ASH MANAGEMENT PLAN

Ogden Martin Systems of Pasco, Inc.

Pasco County Resource Recovery Facility

OGDEN

JOHN P. POWER
REGIONAL ENVIRONMENTAL
COORDINATOR

AN OGDEN
PROJECTS COMPANY

OGDEN MARTIN
SYSTEMS, INC.

HILLSBOROUGH	(813) 684-5688
PASCO	(813) 856-2917
LAKE	(904) 365-1611
HUNTSVILLE	(205) 882-1019

The Pasco County Resource Recovery Facility is a waste-to-energy facility located in Spring Hill, Florida. The facility is designed to combust up to 1050 tons of non-hazardous solid waste per day This results in approximately 250 tons per day of ash generated and disposed of in the adjacent ash monofill. The ash residue is combined ash, consisting of both bottom ash and fly ash.

The residue handling methods, equipment, ash disposal site, analytical QA/QC for ash characterization, potential for ash recycling, and conditions of assuring that hazardous wastes are not received or incinerated at the facility are all discussed within this Ash Residue Management Plan, per the requirements of Chapter 62-702.400, F.A.C.

I. Residue Handling Equipment

The residues of combustion consist of non-combustible by-products, fly ash, spent lime, spent carbon, and bottom ash siftings. The resultant ash residue is approximately 25 to 30 percent (by weight) of the incoming solid waste.

The fly ash system collects and handles collected salts and fly ash discharged from the superheater, economizer, dry scrubber, and particulate removal (baghouse) systems. In addition to fly ash, spent lime reagent and activated carbon are collected from the dry scrubber, and, to a lesser extent, the baghouse. The air pollution control (APC) systems and boiler ash hoppers discharge to fully enclosed screw conveyors through automated dump valves. The valves provide a barrier between the air pressure in the conveyors and the various pressure levels at different points in the combustion train. The collected ash and reagent stream is combined with the bottom

ash for quenching and removal in the ash discharger.

Each of the three combustion units at the facility is equipped with a proprietary Martin GmbH residue discharger, which receives, combines, wets, and quenches burned out waste residues, grate siftings, and flyash. The ash discharger is totally enclosed, thus preventing ash from becoming airborne prior to quenching.

From the quench chamber, a hydraulically driven ram pushes the residue up an inclined draining/drying chute. In the chute, excess water from the residue drains back into the quench bath. Residue, containing enough moisture to prevent dusting (15 to 25 percent by weight), then falls on to the main vibrating residue conveyor.

The conveyor carries discharged residue from the boilers to an integral "grizzly scalper." The grizzly scalper extracts large (> 10") pieces from the main residue stream. Oversized pieces are transported to the residue storage building via front end loader. Undersized pieces are fed to an enclosed inclined belt conveyor for transport to the residue storage building.

Each residue discharger is equipped with an emergency bypass transfer chute to permit uninterrupted removal of residue if any component of the ash conveying system becomes inoperative. The transfer chutes are designed to provide emergency bypass of the main vibrating conveyor by directing the residue directly to a dumpster. The dumpster is transported to the ash building via forklift. This system is utilized in emergency situations only.

Within the residue storage building, a rotating magnet continuously removes ferrous materials from the residue stream. The ferrous materials are collected in a separate storage bay, and are periodically removed by various scrap haulers.

The completely enclosed residue storage building contains three separate storage bunkers. Each storage bay is sized to allow a naturally forming residue pile. Sufficient storage volume is provided for several days of accumulated materials. Stored residue is removed from storage and loaded into trucks by a front end loader for ultimate disposal in the designated landfill. The moisture content of the ash (15 to 25 percent by weight) minimizes any potential fugitive dust emissions during the handling, conveying, and transport activities. The consistency and appearance of the ash residue is comparable to wet aggregate. This moisture condition continues to be maintained during transport to the landfill.

The trucks used to transport the residue material to the landfill are leak-proof containerized vehicles which have the capability of conveying up to 25 tons of material per load. The vehicle makes approximately six or seven round trips per day, on an as needed basis.

The ash materials are managed in full compliance with Chapter 62-702, F.A.C. and in a manner such that an extremely low potential for inhalation, ingestion, or direct dermal contact will exist. Ogden Martin Systems of Pasco has developed a detailed and specific employee safety training program. The program provides effective personal respiratory protection equipment as necessary to promote a high degree of protection to facility personnel.

II. Ash Disposal Site

The current ash residue disposal site is located adjacent to the facility. This site is a FDEP permitted ash monofill with a composite liner and leachate collection system which complies with the requirements of Chapter 62-701.050, F.A.C.

III. Analytical Quality Assurance/Quality Control Plan

Sampling and analytical procedures used for characterization of the ash residue will be in accordance with the following documents:

1. Florida Department of Environmental Protection. Quality Assurance Standard Operating Procedures Manual for Sampling Ash Residue from Solid Waste Combustors. 1994.
2. United States Environmental Protection Agency. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition (SW-846). 1986 as amended by Final Update 1, November 1990.
3. Florida Department of Environmental Protection. Memorandum from William W. Hinkley, Chief, Bureau of Solid and Hazardous Waste to Waste-to-Energy Plant Managers regarding Ash Sampling and Characterization. October 5, 1996.
4. United States Environmental Protection Agency. Guidance For The Sampling and Analysis Of Municipal Waste Combustion Ash For the Toxicity Characteristic. July 24, 1995.

Samples collected in accordance with the above document numbers 1 and 2 are sent to an

independent laboratory operating under an FDEP approved Comprehensive Quality Assurance Plan per 62-160.300(8)(I), and analyzed using appropriate methods and techniques. Analysis includes total metals analysis for the thirteen priority pollutant metals. The priority pollutant metals include: silver, arsenic, beryllium, cadmium, chromium, copper, mercury, nickel, lead, antimony, selenium, thallium, and zinc.

The laboratory adheres to a strict quality control program which consists of a reagent blank, a sample duplicate, and a matrix spike for at least one sample.

In addition to the composite ash sample, leachate from the monofill is also collected and analyzed for the priority pollutant metals on a quarterly basis.

The results of the ash and leachate analyses are submitted annually to the Department of Environmental Protection in a report which presents the summarized data.

A determination of the ash's Toxicity Characteristic was undertaken on July 24 through 31, 1994 using the procedures outlined in the above document number 4. It was demonstrated at such time that the ash does not exhibit the Toxicity Characteristic of RCRA Subtitle C. Subsequent determinations will made in accordance with the guidelines specified in document number 3 above.

IV. Recycling of Ash Residue

As part of the total ash management program, Pasco County and Ogden Martin Systems of Pasco, Inc., remain alert to potential uses of ash. Various pilot projects have been undertaken in Florida and other states to study the possibility of reusing ash from municipal waste combustors. All potential ash reuse projects will be conducted in accordance with Chapter 62-702.600, F.A.C.

V. Hazardous Wastes

Per contractual obligations, as specified by the Ogden/Pasco County Agreement (amended, restated and executed on July 10, 1996), the facility may neither receive nor burn hazardous wastes. To detect hazardous waste, the County has trained all scale house operators to recognize such wastes. The County has also instructed all haulers delivering waste to the facility what constitutes unacceptable or hazardous waste.

In addition to these contractual obligations, Ogden Martin Systems of Pasco, Inc. has an Unacceptable Waste Screening Procedure which is included as part of the facility's Operation and Maintenance Manual.

OGDEN

Ogden Martin Systems of Pasco
14230 Hays Road
Spring Hill, FL 34610
813 856 2917
Fax 813 856 0007

FACSIMILE COVER SHEET

DATE: 6/30/97

TO: Allison Amrein

FROM: Jason Goorie

SUBJECT: PCRF Ash Management Plan - pg. 5

PAGE: 1 + COVER

SENT BY:

MEMO: As requested.

SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 3-23-94

Time 9:05

Subject Ash SOP

Permit No.

County Hillsborough / Pasco

M Jason Gorrie

Telephone No. ~~904~~ 813 856-2917

Representing Ogden - Martin Hills on Friday 684-5688

[ ] Phone Me [ ] Was Called [ ] Scheduled Meeting [ ] Unscheduled Meeting

Other Individuals Involved in Conversation/Meeting

Labs don't have mixers big enough
Sample volume too big ~ 72 lbs.
- ① reduce frequency
② or quantity

Daily sample: 24 lbs → separate >3/8"
mix → take 6 lbs; discard the rest
Quarterly - combine the 3 (18 lbs) /4 → (4½ lb sample

4/4 - Discussed volume of sample - won't be reduced
4/5 - Discussed QAP - person who samples needs to be covered by a QAP - can state that sampling was done under the DEP Ash SOP. If want to sample any other way, they need to get that sampling procedure approved in their QAP

(continue on another sheet, if necessary)

Signature Allison Amram

Title ES3

Pasco RR
Hills. RR

SOUTHWEST DISTRICT

CONVERSATION RECORD

Date 3-16-94

Time 10:05

Subject Ash submittals

Permit No.

County Pasco / Hillsborough

M Jason Gorrie

Telephone No.

Representing Ogden-Martin

[X] Phone Me [ ] Was Called [ ] Scheduled Meeting [ ] Unscheduled Meeting

Other Individuals Involved in Conversation/Meeting

Called in reference to my ash sampling letter. I mistakenly asked for quarterly submittal of ash; rule says annually. They should submit annually the results of all 4 quarters testing.

Jason is replacing John Power as env. MGR for Florida sites. His office is in Pasco -- same # as John.

(continue on another sheet, if necessary)

Signature Allison Amram

Title ES3

Florida Department of
Environmental Protection

Lawton Chiles
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619
813-744-6100

Virginia B. Wetherell
Secretary

March 10, 1994

Mr. Vincent Mannella, P.E.
Solid Waste Facility Manager
Pasco County
7536 State Street
New Port Richey, Florida 34654

Subject: Pasco County Resource Recovery Facility
Ash Testing Standard Operating Procedures
Certification PA 87-23

Dear Mr. Mannella:

The Florida Department of Environmental Protection (FDEP) has finalized the Quality Assurance Standard Operating Procedures Manual for Sampling of Ash Residue from Solid Waste Combustors, attached. Ash sampling shall begin the second quarter of 1994, with these sampling results due to the Solid Waste Section of the FDEP by July 15, 1994. Ash shall be analyzed in accordance with Rule 17-702.570, Florida Administrative Code. A copy of Chapter 17-702 is enclosed for your reference. Your Conditions of Certification will be amended to include this sampling requirement.

Quarterly sampling results for successive years are due on the following dates:

Quarter 1	April 15th
Quarter 2	July 15th
Quarter 3	October 15th
Quarter 4	January 15th

If you should have any questions concerning these sampling procedures, please contact me at (813) 744-6100, ext. 336.

Sincerely,

Allison E. Amram

Allison E. Amram, P.G.
Solid Waste Section

cc: Steve Morgan - FDEP (w/o attachments)
Hamilton "Buck" Oven - FDEP (w/o attachments)
John Power - Ogden Martin (w/o attachements)
Robert G. Sitz - Ogden Martin

Attachments (2)

I N T E R O F F I C E M E M O R A N D U M

Date: 08-Jan-1993 03:37pm EST
From: Mary Jean Yon TAL
YON_MJ
Dept: Waste Management
Tel No: (904)922-6104
SUNCOM: Suncom 292-6104

TO: See Below

Subject: Ash SOP

Hooray for Joe Lurix!! He took the first step towards writing an SOP for ash sampling. Attached is his handiwork which I would really like for you guys to look over and offer whatever comments you may have. Joe has checked this with several of the facilities in his District and feels like it's a workable procedure. Please let me know your thoughts by January 20. Thanks again, Joe.

Distribution:

TO:	Thomas W. Moody PEN	(MOODY_T)
TO:	Michael Fitzsimmons JAX	(FITZSIMMONS_M)
TO:	William Bostwick ORL	(BOSTWICK_W)
TO:	William Kutash TPA	(KUTASH_W)
TO:	Phil Barbaccia FTM	(BARBACCIA_P)
TO:	Vivek Kamath WPB	(KAMATH_V)
CC:	Silky Labie TAL	(LABIE_S)
CC:	Bill Hinkley TAL	(HINKLEY_B)
CC:	Chris McGuire TAL	(MCGUIRE_C)

Quality Assurance
Standard Operating Procedures Manual
Ash Residue
for
Generators of Solid Waste Combustor Ash
Chapter 17-702, Florida Administrative Code

1.0 General

Chapter 17-702.570(2) Florida Administrative Code (F.A.C.), requires that ash residue sampling and analyses be conducted in accordance with an approved comprehensive Quality Assurance Plan (Comp QAP). The Department requires that all sampling and analyses which is conducted to support Chapter 17-701, F.A.C., will be performed under Category 3 QA oversight. All parties conducting ash residue sampling will follow this Department-written SOP as defined in Chapter 17-702.200, F.A.C. Subsequent analysis of collected samples will be performed by a laboratory which has an approved Comprehensive QA Plan.

2.0 Sampling Procedures

2.1 Ash Residue Sampling

Chapter 17-702.570(2), F.A.C. requires minimum sampling for priority pollutant metals.

2.1.1 Sampling Location

Composite ash residue (combined fly ash, bottom ash and scrubber residue) sampling shall occur on the ash residue, belt conveyers or in the ash load-out building. Composite samples shall be collected every 10 minutes for 4 consecutive hours during one day each month. This equates to 3 composite samples per quarter.

2.1.2 Composite Ash Residue Sampling Procedure

The following composite and residue sampling procedures shall be used for collecting samples for priority pollutant metals specified in the Tables attached as referenced in Chapter 17-702, F.A.C.

2.1.2.1. Gather 10 minute random sequential grab samples with a clean stainless steel shovel, taking a cross section of the entire belt conveyer or from the ash load-out building.

2.1.2.2 Place grab samples in a clean plastic container and seal with a screw top plastic lid. The composite weight of the hourly sample should be 4-6 pounds. The 24 samples will be combined into a 16-24 pound daily composite.

2.1.2.3 Transfer the daily composite ash residue samples with a clean stainless steel shovel to a clean glass tray or plastic tray for mixing.

2.1.2.4 Thoroughly mix the composite ash residue samples with a clean stainless steel shovel.

2.1.2.5 Screen entire daily composite ash residue sample through a 3/8 inch screen.

2.1.2.6 Place $\leq$ 3/8 inch ash residue into a clean mixer.

2.1.2.7 Review > 3/8 inch noncrushable ash residue from sample, weigh and discard (e.g. wheels, batteries, rebar, metal frames, etc.).

2.1.2.8 Pass > 3/8 inch crushable ash residue through crusher and then recombine crushed ash residue with other 3/8 inch ash residue in mixer.

2.1.2.9 Turn on mixer for 10 minutes to assure thorough mixing of sample composite. Remove sample from mixer with stainless steel spoon or Teflon coated spoon and quarter to obtain daily composite sample.

2.1.2.10 Place daily composite sample into a clean plastic container and seal with a screw top plastic lid.

2.1.2.11 After 3 monthly composite samples are obtained, recombine in the mixer. Remove sample after mixing for 10 minutes and quarter to obtain one quarterly composite sample. Place quarterly composite sample into a clean plastic container and seal with a screw top plastic lid.

2.1.2.12 Label containers for all composites as to location, date, samples and composite number.

2.1.2.13 Ship one quarterly composite sample to laboratory using chain of custody form, Figure I.

2.1.2.14 Archive at least one quarterly composite on-site as a control and/or for future analyses for a maximum of 6 months.

2.2 Cleaning Procedures

Equipment utilized to obtain samples must be decontaminated before every sampling event.

2.2.1 Wash equipment thoroughly with detergent and tap water using a brush to remove any particulate matter or surface film.

2.2.2 Rinse equipment with tap water.

2.2.3 Rinse equipment with deionized water.

2.2.4 Rinse equipment twice with isopropanol and allow to air dry.

2.2.5 Wrap equipment completely with aluminum foil to prevent contamination during transportation to or within a sampling site.

2.3 Sample Identification, Storage, and Holding Time

2.3.1 Immediately after each sample is collected, it must be sealed and a label will be affixed to the container identifying the sample by location, date and time of collection, collector's name, analysis type, and preservative. Preservative can be deleted if containers are color coded as to preservative or preservative is noted in the chain of custody, sample request, or other documentation going to the lab.

2.3.2 All samples will be shipped in wet ice and access to samples will be restricted to only those persons identified in the chain of custody record.

3.0 Sample custody

3.1 A sample control log will be maintained which will show the field ID number, the name of the sample collector, the date, shift, and location of collection. The field ID number also will be written on the sample label. A numbering system should be used for the field ID numbers which will allow accurate identification of soil piles with no ambiguity.

3.2 Chain of Custody Record

A chain of custody record will be completed for every sample collected. All parties accepting custody of the samples including the collector, coordinator, transporter, laboratory custodian, etc., will provide signatures on the chain of custody forms. In this record every sample will be identified by the following: field ID number, date, time, a sampling method, sampling location, shift, container, and analytical methods. A chain of custody record will be filled out per sample collector per shift.

A binder containing copies of chain of custody records will be maintained by the party which collects the sample. Two copies of a chain of custody record form will accompany the sample to the laboratory. Once the sample transporter signs out and the receiver signs in, one copy will be retained by the laboratory and one retained by the transporter who will deliver it to the party collecting the sample.

TABLE I - Priority Pollutant Metals

Antimony	(mg/kg)
Arsenic	(mg/kg)
Beryllium	(mg/kg)
Cadmium	(mg/kg)
Chromium	(mg/kg)
Copper	(mg/kg)
Lead	(mg/kg)
Mercury	(mg/kg)
Nickel	(mg/kg)
Selenium	(mg/kg)
Silver	(mg/kg)
Thallium	(mg/kg)
Zinc	(mg/kg)

Figure I

CHAIN OF CUSTODY FORM

SAMPLE DATE _____ SAMPLE TIME _____

SAMPLE NUMBER _____ SAMPLE TYPE _____

ANALYTICAL METHOD REQUESTED _____

_____

PARAMETERS TO BE MEASURED _____

_____

_____

_____

FIELD INFORMATION _____

_____

_____

_____

SAMPLE COLLECTOR: NAME _____

TITLE _____

ADDRESS _____

TELEPHONE _____

LABORATORY REPORT TO _____

LABORATORY INVOICE TO _____

CHAIN OF CUSTODY

	Printed name	Signature	Date
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____

pace
INCORPORATED
THE ASSURANCE OF QUALITY

September 18, 1992

RE: CQAP #870529G

Enclosed per your request is a copy of the Comprehensive Quality Assurance Plan (CQAP) for PACE Incorporated, Tampa, Florida.

Please return or shred any Generic QAPP's or earlier dated copies of the CQAP that you might have on hand.

If you have any questions, please feel free to contact me.

Sincerely,

Norma J. Plants

Norma J. Plants
Quality Assurance Officer
Florida Region

NJP1/sgb

Enclosure

5460 Beaumont Center Blvd.
Tampa, FL 33634
TEL: 813-884-8268
FAX: 813-888-6382

State of Florida

Department of Health and Rehabilitative Services

OFFICE OF LABORATORY SERVICES

This is to Certify That

HRS# E84003
Pace Laboratories, Inc.
5460 Beaumont Center Boulevard
Tampa, FL 33634

has complied with Florida Administrative Code section 10 D - 41.100 for the examination of environmental water in the following categories:

Metals, Nutrients, Demands, Extractable Organics (GC, GC/MS, HPLC), General Category I, General Category II, Microbiology (ENV), Pesticides/Herbicides/PCB's (GC, GC/MS, HPLC), Purgeable Organics (GC, GC/MS), Hazardous Waste Characterization **********

Specific methods, parameters, and analytes certified are on file in the Office of Laboratory Services, P.O. Box 210, Jacksonville, Florida 32231.

EFFECTIVE July 1, 1992 **through** June 30, 1993

1992 - 1993

№ 92247

Non - Transferable

Eldert C. Hartwig, Jr., Sc.D., M.P.H.
Chief, Laboratory Services
Office of Laboratory Services
HRS Form 1697, June 92

State of Florida

Department of Health and Rehabilitative Services

Office of Laboratory Services

SAFE DRINKING WATER

This is to certify that

HRS# 84125
Pace Laboratories Inc.
5460 Beaumont Center Boulevard
Tampa, Florida 33634

1992-1993

has complied with section 10D-41.050 of the Florida Administrative Code pertaining to safe drinking water testing in the following categories:

Microbiology, Inorganic-Primary (C), Inorganic-Secondary (C), Organic (P)(GC), Turbidity, Trihalomethanes (C)(GC), Volatile Organic Compounds (C)(GC), Purgeables (C)(GC, GC/MS), Trihalomethanes (C)(GC), Volatile Organic Compounds (C)(GC), Purgeables (C)(GC, GC/MS), Pesticides (P)(GC, GC/MS), Base Neutral Extractables (C)(GC, GC/MS), Acid Extractables (P)(GC, GC/MS)**********

Specific certified analytes and methodologies within these categories are listed on the analyte sheets with this laboratory and the DHRS Water Certification Unit.

EFFECTIVE July 1, 1992 through June 30, 1993

NO. 92306

NON-TRANSFERABLE

Eldert C. Hartwig, Jr., Sc.D., M.P.H.
Chief, Laboratory Services
Office of Laboratory Services
HRS form 1629, June 92

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

July 31, 1992

Ms. Norma Plants
Pace Incorporated
5460 Beaumont Center Blvd.
Suite 500
Tampa, FL 32399-2400

SUBJECT: Quality Assurance Review; Pace Incorporated Comprehensive QA Plan #870529G

Dear Ms. Plants:

The referenced document, received on December 3, 1991, with supplemental information submitted on December 23, 1991, and May 11, 1992, has been reviewed and is being approved-pending requested revisions. Further detail on the status of this plan is explained in the enclosed guidance document (DER QAS #90-03). Please respond to all comments on the annotated pages of your QA Plan as well as the comments listed below.

The following review comments must be addressed:

1) Please submit the next revision of your QA Plan in a 3 ring binder.

1) Separate QA targets must be provided for each inorganic analyte where more than one method is specified.

2) Please provide complete references for all cited methods.

3) SW-846 methods are not acceptable for drinking water.

4) Method validation packages must be submitted for all parameters that are not specifically identified in the cited method or an approved method must be specified. Parameters or methods that are annotated as not approved or not in the cited method will not be approved until the above mentioned criteria are met.

5) Extraction/digestion methods must be specified for all methods where there is a separate prep method (most SW-846 methods).

6) Please note that ion chromatographic methods are only approved for groundwater and surface water matrices and that this methodology is not acceptable for fluoride.

7) As indicated by previous review correspondence, dated August 19, 1991, all QA targets identified as published or advisory must be updated to actual targets generated by your facility with the next submittal. Assert that QA targets for new capabilities added with this revision will be upgraded to in-house targets with the 1993 annual amendments. Please note the comment on page 82 of Section 5 concerning the elevated standard deviations presented for accuracy and precision. The standard deviations presented with the in-house targets must be used as described in Section 11 to determine acceptance criteria. If advisory limits are still being presented for some parameters, the method for determining acceptance criteria must be explained.

8) Formulas or data manipulation descriptions must be provided for all tests or test groups in the data reduction portion of Section 12.

Since these amendments were submitted as the annual amendment requirement, the next revision must be fully approved if the CompQAP is to retain approval status. These revised amendments must be received in our office on or before September 15, 1992, or approval will automatically expire unless you advise the QA Section of any delays. If you have any questions concerning this matter, please call Andy Tintle at (904) 488-2796.

Sincerely,

Sylvia S. Labie, QA Officer
Quality Assurance Section

SSL/ART/art

Attachments (4): DER QAS #90-03 (Explanation of Status)
Annotated QAP pages
Cyanide Preservation Protocol
DER QAS #90-05

cc: Elena Rodriquez - HRS lab Certification Program (w/Section 5)

COMPREHENSIVE QUALITY ASSURANCE PLAN

for

Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
(904) 488-2796

Prepared By

PACE Incorporated®
5460 Beaumont Center Boulevard
Suite 500
Tampa, Florida 33634
(813) 884-8268

Thomas A. Jackman
Group Vice President
Thomas A. Jackman

11-26-91
Date

Norma J. Plants
Quality Assurance Officer
Norma J. Plants

11-26-91
Date

DER Quality Assurance Officer
Sylvia S. Labie

Date

PASCO COUNTY, FLORIDA

SOLID WASTE/FISCAL SERVICES DEPT.
PASCO COUNTY GOVERNMENT COMPLEX
7536 STATE STREET
NEW PORT RICHEY, FL 34654

DADE CITY (904) 521-4274
NEW PORT RICHEY (813) 847-8041

May 11, 1992

D.E.R.
MAY 13 1992
SOUTHWEST DISTRICT
TAMPA

Mr. Kim Ford
Florida Department of
Environmental Regulation
4520 Oak Fair Boulevard
Tampa, FL 33610-7347

Dear Mr. Ford:

It has come to our attention that your database list of landfills needs to be updated. Please change the following:

West Pasco Class I/III (1230 Hays Road)
Doug Bramlett
7536 State Street
New Port Richey, FL 34654
(813) 847-8040

East Pasco Class I Sanitary Landfill
Doug Bramlett
7536 State Street
New Port Richey, FL 34654
(813) 847-8040

Ridge Road Class I
Location: .4 North of Ridge Road on Landfill Road, New Port Richey
Doug Bramlett
7536 State Street
New Port Richey, FL 34654
(813) 847-8040

Any questions, please advise.

Sincerely,

Robert J. Sigmond
Solid Waste/Fiscal
Services Director

RJS/hc

cc: Douglas S. Bramlett, Assistant County Administrator (Utilities Services)

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee

_____ Location: _____
To: _____ Location: _____
To: _____ Location: _____
From _____ Date: _____

Interoffice Memorandum

TO: District Waste Program Administrators
District Air Program Administrators
County Air Program Administrators

FROM: Steve Smallwood, Director
Division of Air Resources Management

John Ruddell, Director
Division of Waste Management

SUBJ: Tire Burning at Municipal Waste Combustors and Resource Recovery Facilities

DATE: April 16, 1992

This joint memorandum is to clarify the Division of Air Resources Management's and the Division of Waste Management's guidance on the use of municipal waste combustors and resource recovery facilities to dispose of tires through incineration.

Tires (shredded and whole) may be processed/fed to these units up to 3%, by weight, of the permitted capacity without any change in the existing permits.

However, any desire to process/feed tires above the 3% level will be considered a modification and the owner/operator of the source(s) will be required to obtain the necessary document(s) (i.e., construction permit modification) prior to increasing the processing/feed rate of the tires. This type of activity will require a Florida P.E. sealed application for a modification, processing fee, public notice, and additional air emission testing to determine the suitability of the unit for the processing of tires. The Air Construction Permit Modification will be processed by the Bureau of Air Regulation's Permitting and Standards Section. However, waste-to-energy facilities certified under the Power Plant Siting Act would require a modification of the certification. Submission of the same information by a Florida P.E. using the same forms you listed would be required. The $10,000 modification fee would apply in those cases.

If you have any questions on the above, please contact Barry Andrews at (904)488-1344 or SunCom 278-1344.

SS/BM/rbm

Florida Department of Environmental Regulation

Southwest District • 4520 Oak Fair Boulevard • Tampa, Florida 33610-7347

Lawton Chiles, Governor 813-623-5561 Carol M. Browner, Secretary

August 26, 1991

KBN Engineering
and Applied Sciences, Inc.
1034 Northwest 57th Street
Gainesville, Florida 32605

Attn: Mr. Thomas Mirti

Re: Hazardous Waste Determination Dried Brine Salts

Dear Mr. Mirti:

I have reviewed the analyses you submitted for the GRU-Deerhaven brine salts. I agree with your conclusion that brine salts generated at the Pasco County cogeneration facility are likely to non-hazardous. However, given the level of chromium and barium in the waste, I would recommend testing a TCLP extract of Pasco County's waste for RCRA metals prior to disposal.

Sincerely,

Elizabeth Knauss
Environmental Specialist III
Division of Waste Management

EK/br

cc: Kim Ford, P.E., Solid Waste

KBN

June 19, 1991

D. E. R.

JUN 20 1991

SOUTHWEST DISTRICT
TAMPA

Ken Ford
Florida Department of Environmental Regulation
Southwest District
4520 Oak Fair Boulevard
Tampa, FL 33610-7347

Dear Mr. Ford:

KBN Engineering and Applied Sciences, Inc., (KBN) currently is pursuing the licensing of a cogeneration facility proposed for construction in Florida. The proposed Pasco Cogen Limited (PCL) facility will be built near Dade City in Pasco County, Florida, with Lykes Pasco Packing Company serving as host. The facility location is given in Figure 1.

The cogeneration facility will be comprised of combined cycle units using natural gas-fired combustion turbines (CTs) and heat-recovery steam generators (HRSGs). The facility will have a net steam generating capacity of approximately 24 megawatts (MW) and a net combustion turbine generating capacity of approximately 84 MW. The HRSGs will generate steam for nonelectric use at the host facility, as well as electric power generation for export to an outside electrical grid. The steam cycle portion of the cogeneration facility is less than 75 MW and, therefore, will not fall within the applicability of the Power Plant Siting Act. This has been confirmed in communications with Mr. Hamilton Oven, Siting Coordinator for the Department.

PCL is considering the installation of a zero liquid discharge wastewater treatment system at the facility. A description of this treatment system is provided as Attachment A. Tables 1 and 2 (attached) provide information pertaining to the composition and quantity of solid materials that will be generated. One to two tons of solid waste is expected to be generated on a daily basis. PCL would like either to landspread this material or otherwise apply it as a soil amendment, or in the event such options are not possible, send it to an existing, licensed landfill. The Pasco County Solid Waste Department has been contacted concerning possible disposal at its Class I landfill. Disposal at this landfill would be possible contingent upon determination by your office based on the information contained herein that the material is not hazardous in nature.

Based on the operation and treatment processes described in Attachment A and the characterization of the solid waste provided in Table 1, it does not appear to meet the definition of hazardous waste as referenced in the Florida Administrative Code 17-730.001 and 17-730.030(1) and defined in 40 CFR Part 261. Confirmation of this from your office is requested.

Transport of the solid waste from the point of generation to the eventual disposal point has not been finalized at this time.

KBN ENGINEERING AND APPLIED SCIENCES, INC.
1034 Northwest 57th Street Gainesville, Florida 32605 904/331-9000 FAX: 904/332-4189

We would greatly appreciate a prompt reply in order to proceed with planning for this aspect of the project. KBN will be available for a meeting to discuss these matters should the need arise. Please contact me if you need clarification or if further information is required.

Thank you.

Sincerely,

Thomas Mirti

cc: Elliott White, PCC
Bruce Miller, PCC
Ken Smith, NC
Paul Myford, NE
Richard Zwolak, KBN
Roger Anderson, KBN
Bob Sigmond, PC-SWD

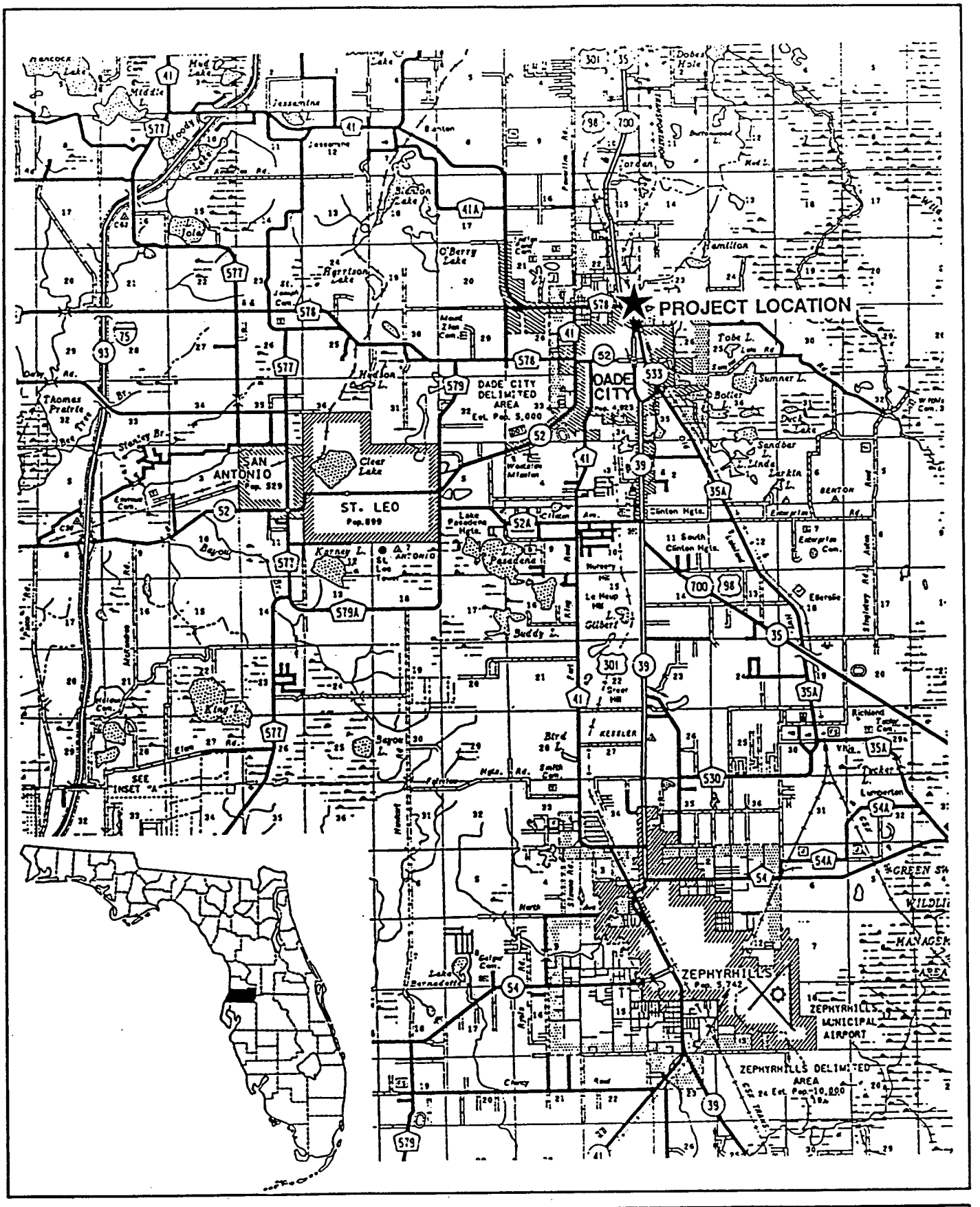

Figure 1 LOCATION MAP FOR PASCO COGEN LIMITED

ATTACHMENT A
LIQUID WASTE TREATMENT SYSTEM DESCRIPTION

The power plant will be equipped with a liquid waste treatment system commonly called a "zero liquid discharge system." The design process has not yet been finalized; therefore, this description is preliminary and does not reflect final choices for equipment. The following process description refers to the average and maximum water balance scenarios shown in Figures 2 and 3, respectively.

Make-up water (1) is supplied to the cooling tower (4). After evaporation (2) and drift (3), the circulating water (27) is pumped via plant equipment cooling systems (28). Blowdown from the cooling tower (5) is pumped through a reverse osmosis unit (6) with product water being returned to the cooling tower basin (not shown) and effluent to a surge tank (7). Other plant wastewater effluent (29) is mixed with concentrated cooling tower blowdown, and the mixed stream is preheated by a heat exchanger (8) and deaerator (9) and fed to a brine concentrator (10). Vapor generated is compressed (14) and recirculated (15) to the brine concentrator. Concentrate (11) is recirculated to the top of the brine concentrator (12) while a portion of this stream is bled (13) via heat exchanger (8) to a crystallizer (20) or, alternatively, a spray dryer. Drying air (21) is used to concentrate brine in the spray dryer, or steam is used in a surface crystallizer. Concentrated brine is fed into a storage silo (26) using a mechanical conveyor (23). Concentrated brine will be transported by truck to a designated landfill. If a spray dryer is used (19 and 20), the spent air will be discharged via a pulse-jet baghouse (22), induced draft fan (24), and stack (25).

Product water leaving the brine concentrator (16) is demineralized by a mobile demineralizer (17). Demineralized water (18) is used entirely by the plant through evaporation, lost process steam make-up, and injection to natural gas turbines.

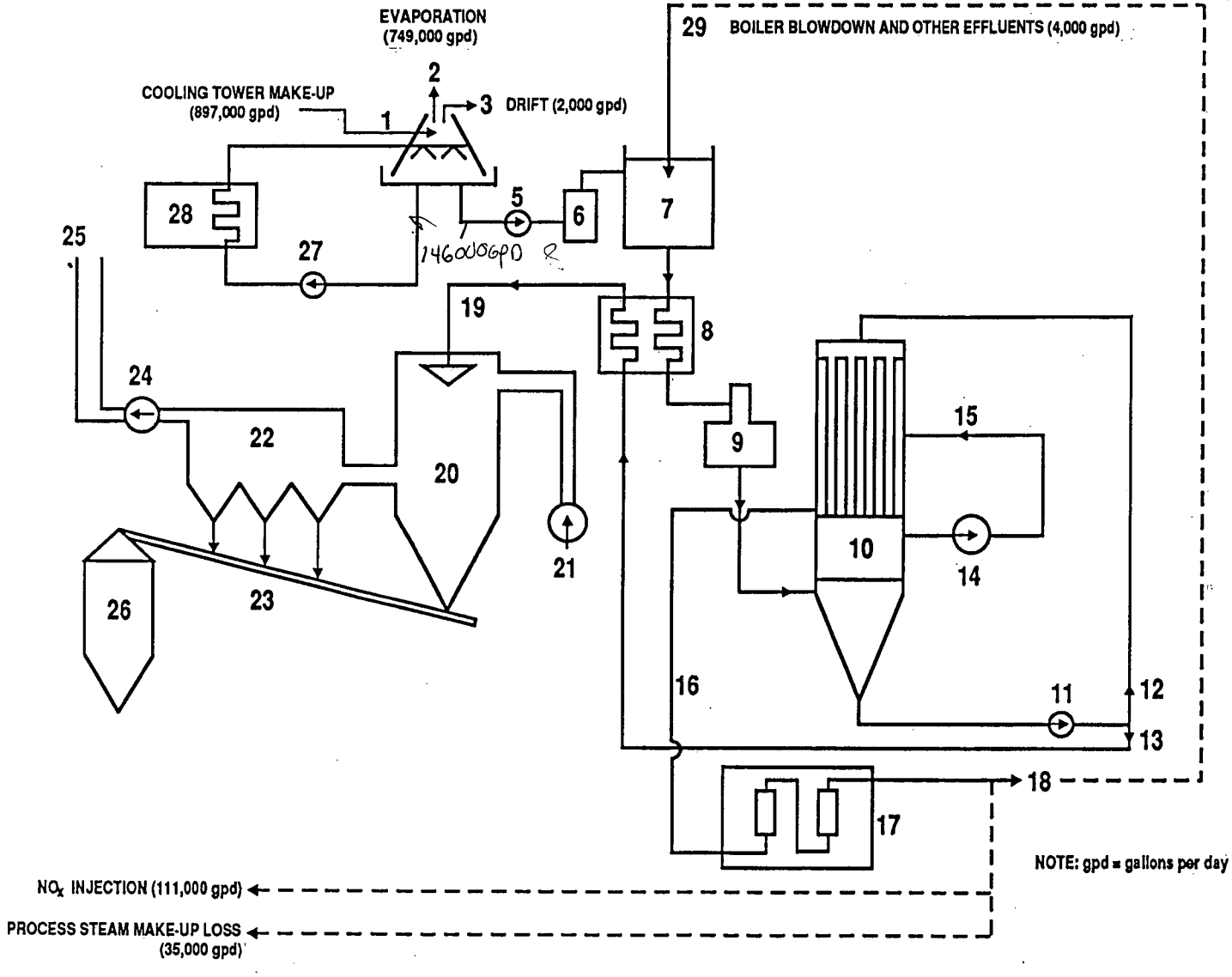

Figure 2 PASCO COGEN LIMITED LIQUID WASTE TREATMENT SYSTEM
AVERAGE WATER BALANCE

KBN

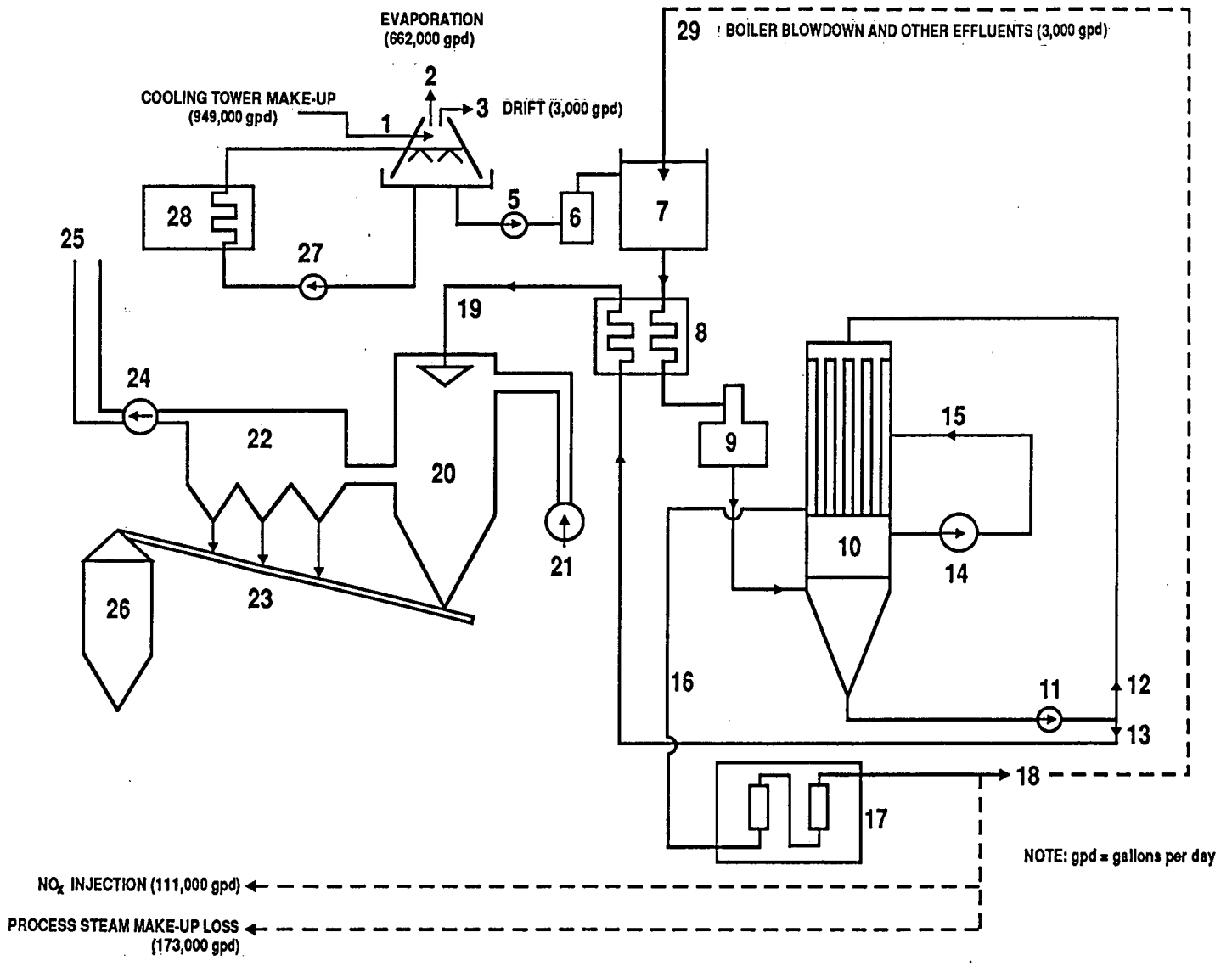

Figure 3 PASCO COGEN LIMITED LIQUID WASTE TREATMENT SYSTEM
MAXIMUM WATER BALANCE

KBN

Table 1. Estimated Solid Waste Composition for Pasco Cogen Limited

xx	xx(HCO_3)n Min (%)	xx(HCO_3)n Max (%)	xx(SO_4)n Min (%)	xx(SO_4)n Max (%)	xx(Cl)n Min (%)	xx(Cl)n Max (%)	xx(PO_4)n Min (%)	xx(PO_4)n Max (%)
Ca	66.4216	69.9175	1.7425	6.7132	13.4715	19.7716	0.0000	0.8928
Mg	24.4532	72.0424	1.8519	7.1345	14.5085	21.2937	0.0000	0.9666
Na	14.9758	27.8866	1.6180	7.0041	10.4185	19.4004	0.0000	0.9437
K	0.0000	1.3457	0.0000	8.5927	0.0000	1.1942	0.0000	1.2219
NH_3	0.0000	1.5188	0.0000	8.5927	0.0000	0.9489	0.0000	0.8408
Fe	0.0000	0.6957	0.0000	0.0000	0.0000	0.0000	0.0000	1.5112
SiO_2	3.0820	3.9474	3.0820	3.9474	3.0820	3.9474	3.0820	3.9474

Table 2. Estimated Solid Waste Volume Generated for Pasco Cogen Limited

xx	xx(HCO_3)n tpd-mi	xx(HCO_3)n tpd-mx	xx(SO_4)n tpd-mi	xx(SO_4)n tpd-mx	xx(Cl)n tpd-mi	xx(Cl)n tpd-mx	xx(PO_4)n tpd-mi	xx(PO_4)n tpd-mx
Ca	0.778	1.275	0.020	0.122	0.158	0.361	0.000	0.016
Mg	0.288	1.314	0.022	0.130	0.170	0.388	0.000	0.018
Na	0.175	0.509	0.021	0.128	0.122	0.354	0.000	0.017
K	0.000	0.025	0.000	0.157	0.000	0.022	0.000	0.022
NH_3	0.000	0.028	0.000	0.157	0.000	0.017	0.000	0.015
Fe	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.028
SiO_2	0.036	0.072	0.036	0.072	0.036	0.072	0.036	0.072

Note: Maximum solids = 1.824 tpd.
Minimum solids = 1.171 tpd.
tpd-mi = tons per day minimum.
tpd-mx = tons per day maximum.

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

December 23,1992

D. E. R.

DEC 2 8 1992

SOUTHWEST DISTRICT
TAMPA

Mr. George Ellsworth
Resource Recovery Manager
Pasco County Utilities Division
7536 State Street
New Port Richey, Florida 33553

Re: Pasco County Waste to Energy Facility
PA 87-23

Dear Mr. Ellsworth:

We have been informed by the Department's Southwest District Office that they were notified by Mr. John Power of Ogden-Martin Systems that ash sampling and testing has been discontinued at the Pasco County Waste to Energy Facility. The reason given is that the County does not have an approved quality assurance plan for this facility. There is no requirement for the County to have a quality assurance plan for ash residue testing. However, the facility must be in compliance with Category 2C of Chapter 17-160, F.A.C. which requires the analytical laboratory conducting the chemical analyses to have an approved quality assurance plan.

Conditions of Certification XIV.E.9 and XIV.E.10 require ash residue analysis reports be submitted to the Department by the County on a quarterly basis. Failure to comply with this requirement constitutes a violation of the Certification to operate the facility.

If you have any questions concerning these matters, please contact Bob Butera, P.E. in our District Office in Tampa at (813)744-6100.

Sincerely,

Steven L. Palmer, P.E.
Siting Coordination Office

cc: Bob Butera, P.E.
Mary Jean Yon
Richard Donelan
Hamilton Oven, P.E.

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee

To: _____ Location: _____
To: _____ Location: _____
To: _____ Location: _____
From: _____ Date: _____

Interoffice Memorandum

TO: Mary Jean Yon

THRU: Bill Kutash, Prog. Adm.
Waste Management

FROM: Bob Butera, P.E.
Solid Waste Manager

DATE: November 25, 1992

SUBJECT: Ash Management Plan
Pasco County W-T-E Facility
Certification #PA 87-23

Mr. John Power of Ogden-Martin Systems has advised FDER that ash sampling and testing has been discontinued at the Pasco County W-T-E and Hillsborough County W-T-E Facilities at the request of the related county agencies. The reason given is that the counties do not want to expend their money on testing that has not been approved by FDER. A QA Plan has been submitted for each facility but has not been approved. This office has not received any resulting data from ash sampling for either facility. Since FAC Rule 17-702.570 requires ash residue and leachate be analyzed quarterly, could you advise as to what action you wish this office to take to resolve this issue.

KBF/ab
Attachment

cc: Kathy Anderson, FDER Tallahassee
Buck Oven, FDER Tallahassee
Steve Morgan, FDER Tampa
Kim Ford, P.E., FDER Tampa

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee

To: _____ Location: _____

_____ Location: _____

To: _____ Location: _____

From: _____ Date: _____

Interoffice Memorandum

TO: Mary Jean Yon

THRU: Bill Kutash, Prog. Adm. 9/29/92
Waste Management

FROM: Bob Butera, P.E. RB 9-28-92
Solid Waste Program Manager

DATE: September 25, 1992

SUBJECT: Ash Management Plan
Pasco County W-T-E Facility
Certification #PA 87-23

Attached are copies of correspondence related to the approval of the Pasco W-T-E Facility Ash Management Plan. The only remaining item that has not been resolved is the approval of the QA Plan for ash sampling and testing by FDER's QA Section. Upon approval of the QA Plan the W-T-E Facility Certification may need to be modified. This office has not received any resulting data from ash sampling for this facility. Since F.A.C. Rule 17-702.570 requires ash residue and leachate be analyzed quarterly, could you advise as to what action you wish this office to take to resolve this issue.

KBF/ab
Attachments

cc: Kathy Anderson, FDER Tallahassee
Buck Oven, FDER Tallahassee
Steve Morgan, FDER Tampa
Kim Ford, P.E., FDER Tampa

For Routing To Other Than The Addressee

To:		Location:	
		Location:	
To:		Location:	
From:		Date:	

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

TO: Mary Jean Yon

THRU: Bill Kutash, Prog. Adm. 9/29/92
Waste Management

FROM: Bob Butera, P.E. RB 9-28-92
Solid Waste Program Manager

DATE: September 25, 1992

SUBJECT: Ash Management Plan
Pasco County W-T-E Facility
Certification #PA 87-23

Attached are copies of correspondence related to the approval of the Pasco W-T-E Facility Ash Management Plan. The only remaining item that has not been resolved is the approval of the QA Plan for ash sampling and testing by FDER's QA Section. Upon approval of the QA Plan the W-T-E Facility Certification may need to be modified. This office has not received any resulting data from ash sampling for this facility. Since F.A.C. Rule 17-702.570 requires ash residue and leachate be analyzed quarterly, could you advise as to what action you wish this office to take to resolve this issue.

KBF/ab
Attachments

cc: Kathy Anderson, FDER Tallahassee
Buck Oven, FDER Tallahassee
Steve Morgan, FDER Tampa
Kim Ford, P.E., FDER Tampa

pace®
INCORPORATED
THE ASSURANCE OF QUALITY

September 18, 1992

RE: CQAP #870529G

Enclosed per your request is a copy of the Comprehensive Quality Assurance Plan (CQAP) for PACE Incorporated, Tampa, Florida.

Please return or shred any Generic QAPP's or earlier dated copies of the CQAP that you might have on hand.

If you have any questions, please feel free to contact me.

Sincerely,

Norma J. Plants

Norma J. Plants
Quality Assurance Officer
Florida Region

NJPl/sgb

Enclosure

5460 Beaumont Center Blvd.
Tampa, FL 33634
TEL: 813-884-8268
FAX: 813-888-6382

State of Florida
Department of Health and Rehabilitative Services

OFFICE OF LABORATORY SERVICES

This is to Certify That

HRS# E84003
Pace Laboratories, Inc.
5460 Beaumont Center Boulevard
Tampa, FL 33634

has complied with Florida Administrative Code section 10 D - 41.100 for the examination of environmental water in the following categories:

Metals, Nutrients, Demands, Extractable Organics (GC, GC/MS, HPLC), General Category I, General Category II, Microbiology (ENV), Pesticides/Herbicides/PCB's (GC, GC/MS, HPLC), Purgeable Organics (GC, GC/MS), Hazardous Waste Characterization **********

Specific methods, parameters, and analytes certified are on file in the Office of Laboratory Services, P.O. Box 210, Jacksonville, Florida 32231.

EFFECTIVE July 1, 1992 **through** June 30, 1993

1992 - 1993

№ 92247

Non - Transferable

Eldert C. Hartwig, Jr., Sc.D., M.P.H.
Chief, Laboratory Services
Office of Laboratory Services
HRS Form 1697, June 92

State of Florida

Department of Health and Rehabilitative Services

Office of Laboratory Services

SAFE DRINKING WATER

This is to certify that

HRS# 84125
Pace Laboratories Inc.
5460 Beaumont Center Boulevard
Tampa, Florida 33634

1992-1993

has complied with section 10D-41.050 of the Florida Administrative Code pertaining to safe drinking water testing in the following categories:

Microbiology, Inorganic-Primary (C), Inorganic-Secondary (C), Organic (P)(GC), Turbidity, Trihalomethanes (C)(GC), Volatile Organic Compounds (C)(GC), Purgeables (C)(GC, GC/MS), Pesticides (P)(GC, GC/MS), Base Neutral Extractables (C)(GC, GC/MS), Acid Extractables (P)(GC, GC/MS)**********

Specific certified analytes and methodologies within these categories are listed on the analyte sheets with this laboratory and the DHRS Water Certification Unit.

EFFECTIVE July 1, 1992 through June 30, 1993

NO. 92306

NON-TRANSFERABLE

Eldert C. Hartwig, Jr., Sc.D., M.P.H.
Chief, Laboratory Services
Office of Laboratory Services
HRS form 1629, June 92

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

July 31, 1992

Ms. Norma Plants
Pace Incorporated
5460 Beaumont Center Blvd.
Suite 500
Tampa, FL 32399-2400

SUBJECT: Quality Assurance Review; Pace Incorporated Comprehensive QA Plan #870529G

Dear Ms. Plants:

The referenced document, received on December 3, 1991, with supplemental information submitted on December 23, 1991, and May 11, 1992, has been reviewed and is being approved-pending requested revisions. Further detail on the status of this plan is explained in the enclosed guidance document (DER QAS #90-03). Please respond to all comments on the annotated pages of your QA Plan as well as the comments listed below.

The following review comments must be addressed:

1) Please submit the next revision of your QA Plan in a 3 ring binder.

1) Separate QA targets must be provided for each inorganic analyte where more than one method is specified.

2) Please provide complete references for all cited methods.

3) SW-846 methods are not acceptable for drinking water.

4) Method validation packages must be submitted for all parameters that are not specifically identified in the cited method or an approved method must be specified. Parameters or methods that are annotated as not approved or not in the cited method will not be approved until the above mentioned criteria are met.

5) Extraction/digestion methods must be specified for all methods where there is a separate prep method (most SW-846 methods).

6) Please note that ion chromatographic methods are only approved for groundwater and surface water matrices and that this methodology is not acceptable for fluoride.

7) As indicated by previous review correspondence, dated August 19, 1991, all QA targets identified as published or advisory must be updated to actual targets generated by your facility with the next submittal. Assert that QA targets for new capabilities added with this revision will be upgraded to in-house targets with the 1993 annual amendments. Please note the comment on page 82 of Section 5 concerning the elevated standard deviations presented for accuracy and precision. The standard deviations presented with the in-house targets must be used as described in Section 11 to determine acceptance criteria. If advisory limits are still being presented for some parameters, the method for determining acceptance criteria must be explained.

8) Formulas or data manipulation descriptions must be provided for all tests or test groups in the data reduction portion of Section 12.

Since these amendments were submitted as the annual amendment requirement, the next revision must be fully approved if the CompQAP is to retain approval status. These revised amendments must be received in our office on or before September 15, 1992, or approval will automatically expire unless you advise the QA Section of any delays. If you have any questions concerning this matter, please call Andy Tintle at (904) 488-2796.

Sincerely,

Sylvia S. Labie, QA Officer
Quality Assurance Section

SSL/ART/art

Attachments (4): DER QAS #90-03 (Explanation of Status)
Annotated QAP pages
Cyanide Preservation Protocol
DER QAS #90-05

cc: Elena Rodriquez - HRS lab Certification Program (w/Section 5)

COMPREHENSIVE QUALITY ASSURANCE PLAN

for

Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
(904) 488-2796

Prepared By

PACE Incorporated®
5460 Beaumont Center Boulevard
Suite 500
Tampa, Florida 33634
(813) 884-8268

Thomas A Jackman
Group Vice President
Thomas A. Jackman

11-26-91
Date

Norma J. Plants
Quality Assurance Officer
Norma J. Plants

11-26-91
Date

DER Quality Assurance Officer
Sylvia S. Labie

Date

Florida De
Southwest Di
Lawton Chiles, Governo

Department of ironmental Regulation

Routing and Transmittal Slip

To: (Name, Office, Location)

1. John Power
2.
3.
4.

Remarks:

YOUR RESPONSE REQUESTED

From: Kim Ford

Date 9/10/92

Phone

Mr. William Crellin
c/o John Power
Ogden Martin Systems
Post Office Box 709
Brandon, FL 33509-070

Re: Ash Managem
Pasco Count

Dear Mr. Crellin:

Thank you for your Au
your ash management p
for a Quality Assuran
yours has been approv
1991 memorandum by Sy
office with the names
the sampling and anal
appropriately approve

If you have questions
382.

KBF/ab
Attachment

cc: Buck Oven, P.E.,
Bob Butera, P.E., DER Tampa

Florida De
Southwest Di:
Lawton Chiles, Governor

Mr. William Crellin
c/o John Power
Ogden Martin Systems
Post Office Box 709
Brandon, FL 33509-070

Re: Ash Manageme
Pasco County

Dear Mr. Crellin:

Thank you for your Au
your ash management p
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the sampling and analy
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If you have questions
382.

KBF/ab
Attachment

cc: Buck Oven, P.E.,
Bob Butera, P.E.

Department o vironmental Regulation

Routing and Transmittal Slip

To: (Name, Office, Location)

1. William CRELLIN
2.
3.
4.

Remarks:

YOUR RESPONSE REQUESTED

From: KIM FORD

Date 9/10/92

Phone

Recycled Paper

Florida Department of Environmental Regulation

Southwest District • 4520 Oak Fair Boulevard • Tampa, Florida 33610-7347

Lawton Chiles, Governor 813-623-5561 Carol M. Browner, Secretary

February 5, 1992

Mr. William Crellin
c/o John Power
Ogden Martin Systems
Post Office Box 709
Brandon, FL 33509-0709

Re: Ash Management Plan
Pasco County Waste-To-Energy Facility

Dear Mr. Crellin:

Thank you for your August 29th letter. In response, it appears that your ash management plan is not sufficient. Since the requirements for a Quality Assurance Plans changed, I don't know whether or not yours has been approved. As requested in the attached March 22, 1991 memorandum by Sylvia Labie, could you please provide this office with the names of the organizations who will be performing the sampling and analysis activities and verify that they have appropriately approved QA plans.

If you have questions, you may call me at (813) 620-6100, extension 382.

Sincerely,

Kim B. Ford, P.E.
Solid Waste Section
Division of Waste Management

KBF/ab
Attachment

cc: Buck Oven, P.E., DER Tallahassee
Bob Butera, P.E., DER Tampa

For Routing To Other Than The Addressee

To: _____ Location: _____

To: _____ Location: _____

To: _____ Location: _____

From: _____ Date: _____

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

D.E.R.

MAR 26 1991

SOUTHWEST DISTRICT
TAMPA

TO: Ernest Weeks, Engineer I
Southwest District

THROUGH: Kim Ford, P.E.
Victor San Agustine, P.E.
Clabe Polk, Environmental Administrator

FROM: Sylvia S. Labie, Environmental Administrator
Quality Assurance Section

DATE: March 22, 1991

SUBJECT: Chapter 17-702 - Ash Residue Management Plans - Quality Assurance Requirements

All Chapter 17-702 Sampling and analysis activities fall under Category 3 of the Quality Assurance Rules, Chapter 17-160. This means that the organizations who will sample and analyze samples for permit compliance must have approved Comprehensive (or Generic) QA Plans on file. The QA Plans must be approved for the specific sampling and analysis methods to be used for the permit.

The permittee must provide the Department with the names of the organizations who will be performing the sampling and analysis activities and verify that they have appropriately approved QA Plans.

If you have further questions, please call me at SC 278-2796.

SSL/lb

cc: John Reese
Buck Oven

OGDEN MARTIN SYSTEMS OF PASCO, INC.

14230 HAYS ROAD
SPRING HILL, FL 34610
P.O. BOX 5478
HUDSON, FL 34674
(813) 856-2917

AN OGDEN PROJECTS COMPANY

August 29, 1991

Florida Department of Environmental Regulation
Southwest District
4520 Oak Fair Boulevard
Tampa, FL 33610-7347

ATTN: Dr. Richard D. Garrity
Deputy Assistant Secretary

RE: Ash Management Plan Approval

Dear Dr. Garrity:

In accordance with Florida Administrative Code 17-702, Ogden Martin Systems of Pasco, Inc. submitted our Ash Management Plan to FDER. Although the new regulations took effect on August 1, 1991, the Plan is not to be incorporated into our permit until it is reviewed and approved by FDER. To this date we have not received notice from your department.

If our Plan has been approved or further information is required, please let us know at your earliest convenience. We are presently awaiting approval from the Department before proceeding with ash sampling and testing.

Sincerely,

William R. Crellin

William R. Crellin
Regional Chief Engineer

WRC/kms

cc: G. Hoag
S. Bass
D. Lehman
FILE 1.4 and 5.1.24

For Routing To Other Than The Addressee

To: _____ Location: _____

To: _____ Location: _____

To: _____ Location: _____

From: _____ Date: _____

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

D.E.R.

MAR 26 1991

SOUTHWEST DISTRICT
TAMPA

TO: Ernest Weeks, Engineer I
Southwest District

THROUGH: Kim Ford, P.E.
Victor San Agustine, P.E.
Clabe Polk, Environmental Administrator

FROM: Sylvia S. Labie, Environmental Administrator
Quality Assurance Section

DATE: March 22, 1991

SUBJECT: Chapter 17-702 - Ash Residue Management Plans - Quality Assurance Requirements

All Chapter 17-702 Sampling and analysis activities fall under Category 3 of the Quality Assurance Rules, Chapter 17-160. This means that the organizations who will sample and analyze samples for permit compliance must have approved Comprehensive (or Generic) QA Plans on file. The QA Plans must be approved for the specific sampling and analysis methods to be used for the permit.

The permittee must provide the Department with the names of the organizations who will be performing the sampling and analysis activities and verify that they have appropriately approved QA Plans.

If you have further questions, please call me at SC 278-2796.

SSL/lb

cc: John Reese
Buck Oven

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee
To: Nicki Polk Location:
To: Location:
To: Location:
From: Date:

Interoffice Memorandum

TO: Deputy Assistant Secretaries
Waste Program Administrators

FROM: Rick Wilkins, Director
Division of Waste Management RW

DATE: March 7, 1991

SUBJECT: Review of Solid Waste Combustor Ash Residue Management Plans

Rule 17-702.400(1) requires existing solid waste combustors to submit an ash residue management plan to the Department by July 1, 1991. You should be receiving these documents later this year. Many of these waste-to-energy facilities were originally certified under the Power Plant Siting Act since they produce electricity. However, combustor ash is a special solid waste and therefore the responsibility of the Division of Waste Management. Ash management plans should be reviewed by your appropriate staff, and your staff should handle obtaining additional information or corrections from the generator of the plan. The QA/QC plan, if attached, should be forwarded to the QA Section for review.

When the ash management plan is approved, the permit for the facility should be modified to include the provisions of the plan, or a list of specific conditions for modification of the certification should be sent to Mr. Buck Oven, siting coordinator in the Division of Air Resources Management, if the facility was certified.

Please contact Mr. John Gentry at SC 277-3299 if you have any questions concerning this subject.

RW/pl

cc: Buck Oven

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee

To: _____ Location: _____

To: _____ Location: _____

To: _____ Location: _____

From: _____ Date: _____

Interoffice Memorandum

TO: Buck Oven
Power Plant Siting Section

THRU: Clabe Polk CP 2/15/91 VSA 2/12/91
Victor San Agustin, P.E.

Kim Ford, P.E. KF 2/12/91

FROM: Ernest Weeks EW 2-12-91

DATE: February 11, 1991

SUBJECT: Ash Residue Management Plans

As you are aware, Chapter 17-702, Florida Administrative Code (FAC) addresses the management of ash residue generated by solid waste combustors with a total facility burning capacity of 50 tons per day or more that primarily receive and burn solid waste collected from residential, commercial and industrial sources. Under 17-702, FAC, these solid waste combustors are required to submit and obtain approval for an ash residue management plan.

Rule 17-702.400(1) states in part "Existing permitted or certified solid waste combustors shall submit an ash residue management plan to the Department by July 1, 1991. After Department review and approval, such plan shall be incorporated into the facility's existing permit, or into its certification pursuant to section 403.511(5)(a), FS."

Therefore, the Southwest District intends to forward to you all Power Plant Siting Act Ash Residue Management Plans we receive.

Attached to this memo is the Ash Residue Management Plan submitted by Pasco County. Please note that the QA/QC Section of Pasco County's plan does not appear to satisfy the requirements of Rule 17-702.400(5), FAC.

Once approval appears ready to be granted, we suggest the facility's existing permit or certification be modified with the following specific conditions:

( ) Ash residue at this facility shall be managed pursuant to the ___(date)___ Ash Residue Management Plan submitted by __(County)___ on __(date)_____, pursuant to all applicable requirements of Chapters 17-701 and 17-702, Florida Administrative Code (FAC); and in accordance with all other applicable requirements of Department rules.

( ) Ash residue shall be analyzed every three months by the operator of this solid waste combustor for priority pollutant metals. Representative composite samples shall be prepared for analysis by total digestion, using EPA Method 3050 Acid Digestion of Sediments, Sludges, and Soils, "Test Methods for Evaluating Solid Waste Physical/Chemical Methods," EPA Publication SW-846 (3rd edition as amended by Update 1 (December, 1987)). Samples shall be collected and analyzed by the methods listed in the Quality Assurance/Quality Control plan approved by the Department.

( ) Leachate shall be analyzed every three months for priority pollutant metals.

( ) The results of the ash and leachate analyses shall be submitted annually to the Department in a report which presents and summarizes the data, in accordance with the requirements of 17-702.570(4), FAC.

EGW/ab
Attachment

cc: John Reese, DER Tallahassee

PASCO COUNTY, FLORIDA

DADE CITY (904) 521-4274
NEW PORT RICHEY (813) 847-8041

SOLID WASTE/FISCAL SERVICES DEPT.
PASCO COUNTY GOVT. COMPLEX
7536 STATE STREET
NEW PORT RICHEY, FL 34654

January 8, 1991

Mr. Kim Ford
Florida Department of
Environmental Regulation
Southwest District
4520 Oak Fair Boulevard
Tampa, FL 33610-7347

Dear Mr. Ford:

Please find under cover Pasco County's Ash Residue Management Plan for the Resource Recovery Facility.

If you have any questions please do not hesitate to call.

Sincerely,

Robert J. Sigmond
Solid Waste/Fiscal
Services Director

RJS/hc

cc: Douglas S. Bramlett, Assistant County Administrator (Utilities Services)

PASCO COUNTY SOLID WASTE RESOURCE RECOVERY FACILITY
ASH RESIDUE MANAGEMENT PLAN

The Ogden Martin Systems of Pasco County (OMSP) Resource Recovery Facility has a nameplate capacity of 1050 tons per day of municipal solid waste (based on a referenced fuel with a HHV of 4800 BTu/lb). Estimates of daily and annual ash residue quantities, generated and disposed of in the Pasco County ash landfill, for the initial 20 years of operation, are provided in Table 1. These estimates are based on the estimated annual processible waste quantities provided in the Power Plant Site Certification Application (dated November 1987). The ash residue is a combined stream consisting of both fly ash and bottom ash.

The residue handling methods, equipment, ash disposal site, analytical QA/QC for ash characterization, potential for ash recycling, and conditions of assuring that hazardous wastes are not received or incinerated at the facility are all discussed within this ash residue management plan, per the requirements of Rule 17-702.400, F.A.C.

1. Residue Handling Equipment

The residues of combustion consist of non-combustible by-products, fly ash, spent lime and bottom ash siftings. The resultant ash residue is approximately 25 to 30 percent (by weight) of the incoming municipal solid waste. It is not possible to accurately estimate the fly ash component generated from the total ash residue produced. Most facilities currently in operation in the United States combine fly ash and bottom ash in the ash quench system. Thus, there is little information for calculating the precise amounts of fly versus bottom ash.

The fly ash system collects and handles spent lime reagent, collected salts and fly ash discharged from the superheater, economizer, dry scrubber and particulate removal systems. The air pollution control (APC) systems and boiler ash hoppers discharge to screw conveyors through dump valves. These provide a barrier between the air pressure in the conveyors and the various pressure levels at different points in the combustion train. The collected

stream is combined with the bottom ash for quenching and removal in the ash discharger.

Each stoker is furnished with one proprietary martin GmbH residue discharger, which receives, combines, wets and quenches burned out waste residues, grate siftings and fly ash. The ash discharger is totally enclosed, thus preventing siftings from becoming airborne prior to quenching.

From the quench chamber, a hydraulically driven ram pushes the residue up an inclined draining/drying chute. In the chute, excess water from the residue drains back into the quench bath. Residue, containing enough moisture to prevent dusting (15 to 25 percent by weight), then falls on to the main vibrating residue conveyor.

The conveyor carries discharged residue from the boilers to an integral grizzly scalper. The grizzly scalper extracts large pieces from the main residue stream. Oversized pieces are transported to the residue storage building via front end loader. Undersized pieces are fed to an inclined belt conveyor for transport to the residue storage building. Conveyors exterior to buildings are covered.

Each residue discharger is equipped with a bypass transfer chute to permit uninterrupted removal of residue if any component of the ash conveying system is shut down for maintenance. The transfer chutes are designed to provide bypass of the main vibrating conveyor by directing the residue to a dumpster. The dumpster is transported to the ash building via fork lift.

The completely enclosed residue storage building contains three separate storage bays. Two of the bays are for ash residue and the third is for recovered ferrous metals. An iron-aggregate shake-on concrete surface hardener is applied to the entire floor of the building. Joints are sealed to prevent water from seeping out at walls and construction joints in the floor. Each storage compartment is sized to allow a naturally forming residue pile in order to minimize the amount of residue recast required. Each residue pile consists of a cone with its lower portion constrained by

the compartment walls. Sufficient storage volume will be provided for three days of material (34,182 cubic feet).

Processed residue is then removed from storage and loaded into trucks by a front-end loader for ultimate disposal in the designated landfill. The moisture content of the ash (15 to 25 percent by weight) minimizes any potential fugitive dust emissions and possible human exposure through inhalation during the handling, conveying and transport activities. The consistency and appearance of the ash residue is comparable to wet aggregate. This moisture condition continues to be maintained during transport to the landfill.

Separation and recovery of ferrous metals are also done in the residue building. When the residue first enters the building, it passes under a magnet which is designed to remove at least 80 percent of the ferrous metals in residue containing at least 8 percent by weight of magnetic ferrous metals greater than 1-inch in size. The separated metals pass through a rotating drum trommel which conditions the ferrous by removing adhering ash particles. The recovered ferrous is directed to the bay of the building for removal by truck.

The trucks used to transport the residue material to the landfill are leak-proof containerized vehicles which have the capability of conveying up to 25 tons of material per load. Prior to transport to the disposal area loaded trucks will pass over the facility scales for record keeping purposes. During transport to the landfill, the vehicles will be covered with a canvas tarp if necessary for control of visible fugitive emissions. The vehicle make approximately fourteen round trips per day, operating six days per week.

The ash materials will be managed in compliance with Chapter 17-702, F.A.C. and in a manner (i.e., moist) such that an extremely low potential for inhalation, ingestion or direct dermal contact will exist. Ogden Martin Systems of Pasco County has developed a detailed and specific employee safety training program. The program provides effective personal respiratory protection equipment as necessary to promote a high degree of

protection to facility personnel who may have contact with the ash material. This program will be continuously updated as new information and equipment is developed to assure compliance with all OSHA standards and FDER requirements. After quenching and draining of freewater from the residual materials, the ash will still contain approximately 15 to 25 percent moisture which will remain through the period of short-term storage and disposal. The highly mechanized nature of the ash handling and disposal operations, in combination with enclosed systems whenever possible, will minimize the potential for inhalation, ingestion or body contact with the residue material.

2. Ash Disposal Site

The current ash residue disposal site is located in a portion of the Hays Road Landfill/Ashfill which is adjacent to the Pasco County Resource Recovery Facility. This portion of the landfill is a 5-year permitted ash monofill with a double synthetic lining system and leachate collection and removal systems which complies with the requirements of Rule 17-701.050, F.A.C.

3. Analytical Quality Assurance/Quality Control Plan

Sampling and analysis analytical procedures used for characterization of the ash residue will be in accordance with the following EPA documents:

1. Test Methods for Evaluating Solid Waste - Physical/Chemical Methods (SW-846), September, 1986, second edition.

2. USEPA and the Coalition on Resource Recovery and the Environment (CORRE) - Draft Work Plan, December 1988.

A representative sample of the combined ash samples will be obtained on quarterly basis using the ASTM "Belt Sampling Protocol" (ASTM D2234-86) and composited per Rules 17-702.570 (2), F.A.C. The sample will be sent to the county owned certified laboratory and analyzed using appropriate methods and techniques. Analysis will include total metals analysis for the

thirteen priority pollutant metals using EPA method 3050 (Acid Digestion of Sediments, Sludges, and Soils). The priority pollutant metals include: silver, arsenic, beryllium, cadmium, chromium, copper, mercury, nickel, lead, antimony, selenium, thallium and zinc.

The laboratory will adhere to a strict quality control program which consists of a reagent blank, a sample duplicate and a matrix spike for at least one sample (as specified by SW-846).

In addition to the ash sample, leachate from the ash monofill will also be collected and analyzed for the priority pollutant metals on a quarterly basis.

The results of the ash and leachate analyses will be submitted annually to the Department of Environmental Regulation in a report which presents the summarized data.

4. Recycling of Ash Residue

As part of the total ash management program, the County will be alert to potential uses of ash. Currently, various pilot projects are underway in Florida and other states to study the possibility of reusing the ash. For example, several communities are studying the effects of incorporating ash materials into asphalt and concrete aggregate materials used in roadway pavements. This work is still in the development and research stages however and will require additional study regarding mixing ratios, leachability, and encapsulation techniques for the material. If these programs are successful, Pasco County may pursue ash reuse programs of its own. At this time, however, Pasco County has no plans to use ash in any other process or product.

5. Hazardous Wastes

Per contractual obligations, as specified by the Amended and Restated Service Agreement between Pasco County and OMSP (dated March 28, 1989,) the facility may neither receive nor burn hazardous waste. The definition of a

"Hazardous Waste" as defined by the Service Agreement, is "any material or substance which, as of the contract Date, and by reason of its composition or characteristics is (a) toxic or hazardous waste as defined in the Solid Waste Disposal Act, 42 USC 6901 et seq., as amended, replaced or superseded, and the regulations implementing same, or (b) material regulated by the Toxic Substances Control Act, 15 USC 2601, et seq., as amended, replaced or superseded, and the regulations implementing same, or (c) special nuclear or by-products material within the meaning of the Atomic Energy Act of 1954. If any governmental agency or unit having appropriate jurisdiction shall determine that substances which are not, as of the Contract Date, considered harmful, toxic, or dangerous, are in fact harmful, toxic, or dangerous, are in fact harmful, toxic or dangerous or are hazardous or harmful to health when Processed at the Facility, then any such substances or materials shall thereafter by Hazardous Waste for purposes of this Service Agreement."

Per the Service Agreement (Section 4.05), the Contractor (OMSP) is responsible for handling any non-processible waste (including hazardous waste) delivered to the facility. In accordance with the Service Agreement (Section 4.08) and to prevent hazardous waste delivery to the facility, the County has adopted an ordinance prohibiting the deliveries of such wastes and will conduct periodic random inspection of vehicles delivering waste to the facility.

In addition to these contractual obligations, Ogden martin Systems of Pasco County has an Unacceptable Waste Screening Protocol (see Attachment 1) which is included as part of the facility's Operation and Maintenance Manual. This protocol establishes methods for screening the incoming waste stream for unacceptable and hazardous wastes.

ATTACHMENT 1

UNACCEPTABLE WASTE SCREENING PROCEDURE

Unacceptable waste screening will be conducted on a random basis as necessary to ensure compliance with he Unacceptable Waste Program.

Prerequisites

1. Safety equipment including appropriate personnel protective gear (i.e., Scott Air Packs, respirators, protective clothing, gloves, boots, first aid kit, etc.), emergency fire fighting equipment, and clean up equipment will be stored near the tipping floor and be readily available. Appropriate materials (e.g., rope, pylons, etc.) needed to isolate any potentially dangerous waste will also be stored near by and be readily available.

2. The Facility Manager will assign a "trained" employee to serve as Inspector. hew ill conduct the screening and complete the necessary report.

3. A front end loader and operator will be standing by to help with the screening.

Types of Screening

I. On-Board Screening (only done on open type vehicles)

1. The Inspector shall select a vehicle for screening and upon entering the tipping floor inform the driver of this fact.

2. The driver will be asked to fold back the screens or tarpaulin covering his load.

3. The Inspector shall then position himself such as to obtain the maximum possible view of the load.

4. If the load is observed to contain unacceptable materials, the Inspector will immediately notify the Facility manager or other designated management representative who will inspect the load and determine if the hauler is to be turned away.

5. If the load is acceptable, the driver will be told to discharge into the pit.

6. If unsure, the inspector will direct the driver to a designated area of the Tipping Hall where Floor Screening will be conducted, as described below.

7. The Inspector will complete the Waste Screening Report which will be submitted to the FAcility Manager for appropriate disposition. The driver will be asked to sign the Report before leaving the facility.

II. Pit Screening

1. The Inspector shall select a vehicle for screening and inform the driver of this fact.

2. The Inspector shall position himself so as to obtain maximum view of the load as it is discharged into the pit.

3. If unacceptable waste is observed, the crane operator will be directed to remove it for proper disposal.

4. In cases where potentially dangerous materials are found and are considered to present a possible immediate threat (such as explosives or large quantities of infectious materials), no attempt will be made by facility personnel to move these materials. The material will be left in place and that

portion of the tipping floor or tipping bay roped off. personnel and traffic will be prevented from operating in that section of the plant. Danger signs and warnings will be posted. No attempt will be made to open suspect waste containers. The Company will notify appropriate government agencies, including the local Fire and Rescue Department and/or Police Department, for dispatch to the Facility.

5. The Inspector will complete the Waste Screening Report which will be submitted to the Facility Manager for appropriate disposition. The driver will be asked to sign the Report before leaving the facility.

III. Floor Screening

1. The Inspector shall select a vehicle for screening and inform the driver of this fact.

2. The driver shall be directed to a designated area of the Tipping Hall where he will dump and spread his load, ensuring that the complete load is discharged. The front end loader shall be utilized as necessary to spread the load uniformly to a minimal depth.

3. The driver will park his vehicle ensuring that he does not interfere with the existing traffic pattern or impede other haulers.

4. The Inspector will watch the unloading process and, if possible, stop the process if he observes unacceptable or potentially dangerous material.

5. If Unacceptable Waste is found, the Facility manager or designated management representative is to be notified and the hauler may be required to remove it from the facility. A screening report and notice of infraction will be issued as appropriate.

6. The Inspector will complete the Waste Screening Report which will be submitted to the FAcility manager for appropriate disposition. The driver will be asked to sign the Report before leaving the facility.

7. After conclusion of screening, acceptable waste will be charged to the pit by the front end loader and the hauler will leave the facility.

8. In cases where potentially dangerous materials are found and considered to present a possible immediate threat (such as explosives or large quantities of infectious materials), no attempt will be made by facility personnel to move these materials. The material will be left in place and that portion of the tipping floor or tipping bay roped off. Personnel and traffic will be prevented from operating in that section of the plant. Danger signs and warnings will be posted. No attempt will be made to open suspect waste containers. The Company will notify appropriate government agencies, including the local Fire and Rescue Department and/or Police Department, for dispatch to the Facility.