read "George W. Percy". The signature is fluid and extends to the right with a long tail.

George W. Percy, Chief
Bureau of Historic
Preservation

GWP:Gsb

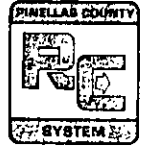


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DEPARTMENT OF SOLID WASTE MANAGEMENT
2800 110TH AVENUE NORTH
ST. PETERSBURG, FLORIDA 33702
PHONE (813) 825-1565



P.O. BOX 21623
ST. PETERSBURG, FLORIDA 33742-1623

August 12, 1983

Mr. W. K. Hennessey
Southwest District Director
State Department of Environmental Regulation
7601 Highway 301 North
Tampa, FL 33610

J.B. (JOOP) HOMBURG
Project Manager

Solid Waste Systems Division
Ten UOP Plaza - Algonquin & Mt. Prospect Roads
Des Plaines, Illinois 60016 • 312-391-2261
UOP Inc.

Re: PPSC # PA 78-11

Dear Mr. Hennessey:

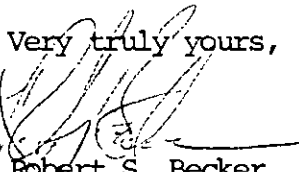
In accordance with Appendix "A"-conditions of certification, page 10, we have maintained records of materials taken in by the Pinellas County System, their destinations, rehandling, and land related disposal. These records are generated daily and can be assembled in a variety of ways. I believe the format provided herein meets our mutual objectives and will be tied to a standard set of definitions which may be enhanced from time to time as we continue to polish our materials handling procedures.

Since our plant startup in January, we had sporadic operation for testing, tuning and mechanical changes, all leading to a steady operation and acceptance date substantially ahead of our projected schedule. The start of plant activities essentially coincided with the new contract with Laidlaw Waste Systems for operation of Bridgeway Acres Landfill. The records begin part way through January, so the first month's records show low volumes. Subsequently, we diverted more and more material from Toytown. Part way through May we closed Toytown completely. Thus, the first full representative month was June 1983.

If you wish any clarification of any of the enclosed information or notes, or feel that the format should be adjusted, please advise me to that effect.

Thank you.

Very truly yours,


Robert S. Becker
Solid Waste Operations Manager

*cc: solid waste - GW
PPS
Dan Williams* **D.E.R.**

AUG 17 1983

SOUTHWEST DISTRICT
TAMPA

RSB:pa
Attach

Pinellas County Solid Waste System

Table Notes

1. All waste deemed "processable," and arriving in self-unloading vehicles are deposited in the intake room of the Resource Recovery Plant.
2. Wastes arriving in vehicles requiring hand unloading, loads observed as containing unprocessable wastes, and wastes diverted from the plant for any reason are sent to the landfill. Inside the landfill, there are three possible destinations: Class I for putrescible, Class III for brush/construction/trash wastes, and demolition for non-organic rubble. Based on operating volumes, there are occasions where destinations are consolidated. In each case, all consolidated wastes are treated as required for the more difficult content, e.g., brush is covered daily when mixed with putrescible.
3. Wastes arriving in small quantities are unloaded at the mini-station, consolidated in large containers, and then moved to the plant or landfill.
4. The County operates an isolated and unrelated program to split, bale, and transport used tires for artificial reef construction. Tires enter the system through the single scalehouse point.
11. Residue Materials (after combustion) is the raw stock for the plant's material recovery section. In addition, materials remaining after separation into streams having value (metals and large chunks still having some metal, which can be sold), and having neutral value (can be given away)--are carried away at County cost and placed in the landfill. There is no additional treatment per se. Residue has been stockpiled on site until final determination by DER as to its suitability for below watertable placement (expected 1983).
12. Reject materials originate in the intake room of the plant and are removed prior to combustion. They do not contain putrescible wastes. Rejects are landfilled in the Class III area or the Class I area of the landfill.
13. Materials deposited in the mini-station are transferred primarily to the landfill (Class I) and occasionally to the plant, if there appears to be excess capacity on a particular day.
14. Aggregate materials are fine, almost exclusively inorganic, and considered suitable for construction purposes. These materials are stockpiled for later removal from the site, or used for haul road construction in the landfill. It has also been used on an experimental basis for cover.

DER

AUG 17 1983

SOUTHWEST DISTRICT
TAMPA

Pinellas County Solid Waste System

1st Quarter

	<u>Intake</u>	<u>Jan 83</u>	<u>Feb 83</u>	<u>Mar 83</u>
1.	To Plant	5,632.77	12,325.45	14,799.23
2.	To Landfill	9,838.28	21,523.98	33,139.46
3.	To Mini-Station	0	0	63.48
4.	To Tire Splitter	<u>37.24</u>	<u>141.13</u>	<u>176.80</u>
	TOTAL	15,508.29	33,99.56	48,179.01
	<u>Rehandled Materials</u>			
11.	Residue to Landfill	651.32	2,229.15	3,158.09
12.	Reject to Landfill	0	0	0
13.	Mini-Station to Landfill	0	0	63.48
14.	Aggregate to Landfill	0	0	0
15.	Recovered Metals	0	0	0
16.	Stockpiled Aggregate	<u>0</u>	<u>0</u>	<u>0</u>
	TOTAL	651.32	2,229.15	3,221.57
	TOTAL TONS TO LANDFILL	10,489.60	23,753.13	36,361.03

Pinellas County Solid Waste System

2nd Quarter

	<u>Intake</u>	<u>Apr 83</u>	<u>May 83</u>	<u>June 83</u>
1.	To Plant	38,418.88	53,323.55	65,987.16
2.	To Landfill	19,539.30	13,723.28	11,695.89
3.	To Mini-Station	72.51	98.86	296.66
4.	To Tire Splitter	<u>261.80</u>	<u>215.53</u>	<u>229.46</u>
	TOTAL	58,292.49	67,314.14	78,011.37
	<u>Rehandled Materials</u>			
11.	Residue to Landfill	6,555.21	8,285.56	12,331.95
12.	Reject to Landfill	25.81	0	17.07
13.	Mini-Station to Landfill	72.51	51.73	98.86
14.	Aggregate to Landfill	0	0	0
15.	Recovered Metals	16.99	3,979.35	3,895.26
16.	Stockpiled Aggregate	<u>176.99</u>	<u>2,361.00</u>	<u>2,026.64</u>
	TOTAL	6,847.51	14,677.64	18,369.78
	TOTAL TONS TO LANDFILL	26,192.83	22,060.57	24,143.77

Pinellas County Solid Waste System

3rd Quarter

	<u>Intake</u>	<u>July 83</u>
1.	To Plant	61,147.62
2.	To Landfill	11,156.13
3.	To Mini-Station	296.66
4.	To Tire Splitter	<u>155.23</u>
	TOTAL	72,755.64
	<u>Rehandled Materials</u>	
11.	Residue to Landfill	156.55
12.	Reject to Landfill	4.37
13.	Mini-Station to Landfill	296.66
14.	Aggregate to Landfill	7,140.56
15.	Recovered Metals	6,102.53
16.	Stockpiled Aggregate	<u>0</u>
	TOTAL	7,598.14
	TOTAL TONS TO LANDFILL	18,754.27

August 12, 1983

Mr. W. K. Hennessey
Southwest District Director
State Department of Environmental Regulation
7601 Highway 301 North
Tampa, FL 33610

Re: PPSC # PA 78-11

Dear Mr. Hennessey:

In accordance with Appendix "A"-conditions of certification, page 10, we have maintained records of materials taken in by the Pinellas County System, their destinations, rehandling, and land related disposal. These records are generated daily and can be assembled in a variety of ways. I believe the format provided herein meets our mutual objectives and will be tied to a standard set of definitions which may be enhanced from time to time as we continue to polish our materials handling procedures.

Since our plant startup in January, we had sporadic operation for testing, tuning and mechanical changes, all leading to a steady operation and acceptance date substantially ahead of our projected schedule. The start of plant activities essentially coincided with the new contract with Laidlaw Waste Systems for operation of Bridgeway Acres Landfill. The records begin part way through January, so the first month's records show low volumes. Subsequently, we diverted more and more material from Toytown. Part way through May we closed Toytown completely. Thus, the first full representative month was June 1983.

If you wish any clarification of any of the enclosed information or notes, or feel that the format should be adjusted, please advise me to that effect.

Thank you.

Very truly yours,

Robert S. Becker
Solid Waste Operations Manager

RSB:pa
Attach

cc: Buck Oven

Pinellas County Solid Waste System

Table Notes

1. All waste deemed "processable," and arriving in self-unloading vehicles are deposited in the intake room of the Resource Recovery Plant.
2. Wastes arriving in vehicles requiring hand unloading, loads observed as containing unprocessable wastes, and wastes diverted from the plant for any reason are sent to the landfill. Inside the landfill, there are three possible destinations: Class I for putrescible, Class III for brush/construction/trash wastes, and demolition for non-organic rubble. Based on operating volumes, there are occasions where destinations are consolidated. In each case, all consolidated wastes are treated as required for the more difficult content, e.g., brush is covered daily when mixed with putrescible.
3. Wastes arriving in small quantities are unloaded at the mini-station, consolidated in large containers, and then moved to the plant or landfill.
4. The County operates an isolated and unrelated program to split, bale, and transport used tires for artificial reef construction. Tires enter the system through the single scalehouse point.
11. Residue Materials (after combustion) is the raw stock for the plant's material recovery section. In addition, materials remaining after separation into streams having value (metals and large chunks still having same metal, which can be sold), and having neutral value (can be given away)--are carried away at County cost and placed in the landfill. There is no additional treatment per se. Residue has been stockpiled on site until final determination by DER as to its suitability for below watertable placement (expected 1983).
12. Reject materials originate in the intake room of the plant and are removed prior to combustion. They do not contain putrescible wastes. Rejects are landfilled in the Class III area or the Class I area of the landfill.
13. Materials deposited in the mini-station are transferred primarily to the landfill (Class I) and occasionally to the plant, if there appears to be excess capacity on a particular day.
14. Aggregate materials are fine, almost exclusively inorganic, and considered suitable for construction purposes. These materials are stockpiled for later removal from the site, or used for haul road construction in the landfill. It has also been used on an experimental basis for cover.

Pinellas County Solid Waste System

1st Quarter

	<u>Intake</u>	<u>Jan 83</u>	<u>Feb 83</u>	<u>Mar 83</u>
1.	To Plant	5,632.77	12,325.45	14,799.23
2.	To Landfill	9,838.28	21,523.98	33,139.46
3.	To Mini-Station	0	0	63.48
4.	To Tire Splitter	<u>37.24</u>	<u>141.13</u>	<u>176.80</u>
	TOTAL	15,508.29	33,99.56	48,179.01
	<u>Rehandled Materials</u>			
11.	Residue to Landfill	651.32	2,229.15	3,158.09
12.	Reject to Landfill	0	0	0
13.	Mini-Station to Landfill	0	0	63.48
14.	Aggregate to Landfill	0	0	0
15.	Recovered Metals	0	0	0
16.	Stockpiled Aggregate	<u>0</u>	<u>0</u>	<u>0</u>
	TOTAL	651.32	2,229.15	3,221.57
	TOTAL TONS TO LANDFILL	10,489.60	23,753.13	36,361.03

Pinellas County Solid Waste System

2nd Quarter

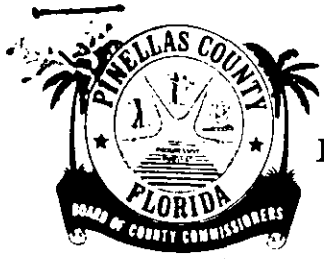
	<u>Intake</u>	<u>Apr 83</u>	<u>May 83</u>	<u>June 83</u>
1.	To Plant	38,418.88	53,323.55	65,987.16
2.	To Landfill	19,539.30	13,723.28	11,695.89
3.	To Mini-Station	72.51	98.86	296.66
4.	To Tire Splitter	<u>261.80</u>	<u>215.53</u>	<u>229.46</u>
	TOTAL	58,292.49	67,314.14	78,011.37
	<u>Rehandled Materials</u>			
11.	Residue to Landfill	6,555.21	8,285.56	12,331.95
12.	Reject to Landfill	25.81	0	17.07
13.	Mini-Station to Landfill	72.51	51.73	98.86
14.	Aggregate to Landfill	0	0	0
15.	Recovered Metals	16.99	3,979.35	3,895.26
16.	Stockpiled Aggregate	<u>176.99</u>	<u>2,361.00</u>	<u>2,026.64</u>
	TOTAL	6,847.51	14,677.64	18,369.78
	TOTAL TONS TO LANDFILL	26,192.83	22,060.57	24,143.77

Pinellas County Solid Waste System

3rd Quarter

	<u>Intake</u>	<u>July 83</u>
1.	To Plant	61,147.62
2.	To Landfill	11,156.13
3.	To Mini-Station	296.66
4.	To Tire Splitter	<u>155.23</u>
	TOTAL	72,755.64
	<u>Rehandled Materials</u>	
11.	Residue to Landfill	156.55
12.	Reject to Landfill	4.37
13.	Mini-Station to Landfill	296.66
14.	Aggregate to Landfill	7,140.56
15.	Recovered Metals	6,102.53
16.	Stockpiled Aggregate	<u>0</u>
	TOTAL	7,598.14
	TOTAL TONS TO LANDFILL	18,754.27

cc Pat Lewis



BOARD OF COUNTY COMMISSIONERS

PINELLAS COUNTY, FLORIDA

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING - OPERATIONS - SOLID WASTE - WATER - SEWER

315 COURT STREET
CLEARWATER, FLORIDA 33516
Phone: (813) 462-3251

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DER
AUG 12 1983
BAQM

August 3, 1983

Received DER

Mr. Hamilton Oven
Power Plant Siting Section
Twin Towers Office Building
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

AUG 5 1983

P. P. S

Dear Mr. Oven:

After reviewing the Conditions of Certification (COC) for our Resource Recovery Facility, it has come to my attention that there are boiler feed rates cited which do not accurately describe plant operations. I refer specifically to Page 6 of the COC. Item XIV.1.c states:

"The incinerator boilers shall not be loaded in excess of their rated capacity of 83,300 pounds per hour each."

Eighty three thousand three hundred pounds per hour is approximately equal to 1000 tons/day. As you are aware, the rate capacity of each boiler now in place is 1050 tons/day. This discrepancy resulted from a change in boiler capacity after air permits were first submitted to the EPA, but prior to submittal of the Application for Power Plant Site Certification. The first air permits and modeling results were for a 1000 tpd, 2-boiler plant. The revised air permits, and the model results included in the PPSC Application were for 1050 tpd boilers.

In order to resolve this matter Pinellas County requests that your Department provide a letter of clarification stating that the maximum loading rate per boiler is 1050 tpd, or 87,500 pounds per hour at a fuel quality of 5000 Btu/pound. This request is based on the following:

1. Existing boilers are rated at 1050 tpd at 5000 Btu/pound.
2. Stack emissions for the current 2100 tpd plant are lower than allowable standards.
3. All air quality modeling and results in the PPSC are based on 1050 tpd boilers.

Mr. Hamilton Oven
Page two
August 3, 1983

We stand ready to follow the Department's recommendation for resolution of this matter. Please call if you have questions.

Sincerely,



for Gene E. Jordan, P.E., Director
Public Works and Utilities

cc: A. Nash - Signal/Resco
R. Van Deman - HDR
W. Gray Dunlap - County Attorney
Solid Waste Management

FLORIDA GAME AND FRESH WATER FISH COMMISSION

WILLIAM G. BOSTICK, JR.
Chairman, Winter Haven

CECIL C. BAILEY
Vice Chairman, Jacksonville

C. TOM RAINEY D.V.M.
Miami

THOMAS L. HIRES SR.
Tampa

J.H. BAROCO
Pensacola

ROBERT M. BRANTLY, Executive Director
F. G. BANKS, Assistant Executive Director



FARRIS BRYANT BUILDING
620 South Meridian Street
Tallahassee, Florida 32301

August 10, 1983

Received DER

Mr. Hamilton S. Oven, Jr.,
Administrator
Power Plant Siting Section
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32301

AUG 12 1983

P.P.S.

RE: Pinellas County Resource
Recovery Project - Phase II
Power Plant Site Certification
Application

Dear Mr. Oven:

The Office of Environmental Services of the Florida Game and Fresh Water Fish Commission has reviewed the referenced power plant site certification application regarding impacts on fish and wildlife resources. Together with the original application for site certification for this facility, the information contained in the referenced document appears to be sufficient for us to review. Moreover, the impacts of the proposed project on fish and wildlife resources are expected to be minimal, and we anticipate having no further comments on this project unless the project is substantially modified. If such a modification is made, please forward that information to us for review.

If you would like additional assistance from us in reviewing this project, please do not hesitate to contact me.

Sincerely,

F. G. Banks
Assistant Executive Director

E552/sy95
ENV 3-3-6

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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

TO: Power Plant Siting Review Committee
FROM: Buck Oven *HGO*
DATE: August 12, 1983
SUBJECT: Pinellas County Resource Recovery Project
Phase II, PA 83-18

Pinellas County, their consultants and others are coming to discuss their Power Plant Siting application insufficiencies, groundwater problems at the existing site, the slurry wall proposal, and the EP-Toxicity test on the current ash from the existing boilers. They will be here at 2:00 pm on Wed. Aug. 17, 1983. The meeting will be held in Conference Room C. on the 4th floor.

Please plan to attend initially in case they have questions concerning items of incompleteness or insufficiency.

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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

TO: Buck Oven
FROM: Jo Ann Wingler
Conference Room Coordinator
DATE: August 11, 1983
SUBJECT: Conference Room Reservation

The following conference room reservation has been made in your name:

Date: August 17, 1983
Time: 2:00--3:30
Room(s): c

Please note the following:

1. It is your responsibility to check the reserved room beforehand and to set it up as needed for your meeting.
2. Lettering is available in Room 411 for use on the meeting notice board located in front of the fourth floor elevators. The lettering should be returned immediately after your meeting. We request that no hand-written signs be used for this purpose.
3. Please notify me as soon as possible if you find that you will not need to use the space you have reserved or if your meeting takes less time than planned, enabling others to use the available space.
4. We will appreciate your seeing that the space you have used is straightened up before you leave so that it will be ready for immediate use by others.

Thanks for your cooperation.

August 9, 1983

Mr. William E. Williams
Division of Administrative Hearings
2009 Apalachee Parkway
Tallahassee, Florida 32301

RE: Pinellas County Resource Recovery
Project, Phase II, PA 83-18
DOAH Case No. 83-2355

Dear Mr. Williams:

The Department of Environmental Regulation has reviewed the Pinellas County Power Plant Siting Application pursuant to Section 403.5065(2), F.S. The subject application was received on July 26, 1983. It has been found incomplete based on the following:

The new application does not show where the original application was altered in response to sufficiency and completeness issues from the first proceedings, and as modified. Because of difficulties this presents to the staff in determining whether the new version is complete and sufficient, the appropriate corrections must be made before the new application can be deemed complete.

The following areas of incompleteness or insufficiency have also been noted, identified by Chapter:

Chapter 1 - It is our understanding that no petition for Determination of Need has been submitted yet to the Public Service Commission. In order for the PSC to be able to file their preliminary and final reports in a timely fashion, data will be needed. The process is presumed to be halted at day 150 of the timeclock if a positive finding of need has not been made by the Commission.

Chapter 2 - Figure 2.1 is close to illegible and the distinction between what facilities are planned vs. certified but not yet constructed vs. constructed is not apparent. Provide a better Figure. Regarding the site layout depicted on the same figure, what will happen to the materials handling area once construction on the third boiler is commenced?

Page Two
August 9, 1983
Mr. Williams

- It was stated that there were no changes in sections 2.3 through 2.7 from the original application. Since part of the site has been used for putrescible waste landfilling over the past few years and Units 1 & 2 construction has occurred, baseline data for the site as it applies to Unit 3 must be different, particularly with regard to site water quality, hydrology, flood prone configuration, plans for corrective action due to the warning letters received from the Department regarding ground water levels vs. solid waste disposal activities, etc.

- The application is incomplete in not providing information relating to groundwater protection:

1. Construction and hydraulic properties of the proposed perimeter slurry trench.
2. Associated borings.
3. "Bentonite" clay properties.
4. Underlying clay confining layer properties.
5. Associated borings.
6. Inside/outside water level projections.
7. Inside/outside ground water monitoring design.
8. Comprehensive runoff model.
9. Possible effects of flooding to contiguous housing.
10. Possible effects of salt water intrusion on the aquifer(s).

Chapter 3 - Regarding Figure 3.1, the flow volume for the 1983 waste stream appears less than for 1978. It is assumed that the 1983 figures are revised and reflect more accurately the anticipated conditions, but this needs to be clarified. Is there documentation from Pinellas County that the effluent is acceptable? A tabulation of the characteristics of the effluent is needed.

- Are the boiler discharges listed in 3.2 given what is expected from Unit 3, or from the existing two units?

- Volumes and tonnages for Section 3.6.3 need to be updated.

Chapter 4 - Section 4.1; will construction plans for the new unit be identical to those for the older two, i.e., will there be a 32 month construction period requiring 750,000-100,000 gpd of water, will the noise levels still be the same, will there be as much construction debris generated, will there be as many construction workers and thus traffic? What is the status of all the various construction areas?

Page Three
August 9, 1983
Mr. Williams

Chapter 5 - Section 5.0; Submit a copy of the U.S.G.S. report on the treatment efficiency of the oxidation pond.

- The same general comments as for chapter 4 apply, regarding whether it is expected that the magnitude of the new project and resultant impacts will be the same as the impacts of Phase I.

Chapter 6 - Regarding the study on aerosolization of pathogenic organisms from the use of sewage effluent in the cooling towers, provide details on the contracted work, i.e., duration of the contract itself, details of the sampling, sampling frequency, intended result (a report?), etc.

Chapter 7 - Address impacts on traffic in the vicinity. While it is logical to assume that there may be less construction traffic than before, considering your data on the increase in population in Pinellas County, a discussion on recent traffic patterns and possible problems caused by construction and operation is necessary.

Air Appendix - The following inconsistencies have been noted:

1. The particulate emission rate specified in Table II-1 is based on a throughput of 1050 ton/day; in Table II-2 on 1000 ton/day. Why?

2. The emission factor for lead is given as 0.1 lb/ton MSW in Table II-1 and 0.07 lb/ton MSW in Table II-2. The associated emission rate in Table II-2 (4.4 lb/hr) does not correspond to the 0.07 lb/ton MSW factor. Which factor are you proposing to meet? What emission rate?

3. The emission factor for Beryllium is given as $1.0 \times 10_{15}$ lb/ton MSW in Table II-1 and as $7.7 \times 10_{-5}$ lb/ton MSW in Table II-2. Which, if either, is the correct value? Note the emission rate given does not correspond to either factor.

4. The modeled concentrations in Table II-10 for CO, lead, and mercury do not correspond to the ratioed emission rates of these pollutants to SO₂. Have these concentrations been calculated differently? If so, how?

Modeling -

1. Send a copy of the computer output for the CRSTER model runs. Include all five years. Also state the approximate date in which these runs were made. State the differences in the CRSTER algorithm between the version run for your output and the current version (UNAMAP-4). How do these changes affect the results?

Page Four
August 9, 1983
Mr. Williams

2. In the ISCST output given, the wind profile exponents and the vertical potential temperature gradients are listed as being 0.0 for all stability categories. How has the program been modified? Why? If this is true, the values need to be corrected and the model rerun.

3. The stability wind rose (STAR) input data to the ISCLT model is incorrect. There are frequencies listed in some wind speed categories that should not occur for stabilities 5 and 6. Correct this error. Five years of meteorological data should be used in creating the STAR input data. This model needs to be rerun with the corrected input data.

4. Identify the sources used in the ISC model runs. Which sources consume PSD increment? Are there additional major sources within 50 km of the RRf which were not included in the modeling? If so, why?

5. On Page II-3, Item B-7; what are the units defining the grid size?

Other Air-related concerns:

1. Will the 29 MW turbine generator be cross linked to the existing system?

2. What is the design steam production rate for the proposed boiler? How will it be monitored?

3. Will a Federal PSD permit be required for the proposed expansion?

4. The existing units at this facility have already undergone compliance testing. Stack test results for TSP and SO₂, chlorides, hydrocarbons, CO, and NO_x should be obtained from testing which could be conducted on the existing facility instead of relying on the referenced information cited in the application.

5. How does the applicant propose to determine compliance with the emission limitation set by the BACT process? Stack testing and/or continuous emission monitors? Will limits for NO_x, CO, fluorides, chlorides, hydrocarbons be set in the Conditions for Certification? What are the particulate and visible emissions during soot blowing? Will a separate soot blowing emission standards be set? How will soot blowing operations be addressed during compliance testing?

6. What visible emission limitation does the applicant propose as BACT? How will compliance be determined?

7. Page I-4, Table 1-3; under Incremental Costs = Additional Tons Removed, for the emission limit of 0.015 gr/dscf, 45 appears too low. What is the correct number?

Page Five
August 9, 1983
Mr. Williams

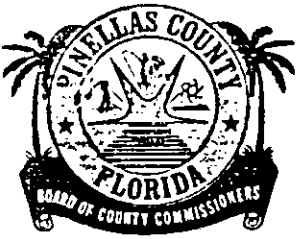
Responses to completeness and sufficiency remarks will be considered amendments to the application and must be done in a format which shows the alterations made. Appropriate page substitutions must be made, not just loose letter materials submitted.

Sincerely,

Hamilton S. Oven, Jr., P.E.
Administrator
Power Plant Siting Section

HSO/sb

cc: D. F. Acenbrack
William Deane
Power Plant Siting Review Committee
Bill Hennessey
Paul Darst, DCA
Bob Trapp, PSC
Gary Kuhl, SWFWMD
Tom Cone
Jim Andrews
Robert Van Deman, Jr., P.E.



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August 9, 1983

Mr. W. K. Hennessey
Southwest District Director
Department of Environmental Regulations
7601 Highway 301 North
Tampa, Florida 33610

Re: Proposed Agenda - Meeting with Department of Environmental
Regulation - Tallahassee - Wednesday August 17, 1983 - ~~2:00~~ 1:00 p.m.

Dear Mr. Hennessey:

Pinellas County has set a meeting with Mr. Hamilton Oven, and staff, as
referenced above.

Our agenda items are as outlined.

1. Discussion of any insufficiencies in the third boiler
Power Plant Site Certification Application.
2. Discussion concerning the technical completeness of
the hydrogeologic survey proposal submitted to HDR by
Ardaman Associates. (proposed installation of bentonite
slurry cut-off walls.)
3. Discussion of Safe Drinking Water Act versus E. P. Toxicity
levels of detection (as per Mr. Jim Crane and Pat Lewis'
respective letters)

Should you desire, we would be most pleased to have a member of your staff
at this meeting. If you have any questions, please do not hesitate to con-
tact me.

Sincerely,

W. W. Dasher, Director
Public Works Operations

cc: Solid Waste Management
W. Gray Dunlap - County Attorney
HDR - Robert VanDeman



PROPOSAL FOR COMPLIANCE WITH FLORIDA
ADMINISTRATIVE CODE AT THE PINELLAS
REFUSE TO ENERGY FACILITY

JUNE 16, 1983

Attached are conceptual drawings for a system of ground water containment at the Pinellas Refuse to Energy Facility. As shown, it is proposed that all land within the 730 Acre site be surrounded by a bentonite soil slurry wall keyed into an underlying clay layer of low permeability. Landfill cells inside the containing wall would be unlined and constructed below grade. New cells would be dewatered prior to the placement of solid waste and the removed water treated in an existing aeration/oxidation pond system. Ditch blocks and diversions in drainage swales would allow the controlled discharge of surface water.

In accordance with the ground water revisions of January 1, 1983, it is proposed that the entire 730 Acre site be designated a zone of discharge (ZOD). Specifically:

Chapter 17-4.25(2)(a) - "Unless exempted by sub-section (c) below or by Section 17-4.243, F.A.C., no installation shall discharge into ground water, either directly or indirectly, any contaminant that causes a violation in the water quality standards and criteria for the receiving ground water as established in Chapter 17-3, Part IV, F.A.C., except within a zone of discharge established by permit or rule pursuant to this section."

Chapter 17-4.245(4) - "Upon affirmative demonstration by an installation owner that a ground water discharge will not impair the designated uses of contiguous waters outside a zone of discharge, the Department shall establish a zone of discharge for Class G-II ground water ... in (one of) the following manners:"

17-4.245(4)2 - "Any applicant seeking a zone of discharge and not electing to use the above procedure shall have a zone of discharge established by the Department. The boundary of the zone of discharge shall be 100 feet from the site boundary or to the installation's property boundary, whichever is less, unless a smaller zone of discharge is necessary to protect the designated use of contiguous waters."

17-4.245(4)3 - "Where multiple sites occur within close proximity, a single zone of discharge for the sites may be established..."

The slurry wall would be located inside the property boundary; monitoring wells inside and outside the wall would be sited after consultation with the Department. Each individual landfill cell is considered one of the "multiple sites" within the single zone of discharge. Two statements in Chapter 17-7 have direct bearing on this proposal:

17.704(2) - "Unless permanent leachate control methods are installed, no solid waste shall be disposed of by being placed: (d) in a dewatered pit."

17-7.04(3) - "No solid waste shall be disposed of: (b) in any natural or artificial body of water including ground water."

Considering the activities permitted within a designated ZOD the statements quoted from FAC 17-7 are interpreted to allow groundwater to seep back into completed and unlined below-grade cells provided that waters contiguous to the ZOD are not adversely affected and "free from" criteria in the ZOD are met.

A comprehensive surface and ground water management program for the entire 730 acre site is now being formulated. The design will incorporate on-site retention and treatment. The Conditions of Certification for the facility recognize two manners in which site water levels could be regulated; water treatment and discharge to adjacent surface water and/or utilization of retained water as process-cooling water. As stated in the C.O.C., discharges to off-site surface waters must meet the following condition:

"Any discharges from the site stormwater/leachate treatment system via the emergency overflow structure which result from any event LESS than a ten-year, 24 hour storm (as defined by the U.S. Weather Bureau Technical Paper No. 40, or the DOT drainage manual, or similar documents) shall meet State Water Quality Standards, Ch. 17-3 FAC."

This proposal is preliminary and does not detail implementation procedures which may be required by the DER; notably hydrogeologic studies, approval of treatment facilities and discharge point, additional ground water monitoring, and inspection and evaluation during slurry wall construction.

PLAN

118th. AVE.

ZONE OF DISCHARGE BOUNDRY

34th. ST.

28th. ST.

ZONE OF DISCHARGE BOUNDRY

B

B'

49th. ST.

N

SCALE

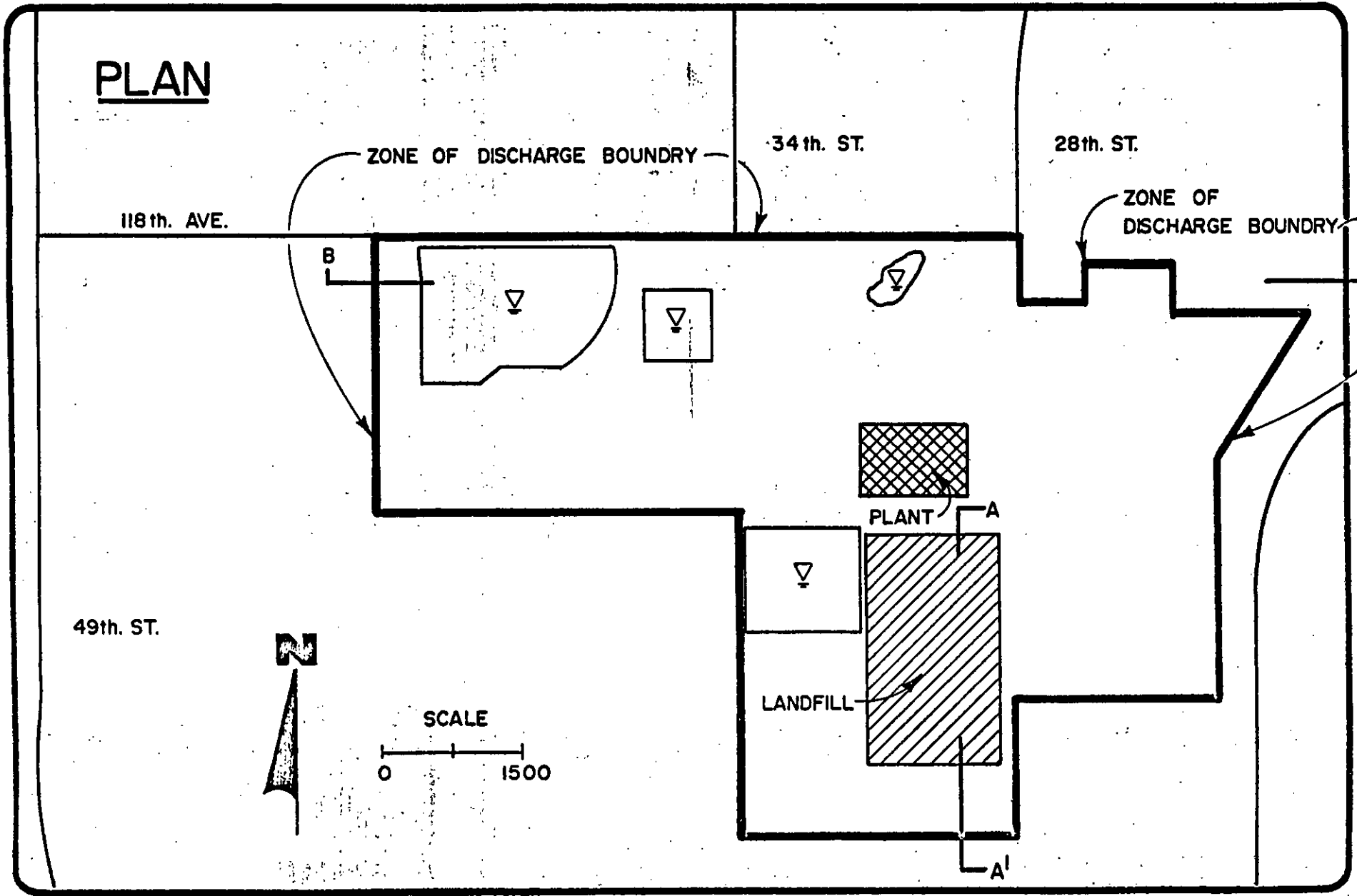
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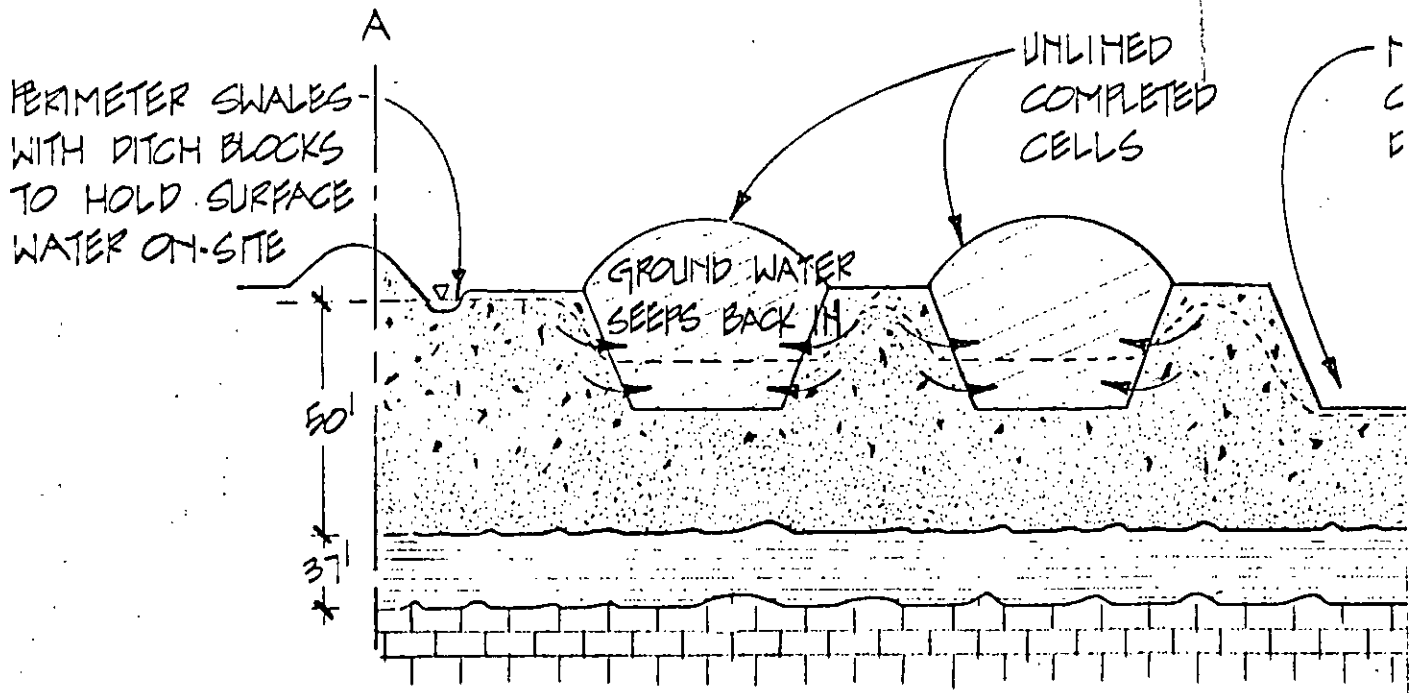
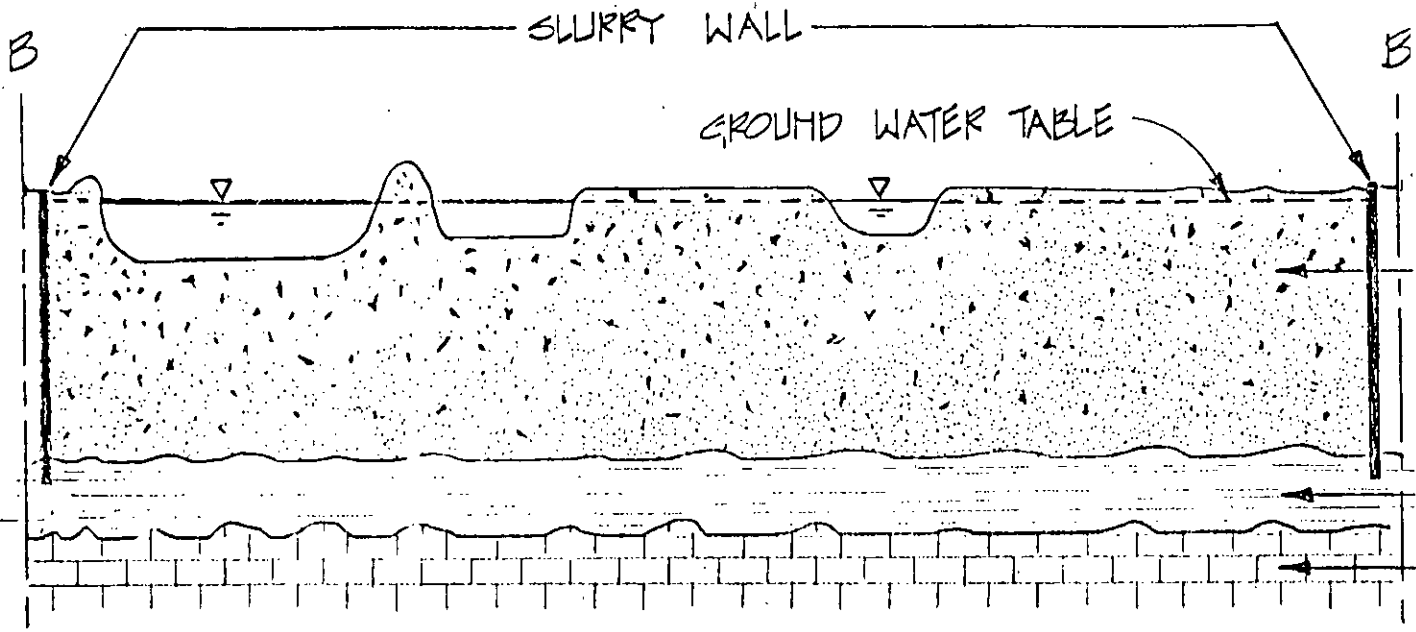
PLANT

A

LANDFILL

A'





July 28, 1983

Mr. W. K. Hennessey
Southwest District Director
State Department of Environmental Regulation
7601 Highway 301 North
Tampa, FL 33610

Re: Bentonite-Soil Slurry Wall Proposal

Dear Mr. Hennessey:

Pinellas County appreciated the opportunity to discuss proposed projects at its Refuse-to-Energy Facility with your staff (Messrs. Boyes and Lewis), on Wednesday, July 6, 1983. The meeting enables us to formulate a plan of action, which is briefly outlined below.

We will proceed with the first step in providing permanent leachate control via a bentonite-soil slurry wall by conducting a detailed hydro-geologic survey of the site. Using a combination of remote sensing techniques and site specific borings, a study will provide the necessary data by which the environmental suitability of the slurry wall project can be evaluated. We are particularly interested in defining the continuity and physical-chemical integrity of the underlying confining layer. The results of the survey will be submitted to your office for staff review.

If the project is deemed feasible, wall design and construction will proceed.

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

Sincerely,



Gene E. Jordan, P.E., Director
Public Works and Utilities

CEJ:WMD:ltl

cc: W. W. Basher, Dir, PW Opns

cc: Pinellas County Attorney

HDR





Ardaman & Associates, Inc.



Consulting Engineers in Soil Mechanics,
Foundations, and Materials Testing

August 9, 1983
File Number 83-113

HDR
Post Office Box 12744
101 West Garden Street
Pensacola, Florida 32575

Attention: Mr. James C. Andrews

Subject: Hydrogeological Investigation for Pinellas County
Resource Recovery Landfill Area

Gentlemen:

As requested by Mr. Andrews in Orlando on August 4, 1983, Ardaman & Associates, Inc. is pleased to present this proposal for conducting a hydrogeological investigation at the above mentioned facility in Pinellas County. This Phase 1 investigation is to determine the feasibility of the slurry wall concept as a leachate control system at the subject site. The feasibility would hinge on the integrity and continuity of the bottom, natural "clay" liner believed to exist at the site. Therefore, the investigation will determine the integrity and continuity of the bottom, natural "clay" liner through a three-element program: (1) lineament analysis; (2) geophysical survey; and (3) boring program. The Phase 2 investigation, not part of this proposal, would be the design and installation of a slurry wall around the 730-acre parcel occupying approximately 27,000 lineal feet.

The project area is located in Section 14 and 15, Township 30 South, Range 16 East as approximately shown in Figure 1. This area includes the UOP resource recovery facility, trash and garbage fill, closed brush fill, closed trash fill, stormwater pond, Windish landfill, sod farm, and undeveloped land. Interstate-275 represents the east boundary of the area. The north and south boundaries are 118th and 102nd Avenue, respectively. Twenty-eighth Street separates the sod farm from the rest of the site.

The following tasks have been identified for this three-element Phase 1 project:

1. Review existing literature data on the soils, geology, development history, and hydrogeology at the site and in the vicinity of the proposed site. Examples of sources of data include U.S. Soil Conservation Service, U.S. Geological Survey, University of Florida, Florida Bureau of Geology, Southwest Florida Water Management District, Pinellas County and the City of St. Petersburg.
2. Visit the area and collect available information on recent sinkhole development in the subject area. Other kinds of information to be collected include aerial photographs, topographic maps, and newspaper clippings. Information available from the City and County Engineers on sinkhole activity in the vicinity of the site will be documented.

8008 S. Orange Avenue, P.O. Box 13003, Orlando, Florida 32809, Phone (305) 855-3860

Offices in: Bartow / Bradenton / Cocoa / Fort Myers / Jacksonville / Miami / Orlando / Riviera Beach / Sarasota / St. Marys / Tallahassee

3. Using the above data develop a lineament map for the subject site.
4. Using the lineament map, the hydrogeology data base and the development history for the subject site, finalize a field investigation program. The field investigation would include borings, water-level observation wells, a geophysical survey, a well inventory and soil sampling.
5. Perform a geophysical investigation within the project area to document the generalized soil profile and to determine the location of anomalous subsurface conditions. The geophysical survey will be performed using surface resistivity and electromagnetic equipment. The electrical resistivity equipment will be used for soundings at selected sites while the electromagnetic equipment will be used for profiling. The soundings will reflect the changes in lithology with depth while the profiles will reflect the changes in lithology over the area within the top 25 feet, approximately.
6. Conduct a subsurface investigation program consisting of Standard Penetration Test (SPT) borings and installation of piezometers. Based on the work of the U.S. Geological Survey at the St. Petersburg and Pinellas County landfills in the area, the near-surface lithology consists of a surficial layer of fine-grained sand and shells which grades downward to a calcareous clay or marl bed that overlies a stiff clay and hard chert and fossiliferous limestone. The surficial layer ranges from about 10 to 40 feet thick and averages on the order of 23 feet thick. The marl bed averages about 15 feet thick and overlies a 12-foot-thick stiff dark-green clay. The test borings will penetrate the dark green clay layer and will be sealed upon completion.

The SPT borings will be used to check out any anomalous conditions as determined by the geophysical survey and to calibrate the results of the geophysical survey. In addition, three typical "natural" depression features will be drilled to document whether these depressions are associated with collapse sinkholes or with solution sinks. One SPT test boring will be performed near the center of each depression, penetrating the confining clay layers. One similar SPT test boring will be performed along the perimeter of each depression. The soil profiles for the interior and perimeter borings associated with each depression will be compared to document whether the clay stratigraphy is continuous and relatively uniform beneath each investigated depression. For purposes of this proposal a budget of 750 lineal feet of SPT borings is considered. Access to and permits for drilling at the center of the selected depressions must be provided by the County. This program will supplement the 30+ borings previously performed at the site by others.

The piezometers will be used to document water-level relations between the surficial and Floridan aquifers. A "perched" water table will document that there is no direct hydraulic connection between the two aquifers. Pairs of piezometers (e.g., shallow and deep) will be located in different parts of the site to document this relation. The final location for the 4 to 6 pairs of piezometers will be determined after literature review and geophysical

survey have been completed. The piezometers will be 1½-inch diameter PVC casing with 5 feet of perforated pipe for the collection zone. For purposes of this proposal a budget item of 450 lineal feet of piezometers is considered reasonable.

7. Collect 8 to 10 undisturbed samples of the "clays" for laboratory analyses. The soil samples will be collected from the marl and clay layers. The laboratory analyses will determine the permeability of the different layers. Laboratory analyses will include classification and permeability testing.
8. Perform a well inventory within a one-mile radius of the site. The well inventory will provide location, well depth, casing diameter, and casing length.
9. Perform a laboratory testing program to verify field visual classifications of soils and to obtain values for the coefficient of permeability for the undisturbed samples. Cation exchange capacities will be determined for four soil samples.
10. Analyze the results of the field and laboratory investigation and develop recommendations concerning the feasibility of the slurry wall liner concept.
11. Prepare a report summarizing the results of the field and laboratory investigations and presenting our conclusions and recommendations.

We appreciate the opportunity to serve you on this element of the project. Please do not hesitate to contact the undersigned if you have questions or when we are authorized to proceed. The work could be started within 2 weeks of authorization to proceed. The work would be completed within 8 to 12 weeks.

Very truly yours,
ARDAMAN & ASSOCIATES, INC.
Herbert G. Stangland
Herbert G. Stangland, Jr., P.E.
Senior Water Resources Engineer

John E. Garlanger
John E. Garlanger, Ph.D., P.E.
Vice President

HGS:ed
Enclosures

SUMMARY OF RCRA SAMPLES SUBMITTED
PINELLAS COUNTY RESOURCE RECOVERY FACILITY

<u>SAMPLE NUMBER (ESE)</u>	<u>DATE TAKEN</u>	<u>DATE SUBMITTED TO DER (LETTER DATE)</u>	<u>TYPE SAMPLE</u>	<u>SAMPLE DESCRIPTION</u>
246900	5/20/83	6/16/83	Solid	Aggregate stockpiled near Class II Landfill
246901	5/20/83	6/16/83	Solid	Non-separated residue near Class I Landfill
246902	5/27/83	6/28/83	Solid (Slurry)	Sump solids - 24 hours old
246903	5/27/83	6/28/83	Solid (Slurry)	Sump solids - fresh
246904	6/6/83	6/28/83	Solid	C.O.C. aggregate residue
246906	6/6/83	6/28/83	Solid	C.O.C. non-separated residue
Blowout 1		5/11/83	Liquid	Leachate from Class I X Landfill
Blowout 2		6/16/83	Liquid	Leachate and stormwater
Blowout 3		6/16/83	Liquid	Water from aeration basin

August 17, 1983

To: Pinellas County Department of Solid Waste Management
From: HDR
Re: Engineer's position concerning the disposition of residue
August 16, 1983

The sale of recovered materials is considered a major economic factor at the Pinellas County Resource Recovery Facility. Pinellas County intends to market four products on a continuous basis: ferrous, aluminum, heavy non-ferrous, and aggregate. The latter material comprises the bulk of process residue (about 460 tons per day) and has great potential as foundation material, especially in road construction.

The Conditions of Certification issued by the DER for this facility state that boiler residue can only be placed below the natural ground water table if the material is not hazardous. On June 6, 1983, samples of the non-separated residue and the aggregate were taken and analyzed in accordance with the hazardous waste regulations (RCRA). The results identify the materials as non-hazardous. Just prior to the submittal of these formal results to the DER, the DER made written comment (July 15, 1983) on an earlier "unofficial" sample of aggregate taken on May 20. The DER states "No disposal of the ash material below the natural water table should be allowed until this matter is resolved". The matter to be resolved is to determine if the leachable fraction of the residue must meet the Safe Drinking Water (SDW) standards (see DER interoffice memorandum of July 7, 1983). The leachable fraction of the June 6 residue samples, extracted using the EP toxicity test, exceeds the SDW for Cadmium, Chromium, Lead, and Zinc. However, it is below the maximum allowable concentration (100 times the SDW) for non-hazardous material.

The DER may have taken the position that two distinct regulations apply to the management of the residue and aggregate: RCRA and Chapters 17-3 and 17-4 (FAC). The latter regulations were amended recently to provide for more stringent ground water protection. Of particular significance is the fact that most of the State's ground water has been classified as potable water; this includes the water beneath the Resource Recovery Facility (RRF). Any discharge, such as from a landfill, into these waters must meet the SDW unless the activity takes place in a designated zone of discharge (ZOD). In such cases, the minimum ground water criteria (known as the "free froms") apply in the ZOD and the SDW must be met at one of two locations:

1. For existing facilities at the property boundary
2. For new facilities 100 ft. from the edge of the landfill

The implications of this stance are far reaching. It is the intent of the County to have the entire RRF installation designated a ZOD for an existing facility. Therefore, the disposal of residues in ground water at site landfills would be allowed provided SDW criteria aren't

exceeded at the property boundary. What must be considered is the aggregate material which is intended to be sold and used remote from the RRF installation. Clearly the majority of uses for this material would not occur within a designated ZOD; therefore, the inevitable contact between this material and the ground water would constitute a prohibited act. Taking this a step further, this interpretation could circumvent the resource recycling programs being implemented around the State. For example, several power companies sell all of their fly ash (much of which is hazardous material) to manufacturers who use it in bricks. Slabs for houses are often poured using a concrete-fly ash mix. In both instances contact with ground water outside of a ZOD is inevitable. It is doubtful that the chemical characteristics of any raw residue material, as determined by the EP Toxicity test, would be the same for that residue, whether raw or combined as soil cement, asphalt, etc., when placed in commonly occurring ground waters of the State.


An additional consideration centers on the physical/chemical similarity of the aggregate material to construction refuse; Chapter 17-7 (FAC) defines such refuse as follows:

"Construction and Demolition Debris" means non-hazardous material generally considered not be to water soluble, including but not limited to steel, concrete, glass, brick, asphalt roofing material, or lumber from a construction or demolition project. Contamination of construction and demolition debris with any amount of other types of solid waste will cause it to be classified as other than construction and demolition debris."

The DER does not require a permit for disposal of construction debris. Disposal of this material in ground water (or a non-dewatered pit) is allowed.

INTEROFFICE MEMORANDUM

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To: _____	Loctn.: _____	
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From: _____	Date: _____	
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Date Due: _____	Date Due: _____	

TO: Buck Oven
FROM: Tom Rogers 
DATE: August 5, 1983
SUBJ: Pinellas County Resource Recovery Facility
Unit No. 3--Air Modeling Completeness Review

I have reviewed the air quality portion of Pinellas County's application to construct a third unit at their resource recovery facility. I offer the following comments and questions. The first group of questions deal with inconsistencies in their writeup and the last four with modeling problems.

Inconsistancies:

1. The particulate emission rate specified in Table II-1 is based on a throughput of 1050 ton/day; in Table II-2 on 1000 ton/day. Why?
2. The emission factor for lead is given as 0.1 lb/ton MSW in Table II-1 and 0.07 lb/ton MSW in Table II-2. The associated emission rate in Table II-2 (4.4 lb/hr) does not correspond to the 0.07 lb/ton MSW factor. Which factor are you proposing to meet? What emission rate?
3. The emission factor for Beryllium is given as 1.0×10^{-5} lb/ton MSW in Table II-1 and as 7.7×10^{-5} lb/ton MSW in Table II-2. Which if either, is the correct value? Note the emission rate given does not correspond to either factor.
4. The modeled concentrations in Table II-10 for CO, lead, and mercury do not correspond to the ratioed emission rates of these pollutants to SO₂. Have these concentrations been calculated differently.? If so, how?

Modeling

1. Send a copy of the computer output for the CRSTER model runs. Include all five years. Also state the approximate date in which these runs were made. State the differences in the CRSTER algorithm between the version run for your output and the current version (UNAMAP-4). How do these

Memorandum
Page Two
August 5, 1983

changes affect the results?

2. In the ISCST output given, the wind profile exponents and the vertical potential temperature gradients are listed as being 0.0 for all stability categories. How has the program been modified? Why? If this is true, the values need to be corrected and the model rerun.
3. The stability wind rose (STAR) input data to the ISCLT model is incorrect. There are frequencies listed in some wind speed categories that should not occur for stabilities 5 and 6. Correct this error. Five years of meteorological data should be used in creating the STAR input data. This model needs to be rerun with the corrected input data.
4. Identify the sources used in the ISC model runs. Which sources consume PSD increment? Are there additional major sources within 50 km of the RRF which were not included in the modeling? If so, why?

TR/ks

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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Date Due: _____	Date Due: _____	

TO: Hamilton S. Oven, Jr.

FROM: Donald P. Schiesswohl, P. E. *DPS*
Bureau of Wastewater Management and Grants

DATE: August 5, 1983

SUBJECT: Power Plant Siting Application
Pinellas County Resource Recovery
Project - PA 83-18 - Module 8188

We have reviewed the wastewater portion of the above subject power plant siting application. Based on a comparison of the summary water flow diagrams for the 1978 application (Figure 3.3.a.) and the 1983 application (Figure 3-1) the additional unit should not present a problem. The flow volume for the 1983 waste stream is less than for 1978. It is assumed that the 1983 figures are revised and reflect more accurately the anticipated conditions. Should this not be the case, then it is suggested that the figures be discussed with the consultant. Further, is there documentation from Pinellas County that the effluent is acceptable? Perhaps a tabulation of the characteristics of the effluent would be in order.

Our statement of no problem is further based on an assumption of no problem with the 1978 application with respect to wastewater discharge.

Please contact me should you have a question.

DPS/jh

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
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Date Due: _____	Date Due: _____	

TO: Hamilton S. Oven, Jr.

FROM: Bill Thomas, DER-Tampa *WST*

DATE: August 4, 1983

SUBJECT: Power Plant Siting Application
Pinellas County Resource Recovery
Project - PA83-18

In response to your memo of July 27, 1983, the following are the District's comments on the air portion of this request:

1. Will the 29 MW turbine generator be cross linked to the existing system?
2. What is the design steam production rate for the proposed boiler? How will it be monitored?
3. Will a Federal PSD permit be required for the proposed expansion. If so, please ensure the District is provided a copy of all significant correspondence.
4. The existing units at this facility have already undergone compliance testing. Stack test results for TSP and SO₂, chlorides, hydrocarbons, CO, and NO_x should be obtained from testing which could be conducted on the existing facility instead of relying on the referenced information cited in the application.
5. How does the applicant propose to determine compliance with the emission limitation set by the BACT process? Stack testing and/or continuous emission monitors? Will limits for NO_x, CO, Fluorides, Chlorides, hydrocarbons be set in the Conditions for Certification. What are the particulate and visible emissions during soot blowing? Will a separate soot blowing emission standards be set? How will soot blowing operations be addressed during compliance testing?
6. What visible emission limitation does the applicant propose as BACT. How will compliance be determined?

MEMORANDUM
Hamilton S. Oven, Jr.

August 5, 1983
Page Two

Pinellas County Department of Environmental Management should be provided a copy of all past and future correspondence on this request as a courtesy to the local program.

Should you have any questions regarding the air section of this application, please call Jim Estler at Suncom 552-7270.

JE/scm

INTEROFFICE MEMORANDUM

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TO: Dan A. Williams, P.E.

THROUGH: Pedro A. Hernandez, P.E. *PAH*

FROM: Sam Sahebzamani *SS*

DATE: August 4, 1983

SUBJECT: Power Plant Siting Application
Pinellas County Resource Recovery Project -
PA 83-18 - Module 8188

Although there are no changes proposed regarding the discharge of process water, I recommend the following changes to the original conditions of certification dated April 24, 1979.

1. Item D, Condition 1(a) - This proviso does not contain the list of parameters to be monitored for any discharges from the site in case of any rainfall event less than a ten-year, 24-hour storm. Also, a copy of the discharge report should be sent to the Southwest District office.
2. Item D, Condition 1(d) - This condition should include boiler blowdown and boiler demineralization of the back flush water.



Also, addition of a condition regarding operation of the spray field is recommended. This condition should prohibit runoff from the sprayfield and ponding of the site.

/rb

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

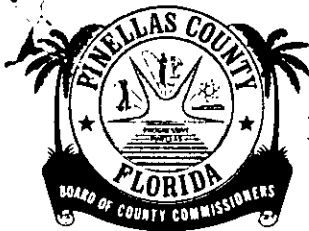
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Date Due: _____	Date Due: _____	

TO: Dan Williams
THRU:  E. G. Snipes
FROM: Pat Lewis 
DATE: July 28, 1983
SUBJECT: Power Plant Siting Application
Pinellas County Resource Recovery
Project - PA83-18- Module 8188

No changes are proposed on the landfill associated with disposal of ash or raw garbage. Because of the increase of amount of solid waste production in the county, the additional boiler is needed to help reduce the need to landfill raw garbage.

Page 19, 20 Solid Waste Report - the monthly solid waste report should be submitted to the Power Plant Siting Section in Tallahassee with a copy to the Southwest District Office.

PWL/bc



BOARD OF COUNTY COMMISSIONERS

PINELLAS COUNTY, FLORIDA

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
 ENGINEERING - OPERATIONS - SOLID WASTE - WATER - SEWER
 315 COURT STREET
 CLEARWATER, FLORIDA 33516
 Phone: (813) 462-3251

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August 3, 1983

Received DER

Mr. Hamilton Oven
 Power Plant Siting Section
 Twin Towers Office Building
 Florida Department of Environmental Regulation
 2600 Blair Stone Road
 Tallahassee, Florida 32301

AUG 5 1983

P. P. S

Dear Mr. Oven:

After reviewing the Conditions of Certification (COC) for our Resource Recovery Facility, it has come to my attention that there are boiler feed rates cited which do not accurately describe plant operations. I refer specifically to Page 6 of the COC. Item XIV.1.c states:

"The incinerator boilers shall not be loaded in excess of their rated capacity of 83,300 pounds per hour each."

Eighty three thousand three hundred pounds per hour is approximately equal to 1000 tons/day. As you are aware, the rate capacity of each boiler now in place is 1050 tons/day. This discrepancy resulted from a change in boiler capacity after air permits were first submitted to the EPA, but prior to submittal of the Application for Power Plant Site Certification. The first air permits and modeling results were for a 1000 tpd, 2-boiler plant. The revised air permits, and the model results included in the PPSC Application were for 1050 tpd boilers.

In order to resolve this matter Pinellas County requests that your Department provide a letter of clarification stating that the maximum loading rate per boiler is 1050 tpd, or 87,500 pounds per hour at a fuel quality of 5000 Btu/pound. This request is based on the following:

1. Existing boilers are rated at 1050 tpd at 5000 Btu/pound.
2. Stack emissions for the current 2100 tpd plant are lower than allowable standards.
3. All air quality modeling and results in the PPSC are based on 1050 tpd boilers.

Mr. Hamilton Oven
Page two
August 3, 1983

We stand ready to follow the Department's recommendation for resolution of this matter. Please call if you have questions.

Sincerely,



for Gene E. Jordan, P.E., Director
Public Works and Utilities

cc: A. Nash - Signal/Resco
R. Van Deman - HDR
W. Gray Dunlap - County Attorney
Solid Waste Management

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 8-3-83

Subject Pinellas County Power Plant
Residue Recovery Facility

Time 8:15 A.M.

Permit No. _____

County Pinellas

Mr. Bob Becker

Telephone No. 813/825-1565

Representing Pinellas County Department of Solid Waste

Telephoned Me Was Called Scheduled Meeting Unscheduled Meeting

Other Individuals Involved in Conversation/Meeting _____

Summary of Conversation/Meeting _____

Pinellas County Dept of Solid Waste is requesting permission to dispose of ash residue below water table, pursuant to the conditions of certification, since they have submitted documentation that analysis show ash to be non-hazardous. The Groundwater Section apparently feels that leachate from ash should meet primary drinking water standards to be disposed of below water table (see James @ Crane memo July 7, 1983), pursuant to amended 17-3, 17-4 F.A.C.

Ash residue is being piled up at the plant and alternatives for disposal are needed.

A meeting between the Power Plant Section, Pinellas County, and the Ground Water Section should probably be set to resolve this issue.

(continue on another sheet, if necessary)

Signature Pat Lewis

Title FS II

cc: Buck Over

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP	ACTION NO.
	ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION) <i>Hamilton Owen</i>	INITIAL
	DATE
2. <i>Thru: W.K. Hennarsy</i>	INITIAL
	DATE
3. <i>Thru: E.G. Snipe</i>	INITIAL
	DATE
4.	INITIAL
	DATE

REMARKS:

Attached conversation record concerning Pinellas County Reservoir Recovery Facility. A meeting may be necessary to resolve this issue.

I would also like to know if the monitoring plan approved in December 1982 for this facility comply with the amended 17-3, 17-4, or have they been notified that a new submittal is necessary.

INFORMATION	
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<input type="checkbox"/>	REVIEW & FILE
<input type="checkbox"/>	INITIAL & FORWARD
DISPOSITION	
<input type="checkbox"/>	REVIEW & RESPOND
<input type="checkbox"/>	PREPARE RESPONSE
<input type="checkbox"/>	FOR MY SIGNATURE
<input type="checkbox"/>	FOR YOUR SIGNATURE
<input type="checkbox"/>	LET'S DISCUSS
<input type="checkbox"/>	SET UP MEETING
<input type="checkbox"/>	INVESTIGATE & REPT
<input type="checkbox"/>	INITIAL & FORWARD
<input type="checkbox"/>	DISTRIBUTE
<input type="checkbox"/>	CONCURRENCE
<input type="checkbox"/>	FOR PROCESSING
<input type="checkbox"/>	INITIAL & RETURN

FROM: *Pat Loun*

DATE *8-3-83*

PHONE *SC 552-7270*

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

PAT

To: <i>Bill Hennessey Tampa</i>		
For Routing To District Offices And/Or To Other Than The Addressee		
To: <i>Pat Lewis</i>	Locn.: <i>Tampa</i>	
To: _____	Locn.: _____	
To: _____	Locn.: _____	
From: <i>J. J. Crane</i>	Date: _____	
Reply Optional []	Reply Required []	Info. Only []
Date Due: _____	Date Due: _____	

TO: Pat Lewis, Environmental Specialist *JJC*
Southwest District - Tampa

THROUGH: Bill Hennessey, Manager *MBH*
Southwest District - Tampa

Rodney DeHan, Administrator *RSD*
Groundwater Section

FROM: *JJC* James J. Crane, Hydrogeologist
Groundwater Section

DATE: July 7, 1983

SUBJECT: Sample Analyses - Pinellas Co. Resource Recovery Facility

I have reviewed the analyses and found most parameters to be below drinking water standards. The detection limits for two parameters, mercury and selenium, are too high to determine whether these parameters exceed drinking water standards. The standard for mercury is 2 ug/l, but the detection limit was <9 ug/l. The standard for selenium is 10 ug/l, but the detection limit was <25 ug/l. These parameters should be re-done using detection limits below the drinking water standard.

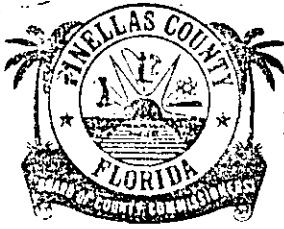
If these two parameters also prove to be below the standards, the waters can be disposed of as requested.

JJC/cs

D.E.R.

JUL 11 1983

SOUTHWEST DISTRICT
TAMPA



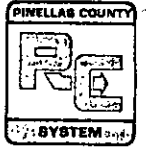
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DEPARTMENT OF SOLID WASTE MANAGEMENT
2800 110TH AVENUE NORTH
ST. PETERSBURG, FLORIDA 33702
PHONE (813) 825-1565

P.O. Box 21623
St. Petersburg, FL 33742-1623



June 28, 1983

Mr. W. K. Hennessey
Southwest District Manager
Department of Environmental Regulation
7601 Highway 301 North
Tampa, FL 33610-9544

Re: Laboratory Analyses--RRF

Dear Mr. Hennessey:

Enclosed are copies of the formal laboratory analyses, as prepared by Environmental Science and Engineering, Inc., and dated June 21, 1983. These are formally transmitted to meet our obligations under the Power Plant Siting Certificate issued by your Department to Pinellas County on April 24, 1979 (page 51).

By copy of this letter, I am also transmitting the same to your Tallahassee Office, Attention: Mr. Hamilton Oven.

If I can be of any further assistance in this matter, please let me know.

Very truly yours,

W. W. Dasher, Director
Public Works Operations

WWD:RSB:ltl

Encls

cc: Hamilton Oven, Admin of PPSC

D.A.R.

JUN 30 1983

SOUTHWEST DISTRICT
TAMPA

ESE

ENVIRONMENTAL SCIENCE
AND ENGINEERING, INC.

June 21, 1983

ESE No. 83 405 400

DER

JUN 30 1983

SOUTHWEST DISTRICT
TAMPA

Mr. William Dasher
Director Public Works Operations
Pinellas County Solid Waste Department
2800 110th Avenue North
St. Petersburg, FL 33702

Dear Mr. Dasher:

Enclosed are the results of the two waste samples collected on 5/27/83 and the two residue samples collected on 6/6/83 at the Pinellas County Refuse to Energy Facility. The samples can be described as follows:

<u>ESE Sample No.</u>	<u>Sample Description</u>	<u>Sample Date</u>
246902	Waste (5/26/83)	5/27/83
246903	Waste (5/27/83)	5/27/83
246904	Aggregate Residue	6/06/83
246906	Non Separated Residue	6/06/83

The maximum allowable concentrations are also provided on the data reports. Results from all four samples are below the maximum allowable concentrations.

Sample numbers 246904 and 246906 yielded a positive reaction to acid and a negative reaction to base when subjected to the reactivity test. The results indicate that the positive reaction is due to carbonates in the samples and hence the samples should not be considered hazardous for the reactivity criteria.

A third sample (#246905) of the non-ferous residue was also collected on 6/6/83. This sample consisted of non-magnetic residue from two to ten inches in size. The nature of this sample made it impossible to sieve it to the required size as specified in the EP Toxicity Test. The DER recommended that this sample was not suitable for the test and hence no analysis was conducted.

Please call me if you have any questions.

Sincerely,

Karen Hatfield

Karen Hatfield
Project Manager

KLH:ceg
Enclosures

5725 RECEIVED
JUN 23 1983

PINELLAS COUNTY
SOLID WASTE SYSTEM

RESULTS OF ANALYSES

SAMPLES COLLECTED AT THE PINELLAS COUNTY REFUSE TO ENERGY FACILITY 5/27/83

ESE Sample No. Sample Description	246902 Dumped 5/27	246903 Dumped 5/26	Max. Conc. Allowed
Arsenic, Diss (ug/L)	<22	<22	5000
Barium, Diss (ug/L)	363	252	100000
Cadmium, Diss (ug/L)	4.2	4.9	1000
Chromium, Diss (ug/L)	170	160	5000
Lead, Diss (ug/L)	<30.0	<30.0	5000
Mercury, Diss (ug/L)	<12	<12	200
Selenium, Diss (ug/L)	<39	<39	1000
Silver, Diss (ug/L)	<4.0	<4.0	5000
Zinc, Diss (ug/L)	5.9	1.9	500000
Endrin, Diss (ug/L)	<0.010	<0.010	20
Lindane, Diss (ug/L)	<0.002	<0.002	400
Methoxychlor, Diss (ug/L)	<0.1	<0.1	10000
Toxaphene, Diss (ug/L)	<0.5	<0.5	500
2,4-D, Diss (ug/L)	<10	<10	10000
2,4,5-TP, Diss (ug/L)	<10	<10	1000
Gross Beta, Diss (ug/L)	112	150	100000
Radium 266, Diss (ug/L)	1.5	0.4	300
pH (Corrosivity)	12.2	12.0	2->12.5
Ignitability	>212°F	>212°F	>212°F
Reactivity	Neg	Neg	Neg

Karen Hatfield
Karen Hatfield, Project Manager

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5775 JUN 23 1983
PINELLAS COUNTY
SOLID WASTE SYSTEM

RESULTS OF ANALYSES

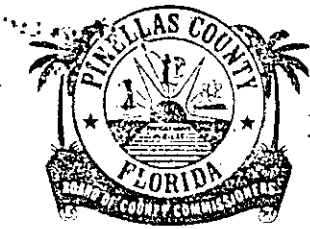
CERTIFICATION SAMPLES COLLECTED AT THE PINELLAS COUNTY REFUSE TO ENERGY FACILITY
6/6/83

ESE Sample No. Sample Description	246904 Aggregate	246906 Non Separated	Max. Conc. Allowed
Arsenic, Diss (ug/L)	<22	<22	5000
Barium, Diss (ug/L)	295	312	100000
Cadmium, Diss (ug/L)	169	494	1000
Chromium, Diss (ug/L)	8.2	91	5000
Lead, Diss (ug/L)	991	2110	5000
Mercury, Diss (ug/L)	<12	<12	200
Selenium, Diss (ug/L)	<39	<39	1000
Silver, Diss (ug/L)	<4.0	<4.0	5000
Zinc, Diss (ug/L)	6830	16600	500000
Endrin, Diss (ug/L)	<0.010	<0.010	20
Lindane, Diss (ug/L)	<0.002	<0.002	400
Methoxychlor, Diss (ug/L)	<0.1	<0.1	10000
2,4-D, Diss (ug/L)	<10	<10	10000
2,4,5-TP, Diss (ug/L)	<10	<10	1000
Gross Beta, Diss (ug/L)	132	426	100000
Radium 226, Diss (ug/L)	0.7	0.7	300
pH (Corrosivity)	12.2	10.6	2->12.5
Ignitability	>212 ^o F	>212 ^o F	>212 ^o F
Reactivity	Neg/Pos*	Neg/Pos*	Neg
Toxaphene, Diss (ug/L)	<0.5	<0.5	500

* See explanation in attached letter

Karen Hatfield
Karen Hatfield, Project Manager

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5725
JUN 23 1983
PINELLAS COUNTY
SOLID WASTE SYSTEM



BOARD OF COUNTY COMMISSIONERS

CO
FAT
DRAFT RESPONSE

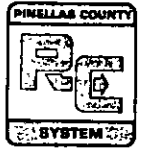
COMMISSIONERS

BARBARA SHEEN TODD, CHAIRMAN
JOHN CHESNUT, JR., VICE-CHAIRMAN
GABRIEL CAZARES
CHARLES E. RAINEY
BRUCE TYNDALL

DEPARTMENT OF SOLID WASTE MANAGEMENT

2800 110TH AVENUE NORTH
ST. PETERSBURG, FLORIDA 33702
PHONE (813) 825-1565
P.O. Box 21623

St. Petersburg, FL 33742-1623



June 16, 1983

Mr. W. K. Hennessey
Southwest District Director
State Department of Environmental Regulation
7601 Highway 301 North
Tampa, FL 33610

E.E.R.
JUN 20 1983
SOUTHWEST DISTRICT
TAMPA

Re: Sample Analysis

Dear Mr. Hennessey:

I am enclosing analyses of the composition of samples taken of post combustion materials at our new Resource Recovery Facility. The aggregate is a mechanizally-refined product whose physical character we believe to be well suited for on and off-site application. The "non-separated" sample is of boiler residue as it is discharged, and as we have placed selectively on site up to this point. We have been advised verbally by ES&E that "maximum allowable concentrations" are those promulgated by the U.S. EPA for these types of materials.

Would you please confirm the latter point and advise us of any restriction applicable for:

1. Allowing this material to leave the site for land application without chemical restriction; and
2. Placement in existing or new excavations on site at levels below the existing high water table without further technical design and construction constraints.

I am also writing to confirm the delivery to you yesterday morning by Mr. Becker, our Solid Waste Operations Manager, of the (Mead) laboratory reports of two bodies of water containing leachate originating in Cell 1-A of Bridgeway Acres Landfill. As noted in his transmittal letter,

Mr. W. K. Hennessey
June 16, 1983
Page 2

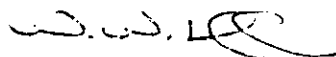
"Blowout #2" is the combination of groundwater and surface waters at the southeast corner of the aforementioned cell, together with intruded leachate from Blowout #1, as sampled and reported a month ago. In addition, this body of water has direct contact with boiler residue, as you know. "Blowout #3" is the body of water in our aeration pond which had been aerated several weeks prior to sampling. It remains there now.

Please advise if we are clear to spray irrigate this water from both locations onto other land/landscape portions of Bridgeway Acres without further treatment or removal. Also, waters from the aeration/oxidation pond may be discharged into 28 Street North after suitable treatment (chlorination). Please advise if we are clear to do this with water presently there.

Because of rather dramatic accumulation of both solids and liquids in the past few weeks, we are most anxious to define available options for their management. Therefore, your prompt consideration and response would be most appreciated.

Naturally, if open questions remain or collective strategy is desired, we stand ready to respond immediately.

Very truly yours,



W. W. Dasher, Director
Public Works Operations

WWD:ltl

Encls

cc: Gene E. Jordan, Dir, PW&U

ESE

**ENVIRONMENTAL SCIENCE
AND ENGINEERING, INC.**

June 13, 1983

ESE No. 83 405 400

Mr. William Dasher
Director Public Works Operations
Pinellas County Solid Waste Department
2800 110th Avenue North
St. Petersburg, FL 33702

Dear Mr. Dasher:

Enclosed are the results of the two samples collected at the Pinellas County Refuse to Energy Facility on 5/20/83. Sample number 246900 corresponds to the sample taken from the aggregate pile and sample number 246901 corresponds to the sample taken from the non separated pile. The maximum allowable concentrations are also provided on the data sheet. Results from both samples are below the maximum allowable concentrations. I will be sending you data on the remaining four samples which were collected on 5/27/83 and 6/6/83 later in the week.

Please call me if you have any questions.

Sincerely,

Karen Hatfield

Karen Hatfield
Staff Chemist

KLH:ceg
Attachment

RECEIVED

JUN 15 1983

5633

PINELLAS COUNTY
SOLID WASTE SYSTEM

REPORT OF ANALYSIS

Description of Samples: Samples collected at the Pinellas
County Refuse to Energy Facility
5/20/83

ESE Sample No.	246900	246901	Max Conc. Allowed
Sample Description	Aggregate	Non Separated	
Arsenic, Diss (ug/L)	< 24	< 24	5000
Barium, Diss (ug/L)	118	213	100000
Cadium, Diss (ug/L)	4.9	4.3	1000
Chromium, Diss (ug/L)	19	21	5000
Lead, Diss (ug/L)	< 24	< 24	5000
Mercury, Diss (ug/L)	< 9.0	< 9.0	200
Selenium, Diss (ug/L)	< 25	< 25	1000
Silver, Diss (ug/L)	< 6.0	< 6.0	5000
Zinc, Diss (ug/L)	19	7.4	500000
Endrin, Diss (ug/L)	< 0.01	< 0.01	20
Lindane, Diss (ug/L)	< 0.002	< 0.002	400
Methoxychlor, Diss (ug/L)	< 0.1	< 0.1	10000
Toxaphene, Diss (ug/L)	< 0.5	< 0.5	500
2,4-D, Diss (ug/L)	< 10	< 10	10000
2,4,5-TP, Diss (u/L)	< 10	< 10	1000
Gross Beta, Diss (Pc/L)	324	75	100000
Radium 226, Diss (Pc/L)	0.2	0.3	300
pH (Corrosivity)	9.5	11.9	2-12.5
Ignitability	> 212°F	> 212°F	> 212°F
Reactivity	Neg.	Neg.	Neg.

Karen Hatfield
Karen Hatfield
Staff Chemist

RECEIVED
JUN 15 1983 563
PINELLAS COUNTY
SOLID WASTE SYSTEM


FLORIDA DEPARTMENT OF AGRICULTURE & CONSUMER SERVICES

DOYLE CONNER, COMMISSIONER * 3125 CONNER BLVD. TALLAHASSEE 32301 Division of Forestry 904/488-4274
 FREP
 EIS
 POWER PLANTS

Received DER

August 2, 1983

AUG 5 1983

Mr. Hamilton S. Oven, Jr.
 Administrator
 Power Plant Siting Section
 Department of Environmental
 Regulation
 2600 Blairstone Road
 Tallahassee, Florida 32301

R R S

Pinellas County Resource Recovery Project Phase II
Power Plant Site Certification Application

Dear Mr. Oven:

This is in response to your letter of July 27 to Commissioner Conner requesting review and comment on the referenced site certification application in Pinellas County.

We have reviewed this application for the Department since the land use impacts are forestry related rather than agricultural and have no particular problems with the proposal. The trade-off of 30 acres of pine flatwoods for the foreseen reduction in use of land for sanitary landfills seems a good one to us.

We note that landscaping of the use area with trees is contemplated during the course of development where this is feasible. If we can be of assistance in the establishment plans, please feel free to call on our local County Forester John Shrencengost of Pinellas County. He can be reached at 813/586-5477 when needed.

Sincerely,

John M. Bethea
 Director

cc: Honorable Doyle Conner, Department of Agriculture and Consumer Services, The Capitol, Tallahassee, Florida 32301
 District Forester Mark Hebb, Division of Forestry, 5745 South Florida Avenue, Lakeland, Florida 33803
 County Forester John Shrencengost, Division of Forestry, c/o Cooperative Extension Service Building, 12175 125th Street, Largo, Florida 33544

INTEROFFICE MEMORANDUM

For Routing To District Offices And/or To Other Than The Addressee		
To: <u>Hamilton Owen</u>	Loctn.: <u>Permitting</u>	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: <u>Don Kell</u>	Date: <u>8/3/83</u>	
Reply Optional []	Reply Required []	Info. Only []
Date Due: _____	Date Due: _____	

TO: Hamilton Owen, Jr., Professional Engineer
Permitting

THROUGH: Rodney S. DeHan, Administrator *RSD*
Groundwater Section

FROM: Don Kell, Engineer *DAK*
Groundwater Section

DATE: August 2, 1983

SUBJECT: PPS Application PA 83-18, Pinellas County

The application appears to be incomplete, lacking materials defining:

1. Construction and hydraulic properties of the proposed perimeter slurry trench.
2. Associated borings.
3. "Bentonite" clay properties.
4. Underlying clay confining layer properties.
5. Associated borings.
6. Inside/outside water level projections.
7. Inside/outside ground water monitoring design.
8. Comprehensive runoff model.
9. Possible effects of flooding to contiguous housing.
10. Possible effects of salt water intrusion on the aquifer(s).

The facility remains in violation of existing conditions of certification. It remains uncertain whether the Sod Farms property will be added to the facility.

DK/cs

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP		ACTION NO.
		ACTION DUE DATE
1. TO: (NAME, OFFICE, LOCATION)	INITIAL	
<i>Buck over</i>	DATE	
2.	INITIAL	
	DATE	
3.	INITIAL	
	DATE	
4.	INITIAL	
	DATE	
REMARKS:	INFORMATION	
	<input type="checkbox"/> REVIEW & RETURN <input type="checkbox"/> REVIEW & FILE <input type="checkbox"/> INITIAL & FORWARD	
<p>We sent each release to 3 papers:</p> <p>The "site cert. applic. received" went to the Clearwater Sun, St. Pete Times and Beach news -- a small weekly in Clearwater.</p> <p>The other release went to the Tampa Tribune and two small weeklies.</p>	DISPOSITION	
	<input type="checkbox"/> REVIEW & RESPOND	
	<input type="checkbox"/> PREPARE RESPONSE	
	<input type="checkbox"/> FOR MY SIGNATURE	
	<input type="checkbox"/> FOR YOUR SIGNATURE	
	<input type="checkbox"/> LET'S DISCUSS	
	<input type="checkbox"/> SET UP MEETING	
	<input type="checkbox"/> INVESTIGATE & REPT	
	<input type="checkbox"/> INITIAL & FORWARD	
	<input type="checkbox"/> DISTRIBUTE	
<input type="checkbox"/> CONFERENCE		
<input type="checkbox"/> FOR PROCESSING		
<input type="checkbox"/> INITIAL & RETURN		
FROM: <i>Kathy Cunningham</i>	DATE: <i>8-1</i>	
	PHONE:	

August 1, 1983

DER. Rec'd AUG 3, 1983 P.P.S.

Re: 83-2355 Pinellas County Resource Recovery Project Power
Plant; phase II vs. DER

The above-styled matter is now before the Division of Administrative Hearings. The hearing officer assigned to the case is

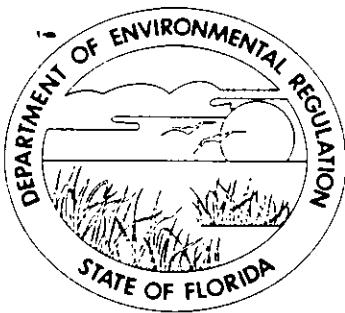
WILLIAM E. WILLIAMS

He/She will contact you through the mail regarding the time and place of hearing. Should you desire to contact him/her you may do so at the Division, Oakland Building, 2009 Apalachee Parkway, Tallahassee, Florida 32301; (904) 488-9675.

NOTE: In the future, file the original and one copy of all documents with the Division.

Date of Filing: 83/07/27

Pamela L. Phillips
PAMELA L. PHILLIPS
Administrative Assistant



Victoria J. Tschinkel
Secretary

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

2600 Blair Stone Road
Tallahassee, Florida 32301

News Release

OFFICE OF PUBLIC INFORMATION (904) 488-9334/5

Buck Oven
488-0130
August 1, 1983

TALLAHASSEE--The Department of Environmental Regulation has received a "Power Plant Site Certification Application" from Pinellas County for the construction and operation of an additional resource recovery facility boiler.

The new boiler will be located at the existing Resource Recovery Facility south of the St. Petersburg-Clearwater Airport.

The proposed new unit will burn 1050 tons per day of municipal solid waste and generate up to 29 megawatts of electricity. The electricity will be sold to Florida Power Corporation.

Other design features may include electrostatic precipitators for particulate control. The source of cooling water will be treated sewage effluent.

For more information on the project, contact the Pinellas County Department of Solid Waste Management or Hamilton S. Oven, Jr., Department of Environmental Regulation, 2600 Blair Stone Road, Tallahassee, Florida, 32301.

* * *