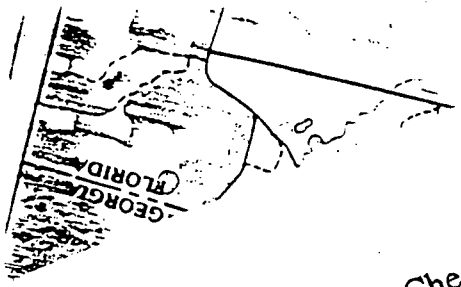

Check Sheet

Company Name: Palm Beach County Board of Commissioners
Permit Number: AC 50-63154, -63156
PSD Number:
Permit Engineer:

Cross References:
- ☐
- ☐
- ☐

Application:
- ☑ Initial Application
- ☐ Incompleteness Letters
- ☑ Responses
- ☐ Waiver of Department Action
- ☐ Department Response
- ☐ Other

Intent:
- ☑ Intent to Issue
- ☑ Notice of Intent to Issue
- ☑ Technical Evaluation
- ☒ BACT or LAER Determination
- ☐ Unsigned Permit
- Correspondence with:
  - ☐ EPA
  - ☐ Park Services
  - ☐ Other
- ☑ Proof of Publication
- ☐ Petitions - (Related to extensions, hearings, etc.)
- ☐ Waiver of Department Action
- ☐ Other

Final Determination:
- ☑ Final Determination
- ☑ Signed Permit
- ☒ BACT or LAER Determination
- ☐ Other

Post Permit Correspondence:
- ☐ Extensions/Amendments/Modifications
- ☐ Other

Revision #5

Wegman ENGINEERS

Leonard S. Wegman Co. Inc. 330 West 42nd Street, New York, NY 10036 Telephone 212 563-6900

December 7, 1982

DER
DEC 10 1982
BAQM

Flordia Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32301

Attn: Mr. William Thomas

Gentlemen:

Please find enclosed a copy of Bulletin VI, Environmental Assessment, that was prepared for the Palm Beach County Solid Waste Authority. Mr. Tim Hunt, Executive Director, requested that a copy be forwarded to you.

The assessment reviewed available information on the proposed site and the procedure for having the site permitted as a Class I Landfill. From available information, the site appears to be permitable.

As the project develops, we plan on working closely with your Department to have an environmental safe facility.

Very truly yours,

LEONARD S. WEGMAN CO. INC.

S. G. Timmerman

Stanley G. Timmerman
Project Manager

SGT:rmc
Encl.

RL1 8.40

PALM BEACH COUNTY
SOLID WASTE AUTHORITY

FEASIBILITY STUDY

ENVIRONMENTAL ASSESSMENT

BULLETIN VI

NOVEMBER 1982

LEONARD S. WEGMAN Co. Inc.-BARKER, OSHA & ANDERSON Inc.

ENGINEERS / PLANNERS

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

BAQM - Central Air Permitting

ACTION NO.

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)				INITIAL / DATE
FANCY	AMODIO	MITCHELL	HERON	
2. ~~PALAGYI~~	VEGA	BOCK	GEORGE	INITIAL / DATE
3. HODGES	THOMAS	HANKS	ROGERS	INITIAL / DATE
4. POWELL	SVEC	KING	HOLLADAY	INITIAL / DATE

REMARKS:

File —

If there is anything needed, can you please get it started.

Alan

John, Ed — I did not find any estimates of noncriteria pollutant emissions. Also, from a regulatory standpoint, it is important that we have an estimate of NMHC emissions. I suggest we bring these deficiencies, over

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 & REPT
- INITIAL & FORWARD
- DISTRIBUTE
- CONCURRENCE
- FOR PROCESSING
- INITIAL & RETURN

FROM: BT

DATE 12/16

PHONE

and any others that you find, to their (Wegman's) attention verbally.

Larry

No technical info on system and control equipment. 3 possible alternatives indicated but no details

JPS.

THE DYER SITE ENVIRONMENTAL ASSESSMENT

for the

PALM BEACH SOLID WASTE AUTHORITY

PALM BEACH COUNTY, FLORIDA

Prepared by

LEONARD S. WEGMAN CO. INC.

ATLANTA - MEMPHIS - NEW YORK

November, 1982

RL1 8.26

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PALM BEACH SOLID WASTE AUTHORITY
THE DYER SITE ENVIRONMENTAL ASSESSMENT

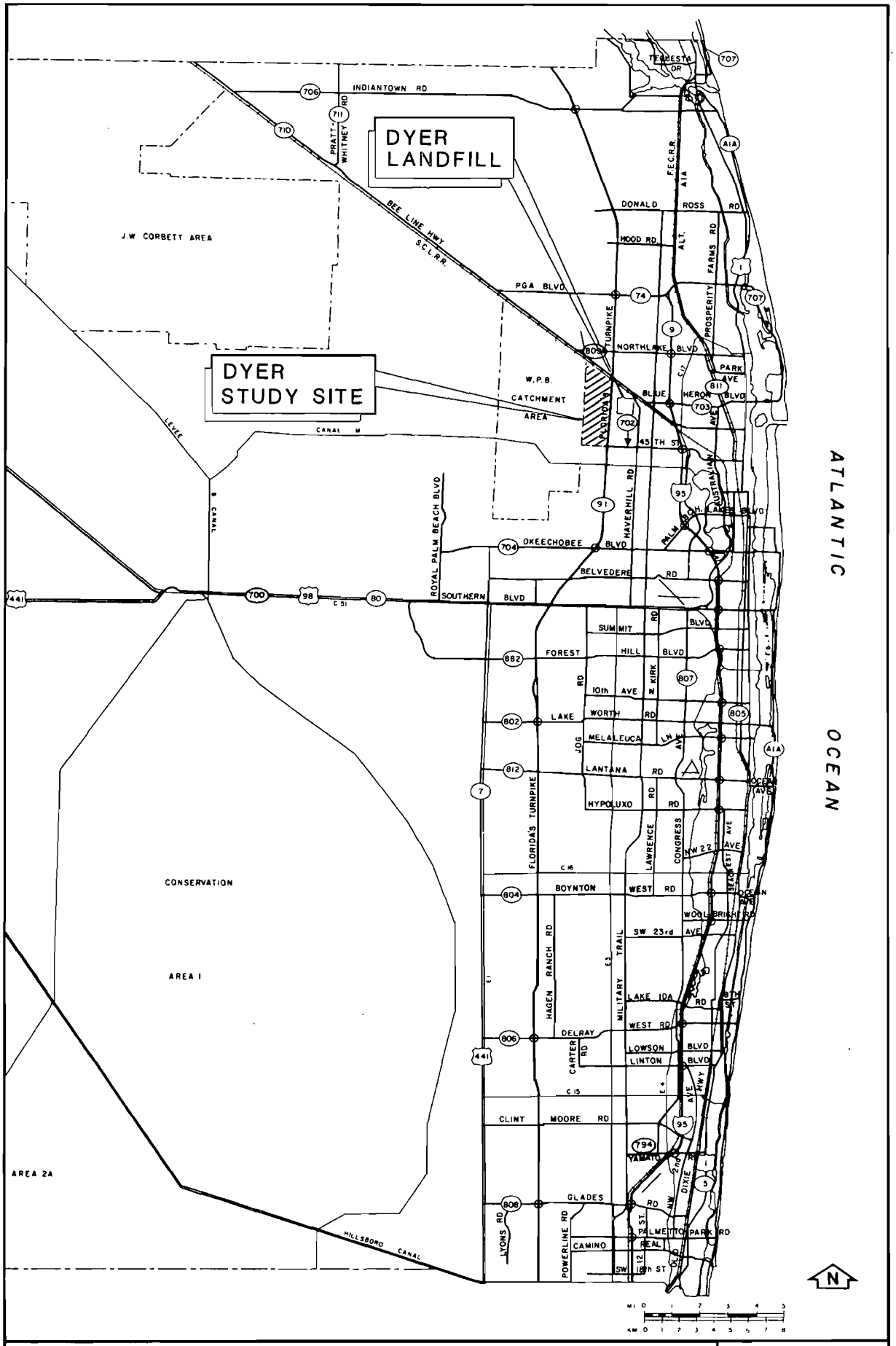
1. INTRODUCTION

The primary purpose of this environmental assessment is to determine any possible impacts on a site area from a resource recovery/landfill facility. The area for study known as the Dyer Blvd. site is approximately 1,600 acres in size and is bordered by the West Palm Beach Water Catchment Area on the west, by the Bee Line Highway on the north, the Florida Turnpike on the east, and 45th Street on the south. (See Figure 1 - Location Map.)

Resource recovery as used in this report refers to the reclaiming of energy and materials from solid waste. This type of project has become increasingly important in that limited landfill space has its life greatly expanded by reducing the county's solid waste by combustion and using the heat energy released to provide steam and/or electricity.

Palm Beach County's two main existing sanitary landfills located at the western edge of the heavily populated area have limited useful life remaining. It is estimated that the Lantana landfill space will be depleted in about two years, and then most of the County's waste would be disposed of at the Dyer landfill. Based on this premise, Dyer Blvd. landfill would then have about a five year life.

Site selection and development of State approved operating plans for a facility can often require long lead times. The necessary public participation and environmental reviews can and do result in increased costs of sanitary landfilling of solid waste. The rising cost of labor and fuel for transportation of solid waste can also result in substantial cost increases. Therefore solid waste disposal methods other than sanitary landfills, are becoming both necessary and economically viable.



PALM BEACH COUNTY DYER STUDY AREA-LOCATION MAP **FIGURE 1.1**

A second issue is the cost and availability of energy supplies. In recent years, the limited supply of conventional domestic fuels has resulted in a rapid escalation of energy prices. This factor, combined with an increased public awareness of the need for conservation and reuse of natural resources, has led many communities to investigate resource recovery technologies which extract materials from municipal refuse and produce energy. The proposed facility at the Dyer Blvd. site is designed both to generate energy and reduce the quantity of refuse requiring landfill disposal.

The Solid Waste Authority's Resource Recovery Project is aimed at solving several environmental problems with minimum environmental trade off. This Environmental Assessment provides a summary description of the project and analyzes environmental factors in accordance with applicable Federal guidelines.

The area of highest probable impact is the atmosphere. Accordingly, air pollution control aspects have been given prime consideration in project development and will continue to be emphasized as the project proceeds through detailed design, construction and start-up. Best "state-of-art" technology is being specified and a Prevention of Significant Deterioration (PSD) Analyses may be required. A review by the Department of Environmental Regulations (DER) of projected emissions will be required to determine if and to what extent PSD Analysis requirements are to be met. Energy to be sold as electricity will allow purchasers to reduce emissions of pollutants from their boilers that would otherwise burn more fossil fuels. This reduction in existing emissions may offset the new emissions and the net result may be environmentally advantageous.

The area of greatest public concern would be the impact of the Water Catchment area that supplies the potable water for West Palm Beach. Meeting and contacts have been held with various agencies, including:

- Flordia Department of Environmental Regulation
- Palm Beach County Health Department
- South Flordia Water Management District
- West Palm Beach Utility Director

Preliminary plans and objectives were reviewed concerning the environmental impact the Resource Recovery Facility would have on the environment.

The preliminary land use plan developed by the Palm Beach County consultants, Post, Buckley, Schuh & Jernigan is used as a basis for developing the property. The application by the same consultant for a permit to expand the present landfill at Dyer was also reviewed, since conditions at the new site are expected to be similar. The land use plan extends Jog Road along the western border of the property with a buffer strip about 1/4 mile wide, which will form a barrier for any surface water migrating towards the Water Catchment area to the west.

The various state and local agencies will require detailed information of the site which goes beyond the scope of this assessment. This would include Geological, Hydrological, and air quality information such as:

- Soil Borings
- Ground Water Flows
- Surface Water Flows
- Topographical Surveys

The information developed in these in depth investigations will determine the "Best Management Practices" and "Best Available Technology" to be used to prevent degradation of surface water and underlying acquifer. The contacts and preliminary data would indicate that the intended use for the site would have minimal if any adverse impacts on the land, water, or air environment.

The County wide project is the culmination of many years of study and effort to find a better way of handling its waste discards. This has led to the development of a realistic solution - in combination with environmental, economic and ecological goals.

2. FACILITY DESCRIPTION

At the time of this study, three different technology alternatives are still under consideration and will be used for the purpose of evaluation at the Dyer site.

2.1 RDF Manufacturing/Spreader Stoker Furnaces

A refuse derived fuel (RDF) system converts the heterogeneous municipal solid waste (MSW) into an RDF by removing inorganics through screening and then shredding the combustible to produce a homogeneous fuel to be burned in a dedicated spreader stoker boiler system located at the site. All ash and Class III waste (trash, vegetative, and demolition) would be disposed of on-site in dedicated landfills.

2.2 Mass Burning Waterwall Furnaces

Mass burning systems continuously introduce the MSW onto a mechanical grate in a waterwall incinerator. Again all trash and Class III waste would be disposed of on-site.

2.3 RDF Manufacturing at the Dyer Site and a Spreader Stoker Furnace at Lake Worth Utilities

Basically, this alternative involves manufacturing the waste into RDF at the Dyer site, then transfer the RDF to a dedicated boiler system to be used at Lake Worth Utilities. All ash and Class III waste will be landfilled at the Dyer site.

Since the exact technology or alternatives have not been chosen a worst case scenario will be used as part of this environmental assessment.

3. EXISTING ENVIRONMENTAL SETTINGS AND MAN-MADE FEATURES*

3.1 Physiography

3.1.1 Introduction

A discussion of both topography, geology and soils of the Palm Beach study area is covered in this section. Palm Beach County area can be divided into three general parts based on physiography and soils. These are the coastal ridge in the eastern part, the sandy flatlands in the central part, and the broad Everglades marsh in the western part.

3.1.2 Coastal Ridge

The coastal ridge area parallels the coast and extends inland two to three miles. This is the only part of the survey area that has any noticeable relief or slope. It includes Palm Beach Island and beaches, Lake Worth and the Intracoastal Waterway, and the coastal ridge itself. The elevation of the ridge ranges from about 25 to 50 feet above mean sea level and extends as much as 30 feet above adjacent flatlands. The elevation on Palm Beach Island ranges from 0 to about 25 feet above sea level. The soils consist of shelly sands that vary in thickness, slope and drainage, according to location and position. Lake Worth and the waterway areas are only slightly above sea level and include scattered areas of mangrove swamps, which consist of both organic and mineral soils. Soils of the coastal ridge are deep, excessively drained sands.

This area is covered by a surface layer of white to gray quartz sand of the Pamlico Sand formation which is up to about ten feet thick along the coastal ridge and barrier beaches. A maximum thickness of fifty feet is attained in the dune areas. This formation is of late Pleistocene to recent origin. North of Boca Raton and Anastasia Formation forms the backbone of the coastal ridge at a thickness of up to 200 feet. This is composed of sand, coquina, clacerous sandstone

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* Partially developed for the Palm Beach Central 201 Facilities Plan, Sept. 1978.

and shell marl. It provides a good aquifer in this area. South of Boca Raton the Anastasia Formation grades gently into Miami Oolite. This is a white to yellow, soft solution riddled limestone. The Caloosahatchee Marl, which is primarily composed of shelly sand and sand-shell marl with some limestone and sandstone, underlies the Anastasia Formation. It provides a fair aquifer. Below the Caloosahatchee Marl is the Tamiami formation which is comprised of marly sand, marl and shell beds. Impermeable clayey and sandy marls compose most of the Hawthorn Formation which underlies the entire study area's soils. Near West Palm Beach, this formation occurs at 400 feet below the land surface with a thickness of 500 feet.

3.1.3 Sandy Flatlands

The sandy flatlands lie between the coastal ridge and the Everglades. Most of this area has an elevation of 10 to 20 feet above mean sea level, but a maximum elevation of about 25 feet is near the north county line. The area consists mostly of pine and palmetto flatwoods with numerous small ponds and lesser areas of broad, grassy sloughs. The soils are predominantly nearly level, wet and sandy and have a loamy subsoil or sandy layers that are weakly cemented with organic matter. In places the soils are underlain by limestone. In the northern part of the area, most soils are in their natural condition. Much of the remaining has been drained and used for truck crops and pasture for many years.

As with the coastal ridge a layer of Pamlico Sand blankets the flatlands; here it is one to two feet thick. In some places, hard limestone, a foot or two thick, occurs immediately beneath the surface sands. Naturally occurring organic top soils are found only in the Loxahatchee Slough and the area immediately surrounding Lake Osborne. The flatlands strata is mainly comprised of the Anastasia Formation which ranges from 40-200 feet in thickness. As previously mentioned, this formation is generally composed of sand, coquina, calcerous limestone and shell marl. Some zones of the Anastasia Formation contain old mangrove swamp or salt marsh deposits of fine sand, silt, clay and organic materials. The occurrence of Caloosahatchee Marl in the north-western flatlands region is composed of sandy marl, clay,

silt, sand and shell beds. Both formations serve as fair to good aquifers, particularly the Anastasia. As mentioned in Section 3.1.2 the Tamiami and Hawthorn Formations underlie the surficial sediments of the flatlands.

The soils of the flatlands are virtually all nearly level, sandy soils; the exceptions being organic soils found in the Loxahatchee Slough and Lake Osborne vicinities. There is a wide variety of sandy types ranging from moderately well to poorly drained and anywhere from acid to alkaline in character. These soils have required extensive drainage and have frequently been replaced or covered with fill material as the population center has expanded westward. The organic, peaty soils usually overlie limestone or shell layers and occur in broad, level marshlands. Subsequently they are very poorly drained and of a neutral to alkaline character.

3.1.4 The Everglades

The Everglades is in the western two-thirds of Palm Beach County area. This area is a nearly level, generally treeless, sawgrass marsh that has an elevation of only about 14 to 16 feet above sea level. The soils are organic and are underlain by limestone at a depth that ranges from 2 to 8 feet but generally is about 4 to 5 feet. Under natural conditions, water stands on the surface for months, and only during extremely dry seasons is the surface exposed. Today, however, these soils have been drained, and water stands on the surface for only a short time. Having been drained, the organic soils are subject to oxidation and subsidence. Although initial subsidence is rapid and brief, the soil continues to subside at the rate of about 1 inch per year because of oxidation. Since land use, or cover, has little effect on the subsidence rate of drained organic soils, the best way to slow the rate is to maintain the highest water table possible for all uses. Except for those in undeveloped areas in the southwestern corner of the county most of the organic soils in the Everglades are used for sugarcane, winter vegetables and pasture.

3.2 Climate

The Palm Beach County Area has a tropical climate near the coast and a humid, subtropical climate west of the coastal area. Seldom does a cold air mass reach this region without being modified due to marine influences and the southern location. Light freezes occur infrequently along the coastal areas of the County and more frequently in the everglades and agricultural areas. The most eastern parts of the County come under the influence of the sea breeze during the day and land breeze during the night. Based on weather data accumulated at Palm Beach International Airport (Table 3.1), August is the warmest month with a mean of 82.7°F, a maximum mean of 90.6°F, and a minimum mean of 74.7°F. From the same data, January is the coldest month with a mean of 65.9°F, a maximum mean of 75.1°F and a minimum mean of 56.7°F. Rain showers and/or thunderstorms of short duration are frequent during the summer and fall. As indicated in Table 1, the County receives an average 60.9 inches of rain per year.

Meteorological parameters play a significant role in understanding the over-all air pollution cycle. The motion of the atmosphere is extremely variable and must be thoroughly examined in order to determine the movement and dispersement of pollutants. Both wind direction and wind speed are of primary importance. The surface wind and the wind found in the first few hundred feet of out atmosphere must be studied to determine diffusion and movement of the pollutants. The wind direction is indicative of the direction of travel of the pollutants. The wind speed determines the time it takes the pollutants to travel to a receptor and is a function of the amount of dilution of pollutant. Light winds, coupled with other factors, contribute to poor air quality episodes. U.S. Weather Service records of Palm Beach International Airport show the prevailing wind directions for the months of February through November are from one of the easterly headings. Mean monthly speeds vary between 7.6 mi/hr in August to 10.9 mi/hr in April. The wind direction and speed for 1981 (Table 3.2) taken at continuous monitoring site in West Palm Beach shows that a higher percentage of winds were from the east-northeast, east, or east southeast directions and the majority of the winds were in the 4-10 mi/hr category.

TABLE 3.1

PALM BEACH INTERNATIONAL AIRPORT

METEOROLOGICAL MEANS

MONTH	MEAN MAXIMUM TEMPERATURE	MEAN MINIMUM TEMPERATURE	MEAN MONTHLY TEMPERATURE	MEAN MONTHLY PRECIP. (IN)	PREVAILING WIND DIRECTION	MEAN WIND SPEED (mi/hr)
JANUARY	75.1	56.7	65.9	2.64	NW	9.9
FEBRUARY	76.0	56.7	66.4	2.41	SE	10.3
MARCH	79.4	61.0	70.2	2.93	SE	10.8
APRIL	82.7	65.3	74.0	3.47	E	10.9
MAY	86.0	69.3	77.7	5.76	ESE	9.7
JUNE	88.7	72.6	80.7	7.89	ESE	8.1
JULY	90.4	74.3	82.4	6.37	ESE	7.5
AUGUST	90.6	74.7	82.7	6.52	ESE	7.6
SEPTEMBER	88.7	74.3	81.5	9.53	ENE	8.6
OCTOBER	84.8	70.4	77.6	7.74	ENE	10.0
NOVEMBER	79.9	63.9	71.9	3.14	ENE	10.1
DECEMBER	76.4	58.8	67.6	2.48	NNW	9.9
YEARLY	83.2	66.5	74.9	60.88	ESE	9.5

TABLE 3.2

West Palm Beach

WIND DIRECTION AND SPEED (MI/HR) OCCURRENCES

1981

DIRECTION	1-3	4-6	7-10	11-16	17-21	22-27	TOTAL	PERCENT
346 - 15 (N)	225	205	167	55	1	1	654	7.78
16 - 45 (NNE)	130	134	226	91		1	582	6.93
46 - 75 (ENE)	118	262	369	117			866	10.31
76 - 105 (E)	204	414	369	34			1021	12.15
106 - 135 (ESE)	196	438	357	36		1	1028	12.24
136 - 165 (SSE)	121	234	333	95	4		787	9.37
166 - 195 (S)	114	146	88	45	13		406	4.83
196 - 225 (SSW)	156	153	59	24		1	393	4.68
226 - 255 (WSW)	162	143	94	17	2		418	4.97
256 - 285 (W)	181	61	33	3			278	3.31
286 - 315 (WNW)	287	120	34			1	442	5.26
316 - 345 (NNW)	373	214	94	10			691	8.22
CALM	836						836	9.95
TOTAL	3103	2524	2223	527	20	5	8402	
PERCENT	36.93	30.04	26.46	6.27	.24	.06		100.00

3.3 Population

Palm Beach County has witnessed tremendous increases to its population in recent decades. This growth situation has been especially intensified in the coastal areas of the county since 1970. Increasing population rates have far reaching implications which transcend the mere numbers of people settling in this area. For example, migration to Palm Beach County from other states and other areas of Florida has been a major factor of this growth. Consequently, the county has been impacted by distinct socio-economic characteristics of its population which, in turn, affect levels of service necessary to satisfy the needs and desires generated by this growth.

PALM BEACH COUNTY GROWTH SINCE 1970

YEAR	POPULATION	% CHANGE
1970	348,993	-
1971	368,220	6
1972	391,800	6
1973	426,565	9
1974	450,670	6
1975	476,970	6
1976	503,250	6
1977	513,870	2
1978	530,865	3
1979	564,950	6
1980	576,863	2
1981	615,165	7
1982 *	637,940	4

*Preliminary

Source: Are Planning Board of Palm Beach County Estimates, April of each year.

The major portion of the population in Palm Beach County has been settling in the incorporated municipalities. Although the percent of total population living in incorporated municipalities within the county has decreased somewhat in the 1970's, the municipalities still contain a majority of the population.

The cities of West Palm Beach and Boca Raton, respectively, represent the hierarchical center of population growth along the coastal region of the county. Boca Raton has emerged only recently as a hierarchical center. The City of Belle Glade is recognized as the population center of the Glades area in Palm Beach County.

The major concentration of population in the county is in the coastal area. Historically, population growth has ocurred along the eastern coastal areas. This settlement pattern dates nearly to the turn of the century. Since that time, population growth has been contained primarily within the immediate coastal fringe (land area east of Florida's Turnpike) and, to a lesser extent, in the Glades area. However, a westward movement of the population is occurring, especially in the Lake Worth-West Palm Beach area.

Future population estimates are for the county to have continued rapid growth. In the year 1985, population in the Palm Beach County study area is expected to be around 700,000 people.

The Palm Beach county study area averages approximately 1500 people/square mile in the higher density areas of the county. North of the Dyer Blvd. site across from the Bee Line Highway lies an existing residential area known as Steeplechase and a new residential development area. Population density in this average approximately less 600 persons/square mile. To the east of the Dyer Blvd. site lies the existing Dyer landfill.

To the southeast of the site lies the Gramercy Park residential area which borders 45th Street and Haverhill Road. Population in this residential park is approximately 1000 persons. The immediate area south and west of the Dyer site are mainly conservation areas with sparse population.

3.4 Zoning

The proposed Dyer Blvd. site is zoned "Agricultural District (AG)." The purpose and intent of the AG District is to provide for the protection of agriculture as a major industry in the county by preventing encroachment on agricultural lands by incompatible uses; to encroach a broad range of agricultural activities and their accessory operations, including the processing and sale of agricultural products raised on the premises; to protect watersheds and water supplies, wilderness and scenic areas, and conservation and wildlife areas; and to permit a variety of activities which require non-urban locations but which do not operate to the detriment of adjoining lands devoted to rural and agricultural purposes.

There are special exceptions subject to Commission approval. If the Commission determines, after the review of the application and plans submitted that the conditions and provisions of the regulations set forth and defined in the Zoning Code have been met, and if the proposed use or uses are consistent with good zoning practice and are not contrary to the policies of the Comprehensive Land Use Plan of Palm Beach County, the following uses will be permitted:

Public and Private Utility Services and accessory buildings and structures including but not limited to the following:

- Electric power and light substation
- Gas and water regulation station
- Incinerator
- Refuse and Trash dumps
- Sanitary landfill
- Sewage Treatment Plant
- Telephone exchange building and substation

- Water tower, storage tank, reservoir, treatment plant
- Transfer station

3.5 Transportation

A Resource Recovery facility located at the proposed Dyer Blvd. site location will generate increased traffic in the immediate area. Access to the site will be made by Jog Road, the new Jog Road extension, and possibly the Florida Turnpike which may have an entrance and exit ramp on 45th Street.

The proposed facility involves three types of trips: (1) trips by collection trucks delivering waste directly to the site; (2) trips by transfer trailer trucks from the different transfer stations that are proposed throughout the county; and (3) trips made by RDF transfer trailers to Lake Worth Utilities. There will be truck traffic on-site due to the generation of ash and the disposal thereof.

Since 45th Street dead ends near the site, existing traffic volume in the area is rather limited. Increased traffic will be apparent at the Dyer Blvd. site because of up to 150 transfer trailer trucks going in and out of the site. Traffic volume around the existing Dyer landfill will drastically be reduced due to the closure of the landfill.

3.6 Water Resources

3.6.1 Introduction

Water quality concerns have always been a major focus of concern by the Federal, State,and local regulatory agencies. All of these agencies have provided general direction and policy for the ongoing efforts to assure adequate potable water availability to the growing population of Palm Beach County. Provisions for potable water supply, treatment and distribution are very complex issues. Such things as aquifer recharge and management, protection of open space and other permeable surfaces, wellfield development, water use and withdrawal permits, collection-transmission-distribution lines, treatment facilities, etc. all need to be considered and adequately addressed if a sufficient potable water system is to be maintained.

3.6.2 Surface Water

Palm Beach County area's surface waters are easily its most important physical asset. These waters play an important role in the economic structure of the study. Other than in the lower reaches of the Loxahatchee River, this area has no flowing streams. It does, however, have an abundance of surface water that includes more than one-third of Lake Okeechobee; Lakes Mangonia, Clear, Osborne, and Ida, just west of the coastal ridge; and an extensive network of canals.

Overall management of this surface water is the responsibility of the South Florida Water Management District. Important components of the water management system in the Palm Beach County area are Lake Okeechobee, the network of major and minor canals, and the pumps and control structures. The system is used to prevent flood damage, provide drainage, control groundwater levels, distribute water for irrigation, and store water.

3.6.3 Surface Drainage

Drainage in Palm Beach County Area is provided by both major and minor drainage systems. Parts of the major system are the West Palm Beach Canal, the Hillsboro Canal, the North New River Canal, and Miami Canal, all of which tie Lake Okeechobee with the east coast. Ocean Canal and Bolles Canal link the four major canals. The minor systems that included numerous smaller canals and drainage districts are interconnected with the major system under the control of the South Florida Water Management District.

Palm Beach County's historical drainage patterns have been significantly altered by man in his efforts to manage water resources. These alterations have included construction of canals, levees, pumping stations, etc. and have dramatically changed both surface and underground drainage capability. These changes have resulted in the delineation of several drainage basins throughout the County. The delineation was based upon similar drainage characteristics, both natural and man-made, of the area within each particular basin. There are 20 drainage districts within the County which are responsible for drainage within their designated boundaries.

3.6.4 Groundwater

The groundwater reservoirs in Palm Beach County consist of the shallow water table aquifer and the deep artesian Florida aquifer. The information presented below has been taken primarily from U.S.G.S Water Resources Investigations 76-21.

3.6.4.1 Shallow Aquifer

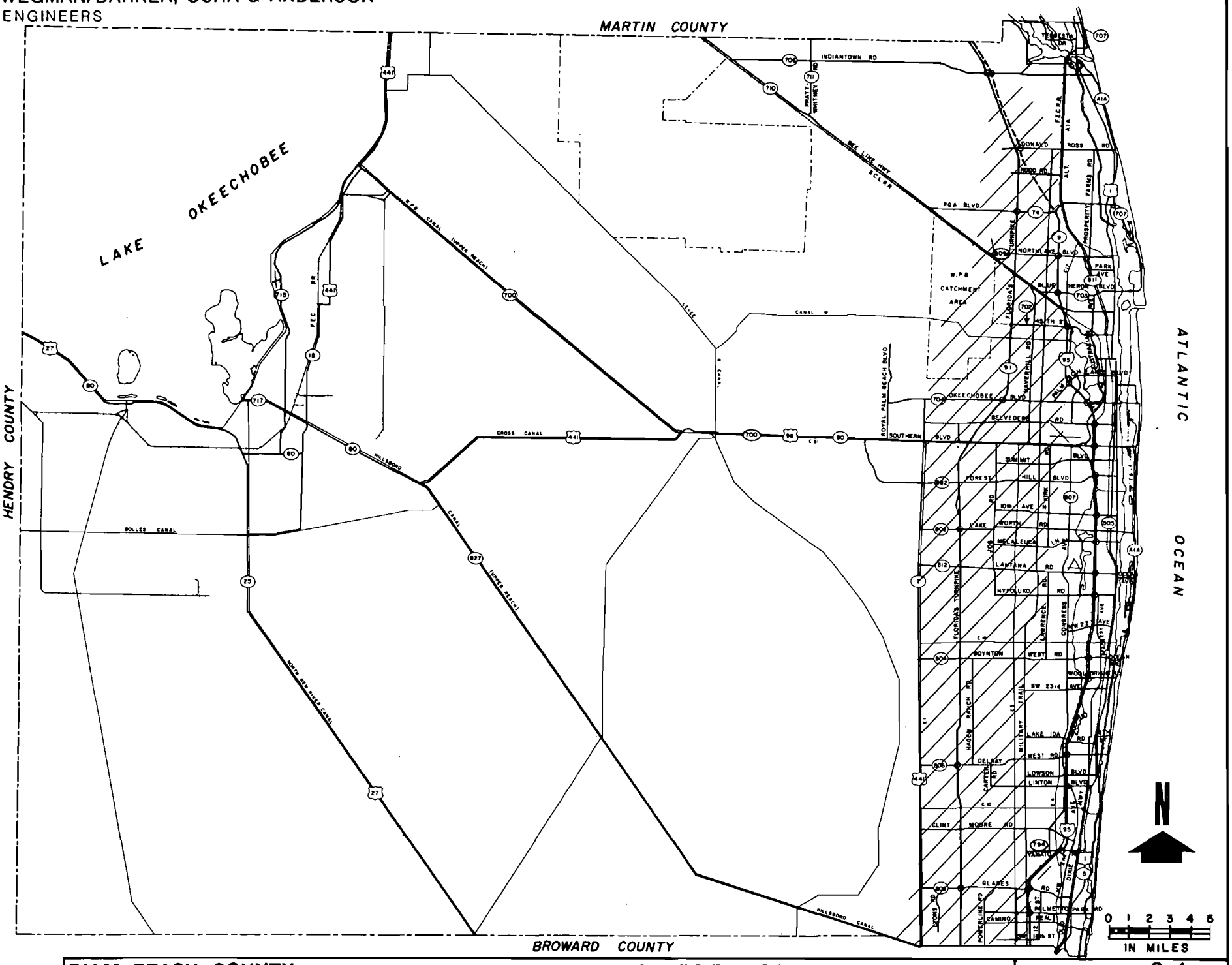
The Biscayne aquifer is a hydrologic unit of water bearing limestone and sand and is one of the most permeable aquifers in the world. It underlies South Florida but thins out in Palm Beach County and is only available in the southeastern portion of the County, near Boca Raton. Recharge of this aquifer is from rainfall and infiltration from canals.

Directly north of the Biscayne aquifer lies a productive shallow aquifer extending underneath the rest of Palm Beach county, and underlying all of Martin and St. Lucie counties. The transmissivity of the aquifer is much lower than in the Biscayne aquifer. This lower transmissivity coupled with coastal ridge reduces the danger of sea water intrusion in Palm Beach County. This aquifer consists of sand, shell sandstone, limestone and various mixtures of these materials. A north-south cavity-riddled sandy limestone section which is located several miles inland and extends almost the entire length of Palm Beach County is the most permeable section. See Figure 3.1.

This shallow aquifer ranges in thickness from 75 feet in the west to 250 feet in the east. In consequence, the water quality in the western portion of the county is poor and the depth of wells are restricted.

The shallow aquifer is underlain by a section of less permeable sediments composed primarily of fine sand, marl and silt. This section contains discontinuous zones if limestone and shell that are capable of yielding minor quantities of water to wells. The bottom of the less permeable section conforms with the top of a green, shelly clay that occurs at depths of more than 400 feet in the southeast and almost 175 feet in the west. This green clay of Hawthorne Formation

WEGMAN/BARKER, OSHA & ANDERSON
ENGINEERS



PALM BEACH COUNTY

SHALLOW AQUIFER ZONE

FIGURE 3.1

forms the main confining unit that separates the water in the shallow aquifer from that in the deep Floridan aquifer.

Water within the aquifer generally occurs under water-table conditions. It flows toward the coast in the east half of the county and to the south in the west half. The high water level in the Corbett Wildlife Area and other conservation areas influences the general movement of water in the central and eastern parts of the county. Regulation of water levels in canals by water management agencies and the operation of high capacity well fields causes local variations in the regional flow pattern.

The shallow aquifer is replenished primarily by local rainfall. During the wet season, the water table rises 2 to 4 feet in remote areas and, in places, reaches above land surface causing local flooding or swampy conditions. During the dry season, the water table declines because of evapo-transpiration and the continual use of ground water for supply.

Water quality wells are sampled periodically by the U.S. Geological Survey. The values indicate that, in general, the mineral content increases with depth and as one moves inland. This is indicated by an increase in chlorides concentration and conductance.

3.6.4.2 The Floridan Aquifer

This artesian aquifer underlies all of Palm Beach County, but at a considerable depth. Wells which make use of this water supply are usually drilled 1,000 feet or more. The piezometric or pressure surface slope southeasterly from about 53 feet above mean sea level at Belle Glade to about 37 feet above M.S.L. at West Palm Beach.

The water within this aquifer stays at a year-round temperature of 73°F or 4° to 6° cooler than the shallow groundwater.

The deep strata of limestone in the Floridan aquifer is called the "Boulder Zone". This formation is highly cavernous and has the capacity to accept large volumes of water injected under pressure.

The Boulder Zone presently contains ancient sea water which is highly mineralized and therefore unusable.

4. SENSITIVE AND HAZARDOUS AREAS

4.1 Flood Fringes

Flood fringes are relatively flat areas or lowlands adjoining the channel of a river, stream, or water course which have been or may be covered by floodwater. A flood is a "general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland and/or tidal waters and/or the unusual and rapid accumulation of runoff of surface water from any source." (Executive Order 11988, Flood Plain Management, May 25, 1977). The benefits of preserving flood fringes in their natural or relatively undisturbed state include the reduction of flood hazards and losses, maintenance of water quality standards, replenishment of groundwater, soil conservation, the fostering of fish, wildlife and plant resources, and provision of recreational areas.

Palm Beach County has an extensive canal system which is designed for water supply, flood control, drainage and irrigation purposes. There are four major canals which provide freshwater supplies to the eastern coastal areas from Lake Okeechobee. These are the Miami, North New River, Hillsboro and West Palm Beach Canals. In addition to these major canals, there are numerous smaller canals which form an interconnecting surface water system with massive pumping capability several of which are prone to flood in certain areas which is seen in Figure 4.1.

There is only one free-flowing river in Palm Beach County, this being the Loxahatchee River in the extreme northern portion of the County, west of the turnpike. This river has been a long concern of various federal, state and local agencies and is the only one of its kind in southeast Florida. Every effort must be made to preserve and protect this river in its natural state for the continued enjoyment by present and future generations.

The flood plain for the Loxahatchee extends on both sides of the river and encompasses all of the swamp forest community which forms the river "corridor." This area is extremely rich and ecologically

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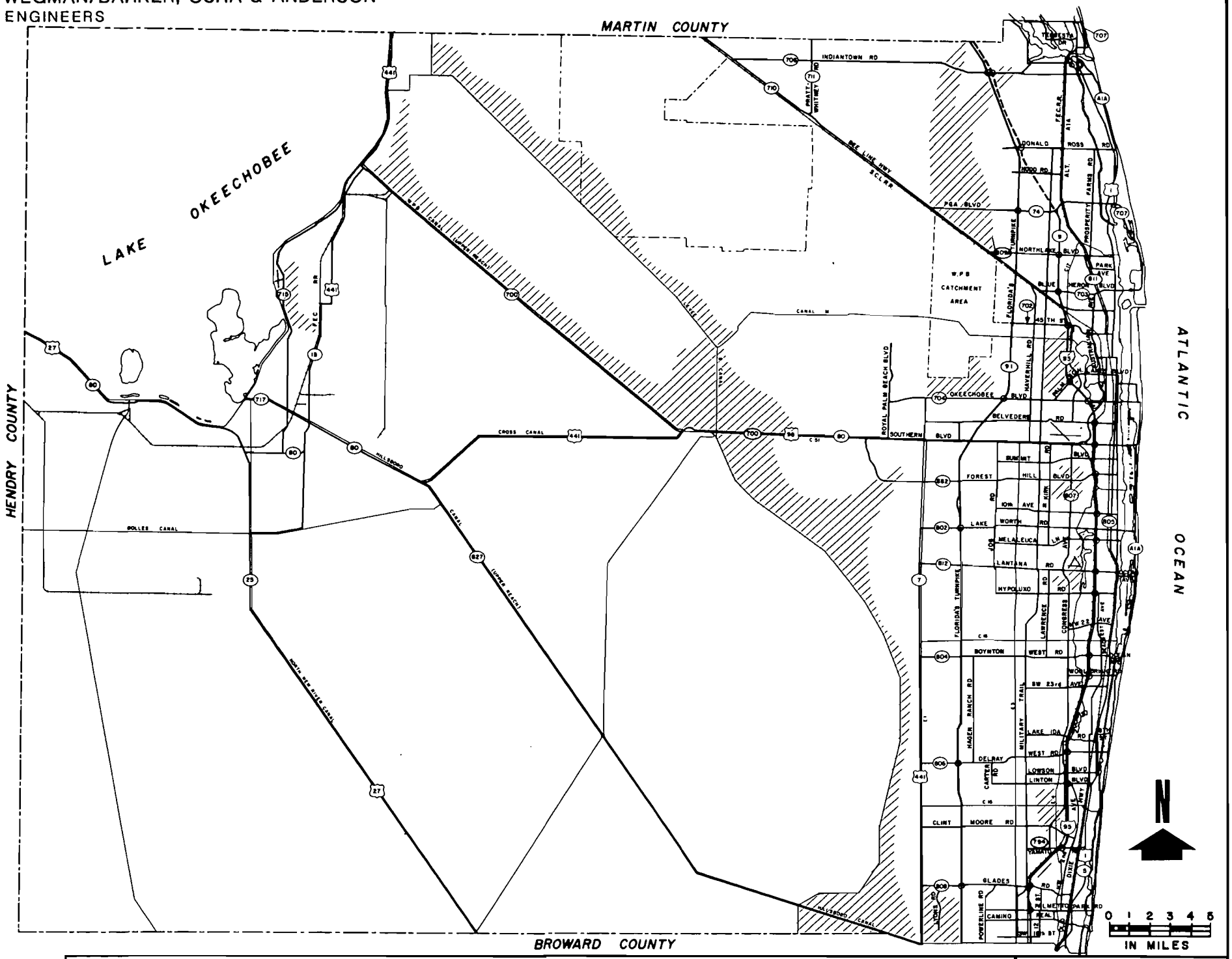

PALM BEACH COUNTY — GENERALIZED FLOOD PRONE AREAS — FIGURE 4.1

diverse and must be included in any protection plans for the river. Because of its significance and importance as part of the Loxahatchee River system, the natural character and integrity of this flood plain must be maintained.

As seen in the Figure 4.1, the flood prone areas do not impose a problem to the Dyer Blvd. site. It should be noted that this figure is only general in nature and exact boundaries should be referred to the South Florida Water Management District. Since the proposal site is not located in any flood prone areas, it will not affect existing runoff or flooding downstream.

4.2 Wetlands

Wetlands are land areas which, because of their frequent inundation by surface or groundwater, can support vegetative or aquatic life that requires saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats and natural ponds. Wetlands provide habitats for plants and animals that are critical parts of flood chains in the local ecosystems. Commerically important marine life as well as threatened and endangered species depend on wetlands.

The predominant wetland in the immediate study area is the West Palm Beach Water Catchment Area. The Water Catchment Area covers approximately 18 square miles within the City of West Palm Beach and is located one mile west of Florida's Turnpike, just south of the Bee Line Highway. The Water Catchment Area functions primarily as a natural surface water supply source for the City of West Palm Beach. Raw water is supplied to the City's treatment plant from the Catchment Area through Lake Mangonia and Clear Lake. The West Plam Beach system then supplies water to the cities of Palm Beach and South Palm Beach. In addition to its water supply function, the Catchment Area is also used for various recreational activities without significant regulation or support facilities.

Important aspects of the Water Catchment Area are its value as a natural open space and its classification as a wetland. The value of

wetlands to the natural environment and water management is significant. Wetland vegetation is important to water quality because it reduces the amounts of nitrogen and phosphorous contained in existing water supplies. Water is also stored in wetland areas and released as it becomes necessary. Existing vegetation in such areas also absorb nutrients and thereby assists in purifying the stored water. Wetland vegetation is also the first step in development of organic soils which produce coal, oil, gas, peat and muck during the process of decomposition and decay.

As a natural wetlands, the Water Catchment Area is also a valuable animal and wildlife habitat as well as a biological filtering system. It serves as a food source for aquatic animals, a spawning and nursery area for fish and wildlife and is composed of the following types of habitats: shallow freshwater ponds (20 percent), wet prairies and freshwater marshes (25 percent), cypress sloughs (20 percent), pine and cypress associations (5-10 percent), pine flatwoods (20 percent) and distributed areas (less than 5 percent).[1]

On the Dyer Blvd site, if any wetland is altered or destroyed, full replacement of the lost functions will be provided through the creation of a new wetland area, through the restoration of areas that were historically wet, or through the enhancement of functions in existing habitats. The amount and extent of change in the wetlands on the site will be determined with the cooperation of the Treasure Coast Regional Planning Council.

4.3 Cultural Resources

Cultural resources include districts, sites, buildings, structures or objects which are significant in American history, architecture, archaelogy or culture. Since the area of the Dyer Blvd. site is an undeveloped area, cultural aspects will not be affected by the proposed facility and landfill.

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[1] City of West Palm Beach Beach Water Catchment Area Study, by Post, Buckley, Schuh and Hernigan, Inc., September, 1980.

There are a few archeological features in the Palm Beach County study area but none in the project area boundaries. While it is unlikely, if by chance archeological remains are discovered during the excavation of the proposed project, construction will be stopped to allow examination and recommendation by the proper authorities. There are no archeological sites that will be adversely affected upon the implementation of the project.

4.4 Rare and Endangered Species

This section deals with the species and subspecies of animals in Florida whose continued existence in the state is threatened to a significant degree or which, because of rarity or other causes have a likelihood of becoming threatened if present trends continue, i.e., due to habitat destruction, reduced productive ability due to pesticides, shooting, etc. Animals which are endangered are in imminent danger of extinction or extirpation if the deleterious factors affecting them continue to operate. A threatened form is one which is believed likely to become endangered in the near future if the casual factors now at work continue to operate. A rare species is one which may not be presently threatened or endangered, but is potentially at risk because it is only found within a restricted geographic region or habitat or is thinly scattered over a more extensive range. A list of endangered, threatened and rare animal species of Palm Beach County may be found in Table 4.1.

Some of the species are likely to be in the study area, especially in the Water Catchment Area. The proposed facility poses no danger to these species of animals.

TABLE 4.1

STATUS OF RARE AND ENDANGERED SPECIES OF PALM BEACH COUNTY, FLORIDA

SPECIES	AUTHORITY 1	2	3
Striped Mud Turtle (Kinosternon bauri bauri)	Th		
Atlantic Loggerhead (Caretta caretta caretta	Th		
Atlantic Leatherback (Dermochelys loriacea)	Ra		
Atlantic Green Turtle (Chelonia mydas mydas)	Th	Th	Th
Florida Brown Snake (Storeria dekayi victa)	Th		
Peninsula Ribbon Snake (Thamnoplus sauritus sackeni)	Th		
Eastern Indigo Snake (Drymarchon corais couperi)	Th		Th
Corn Snake (Elaphe guttata guttata)	Th		
Gopher Tortoise (Gopherus polyphemus)	Th		
American Alligator (Alligator mississippiensis)		En	Th
Florida Everglades Kite (Rosthramus sociabilis plumbeus)	En	En	Th
Peregrine Falcon (Falco peregrinus)	En	En	Th
Brown Pelican (Pelecanus occidentalis)	Th	En	Th
Magnificent Frigatebird (Fregata magnificens)	Th		
Southern Bald Eagle (Haliaeetus leucocephalus)	Th	En	Th

TABLE 4.1 continued

SPECIES	AUTHORITY 1	2	3
Osprey (*Pandion haliaetus*)	Th		
Florida Sandhill Crane (*Grus canadensis*)	Th	Th	Th
Great White Heron (*Ardea occidentalis*)		En	Th
Least Tern (*Sterna albifrons*)	Th		
Roseate Spoonbill (*Ajaja ajaja*)	Ra		Th
Short-tailed Hawk (*Buteo brachyurus*)	Ra		Th
Rice Rat (*Oryzomys* sp.)	En		
Florida Panther (*Felis concolor*)	En	En	Th
Florida Mouse (*Peromyscus floridanus*)	Th		
Black Bear (*Ursa americanus*)	Th		Th
Everglades Mink (*Mustela vision evergladensis*)	Th	Th	Th
Weasel (*Mustela frenata*)	Th	Th	Th

1. Florida Committee on Rare and Endangered Plants and Animals
2. United States Department of the Interior List of Threatened and endangered Wildlife
3. Florida Game and Fresh Water Fish Commission's List of Threatened Species of Florida Wildlife
4. En=Endangered, Ra=Rare, Th=Threatened

4.5 Coastal Zones

The Coastal Zone Management Act of 1972 provides funds for States to formulate plans to preserve, protect, develop and improve their coastal resources. These plans attempt to prevent shoreline erosion and the loss of living marine resources and wildlife, preserve nutrient rich areas and recreational areas, and avoid adverse changes to ecological systems.

The State of Florida is one of the coastal states covered by the Act. The state coastal zone management plan was approved by the Secretary of Commerce in 1981. Since the Dyer Blvd. site is located inland, there will be no changes in land use or changes in the quality of coastal zone resources.

4.6 Recreation of Open Space

Palm Beach County contains a variety of natural resources which cater to the recreational pursuits of thousands of residents and tourists each year. Local amenities such as the Atlantic Ocean and its beaches, year-round temperature climate, extensive wetlands and marsh areas, and an abundance of wildlife all contribute to a favorable environment for the outdoor, recreation-oriented individual.

An inventory shows that there are 314,291 acres of public land in the County used for recreational or conservation purposes. This inventory is in federal, state, county and municipal ownership. Community parks, metropolitan parks, regional parks, beaches, conservation lands and special areas were inventoried with neighborhood parks and other small areas. The following provides a breakdown of the class, number and total acres of parklands throughout the County:

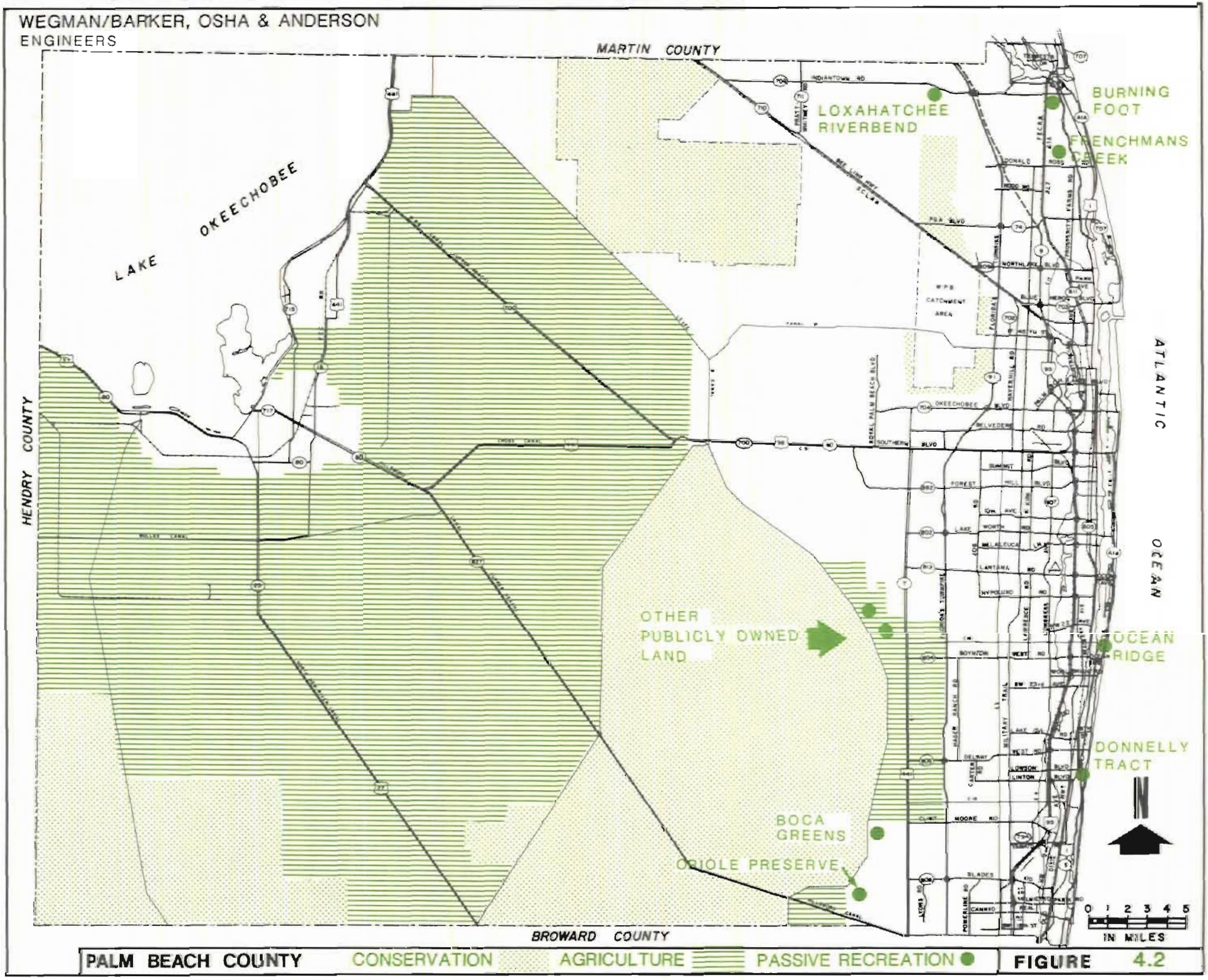
Park Class		No. of Public Parks	Acres
Class I	- Neighborhood	106	362
Class II	- Community	73	984
Class III	- Metropolitan	9	2,020
Class IV	- Regional	5	2,371
Class V	- Nature Preserves	11	307,922
Class VI	- Special Areas (includes beaches, boat ramps, marinas and wayside parks)	56	632
	Total	260	314,291

The nearest recreational area to the proposed Dyer Blvd. site location could be considered the Water Catchment Area. This area is now used for recreation without significant management or control and with minimal support facilities. The recreational activities found in the Catchment Area are predominantly water-oriented. There is some fishing within the Catchment Area and along the canals where parking is available or access is relatively easy. Since no recreational activities occur in the immediate site area, no impacts will occur on existing activities in the area.

4.7 Agricultural and Productive Lands

Palm Beach County Area is one of the few places in the United States that has either a tropical or a humid, subtropical climate. A large percentage of the mineral soils are nearly level, poorly drained, and not fertile. The more extensive organic soils are nearly level and very poorly drained, but are relatively fertile. If all these soils are drained and properly fertilized and with the benefit from the favorable prevailing climate, they will produce good yields of winter truck crops.

Little farming was done in Palm Beach County Area prior to the establishment of the Everglades Drainage District in 1907, and until the 1940's most farms were within 6 miles of Lake Okeechobee. By the mid 1920's vegetable farming in the Everglades was fairly extensive.


WEGMAN/BARKER, OSHA & ANDERSON
ENGINEERS
MARTIN COUNTY
LAKE OKEECHOBEE
HENDRY COUNTY
ATLANTIC OCEAN
LOXAHATCHEE RIVERBEND
BURNING FOOT
FRENCHMANS CREEK
OTHER PUBLICLY OWNED LAND
OCEAN RIDGE
DONNELLY TRACT
BOCA GREENS
ORIOLE PRESERVE
BROWARD COUNTY
0 1 2 3 4 5
IN MILES
PALM BEACH COUNTY
CONSERVATION
AGRICULTURE
PASSIVE RECREATION
FIGURE 4.2

In the late 1920's limited planting of sugarcane began. These two crops prevailed until the early 1950's when a significant area of pasture was developed. In 1960 when sugar imports from Cuba ceased, acreage of sugar cane rapidly increased.

Sugarcane production is the main agricultural pursuit in Palm Beach County area. The survey area produces over 90 percent of Florida's sugar. Several sugar mills, producing raw sugar and molasses, are located in this area.

Fresh vegetables are marketed in several ways. Tomotoes and sweet corn are packed and shipped by commercial packing companies. Most other vegetables from the coastal areas are marketed at the Pompano Farmers' Market in Broward County. All fresh vegetables from the Everglades and some from the coast are marketed at Pahokee and Belle Glade. There are no citrus processing plants in Palm Beach County Area, so all citrus, except that marketed as fresh fruit, is shipped to other counties for processing.

As it can be seen in Figure 4.2, the majority of the agricultural lands are in the western part of the county. At the Dyer site no agricultural development is in the immediate area, therefore no impacts will be made on the agricultural market in the county.

5. ENVIRONMENTAL AND SOCIAL IMPACTS AT THE DYER BLVD. SITE

5.1 Air Quality

5.1.1 General

Minimization of air pollution impacts is a major objective of the proposed project. A state-of-the-art control device known as an baghouse will be employed to control particulate emissions. Air pollution control employing a baghouse is accepted as representing the best available control techology (BACT) for air pollution control for solid waste-to-energy projects.

5.1.2 Air Quality Regulations

Various air pollution emissions regulations are applicable to resource recovery and energy conservation facilities. These regulations are promulgated by federal, state, and local air quality agencies. The Department of Environmental Regulations (DER) and the Palm Beach County Health Department have developed their own Air Pollution Control Regulations. These regulations incorporate the federal regulations and have therefore been delegated implementation and enforcement authority of Federal regulations. Since regulations are periodically revised, the current regulations should be reviewed before commencing final design and permit application procedures. Agency guidelines that the proposed project will have to comply with include the following:

FEDERAL

- National Ambient Air Quality Standards
- National Emission Standards for Hazardous Air Pollutants
- Standards of Performance for New Stationary Sources

. Regulations Pertaining to Prevention of Significant Deterioration of Air Quality

STATE

. Florida Department of Environmental Regulation, Rule 17-2

5.1.2.1 National Ambient Air Quality Standards (NAAQS)

Federal air quality regulations are derived from the Clean Air Act Amendments of 1970, the Energy Supply and Environmental Coordination Act of 1974, and the Clean Air Act Amendments of 1977. The NAAQS established threshold levels of air pollutants below which no adverse affects would occur. These levels were designed to provide an adequate margin of safety so as to protect the public health. The state and local ambient air quality standards are essentially the same as the national standards and are presented in the permit section of the study.

Air pollutants are classified into two groups: primary pollutants and secondary pollutants. Primary pollutants are those emitted directly from sources, while secondary pollutants are formed by chemical and photochemical reactions of primary pollutants with the atmosphere. Primary pollutants include carbon monoxide (CO), hydrocarbons (organic gases), oxides of nitrogen (NO_x), sulfur dioxide (SO_2), and total suspended particulates (TSP). Photo-chemical oxidants and nitrogen dioxide (NO_2) are the principal secondary pollutants. These form a visible brown-yellow haze. The quantity of secondary pollutants is dependent on the availability of sunlight as much as on the availability of primary pollutants.

5.1.2.2. National Emission Standards for Hazardous Air Pollutants (NESHAPS)

Hazardous air contaminants are any air contaminants which may cause, or contribute to, an increase in serious irreversible or incapacitating reversible illness, and has been so designated by the regulations of the NESHAPS. State and local standards are the same as the national standards and are regulated by the DEPARTMENT OF ENVIRONMENTAL

REGULATIONS. Pollutants include asbestos, beryllium, beryllium from rocket motor firing, mercury, and vinyl chloride.

5.1.2.3 Standards of Performance for New Stationary Source (NSPS)

The NSPS establishes emission limitations for new sources of specific industrial groups. These rules apply to the owner or operator of any new major facility or modification to a major facility commenced after the adoption of each rule. Subpart E is applicable to all incinerators with a charging rate greater than 50 tons per day (TPD). This subpart requires that particulates discharge be no greater than 0.08 grains per dry standard cubic foot (0.18 g/m^3 dry) corrected to 12 percent carbon dioxide.

Compliance of the proposed project will be achieved with a baghouse which will be designed to emit no more than 0.01 grains per dry standard cubic foot corrected to 12 percent carbon dioxide.

5.1.2.4 Prevention of Significant Deterioration (PSD)

Regulations 40 CFR 52.21 limits increases in particulate and sulfur dioxide concentrations to specified increments above base levels measured in attainment areas. Data on total emissions for the entire air basin are required in order to evaluate incremental increases in specific emissions due to operation of any new or modified furnaces. PSD also limits the number of tons of hazardous (toxic in small quantities) pollutants--mercury, beryllium, lead, etc. that may be emitted.

PSD applies only to major sources of air pollution, sources which will emit on a controlled basis more than 100 tons per year. For example, if a major source is expected to emit more than 40 tons per year of SO_2 in the Dyer Blvd. site area, the project must use BACT, and must also conduct modeling and monitoring of emissions. In addition, if emissions of hazardous pollutants exceed certain thresholds, BACT, modeling, and monitoring may be required.

The purpose of the required modeling and monitoring is to determine whether the project would contribute to deterioration of air quality in the basin, in which case further control or disapproval of the project is mandated.

Threshold levels for BACT, modeling, and monitoring requirements appear in Table 5.1.

5.1.2.5 The Permit Process

Permits for construction and/or operation of processes that discharge gases to the atmosphere are the primary means for control of air emissions by the DER and the local Health Department. Regulations applicable to a specific plant site must be thoroughly reviewed to determine the necessary permits required for the proposed project. The state and local permit application requirements are one and the same for the Palm Beach Area. An application need only be made with the local DER.

In the Palm Beach Study Area for example, two stages of permits are required. These are:

- Permit to construct--to be applied for and granted before construction of a facility may proceed.
- Permit to operate--to be issued after construction and generally after point sources have passed stack emission tests.

Permit review requirements include:

1) Compliance with all applicable emissions limitations;
2) Use of BACT technology for all pollutants subject to new source review (NSR);
3) Ambient impact analysis to demonstrate to the FDER that the increase in allowable emissions from the facility will not cause or contribute to a violation of any ambient air quality standard or allowable increase;

TABLE 5.1

Threshold Levels for Prevention of Significant Deterioration Review

Pollutant	PSD Limitation in tons per year
Carbon monoxide	100.0
Nitrogen dioxide	40.0
Sulfur dioxide	40.0
Particulate matter	25.0
Ozone	40.0 (of Voc)
Lead	0.6
Asbestos	0.007
Beryllium	0.0004
Mercury	0.1
Vinyl chloride	1.0
Fluorides	3.0
Sulfuric acid mist	7.0
Hydrogen sulfide	10.0
Total reduced sulfur (including H_2S)	10.0
Reduced sulfur compounds (including H_2S)	10.0

Source: DER, Rule 17-2.

4) Analysis of other impacts that could occur as a result of the facility;
5) Preconstruction air quality monitoring and analysis for each pollutant subject to NSR;
(In general, monitoring is to be conducted over the 12 month period preceding the filing of the permit application. However, the FDER may accept monitoring data accumulated by the County Health Department in lieu of this requirement.)
6) Postconstruction air quality monitoring and analysis for each pollutant subject to NSR; (Health Department data may be acceptable.)
7) Permit application submission in completed form containing data and information from items 1) thru 6) above;
8) The FDER will make a preliminary determination on whether the application should be approved within 60 days after receipt of the completed application.

5.1.3 Projected Emissions

The proposed energy recovery facility will produce air emissions from three (3) major sources:

(1) Combustion of waste to produce electricity.
(2) Truck transport of solid waste to and residual solid waste from the proposed project.
(3) Equipment operations at the new landfill.

Emission projections have been prepared by a review of relevant data from literature and other sources. Since several mass burning water-wall furnaces exist throughout the U.S., it is therefore necessary to establish the emissions from available data. These estimates are upper limit values that will not be exceeded by the proposed project furnace units. Emissions from firing 1400 TPD of MSW at the proposed plant with and without air pollution control are presented in Table 5.2. Emission projections for individual pollutants are described in the following subsections.

Table 5.2
Air Emission Projection for the Resource Recovery Facility
(pounds per day)

Pollutant	Uncontrolled	Controlled	TPY
TSP	56,000 **	56 *	10.2
SO_2	3,500	525 *	95.8
NO_x	4,200	4,200	766.5
THC	210	210	38.3
CO	5,600	5,600	1022.0

NOTE:

1. * Dry Scrubber System including baghouse (TSP removal efficiency of 99.9%) and dry scrubber for SO_2 removal (85% efficiency) and 1400 TPD of refuse.
2. TSP = Total suspended particles, SO_2 = Sulfur Dioxide, NO_x = Oxide of Nitrogen, THC = Total Hydrocarbons, CO = Carbon Monoxide.
3. **Value is based upon a discharge of 40 lbs of TSP per ton of Solid Waste incinerated. EPA publication No. PB-275 525. "Compilation of Air Pollutant Emission Factors," 3rd Ed., Aug 1977 notes that TSP average approximately 30 lbs per ton of solid waste incinerated. Another source by the State of California Air Resource Board titled "Air Pollution aspects of Resource Recovery Project", March 1980, notes that TSP emissions (uncontrolled) may range from 13 to 75 lbs per ton of solid waste incinerated. A conservative value of 40 lbs of TSP per ton of Solid waste is therefore used for the Palm Beach facility. Reduction of SO_2, NO_x, THC and CO may also occur due to absorption by the particulates which may then be removed by the ESP. No reduction is shown for this removal.

RL1 8.31

5.1.3.1 Total Suspended Particulates

Total suspended particulates (TSP) are a mixture of natural and manmade materials in the air, including soil particles, sulfates, nitrates, lead, and a variety of organic compounds.

The exhaust stack system will produce the majority of the suspended particulates in the form of fly ash, approximately 56,000 pounds per day before control. The use of a baghouse will reduce the emissions by an expected 99.9 percent, to 56 pounds per day.

5.1.3.2 Sulfur Dioxide

Sulfur dioxide (SO_2) is a colorless gas with a sharp, irritating odor. It is emitted primarily by stationary sources such as power plants, petroleum refineries, chemical plants, and steel plants.

Combustion in the incinerator will generate sulfur dioxide due to oxidation of sulfur occurring in a variety of compounds in the solid waste. It has been estimated that combustion of 1400 tons of MSW per day will generate approximately 3,500 pounds per day of SO_2 before control. The use of a dry scrubber will reduce SO_2 emissions by an expected 85%, to 525 pounds per day.

5.1.3.3 Oxides of Nitrogen (NO_x)

Nitrogen dioxide (NO_2) is a light brown gas with a strong odor similar to bleach. NO_2 is formed in the atmosphere primarily by rapid oxidation of nitric oxide (NO), though NO_2 is also emitted along with NO from stationary and mobile combustion sources.

These compounds, NO and NO_2 are referred to collectively as oxides of nitrogen (NO_x). Nitrogen oxides will be emitted as products of combustion of 1400 tons per day of MSW which will generate approximately 4,200 pounds per day of NO_x.

5.1.3.4 Total Hydrocarbons

The facility will generate approximately 210 pounds per day of total hydrocarbons, both reactive and nonreactive. No data is available

which indicated what percent of the 210 pounds is reactive. It is likely that a significant fraction is of the non-reactive variety (such as methane). Control is not proposed for THC as uncontrolled levels should not violate air regulations.

5.1.3.5 Carbon Monoxide

Carbon Monoxide (CO) is a colorless, odorless gas produced by incomplete combustion of carbon-containing fuels. The plant will generate approximately 5,600 pounds of carbon monoxide daily on an uncontrolled basis. No control devices are available for carbon monoxide, though manipulation of the elements of the combustion process such as temperature and availability of oxygen can reduce emissions.

Unfortunately, those combustion conditions which discourage the formation of CO also encourage the formation of NO_x.

5.2 Waste Materials

5.2.1 General

For many years virtually all solid waste produced in the Palm Beach County study area has been disposed of in sanitary landfills. These are sites at which the waste is buried and covered with soil to maintain sanitary conditions. Waste collected each day by the municipalities, commercial and industrial haulers is currently being brought to the landfills directly upon collection. At the landfills, waste is compacted and buried each day (5.5 days/week). More than 1,000,000 tons of solid waste per year are disposed of in the County landfills in this manner.

A shortage of landfill space and cover material is developing in the area. As space and cover material becomes less available, costs of burying waste will rise. One of the purposes of this project is to reduce the volume of the County's solid waste requiring landfilling. In addition, the project will provide an opportunity to recycle metals and generate electricity. It will also reduce the total volume of waste requiring landfilling but will generate ash that may require special care in disposal.

Landfills are classified by the degree to which they effectively contain the waste. Containment is needed to protect groundwater (water found in saturated zones of the earth's surface and frequently used as urban or agricultural water supply) and surface waters such as streams and lakes. Contamination can occur by leaching of chemicals and biological organisms from the waste when rainwater or liquid waste travels through buried layers and migrates through the landfill walls or floor into surface bodies of water. Landfills can be sited to take advantage of a natural formation such as clay layers which hinder migration of liquids from the landfill to groundwater reserves. Landfills can also be engineered with synthetic liners or by other techniques, to prevent contamination of groundwater.

Both the availability of land and environmental regulations restrict the development of new landfill sites. Land for the new sites to handle solid waste disposal is difficult to obtain due to the competition for and the high price of large tracts of land in the County. In addition, the location and purchase of land for landfills must be planned years in advance, and later changes in such necessities as access routes to the landfill may influence the economics of operation in unplanned ways.

Because landfills can result in a number of adverse environmental impacts, they are subject the governmental regulations and, frequent public controversy which restricts areas in which landfills can be sited or continue in use. An incorrect or poorly operated landfill can pollute groundwater and can also generate odors particularly if gas escapes from the decomposing waste. Other associated impacts are blowing of litter, unaesthetic views, and hazards posed by escape of explosive gases. As the County continues to urbanize and as public concerns increase and focus on these environmental issues, fewer and less centrally located sites can be considered for landfills in the study area. Scarcity of available landfill sites increases the price of disposal and remoteness increases the price of transportation.

The project will consume most of the waste taken in, thereby reducing demand on landfills, but will leave residual ash which may require

more care in disposal than municipal solid waste. A portion of the waste will be recycled.

At the Dyer Blvd. site location, the resource recovery will occupy approximately 40 acres, while the Class I and Class III will require approximately 300 to 350 acres, respectively. The remainder of the acreage is unsuitable for use as a landfill especially on the western side. Also the dirt to be used for cell development and cover will develop borrow pits. These pits will be formed on the northern and eastern side of the site along with several rows of trees to serve as a "bumper" zone between the landfill and residential and commercial development.

5.2.2 Solid Waste Disposal

It is estimated that the Lantana Landfill space will be depleted in two years. Thereafter all of the County waste will be disposed of at the Dyer Landfill which will then give it a life of only four or five more years. A resource recovery facility constructed along with additional landfill space could handle the ash generated from Resource Recovery facilities plus Class III waste for 20 years and beyond. The existing Dyer landfill would then be closed out and cleaned up.

The Florida Department of Environmental Regulation establishes siting requirements for landfills in the State of Florida. These requirements are listed in Section 17-7.05 of the Rules of the Department. Landfill site prohibitions, listed in Section 17-7.04, are:

- No disposal without permanent leachate control methods into or in the immediate area of an open sink hole; in a limestone or gravel pit; in a new area within 500 ft. of an existing or approved shallow water supply.
- No disposal areas subjected to frequent or periodic flooding without base flood protection.
- No disposal in bodies of water including groundwater.
- No disposal in an area visible to the public without proper screening.

- No disposal within 10,000 ft of runways which may be used for turbo jet aircraft, or 5,000 ft of runways used only by piston engine aircraft unless exception is granted by the Federal Aeronautics Administration.

As of July 1, 1982 the Flordia statutes (Section 403.707) added a requirement: When application for a Class I or Class II Landfill is made to the DER, the DER is to notify the appropriate Water Management District and they shall prepare a report as to the impact on water resources.

Class I Landfill

A Class I landfill will accept all ash-generated material from the resource recovery which is expected to be up to 350 dry TPD_7. Due to the potential ash-generated leachate polluting surface water, groundwater and possibly the aquifer, a state-of-the-art leachate collection and treatment system will be constructed. The main intent for this system is the

- control of leachate production
- control of the escape of leachate
- control of the impact of leachate on the environment

Specific technologies to be used at the site include the following:

- construction of surface runoff diversion structures to divert all water from rainfall
- grading of fill to prevent standing surface water at slopes less than 30% to avoid erosion
- vegetation of final cover
- protection of underlying groundwater by liner installation
- removal and treatment of leachate

The membrane liner will have leachate collection piping systems both below and above the liner. The leachate piping above the liner normally collects all leachate, but if a break should occur in the liner, the under system will detect the break and collect the leaking leachate. The detection system will allow for repairs to be made and prevent contamination of either surface or subsurface water.

The bottom of the landfill will be above the seasonal water table and there will be no hydraulic connection between the fill and surface water. No hazardous waste will be allowed at the landfill or allowed to be burned at the resource recovery facility. Since no leachate will reach the surface or groundwater, there should be no impacts on the County water system or Water Catchment Area.

Class III Landfill

A Class III landfill will accept all vegetative, trash, demolition, and bulky waste which is expected to be approximately 1,700 TPD_7. Bulky waste includes large appliances, furniture, etc., that is to say, any large items that could not feed directly to the furnaces if mass-burning is the chosen technology. Non-combustibles include material such as concrete, dirt, etc. This material usually brought in by construction contractors will not be allowed to be taken to the resource recovery facility but directly to the Class III landfill.

No leachate barriers, collection, and treatment will be needed at the landfill site. But efforts will be made to control possible leachate causing surface runoff away from the landfill. Impacts on the groundwater and Water Cathcment Area should be minimal, if any.

5.2.3 Ash Disposal

The project will generate approximately 350 dry tons a day (based on 1,400 TPD_7 feed rate) of incinerator fly and bottom ash, fly ash being that filtered from the exhaust gases of combustion, and bottom ash being the ash left at the bottom of the furnace.

Water soluble heavy metals, are initially present in the solid waste, and become more concentrated in the ash combustion of the organic portion.

Upon generation of the ash at the resource recovery facility, an EP Toxicity Test will be run to determine whether this particular ash is hazardous and therefore subject to the Resource Conservation and Recovery Act (RCRA). This test is designed to identify those contaminants which might be leached from a landfill and pollute a ground or

TABLE 5.3

EP TOXITY TEST RESULTS
OBSERVED CONCENTRATIONS (ppm)

CONTAMINANT	MAX. PERMITTED CONCENTRATION	COMPOSITED FLY & BOTTOM ASH
Arsenic	5.0	< 0.0025
Barium	100.0	0.184
Cadmium	1.0	0.251
Chromium	5.0	0.039
Lead	5.0	0.337
Mercury	0.2	0.0001
Selenium	1.0	< 0.0025
Silver	5.0	< 0.001

NOTE: Composite ash from large (over 1000 TPD) mass burning plant.

Data published in Waste Age, February 1981.

surface water source. If the waste is defined as hazardous, the facility owner or operator must notify the State and EPA that it is the generator, and waste must be manifested (tracked) and managed in accordance with the regulations.

The fly ash will be automatically conveyed and mixed with bottom ash. Preliminary tests from all other resource recovery facilities where similar mixing is done, have indicated that most residues from the plants are non-hazardous (Table 5.3). However, when the ashes are treated as separate waste streams, the fly ash is often subject to RCRA regulations and therefore waste that would need to be disposed at an approved hazardous waste disposal facility.
Insert table 5.3

5.2.4 Wastewater and Leachate Treatment

5.2.4.1 Wastewater Treatment

The major water quality compliance problem associated with all solid fuel fired boiler plants today stems from ash-contaminated discharges. All of the ash collected in the plant is dumped into water filled residue conveyor troughs. Thus, the overflow from these troughs is sufficiently contaminated with ash to preclude legal discharge into the environment or sanitary sewer.

Wastewater from the facility will be pretreated and partially recycled to the cooling towers with the remaining discharged to a sewer line for disposal. The wastewater will be treated to meet the rules and regulations of the Florida Department of Environmental Regulations and other local agencies. Solids removed from the wastewater will be concentrated and disposed of with the bottom and fly ash from the incinerators. Any wastewater discharges from the facility will meet all discharge standards for the local sewer system. This wastewater will be pretreated before discharge will flow to the local wastewater treatment plant for final treatment.

5.2.4.2 Leachate Treatment

Impervious liners in the bottom and sides of the landfill site will be provided to contain leachate. The leachate will be collected to pre-

vent their exit from the landfill site into the surrounding environ ment which could result in pollution of the water supply. Such prevention of leachate migration by collection would provide the necessary final step in the control of leachate. The collected fluid will be transferred to a surge/storage lagoon then to a packaged treatment plant with aeration capabilities and secondary sedimentation. Thus the problem of leachate generation and migration with consequent contamination of subsurface water supplies can be controlled and eliminated through the proper technical design and operation of a landfill site. The additional costs attendant upon the installation of liners and a collection system must be borne as a necessary expense to proper sanitary landfilling. Thus, the problems associated with migration of water through decomposing refuse and the generation of leachate can be technically controlled, and the water quality in the general area of the Dyer landfill should improve.

5.2.5 Water Usage

Water usage at the resource facility is expected to be approximately one (1) million gallons per day (MGD). This water will be used in part for the cooling towers which service the electrical generating process. Also, water will be needed for boiler makeup, but this amount is small when compared to the cooling tower demand. Cooling tower water discharge will be used for the quench tank makeup.

The waterwell at the resource recovery facility will be rated at 700 gpm at 100 feet in depth extending down to the local aquifer. Maximum drawdown from the pump is expected to be twenty (20) feet.

Applications for industrial water use will be reviewed and evaluated by the South Florida water Management District (SFWMD). The SFWMD will evaluate the hydrologic and associated environmental impacts on environmentally sensitive areas (ESA) associated with withdrawals. Environmentally sensitive areas include but not limited to lakes, ponds, streams, creeks, wetlands, recreation areas, and the habitat of endangered species.

Floridan aquifer withdrawals will be exempt from most evaluations of

environmental impact except in areas where lake levels may be controlled by the potentiometric head of the Floridan aquifer.

In its evaluation the SFWMD will weight the public interest of an industrial water use against the public interest of an environmentally sensitive area. They will estimate the hydrologic impacts associated with the requested withdrawal provided site specific or regional data is available by determining the drawdown an aquifer due to pumpage.

5.2.6 Stormwater Management System

All stormwater runoff and drainage outside the immediate landfill area will be diverted so to reduce the quantity of leachate that could develop from the landfill and the amount of stormwater to be collected and detained on site. The runoff from the immediate landfill site area will be collected and detained in dry retention basins. Excess stormwater will be discharged into the local canals in accordance with the criteria of the Northern Palm Beach County Water Control District (NPBCWCD), the SFWMD, and the DER.

Stormwater from at least a one (1) inch of runoff from the immediate landfill site will be collected and stored in dry retention basins located above the groundwater table. Excess stormwater runoff will be discharged to EPB-9 and/or EPB-10 canals. Since these two canals bein on the eastern side of the Florida Turnpike, they will be extended under the turnpike to the area of stormwater retention. This excess runoff will pass through a filtering system before direct discharge into the canal system. The amount of storage and discharge into the system will be determined by the NPBCWCD and the SFWMD

5.3 Energy

5.3.1 General

The section outlines the energy impacts, largely beneficial, of the proposed project. The Dyer Blvd. site facility will generate electricity with a renewable resource, municipal solid waste (MSW), rather than with fossil fuel. The project will also reduce the volume of the County's waste requiring landfilling.

5.3.2 Setting

During the 1970's, the United States underwent a reevaluation of its traditional energy supplies. From 1970 to 1982, petroleum, which provided approximately 50 percent of the United States energy supply, escalated in price from $3.50 per barrel (42 gallons) to $34 per barrel, nearly a 1,000 percent increase. Price increases, as well as the unreliability of supply of imported petroleum, which represents half of the U.S. consumption, have reduced the value of petroleum as the fuel upon which continued industrial growth can depend. Other traditional fuels: natural gas, coal, nuclear, and hydroelectricity, are not likely to fill the gap left by a decreased petroleum supply, either because of insufficient supplies or environmental problems associated with their use.

In spite of increases in the cost of energy production and the possibility of reduced energy availability, consumption of energy in the United States and particularly in the State of Florida has continued to increase. Therefore, with both demand for and price of energy increasing, new technologies for energy production have become cost-effective. One of these technologies, energy recovery from solid waste, is the focus of this Environmental Assessment.

The metropolitan centers are particularly vulnerable to disruption due to energy price increases and shortages. When city transportation networks are heavily dependent upon private automobiles, impact of shortages is immediate and widespread.

5.4.3 Impacts

Generally, the project's impacts on energy production and consumption will be beneficial. Approximately 30 MW of electricity will be produced by the combustion of 1400 tons each day of solid waste.

5.4 Nuisance and Safety Impacts

5.4.1 General

The siting of the proposed facility and landfill, in areas relatively isolated from residential areas and also somewhat isolated from the working areas of neighboring industrial operations, will minimize many

nuisance and safety impacts on surrounding uses. Impacts of noise, odor, pathogens, dust, and other items are described below.

5.4.2 Noise

The proposed facility and landfill will be sited in an area of relatively low ambient noise levels. During construction, high noise levels will be generated. Operational noise will be considerably lower.

Noise will be generated during both construction and operation of the proposed facility. As shown in Table 5.4 noise measurements at construction sites range from 71 to 124 dBA. These levels are considerably above the standard in the county code for levels outside windows of occupied rooms adjacent to construction. However, noise from the site to adjacent structures will be attenuated by distances of several thousand feet.

TABLE 5.4

TYPICAL RANGES OF NOISE LEVEL

AT CONSTRUCTION SITES

Construction activity	NOISE LEVEL (dBA) Condition I[a]	Condition II[b]
Ground clearing	84 106	83 124
Excavation	89 105	71 77
Foundations	77 87	77 90
Erection	84 107	72 91
Finishing	89 105	74 100

a. All pertinent equipment present at site.

b. Minimum required equipment present at site.

Source: U.S. Environmental Protection Agency, Publication NTID 300.1, Noise From Construction Equipment and Operations, Building Equipment, and Home Appliances, (Washington, D.C.: 1977), p. 19.

During the facility operations, noise will be generated by such equipment as shredders, the boiler/furnaces and truck unloading and loading. At the landfill, noise will be concentrated at the compactors and truck operation. Most noise levels will be retained in their respective area.

One other area of noise impact is of greater concern: exposure of employees to high noise levels in the Resource Recovery buildings. A study of noise levels in resource recovery plants concludes that:

> "Control of noise in such equipment by engineering design will probably be costly. Consequently, administrative controls (limiting the time exposure in high noise areas) and personal protective equipment may be needed to control exposure .... Current OSHA regulatory activity should be adequate to control noise exposure ... [1]"

Accordingly conformity with OSHA regulations will be the mitigation measure for the project.

5.4.3 Odors

Odors generated by the proposed facility would be capable of traveling greater distances than noise. Odor impacts can be minimized by rapid processing of the solid waste. If organic wastes were allowed to accumulate at the facility, odors could develop as the waste decayed. The project is designed to hold waste for a limited period at the facility prior to processing or hauling away of noncombustible solid waste to the landfill. In case of plant breakdown it will be possible to haul waste from the tipping floor to the landfill.

---

1 Office of Technology Assessment, U.S. Congress, Materials and Energy from Municipal Waste. pg. 105.

Solid waste will be stored for up to three days. This storage period is necessary to provide a continuous supply of fuel to the boilers over the weekend, when there is no solid waste collection. In case of extended plant breakdown it will be possible to remove MSW from the site for disposal at the landfill.

An odor control system may be used to prevent possible odors from escaping to the atmosphere. Other mitigation measures proposed for odor control include daily cleaning and washing down of floors and storage containers and possible provision of a back-up odor control system, such as activated carbon air filters and masking agents.

5.4.4 Pathogens and Dust

Fine bits of the refuse materials could contaminate the air and equipment at the proposed facility. Two aspects of this hazard are contamination by pathogens and dust. Data on these topics is in the research stage.

5.4.4.1 Pathogens

As MSW is handled at the proposed facility, workers may be exposed to bacterial, fungal, and virological pathogens contained in the waste stream. Air sampling studies by the EPA have detected greater than normal level of pathogens in a resource recovery environment but the health of the employees has not been affected by this factor.

5.4.4.2 Dust

Handling MSW at both the proposed facility and landfill produces considerable dust, another potential health hazard. OSHA standards for dust specify maximum permissible concentrations for dirt or nuisance dust. However, because of the variety of materials in MSW, there is additional concern about specific substances such as asbestos, metal dusts, and other toxic substances. There will be adequate ventilation in the resource recovery facility to ensure no buildup of dust particles.

5.4.5 Litter

The receiving area for solid waste at the facility will be enclosed preventing litter from being blown about.

5.4.6 Vectors

Vectors are organisms which can carry disease. Measures are available to prevent infestations of rats, flies and other vectors. Minimization of holding time of solid waste and cleaning of areas for receiving and storing solid waste should be effective in minimizing or eliminating infestations.

5.5 Aesthetics

The facility will involve construction of a large complex of fully-enclosed buildings for storing, handling, processing and burning the solid waste on a 40 acre site. Driveways will connect the on-site structure. The proposed architectural treatment and landscaping will create an attractive installation. While the project will change the appearance of the surrounding area, it should create an aesthetically compatible appearance.

5.6 Socioeconomic Impacts

5.6.1. Employment

Construction of the facility is scheduled to take place over a 36 month period and require a peak work force of 600. There is an abundance of skilled construction labor in the area and there should be little difficulty meeting the labor demand for the plant. Construction workers are expected to commute to the plant site on a daily basis.

Following construction, the facilities may operate on a continuous basis employing approximately 140 full time employees. To the extent possible, operating labor will be hired from within the local labor market. A limited number of highly specialized technicians may be relocated to the Palm Beach County area, but they should have no significant influence on area population growth. These 140 employees with total wages amounting to over 3.1 million dollars per year (1982) will benefit the community as a whole through their spending.

5.6.2 Public Services and Infrastructure

Because there will be very little population increase directly attributable to the facility the demand for public services should remain unchanged. The level of service provided by schools, hospitals and other facilities dedicated to public health, safety and recreation should be unaffected by the facility. Fire and police protection will remain adequate.

Major truck access to the facility will be restricted to the Bee Line Highway and Jog Road.

The facility's sewer and water requirements will be met by the Water Utilities Department and South Florida Water Management District respectively. These systems have been designed to accomodate industrial growth and there should be little difficulty in supplying water or accepting the closely regulated treated wastewater discharged from the plant.

DYER BOULEVARD SANITARY LANDFILL
PALM BEACH COUNTY, FLORIDA

APPLICATION TO OPERATE/
CONSTRUCT AIR POLLUTION SOURCES

NOVEMBER 1982

Prepared by:

Post, Buckley, Schuh & Jernigan, Inc.
Consulting Engineers and Planners

954-002.02

P B S J Post, Buckley, Schuh & Jernigan, Inc.
CONSULTING ENGINEERS and PLANNERS
889 NORTH ORANGE AVENUE, ORLANDO, FLORIDA 32801-1088 • 305/423-7275 • TELEX 808435

November 22, 1982

Mr. John Guidry
Department of Environmental Regulation
3301 Gun Club Road
West Palm Beach, FL 33402

Dear Mr. Guidry:

Re: Application To Operate/Construct Air Pollution Sources

This letter is in response to your telephone conversation of October 4, 1982, with Mr. Wayne Aldridge regarding the submittal of the above referenced application for an air curtain destructor (ACD) facility at the Dyer Boulevard Sanitary Landfill. Enclosed are four signed and sealed copies of "Application To Operate/Construct Air Pollution Sources" for each of two ACD units to be installed at the proposed site.

We would be available for a meeting to discuss the application to address any of the agency's concerns and to provide any additional information requested by DER. Please contact me in the next few weeks to arrange such a meeting time at your convenience, if you feel such a meeting is necessary.

Should you have any questions regarding any of the information submitted, please feel free to contact me.

Very truly yours,

POST, BUCKLEY, SCHUH & JERNIGAN, INC.

David E Deans

David E. Deans, P.E.
Project Director

Enclosures (as stated)

cc w/encls: H. Kahlert/H. Frakes/R. Day/D. Smith/K. Cooley/W. Aldridge

954-002.02

AC 50-63154

DER

RECEIVED DEC 10 1982

DEC - 3 1982

Dept. of Environmental Reg. West Palm Beach

BAQM

PAID
13935
DEC 3 1982
$1,000.00

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Dept. of Environmental Reg.
West Palm Beach

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Forced Draft Air Curtain Destructor [X] New[1] [ ] Existing[1]

APPLICATION TYPE: [X] Construction [ ] Operation [ ] Modification

COMPANY NAME: N/A COUNTY: Palm Beach

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) Exhaust from Unit No. 1 (see site plan)

SOURCE LOCATION: Street Dyer Boulevard and Haverhill Road City N/A

UTM: East 783,000E-784,000E North 888,500N-889,500N

Latitude 26 o 46 ' ____ "N Longitude 80 o 07 ' ____ "W

APPLICANT NAME AND TITLE: Board of County Commissioners, Palm Beach County

APPLICANT ADDRESS: P.O. Box 2429; West Palm Beach, FL 33402

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Board of County Commissioners, Palm Beach County

I certify that the statements made in this application for a Air Pollution Source Construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: H.F. Kahlert

H.F. Kahlert, P.E., County Engineer
Name and Title (Please Type)

Date: NOV 29 1982 Telephone No. (305)837-2006

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: David E Deans

David E. Deans, P.E.
Name (Please Type)

Post, Buckley, Schuh & Jernigan, Inc.
Company Name (Please Type)

889 North Orange Avenue, Orlando, FL 32801
Mailing Address (Please Type)

(Affix Seal)

Florida Registration No. 31095 Date: 11-22-82 Telephone No. (305)423-7275

[1]See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

The proposed project includes the construction/installation of an air curtain destructor (ACD) at the Palm Beach County Dyer Boulevard Sanitary Landfill. The ACD would be utilized to combust land clearing wastes including stumps, logs, tree limbs, brush, and other such items. The ACD will provide maximum volume reduction (SEE ATTACHED SHEET 'A')

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction December 15, 1982 Completion of Construction February 15, 1983

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

The blower used for air pollution control represents approximately 25 percent of the total facility costs.

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

N/A

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? ____ Yes X No

F. Normal equipment operating time: hrs/day 5 ; days/wk 7 ; wks/yr 52 ; if power plant, hrs/yr N/A ;

if seasonal, describe: ____

G. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? Yes (17-2.410)
   a. If yes, has "offset" been applied? No
   b. If yes, has "Lowest Achievable Emission Rate" been applied? No
   c. If yes, list non-attainment pollutants.
      Ozone
2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. No
3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI and VII. No
4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? No
5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? No

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

(Cond't of Section II: General Project Information - Item A)

on this material which would otherwise be placed directly in the County landfill. This system will, therefore, significantly reduce the volume of waste being buried in the County landfill site and, thereby, prolong the life of that site.

N/A

(See Incinerator Information Section IV

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): _____

2. Product Weight (lbs/hr): _____

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission[1]		Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential Emission[4]		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles[5] Size Collected (in microns)	Basis for Efficiency (Sec. V, It[5]

[1] See Section V, Item 2.

[2] Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 0.1 pounds per million BTU heat input)

[3] Calculated from operating rate and applicable standard

[4] Emission, if source operated without control (See Section V, Item 3)

[5] If Applicable

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal N/A

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating. Annual Average _____ Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: _____ ft. Stack Diameter: _____ ft.

Gas Flow Rate: _____ ACFM Gas Exit Temperature: _____ °F.

Water Vapor Content: _____ % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type O (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated		19,800					

Description of Waste Land clearing wastes (stumps, logs, tree limbs, brush)

Total Weight Incinerated (lbs/hr) 19,800 Design Capacity (lbs/hr) 19,800 lb./hr.

Approximate Number of Hours of Operation per day 5 days/week 7

Manufacturer W.P. Kutrieb, Inc.

Date Constructed N/A Model No. CSE 3000 ACD/PRCC Unit

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber	3780	124,740,000	None	None	1600 (AVG.) 2400 (ULT.)
Secondary Chamber	N/A	N/A	N/A	N/A	N/A

Stack Height: 14(a) ft. Stack Diameter 30' x 9'(b) Stack Temp. 1600°F

Gas Flow Rate: N/A ACFM N/A DSCFM* Velocity N/A FPS

(a) Depth of pit. (b) Dimensions at top of pit.

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner [X] Other (specify) Air Curtain Destructo

Brief description of operating characteristics of control devices: Controlled introduction of air into the upper portion of the combustion pit creates an air curtain or rotating mass of high temperature (i.e., 1800°F) air which contains and combusts smoke/particulate matter before it can discharge into the atomosphere.

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

The ash residue remaining after combustion (generally 2 to 6% by weight of the incoming wastes) will be removed from the combustion pit by a front-end loader and placed on a cleared area adjacent to the ACD for final cool down. When the ash has completely cooled, it will be transported to the working face of the Class III landfill for final disposal.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight — show derivation.
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.,) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, etc.).
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3, and 5 should be consistent: actual emissions = potential (1-efficiency).
6. An 8½" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
7. An 8½" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
8. An 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

N/A

9. An application fee of $20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
[ ] Yes [ ] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) [ ] Yes [ ] No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:
5. Useful Life:
6. Operating Costs:
7. Energy:
8. Maintenance Cost:
9. Emissions:

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

10. Stack Parameters

a. Height: ft. b. Diameter: ft.

c. Flow Rate: ACFM d. Temperature: °F

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device:

b. Operating Principles:

c. Efficiency*: d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy*: h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency*: d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy**: h. Maintenance Costs:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power – KWH design rate.

3.

a. Control Device:

b. Operating Principles:

c. Efficiency*: d. Capital Cost:

e. Life: f. Operating Cost:

g. Energy: h. Maintenance Cost:

*Explain method of determining efficiency above.

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space and operate within proposed levels:

4.

a. Control Device

b. Operating Principles:

c. Efficiency*:

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency*:

3. Capital Cost:

4. Life:

5. Operating Cost:

6. Energy:

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

*Explain method of determining efficiency above.

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

b.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

10. Reason for selection and description of systems:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

N/A

SECTION VII – PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

1. _____ no sites _____ TSP _____ ( ) SO^2* _____ Wind spd/dir

Period of monitoring ____/____/____ to ____/____/____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

2. Instrumentation, Field and Laboratory

a) Was instrumentation EPA referenced or its equivalent? ____ Yes ____ No

b) Was instrumentation calibrated in accordance with Department procedures? ____ Yes ____ No ____ Unknown

B. Meteorological Data Used for Air Quality Modeling

1. ____ Year(s) of data from ____/____/____ to ____/____/____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____ grams/sec
SO^2	_____ grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description on point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

*Specify bubbler (B) or continuous (C).

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

ATTACHMENT I

Section V: Supplemental Requirements

1. Process Input Rate and Product Weight Derivation

The following are the calculations used to derive the input rate and product weight:

Process Capacity

Assume: 0.33 T/Hr./L.F. (manufacturer's design rate)

0.33 T/Hr./L.F. x 30 L.F. = 9.9 T/Hr. (49.5 T/5 hr. day)

Product Weight (ash)

Assume: 94% weight reduction

49.5 T/day x 0.94 = 46.5 T reduction

49.5 T - 46.5 T = 3 tons of ash generated/day

2. Basis of Emission Estimate

Visible emissions (opacity) for a similar unit located in Indian River County showed an opacity of 1.54%. Exhibit 1 depicts the results of that test.

The proposed units will be required to comply with the performance standards for an incinerator with a charging rate of less than 50 tons per day, as found in Chapter 17-2.600 FAC. This standard requires no visible emissions (five percent opacity), except that visible emissions with a density of No. 1 on the Ringelmann Chart (20 percent opacity) are allowed for up to three minutes in any one hour. Also, no objectionable odors are allowed.

DEPARTMENT OF ENVIRONMENTAL REGULATION

EXHIBIT

Visible Emission

OWNER NAME Board of County Commissioners COUNTY Indian River

Owner Address County Court House, Vero Beach, Fla 32960

Source Name Visible Emissions (opacity)

Source Location Five feet Above pit outlet

Source Description (Type) Air Curtain Destructor (open pit type

TIME 4:10 pm - 4:40 pm DATE Aug 18, 1980

Min	Seconds 0	15	30	45	Min	Seconds 0	15	30	45
0	0	0	0	5	30				
1	5	0	0	0	31				
2	0	0	0	5	32				
3	5	0	0	0	33				
4	0	5	0	0	34				
5	0	5	5	5	35				
6	0	5	5	0	36				
7	0	0	0	0	37				
8	0	0	0	5	38				
9	0	5	0	0	39				
10	5	0	5	0	40				
11	0	0	0	0	41				
12	0	0	0	0	42				
13	5	5	5	5	43				
14	5	0	0	0	44				
15	0	0	0	0	45				
16	0	0	5	5	46				
17	0	5	5	5	47				
18	0	0	5	0	48				
19	0	0	5	5	49				
20	5	5	0	0	50				
21	0	5	0	5	51				
22	0	0	0	0	52				
23	5	0	5	0	53				
24	0	5	5	0	54				
25	0	0	0	0	55				
26	0	0	5	0	56				
27	0	0	0	0	57				
28	0	0	0	0	58				
29	5	5	0	0	59				

Point of Observation West

Distance to S 40 feet

Direction of Source East

Direction of Wind South

Veloc. 10-15m

Sum of Capacit Readings 185

Total Number o Readings 120

Opacity= 1.54%

Sum of Opacity Readings

Total Number o Readings

1.54%

OBSERVER Gregory J. Kingsley

CERT. NO.

1-2

3. Emission Factor Potential Discharge

The EPA AP42 standards listed in Table 2.1-1, "Emission Factors For Refuse Incinerators Without Controls (Emission Factor Rating: A", estimate trench type burners to emit 13 pounds of particulates per ton of waste burned.

Estimated Particulates Emitted Per ACD Unit

13 lb./T x 50 T/day = 650 lb./day x 360 days/yr. = 234,000 lb./yr.

or 117 T/yr. of particulates.

Total Potential Discharge for the Facility

117 T/yr/unit x 2 units = 234 T/yr.

4. Air Pollution Control System

The air curtain destructor (ACD) does not have typical air pollution control equipment. The use of the high velocity and high volume air stream is designed to reduce the amount of particulate and hydrocarbon emissions by trapping them within the combustion chamber and reburning them at high temperatures (1600-2400°F). Figures 1 and 2 depict the type of equipment and the concept of the air curtain principle.

5. Control Device(s) Efficiency

This section is not applicable as there are no figures for actual emissions of an ACD unit of this type.

6. Process Flow Diagram

The facility process flow diagram is depicted on Figure 3.

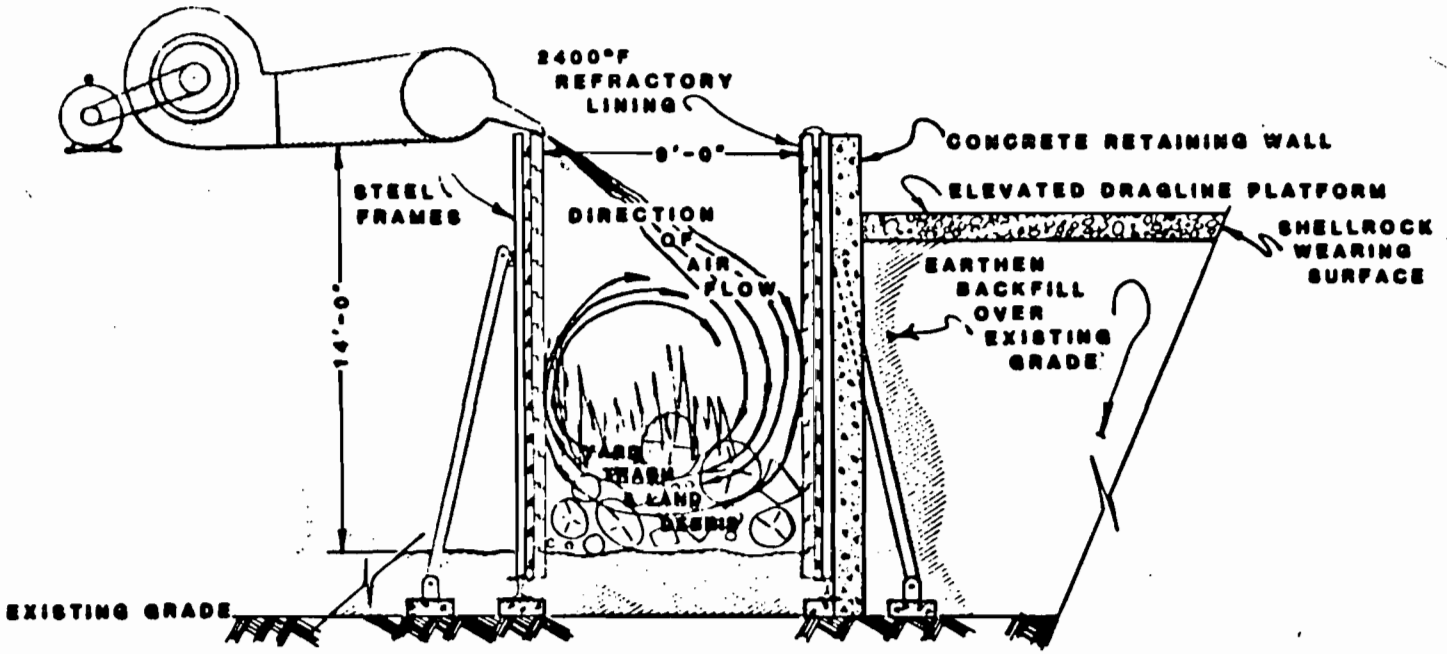
7. Location Plot Plan

The proposed location of the ACD is depicted on Figure 4.

Table 2.1-1. EMISSION FACTORS FOR REFUSE INCINERATORS WITHOUT CONTROLS[a]
EMISSION FACTOR RATING: A

Incinerator type	Particulates		Sulfur oxides[b]		Carbon monoxide		Organics[c]		Nitrogen oxides[d]	
	lb/ton	kg/MT	lb/ton	kg/MT	lb/ton	kg/MT	lb/ton	kg/MT	lb/ton	kg/MT
Municipal[e]										
Multiple chamber, uncontrolled	30	15	2.5	1.25	35	17.5	1.5	0.75	3	1.5
With settling chamber and water spray system[f]	14	7	2.5	1.25	35	17.5	1.5	0.75	3	1.5
Industrial/commercial										
Multiple chamber[g]	7	3.5	2.5[h]	1.25	10	5	3	1.5	3	1.5
Single chamber[i]	15	7.5	2.5[h]	1.25	20	10	15	7.5	2	1
Trench[j]										
Wood	13	6.5	0.1[k]	0.05	NA[l]	NA	NA	NA	4	2
Rubber tires	138	69	NA	NA	NA	NA	NA	NA	NA	NA
Municipal refuse	37	18.5	2.5[h]	1.25	NA	NA	NA	NA	NA	NA
Controlled air[m]	1.4	0.7	1.5	0.75	Neg	Neg	Neg	Neg	10	5
Flue-fed single chamber[n]	30	15	0.5	0.25	20	10	15	7.5	3	1.5
Flue-fed (modified)[o,p]	6	3	0.5	0.25	10	5	3	1.5	10	5
Domestic single chamber										
Without primary burner[q]	35	17.5	0.5	0.25	300	150	100	50	1	0.5
With primary burner[r]	7	3.5	0.5	0.25	Neg	Neg	2	1	2	1
Pathological[s]	8	4	Neg	Neg	Neg	Neg	Neg	Neg	3	1.5

[a] Average factors given based on EPA procedures for incinerator stack testing.
[b] Expressed as sulfur dioxide.
[c] Expressed as methane.
[d] Expressed as nitrogen dioxide.
[e] References 5 and 8 through 14.
[f] Most municipal incinerators are equipped with at least this much control: see Table 2.1-2 for appropriate efficiencies for other controls.
[g] References 3, 5, 10, 13, and 15.
[h] Based on municipal incinerator data.
[i] References 3, 5, 10, and 15.
[j] Reference 7.
[k] Based on data for wood combustion in conical burners.
[l] Not available.
[m] Reference 9.
[n] References 3, 10, 11, 13, 15, and 16.
[o] With afterburners and draft controls.
[p] References 3, 11, and 15.
[q] References 5 and 10.
[r] Reference 5.
[s] References 3 and 9.



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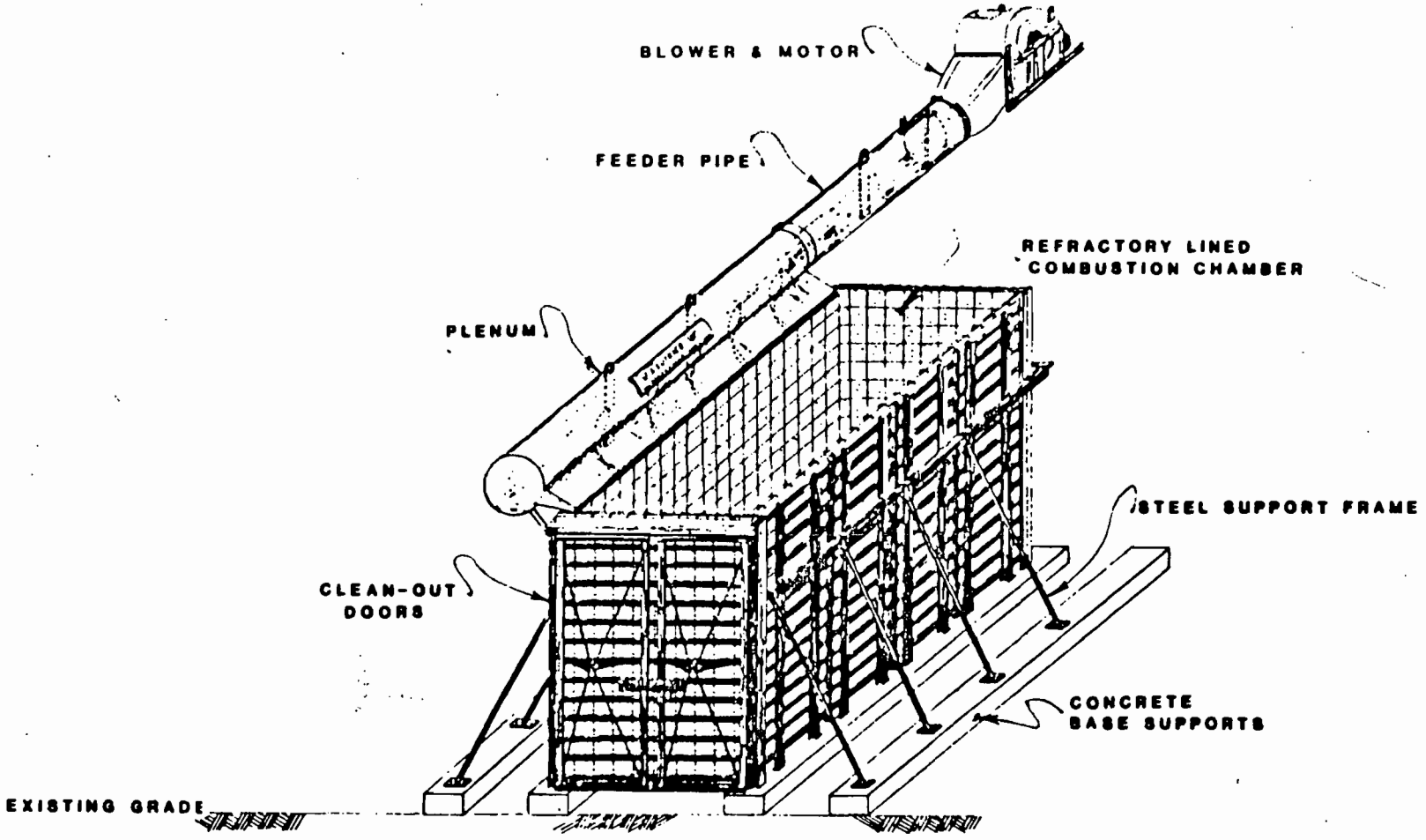
A. C. D. FRONT SECTIONAL VIEW

FIGURE
1

S&HWG #104-1082A



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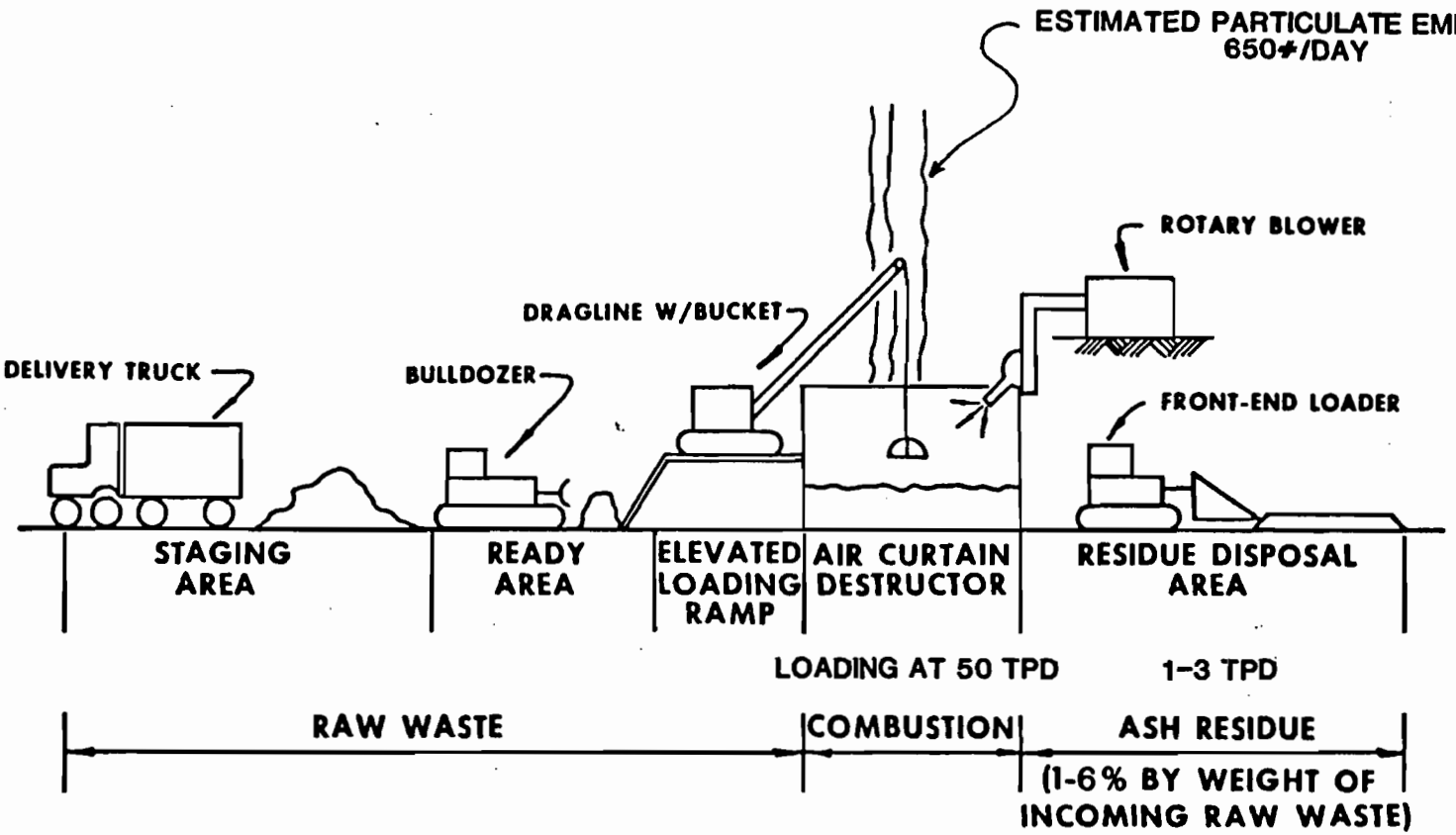
TYPICAL AIR CURTAIN DESTRUCTOR (A. C. D.)

FIGURE
2

S&HWG #105-1082A



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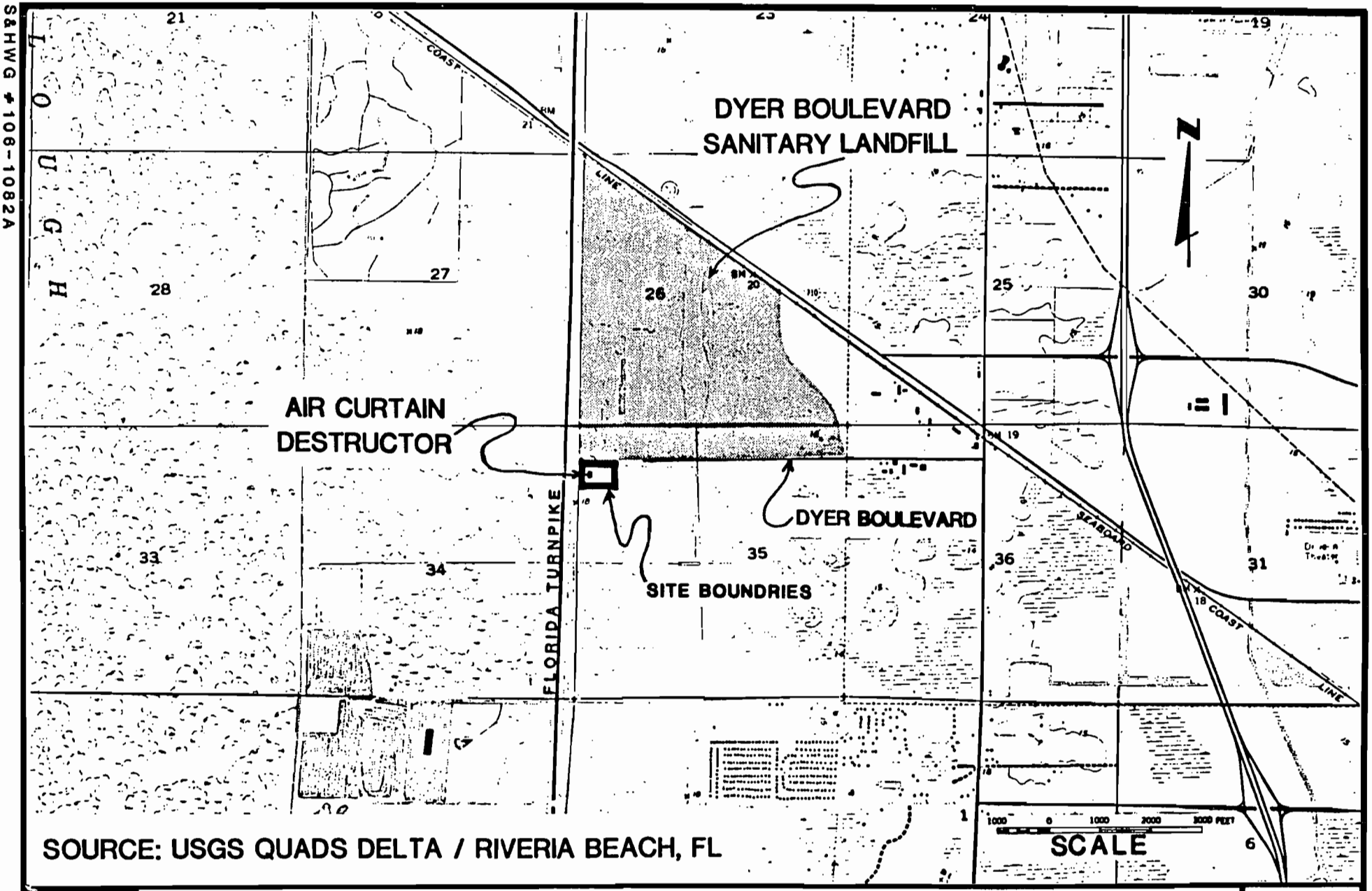
PROCESS FLOW DIAGRAM

FIGURE 3



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LOCATION PLOT PLAN

FIGURE 4

8. Facility Plot Plan

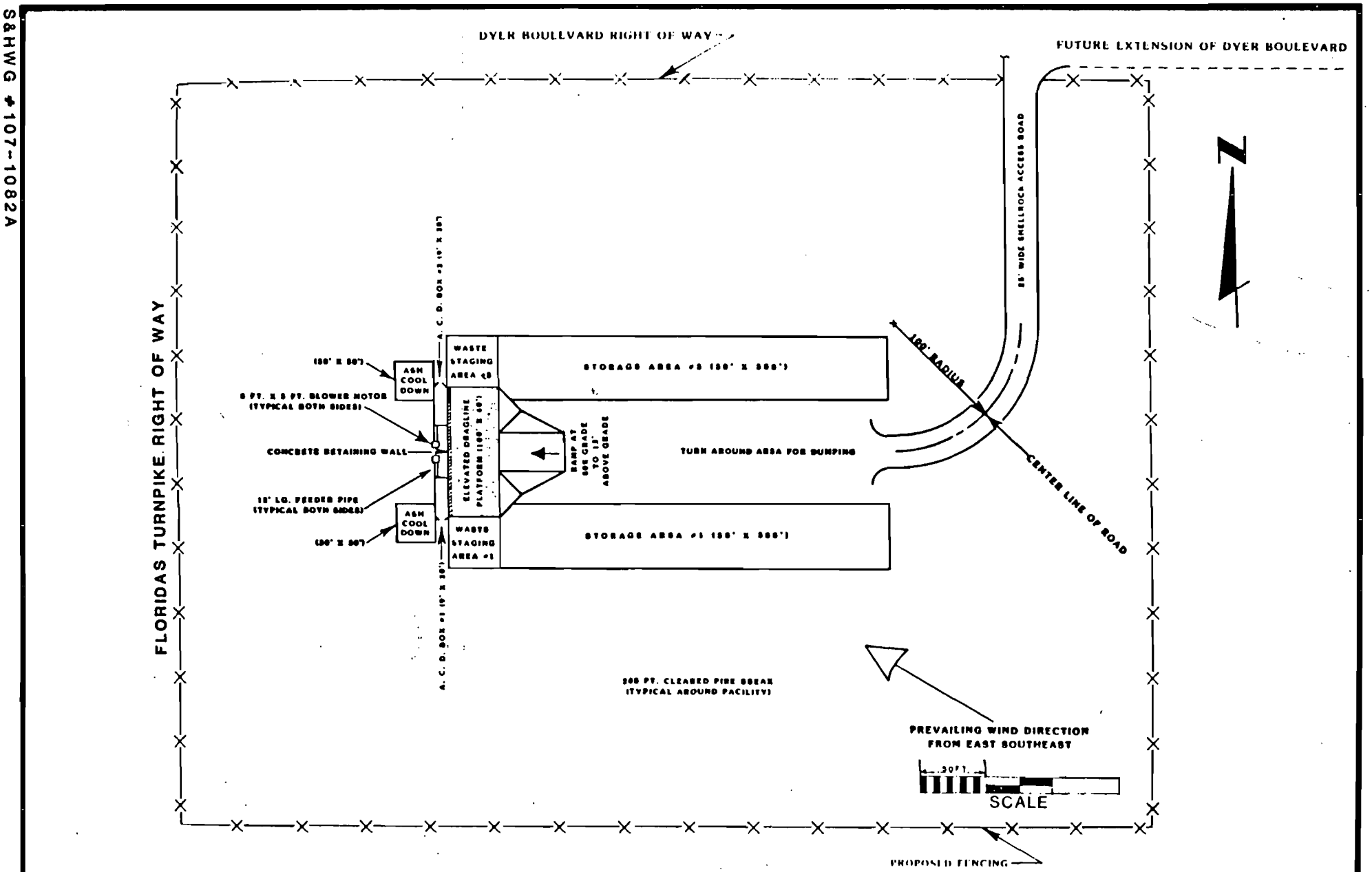
The proposed facility plot plan is depicted in Figure 5.

9. Other Pertinent Information

The ACD is a device designed for low emission incineration of certain burnable wastes (i.e., stumps, wood, vegetation, roots). The ACD employes a refractory lined combustion chamber and a high volume, high velocity blower. The blower's plenum contains air nozzles that direct a high-speed curtain of air at a 40 degree angle down and across the top opening of the combustion chamber along the entire length of the chamber. The air hits the opposite wall of the chamber and is deflected into the material being burned in a rotory motion which creates turbulence inside the chamber. The air curtain accomplishes three things: (1) it provides excess oxygen needed to reach high temperatures; (2) it creates turbulence that aids combustion; and (3) it takes smoke and particulates above the filling level of the chamber and recirculates and reburns them through the intense heat. As a result, wastes are virtually and completely consumed at temperatures between 1600 and 2400°F.

To further insure a smokeless operation, the ACD's units will be fitted with auxiliary burners that are fired with LP gas. These burners will be used to ignite the wastes during daily start-up.

The ACD facility will consist of two, Model CSE 3000 ACD/PRCC units manufacturered by W.A. Kutrieb, Inc. of Janesville, Wisconsin. These units will be set up end to end with a common elevated earthen platform in front of the units to accommodate a dragline crane with a clamshell bucket for charging each of the units. Each unit will be limited to processing 50 tons per day (TPD).



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FACILITY PLOT PLAN

FIGURE 5

Incoming waste trucks will enter the access road and the site operator will direct the driver to one of the storage areas to unload. Each ACD has a storage area with a six day storage capacity. The purpose of the storage area is to provide space for materials to dry out since drier materials burn better and produce less smoke (particulate emissions). The dried material will be transported by a front-end loader from the storage areas to the respective waste staging areas for placement in the ACD by the dragline crane.

The ACD facility has the capability to accept waste and operate seven days per week. Removal of ash from the combustion chamber will be accomplished with the front-end loader or the dragline crane. The ash will be cooled with a water spray prior to removal from the site to insure no burning material is disposed of at the landfill and to reduce blowing ash. The ash removal schedule may vary due to the types of material being burned. Normally, the accumulated ash in the combustion chamber will be emptied once per week or when the level reaches a depth of three feet.

AC 50-63156

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Dept. of Environmental Reg.
West Palm Beach

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DEC 3 1982
$1,000.00

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
Dept. of Environmental Reg.
West Palm Beach

BACM
APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Forced Draft Air Curtain Destructor [X] New[1] [ ] Existing[1]

APPLICATION TYPE: [X] Construction [ ] Operation [ ] Modification

COMPANY NAME: N/A COUNTY: Palm Beach

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) Exhaust from Unit No. 2 (see site plan)

SOURCE LOCATION: Street Dyer Boulevard and Haverhill Road City N/A

UTM: East 783,000E-784,000E North 888,500N-889,500N

Latitude 26 o 46 ' ____ "N Longitude 80 o 07 ' ____ "W

APPLICANT NAME AND TITLE: Board of County Commissioners, Palm Beach County

APPLICANT ADDRESS: P.O. Box 2429; West Palm Beach, FL 33402

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Board of County Commissioners, Palm Beach County

I certify that the statements made in this application for a Air Pollution Source Construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: _____
H.F. Kahlert, P.E., County Engineer
Name and Title (Please Type)
Date: _____ Telephone No. (305)837-2006

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

(Affix Seal)

Signed: David E Deans
David E. Deans, P.E.
Name (Please Type)
Post, Buckley, Schuh & Jernigan, Inc.
Company Name (Please Type)
889 North Orange Avenue, Orlando, FL 32801
Mailing Address (Please Type)
Florida Registration No. 31095 Date: 11-22-82 Telephone No. (305)423-7275

[1]See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

The proposed project includes the construction/installation of an air curtain destructor (ACD) at the Palm Beach County Dyer Boulevard Sanitary Landfill. The ACD would be utilized to combust land clearing wastes including stumps, logs, tree limbs, brush, and other such items. The ACD will provide maximum volume reduction (SEE ATTACHED SHEET 'A')

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction December 15, 1982 Completion of Construction February 15, 1983

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

The blower used for air pollution control represents approximately 25 percent of the total facility costs.

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

N/A

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? ____ Yes X No

F. Normal equipment operating time: hrs/day 5 ; days/wk 7 ; wks/yr 52 ; if power plant, hrs/yr N/A ;

if seasonal, describe: ____

G. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant?	Yes (17-2.410)
a. If yes, has "offset" been applied?	No
b. If yes, has "Lowest Achievable Emission Rate" been applied?	No
c. If yes, list non-attainment pollutants. Ozone	
2. Does best available control technology (BACT) apply to this source? If yes, see Section VI.	No
3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI and VII.	No
4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source?	No
5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source?	No

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

SHEET A

(Cond't of Section II: General Project Information - Item A)

on this material which would otherwise be placed directly in the County landfill. This system will, therefore, significantly reduce the volume of waste being buried in the County landfill site and, thereby, prolong the life of that site.

N/A

(See Incinerator Information Section IV

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): _____

2. Product Weight (lbs/hr): _____

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission[1]		Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential Emission[4]		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles[5] Size Collected (in microns)	Basis for Efficiency (Sec. V, It[5])

[1] See Section V, Item 2.

[2] Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 0.1 pounds per million BTU heat input)

[3] Calculated from operating rate and applicable standard

[4] Emission, if source operated without control (See Section V, Item 3)

[5] If Applicable

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal N/A

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating. Annual Average _____ Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: _____ ft. Stack Diameter: _____ ft.

Gas Flow Rate: _____ ACFM Gas Exit Temperature: _____ °F.

Water Vapor Content: _____ % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated		19,800					

Description of Waste Land clearing wastes (stumps, logs, tree limbs, brush)

Total Weight Incinerated (lbs/hr) 19,800 Design Capacity (lbs/hr) 19,800 lb./hr.

Approximate Number of Hours of Operation per day 5 days/week 7

Manufacturer W.P. Kutrieb, Inc.

Date Constructed N/A Model No. CSE 3000 ACD/PRCC Unit

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber	3780	124,740,000	None	None	1600 (AVG.) 2400 (ULT.)
Secondary Chamber	N/A	N/A	N/A	N/A	N/A

Stack Height: 14(a) ft. Stack Diameter 30' x 9'(b) Stack Temp. 1600°F

Gas Flow Rate: N/A ACFM N/A DSCFM* Velocity N/A FPS

(a) Depth of pit. (b) Dimensions at top of pit.

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner [X] Other (specify) Air Curtain Destructo

Brief description of operating characteristics of control devices: Controlled introduction of air into the upper portion of the combustion pit creates an air curtain or rotating mass of high temperature (i.e., 1800°F) air which contains and combusts smoke/particulate matter before it can discharge into the atomosphere.

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

The ash residue remaining after combustion (generally 2 to 6% by weight of the incoming wastes) will be removed from the combustion pit by a front-end loader and placed on a cleared area adjacent to the ACD for final cool down. When the ash has completely cooled, it will be transported to the working face of the Class III landfill for final disposal.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight — show derivation.
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.,) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, etc.).
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3, and 5 should be consistent: actual emissions = potential (1-efficiency).
6. An 8½" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
7. An 8½" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
8. An 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

N/A

9. An application fee of $20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
[ ] Yes [ ] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) [ ] Yes [ ] No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:
5. Useful Life:
6. Operating Costs:
7. Energy:
8. Maintenance Cost:
9. Emissions:

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

10. Stack Parameters

a. Height: ft. b. Diameter: ft.

c. Flow Rate: ACFM d. Temperature: °F

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device:

b. Operating Principles:

c. Efficiency*: d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy*: h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency*: d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy**: h. Maintenance Costs:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power – KWH design rate.

3.

a. Control Device:

b. Operating Principles:

c. Efficiency*: d. Capital Cost:

e. Life: f. Operating Cost:

g. Energy: h. Maintenance Cost:

*Explain method of determining efficiency above.

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space and operate within proposed levels:

4.

a. Control Device

b. Operating Principles:

c. Efficiency*:

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:
2. Efficiency*:
3. Capital Cost:
4. Life:
5. Operating Cost:
6. Energy:
7. Maintenance Cost:
8. Manufacturer:
9. Other locations where employed on similar processes:

a.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

*Explain method of determining efficiency above.

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

b.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

10. Reason for selection and description of systems:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

N/A

SECTION VII – PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

1. _____ no sites _____ TSP _____ ( ) SO^2* _____ Wind spd/dir

Period of monitoring _____/_____/_____ to _____/_____/_____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

2. Instrumentation, Field and Laboratory

a) Was instrumentation EPA referenced or its equivalent? _____ Yes _____ No

b) Was instrumentation calibrated in accordance with Department procedures? _____ Yes _____ No _____ Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from _____/_____/_____ to _____/_____/_____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____ grams/sec
SO^2	_____ grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description on point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

*Specify bubbler (B) or continuous (C).

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

ATTACHMENT I

Section V: Supplemental Requirements

1. Process Input Rate and Product Weight Derivation

The following are the calculations used to derive the input rate and product weight:

Process Capacity

Assume: 0.33 T/Hr./L.F. (manufacturer's design rate)

0.33 T/Hr./L.F. x 30 L.F. = 9.9 T/Hr. (49.5 T/5 hr. day)

Product Weight (ash)

Assume: 94% weight reduction

49.5 T/day x 0.94 = 46.5 T reduction

49.5 T - 46.5 T = 3 tons of ash generated/day

2. Basis of Emission Estimate

Visible emissions (opacity) for a similar unit located in Indian River County showed an opacity of 1.54%. Exhibit 1 depicts the results of that test.

The proposed units will be required to comply with the performance standards for an incinerator with a charging rate of less than 50 tons per day, as found in Chapter 17-2.600 FAC. This standard requires no visible emissions (five percent opacity), except that visible emissions with a density of No. 1 on the Ringelmann Chart (20 percent opacity) are allowed for up to three minutes in any one hour. Also, no objectionable odors are allowed.

DEPARTMENT OF ENVIRONMENTAL REGULATION

EXHIBIT

BEST AVAILABLE COPY

Visible Emission

OWNER NAME Board of County Commissioners COUNTY Indian River

Owner Address County Court House, Vero Beach, Fla 32960

Source Name Visible Emissions (opacity)

Source Location Five feet Above pit outlet

Source Description (Type) Air Curtain Destructor (open pit type

TIME 4:10 pm - 4:40 pm DATE Aug 15, 1980

Min	Seconds 0	15	30	45	Min	Seconds 0	15	30	45
0	0	0	0	5	30				
1	5	0	0	0	31				
2	0	0	0	5	32				
3	5	0	0	0	33				
4	0	5	0	0	34				
5	0	5	5	5	35				
6	0	5	5	0	36				
7	0	0	0	0	37				
8	0	0	0	5	38				
9	0	5	0	0	39				
10	5	0	5	0	40				
11	0	0	0	0	41				
12	0	0	0	0	42				
13	5	5	5	5	43				
14	5	0	0	0	44				
15	0	0	0	0	45				
16	0	0	5	5	46				
17	0	5	5	5	47				
18	0	0	5	0	48				
19	0	0	5	5	49				
20	5	5	0	0	50				
21	0	5	0	5	51				
22	0	0	0	0	52				
23	5	0	5	0	53				
24	0	5	5	0	54				
25	0	0	0	0	55				
26	0	0	5	0	56				
27	0	0	0	0	57				
28	0	0	0	0	58				
29	5	5	0	0	59				

Point of Obse
vation West

Distance to S
40 feet

Direction of
Source East

Direction of
Wind South

Veloc. 10-15m

Sum of Capaci
Readings 185

Total Number
Readings 120

Opacity= 1.54

Sum of Opacity
Readings

Total Number
Readings

1.54%

OBSERVER Gregory J. Kingsley

CERT. NO.

3. Emission Factor Potential Discharge

The EPA AP42 standards listed in Table 2.1-1, "Emission Factors For Refuse Incinerators Without Controls (Emission Factor Rating: A", estimate trench type burners to emit 13 pounds of particulates per ton of waste burned.

Estimated Particulates Emitted Per ACD Unit

13 lb./T x 50 T/day = 650 lb./day x 360 days/yr. = 234,000 lb./yr.

or 117 T/yr. of particulates.

Total Potential Discharge for the Facility

117 T/yr/unit x 2 units = 234 T/yr.

4. Air Pollution Control System

The air curtain destructor (ACD) does not have typical air pollution control equipment. The use of the high velocity and high volume air stream is designed to reduce the amount of particulate and hydrocarbon emissions by trapping them within the combustion chamber and reburning them at high temperatures (1600-2400°F). Figures 1 and 2 depict the type of equipment and the concept of the air curtain principle.

5. Control Device(s) Efficiency

This section is not applicable as there are no figures for actual emissions of an ACD unit of this type.

6. Process Flow Diagram

The facility process flow diagram is depicted on Figure 3.

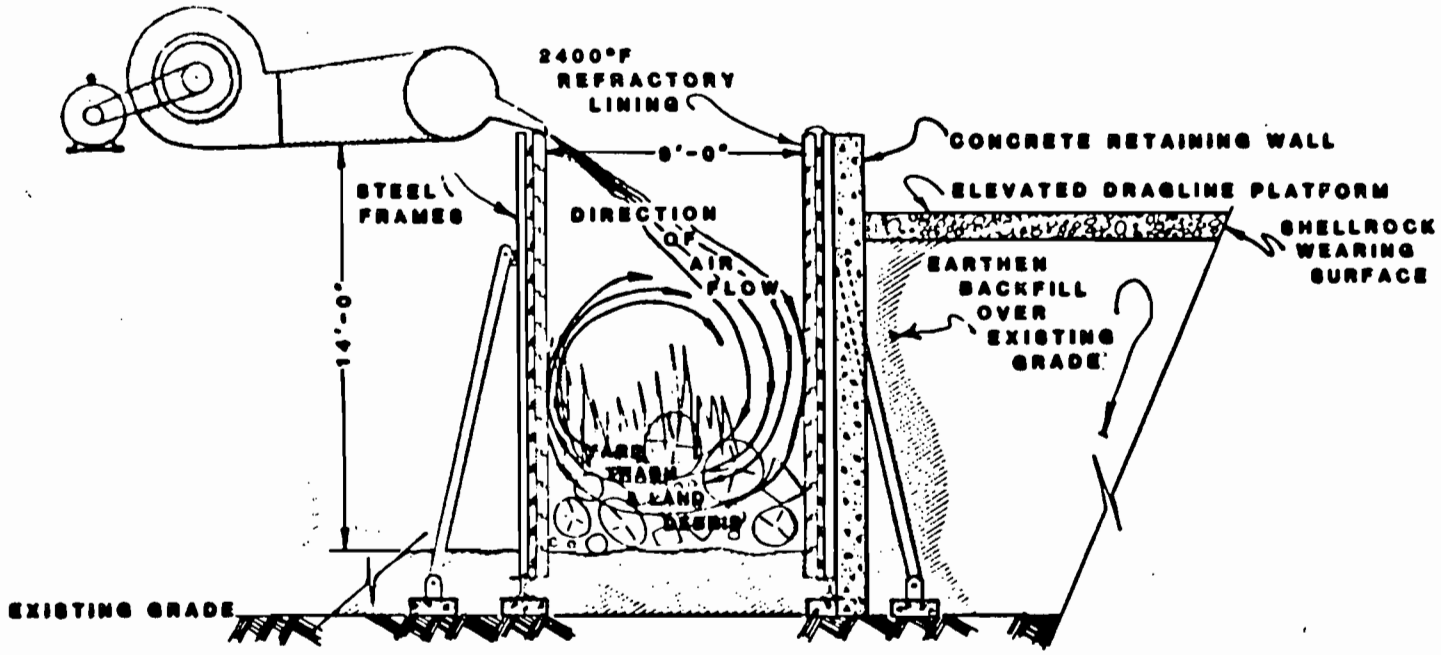
7. Location Plot Plan

The proposed location of the ACD is depicted on Figure 4.

Table 2.1-1. EMISSION FACTORS FOR REFUSE INCINERATORS WITHOUT CONTROLS[a]
EMISSION FACTOR RATING: A

Incinerator type	Particulates		Sulfur oxides[b]		Carbon monoxide		Organics[c]		Nitrogen oxides[d]	
	lb/ton	kg/MT	lb/ton	kg/MT	lb/ton	kg/MT	lb/ton	kg/MT	lb/ton	kg/MT
Municipal[e]										
Multiple chamber, uncontrolled	30	15	2.5	1.25	35	17.5	1.5	0.75	3	1.5
With settling chamber and water spray system[f]	14	7	2.5	1.25	35	17.5	1.5	0.75	3	1.5
Industrial/commercial										
Multiple chamber[g]	7	3.5	2.5[h]	1.25	10	5	3	1.5	3	1.5
Single chamber[i]	15	7.5	2.5[h]	1.25	20	10	15	7.5	2	1
Trench[j]										
Wood	13	6.5	0.1[k]	0.05	NA[l]	NA	NA	NA	4	2
Rubber tires	138	69	NA	NA	NA	NA	NA	NA	NA	NA
Municipal refuse	37	18.5	2.5[h]	1.25	NA	NA	NA	NA	NA	NA
Controlled air[m]	1.4	0.7	1.5	0.75	Neg	Neg	Neg	Neg	10	5
Flue-fed single chamber[n]	30	15	0.5	0.25	20	10	15	7.5	3	1.5
Flue-fed (modified)[o,p]	6	3	0.5	0.25	10	5	3	1.5	10	5
Domestic single chamber										
Without primary burner[q]	35	17.5	0.5	0.25	300	150	100	50	1	0.5
With primary burner[r]	7	3.5	0.5	0.25	Neg	Neg	2	1	2	1
Pathological[s]	8	4	Neg	Neg	Neg	Neg	Neg	Neg	3	1.5

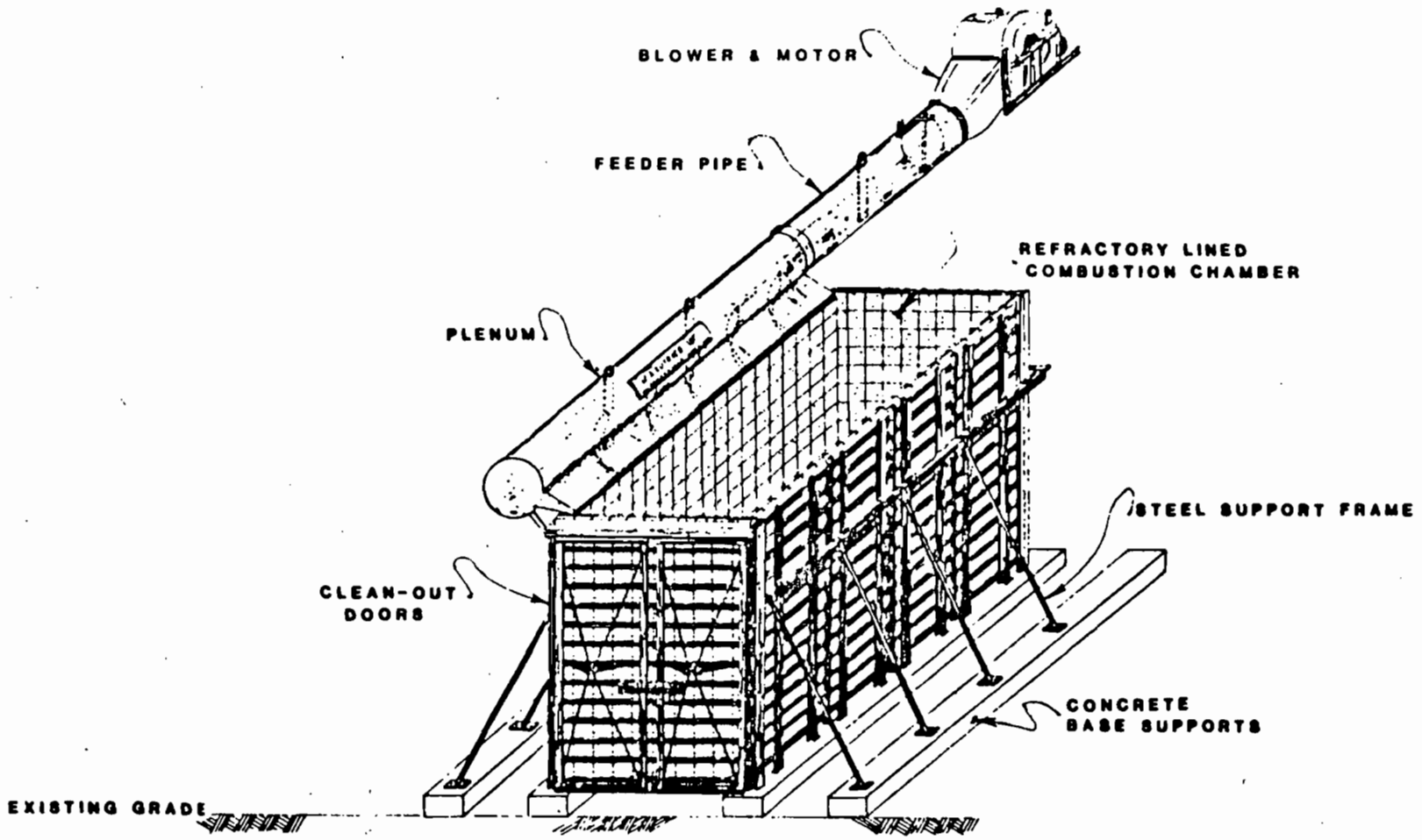
[a] Average factors given based on EPA procedures for incinerator stack testing.
[b] Expressed as sulfur dioxide.
[c] Expressed as methane.
[d] Expressed as nitrogen dioxide.
[e] References 5 and 8 through 14.
[f] Most municipal incinerators are equipped with at least this much control: see Table 2.1-2 for appropriate efficiencies for other controls.
[g] References 3, 5, 10, 13, and 15.
[h] Based on municipal incinerator data.
[i] References 3, 5, 10, and 15.
[j] Reference 7.
[k] Based on data for wood combustion in conical burners.
[l] Not available.
[m] Reference 9.
[n] References 3, 10, 11, 13, 15, and 16.
[o] With afterburners and draft controls.
[p] References 3, 11, and 15.
[q] References 5 and 10.
[r] Reference 5.
[s] References 3 and 8.



PBSJ

A. C. D. FRONT SECTIONAL VIEW

FIGURE
1

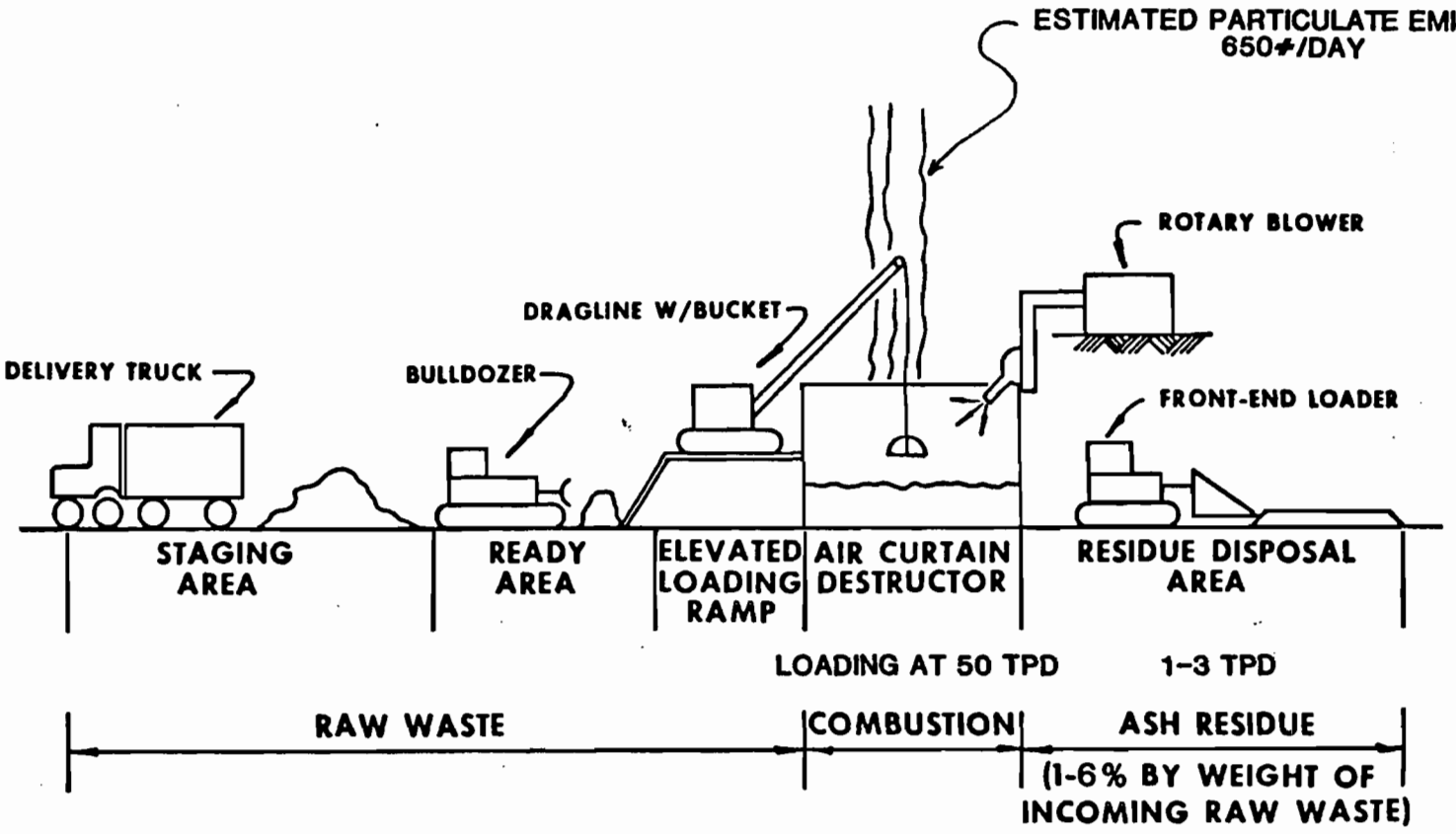


PBSJ

TYPICAL AIR CURTAIN DESTRUCTOR (A. C. D.)

FIGURE 2

S&HWG #105-1082A



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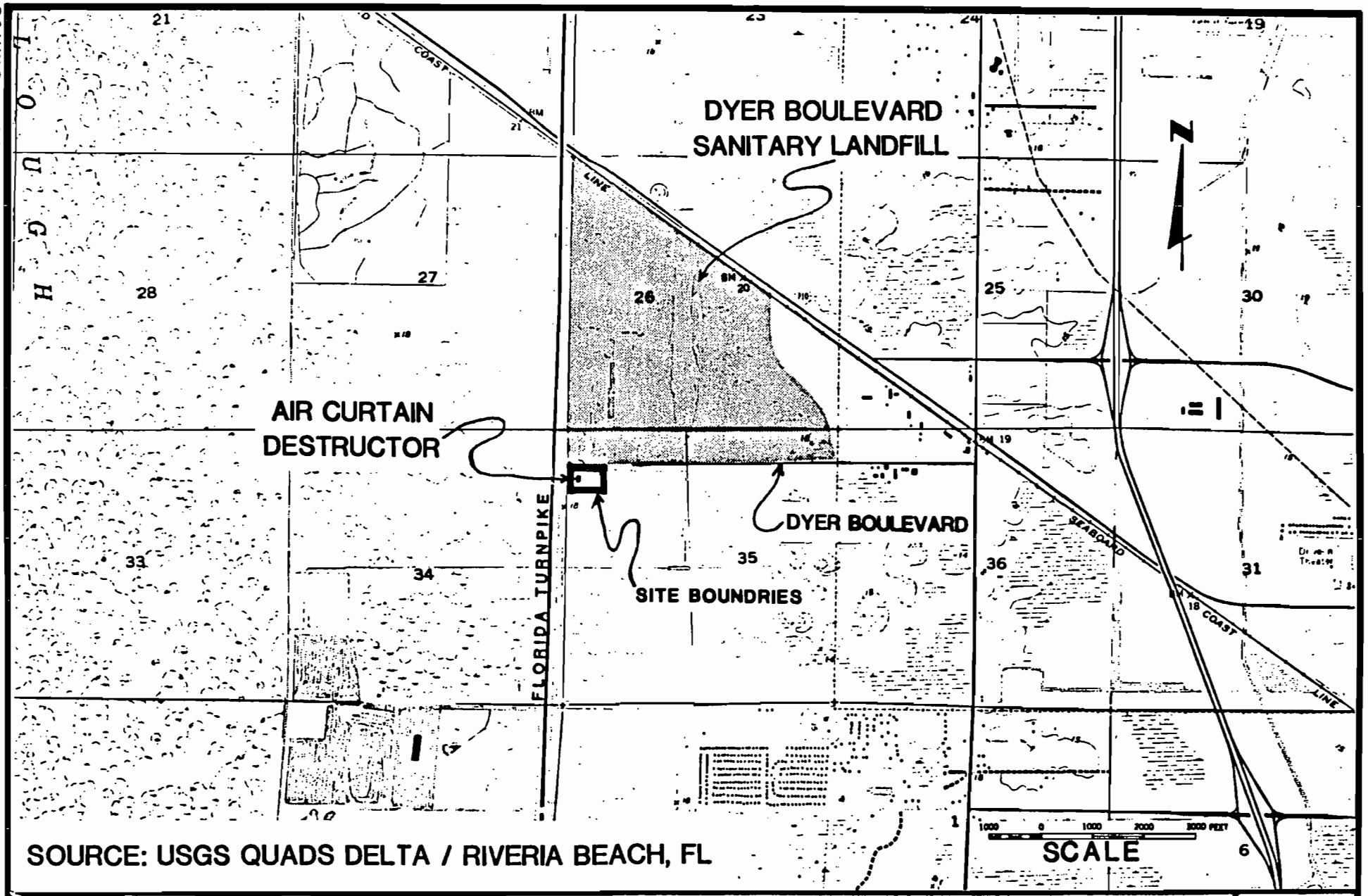
PROCESS FLOW DIAGRAM

FIGURE 3



SOURCE: USGS QUADS DELTA / RIVERIA BEACH, FL

PBSJ

LOCATION PLOT PLAN

FIGURE 4

8. Facility Plot Plan

The proposed facility plot plan is depicted in Figure 5.

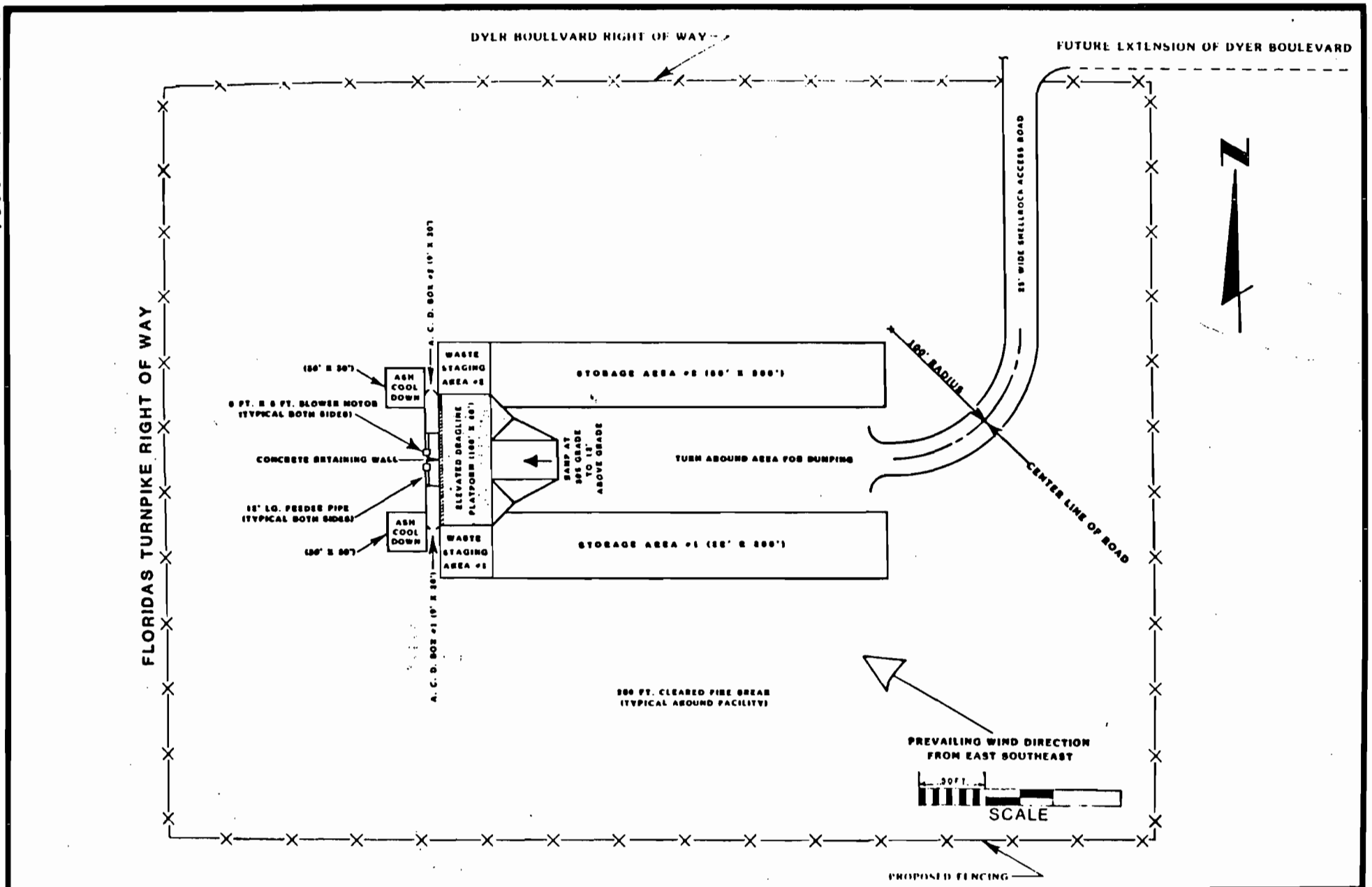
9. Other Pertinent Information

The ACD is a device designed for low emission incineration of certain burnable wastes (i.e., stumps, wood, vegetation, roots). The ACD employes a refractory lined combustion chamber and a high volume, high velocity blower. The blower's plenum contains air nozzles that direct a high-speed curtain of air at a 40 degree angle down and across the top opening of the combustion chamber along the entire length of the chamber. The air hits the opposite wall of the chamber and is deflected into the material being burned in a rotory motion which creates turbulence inside the chamber. The air curtain accomplishes three things: (1) it provides excess oxygen needed to reach high temperatures; (2) it creates turbulence that aids combustion; and (3) it takes smoke and particulates above the filling level of the chamber and recirculates and reburns them through the intense heat. As a result, wastes are virtually and completely consumed at temperatures between 1600 and 2400°F.

To further insure a smokeless operation, the ACD's units will be fitted with auxiliary burners that are fired with LP gas. These burners will be used to ignite the wastes during daily start-up.

The ACD facility will consist of two, Model CSE 8000 ACD/PRCC units manufacturered by W.A. Kutrieb, Inc. of Janesville, Wisconsin. These units will be set up end to end with a common elevated earthen platform in front of the units to accommodate a dragline crane with a clamshell bucket for charging each of the units. Each unit will be limited to processing 50 tons per day (TPD).

S&HWG #107-1082A



FACILITY PLOT PLAN

FIGURE 5

1-10

Incoming waste trucks will enter the access road and the site operator will direct the driver to one of the storage areas to unload. Each ACD has a storage area with a six day storage capacity. The purpose of the storage area is to provide space for materials to dry out since drier materials burn better and produce less smoke (particulate emissions). The dried material will be transported by a front-end loader from the storage areas to the respective waste staging areas for placement in the ACD by the dragline crane.

The ACD facility has the capability to accept waste and operate seven days per week. Removal of ash from the combustion chamber will be accomplished with the front-end loader or the dragline crane. The ash will be cooled with a water spray prior to removal from the site to insure no burning material is disposed of at the landfill and to reduce blowing ash. The ash removal schedule may vary due to the types of material being burned. Normally, the accumulated ash in the combustion chamber will be emptied once per week or when the level reaches a depth of three feet.

PS Form 3811, Jan. 1978

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)
- ☒ Show to whom and date delivered..... ¢
- ☐ Show to whom, date and address of delivery..... ¢
- ☐ RESTRICTED DELIVERY
  Show to whom and date delivered..... ¢
- ☐ RESTRICTED DELIVERY.
  Show to whom, date, and address of delivery.$

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
Mr. H. F. Kahlert
P. O. Box 2429
West Palm Beach, FL 33402

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	P408530315	

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐Addressee ☐Authorized agent

4. DATE OF DELIVERY: 5/11/83 POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

MAY 11 1983 POST OFFICE WEST PALM BEACH, FL USPS

☆GPO : 1979-300-459

P 408 530 315

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. H. F. Kahlert	
Street and No.	
P.O., State and ZIP Code	
Postage	$
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	$
Postmark or Date 5/9/83	

PS Form 3800, Feb. 1982

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

May 6, 1983

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. H. F. Kahlert. P.E.
County Engineer
Palm Beach County Board of
County Commissioners
Post Office Box 2429
West Palm Beach, Florida 33402

Dear Mr. Kahlert:

Attached is one copy of the Technical Evaluation and Preliminary Determination, and proposed permits for the construction of two force draft air curtain destructors at the Dyer Boulevard Sanitary Landfill in Palm Beach County, Florida.

Before final action can be taken on your proposed permits, you are required by Florida Administrative Code Rule 17-1.62(3) to publish the attached Notice of Proposed Agency Action in the legal advertising section of a newspaper of general circulation in Palm Beach County no later than fourteen days after receipt of this letter. The department must be provided with proof of publication within seven days of the date the notice is published. Failure to publish the notice will be grounds for denial of the permits.

The Preliminary Determination and proposed permits constitute a proposed action of the department and are subject to administrative hearing under the provisions of Chapter 120, Florida Statutes, if requested within fourteen days from receipt of this letter. Any petition for hearing must comply with the requirements of Florida Administrative Code Rule 28-5.201 and be filed with the Office of General Counsel, Florida Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32301. Failure to file a request for hearing within fourteen days shall constitute a waiver of your right to a hearing. Filing is deemed complete upon receipt by the Office of General Counsel.

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

Sincerely,

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

CHF/pa

Attachment

cc: Mr. David E. Deans, Post, Buckley, Schuh & Jernigan, Inc.
Mr. Isidore Goldman, DER Southeast District
Mr. Michael Martin, Palm Beach County Health Department

Technical Evaluation

and

Preliminary Determination

Dyer Boulevard Sanitary Landfill

Palm Beach County Board of County Commissioners

West Palm Beach, Florida

Application Numbers:

AC 50-63154
AC 50-63156

Department of Environmental Regulation

Bureau of Air Quality Management

Central Air Permitting

NOTICE OF PROPOSED AGENCY ACTION

The Department of Environmental Regulation gives notice of its intent to issue permits to the Palm Beach County Board of County Commissioners for the construction of two force draft air curtain destructors at the Dyer Boulevard Sanitary Landfill in Palm Beach County, Florida. A determination of Best Available Control Technology (BACT) was not required.

A person who is substantially affected by the Department's proposed permitting decision may request a hearing in accordance with Section 120.57, Florida Statutes, and Chapters 17-1 and 28-5, Florida Administrative Code. The request for hearing must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within fourteen (14) days of publication of this notice. Failure to file a request for hearing within this time period shall constitute a waiver of any right such person may have to request a hearing under Section 120.57, Florida Statutes.

The applications, technical evaluation and department intent are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the following locations:

DER Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, FL 32301

DER Southeast District
3301 Gun Club Road
West Palm Beach, FL a 32207

Palm Beach County Health Department
Division of Environmental Science & Engineering
901 Evernia Street
West Palm Beach, Florida 33402

Comments on this action shall be submitted in writing to Bill Thomas of Tallahassee office within thirty (30) days of this notice.

RULES OF THE ADMINISTRATIVE COMMISSION
MODEL RULES OF PROCEDURE
CHAPTER 28-5
DECISIONS DETERMINING SUBSTANTIAL INTERESTS

28-5.15 Requests for Formal and Informal Proceedings

(1) Requests for proceedings shall be made by petition to the agency involved. Each petition shall be printed typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double spaced and indented.

(2) All petitions filed under these rules should contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name and address of the petitioner or petitioners;

(c) All disputed issues of material fact. If there are none, the petition must so indicate;

(d) A concise statement of the ultimate facts alleged, and the rules, regulations and constitutional provisions which entitle the petitioner to relief;

(e) A statement summarizing any informal action taken to resolve the issues, and the results of that action;

(f) A demand for the relief to which the petitioner deems himself entitled; and

(g) Such other information which the petitioner contends is material.

I. PROJECT DESCRIPTION

A. Applicant

Board of County Commissioners
Palm Beach County
Dyer Boulevard Sanitary Landfill
P. O. Box 2429
West Palm Beach, Florida 33402

B. Project Description and Location

The applicant intends to construct two (2) air curtain destructors (ACD) at the existing Palm Beach County Dyer Boulevard Sanitary Landfill (PBCDBSL).

The two sources will be located at the intersection of Dyer Boulevard and Haverhill Road in Palm Beach County. The UTM coordinates are Zone 17-586.40 km East and 2961.90 km North.

C. Process and Controls

The ACD facility will consist of two, Model CSE 3000 ACD/PRCC units manufactured by W. A. Kutrieb, Inc. of Janesville, Wisconsin. These units will be set up end to end with a common elevated earthen platform in front of the units to accommodate a dragline crane with a clamshell bucket for charging each of the units. Each unit will be limited to processing a maximum of 49.5 tons per day (TPD) of waste material (yard trimmings, land clearing-natural vegetative matter, wood and wood wastes).

All trucks entering the PBCDBSL area are weighed. The ACD operator is responsible for reviewing the weight of each load dumped. By placing the load in a given area of the storage area, the operator is able to accumulate a stockpile of one day's supply of materials (49.5 TPD). The one day supply can then be moved to the daily staging area to be burned during the daily operation. A secondary check to this system is to limit the operation of the ACD to five hours of burning time per day at a peak charging capacity of 19,800 pounds of waste per hour (manufacturer's design charging capacity).

An ACD is a device designed for low emission incineration of certain burnable wastes (i.e., stumps, wood, vegetation, roots). An ACD is designed with a refractory lined combustion chamber and a high volume, high velocity blower. The

blower's plenum contains air nozzles that direct a high-speed curtain of air at a 40 degree angle down and across the top opening of the combustion chamber along the entire length of the chamber. The air hits the opposite wall of the chamber and is deflected into the material being burned in a rotory motion which creates turbulence within the chamber. The air curtain accomplishes three things: (1) it provides excess oxygen needed to reach high temperatures; (2) it creates turbulence that aides combustion; and (3) it takes the smoke and particulates above the filling level of the chamber, recirculates, and reburns them through the intense heat. As a result, wastes are virtually completely combusted at the temperatures of 1600 to 2400° Fahrenheit. A 94 percent (%) reduction by weight is projected. The 6% residual waste material will be stockpiled, cooled (air/water spray), and then landfilled at the PBCDBSL.

To further insure a smokeless operation, the ACD will be fitted with auxiliary burners that are fired with LP gas. The purpose of the LPG burners is to ignite the burnable material during start-up. The LPG ignition system for an ACD is currently in design and will probably consist of four (4) one million Btu per hour LPG burners. The estimated ignition time required to ignite the waste material ranges from five (5) to eighteen (18) minutes (once each day), depending on the type of waste and its moisture content.

The residual waste material stockpile will be a potential fugitive PM problem. A water-spray will be used for both cooling the fired material and to prevent fugitive PM emissions. Ash is to be removed from the combustion chamber when it reaches a depth of three feet as part of the normal operation procedures. Provided ash is removed when it reaches a depth of three feet, the depth of the combustion chamber should be sufficient to prevent ash from blowing or being carried out of the unit and entrained in the surrounding air. The wind directions for the area indicate a calm 18.3% of the time and the predominant wind direction is from the east/southeast. Winds in excess of 20 knots occur less than 2% of the time. Therefore, ash from the ACD units should not be entrained in the air by the wind. If a nuisance does occur, additional and approved control measures must be implemented.

II. RULE APPLICABILITY

The proposed new project is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2, Florida Administrative Code (FAC).

Each proposed ACD will emit a projected potential of 117.4 tons per year (TPY) of the pollutant particulate matter (PM), which is by definition a major source in accordance with Chapter 17-2.100(96), FAC. Therefore, the proposed project constitutes a major facility for the pollutant PM in accordance with Chapter 17-2.100(95), FAC.

The PBCDBSL is located in the Palm Beach County Nonattainment Area for the pollutant ozone (O_3) in accordance with Chapter 17-2.410(1)(a)5., FAC, and review shall be in accordance with Chapter 17-2.510, FAC, New Source Review for Nonattainment Areas. Because the projected potential emissions of the affected pollutant O_3 will not exceed 100 TPY, the facility shall not be subject to the provisions of Chapter 17-2.510(4), FAC, in accordance with Chapter 17-2.510(2)(d)2., FAC.

Since each proposed ACD will not exceed a daily charge rate of 49.5 tons per day (TPD) of combustible material, then the proposed incinerators will not be subject to the New Source Performance Standards (NSPS), 40 CFR 60.50, Subpart E, Incinerators, in accordance with Chapter 17-2.660, FAC.

According to Chapter 17-2.500(2)(d)2., FAC, the proposed new facility will not be subject to Chapter 17-2.500(4), FAC, because the projected potential emissions for the total facility will not exceed 250 TPY of an affected pollutant. The closest pollutant to the threshold is PM at 234.9 TPY.

Each proposed ACD is exempted from the emission limiting standards of Chapter 17-2.600(1), FAC, Incinerators, since the charging rate is less than 50 TPD per source. Therefore, the two sources will be permitted in accordance with Chapter 17-2.610, FAC, General Visible Emissions Standard, and Chapter 17-2.620(2), FAC, General Pollutant Emission Limiting Standards.

According to Chapter 17-2.610(a), FAC, no person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere any air pollutants from new, or existing sources, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart the opacity of which is equal to or greater than 20%. If the presence of uncombined water is the only reason for failure to meet visible emission standards given in this part, such failure shall not be a violation of this emission limit.

In accordance with Chapter 17-2.620(2), FAC, no person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. An objectionable odor is defined as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment

of life or property, or which creates a nuisance according to Chapter 17-2.100(108), FAC.

III. SUMMARY OF EMISSIONS

A. Emission Limitations

For PSD tracking, the projected particulate matter (PM) emissions from this facility are in the following table:

Source	Pollutant	Fuel Charging Rate	Projected Emissions	
		TPD	lbs/day	TPY
ACD	PM	49.5	643.52	117.443
ACD	PM	49.5	643.52	117.443
			Total:	234.89

The regulated pollutant emissions from this facility are visible emissions (VE) in accordance with Chapter 17-2.610(a) and (b), FAC.

Source	Pollutant	Allowable Emissions
ACD	VE	less than 20% Opacity (not to include uncombined water)
ACD	VE	less than 20% Opacity (not to include uncombined water)

The permitted emissions are in compliance with all requirements of Chapter 17-2, FAC.

B. Air Quality Impacts

From a technical review of the application, the Department has determined that the construction and operation of this facility will not have an impact on Florida's ambient air quality standards.

IV. CONCLUSIONS

The emission limits proposed for this project have been determined to be acceptable by the Department. Since no controls are associated with the sources other than crew efficiency, quarterly reports of the daily charging per ACD shall be required to provide the reasonable assurance that the facility is being operated as requested in the application and its amendments.

The permitted emissions from this facility, with the maximum charging rate per ACD of 49.5 TPD of permitted fuel material, will not cause any violation of Florida's ambient air quality standards.

The General and Specific Conditions listed in the proposed permits (attached) will assure compliance with all applicable requirements of Chapter 17-2, FAC.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

PERMITTEE:

Board of County Commissioners
Palm Beach County
Dyer Boulevard Sanitary Landfill
P. O. Box 2429
West Palm Beach, Florida 33402

Permit Number: AC 50-63154
Date of Issue:
Expiration Date: May 1, 1984
County: Palm Beach County
Latitude/Longitude: 26° 46' 38"N/
80° 07' 51"W
Project: Air Curtain Destructor Unit (maximum 49.5 tons per day incinerator)

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

For the construction of a new air curtain destructor unit with a maximum daily charging rate of 49.5 tons of waste material (yard trimmings, land clearing-natural vegetative matter, wood and wood wastes) at the existing sanitary landfill facility located in West Palm Beach, Florida. The UTM coordinates are Zone 17-586.40 km East and 2961.90 km North.

Construction shall be in accordance with the permit application and plans, documents, amendments, and drawings except as otherwise noted on pages 5 - 7 of the "Specific Conditions".

Attachments are as follows:

1. Application to Construct Air Pollution Sources, DER FORM 17-1.122(16).
2. M. J. Martin's letter of completeness dated December 10, 1982.
3. C. H. Fancy's letter of completeness dated December 29, 1982.
4. D. E. Deans letter dated February 28, 1983.
5. Memo to file as an amendment dated March 25, 1983.
6. M. J. Martin's memo dated April 8, 1983.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63154
Date of Issue:
Expiration Date: May 1, 1984

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefor caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63154
Date of Issue:
Expiration Date: May 1, 1984

GENERAL CONDITIONS:

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63154
Date of Issue:
Expiration Date: May 1, 1984

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. Maximum permitted fuel charging rate shall not exceed 49.5 tons per day at 365 days per year. Permitted fuel is yard trimmings, land clearing-natural vegetative matter, wood and wood wastes. No hazardous waste is permitted to be used as a combustible material.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63154
Date of Issue:
Expiration Date: May 1, 1984

SPECIFIC CONDITIONS:

2. The compliance test to be required shall be visible emissions and as follows:

Source/Emission Point	Pollutant	Emission Limit	Test Method
Air Curtain Destructor	Visible Emissions	less than 20% Opacity (not to include uncombined water)	DER Method 9

DER Method 9 shall be performed annually in accordance with Chapter 17-2.700(6)(a)9., FAC.

3. The compliance test reports shall be submitted to the Department or its designee in accordance with Chapter 17-2.700(7), FAC. The required test reports shall be filed with the Department or its designee no later than 45 days after the last compliance test is completed.

4. The compliance test shall be conducted using a minimum to a maximum fuel charging rate of 90% to 100%, respectively, of the maximum permitted fuel charging rate (see No. 1).

5. The Department or its designee shall be notified 10 days prior to conducting the compliance tests.

6. Quarterly reports shall be maintained providing a monthly total and the actual daily fuel charging rate of the Air Curtain Destructor.

7. Copies of all reports, tests, notifications or other submittals required by this permit shall be submitted to both the Department of Environmental Regulation's (DER's) Southeast Florida District Office and the Palm Beach County Health Department Office.

8. Operation of the Air Curtain Destructor shall be in accordance with the Operating and Safety instructions from W. A. Kutrieb, Inc.

9. No objectionable odors shall be permitted on off-facility property in accordance with Chapter 17-2.620(2), FAC.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63154
Date of Issue:
Expiration Date: May 1, 1984

SPECIFIC CONDITIONS:

10. The applicant will demonstrate compliance with the conditions of this construction permit and submit a complete application for an operating permit to the DER's Southeast Florida District Office or its designee prior to 90 days before the expiration date of this permit. The applicant may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.

Issued this_____day of_____, 19__

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

_____

_____Pages attached.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

PERMITTEE:

Board of County Commissioners
Palm Beach County
Dyer Boulevard Sanitary Landfill
P. O. Box 2429
West Palm Beach, Florida 33402

Permit Number: AC 50-63156
Date of Issue:
Expiration Date: May 1, 1984
County: Palm Beach County
Latitude/Longitude: 26° 46' 38"N/ 80° 07' 51"W
Project: Air Curtain Destructor Unit (maximum 49.5 tons per day incinerator)

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

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PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
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4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefor caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63156
Date of Issue:
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7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

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c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

a. a description of and cause of non-compliance; and

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PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63156
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PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63156
Date of Issue:
Expiration Date: May 1, 1984

GENERAL CONDITIONS:

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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.

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PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63156
Date of Issue:
Expiration Date: May 1, 1984

SPECIFIC CONDITIONS:

2. The compliance test to be required shall be visible emissions and as follows:

Source/Emission Point	Pollutant	Emission Limit	Test Method
Air Curtain Destructor	Visible Emissions	less than 20% Opacity (not to include uncombined water)	DER Method 9

DER Method 9 shall be performed annually in accordance with Chapter 17-2.700(6)(a)9., FAC.

3. The compliance test reports shall be submitted to the Department or its designee in accordance with Chapter 17-2.700(7), FAC. The required test reports shall be filed with the Department or its designee no later than 45 days after the last compliance test is completed.

4. The compliance test shall be conducted using a minimum to a maximum fuel charging rate of 90% to 100%, respectively, of the maximum permitted fuel charging rate (see No. 1).

5. The Department or its designee shall be notified 10 days prior to conducting the compliance tests.

6. Quarterly reports shall be maintained providing a monthly total and the actual daily fuel charging rate of the Air Curtain Destructor.

7. Copies of all reports, tests, notifications or other submittals required by this permit shall be submitted to both the Department of Environmental Regulation's (DER's) Southeast Florida District Office and the Palm Beach County Health Department Office.

8. Operation of the Air Curtain Destructor shall be in accordance with the Operating and Safety instructions from W. A. Kutrieb, Inc.

9. No objectionable odors shall be permitted on off-facility property in accordance with Chapter 17-2.620(2), FAC.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63156
Date of Issue:
Expiration Date: May 1, 1984

SPECIFIC CONDITIONS:

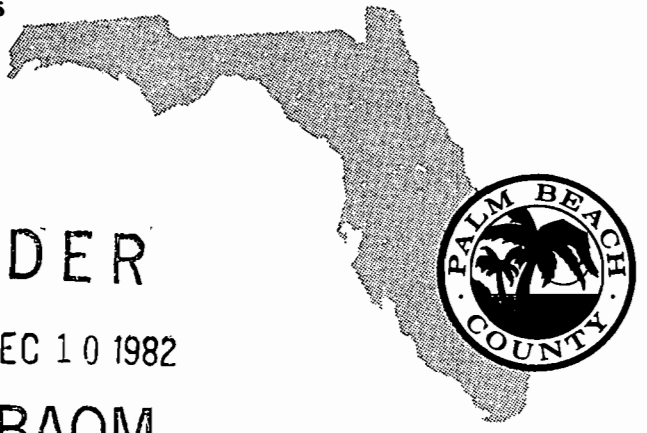
10. The applicant will demonstrate compliance with the conditions of this construction permit and submit a complete application for an operating permit to the DER's Southeast Florida District Office or its designee prior to 90 days before the expiration date of this permit. The applicant may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.

Issued this_____day of_____, 19__

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

_____

_____Pages attached.



December 1, 1982

Mr. John Guidry
Department of Environmental Regulation
3301 Gun Club Road
West Palm Beach, Florida 33402

SUBJECT: Application to Operate/Construct Air Pollution Sources

Dear Mr. Guidry:

Enclosed are four signed and sealed copies of "Application to Operate/ Construct Air Pollution Sources" for each of two air curtain destructor units to be installed at the Dyer Boulevard Landfill. Also enclosed is a check in the amount of $2,000 which is necessary to process the permit application.

Should you have any questions, please do not hesitate to contact my office or our consultants, Post Buckley Schuh & Jernigan in Orlando.

Sincerely,

H. F. Kahlert, P.E.
County Engineer

HFK:d
cc: David Deans, Post Buckley, Schuh & Jernigan
G. Haney Frakes, Assistant County Engineer
Ron Day, Solid Waste Authority

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO.

ACTION DUE DATE

	INITIAL	DATE
1. TO: (NAME, OFFICE, LOCATION) Clair Fancy BAQM/DER-TALLA.		
2.		
3. DER		
4. DEC 10 1982 BAQM		

REMARKS: Re: P.B.Co.Comm-Dyer Blvd.

Attached:

Two copies of Application pack (ea. for two air curtain destructors), we have retained one copy and forwarded a copy to PBCHD.

Copies of P.A.T.S. sheets. Please call if you need our help to transfer the P.A.T.S. files.

Solid waste permit application also enclosed for reference only. We are permitting the solid waste aspects under a S.W. permit separately.

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 & REPT
- INITIAL & FORWARD
- DISTRIBUTE
- CONCURRENCE
- FOR PROCESSING
- INITIAL & RETURN

FROM: Tom Fidler DER/WPB

DATE 12-7-82

PHONE

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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

TO: Broward County Environmental Quality Control Board
Broward County Health Department
Dade County Health Department
Metropolitan Dade County Environmental Resources Management
Palm Beach County Health Department

FROM: James C. Williams, P.E., West Palm Beach

DATE: December 6, 1982

SUBJECT: Application

Application File No. AC 50-63154
Application Name Palm Beach Co. Comm. (Dyer Blvd.)
(Forced Draft Air Curtain Destructor-
Exhaust from Unit No. 1)

This office has received the following application for:

_X_ Air Pollution Source	___ Industrial Wastewater
___ Domestic Wastewater	___ Injection Well
___ Drainage Well	___ Public Water Well/Plant
___ Hazardous Waste Facility	___ Solid Waste Facility

for

_X_ Construction Permit
___ Operating Permit
___ Temporary Operating Permit

Your comments regarding completeness of the application are requested by December 20, 1982.

A copy of the application has been provided to you by:

___ The applicant or his engineer; or
_X_ Is attached

If you have any questions please call 305/689-5800.

JCW:km

WPB 116P (Rev. 5/82)

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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

TO: Broward County Environmental Quality Control Board
Broward County Health Department
Dade County Health Department
Metropolitan Dade County Environmental Resources Management
Palm Beach County Health Department

FROM: James C. Williams, P.E., West Palm Beach

DATE: December 6, 1982

SUBJECT: Application

Application File No. AC 50-63156
Application Name Palm Beach Co. Comm. (Dyer Blvd.)
(Forced Draft Air Curtain Destructor-
Exhaust from Unit No. 2)

This office has received the following application for:

X Air Pollution Source	___ Industrial Wastewater
___ Domestic Wastewater	___ Injection Well
___ Drainage Well	___ Public Water Well/Plant
___ Hazardous Waste Facility	___ Solid Waste Facility

for

X Construction Permit
___ Operating Permit
___ Temporary Operating Permit

Your comments regarding completeness of the application are requested by December 20, 1982.

A copy of the application has been provided to you by:

___ The applicant or his engineer; or
X Is attached

If you have any questions please call 305/689-5800.

JCW:km

WPB 116P (Rev. 5/82)

DETACH BEFORE DEPOSITING
AND RETAIN FOR YOUR RECORDS

No. 13935

JOB NO.	ACCOUNT NO.	VOUCHER NO.	VENDOR NO.	DESCRIPTION	AMOUNT
954-002.02				Air Permit Fee - Air Curtain Destructor Unit No. 1	1,000.00

POST, BUCKLEY, SCHUH & JERNIGAN, INC.
ORLANDO, FLORIDA

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

No. 66388

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from Post, Buckley, Schuh & Jernigan, Inc. Date 12/03/82

Address 889 North Orange Avenue Orlando, Florida 32801-1088 Dollars $1,000.00

Applicant Name & Address Palm Beach Co. Comm., P.O. Box 2429, West Palm Beach, FL 33402

Source of Revenue Palm Beach Co. Comm.-Dyer Blvd. (Forced Draft Air Curtain Destructor-Unit No. 1)

Revenue Code 0101 (13935) Application Number AC 50- 63154

By Karen Miller

DETACH BEFORE DEPOSITING
AND RETAIN FOR YOUR RECORDS

No. 13934

JOB NO.	ACCOUNT NO.	VOUCHER NO.	VENDOR NO.	DESCRIPTION	AMOUNT
954-002.02				Air Permit Fee - Unit No. 2	1,000.00

POST, BUCKLEY, SCHUH & JERNIGAN, INC.
ORLANDO, FLORIDA

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

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Applicant Name & Address Palm Beach Co. Comm., P.O. Box 2429, West Palm Beach, FL 33409

Source of Revenue Palm Beach Co. Comm.-Dyer Blvd. (Forced Draft Air Curtain Destructor-Exhaust from Unit No. 2)

Revenue Code 0101 (13934) Application Number AC 50- 63156

By [illegible]

STATE OF FLORIDA DEPARTMENT OF

Send a copy to Tally

HEALTH & REHABILITATIVE SERVICES

DISTRICT NINE

PALM BEACH COUNTY HEALTH DEPT.
WEST PALM BEACH, FLORIDA 33401

INTER-OFFICE MEMORANDUM

DATE December 10, 1982

RECEIVED
DEC 10 1982
Dept. of Environmental Reg.
West Palm Beach

TO: Mr. James C. Williams, P.E., Permitting, DER-WPB

SUBJECT: Palm Beach County-ACD, Units 1 & 2
AC 50-63154

FROM: Air Pollution Control

This agency has reviewed the application for the above referenced source. Application for the permit is incomplete. Please include our comments below in your agency's request for additional information.

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2. Attachment 1, page 1-1 1. Please supply manufacturer's design rate 0.33 T/Hr./L.F. Also, please address the assumption of 94% weight reduction. The 6% incombustible figure appears low.

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9. Figure 3, estimated particulate emission of 650#/day and loading rate of 50 TPD would require ~~NSPS~~. Calculations should be based on 49.5 TPD. Chp. 17-2.600(1)(e), FAC, applicability. gas

10. Location of and maximum fuel consumption for auxiliary burners. (BTU/hr burner rating, etc.).

11. Need manufacturers specs for this particular model and design data.

MJM/mc

FORM ADM 80003

BY M J Martin
Michael J. Martin
Environmental Specialist

PS Form 3811, Jan. 1979

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)
- ☑ Show to whom and date delivered..... ¢
- ☐ Show to whom, date and address of delivery.... ¢
- ☐ RESTRICTED DELIVERY
  Show to whom and date delivered..... ¢
- ☐ RESTRICTED DELIVERY.
  Show to whom, date, and address of delivery.$

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
H.F. Kahlert
P.O. Box 2429
West Palm Beach, FL 33402

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	015791O	

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

4. DATE OF DELIVERY: 1/5/83

POSTMARK: WEST PALM BEACH, FL MAIN OFFICE JAN 05 1983 U.S.

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE:

CLERK'S INITIALS

☆GPO : 1979-300-459

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

December 29, 1982

CERTIFIED MAIL

Mr. H. F. Kahlert, P.E.
County Engineer
Board of County Commissioners, Palm Beach County
P. O. Box 2429
West Palm Beach, Florida 33402

Re: Completeness Review of Applications to Construct:
AC 50-63154 and AC 50-63156

Dear Mr. Kahlert:

The Department has received your applications, referenced above, to construct two (2) force draft air curtain destructors (ACD), Model No. CSE 3000 ACD/PRCC, at the Dyer Boulevard Sanitary Landfill in Palm Beach County. The applications, after being reviewed, have been determined to be incomplete. Processing of the applications will resume when the following points of incompleteness and the comments contained in the attachment (request from Michael Martin, Palm Beach County Health Department) have been answered and submitted to the Bureau:

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If there are any questions, please call Bruce Mitchell at (904)488-1344 or write to me at the address above.

Sincerely,

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

CHF/RBM/bjm

cc: Martha Harrell Hall
Michael Martin
Isidore Goldman
David E. Deans

Attachment

STATE OF FLORIDA DEPARTMENT OF

Send a copy To Tally

HEALTH & REHABILITATIVE SERVICES

DISTRICT NINE

PALM BEACH COUNTY HEALTH DEPT.
WEST PALM BEACH, FLORIDA 33401

INTER-OFFICE MEMORANDUM

DATE December 10, 1982

RECEIVED
DEC 10 1982
Dept. of Environmental Reg.
West Palm Beach

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SUBJECT: Palm Beach County-ACD, Units 1 & 2
AC 50-63154

FROM: Air Pollution Control

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11. Need manufacturers specs for this particular model and design data.

MJM/mc

FORM ADM 80003

BY M J Martin

Michael J. Martin
Environmental Specialist

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO.

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION) Dave Fanay BAQM/DER-Tall	INITIAL	
	DATE	
2.	INITIAL	
	DATE	
3.	INITIAL	
	DATE	
4.	INITIAL	
	DATE	

REMARKS:

Comments from PBCHD on application being processed at BAQM

Palm Beach County AIR ~~[redacted]~~ CURTAIN DESTRUCTOR

DER

DEC 15 1982

BAQM

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 & REPT
	INITIAL & FORWARD
	DISTRIBUTE
	CONCURRENCE
	FOR PROCESSING
	INITIAL & RETURN

FROM: L. Goldman

DATE 11/13/82

PHONE

Post, Buckley, Schuh & Jernigan, Inc.
CONSULTING ENGINEERS and PLANNERS
889 NORTH ORANGE AVENUE, ORLANDO, FLORIDA 32801-1088 • 305/423-7275 • TELEX 808435

February 28, 1983

Mr. C.H. Fancy, P.E.
Deputy Bureau Chief
Bureau of Air Quality Management
Department of Environmental Regulation
Twin Towers Office Building
2600 Blairstone Road
Tallahassee, FL 32301

DER
MAR 16 1983
BAQM

Dear Mr. Fancy:

Re: Response to December 29, 1982, Letter to Mr. H.F. Kahlert, P.E., Palm Beach County Engineer, from C.H. Fancy, P.E., DER Deputy Bureau Chief, Bureau of Air Quality Management

This letter is in response to DER's and Palm Beach County Health Department's questions in your letter dated December 29, 1982, regarding the Air Pollution Source Construction Permit Application for an air curtain destructor (ACD) facility at Palm Beach County's Dyer Boulevard Sanitary Landfill. The following are responses to the questions contained in your December 29, 1982, letter:

DER Questions

1. The revised latitude and longitude, UTM coordinates for the facility are:

Latitude	-	26° 43' 23" N
Longitude	-	80° 08' 04" W
UTM:East	-	586,400
UTM:North	-	2,961,900

2. The purpose of the LPG burners is to ignite the burnable material during start-up and to eliminate the use of kerosene or diesel fuel for ignitation. Use of LPG burners to ignite the burnable material in the ACD unit is not a standard practice. The LPG ignition system for the ACD unit is currently in design and will probably consist of four (4), one million Btu per hour, LPG burners. The estimated ignition time required to ignite the waste material ranges from five (5) to eighteen (18) minutes (once each day), depending on the type of waste and its moisture content. The following assumptions were made in order to calculate the probable LPG usage per ACD unit:

    1. LPG has an average Btu value of 91,690 per gallon.

    2. The ignition time is 18 minutes, once per day.

    3. Each unit will have a maximum four million Btu per hour of burner capacity.

Based on the above assumptions, the LPG consumption rate was calculated as follows:

Total Btu's of LPG Consumed Per Day
4 Million Btu's/Hr. x 0.3 Hrs./Day = 1.2 Million Btu's/Day

Total Gallons of LPG Consumed Per Year
1.2 Million Btu's//Day ÷ 91,690 Btu's/Gal. = 13.08 Gals./Day
13.08 Gals./Day x 360 Days/Yr. = 4,711 Gals./Year

3. Attachment 1 is page 1-9 of the permit application which has been revised to limit the amount of waste processed per day to 49.5 tons per day. The following are the potential emissions that were calculated based on Table 2.1.1, Emission Factors For Refuse Incinerators Without Controls, Emissions Rating A, for the Class III waste and Table 1.5-1, Emission Factors For LPG Combustion, Emission Factor Rating C, for the LPG, both from EPA Publication AP42.

Attachment 2 is the table used to figure the emission factor for the LPG gas. The table used to figure the emission factor for the waste can be found on page 1-4 of the permit application.

Particulate Matter (PM)*

Waste:	13 lbs./ton x 49.5 TPD x 360 days/yr. ÷ 2,000 lbs./ton	= 115.83 TPY
LPG:	0.0017 lbs./gal. x 13.0 gals./day x 360 days/yr. ÷ 2,000 lbs./ton	= 0.004 TPY
	TOTAL	115.834 TPY

*This number supercedes the calcalations presented in Section V, Item 3, page 1-3.

Nitrogen Oxide (NO_X)

Waste:	4 lbs./ton x 49.5 TPD x 360 days/yr. ÷ 2,000 lbs./ton	= 35.64 TPY
LPG:	0.0112 lbs./gal. x 13.08 gals./day x 360 days/yr. ÷ 2,000 lbs./ton	= 0.02 TPY
	TOTAL	35.66 TPY

Sulfur Oxides

Waste:	0.1 lbs./ton x 49.5 TPD x 360 days/yr. ÷ 2,000 lbs./ton	= 0.89 TPY
LPG:	0.000014 lbs./gal.** x 13.08 gals./day x 360 days/yr. ÷ 2,000 lbs./ton	=0.00003 TPY
	TOTAL	.89003 TPY

**Assumes sulfur content of propane equivalent to 0.16 grain per 100 $ft.^3$.

Carbon Monoxide (CO)

Waste:	No data available.	
LPG:	0.015 lbs./gal. x 13.08 gals./day x 360 days/yr. ÷ 2,000 lbs./ton	=0.00353 TPY

Organics (HC_n)

Waste: No data available.
LPG: 0.0003 lbs./gal. x 13.08 gals./day x 360 days/yr. ÷ 2,000 lbs.ton = .0007 TPY

4. All trucks entering the Dyer landfill area are weighed. The ACD facility operator is responsible for reviewing the weight of each load dumped. By placing the load in a given area of the storage area, the operator is able to accumulate a stockpile of one day's supply of materials (49.5 TPD). The one day supply can then be moved to the daily staging area to be burned during the daily operation. A secondary check to this system is to limit the operation of the ACD unit to five hours of burning time per day at a peak charging capacity of 19,800 pounds of waste per hour (manufacturer's design charging capacity).

5. As described in Section V, Item 9 of Attachment I (page 1-11 of the original permit application), ash is removed from the ACD combustion chamber when it reaches a depth of three feet, as part of the normal operation procedures. Provided ash is removed when it reaches a depth of three feet, the depth of the combustion chamber is sufficient to prevent ash from blowing or being carried out of the unit. In reviewing the wind directions for the area, the area is calm 18.3 percent of the time and the predominant wind direction is from the east/southeast. Winds in excess of 20 knots occur less than two percent of the time. Ash from the ACD unit should not be entrained in the air by the wind. Therefore, a cover for the unit is not required.

6. Please amend Section 11, General Project Information, Section B, of the construction permit application form, to read:

   Start of Construction May 1, 1983
   Completion of Construction May 1, 1984

Palm Beach County Health Department Questions

1. Unit price cost for the ACD unit is $63,241.00. The blower used for air pollution control represents approximately 25 percent of this cost, or $15,800.

2. Attachment 3 is a copy of the manufacturer's specification indicating the ACD unit is a capable of burning 0.33 T/hr./L.F. Attachment 4 is a copy of the manufacturer's specifications indicating that the ACD unit is capable of a 94 percent reduction in volume of the woody wastes listed in the specification.

3. The opacity test for the Indian River ACD unit is conducted under normal operating conditions. In a telephone conversation with the Indian River County Superintendent of Solid Waste Diposal Operations, Mr. Rex Hailey, he was unable to recall how many times the ACD unit was charged during the opacity tests. In a subsequent telephone conversation with Mr. Gregory Kingsley, the visible emissions testing technician, he recounted that the unit was not charged during the test period.

4. See DER Response No. 1.

5. Attachment 5 is a specification of the equipment being purchased by Palm Beach County. Section B.1.a describes the blower; Section B.1.b describes the feeder pipe diameter.

6. UTL is the abbreviation for "upper temperature limit." The UTL is the maximum temperature the fire brick can sustain without damage or deterioration. The ACD unit is designed to operate below this limit when burning the waste material described in the manufacturer's literature (see Attachment 4).

7. See DER Response No. 6.

8. See DER Response No. 3.

9. Attached is a revised Figure 3 indicating only 643 lbs./day of particulates are released.

10. See DER Response No. 2.

11. See Attachment 3.

Should you have any questions regarding the responses, please do not hesitate to call.

Very truly yours,

POST, BUCKLEY, SCHUH & JERNIGAN, INC.

David E. Deans, P.E.
Project Director

DED/agb

Attachments (as stated)

cc w/attachs: H. Kahlert/H. Frakes/R. Day/D. Smith/K. Cooley/W. Aldridge/
DER, West Palm Beach/Palm Beach County Health Department

954-002.02

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

JAN 3 1982

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

December 29, 1982

CERTIFIED MAIL

Mr. H. F. Kahlert, P.E.
County Engineer
Board of County Commissioners, Palm Beach County
P. O. Box 2429
West Palm Beach, Florida 33402

Re: Completeness Review of Applications to Construct:
AC 50-63154 and AC 50-63156

Dear Mr. Kahlert:

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

CHF/RBM/bjm

cc: Martha Harrell Hall
Michael Martin
Isidore Goldman
David E. Deans

Attachment

STATE OF FLORIDA DEPARTMENT OF

HEALTH & REHABILITATIVE SERVICES

DISTRICT NINE

PALM BEACH COUNTY HEALTH DEPT.
WEST PALM BEACH, FLORIDA 33401

INTER-OFFICE MEMORANDUM

DATE December 10, 1982

TO: Mr. James C. Williams, P.E., Permitting, DER-WPB

SUBJECT: Palm Beach County-ACD, Units 1 & 2
AC 50-63154

FROM: Air Pollution Control

RECEIVED
DEC 10 1982
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West Palm Beach

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MJM/mc

FORM ADM 80003

BY Mr J Martin
Michael J. Martin
Environmental Specialist

8. Facility Plot Plan

The proposed facility plot plan is depicted in Figure 5.

9. Other Pertinent Information

The ACD is a device designed for low emission incineration of certain burnable wastes (i.e., stumps, wood, vegetation, roots). The ACD employes a refractory lined combustion chamber and a high volume, high velocity blower. The blower's plenum contains air nozzles that direct a high-speed curtain of air at a 40 degree angle down and across the top opening of the combustion chamber along the entire length of the chamber. The air hits the opposite wall of the chamber and is deflected into the material being burned in a rotory motion which creates turbulence inside the chamber. The air curtain accomplishes three things: (1) it provides excess oxygen needed to reach high temperatures; (2) it creates turbulence that aids combustion; and (3) it takes smoke and particulates above the filling level of the chamber and recirculates and reburns them through the intense heat. As a result, wastes are virtually and completely consumed at temperatures between 1600 and 2400°F.

To further insure a smokeless operation, the ACD's units will be fitted with auxiliary burners that are fired with LP gas. These burners will be used to ignite the wastes during daily start-up.

The ACD facility will consist of two, Model CSE 3000 ACD/PRCC units manufacturered by W.A. Kutrieb, Inc. of Janesville, Wisconsin. These units will be set up end to end with a common elevated earthen platform in front of the units to accommodate a dragline crane with a clamshell bucket for charging each of the units. Each unit will be limited to processing 49.5 tons per day (TPD).

ATTACHMENT 2

Table 1.5-1. EMISSION FACTORS FOR LPG COMBUSTION[a]
EMISSION FACTOR RATING: C

Pollutant	Industrial process furnaces				Domestic and commercial furnaces			
	Butane		Propane		Butane		Propane	
	lb/10^3 gal	kg/10^3 liters	lb/10^3 gal	kg/10^3 liters	lb/10^3 gal	kg/10^3 liters	lb/10^3 gal	kg/10^3 liters
Particulates	1.8	0.22	1.7	0.20	1.9	0.23	1.8	0.22
Sulfur oxides[b]	0.09S	0.01S	0.09S	0.01S	0.09S	0.01S	0.09S	0.01S
Carbon monoxide	1.6	0.19	1.5	0.18	2.0	0.24	1.9	0.23
Hydrocarbons	0.3	0.036	0.3	0.036	0.8	0.096	0.7	0.084
Nitrogen oxides[c]	12.1	1.45	11.2	1.35	(8 to 12)[d]	(1.0 to 1.5)[d]	(7 to 11)[d]	(0.8 to 1.3)[d]

[a]LPG emission factors calculated assuming emissions (excluding sulfur oxides) are the same, on a heat input basis, as for natural gas combustion.
[b]S equals sulfur content expressed in grains per 100 ft^3 gas vapor; e.g., if the sulfur content is 0.16 grain per 100 ft^3 (0.366 g/100 m^3) vapor, the SO_2 emission factor would be 0.09 x 0.16 or 0.014 lb SO_2 per 1000 gallons (0.01 x 0.366 or 0.0018 kg $SO_2/10^3$ liters) butane burned.
[c]Expressed as NO_2.
[d]Use lower value for domestic units and higher value for commercial units.

ATTACHMENT 3

During the pressing operation two stainless steel anchors are inserted into the block. These anchors allow the tile to be hung in place on the steel supporting framework. Total tile weight is about 60 lbs. makes it easy to handle by one man.

It should be noted that not only must a castable refractory be used with an adequate service temperature and modulus of rupture, but that production of such tile be done under controlled environmental conditions. Such a tile had to be designed specifically for ACD use. The refractory tile component system makes replacement of tile quite simple.

Such permanent ACD installations require minimal maintenance if operated according to manufacturers specifications. Installations over 3 years old under continuous use have found it unecessary to replace any tile. However, normally, occassional replacement of individual tile will probably be necessary since many installations burn stumps and tree trunks weighing 2 or more tons. Even with careful loading of such large material, very concentrated impact could cause a tile to crack. Maintenance of mechanical components is little. Regular greasing of blower and motor bearings is almost the limit. Extremely low overall maintenance cost is unique to this particular system of disposal.

Air pollution or and emission standards can be met if the equipment is operated properly and the necessary combustion chamber used. Numerous trench burners have been shutdown due to emission violations unavoidable with the often shallow and irregular dirt pit chamber.

To date, I'm not aware of a state which has refused operation or restricted operation of a properly designed and operated ACD installation. On the contrary, properly operated, they are welcomed to the growing field of effective solid waste disposal equipment.

The ACD is, however, limited in the type of material which it can effectively burn. Wet or dry wood wastes of almost any type are rapidly consumed with about a 1 - 2% ash residue. Low heat refuse, plastics, rubber etc. are not recommended fuel and often are legally restricted.

The size of an installation needed can be based on a tonnage per hour basis. A rule of thumb measurement of about .33 tons/hour/lineal foot of combustion chamber is standard. Dry material such as crating, pallets or house wreckage burn considerably faster.

Installations are usually available in 10 ft. increments starting at 10' and running up to 60'.

W. A. KUTRIEB INC.
DESIGNERS & BUILDERS OF:
Waste Recovery and Pollution Control Equipment

SPECIFICATIONS FOR AN AIR CURTAIN DESTRUCTOR:

It is the intent of these specifications to describe a new Air Curtain Destructor, complete with fan, motor, plenum and combustion chamber. These specifications are intended to describe minimum requirements and are not intended to limit acceptance of one manufactured unit to the exclusion of others.

This unit is intended to be used for low-emission incineration of common yard cuttings, tree trimmings, palm fronds, grass cuttings, scrap lumber, form lumber and debris from demolished wood structures. It is not intended for incineration of garbage, household appliances or abandoned cars.

This unit shall effect volume reduction, after incincration, of the above described materials of 94% or more. *

This unit shall burn smokeless after operating temperature is reached and maintained.

No gas, oil or water shall be required to operate this unit except for a small amount of diesel fuel to effect initial combustion at the start of the operating day.

This unit will be an above ground installation.

The blower unit shall meet the following specifications:

a. The unit shall accomodate a ~~20'~~ 40' long pit and shall be in-line design.

b. The plenum shall be approximately 34" in diameter, manufactured of 11 gauge steel (minimum thickness). It shall include a tapered nozzle having inside and forward inclined baffels. The last 1" of the nozzle tip shall have an inside deflection of appr. 20°. The plenum shall have a 24" extension beyond the nozzle to accomodate the feeder pipe connection.

c. The feeder pipe shall be the same diameter as the plenum and shall be constructed of similar strenght steel. It shall be a minimum of 12' long and shall be connected to the plenum with a connection ring which allows the plenum to be rotated. Both the plenum and feeder pipe shall have transporting eye bolts located at centers of gravity.

1527 BELOIT AVENUE • P.O. BOX 1635 • JANESVILLE, WISCONSIN 53545 U.S.A. • (608)752-9146

ATTACHMENT 5

B. EQUIPMENT

1. Air Curtain Destructor Units

The air curtain destructor unit shall be comprised of the following:

a. Centrifugal Airfoil Blower

1) The blower shall be a 27 inch diameter, double width, double intake, centrifugal airfoil of in-line design capable of delivering 31,500 cfm at an exit speed of 110 ft./sec. and equipped with a lifting eye bolt.

2) The blower motor shall be electric, 230-460 volt, three phase, 40 horsepower Lincoln Multigard motor (or equivalent), with a lifting eye bolt.

3) The blower shall be equipped with all necessary drive systems, belts, pulleys, and guards.

b. Feeder Pipe

1) The feeder pipe shall be a 36 inch outside diameter, 11 gauge steel pipe with a minimum length of 12 feet. An air flow damper shall be installed to permit air volume modulation during start-up of the air curtain destructor system. The feeder pipe shall be equipped with a lifting eye bolt at the center of gravity.

c. Plenum

1) The plenum shall be a 36 inch outside diameter, 31 foot long, 11 gauge steel (minimum thickness) pipe. The plenum shall include a 30 foot long tapered nozzle having inside forward

inclined baffles capable of fitting in a 30 foot long PRCC. The last one inch of the nozzle tip shall have an inside deflection of approximately 20°. The plenum shall be equipped with a lifting eye bolt at the center of gravity.

d. Couplings

1) A reinforced, neoprene fabric, airtight, flexible coupling at least 24 inches long with steel compression ring connectors shall connect the feeder pipe to the blower.

2) A steel connection ring shall join the feeder pipe to the plenum.

e. Combustion Chamber

1) The combustion chamber's inside dimensions shall be 30 feet long, eight feet wide, and 14 feet high (deep).

2) The refractory lining for the combustion chamber shall consist of precast blocks manufactured from a castable refractory material, Castex 24D or an equivalent, capable of providing continuous service under temperatures up to 2400°F. The refractory block shall be replacable and shall be hung from the supporting steel framework by stainless steel hooks (anchors) cast into blocks and which protrude from the cold face of the block. No mortar or cement shall be required for fastening. The refractory blocks shall be no larger than 12 inches x 12 inches x five inches and shall have a Modulus

of Rupture (lbs./sq. in.), after heating to 2300°F, of at least 850 and Cold Crushing Strength (lbs./sq. in.), after heating to 2300°F, of at least 2400.

3) The combustion chamber shall be completely prefabricated and constructed in sections no larger than can be transported on a common carrier truck.

4) The supporting steel framework for the combustion chamber shall be self-supporting and free standing and capable of supporting the refractory block lining. The framework components shall be bolted in place, and the complete unit shall be capable of being dismantled and reerected in another location. Framework components shall be small enough to allow erection using small construction equipment such as a front-end loader. The framework shall be installed on a poured in-place concrete foundation furnished by the Owner. The plenum shall be supported on outriggers attached to the supporting framework and supplied with the framework.

5) A pair of full height, hinged, clean out doors, complete with refractory block, shall be furnished for the end away from the blower. The doors shall be equipped with a locking device.

f. Equipment Painting

1) The components (plenum, feeder pipe, flexible coupling, blower enclosure) shall be prepared and painted in the following manner:

a) The surface preparation shall be wire brushed, sand blasted or pickled to remove millscale and rust. All metal surfaces shall be completely degreased with the paint manufacturer's recommended solvent prior to priming.

b) The prime coat shall be a rust inhibitive primer such as Koppers Pug Primer or equivalent.

c) The finish coat shall be an alkyd, weather resistant paint such as Koppers Rustarmor 500 or equivalent.

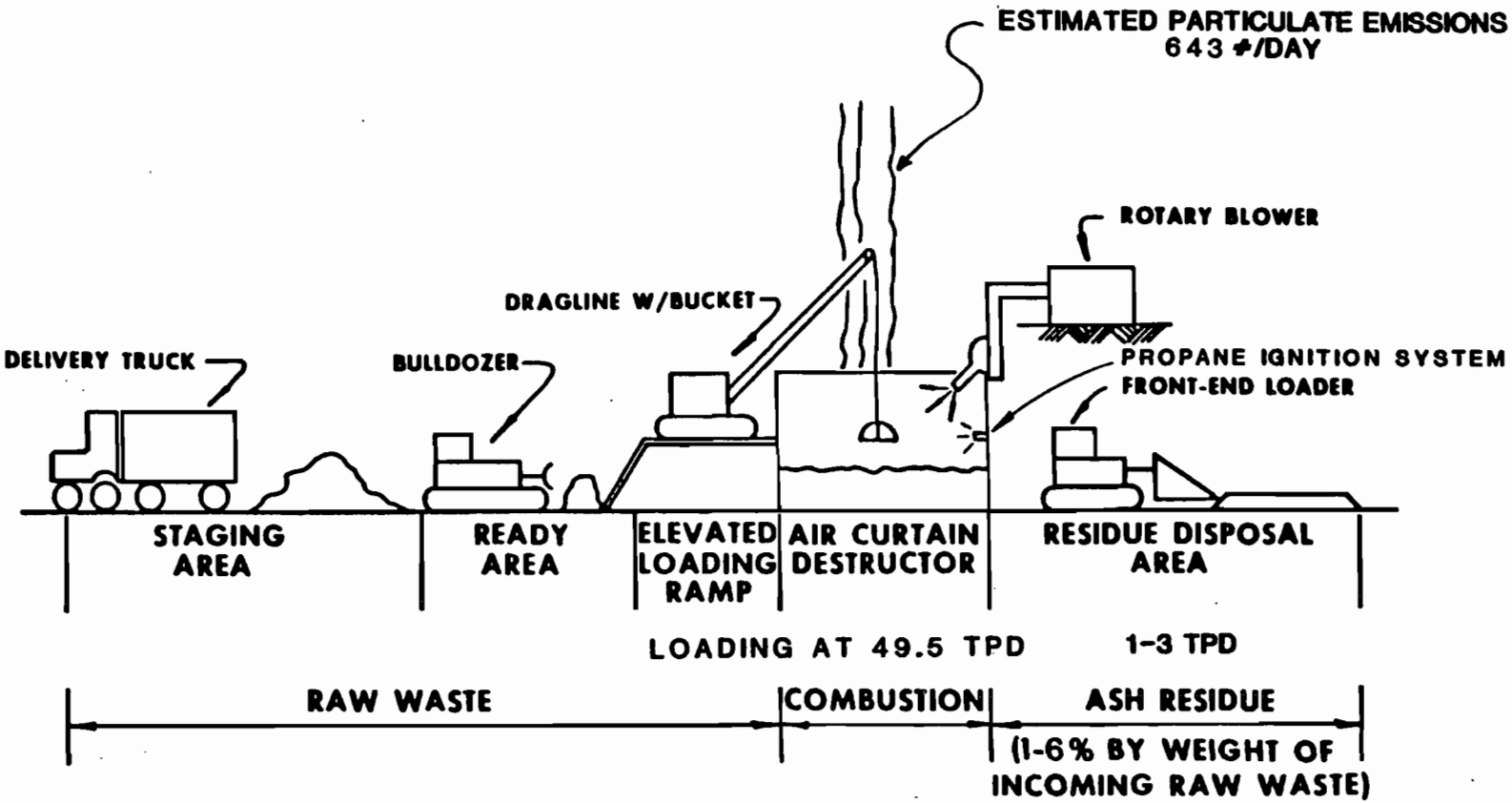
g. Spare Parts Inventory

1) A minimum of one year's supply of all expendable and short-life parts and components normally available only from the factory or requiring special order, shall be provided. A spare belt shall be included for each belt drive. The Manufacturer shall submit a complete list of the spare parts proposed to be furnished in the Proposal. The Manufacturer shall also furnish a complete list of spare parts which are normally available locally as standard replacements.

h. Special Tools

1) Provide all special tools required for normal maintenance suitably packed in steel storage case and properly identified.

S&HWG # B-105-1082A



PBSJ

PROCESS FLOW DIAGRAM

FIGURE 3

REVISED 2/28/83

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHEAST FLORIDA
DISTRICT

P.O. BOX 3858
3301 GUN CLUB ROAD
WEST PALM BEACH, FLORIDA 33402-3858

March 18, 1983

SW - Palm Beach County
Landfill #3
Air Curtain Destructor Project

Board of County Commissioners
Palm Beach County
P.O. Box 2429
West Palm Beach, Florida 33402

Dear Sirs:

Enclosed is Permit Number SC 50-63165, to construct a solid waste volume reduction facility issued pursuant to Section 403.087, Florida Statutes. This constitutes only the Solid Waste portion of your project. The Air portion is still pending receipt of the additional information requested on December 29, 1982. No construction is to be undertaken until the Air Pollution Permit is received.

Should you object to this permit, including any and all of the conditions contained therein, you may file an appropriate petition for administrative hearing. This petition must be filed within fourteen (14) days of the receipt of this letter. Further, the petition must conform to the requirements of Florida Administrative Code Rule 28-5.201 (see reverse side of this letter). The petition must be filed with the Office of General Counsel, Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32301.

If no petition is filed within the prescribed time, you will be deemed to have accepted this permit and waived your right to request an administrative hearing on this matter.

Acceptance of the permit constitutes notice and agreement that the Department will periodically review this permit for compliance, including site inspections where applicable, and may initiate enforcement action for violation of the conditions and requirements thereof.

Sincerely,

Steven K. Burian

Steven K. Burian
Environmental Specialist
Solid Waste Permitting

cc: Tallahassee
Palm Beach Health Department
Clair Fancy

SB:km/20

Enclosure

DER Form 17-1.201(7)
Effective November 30, 1982

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION) Clair Fancy - Tallahassee	INITIAL	
	DATE	
2. ~~Bill~~ Bruce	INITIAL	
	DATE	
3.	INITIAL	
	DATE	
4.	INITIAL	
	DATE	

REMARKS:

DER

MAR 21 1983

BAQM

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 & REPT
- INITIAL & FORWARD
- DISTRIBUTE
- CONCURRENCE
- FOR PROCESSING
- INITIAL & RETURN

FROM: Cindy

DATE 3/18/83

PHONE

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHEAST FLORIDA
DISTRICT

P.O. BOX 3858
3301 GUN CLUB ROAD
WEST PALM BEACH, FLORIDA 33402-3858

PERMITTEE:
Board of County Commissioners
Palm Beach County
P. O. Box 2429
West Palm Beach, Florida 33402

I.D. NUMBER: 5050M50140
PERMIT/CERTIFICATION NUMBER: SC 50-63165
DATE OF ISSUE:
EXPIRATION DATE: January 12, 1985
COUNTY: Palm Beach
LATITUDE/LONGITUDE: 26°46'00", 80°07'00"
SECTION/TOWNSHIP/RANGE:
PROJECT: Palm Beach County Landfill #3
Air Curtain Destructor Project

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule 17-7. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with Department and made a part hereof and specifically described as follows:

TO CONSTRUCT: A volume reduction facility utilizing and air curtain destructor to process materials classified as yard trash or that material which is permittable in a Class III Landfill.

IN ACCORDANCE WITH: An application to construct a Solid Waste Resource Recovery and Management Facility that was submitted on December 3, 1982. Notice of Proposed Agency Action issued January 7, 1983. (The above documents are not attached)

LOCATED AT: Dyer Boulevard and Haverhill Road, Palm Beach County, Florida.

SERVING: Palm Beach County.

SUBJECT TO: General Conditions 1-15 and Specific Conditions 1-6.

DER Form 17-1.201(5)
Effective November 30, 1982

PERMITTEE:

I.D. Number:
Permit/Certification Number:
Date of Issue:
Expiration Date:

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefor caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

   a. Having access to and copying any records that must be kept under the conditions of the permit;

   b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

   c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

   Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

   a. a description of and cause of non-compliance; and

b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)
( ) Compliance with New Source Performance Standards

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.

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.

PERMITTEE:
Board of County Commissioners
Palm Beach County

I.D. Number: 5050M50140
Permit/Certification Number: SC 50-63165
Date of Issue:
Expiration Date: January 12, 1985

SPECIFIC CONDITIONS:

1. Ash generated from the process shall be removed from the combustion chamber once a day or whenever the ash reaches a depth of three (3) feet in the chamber.

2. Ash shall be allowed to cool prior to further disposal to insure no burning waste is landfilled. Once the ash has cooled it shall be transported to the landfill for final disposal.

3. Fire breaks of at least 200 feet shall be maintained from areas of existing trees and understory vegetation.

4. No hazardous wastes, industrial wastes or municipal refuse shall be disposed of at this facility.

5. In order to prevent possible contamination of surface and groundwaters by ash a surface water management and containment area shall be constructed. Design of this run-off containment system shall be that described in Section 7 of permit application.

6. A surface water monitoring program shall be implemented at the site. Sampling points in adjacent canals shall be approved by the Department of Environmental Regulation and the Palm Beach County Health Department. Sampling shall be during the months of January, April, July and October. Samples shall be analyzed for the following:

Turbidity
pH
Conductivity
COD

PERMITTEE:
Board of County Commissioners

I.D. Number: 5050P50140
Permit/Certification Number: SC 50-63165
Date of Issue:
Expiration Date: January 12, 1985

Issued this 17th day of March 1983

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Roy M. Duke

SB

Roy M. Duke
District Manager

DER Form 17-1.201(5)
Effective November 30, 1982

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHEAST FLORIDA
DISTRICT

P.O. BOX 3858
3301 GUN CLUB ROAD
WEST PALM BEACH, FLORIDA 33402-3858

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

ROY M. DUKE
DISTRICT MANAGER

April 6, 1984

AP - Palm Beach County
PBC Solid Waste
Authority

Mr. Timothy Hunt, Jr.
Executive Director
Palm Beach County Solid Waste Authority
5114 Okeechobee Boulevard, Suite 2C
West Palm Beach, Florida 33409

Dear Mr. Hunt:

Re: Construction Permit AC-50-63154 - Dyer Boulevard
Sanitary Landfill Air Curtain Destructor Units

The above referenced permit issued by the Department of Environmental Regulation office in Tallahassee will expire on May 1, 1984. Florida Administrative Code (F.A.C.) Rule 17-4.09 requires that prior to 60 days before expiration of any Department Permit the owner shall apply for a renewal of the permit. It is requested that within 30 days, you submit and application for an operating permit, if construction has been completed, or request an extension of the construction permit from our Tallahassee office with a copy to the Palm Beach County Health Department.

If there are any questions, please contact Mr. I. Goldman of this office, telephone 305/689-5800.

Sincerely,

John A. Guidry
Supervisor
Air Pollution Permitting

JAG:iglp

cc: Clair Fancy, BAQM, Tallahassee
Palm Beach County Health Department

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

	INITIAL	DATE
1. TO: (NAME, OFFICE, LOCATION) Clair Fancy		
2. BAQM Tallahassee, Florida		
3. 4/10 ~~Patty~~ P.A. Bruce PA 4/11/84		
4. File		

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 & REPT
- INITIAL & FORWARD
- DISTRIBUTE
- CONCURRENCE
- FOR PROCESSING
- INITIAL & RETURN

FROM:

STATE OF FLORIDA
DEPT. OF ENVIRONMENTAL REGULATION
P.O. BOX 3858
WEST PALM BEACH, FL 33402

DATE April 6, 1984

PHONE

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee

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

Reply Optional [ ] Reply Required [ ] Info. Only [ ]
Date Due: _____ Date Due: _____

TO: Palm Beach County Dyer Boulevard Sanitary Landfill Files

FROM: Bruce Mitchell BM

DATE: March 25, 1983

SUBJ: Amend the February 28, 1983 response letter from D. E. Deans with Wayne Aldridge by a phone call.
Construction Permit Application Files: AC 50-63154
AC 50-63156

1. The revised latitude and longitude, UTM coordinates for the facility will be:

Latitude	-	26° 46' 38" North
Longitude	-	80° 07' 51" West
Zone	-	17
UTM: East	-	586.40 km
UTM: North	-	2,961.90 km

2. Emission calculations are revised to reflect 365 days per year operating time, not the 360 days per year contained in the recent submittal. The 365 days per year was contained in the original applications. Therefore, the revised emissions are:

a. Particulate Matter:

Waste:	117.439 TPY
LPG :	0.004
	117.443 TPY x 2 ACD's = 234.89 TPY

b. Nitrogen Oxides:

Waste:	36.135 TPY
LPG :	0.027
	36.162 TPY x 2 ACD's = 72.32 TPY

c. Sulfur Oxides:

Waste:	0.90338 TPY
LPG :	0.00003
	0.90341 TPY x 2 ACD's = 1.81 TPY

d. Carbon Monoxide:

Waste: No data available for this type of application
LPG : 0.00358 TPY
0.00358 TPY x 2 ACD's = 0.0072 TPY

e. Hydrocarbons:

Waste: No data available for this type of operation:
LPG: 0.00072 TPY
0.00072 TPY x 2 ACD's = 0.0014 TPY

RBM/bjm

Copied:

Isidore Goldman - Southeast Fl. Dist
H. F. Kahlert - P.B.C. Eng.
Wayne Aldridge } Post, Buckley, Schuh & Jernigan, Inc
David E. Deans }
Michael J. Martin - PBCHD

STATE OF FLORIDA DEPARTMENT OF

HEALTH & REHABILITATIVE SERVICES

DISTRICT NINE

PALM BEACH COUNTY HEALTH DEPT.
WEST PALM BEACH, FLORIDA 33401

INTER-OFFICE MEMORANDUM

DATE April 8, 1983

DER
APR 11 1983
BAQM

TO: Mr. C.H. Fancy, Deputy Chief, BAQM DER-Tally
THRU: Mr. Umesh Asrani, Supervising Engineer, Plan Review
SUBJECT: Construction Permit-Palm Beach County Dyer Landfill
FROM: Air Pollution Control

This office has reviewed the application for the above referenced project and have found it to be technically satisfactory. We are therefore, recommending approval to issue a Department Permit to include the following specific conditions:

1. Application for a permit to operate along with the initial compliance test report shall be submitted to the Department at least sixty (60) days prior to the expiration of this permit. The Certificate of Completion of Construction, DER Form 17-1.122 (20), F.A.C. may be submitted in lieu of the application for a permit to operate.

2. Emission limiting standard is as follows:

   Visible emissions shall not exceed an average of 5 percent opacity over any 6-minute period excluding one 3-minute period per hour in which an average of up to 20 percent opacity is allowed.

3. The compliance test report shall include emission tested by the following methods:

Source/Emission Point	Pollutant	Test Method
Incinerator	Visible Emissions	DER Method 9

   The compliance test report shall be submitted to the Department in accordance with Florida Administrative Code (F.A.C.) Rule 17-2.700 (7).

4. Testing of emissions should be conducted using the fuel and/or process input which are expected to result in the highest emissions and within ten percent (10%) of the rated capacity of the source, otherwise the Department may require the test to be repeated or modify the permit to reflect tested rates and/or fuels.

5. The Department shall be notified of expected test dates at least ten (10) days prior to compliance testing.

FORM ADM 80003

BY Michael J. Martin

6. Copies of all reports, tests, notifications or other submittals required by this permit shall be submitted to both the Department of Environmental Regulation, South Florida Subdistrict Office and Palm Beach County Health Department.

7. Operation of the Air Curtain Destructor (2 units) shall be in accordance with the Operating and Safety Instructions from W.A. Kutrieb, Inc.

8. Only land clearing-natural vegetation shall be combusted in these units.

9. Objectionable odors are prohibited in accordance with Chapter 17-2.620 (2), F.A.C.

MJM/mc

PS Form 3811, Jan. 1979

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)
- ☒ Show to whom and date delivered..... ¢
- ☐ Show to whom, date and address of delivery.... ¢
- ☐ RESTRICTED DELIVERY
  Show to whom and date delivered..... ¢
- ☐ RESTRICTED DELIVERY.
  Show to whom, date, and address of delivery $____

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
Mr. H. F. Kahlert
P.O. Box 2429
West Palm Beach, FL 33402

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	P 408530390	

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐Addressee ☐Authorized agent

4. DATE OF DELIVERY 5-14-83 POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

☆GPO : 1979-300-459

P 408 530 390

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to
Mr. H. F. Kahlert
Street and No.
P.O. Box 2429
P.O., State and ZIP Code
West Palm Beach, FL33402

Postage	$
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	$
Postmark or Date	

PS Form 3800, Feb. 1982

PS Form 3811, Jan. 1979

SENDER: Complete items 1, 2, and 3. Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)
- [X] Show to whom and date delivered..... ¢
- [ ] Show to whom, date and address of delivery..... ¢
- [ ] RESTRICTED DELIVERY
  Show to whom and date delivered..... ¢
- [ ] RESTRICTED DELIVERY.
  Show to whom, date, and address of delivery.$

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
Mr. David E. Deans
889 North Orange Avenue
Orlando, FL 32801-1088

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	P 408 530 389	

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE [X] Addressee [ ] Authorized agent

4. DATE OF DELIVERY 5/16 POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

☆GPO : 1979-300-459

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

PS Form 3811, Jan. 1979

SENDER: Complete items 1, 2, and 3. Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)
- [X] Show to whom and date delivered..... ¢
- [ ] Show to whom, date and address of delivery..... ¢
- [ ] RESTRICTED DELIVERY
  Show to whom and date delivered..... ¢
- [ ] RESTRICTED DELIVERY.
  Show to whom, date, and address of delivery.$

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
Mr. Michael J. Martin
P.O. Box 29
West Palm Beach, FL 33402

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	P 408 530 388	

(Always obtain signature of addressee or agent)

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4. DATE OF DELIVERY MAY 17 1983 POSTMARK WEST PALM BEACH, FL MAIN OFFICE MAY 17 1983 USPO

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☆GPO : 1979-300-459

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

P 408 530 389

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. David E. Deans	
Street and No. 889 North Orange Avenue	
P.O., State and ZIP Code Orlando, FL 32801-1088	
Postage	$
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	$
Postmark or Date	

PS Form 3800, Feb. 1982

P 408 530 388

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. Michael J. Martin	
Street and No. P.O. Box 29	
P.O., State and ZIP Code West Palm Beach, FL 33402	
Postage	$
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	$
Postmark or Date	

PS Form 3800, Feb. 1982

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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

TO: File: Palm Beach County Dyer Boulevard Sanitary Landfill
Tom Tittle
Michael Martin
H. F. Kahlert
David E. Deans/Wayne Aldridge

FROM: Bruce Mitchell

DATE: May 13, 1983

SUBJ: Corrections to the Technical Review and Preliminary Determination for the following: AC 50-63154
AC 50-63156

Please replace/insert the enclosed corrected pages to the Technical Review and Preliminary Determination for the Palm Beach County Dyer Boulevard Sanitary Landfill that was mailed to you on May 6, 1983. If there are any questions, please call Bruce Mitchell at (904)488-1344.

Each proposed ACD will emit a projected potential of 117.4 tons per year (TPY) of the pollutant particulate matter (PM), which is by definition a major source in accordance with Chapter 17-2.100(96), FAC. Therefore, the proposed project constitutes a major facility for the pollutant PM in accordance with Chapter 17-2.100(95), FAC.

The PBCDBSL is located in the Palm Beach County Nonattainment Area for the pollutant ozone (O_3) in accordance with Chapter 17-2.410(1)(a)5., FAC, and review shall be in accordance with Chapter 17-2.510, FAC, New Source Review for Nonattainment Areas. Because the projected potential emissions of the affected pollutant O_3 will not exceed 100 TPY, the facility shall not be subject to the provisions of Chapter 17-2.510(4), FAC, in accordance with Chapter 17-2.510(2)(d)2., FAC.

Since each proposed ACD will not exceed a daily charge rate of 49.5 tons per day (TPD) of combustible material, then the proposed incinerators will not be subject to the New Source Performance Standards (NSPS), 40 CFR 60.50, Subpart E, Incinerators, in accordance with Chapter 17-2.660, FAC.

According to Chapter 17-2.500(2)(d)2., FAC, the proposed new facility will not be subject to Chapter 17-2.500(4), FAC, because the projected potential emissions for the total facility will not exceed 250 TPY of an affected pollutant. The closest pollutant to the threshold is PM at 234.9 TPY.

Since each proposed ACD has a charging rate of less than 50 TPD, each source shall be subject to Chapter 17-2.600(1)(a), FAC.

According to Chapter 17-2.600(1)(a), FAC, each source shall be subject to no visible emissions (5 percent opacity) except that visible emissions with a density of Number 1 on the Ringelmann Chart (20 percent opacity) are allowed for up to three minutes in any one hour. Also, no objectionable odor shall be allowed on off-plant property.

III. SUMMARY OF EMISSIONS

A. Emission Limitations

For PSD tracking, the projected particulate matter (PM) emissions from this facility are in the following table:

Source	Pollutant	Fuel Charging Rate	Projected Emissions	
		TPD	lbs/day	TPY
ACD	PM	49.5	643.52	117.443
ACD	PM	49.5	643.52	117.443
			Total:	234.89

The regulated pollutant emissions from this facility are visible emissions (VE) in accordance with Chapter 17-2.600(1), FAC.

Source	Pollutant	Allowable Emissions
ACD	VE	5% Opacity, except 20% Opacity for up to 3 minutes in any one hour
ACD	VE	5% Opacity, except 20% Opacity for up to 3 minutes in any one hour

The permitted emissions are in compliance with all requirements of Chapter 17-2, FAC.

B. Air Quality Impacts

From a technical review of the application, the Department has determined that the construction and operation of this facility will not have an impact on Florida's ambient air quality standards.

IV. CONCLUSIONS

The emission limits proposed for this project have been determined to be acceptable by the Department. Since no controls are associated with the sources other than crew efficiency, quarterly reports of the daily charging per ACD shall be required to provide the reasonable assurance that the facility is being operated as requested in the application and its amendments.

The permitted emissions from this facility, with the maximum charging rate per ACD of 49.5 TPD of permitted fuel material, will not cause any violation of Florida's ambient air quality standards.

The General and Specific Conditions listed in the proposed permits (attached) will assure compliance with all applicable requirements of Chapter 17-2, FAC.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63154
Date of Issue:
Expiration Date: May 1, 1984

SPECIFIC CONDITIONS:

2. The compliance test to be required shall be visible emissions and as follows:

Source/Emission Point	Pollutant	Emission Limit	Test Method
Air Curtain Destructor	Visible Emissions	5% Opacity, except 20% Opacity for up to 3 minutes in any one hour	DER Method 9

DER Method 9 shall be performed annually in accordance with Chapter 17-2.700(6)(a)9., FAC.

3. The compliance test reports shall be submitted to the Department or its designee in accordance with Chapter 17-2.700(7), FAC. The required test reports shall be filed with the Department or its designee no later than 45 days after the last compliance test is completed.

4. The compliance test shall be conducted using a minimum to a maximum fuel charging rate of 90% to 100%, respectively, of the maximum permitted fuel charging rate (see No. 1).

5. The Department or its designee shall be notified 10 days prior to conducting the compliance tests.

6. Quarterly reports shall be maintained providing a monthly total and the actual daily fuel charging rate of the Air Curtain Destructor.

7. Copies of all reports, tests, notifications or other submittals required by this permit shall be submitted to both the Department of Environmental Regulation's (DER's) Southeast Florida District Office and the Palm Beach County Health Department Office.

8. Operation of the Air Curtain Destructor shall be in accordance with the Operating and Safety instructions from W. A. Kutrieb, Inc.

9. No objectionable odors shall be permitted on off-facility property in accordance with Chapter 17-2.600(1)(a)2., FAC.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63156
Date of Issue:
Expiration Date: May 1, 1984

SPECIFIC CONDITIONS:

2. The compliance test to be required shall be visible emissions and as follows:

Source/Emission Point	Pollutant	Emission Limit	Test Method
Air Curtain Destructor	Visible Emissions	5% Opacity, except 20% Opacity for up to 3 minutes in any one hour	DER Method 9

DER Method 9 shall be performed annually in accordance with Chapter 17-2.700(6)(a)9., FAC.

3. The compliance test reports shall be submitted to the Department or its designee in accordance with Chapter 17-2.700(7), FAC. The required test reports shall be filed with the Department or its designee no later than 45 days after the last compliance test is completed.

4. The compliance test shall be conducted using a minimum to a maximum fuel charging rate of 90% to 100%, respectively, of the maximum permitted fuel charging rate (see No. 1).

5. The Department or its designee shall be notified 10 days prior to conducting the compliance tests.

6. Quarterly reports shall be maintained providing a monthly total and the actual daily fuel charging rate of the Air Curtain Destructor.

7. Copies of all reports, tests, notifications or other submittals required by this permit shall be submitted to both the Department of Environmental Regulation's (DER's) Southeast Florida District Office and the Palm Beach County Health Department Office.

8. Operation of the Air Curtain Destructor shall be in accordance with the Operating and Safety instructions from W. A. Kutrieb, Inc.

9. No objectionable odors shall be permitted on off-facility property in accordance with Chapter 17-2.600(1)(a)2., FAC.

operating temperature. At this stage the properly functioning ACD will burn compl. smokeless.

5.) Feeding ACD while in operation
After establishing a good hot bed of coals, waste material can be added in small amounts and always placed where fire appears to be hottest. Never dump complete truck load into pit or allow any other vehicle on loading ramp.

If open fire raises to level of air curtain, load with heavier harder materials to ignite or slow down in feeding. When high heat level is established, wet or green materials might be fed into ACD at an appropriate rate.

6.) Smoke emissions while operating an ACD
Are signals of IMPROPER operation and indicate insufficient heat, improper loading, overloading, burning of materials not suitable or air starvation.
Smoke emissions can only be tolerated during the very brief seconds when air curtain is broke while loading fresh material into same and will be of a translucent, light kind.

7.) Shut down
Is done by first stopping to feed ACD, allowing enough time to burn load to a point where only ash is left and blower can be turned off.

Clean out ash as often as possible, but before raising to 3 feet dept, this will result in more efficient, faster and cleaner burning.

S A F E T Y I N S T R U C T I O N S

Waste material to be burned shall be stocked up-wind and not closer then 100 feet from ACD.

To provide fire protection, a water hose or other fire extinguishing equipment shall be available at any time. Even when the ACD is not in operation, the pit and ash will remain hot for several days; this dictates the use of a fence and lockable gate around the complete ACD installation.

Do not allow any combustable liquid or solid material other than the waste directly fed into ACD in close proximaty to pit.

When front end loader or other mobile equipment is in use, always approach pit slowly in such way that use of brakes is necessary only for holding equipment from rolling backwards and away from pit, since ramp is slidely inclined towards pit.

Keep out any persons not authorized to enter installation area.

Do not allow blower unit to run when unattended.

No one person, including operator, shall ever or for any purpose stand closer than 3' from edge of pit.

Always lock gate after leaving installation.

D O
===

Do get at least a one day check out in practical operation by representative of manufacturer.

Do approach pit at slow speed when operating Front end loader or other moving equipment.

Do start up blower with damper in closed position.

Do at initial start up make sure fire will spread quickly along entire length of pit.

Do keep loading ramp clean at all times.

Do start blower up before igniting pit.

Do keep unauthorized persons away from installation.

Do clean pit before ash level reaches about 3 feet.

Use fairly dry material for initial loading. If possible at all do not start out with heavy logs, brush with green leaves, material tending to close off air circulation or material difficult to ignite.

Loading pit for initial start up can be compared with practices used in starting up the common open fire place.

Fill to an even level to about half of pit dept. Do not allow any branches, logs or other materials to stick out above level of air curtain. Do not allow loading ramp (the area along complete pit and 15' abreast) to be cluttered with waste material.

Next, move damper lever on feeder pipe to fully closed position and start up blower.

4.) Igniting pit

Never use for starting: old tires, tar or other mediums known for generation of black smoke.
If kerosene or light fuel oil must be used, sprinkle close to and along the wall opposite of nozzle. Light up several pieces of cardboard and throw into pit evenly spaced and in a way which insures ignition along entire lenght of pit.

Note: Never start to burn only at one end or in center of pit thrusting fire will spread later by it self. Any section of pit not burning properly will emitt smoke because it is lacking heat for proper afterburning.
Increase air supply by moving damper lever thru it's four positions as fire progresses. After approximately 10 min. of start up time and with damper lever now in full open position ACD should have reached

1.) General

The Air Curtain Destructor referred to as ACD is of simple construction and has a minimum of controls to be operated. However, never operate an ACD unless thoroughly familiar with all details of operation.

2.) Operators Qualifications

To insure proper operation it is necessary to have one person assigned as the operator to be present and in charge of the operation at any time when ACD is in use.

The operator is required to read following instructions carefully and additional undergo at least a one day on the job training period conducted by a qualified experienced representative of the manufacture.

3.) Initial loading of pit

Providing proper installation of complete ACD has been completed, equipment must be available such as: Crane with clam shell bucket, Front end loader with grappel attachment, or other machinery suitable to pick up waste material from stock pile and to lower at correct locations into the pit.

For continious loading purpose give preference to such equipment capable of lowering waste materials gently to loading level of pit, dumping of heavy stumps or other materials from high above loading level will result in fly ash emission or damage of air nozzle or other parts of installation.

D O N O T
==========

Do not operate, adjust or otherwise tamper with ACD unless familiar.

Do not use equipment for loading without a cab or other means to protect operator.

Do not dump material from high above pit when ACD is in operation.

Do not use freshly cut brush and green leaves or big logs for start up.

Do not ignite loaded pit unless you are sure blower unit will operate properly or better, has been started prior to ignition.

Do not use tires, tar paper, ashalt or other materials known for their generation of heavy black smoke to start up or at any other time.

Do not allow pit to be overloaded, that is burning level to be higher than 2/3 of pit dept, or open flames rising thru the air curtain.

Do not run blower unit unattended.

W. A. Kutrieb Incorporated

Aircurtain Destructor

OPERATING AND SAFETY INSTRUCTIONS

Post Office Box 1635
JANESVILLE, WISCONSIN 53545

Post, Buckley, Schuh & Jernigan, Inc.
CONSULTING ENGINEERS and PLANNERS
889 NORTH ORANGE AVENUE, ORLANDO, FLORIDA 32801-1088 • 305/423-7275 • TELEX 808435

May 06, 1983

Mr. Bruce Mitchell
Bureau of Air Quality Management
Department of Environmental Regulation
Twin Towers Building
2600 Blairstone Road
Tallahassee, Florida 32301

DER
MAY 09 1983
BAQM

Dear Mr. Mitchell:

Re: Request for Aircurtain Destructor Instruction Manual

Pursuant to your request of April 25, 1983, I am enclosing a copy of the "Aircurtain Destructor Operating and Safety Instructions" manual the Kutrieb Corporation will be issuing to the Palm Beach County staff on how to operate their Aircurtain Destructor Units (ACD). Kutrieb Corporation also provides 3-5 days of on-the-job-training (OJT) for facility operators once the unit(s) has been erected and are ready for operation. During the OJT factory representatives train facility operators on how to start and operate the ACD unit(s). The people at the Kutrieb Corporation feel OJT is the best way to learn how to operate the ACD unit(s) and do not provide a more detailed O&M manual than the one enclosed.

Should you have any questions regarding the attached instruction booklet or other matters concerning the OJT program, please feel free to contact me.

Very truly yours,

POST, BUCKLEY, SCHUH & JERNIGAN, INC.

Wayne Aldrige

Wayne Aldrige
Senior Engineer

WA/em

cc w/o encl: H. Kahlert/H. Frakes/R. Day/D. Deans/K. Cooley

954-002.02

Department of Engineering and Public Works
H. F. Kahlert
County Engineer

May 13, 1983

DER
MAY 19 1983
BAQM

Mr. C. H. Fancy, P.E.
Deputy Chief, Brueau of Air Quality
Management, Department of Environmental Regulation
Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32301-8341

SUBJECT: Notice of Proposed Agency Action -- Air Curtain Destructor at the Dyer Boulevard Landfill

Dear Mr. Fancy:

This is in response to your May 6 letter concerning the Notification of Proposed Agency Action for the permits for the construction of two force draft Air Curtain Destructors for the Dyer Boulevard Landfill.

For your information, attached is a copy of a letter addressed to the Palm Beach Post Times requesting publication of the Notice of Proposed Agency Action on Monday May 16.

Copies of the actual proof of publication will be forwarded to you upon receipt. If we can be of any further assistance, please advise.

Sincerely,

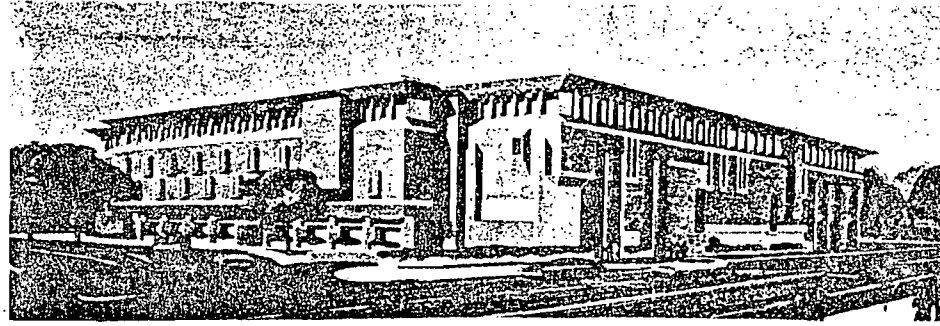
H. F. Kahlert, P.E.
County Engineer

HFK:d
cc: David E. Deans, Post Buckley

PALM BEACH COUNTY
WEST PALM BEACH, FLORIDA

JOHN B. DUNKLE, CLERK
BOARD OF COUNTY COMMISSIONERS

P. O. BOX 4036
33402



May 13, 1983

The Palm Beach Post Times
2751 South Dixie
West Palm Beach, FL 33405

Attention: Legal Ad Department

Re: Publication of Notice of Proposed Agency Action

Publish: Monday - May 16, 1983

Please publish the enclosed Notice of Proposed Agency Action regarding Department of Environmental Regulation intent to issue permits to the Palm Beach County Board of County Commissioners for the construction of two force draft air curtain destructors at the Dyer Blvd. Sanitary Landfill in P.B.C., FL.

Please furnish me with four (4) proofs of publication and your bill in quadruplicate addressed to John B. Dunkle, Clerk, Board of County Commissioners, Post Office Box 4036, West Palm Beach, FL 33402 to the attention of John W. Dame, Chief Deputy Clerk.

Sincerely,

JOHN B. DUNKLE, CLERK
Board of County Commissioners

By Mrs. Lorie Clinger

for John W. Dame
Chief Deputy Clerk

JBD:JWD/lc

Enclosure

cc: Herb Kahlert, County Engineer

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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

DER
MAY 19 1983
BAQM

TO: Mr. Bill Thomas - BAQM

FROM: Mr. I. Goldman - DER, Southeast District

DATE: May 17, 1983

RE: Dyer Landfill Air Curtain Destructor Units - Application for Construction

In reply to your request for comments dated May 6, 1983 in BAQM letter to H.F. Kahlert, Palm Beach County Engineer, I suggest the following:

In Specific Condition 1; delete "at 365 days per year", so that the first sentence reads "Maximum permitted fuel charging rate shall not exceed 49.5 tons per day". The remainder of Specific Condition 1 stays as written.

In Specific Condition 2; under Emission Limit, in place of less than 20% opacity, quote the Incinerator Visible Emission Standard in (17-2.600(1)(a))

Specific Condition 10; add an additional paragraph, "The Certificate of Completion of Construction DER Form 17-1.202(3) may be submitted in lieu of application for a permit to operate".

IG:lp

STATE OF FLORIDA

hrs DEPARTMENT OF

Bob Graham, Governor

Health & Rehabilitative Services

District Nine
P. O. Box 29

Palm Beach County Health Dept.
West Palm Beach, Florida 33402

Please Address
Reply to: ESE-WPB

May 17, 1983

DER
MAY 19 1983
BAQM

Mr. C.H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality Management
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32301-8241

Attn: MrilBill Thomas:

RE: Applications: AC50-63154, AC50-63156
Dyer Boulevard Landfill-ACD

Dear Mr. Fancy:

This agency has reveiwed the Technical Evaluation Preliminary Determination, and the proposed permits for the construction of two Air Curtain Destructors (ACD) at the Palm Beach County's Dyer Road Landfill.

The following comments are submitted for your consideration:

1) An error exists in Section II, Rule Applicability. Each proposed ACD is not exempt from the emission limiting standard found in Chapter 17-2.600 (1), FAC, Incinerator. Clearly, both units will be permitted at a maximum rate of 49.5 Tons per day and as required by Chapter 17-2.600 (1) FAC will be required to have (A) No visible emissions (5% opacity) except that visible emissions with a density of Number 1 on the Ringelmann Chart (20% opacity) are allowed for up to three minutes in any one hour. (B) No objectionable odor allowed.

2) Specific condition Number 1 of both proposed permits states a maximum permitted fuel charging rate shall not exceed 49.5 tons per day at 365 days per year. On interpretation of this statement is that the 49.5 TPD could be on average rate over 365 days of operation, which would allow for a higher daily rate. For clarities sake, the 365 day statement should be deleted. Realistically, 365 day will not restrict the source at all.

3) Specific condition Number 10 of both permits should allow for a Certificate of Completion of Construction in lieu of another complete application for an operation permit.

Should you have any questions regarding this matter, please contact the undersigned at (305) 837-3070.

Sincerely,

For the Division Director
Environmental Sciences & Engineering

Michael J. Martin

Michaël J. Martin
Environmental Specialist

MJM/mc

QUESTIONS AND ANSWERS 8/1/85
concerning
THE AIR CURTAIN PIT BURNER

Q What is an Air Curtain Pit Burner?
A A device that burns combustibles in a manner that is virtually smokeless.

Q How does it do this?
A The materials to be burned are introduced into an open top refractory lined pit. A curtain of air is blown across and down the top of the pit which then circulates in a rotating direction inside the pit. Because of the introduction of large volumes of air, temperatures inside the pit reach 2500 degrees. The air curtain directed across the top of the pit prevents the unburned carbons (smoke) from escaping until they are fully oxidized.

Q How do you get material into the pit?
A You drop it down through the curtain. As it breaks the curtain you see a puff of smoke, but as soon as the material is under the curtain the air flow is re-established and the smoke disappears.

Q Is there never any smoke?
A When the curtain is first started, until the heat is built up, there will be some smoke. Occasionally there is an overload and combustibles (particularily tree branches) will stick above the curtain and produce smoke. If tires or other special items are introduced they will smoke and should not be burned by this method. When the pit is cleaned there will be some smoke in the ash and if the ash is still hot and it will steam when hosed down.

Q How objectionable is the smoke in either of these circumstances?
A Normally there should not be a problem because from a distance the smoke is hardly noticeable and is never prolonged.

Q Can you operate the unit to produce smoke?
A Yes, there is skill and care required and an unskilled operator can cause far more smoke than is necessary.

Q Why the current interest in Air Curtain Pit Burners in Florida?
A Many communities are passing ordinances that prohibit open burning. Many new housing and commercial developments are on wooded properties with a great deal of land clearing required. Open burning is far more economical than removing the trees and then, either chipping them into wood mulch or hauling them to a commercial land fill. In addition, the critical concern of many of the Florida land fills is their total capacity and trees and stumps take up a great deal of space.

Some communities are allowing the use of Air Curtain Pit Burners as a method of tree disposal and this method is normally less expensive than chipping or removal to a commercial land fill.

Q Are there any other uses than tree disposal?
A The unit can be used for many other combustibles other than trees and stumps provided they can be bundled or have sufficient mass so that they will drop through the air curtain. Loose paper for example will not drop through the curtain and will fly all over when dropped over the curtain.

The use of a pit burner can appreciably lengthen the life of a land fill.

Q Why is open burning for trees a problem?
A The most efficient and least expensive method of tree disposal is open burning. If the trees are properly stacked and left to dry they will burn rapidly with intense heat. The air flow is generally upward and behaves much much like a chimney, sucking air in from the bottom with a cloud of smoke rising above the pile. The reason there is smoke is that the trunks and limbs furthest from the intense heat of the flames are not completely consumed and unoxidized carbons are emitted into the air. With the chimney air flow effect, this smoke is carried into the air and is often quite visible. Near populated areas, burning is conducted on windless days or when prevailing winds carry the smoke away from houses. Unfortunately, sudden and unpredicted changes in wind direction can carry smoke toward houses and commercial developments often with complaints made to the municipalities. While many of the complaints are greatly overstated, the municipality, often in defense, bans burning even though it greatly increases development costs.

Q What about fans or blowers directed to the open piles?
A They greatly increase the burning rate and minimize smoke near the fan, but the timber beyond the influence of the fan will still smoke.

Q How does the Air Curtain Pit Burner differ from open burning?
A In the Air Curtain Pit Burner the wood is all cut to a size that will drop into the burning chamber under the curtain. As a result there is no opportunity for anything to be starved for air when its burning, and the air curtain keeps the unburned particles from escaping.

The cost of reducing the trees to size, moving them to the pit, feeding them at a rate the burner can handle, is substantially more expensive than stacking the trees and open burning.

To haul off site or to chip the trees on site there is still the cost of cutting the trees to size in addition to the cost of chipping or off site haulage and dump fees. In most cases therefore the cheapest alternative to open burning is the Air Curtain Pit Burner.

Q What is the capacity of an Air Curtain Pit Burner?
A Theoretically a 40' Pit would handle 20 tons per hour but this can vary greatly. A load of limbs or brush would burn much faster than a load of stumps because of the much greater exposed surfaces of the limbs and brush. Wet or green timber will burn slower than wood that has dried for some time. Woods with a high internal water content such as palm and palmetto will burn slower than something like holly that is fairly dry inside.

Q What is the cost of burning with the Air Curtain Pit Burner?
A Costs will vary substantially depending on materials burned, nominal size, distance to transport materials to the burner, total volume and the need to be portable or to relocate the burner.

Q What do you mean by portability?
A The first pit burner that Ryan Incorporated used was built by them in 1971 and was portable. It was used to burn 1000 acres of trees and was moved to various locations on site to reduce the distance that trees had to be moved to the Burner. It was 60' long, was very heavy and required several tractors to move its two independant free standing side walls constructed on heavy skids.

If the situation is best served by locating the burner in more than one location, it can be constructed with various degrees of portability.

Q What does a 40' Air Curtain Pit Burner installation cost?
A From $150,000 to $300,000 depending on equipment and portability.

Q What is a PACTHERM PIT BURNER?
A PACTHERM is a manufacturer's name and is considered the best one presently on the market. It is sold through the CROCHET EQUIPMENT CO of Baton Rouge, Louisiana, is manufactured in Washington state and RYAN INCORPORATED EASTERN, with the exception of the panhandle area, is the exclusive dealer for Florida.

Q Who is Ryan Incorporated Eastern?
A Ryan Incorporated Eastern is a fourth generation construction firm started in 1884 in Wisconsin. The firm has operated in south Florida since 1972 on many and varied development projects.

This firm specializes in heavy earthmoving projects and is presently operating probably as much or more earthmoving equipment in Florida as any of its like competitors.

Q What does the Ryan firm offer other than an outright sale?
A Since the firm is heavily engaged in contract construction they are not only interested in the sale and servicing of purchased units, but offer a variety of contract options.

Q What are examples of contract options?
A 1. Furnish and operate a unit to dispose of the trees and stumps on a new site development with either stationary or movable units
   a. by hourly rentals
   b. by units of measured quantities
   c. by lump sums

2. Furnish and operate units at land fill and dump sites
   a. by hourly rates
   b. by measured units related to the income of the land fill or dump

3. For owners that may have intermittent uses, by moving to their sites for as long as required to dispose of the accumulated combustibles and to return again as needed. The size of the unit can be scaled to their requirements and small portable units are now in the design stages.

4. For municipalities that create staging or collecting stations for trees and other combustibles, a unit could be employed fully or intermittently at such sites.

Q What information is necessary to formulate a contract?
A The zoning or permit status of the operation, the types of material to be burned, the minimum volumes, the expected maximum volumes, the charge structure if it's a land fill or a city, the proposed location of the burner, and the storage area for hauled in unburned materials.

Q Why would anyone contract out the operation? It appears to be simple.
A 1 One of the most significant reasons is that it saves front end costs in exchange for a minimum guarantee with the operator. (The operator needs a minimum guarantee for his financing purposes)

2 While the operation appears relatively simple there are a number of aspects that require a good management function such as:

a. oversized limbs, trunks, stumps, etc. must be cut to size
b. to minimize ash ,an operation is required to remove dirt prior to burning
c. a daily 1 to 2 hour cleaning is required during periods of heavy usage
d. to complete combustion, an all night supplemental air operation is needed
e. a full understanding of burning rates and air pressures is required
f. special servicing of loading machines because of extreme heat
g. the proper use of water to cool the ash prior to cleaning
h. management of a 24 hour safety hazard
i. yearly certifications of the operation and its operating personnel

3 The need for a burner may be short term or intermittent

4 Providing the subcontractor is competent, an incentive contract is a good way of providing and maintaining good performance

Q Can a subcontract be structured initially with eventual ownership by the municipality or land fill at some future date?
A Yes, a variety of alternatives can be structured with ownership or buyout options.

Q What is the status of governmental permits?
A At present Ryan has a permit to operate in Coral Springs, Florida, one of the communities that has banned open burning. Officials from various agencies have seen the operation and are generally very favorably impressed. It will take an effort to get approval in areas that have banned open burning, but are not as yet familiar with the system. In the past, a number of systems were poorly constructed and or operated, and it would be unfortunate if these experiences negated the use of this concept. Hopefully a system of licensing or of minimum specifications will evolve.

This system is not new and has been employed in the north for some time. On occasion, pits have been constructed with some success by digging vertical banks in certain types of clay. In Florida, with the predominance of granular materials and high water tables, it is felt that this technique has very limited application.

Q The Ryan operation at Coral Springs has a power module on a skid and the PACTHERM literature shows a much cheaper electrically operated blower permanently mounted on a frame work. Why?
A The module is a carry over from past portable operations. The loading ramp is also built on a skid and there are plans to build a skid on which to mount the entire burner unit.

Q The PACTHERM literature shows a lower ramp and a loading apron. Why does the Coral Springs operation use a ramp to the top of the burner?
A It was felt that loading would be better with direct operator visibility.

Q The cleanout operation seems slow!
A There are many innovations that we feel are possible over time and further experience is gained in Florida.

Q What are some examples?
A Feeding aprons that would shake dirt out of the combustibles and make the feed uniform; automatic cleaning devices; spray bars to cool the ash; collectors to insure against any flying unburned particles; etc.

Q Can marijuana be burned in this device?
A Yes, if it is bundled and burned with other materials since by itself it will create too much heat and destroy the refractory of the burner.

Q What is the delivery time for a new unit?
A Presently, two months depending on how it's equipped and the amount of custom fabrication.

RYAN INCORPORATED EASTERN

BRAD BANKS

(305) 652-5117 OFFICE
(305) 746-2856 RESIDENCE

BOX 694417 MIAMI, FLORIDA 33269

RYAN

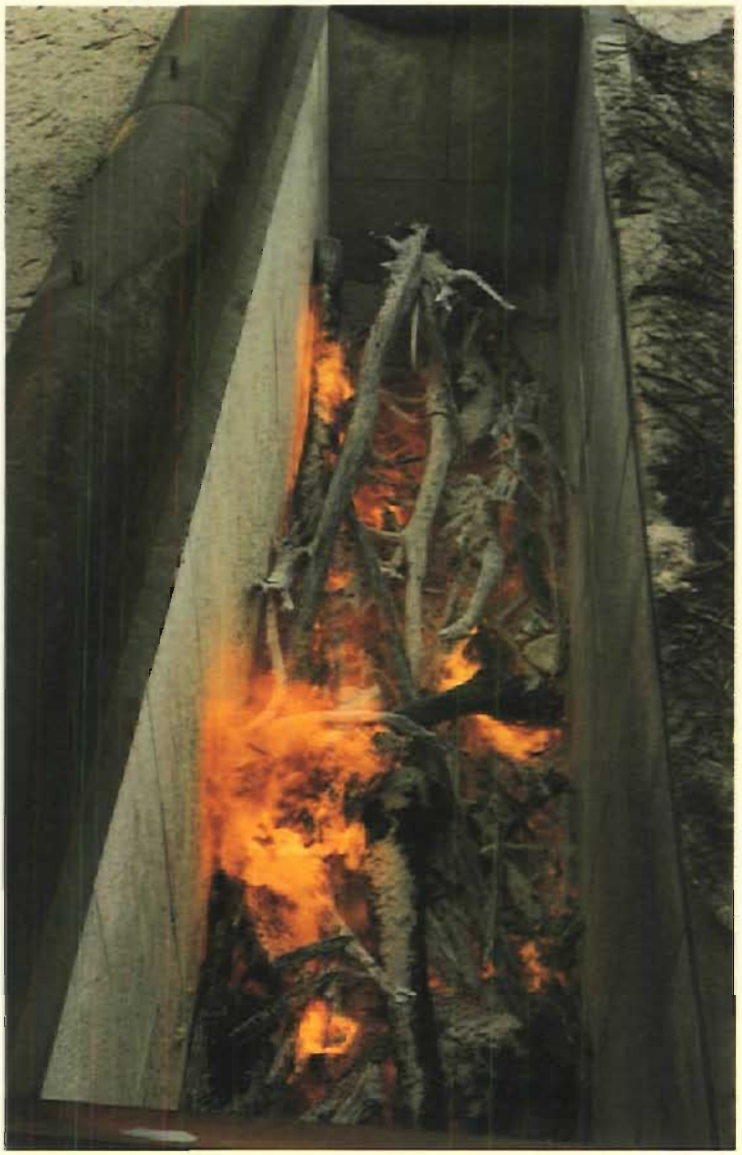
RYAN INCORPORATED EASTERN BOX 694417 MIAMI, FLORIDA 33269 (305) 652-5117

the pit shown is constructed in sections and can readily be moved and reinstalled at another location

uniform loading and good operator visibility are facilitated by use of an access ramp

The installation shown is for a residential development in Coral Springs, Florida, a community that has banned open burning. Working in conjunction with the Coral Springs Fire Department, RYAN INCORPORATED EASTERN, a Florida construction firm, installed a forty foot PACTHERM Air Curtain Pit Burner and disposed of forty acres of trees and stumps. The disposal was virtually smokeless, the total volume of ash residue was minimal, an expensive off-site disposal was avoided, and no environmental nuisance was created.

for cleaning purposes, doors are provided on one end of the burner so that residue ash can be readily removed with a small endloader



the pit shown is 40' long, 8' wide and 12' high

RYAN INCORPORATED EASTERN, Miami, Florida, with the exception of the panhandle area, is the exclusive Florida sales agent for the PACTHERM pit burner. The CROCHET EQUIPMENT COMPANY, Baton Rouge, Louisiana, is the licensed manufacturer.

smoke is contained until complete combustion by use of both an air curtain and supplemental air supplied underneath the pit

during loading, the air curtain is temporarily broken, but is quickly restored as the material drops into the burning chamber

Because of the many and varied applications, both long and short term, for this type of a system, the RYAN organization with its long history in the contracting industry is well able to act both as a direct sales agent and as a provider of services on a contract basis.

Situations that would readily lend themselves to a contract relationship would be tree and stump disposal for site developments, landfills that would like to establish a smokeless burning operation, but would like to avoid the investment and its operational ramifications, communities and others that would have a short term intermittent use for a burner of this type.

no smoke is visible despite a continuous feed of trees and stumps

THE AIR CURTAIN PIT BURNER,
since it burns without smoke, is the logical and economical alternative where Florida communities have banned open burning and developers and contractors are faced with the expense of trucking cleared trees and stumps to landfills.

The units also have application in connection with landfill operations for the purpose of burning trees, stumps and other combustibles thereby substantially lengthening the life of the landfills.

PS Form 3811, Jan. 1979

● SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)
- ☑ Show to whom and date delivered..... ¢
- ☐ Show to whom, date and address of delivery.... ¢
- ☐ RESTRICTED DELIVERY
  Show to whom and date delivered..... ¢
- ☐ RESTRICTED DELIVERY.
  Show to whom, date, and address of delivery.$

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
Mr. H. F. Kahlert
P. O. Box 2429
West Palm Beach, FL 33402

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	P40853034[illegible]	

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐Addressee ☐Authorized agent

4. DATE OF DELIVERY 7/7/83 POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

☆GPO : 1979-300-459

P 408 530 340

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. H. F. Kahlert	
Street and No. P. O. Box 2429	
P.O., State and ZIP Code West Palm Beach, FL	
Postage	$
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	$
Postmark or Date 7/5/83	

PS Form 3800, Feb. 1982

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

July 1, 1983

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. H. F. Kahlert, P.E.
County Engineer
P. O. Box 2429
West Palm Beach, Florida 33402

Dear Mr. Kahlert:

Enclosed is Permit Numbers AC 50-63154 and AC 50-63156 dated June 30, 1983, to Palm Beach County Board of County Commissioners issued pursuant to Section 403, Florida Statutes.

Acceptance of the permit constitutes notice and agreement that the Department will periodically review this permit for compliance, including site inspections where applicable, and may initiate enforcement actions for violation of the conditions and requirements thereof.

Sincerely,

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

CHF/bjm

Enclosure

cc: David E. Deans, Post, Buckley, Schuh & Jernigan, Inc.
Jim Williams, Southeast Florida District
Michael J. Martin, HRS

FINAL DETERMINATION

Dyer Boulevard Sanitary Landfill

Palm Beach County Board of County Commissioners

West Palm Beach, Florida

Application Numbers:

AC 50-63154
AC 50-63156

Department of Environmental Regulation

Bureau of Air Quality Management

Central Air Permitting

Dyer Boulevard Sanitary Landfill
Two Air Curtain Destructors
Palm Beach County

The construction application has been reviewed by the department. Public notice of the department's intent to issue was published in the Palm Beach Post on May 16, 1983. The preliminary determination and technical evaluation was available for public inspection at the DER's Southeast Florida District Office, Palm Beach County Health Department, and the DER's Bureau of Air Quality Management.

The following comments were received from Mr. Mike Martin with the Palm Beach County Health Department and Mr. Isidore Goldman with DER's Southeast Florida District Office:

1. Apply the conditions of Chapter 17-2.600(1)(a), Florida Administrative Code.

2. Delete the "365 days per year" from Specific Condition No. 1.

3. Add to Specific Condition No. 10 "The Certificate of Completion of Construction DER Form 17-1.202(3) may be submitted in lieu of an application for a permit to operate".

The bureau agrees with the comments. Comment No. 1 was incorporated into the text and the proposed permits prior to public notice. The latter two comments will be incorporated into the final determination and the following "specific conditions" will be revised and shall read:

Specific Conditions:

1. Maximum permitted fuel charging rate shall not exceed 49.5 tons per day. Permitted fuel is yard trimmings, land clearing-natural vegetative matter, wood and wood wastes. No hazardous waste is permitted to be used as a combustible material.

10. The applicant will demonstrate compliance with the conditions of this construction permit and submit a complete application for an operating permit to the DER's Southeast Florida District Office or its designee prior to 90 days before the expiration date of this permit. The Certificate of Completion of Construction, DER Form 17-1.202(3), Florida Administrative Code, may be submitted in lieu of an application for a permit to operate. The applicant may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.

Attachments to be incorporated are:

7. I. Goldman's interoffice memorandum dated May 17, 1983.

8. M. J. Martin's letter dated May 17, 1983.

It is recommended that the construction permits be issued as drafted, with the above revisions incorporated.

ATTACHMENT 7

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee

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

Reply Optional [ ] Reply Required [ ] Info. Only [ ]
Date Due: _____ Date Due: _____

DER
MAY 19 1983
BAQM

TO: Mr. Bill Thomas - BAQM

FROM: Mr. I. Goldman - DER, Southeast District

DATE: May 17, 1983

RE: Dyer Landfill Air Curtain Destructor Units - Application for Construction

In reply to your request for comments dated May 6, 1983 in BAQM letter to H.F. Kahlert, Palm Beach County Engineer, I suggest the following:

In Specific Condition 1; delete "at 365 days per year", so that the first sentence reads "Maximum permitted fuel charging rate shall not exceed 49.5 tons per day". The remainder of Specific Condition 1 stays as written.

In Specific Condition 2; under Emission Limit, in place of less than 20% opacity, quote the Incinerator Visible Emission Standard in (17-2.600(1)(a))

Specific Condition 10; add an additional paragraph, "The Certificate of Completion of Construction DER Form 17-1.202(3) may be submitted in lieu of application for a permit to operate".

IG:lp

ATTACHMENT 8

STATE OF FLORIDA

hrs DEPARTMENT OF

Bob Graham, Governor

Health & Rehabilitative Services

District Nine
P. O. Box 29

Palm Beach County Health Dept.
West Palm Beach, Florida 33402

Please Address
Reply to: ESE-WPB

May 17, 1983

Mr. C.H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality Management
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32301-8241

Attn: Mr. Bill Thomas:

RE: Applications: AC50-63154, AC50-63156
Dyer Boulevard Landfill-ACD

Dear Mr. Fancy:

This agency has reveiwed the Technical Evaluation Preliminary Determination, and the proposed permits for the construction of two Air Curtain Destructors (ACD) at the Palm Beach County's Dyer Road Landfill.

The following comments are submitted for your consideration:

1) An error exists in Section II, Rule Applicability. Each proposed ACD is not exempt from the emission limiting standard found in Chapter 17-2.600 (1), FAC, Incinerator. Clearly, both units will be permitted at a maximum rate of 49.5 Tons per day and as required by Chapter 17-2.600 (1) FAC will be required to have (A) No visible emissions (5% opacity) except that visible emissions with a density of Number 1 on the Ringelmann Chart (20% opacity) are allowed for up to three minutes in any one hour. (B) No objectionable odor allowed.

2) Specific condition Number 1 of both proposed permits states a maximum permitted fuel charging rate shall not exceed 49.5 tons per day at 365 days per year. On interpretation of this statement is that the 49.5 TPD could be on average rate over 365 days of operation, which would allow for a higher daily rate. For clarities sake the 365 day statement should be deleted. Realistically, 365 day will not restrict the source at all.

3) Specific condition Number 10 of both permits should allow for a Certificate of Completion of Construction in lieu of another complete application for an operation permit.

Should you have any questions regarding this matter, please contact the undersigned at (305) 837-3070.

Sincerely,

For the Division Director
Environmental Sciences & Engineering

Michael J. Martin
Environmental Specialist

MJM/mc

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

PERMITTEE:

Board of County Commissioners
Palm Beach County
Dyer Boulevard Sanitary Landfill
P. O. Box 2429
West Palm Beach, Florida 33402

Permit Number: AC 50-63154
Date of Issue:
Expiration Date: May 1, 1984
County: Palm Beach County
Latitude/Longitude: 26° 46' 38"N/ 80° 07' 51"W
Project: Air Curtain Destructor Unit (maximum 49.5 tons per day incinerator)

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

For the construction of a new air curtain destructor unit with a maximum daily charging rate of 49.5 tons of waste material (yard trimmings, land clearing-natural vegetative matter, wood and wood wastes) at the existing sanitary landfill facility located in West Palm Beach, Florida. The UTM coordinates are Zone 17-586.40 km East and 2961.90 km North.

Construction shall be in accordance with the permit application and plans, documents, amendments, and drawings except as otherwise noted on pages 5 - 7 of the "Specific Conditions".

Attachments are as follows:

1. Application to Construct Air Pollution Sources, DER FORM 17-1.122(16).
2. M. J. Martin's letter of completeness dated December 10, 1982.
3. C. H. Fancy's letter of completeness dated December 29, 1982.
4. D. E. Deans' letter dated February 28, 1983.
5. Memo to file as an amendment dated March 25, 1983.
6. M. J. Martin's memo dated April 8, 1983.
7. I. Goldman's interoffice memorandum dated May 17, 1983.
8. M. J. Martin's letter dated May 17, 1983.

PERMITTEE: Dyer Boulevard
Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63154
Date of Issue:
Expiration Date: May 1, 1984

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63154
Date of Issue:
Expiration Date: May 1, 1984

GENERAL CONDITIONS:

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63154
Date of Issue:
Expiration Date: May 1, 1984

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63154
Date of Issue:
Expiration Date: May 1, 1984

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. Maximum permitted fuel charging rate shall not exceed 49.5 tons per day. Permitted fuel is yard trimmings, land clearing-natural vegetative matter, wood and wood wastes. No hazardous waste is permitted to be used as a combustible material.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63154
Date of Issue:
Expiration Date: May 1, 1984

SPECIFIC CONDITIONS:

2. The compliance test to be required shall be visible emissions and as follows:

Source/Emission Point	Pollutant	Emission Limit	Test Method
Air Curtain Destructor	Visible Emissions	5% Opacity, except 20% Opacity for up to 3 minutes in any one hour	DER Method 9

DER Method 9 shall be performed annually in accordance with Chapter 17-2.700(6)(a)9., FAC.

3. The compliance test reports shall be submitted to the Department or its designee in accordance with Chapter 17-2.700(7), FAC. The required test reports shall be filed with the Department or its designee no later than 45 days after the last compliance test is completed.

4. The compliance test shall be conducted using a minimum to a maximum fuel charging rate of 90% to 100%, respectively, of the maximum permitted fuel charging rate (see No. 1).

5. The Department or its designee shall be notified 10 days prior to conducting the compliance tests.

6. Quarterly reports shall be maintained providing a monthly total and the actual daily fuel charging rate of the Air Curtain Destructor.

7. Copies of all reports, tests, notifications or other submittals required by this permit shall be submitted to both the Department of Environmental Regulation's (DER's) Southeast Florida District Office and the Palm Beach County Health Department Office.

8. Operation of the Air Curtain Destructor shall be in accordance with the Operating and Safety instructions from W. A. Kutrieb, Inc.

9. No objectionable odors shall be permitted on off-facility property in accordance with Chapter 17-2.600(1)(a)2., FAC.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63154
Date of Issue:
Expiration Date: May 1, 1984

SPECIFIC CONDITIONS:

10. The applicant will demonstrate compliance with the conditions of this construction permit and submit a complete application for an operating permit to the DER's Southeast Florida District Office or its designee prior to 90 days before the expiration date of this permit. The Certificate of Completion of Construction, DER Form 17-1.202(3), Florida Administrative Code, may be submitted in lieu of an application for a permit to operate. The applicant may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.

Issued this 30 day of June, 1983

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Victoria J. Tschinkel

_____ Pages attached.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

PERMITTEE:

Board of County Commissioners
Palm Beach County
Dyer Boulevard Sanitary Landfill
P. O. Box 2429
West Palm Beach, Florida 33402

Permit Number: AC 50-63156
Date of Issue:
Expiration Date: May 1, 1984
County: Palm Beach County
Latitude/Longitude: 26° 46' 38"N/ 80° 07' 51"W
Project: Air Curtain Destructor Unit (maximum 49.5 tons per day incinerator)

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

For the construction of a new air curtain destructor unit with a maximum daily charging rate of 49.5 tons of waste material (yard trimmings, land clearing-natural vegetative matter, wood and wood wastes) at the existing sanitary landfill facility located in West Palm Beach, Florida. The UTM coordinates are Zone 17-586.40 km East and 2961.90 km North.

Construction shall be in accordance with the permit application and plans, documents, amendments, and drawings except as otherwise noted on pages 5 - 7 of the "Specific Conditions".

Attachments are as follows:

1. Application to Construct Air Pollution Sources, DER FORM 17-1.122(16).
2. M. J. Martin's letter of completeness dated December 10, 1982.
3. C. H. Fancy's letter of completeness dated December 29, 1982.
4. D. E. Deans' letter dated February 28, 1983.
5. Memo to file as an amendment dated March 25, 1983.
6. M. J. Martin's memo dated April 8, 1983.
7. I. Goldman's interoffice memorandum dated May 17, 1983.
8. M. J. Martin's letter dated May 17, 1983.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63156
Date of Issue:
Expiration Date: May 1, 1984

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63156
Date of Issue:
Expiration Date: May 1, 1984

GENERAL CONDITIONS:

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63156
Date of Issue:
Expiration Date: May 1, 1984

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63156
Date of Issue:
Expiration Date: May 1, 1984

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. Maximum permitted fuel charging rate shall not exceed 49.5 tons per day. Permitted fuel is yard trimmings, land clearing-natural vegetative matter, wood and wood wastes. No hazardous waste is permitted to be used as a combustible material.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63156
Date of Issue:
Expiration Date: May 1, 1984

SPECIFIC CONDITIONS:

2. The compliance test to be required shall be visible emissions and as follows:

Source/Emission Point	Pollutant	Emission Limit	Test Method
Air Curtain Destructor	Visible Emissions	5% Opacity, except 20% Opacity for up to 3 minutes in any one hour	DER Method 9

DER Method 9 shall be performed annually in accordance with Chapter 17-2.700(6)(a)9., FAC.

3. The compliance test reports shall be submitted to the Department or its designee in accordance with Chapter 17-2.700(7), FAC. The required test reports shall be filed with the Department or its designee no later than 45 days after the last compliance test is completed.

4. The compliance test shall be conducted using a minimum to a maximum fuel charging rate of 90% to 100%, respectively, of the maximum permitted fuel charging rate (see No. 1).

5. The Department or its designee shall be notified 10 days prior to conducting the compliance tests.

6. Quarterly reports shall be maintained providing a monthly total and the actual daily fuel charging rate of the Air Curtain Destructor.

7. Copies of all reports, tests, notifications or other submittals required by this permit shall be submitted to both the Department of Environmental Regulation's (DER's) Southeast Florida District Office and the Palm Beach County Health Department Office.

8. Operation of the Air Curtain Destructor shall be in accordance with the Operating and Safety instructions from W. A. Kutrieb, Inc.

9. No objectionable odors shall be permitted on off-facility property in accordance with Chapter 17-2.600(1)(a)2., FAC.

PERMITTEE: Dyer Boulevard Sanitary Landfill

I. D. Number:
Permit Number: AC 50-63156
Date of Issue:
Expiration Date: May 1, 1984

SPECIFIC CONDITIONS:

10. The applicant will demonstrate compliance with the conditions of this construction permit and submit a complete application for an operating permit to the DER's Southeast Florida District Office or its designee prior to 90 days before the expiration date of this permit. The Certificate of Completion of Construction, DER Form 17-1.202(3), Florida Administrative Code, may be submitted in lieu of an application for a permit to operate. The applicant may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit.

Issued this 30 day of June, 1983

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Victoria J. Tschinkel

_____ Pages attached.

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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

TO: Victoria J. Tschinkel

FROM: Clair Fancy

DATE: June 22, 1983

SUBJ: Approval of Attached Air Construction Permits

Attached for your approval and signature are two Air Construction Permits for which the applicant is Palm Beach County Board of County Commissioners. The proposed project is to construct two air curtain destructor units at the existing Dyer Boulevard Sanitary Landfill, West Palm Beach, Florida.

Day 90, after which the permits would be issued by default, is July 4, 1983.

The Bureau recommends your approval and signature.

CF/pa

Attachment

Department of Engineering
and Public Works
H. F. Kahlert
County Engineer

May 19, 1983

Mr. C. H. Fancy, P.E.
Deputy Chief, Bureau of Air Quality
Management, Department of Environmental Regulation
Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32301-8341

DER
MAY 23 1983
BAQM

SUBJECT: Proof of Publication - notice of proposed agency action
Air Curtain Destructor at the Dyer Boulevard Landfill

Dear Mr. Fancy:

This is a followup to our May 13, 1983 letter concerning the subject notice of proposed agency action.

For your files and information, attached is a copy of the proof of publication of the Palm Beach Post, issue of May 16.

Please feel free to contact this office for additional information you may need.

Sincerely,

H. F. Kahlert, P.E.
County Engineer

HFK:d
cc: David Deans

(Detach this stub and forward with your remittance to
Palm Beach Newspapers, Inc., 2751 So. Dixie, West Palm Beach)

PALM BEACH NEWSPAPERS, INC.

The Post Daily & Sunday | The Evening Times

Date ..May 17, 1983.. Account No. ...404712.....

Ad. No. 653982..... Size ..4 I I..... Amount ..$36.68....

2751 SO. DIXIE WEST PALM BEACH, FL
Phone 837-4384
THANK YOU FOR THE
LEGAL ADVERTISEMENT
DESCRIBED BELOW
PAYMENT BY RETURN MAIL
WILL BE APPRECIATED

Clerk of the Brd.
of Co. Commissioners
PO Box 4036
ATTN: John W. Dame
West Palm Beach, FL 33402

RETAIN THIS PART FOR YOUR FILES

Acct. No. ....404712.....

Ad. No. ....653982.....

Size .....4 I I.....

Amount ....$36.68.....

Ad Description:
notice: proposed
agency action

Publ. Date May 16, 1983

RECEIVED
MAY 19 1983
JOHN B. DUNKLE, CLERK
BD. OF CO. COMM.
DEPUTY CLERK

THE POST

Published Daily and Sunday
West Palm Beach, Palm Beach County, Florida

PROOF OF PUBLICATION

STATE OF FLORIDA

COUNTY OF PALM BEACH

Before the undersigned authority personally appeared ....Joseph A. Ernst..... who on oath says that he is ..Class. Adv. Mgr.. of The Post, a daily and Sunday newspaper published at West Palm Beach in Palm Beach County, Florida; that the attached copy of advertising, being a .....Notice..... in the matter of .....Proposed agency action..... in the .....---------..... Court, was published in said newspaper in the issues of .....May 16, 1983.....

Affiant further says that the said The Post is a newspaper published at West Palm Beach, in said Palm Beach County, Florida, and that the said newspaper has heretofore been continuously published in said Palm Beach County, Florida, daily and Sunday and has been entered as second class mail matter at the post office in West Palm Beach, in said Palm Beach County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that 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.

Joseph A. Ernst

Sworn to and subscribed before me this 16 day of May A.D. 19 83

Barbara M. McCord
NOTARY PUBLIC STATE OF FLORIDA AT LARGE
MY COMMISSION EXPIRES SEPT 9 1983
BONDED THRU GENERAL INS. UNDERWRITERS

NO. 653582
NOTICE OF PROPOSED AGENCY ACTION

The Department of Environmental Regulation gives notice of its intent to issue permits to the Palm Beach County Board of County Commissioners for the construction of two force draft air curtain destructors at the Dyer Boulevard Sanitary Landfill in Palm Beach County, Florida. A determination of Best Available Control Technology (BACT) was not required.

A person who is substantially affected by the Department's proposed permitting decision may request a hearing in accordance with Section 120.57, Florida Statutes, and Chapters 17-1 and 28-5, Florida Administrative Code. The request for hearing must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within fourteen (14) days of publication of this notice. Failure to file a request for hearing within this time period shall constitute a waiver of any right such person may have to request a hearing under Section 120.57, Florida Statutes.

The applications, technical evaluation and department intent are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the following locations:
DER Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, FL 32301
DER Southeast District
3301 Gun Club Road
West Palm Beach, FLa 32207
Palm Beach County Health Department
Division of Environmental Science & Engineering
901 Evernia Street
West Palm Beach, Florida 33402

Comments on this action shall be submitted in writing to Bill Thomas of Tallahassee office within thirty (30) days of this notice.

JOHN B. DUNKLE, CLERK
Board of
County Commissioners
By: John W. Dame
Chief Deputy Clerk

PUBLISH: May 16, 1983