

Fed. Exp. 6947055472
8-15-88
Panama City, FL

file copy



**BAY COUNTY
ENERGY SYSTEMS,
INC.**

7504 Hwy. 231 N.
Panama City, Florida 32404
(904) 785-7933

BCES/DER-88-80

August 15, 1988

RECEIVED

AUG 16 1988

DER-BAQM

C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Fancy:

Enclosed, per conditions stated in the Bay Resource Management Center Intent to Issue, is Proof of Publication.

Please contact me if you require additional information.

Sincerely,

G. Gregg Pennington
Plant Manager

GGP/wlf

Enclosure

cc: D. S. Beachler
J. J. Ludwig

copied: Pradeep Raval
Tom Rogers
Larry Andrews
Ed Middlewart, NW Dist.
Richard Sublette NW Dist. Branch
Stacye Cronson, EPA
Miguel & Loree, NPS

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL NUMBER

6947055872

7342H

6947055872

DATE OF SERVICE

From (Your Name) Please Print Bay County Energy Systems Inc		Date 8/15/83	
Company BAY COUNTY ENERGY SYSTEMS INC		Department/Floor No. 1A	
Street Address 7504 HWY 231 NORTH		Exact Street Address (Use of P.O. Boxes or P.O. Zip Codes Will Delay Delivery And Result in Extra Charge.) 7504 HWY 231 NORTH	
City PANAMA CITY FL		City PANAMA CITY FL	
Your Phone Number (Very Important) (904) 285-7733		Recipient's Phone Number (Very Important) (904) 321-7924	
YOUR BILLING REFERENCE INFORMATION (FIRST 24 CHARACTERS WILL APPEAR ON INVOICE.) 1000340			

PAYMENT <input type="checkbox"/> Bill Sender <input type="checkbox"/> Bill Recipient's FedEx Acct. No. <input type="checkbox"/> Bill 3rd Party FedEx Acct. No. <input type="checkbox"/> Bill Credit Card		HOLD FOR PICK-UP AT THIS FEDERAL EXPRESS LOCATION: Street Address (See Service Guide or Call 800-238-5355) City _____ State _____	
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SERVICES CHECK ONLY ONE BOX		DELIVERY AND SPECIAL HANDLING CHECK SERVICES REQUIRED		PACKAGES	WEIGHT	YOUR DECLARED VALUE	OVER SIZE
1	<input type="checkbox"/> PRIORITY 1 Overnight Delivery Using Your Packaging <input type="checkbox"/> OVERNIGHT DELIVERY USING OUR PACKAGING <input type="checkbox"/> Courier-Pak Overnight Envelope* <input type="checkbox"/> Overnight Box <input type="checkbox"/> Overnight Tube <input checked="" type="checkbox"/> STANDARD AIR Delivery not later than second business day SERVICE COMMITMENT <small>PRIORITY 1 - Delivery is scheduled early next business morning in most locations. It may take two or more business days if the destination is outside our primary service areas. STANDARD AIR - Delivery is generally next business day or not later than second business day. It may take three or more business days if the destination is outside our primary service areas.</small>	<input type="checkbox"/> HOLD FOR PICK-UP (Fill in Section H at right) <input checked="" type="checkbox"/> DELIVER WEEKDAY <input type="checkbox"/> DELIVER SATURDAY (Extra charge)	<input type="checkbox"/> HAZARDOUS GOODS (PSN and Standard Air Packages only Extra charge) <input type="checkbox"/> CONSTANT SURVEILLANCE SERVICE (CSS) (Extra charge (Do Not Complete Section 5)) <input type="checkbox"/> DRY ICE <input type="checkbox"/> OTHER SPECIAL SERVICE <input type="checkbox"/> SATURDAY PICK-UP (Extra charge)				
Received At <input checked="" type="checkbox"/> Regular Stop <input type="checkbox"/> On-Call Stop <input type="checkbox"/> Drop Box <input type="checkbox"/> B.S.C. Station				City PANAMA CITY State FL Zip 32179			
Federal Express Corp. Employee No. 077273				Received By 000252			
Date/Time For Federal Express Use 8/15 11:03				Date/Time Received 007			

RECIPIENT'S COPY

PART #106001 REV 5/87 PRINTED U.S.A. SRCF 007

Florida Freedom Newspapers, Inc.

PUBLISHERS OF THE NEWS - HERALD

Panama City, Bay County, Florida

Published Daily

RECEIVED

AUG 10 1988

DER - BAQM

State of Florida

County of Bay

Before the undersigned authority appeared _____

KAYE NICHOLS

who on oath says that (s)he

is ADVERTISING DIRECTOR of the News-Herald, a daily

newspaper published at Panama City, in Bay County, Florida; that the attached copy

of advertisement, being a NOTICE OF INTENT

in the matter of DEP OF ENVIRONMETAL REG. PERMIT

BAY RESOURCE MANG. WASTE TO ENERGY FACILITY

in the BAY COUNTY COURTS

Court, was published in said newspaper in the issues of AUG 10

Affiant further says that the News-Herald is a direct successor of the Panama City News and that this publication, together with its direct predecessor, has been continuously published in said Bay County, Florida, each day (except that the predecessor, Panama City News, was not published on Sundays), and that this publication, together with its said predecessor, has been entered as a second class mail matter at the post office in Panama City in said Bay County, Florida, for a period of one year next preceding the first publication of the attached copy of the advertisement, all in accordance with the provisions of section 49.03, Florida Statutes; and affiant further says that (s)he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Kaye Nichols

Sworn to and subscribed before me this 10th day of _____

4875

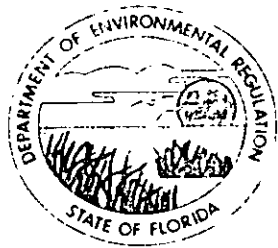
STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION NOTICE OF INTENT

The Department of Environmental Regulation hereby gives notice of its intent to issue permits to Bay Resource Management Center for the Bay County Waste-to-Energy Facility located in Panama City, Bay County, Florida. The project involves increasing the charging rate of municipal solid waste from 350 tons per day (TPD) to 510 TPD (current design capacity). There will be increases in emissions of sulfur dioxide, nitrogen oxides, particulate matter, carbon monoxide, volatile organic fluoride, lead, mercury, beryllium, and acid gases. The project is not expected to have significant impacts on the ambient air quality. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative determination (hearing) in accordance with

Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17, 103, and 285, Florida Administrative Code, and must be filed (received) in the Department's Office of General Counsel, 2800 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the proposed agency action. Therefore, persons who may not wish to file a petition may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Rule 285.207, Florida Administrative Code, at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009 Appalachia Parkway, Tallahassee, Florida



K. FILE

Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachmann, Secretary

John Shearer, Assistant Secretary

August 11, 1988

Mr. Steven A. McLellan
Water & Wastewater Systems
3400 Transmitter Road
Panama City, Florida 32404

Dear Mr. McLellan:

Re: Proposal to Incinerate Wastewater Treatment Sludge in the
Bay County Incinerator - Your Letter Dated July 12, 1988

The new draft permit to increase the MSW charging rate to the incinerators from 350 TPD to 510 TPD has been sent to Westinghouse and Bay County. The final permit needs to be issued prior to considering any amendments such as the one you proposed. Once the final permit is issued, we will consider this request, if, at that time you reactivate the request.

Sincerely,

C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

CHF/ks

cc: T. Moody

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)

Initial

Date

2.

John Glunn.

Initial

Date

3.

Pradeep.

Initial

Date

4.

Initial

Date

REMARKS:

INFORMATION

Review & Return

Review & File

Initial & Forward

DISPOSITION

Review & Respond

Prepare Response

For My Signature

For Your Signature

Let's Discuss

Set Up Meeting

Investigate & Report

Initial & Forward

Distribute

Concurrence

For Processing

Initial & Return

Please comment :

a. Bary - BACT implications

b. John - Air toxics generated vs emission limits.

This would likely increase the emissions of Mercury, Lead, and VOC's which are regulated under PID. In addition other metals would be required as well.

Return to, Bary

FROM:

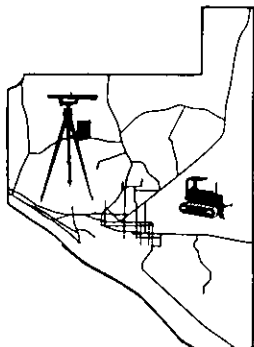
Pradeep.

DATE

8-17

PHONE

Board of County Commissioners Bay County



IN REPLY REFER TO:

Water & Wastewater Systems
3400 Transmitter Road
Panama City, FL 32404

July 12, 1988

RECEIVED

JUL 20 1988

DER-BAQM

COMMISSIONERS:

JOHN B. HUTT, JR.
DISTRICT I

RALPH BURGESS
DISTRICT II

S. RICHARD SELTZER
DISTRICT III

HAROLD T. PHILLIPS
DISTRICT IV

TOMMY LOFTIN
DISTRICT V

Mr. Clair Fancy
Florida DER
2600 Blairstone Road
Tallahassee, FL 32399-2400

RE: Proposal to Incinerate Wastewater Treatment Sludge

Dear Mr. Fancy;

This letter will provide the information you and I discussed concerning a possible waiver for the Bay County Resource Recovery Unit construction permit. The purpose of the waiver would be to enable us to incinerate the dried biological solids (sludge) from our wastewater treatment system. The language of the construction permit currently prohibits the burning of sewage sludges. While the sludge is of a high quality and is suitable for disposal by land application, the nearest land available is a considerable distance further than the resource recovery facility. The increased transportation costs, plus equipment for spreading the sludge, could make the option of incineration more economically feasible assuming it is permissible under the permit. The following information describes our operation and the quality and quantity of sludge to be disposed of.

Figure 1 shows the general location of our aerated stabilization basin (lagoon) located at Military Point on St. Andrew Bay. Bay County leases the lagoon property from Tyndall Air Force Base. Figure 2 is a sketch (drawn approximately to scale) showing the lagoon, the 3 sludge holding/drying ponds on the south side of the lagoon and the 21 groundwater monitoring wells. The lagoon treats waste from Stone Container Corporation (pulp and paper mill), Arizona Chemical Company (gum and wood chemical products) and domestic sewage. All waste receives primary treatment prior to entering the lagoon.

The lagoon influent solids concentration is consistently low (80 to 100 mg/l) and the sludge which accumulates in the lagoon is composed almost entirely of biological solids. The sludge accumulations became excessive and a dredging project took place from July, 1987 through January, 1988. The dredged sludge was pumped into the 3 holding ponds.

A polymer was added to enhance solids settling and the supernatant was pumped back into the lagoon. The sludge in the 3 ponds is now ready to be removed to make space available for continued dredging of the lagoon. We estimate that the total volume of sludge now in all 3 holding ponds is approximately 45,000 yd³.

The attached report from Savannah Laboratories shows the results of our analysis of the sludge. Page 1 of the report is a lagoon effluent, not sludge sample, and was included only so you do not think a page of the lab report is missing. The sample sent to the lab was a homogenous composite of samples collected at 8 different sites (3 in pond #1, 3 in pond #2, 2 in pond #3). Page 6 of the report presents the metals results. The 5 metals regulated by DER for land application have been highlighted and I've added the maximum values for the sludge to be considered a Grade I (highest) quality. Of the organic compounds measured, the only ones present in measureable amounts were ethyl benzene and xylenes. The polymer used as a coagulant aid was a water-in-oil emulsion containing petroleum solvents, which are necessary for the synthesis of the cationic polyacrylamide molecule. This is the source of the 2 organic compounds. The material safety data sheet for the polymer is attached. While I do not claim any expertise in the incineration of sludge, it appears that there would not be a problem created in the bottom ash, fly ash, or other emissions from the incinerator if this sludge was burned. Mixing of the sludge (which is almost totally odor free) with the normal refuse would seem to make the possibility of problems even less.

Based on this information, I am interested in your and your staffs judgement on the acceptability of incinerating this sludge at the Bay County Resource Recovery facility. I am assuming that a test burn, with your permission, would be necessary. I will provide your office and Mr. Greg Pennington, Manager of the incinerator facility, with whatever information is needed to explore this alternative. Please contact me at (904) 872-4135 if further information is necessary. We will coordinate our activities with the incinerator staff concerning any future formal requests for a permit waiver should this alternative appear feasible. Thank you for your consideration.

Yours Truly,



Steven A. McLellan
Pretreatment Program Manager

SAM/mr

Attachments

cc: George C. Cook, Director of Water & Wastewater Systems
Greg Pennington, Manager, Bay Energy Systems

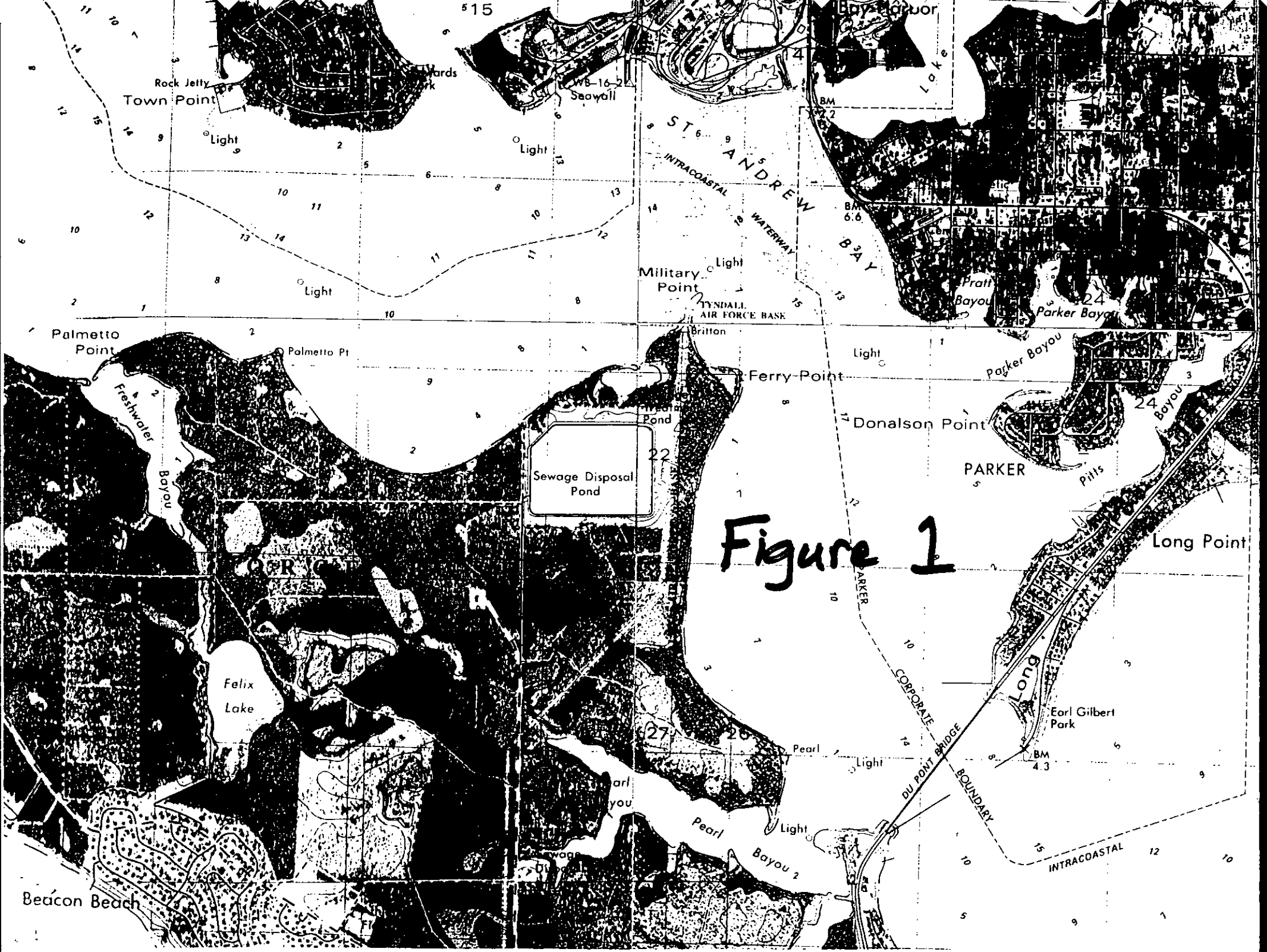
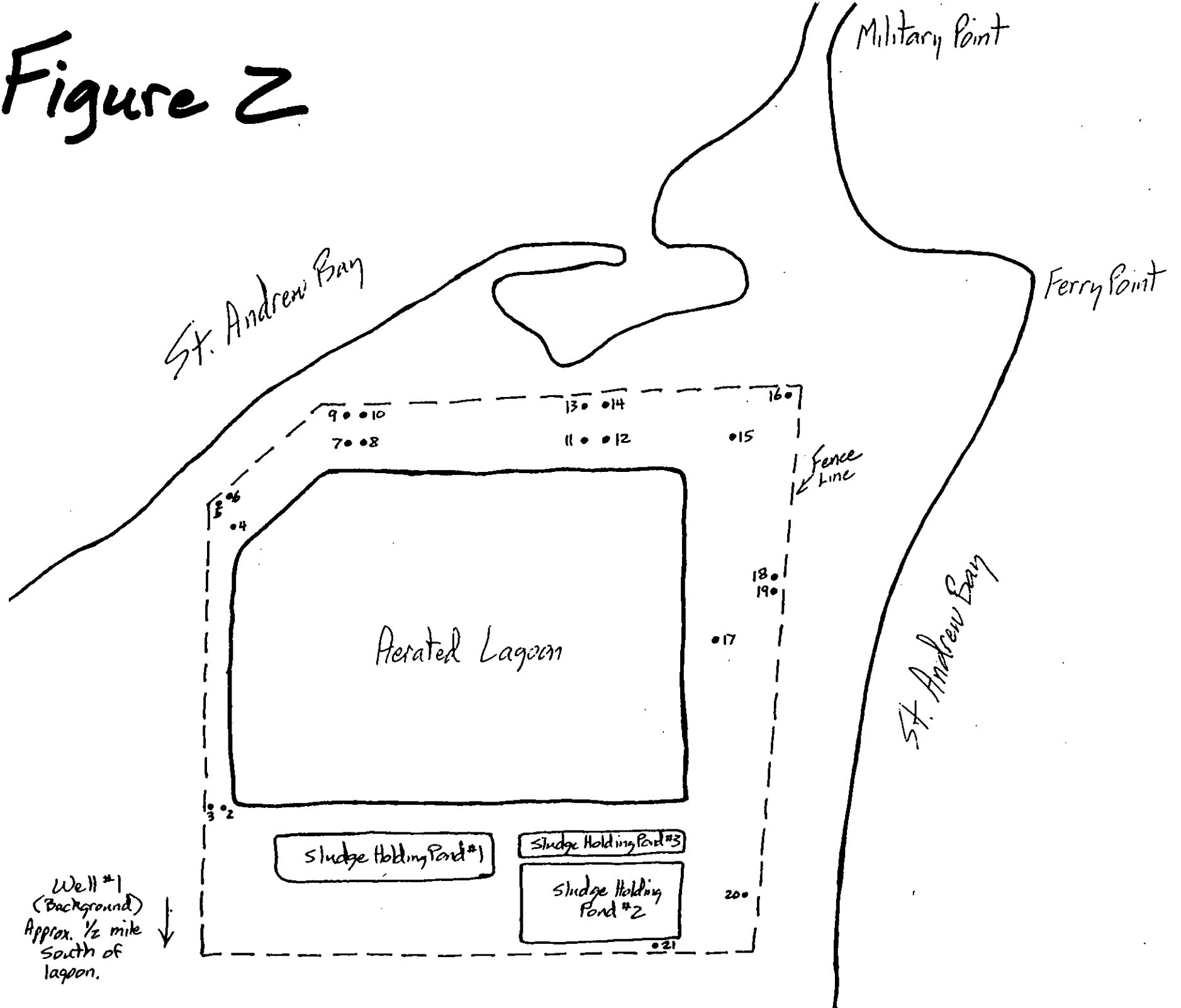


Figure 2



5000

Thomas L. Stephens
Laboratory Director

James W. Andrews, Ph.D.
President

Janette M. Davis
Vice-President

SAVANNAH LABORATORIES
AND ENVIRONMENTAL SERVICES, INC.
TALLAHASSEE DIVISION
P. O. Box 13056 • Tallahassee, FL 32317-3056
2820 Industrial Plaza Blvd. (32301)
(904) 878-3994



LOG NO: 88-0963
Rec'd 5/4/88
Received: 03 MAR 88
HRS Certification #'s
81291
E81005
E87052
87279

Ms. Carol Spain
Bay Co. Wastewater Treatment Plant
3642 Cherry Street
Panama City, Florida 32401

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION . LIQUID SAMPLES	SAMPLED BY
0963-1	Lagoon Effluent	Client
PARAMETER	0963-1	
PP-Acid Extractable Organics		
2-Chlorophenol, ug/l	<1	
2,4-Dichlorophenol, ug/l	<1	
2,4-Dimethylphenol, ug/l	<1	
4,6-Dinitro-o-cresol, ug/l	<1	
2,4-Dinitrophenol, ug/l	<1	
2-Nitrophenol, ug/l	<1	
4-Nitrophenol, ug/l	<1	
p-Chloro-m-cresol, ug/l	<1	
Pentachlorophenol, ug/l	<1	
Phenol, ug/l	<1	
2,4,6-Trichlorophenol, ug/l	<1	

Method: EPA 40 CFR Part 136

RECEIVED

JUL 20 1988

DER-BAQM

Thomas L. Stephens
Laboratory Director

James W. Andrews, Ph.D.
President

Janette M. Davis
Vice-President

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AND ENVIRONMENTAL SERVICES, INC.
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LOG NO: 88-0963

Received: 03 MAR 88

Ms. Carol Spain
Bay Co. Wastewater Treatment Plant
8642 Cherry Street
Panama City, Florida 32401

REPORT OF ANALYTICAL RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION . SOLID OR SEMISOLID SAMPLES	SAMPLED BY
0963-2	Sludge	Client
PARAMETER	0963-2	
601 and 602		
Bromodichloromethane, ug/kg dw	<25	
Bromoform, ug/kg dw	<25	
Bromomethane, ug/kg dw	<25	
Benzene, ug/kg dw	<25	
Carbon Tetrachloride, ug/kg dw	<25	
Chlorobenzene, ug/kg dw	<25	
Chloroethane, ug/kg dw	<25	
2-Chloroethylvinyl Ether, ug/kg dw	<25	
Chloroform, ug/kg dw	<25	
Ethyl Benzene, ug/kg dw	1600	
Chloromethane, ug/kg dw	<25	
Dibromochloromethane, ug/kg dw	<25	
1,2-Dichlorobenzene, ug/kg dw	<25	
1,3-Dichlorobenzene, ug/kg dw	<25	
1,4-Dichlorobenzene, ug/kg dw	<25	
Dichlorodifluoromethane, ug/kg dw	<25	
1,1-Dichloroethane, ug/kg dw	<25	
1,2-Dichloroethane, ug/kg dw	<25	
1,1-Dichloroethylene, ug/kg dw	<25	
trans-1,2-Dichloroethylene, ug/kg dw	<25	
1,2-Dichloropropane, ug/kg dw	<25	
cis-1,2-Dichloropropane, ug/kg dw	<25	

Thomas L. Stephens
Laboratory Director

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LOG NO: 88-0963

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3642 Cherry Street
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REPORT OF ANALYTICAL RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION . SOLID OR SEMISOLID SAMPLES	SAMPLED BY
0963-2	Sludge	Client
PARAMETER	0963-2	
trans-1,3-Dichloropropene, ug/kg dw	<25	
Methylene Chloride, ug/kg dw	<25	
1,1,2,2-Tetrachloroethane, ug/kg dw	<25	
Tetrachloroethylene, ug/kg dw	<25	
Toluene, ug/kg dw	<25	
1,1,1-Trichloroethane, ug/kg dw	<25	
1,1,2-Trichloroethane, ug/kg dw	<25	
Trichloroethylene, ug/kg dw	<25	
Trichlorofluoromethane, ug/kg dw	<25	
Vinyl Chloride, ug/kg dw	<25	
Xylenes, ug/kg dw	6500	
PP-Acid Extractable Organics		
2-Chlorophenol, mg/kg dw dw	<5	
2,4-Dichlorophenol, mg/kg dw	<5	
2,4-Dimethylphenol, mg/kg dw	<5	
4,6-Dinitro-o-cresol, mg/kg dw	<25	
2,4-Dinitrophenol, mg/kg dw	<25	
2-Nitrophenol, mg/kg dw	<5	
4-Nitrophenol, mg/kg dw	<25	
p-Chloro-m-cresol, mg/kg dw	<5	
Pentachlorophenol, mg/kg dw	<5	
Phenol, mg/kg dw	<5	
2,4,6-Trichlorophenol, mg/kg dw	<5	

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3642 Cherry Street
Panama City, Florida 32401

REPORT OF ANALYTICAL RESULTS

Page 4

LOG NO	SAMPLE DESCRIPTION . SOLID OR SEMISOLID SAMPLES	SAMPLED BY
0963-2	Sludge	Client
PARAMETER	0963-2	
PP-Base Neutral Compounds		
Acenaphthene, mg/kg dw	<5	
Acenaphthylene, mg/kg dw	<5	
Anthracene, mg/kg dw	<5	
Benzidine, mg/kg dw	<400	
Benzo(a)Anthracene, mg/kg dw	<5	
Benzo(a)Pyrene, mg/kg dw	<5	
3,4-Benzofluoranthene, mg/kg dw	<5	
Benzo (g,h,i) Perylene, mg/kg dw	<5	
Benzo (k) Fluoranthene, mg/kg dw	<5	
Bis (2-Chloroethoxy) Methane, mg/kg dw	<5	
Bis (2-Chloroethyl) Ether, mg/kg dw	<5	
Bis (2-Chloroisopropyl) Ether, mg/kg dw	<5	
Bis (2-Ethylhexyl) Phthalate, mg/kg dw	<5	
4-Bromophenyl Phenyl Ether, mg/kg dw	<5	
Butyl Benzyl Phthalate, mg/kg dw	<5	
2-Chloronaphthalene, mg/kg dw	<5	
4-Chlorophenyl Phenyl Ether, mg/kg dw	<5	
Chrysene, mg/kg dw	<5	
Dibenzo (a,h) Anthracene, mg/kg dw	<5	
1,2-Dichlorobenzene, mg/kg dw	<5	
1,3-Dichlorobenzene, mg/kg dw	<5	
1,4-Dichlorobenzene, mg/kg dw	<5	

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REPORT OF ANALYTICAL RESULTS

Page 5

LOG NO	SAMPLE DESCRIPTION . SOLID OR SEMISOLID SAMPLES	SAMPLED BY
0963-2	Sludge	Client
PARAMETER	0963-2	
3,3-Dichlorobenzidine, mg/kg dw	<100	
Diethyl Phthalate, mg/kg dw	<5	
Dimethyl Phthalate, mg/kg dw	<5	
Di-N-Butyl Phthalate, mg/kg dw	<5	
2,4-Dinitrotoluene, mg/kg dw	<5	
2,6-Dinitrotoluene, mg/kg dw	<5	
Di-N-Octyl Phthalate, mg/kg dw	<5	
1,2-Diphenylhydrazine, mg/kg dw	<5	
Fluoranthene, mg/kg dw	<5	
Fluorene, mg/kg dw	<5	
Hexachlorobenzene, mg/kg dw	<5	
Hexachlorobutadiene, mg/kg dw	<5	
Hexachlorocyclopentadiene, mg/kg dw	<5	
Hexachloroethane, mg/kg dw	<5	
Indeno (1,2,3-cd) Pyrene, mg/kg dw	<5	
Isophorone, mg/kg dw	<5	
Naphthalene, mg/kg dw	<5	
Nitrobenzene, mg/kg dw	<5	
N-Nitrosodimethylamine, mg/kg dw	<5	
N-Nitrosodi-N-Propylamine, mg/kg dw	<5	
N-Nitrosodiphenylamine, mg/kg dw	<5	
Phenanthrene, mg/kg dw	<5	
Pyrene, mg/kg dw	<5	
1,2,4-Trichlorobenzene, mg/kg dw	<5	

Thomas L. Stephens
Laboratory Director

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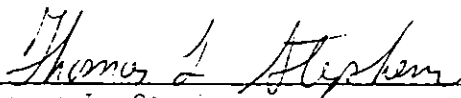
Ms. Carol Spain
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3642 Cherry Street
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REPORT OF ANALYTICAL RESULTS

Page 6

LOG NO	SAMPLE DESCRIPTION . SOLID OR SEMISOLID SAMPLES	SAMPLED BY
0963-2	Sludge	Client
PARAMETER	<u>Grade I</u>	0963-2
Aluminum, mg/kg dw		6400
Barium, mg/kg dw		150
Cadmium, mg/kg dw ≤ 30		1.0
Chromium, mg/kg dw		82
Copper, mg/kg dw ≤ 900		41
Iron, mg/kg dw		1700
Lead, mg/kg dw ≤ 1000		7.45
Mercury, mg/kg dw dw		0.39
Manganese, mg/kg dw		990
Nickel, mg/kg dw ≤ 100		30
Potassium, mg/kg dw		440
Silver, mg/kg dw		0.56
Titanium, mg/kg dw		150
Zinc, mg/kg dw ≤ 1200		170

Method: EPA SW-846


Thomas L. Stephens

JUL 20 1988

TECHNICAL BULLETIN

DER-BAOM

February 7, 1986

CALLAWAY 4410

DESCRIPTION AND USE

CALLAWAY 4410 is a high molecular weight, low charge density cationic polyacrylamide. It is supplied as a low viscosity, milky white water-in-oil emulsion. CALLAWAY 4410 is a quaternary ammonium cationic polymer which generally performs in the pH range of 2.5 to 12.0.

TYPICAL PROPERTIES

1. Appearance	White Translucent emulsion
2. Density @ 80°F.	8.60 ± 0.1 lbs./gallon
3. Viscosity @ 80°F.	500-800 cp
4. Activity	36%
5. Charge Density	10%
6. Freeze Point	20°F.

APPLICATION

CALLAWAY 4410 is a cationic flocculant which is very effective in many solid-liquid separation processes. The product has been particularly effective for clarification and for sludge conditioning in municipal and industrial waste treatment operations. However, the most cost effective Callaway flocculant should be selected based on a performance evaluation using the particular waste or process stream intended for treatment. Your Callaway Chemical Co. technical sales representative is qualified and will be happy to assist you in selecting the product which best suits your requirements.

A stock solution of up to 1% concentration (as is) may be prepared by adding CALLAWAY 4410 to the appropriate quantity of agitated water. Subsequent dilution to 0.1 to 0.02% should improve performance in most cases. An in-line dilution is satisfactory.

The stock solution should not be stored more than 24 hours, as deterioration in performance can occur. Note: Water should never be added to a water-in-oil emulsion - an intractable gel is formed!

STORAGE AND HANDLING

CALLAWAY 4410 should be stored at 40-90°F. Short term exposure to higher or lower temperatures will normally not harm the product. If frozen, CALLAWAY 4410 should be warmed to 40-90°F., and agitated prior to use.

The shelf life of CALLAWAY 4410 is at least six months. The product should be rotated to avoid excessive storage time. CALLAWAY 4410 will settle slightly on standing; an upper layer of clear oil will develop. Mild agitation will restore homogeneity.

Polymer spilled on floors is very slippery and difficult to "hose down". It should be "scooped up" as much as possible, and the remaining thin film absorbed with a solid material such as a sweeping compound. Alternatively, the area may be hosed down after most of the polymer has been removed.

CALLAWAY 4410 may be stored in glass, stainless steel or plastic vessels. Plastic or epoxy lined containers are also suitable. Aluminum or iron equipment should not be used in storage or feed systems.

PACKAGING INFORMATION

CALLAWAY 4410 is available in bulk or in 55 gallon non-returnable steel drums. Net weight per drum is 450 pounds.

PRICING INFORMATION

Current price quotations are available upon request.

SECTION I PRODUCT IDENTIFICATION & EMERGENCY INFORMATION

PRODUCT NAME

CALLAWAY 4410

CHEMICAL NAME

A Cationic Polyacrylamide in Water in Oil Emulsion

CHEMICAL FAMILY

Cationic Polyacrylamide

PRODUCT APPEARANCE

Milky white liquid, slight hydrocarbon odor

EMERGENCY TELEPHONE NUMBERS: CALLAWAY CHEMICAL COMPANY 404-576-2000
CHEMTREC 800-424-9300

SECTION II HAZARDOUS COMPONENTS OF MIXTURES

THE PRECISE COMPOSITION OF THIS MIXTURE IS PROPRIETARY INFORMATION. A MORE COMPLETE DISCLOSURE WILL BE PROVIDED TO A PHYSICIAN OR NURSE IN THE EVENT OF A MEDICAL EMERGENCY. THE FOLLOWING COMPONENTS ARE DEFINED HAZARDOUS IN ACCORDANCE WITH 29CFR1910.1200:

OSHA HAZARD	COMPONENT
Combustible	Petroleum Distillate
Irritant to eyes and skin	Petroleum Distillate
Irritant to eyes and skin	Cationic Polyacrylamide

SECTION III HEALTH INFORMATION AND PROTECTION

FIRST AID & NATURE OF HAZARD

EYE CONTACT:

Immediately flush eyes with large amounts of water for at least 15 minutes. Get prompt medical attention.

Irritating, and will injure eye tissue if not removed promptly.

SKIN CONTACT:

Flush with large amounts of water; use soap if available.

Remove grossly contaminated clothing, including shoes, and launder before reuse.

If irritation persists, seek medical attention.

Irritating.

Low order of toxicity.

INGESTION:

If swallowed, DO NOT induce vomiting. Keep at rest. Get prompt medical attention.

Small amounts of the liquid aspirated into the respiratory system during ingestion, or from vomiting, may cause bronchiopneumonia or pulmonary edema.

INHALATION:

Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.

Irritating to eyes and respiratory tract in high concentrations.

OCCUPATIONAL EXPOSURE LIMIT; EXXON RECOMMENDS:

200 ppm total hydrocarbon based on composition.

EXXON - 217

THIS INFORMATION RELATES TO THE SPECIFIC MATERIAL DESIGNATED AND MAY NOT BE VALID FOR SUCH MATERIAL USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. SUCH INFORMATION IS TO THE BEST OF OUR KNOWLEDGE AND BELIEF ACCURATE AND RELIABLE AS OF THE DATE COMPILED. HOWEVER, NO REPRESENTATION, WARRANTY OR GUARANTEE IS MADE AS TO ITS ACCURACY, RELIABILITY OR COMPLETENESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY HIMSELF AS TO THE SUITABILITY AND COMPLETENESS OF SUCH INFORMATION FOR HIS OWN PARTICULAR USE. WE DO NOT ACCEPT LIABILITY FOR ANY LOSS OR DAMAGE THAT MAY OCCUR FROM THE USE OF THIS INFORMATION NOR DO WE OFFER WARRANTY AGAINST PATENT INFRINGEMENT.

PERSONAL PROTECTION

Where contact may occur, wear long sleeves and safety glasses with side shields. For open systems where contact is likely, wear long sleeves, chemical resistant gloves, chemical safety goggles plus a face shield. Where concentrations in air may exceed the limits given in this Section and engineering, work practice or other means of exposure reduction are not adequate, NIOSH/MSHA approved respirators may be necessary to prevent overexposure by inhalation.

VENTILATION

The use of mechanical dilution ventilation is recommended whenever this product is used in a confined space, is heated above ambient temperatures, or is agitated.

SECTION IV FIRE & EXPLOSION HAZARD

FLASHPOINT DEG. F : 140 METHOD: Setaflash
FLAMMABLE LIMITS-LEL: 1.0 UEL: 6.0
AUTOIGNITION TEMPERATURE DEG. F : NOTE: Not Available

GENERAL HAZARD

Combustible Liquid, can form combustible mixtures at temperatures at or above the flashpoint.
Empty product containers may contain product residue. Do not pressurize, cut, heat, weld or expose containers to flame or other sources of ignition.

FIRE FIGHTING

Use water to cool fire-exposed surfaces and to protect personnel. Isolate "fuel" supply from fire. Use foam, dry chemical, or water spray to extinguish fire.
Respiratory and eye protection required for fire fighting personnel.

HAZARDOUS COMBUSTION PRODUCTS

No Unusual

SECTION V SPILL CONTROL PROCEDURE**LAND SPILL**

Eliminate sources of ignition. Prevent additional discharge of material, if possible to do so without hazard. For small spills implement cleanup procedures; for large spills implement cleanup procedures and, if in public area, keep public away and advise authorities. Also, if this product is an EPA hazardous substance (See Section X, Page 4) notify the U.S. EPA if appropriate.

Prevent liquid from entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth. Do not use combustible materials such as sawdust.

Recover by pumping (use an explosion proof or hand pump) or with a suitable absorbent.

If liquid is too viscous for pumping, scrape up.

Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

WATER SPILL

Remove from surface by skimming or with suitable absorbents. Do not use dispersants. Consult an expert on disposal of recovered material, and ensure conformity to local disposal regulations.

SECTION VI NOTES

Protect from freezing.

SECTION VII TYPICAL PHYSICAL & CHEMICAL PROPERTIES

SP. GRAVITY 0.98	to 1.12 @ 77 F	VAPOR PRESSURE, mmHg at F 100
SOLUBILITY IN WATER, WT. % at F Soluble	VISCOSITY OF LIQUID, cST at F 500 to 2000 cps @ 77 F	
SP. GRAVITY OF VAPOR, at 1 ATM AIR-1 Not available	FREEZING MELTING POINT/RANGE, F 10 to 32 F	
EVAPORATION RATE, n-BU ACETATE-1 Less than 1	BOILING POINT/RANGE, F 212 to 370	

SECTION VIII REACTIVITY DATA

STABILITY? Stable	HAZARDOUS POLYMERIZATION OCCUR? Will not occur
CONDITIONS TO AVOID INSTABILITY Avoid temperatures above 200 F Avoid temperatures below 32 F	CONDITIONS TO AVOID HAZARDOUS POLYMERIZATION Not Applicable

MATERIALS AND CONDITIONS TO AVOID INCOMPATIBILITY
Contact with water forms a gel at product solid content greater than 10%.

HAZARDOUS DECOMPOSITION PRODUCTS
None

SECTION IX TRANSPORT & STORAGE

ELECTROSTATIC ACCUMULATION HAZARD Unknown, use proper grounding procedure	
STORAGE TEMPERATURE, F Keep from freezing	LOADING/UNLOADING TEMPERATURE, F Keep from freezing
STORAGE/TRANSPORT PRESSURE, mmHg Atmospheric	VISCOSITY AT LOADING/UNLOADING TEMPERATURE, cST 500 to 2000 cps

SECTION X HAZARD CLASSIFICATION

U.S. DOT CLASSIFICATION Combustible	EPA HAZARDOUS SUBSTANCE Not Applicable	AMOUNT LBS.
--	---	-------------

ADDITIONAL INFORMATION
Not Available

REFERENCE NUMBER HDHA-P-10599	DATE PREPARED FEBRUARY 19, 1987	SUPERCEDES ISSUE DATE
----------------------------------	------------------------------------	-----------------------

FOR ADDITIONAL PRODUCT INFORMATION CONTACT YOUR TECHNICAL SALES REPRESENTATIVE
FOR ADDITIONAL HEALTH/SAFETY INFORMATION CALL 713-870-6885

EX-1043

PM
8-8-88
Pittsburgh, PA



file copy

Westinghouse
Electric Corporation

EN1351DB

Resource Energy Systems
Division

Cost Building
2400 Ardmore Boulevard
Pittsburgh Pennsylvania 15221
(412) 636 5800
W.N. 61 5800

RECEIVED

AUG 12 1988

DER-BAQM

August 4, 1988

Mr. Clair H. Fancy
Deputy Chief
Bureau of Air Quality Management
Florida DER
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399

Dear Mr. Fancy:

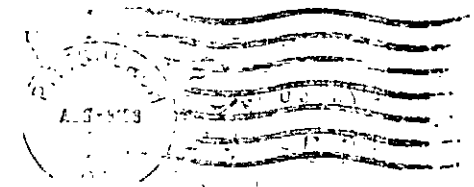
We would like to make the following comments and ask a few questions regarding the Technical Evaluation, Preliminary Determination, and proposed permit for the waste-to-energy facility located in Panama City, Florida.

1. There is an error on Page 6 of 11 of the proposed permit, Point No. 3. The flue gas emissions listed in the table are for both units combined, not from each combustor as shown.
2. The expiration date on the permit is given as December 1, 1988. This date should be changed to April 1, 1989 because the facility will need to install and certify additional continuous emission monitors and to conduct additional stack testing.
3. Specific Condition No. 1b states that each combustor can burn a maximum of 80 TPD wood waste. We would like the flexibility of being able to burn all of the allowable wood waste in one combustor. In addition, in the unlikely event that less than 350 TPD MSW was available (i.e., 250 TPD), can the facility make up this shortfall by burning wood waste (i.e., 260 tons of wood)?
4. Condition No. 1f states that the facility must be started using fuel oil. We would like to request the flexibility of starting the facility using wood instead of fuel oil.

Westinghouse
Electric Corporation

Resource Energy Systems
Division

Cost Building
2400 Ardmore Boulevard
Pittsburgh PA 15221



Mr. Clair H. Fancy
Deputy Chief
Bureau of Air Quality Management
Florida DER
Twin Towers Office Bldg.
2600 Blainstone Road
Tallahassee, FL 32399



5. Specific Condition No. 4 states that tests must be conducted to measure particulate matter, SO₂, NO_x, CO, VOC, lead, fluorides, mercury, and beryllium. Westinghouse contracted Entropy to conduct sampling in March, 1988 to measure many of these pollutants. Would DER accept some of this data to reduce the amount of testing required by this condition?
6. Condition No. 3 states that opacity shall not exceed 15%. Is the opacity limit of 15% for six minutes in any one hour?
7. Condition No. 5 requires installing a number of continuous emission monitors. The plant currently has opacity, O₂, and CO monitors installed on each combustor/boiler train. We would like to propose using the O₂ monitor to determine the CO₂ concentration. We have made numerous simultaneous measurements for both O₂ and CO₂, approximately 400 hours of data. These data show that O₂ and CO₂ levels vary linearly. Therefore, the computer could be programmed to compute the CO₂ level from the corresponding reading of O₂. We feel that this would be adequate to determine CO₂ levels.
8. Condition No. 1b states that the plant can burn a maximum of 510 TPD MSW (255 TPD per combustor). The facility keeps records of the amount of waste that is delivered to the site and the amount burned. We would like to request that the first sentence under No. 1b be changed to read "The average throughput for each MWC shall not exceed the design average heat input rate of 95.6 MM Btu/hr, which corresponds to 255 TPD of waste having a HHV of 4500 Btu/lb.

The facility will be operated to maintain a steam flow rate of approximately 68,500 lb/hr. The computer control system has a setpoint that allows each combustor/boiler to maintain this value within a range of ± 2000 lb/hr. When the steam flow drops below the setpoint, the rams are activated to increase the MSW feed into the combustor. When the steam flow exceeds the setpoint, less MSW is fed into the unit.

The higher heating value (HHV) of the waste varies because of the heterogeneous nature of the waste. In the spring and summer months, the waste can typically have a HHV less than 4500 because the waste is occasionally soaked by heavy rainfalls. In this case, it will take more than 255 TPD MSW to generate an average heat input of 95.6 MM Btu/hr. However, in terms of pollutant levels, the concentrations of particulate matter, NO_x, SO₂, HCl, CO, etc. in the flue gas will be approximately the same as when burning 4500 Btu/lb waste because the additional weight in the MSW is comprised of mostly water and/or inerts. On the other hand, if the waste contains more cardboard or paper (as during the holidays), the waste will have a heating value of more than 4500 Btu/lb and less waste, tonnage-wise, will be burned in the combustor.

August 4, 1988

8. (Continued)

We would like to propose using the boiler operating parameters to determine the average heat input into the combustor boiler. The computerized control system can be programmed to record various parameters including steam flow and flue gas O₂ concentration and temperature. By assuming the boiler efficiency and ash burnout remains relatively constant, the heat input from the waste can be estimated using these parameters. The facility will measure and record all of the appropriate data including the amount of waste burned and submit this data for review by DER.

9. Specific Condition No. 1d specifies that the normal operating range of the MWC shall be 80% to 100% of the design rated capacity. The facility is designed to operate at 50% to 120% design rated capacity. The equipment is designed with the excess margin so that it can operate for short time intervals and not be subject to strain and subsequently damaged. We would like to propose that this condition read "The normal operating range of the MWC shall be 80% to 120% of the design rated capacity."

If you have any questions regarding the above items, please call me at (412) 636-5806.

Sincerely,

David S Beachler

D. S. Beachler, Manager
Environmental and Quality Engineering

cc: S. J. Brady, Westinghouse RESD
G. G. Pennington, Bay County Resource Management Center

/kjd
EN1351DB-EN09

*copied: Pradip Raval
Barry Andrews
Tom Rogers
Ed Middlewart
Tom Moody
Hayne Brownson
Miguel Flores
CFF/BT*

8-8-88
Pittsburgh, PA



full copy

Westinghouse
Electric Corporation
EN1351DB

Resource Energy Systems
Division

Cost Building
2400 Ardmore Boulevard
Pittsburgh Pennsylvania 15221
412-636-5800
W.N. 61-5800

RECEIVED

AUG 12 1988

DER-BAQM

August 4, 1988

Mr. Clair H. Fancy
Deputy Chief
Bureau of Air Quality Management
Florida DER
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399

2 ESP

2 flues

EPA's done separately

2 opacity CEMS, strip chart recorder

Talked to
Dale McClannan

on 9-13-88

Dear Mr. Fancy:

We would like to make the following comments and ask a few questions regarding the Technical Evaluation, Preliminary Determination, and proposed permit for the waste-to-energy facility located in Panama City, Florida.

Write for
Each
Combustor

1. There is an error on Page 6 of 11 of the proposed permit, Point No. 3. The flue gas emissions listed in the table are for both units combined, not from each combustor as shown.
2. The expiration date on the permit is given as December 1, 1988. This date should be changed to ^{June} April-1, 1989 because the facility will need to install and certify additional continuous emission monitors and to conduct additional stack testing.
3. Specific Condition No. 1b states that each combustor can burn a maximum of 80 TPD wood waste. We would like the flexibility of being able to burn all of the allowable wood waste in one combustor. In addition, in the unlikely event that less than 350 TPD MSW was available (i.e., 250 TPD), can the facility make up this shortfall by burning wood waste (i.e., 260 tons of wood)?
4. Condition No. 1f states that the facility must be started using fuel oil. We would like to request the flexibility of starting the facility using wood instead of fuel oil.

check
OK

OK

(NO)

1. clean up emissions

(NO)

1. CSP must be @
exp for 2nd control

2.

5. Specific Condition No. 4 states that tests must be conducted to measure particulate matter, SO₂, NO_x, CO, VOC, lead, fluorides, mercury, and beryllium. Westinghouse contracted Entropy to conduct sampling in March, 1988 to measure many of these pollutants. Would DER accept some of this data to reduce the amount of testing required by this condition?

*if with
1/10/11
YES*

6. Condition No. 3 states that opacity shall not exceed 15%. Is the opacity limit of 15% for six minutes in any one hour?

YES

7. Condition No. 5 requires installing a number of continuous emission monitors. The plant currently has opacity, O₂, and CO monitors installed on each combustor/boiler train. We would like to propose using the O₂ monitor to determine the CO₂ concentration. We have made numerous simultaneous measurements for both O₂ and CO₂, approximately 400 hours of data. These data show that O₂ and CO₂ levels vary linearly. Therefore, the computer could be programmed to compute the CO₂ level from the corresponding reading of O₂. We feel that this would be adequate to determine CO₂ levels.

1. variability of feed will probably account for variability in variability of CO₂

8. Condition No. 1b states that the plant can burn a maximum of 510 TPD MSW (255 TPD per combustor). The facility keeps records of the amount of waste that is delivered to the site and the amount burned. We would like to request that the first sentence under No. 1b be changed to read "The average throughput for each MWC shall not exceed the design average heat input rate of 95.6 MM Btu/hr, which corresponds to 255 TPD of waste having a HHV of 4500 Btu/lb.

2. average also NO

The facility will be operated to maintain a steam flow rate of approximately 68,500 lb/hr. The computer control system has a setpoint that allows each combustor/boiler to maintain this value within a range of ±2000 lb/hr. When the steam flow drops below the setpoint, the rams are activated to increase the MSW feed into the combustor. When the steam flow exceeds the setpoint, less MSW is fed into the unit.

NO

The higher heating value (HHV) of the waste varies because of the heterogeneous nature of the waste. In the spring and summer months, the waste can typically have a HHV less than 4500 because the waste is occasionally soaked by heavy rainfalls. In this case, it will take more than 255 TPD MSW to generate an average heat input of 95.6 MM Btu/hr. However, in terms of pollutant levels, the concentrations of particulate matter, NO_x, SO₂, HCl, CO, etc. in the flue gas will be approximately the same as when burning 4500 Btu/lb waste because the additional weight in the MSW is comprised of mostly water and/or inerts. On the other hand, if the waste contains more cardboard or paper (as during the holidays), the waste will have a heating value of more than 4500 Btu/lb and less waste, tonnage-wise, will be burned in the combustor.

NO

1. Emissions increase with increase in MSW then not (except for extra water)

8. (Continued)

We would like to propose using the boiler operating parameters to determine the average heat input into the combustor boiler. The computerized control system can be programmed to record various parameters including steam flow and flue gas O₂ concentration and temperature. By assuming the boiler efficiency and ash burnout remains relatively constant, the heat input from the waste can be estimated using these parameters. The facility will measure and record all of the appropriate data including the amount of waste burned and submit this data for review by DER.

9. Specific Condition No. 1d specifies that the normal operating range of the MWC shall be 80% to 100% of the design rated capacity. The facility is designed to operate at 50% to 120% design rated capacity. The equipment is designed with the excess margin so that it can operate for short time intervals and not be subject to strain and subsequently damaged. We would like to propose that this condition read "The normal operating range of the MWC shall be 80% to 120% of the design rated capacity."

*Submit new application.
120 hrs. not less
NO*

If you have any questions regarding the above items, please call me at (412) 636-5806.

Sincerely,

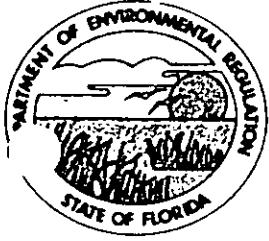
D. S. Beachler

D. S. Beachler, Manager
Environmental and Quality Engineering

cc: S. J. Brady, Westinghouse RESD
G. G. Pennington, Bay County Resource Management Center

/kjd
EN1351DB-EN09

*copied: Pradip Patel
Barry Andrews
Tom Rogers
Ed Middlewait
Tom Moody
Hayne Brownson
Miguel Adame
CAF/RT*



Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

August 2, 1988

Mr. D. S. Beachler
Westinghouse RESD, Cost Bldg.
2400 Ardmore Boulevard
Pittsburg, PA 15221

Dear Mr. Beachler:

RE: The Technical Evaluation and Preliminary Determination and proposed permit for Bay County Waste-to-Energy Facility, located in Panama City, Bay County, Florida, PSD-FL-129.

Specific Condition No. 1.b., in the above mentioned proposed permit needs to be corrected to reflect that wood waste use shall not exceed 160 TPD for the facility, and is not limited to 80 TPD per combustor.

Specific Condition No. 3 in the proposed permit needs to be corrected to reflect that the emission limits therein are for the facility and not just for one combustor.

Please find attached pages 5 and 6 as corrected.

Please submit, in writing, any comments which you wish to have considered concerning the Department's proposed action to Mr. Bill Thomas of the Bureau of Air Quality Management.

Sincerely,

for Bill Thomas

C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

CHF/pr

Attachments

cc: E. Middleswart, NW District
T. Moody, NW District
W. Aronson, EPA
M. Flores, NPS
A. Richter, P.E.
J. Kolk, Audubon Society

Pradeep -
this is okay with
me. *Clan*

8/16

PERMITTEE: Bay Resource
Management Center

Permit Numbers: AC 03-145061
03-152196

GENERAL CONDITIONS:

- b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.
- c. Records of monitoring information shall include:
 - the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the date(s) analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. Municipal Waste Combustor

- a. Each of the two municipal waste combustors (MWC) shall have a design rated capacity of 255 tons municipal solid waste (MSW) per day, 95.6 million Btu heat input per hour, assuming a heating value of 4,500 Btu per pound, and a steam production rate of 68,000 lbs/hr.
- b. The maximum throughput for each MWC shall not exceed the design charging rate of 255 TPD or the heat input rate of 95.6 MMBtu/hr. In absence of sufficient MSW to maintain a steady heat rate, wood waste may be used but not in excess of 160 TPD for the facility.

PERMITTEE: Bay Resource
Management Center

Permit Numbers: AC 03-145061
03-152196

SPECIFIC CONDITIONS:

- c. The furnace mean temperature at the fully mixed zone of the combustor shall not be less than 1,800°F.
 - d. The normal operating range of the MWC shall be 80% to 100% of design rated capacity.
 - e. The MWC shall be fueled with municipal solid waste and wood waste only. Other wastes shall not be burned without specific prior written approval of Florida DER.
 - f. Auxiliary fuel burners shall be fueled only with distillate fuel oil or natural gas. If the annual capacity factor for oil or gas is greater than 10%, as determined by 40 CFR 60.43b(d), the facility shall be subject to 40 CFR 60.44b, standards for nitrogen oxides.
 - g. Auxiliary fuel burners shall be used at start up during the introduction of MSW fuel until design furnace gas temperature is achieved.
 - h. The facility may operate continuously (8760 hrs/yr).
2. Each MWC shall be equipped with an electrostatic precipitator for particulate emission control.
3. Flue gas emissions from the facility shall not exceed the following:

Pollutant	Emissions	
	lbs/hr	TPY
PM	13.5	59
CO	185.6	813
NOx	53.9	236
SO ₂	71.5	313
VOC	14.2	62
Lead	0.08	0.36
Mercury	0.36	0.16
Beryllium	1 x 10 ⁻⁵	4.5 x 10 ⁻⁵
Hydrogen Chloride	123.3	540
Sulfuric Acid Mist	3	13
Fluoride	0.3	1.3

Visible emissions shall not exceed 15% opacity.

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
 Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. 2. Restricted Delivery
↑(Extra charge)↑ ↑(Extra charge)↑

3. Article Addressed to: Ms. Jacalyn N. Kolk Bay County Audubon Society P. O. Box 1182 Panama City, FL 32402	4. Article Number P 702 177 467 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X <i>Carla M. Huber for BCAS</i>	
7. Date of Delivery AUG 02 1988	

PS Form 3811, Mar. 1987 * U.S.G.P.O. 1987-178-268 **DOMESTIC RETURN RECEIPT**

P 702 177 467
RECEIPT FOR CERTIFIED MAIL
 NO INSURANCE COVERAGE PROVIDED
 NOT FOR INTERNATIONAL MAIL
 (See Reverse)

Sent to Jacalyn N. Kolk, Bay County	
Street and No. P.O. Box 1182 Audubon	
P.O., State and ZIP Code Panama City, FL 32402	
Postage	S
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	S
Postmark or Date Permit: AC 03-145061 Mailed: 7-28-88	

PS Form 3800, June 1985

P 702 177 466
RECEIPT FOR CERTIFIED MAIL
 NO INSURANCE COVERAGE PROVIDED
 NOT FOR INTERNATIONAL MAIL
 (See Reverse)

Sent to Mr. David S. Beachler	
Street and No. 2400 Ardmore Blvd.	
P.O., State and ZIP Code Pittsburgh, PA 15221	
Postage	S
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	S
Postmark or Date Mailed: 7-28-88 Permit: AC 03-145061	

PS Form 3800, June 1985