APR 21 1993

D.E.R. SOUTH DISTRICT

LEE COUNTY, FLORIDA QUARTERLY PROGRESS REPORT NO. 2 JANUARY THROUGH MARCH 1993





OGDEN MARTIN SYSTEMS OF LEE, INC.

LEE COUNTY SOLID WASTE RESOURCE RECOVERY FACILITY OPI Project No. C-1033

QUARTERLY PROGRESS REPORT

No. 2

JANUARY THROUGH MARCH 1993

SECTION 1 - DESCRIPTION OF FACILITY

SECTION 2 - GENERAL PROJECT STATUS

SECTION 3 - MAJOR FUTURE EVENTS

SECTION 4 - KEY EVENTS SCHEDULE

SECTION 5 - PROBLEM AREAS/EXCEPTION REPORT

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1. DESCRIPTION OF FACILITY

The Lee County Solid Waste Resource Recovery Facility (the "Facility") will receive, store, and burn Acceptable Waste and produce electricity. Ogden Martin Systems of Lee, Inc. ("the Company") will be required to operate the Facility in accordance with applicable permits and environmental standards. The Facility's technology is a process generally known as "mass burning," in which solid waste is burned with little or no precombustion processing. Mass burn technology has been used successfully in Europe since the early 1900's and in the United States for over 20 years.

Site Description

The Facility site is a 46.4 acre portion of an approximately 300 acre tract of land owned by Lee County, Florida ("the County") located in Lee County, Florida, outside the city limits of Fort Myers, one mile east of the intersection of Interstate 75 and State Road 82. The land is zoned so that it may be used for a resource recovery facility.

The site will be served by a potable water line, sewer line, and a reclaimed water line from the City of Fort Myers. An onsite well system will be provided for limited standby process cooling water. Electricity for in-plant use will be generated primarily by the Facility. The Facility will be tied into the Florida Power & Light Corporation electrical grid at the onsite switchyard. Propane gas service will be supplied from an onsite propane tank. Telephone service will be supplied from the existing telephone lines.

Facility Operation

After being weighed, unprocessed Acceptable Waste will be delivered to a storage pit. From the pit, the waste will be lifted by one of two overhead cranes and placed into one of two combustion unit charging hoppers. Combustion will take place in two boilers with integral waterwall furnaces. Each boiler has a design capacity of 600 tons of solid waste per day and operates independently of the other. From the charging hoppers solid waste will be passed downward through a feed chute and then pushed onto the stoker grates by a hydraulically operated ram feeder. To seal the feed chute from outside air infiltration and maintain control of the furnace draft, the hopper will be kept filled with solid

1. <u>DESCRIPTION OF FACILITY</u> (continued)

waste.

In the furnace, reverse-reciprocating grates will provide continued mixing, thus assisting in attaining thorough burnout of the Waste. Forced draft combustion air will be supplied to the underside of the grate bars in volumes that are controlled to meet the local combustion conditions. The uniform air distribution also cools the grate bars to prolong grate bar lift. Additional combustion air will be introduced above the stoker at the front and rear walls of the furnaces. The resulting flame turbulence prevents the escape of unburned gases from the furnace.

As the hot gases move through the boiler sections of each furnace, water in the boiler tubes will be heated, and steam will be generated. The steam will be directed to a turbinegenerator (manufactured by Mitsubishi) to produce electricity. Exhaust steam from the turbine-generator will be condensed in a watercooled condenser. The electricity produced flows to the electrical switchgear and then over an interconnection line into the Florida Power & Light Corporation (FPL) distribution system. Approximately 25 megawatts of the 30 megawatts produced will be sold to the local utility. After leaving the steam generators, the combustion gases will pass through dry-flue gas scrubbers for removal of HCl and other acid gases and through baghouse-type fabric filters for removal of particulates prior to discharge through the 276foot concrete square stack. The air pollution control equipment will be designed and furnished by ABB Environmental Systems.

Bottom ash and grate siftings will be discharged into a waterquenched residue removal system. From the Martin ash discharger, cooled residue will be moved via vibrating conveyors and belt conveyors to an enclosed residue storage are for final disposal at a sanitary landfill. Facility specifications include equipment for the recovery of ferrous materials. The ash removal system will be designed to handle any size material which can be delivered through the feed chute and across the grates. Ash from the air pollution control equipment will be collected separately and conveyed to the ash removal system for handling and disposal together with the bottom ash.

1. <u>DESCRIPTION OF FACILITY</u> (continued)

The principal components of the Facility will be the proprietary grate system, the overhead refuse cranes, the boilers, the dry-flue gas scrubbers, the baghouse type fabric filters, and the turbine-generator set. Auxiliary equipment will be provided at a level of redundancy consistent with practices common within the power-generating industry.

The stoker grate system will be designed and furnished by Martin GmbH. Martin GmbH has more than a quarter century of experience in the design, engineering, construction, and operation of systems for solid waste combustion and energy generation. As of January 1992, there were over 172 plants with 343 Martin GmbH combustion units in operation or under construction. In the United States, there are presently twenty Ogden Martin facilities in operation.

<u>Description of Operational Responsibilities</u>

The Company has the responsibility to build, operate, maintain and repair the Facility. Operations, maintenance, and repair shall be performed through Ogden Services, Inc., a whollyowned subsidiary of Ogden Corporation. Ogden Services is a service company, with over 40,000 employees, which was founded in 1888 and acquired by Ogden in 1982. Ogden Services provided operating, mechanical maintenance and housekeeping services for a variety of residential, commercial and institutional facilities. Mechanical maintenance and plant responsibilities include the operation of total energy systems, heating, ventilating and air conditioning plants; painting, plumbing, carpentry, electrical and other related services all utilizing programmed preventive maintenance techniques; installation, operation, maintenance and repair of production equipment; "turn-around" services; and receiving and shipping services in manufacturing and production plants and warehouses.

Facility Permits

The Florida Department of Environmental Regulation (FDER) issued its Power Plant Siting Certification for the Facility on June 16, 1992 and a permit for Prevention of Significant Deterioration (PSD) on July 20, 1992. These events were followed by Lee County completing negotiations on the Power Purchase Agreement with Florida Power & Light. With financing of the project completed prior to the issuance of permits Lee

County 1. DESCRIPTION OF FACILITY (continued)

provided Ogden notice-to-proceed with construction on October 28, 1992.

GENERAL

Owner/Operator:

Ogden Martin Systems of Lee, Inc.

10500 Buckingham Road Ft. Myers, FL 33905

P. O. Box 9387

Ft. Myers, FL 33902-9387

(813) 337-2200

Client:

Lee County

Construction Start Date:

October 28, 1992

Contracted Commercial Operations Date:

January 27, 1995

Guaranteed Construction Price:

\$126 million

Financed Costs:

\$179 million

TECHNICAL INFORMATION

Site:

± 47 acres in Lee County, FL

Waste-to-Energy System:

Two 600 tons-per-day waterwall furnaces with Martin reverse-reciprocating grates and ash

handling system

Waste Type:

Municipal, residential and commercial solid waste

Rated Refuse Burning Capacity:

1,200 tons per day

Guaranteed Throughput:

372,300 tons per year

Guaranteed Waste Delivery:

279,225 to 372,300 tons per year

Boiler Design:

865 psig/830°F superheater outlet

conditions

Air Pollution Control Equipment:

Automatic Combustion Controls, Dry flue gas scrubbers, fabric filter baghouses, Selective Non-Catalytic NOx Reduction, Mercury Abatement and Continuous Emissions Monitoring

(CEM) System

Energy Generation at Rated

Capacity:

39.7 MW

Sold To:

Florida Power and Light Company

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2. GENERAL PROJECT STATUS

Construction activities significantly increased during this report period. Primary focus was accelerating the refuse pit activities in order to compensate for the unanticipated extended durations for dewatering operations and a slow start by the contractor. The refuse pit excavation and pile installation was completed and rebar placement is well underway in preparation for the refuse pit mat pours. Piling in the boiler area was also completed with piling in other areas continuing. The turbine-generator pedestal foundation mat was poured. Other site activities included the installation of the site perimeter fencing, continued site grading and drainage work, and commencement of underground piping.

Lee County Construction Board of Adjustments and Appeals granted an adjustment to the building code as appropriate for the nature of this type of project and building permits for foundations were subsequently issued. Coordination with Lee County and the FDER on the utility piping system designs was active this period as was interfacing with Florida Power & Light on the electrical interconnect. Lee County is continuing the planning and engineering of project associated offsite work involving the landfill, roads, wetlands mitigation, and utility systems. The County has completed the installation of the offsite access road for the electrical interconnect.

Engineering activities are active in support of construction and procurement needs. Civil and structural designs are substantially developed as are the General Arrangements, P&ID's, and equipment specifications. Piping, electrical and instrumentation efforts are increasingly active as much of the vendor equipment design information is now available. The chimney, cooling tower, truck scales, all major pumps, switchgear distributed control system, steel and siding were purchased this period.

3. MAJOR FUTURE EVENTS

- 1. Complete all piling.
- 2. Complete the refuse pit mat and walls to grade.
- 3. Substantial completion of all major foundations.
- 4. Delivery of stoker equipment.
- 5. Mobilization of boiler and chimney erectors.
- 6. Initial shipments of building steel.

4. KEY EVENTS SCHEDULE

KEY EVENT	SCHEDULED	<u>ACTUAL</u>	MONTH OF CONSTRUCTION
Notice to Proceed		10/28/92	0
Groundbreaking		10/29/92	1
Complete Refuse Pit Mat	03/15/93		5
Complete Refuse Pit to Grade	04/26/93		6
Start Stoker Erection	06/14/93		8
Start Boiler Erection	06/14/93		8
Turbine-Generator On Site	12/28/93		14
Start Hydrostatic Test for Boilers	04/07/94		18
First Fire/Boilout	06/28/94		20
First Refuse Fire	08/12/94		22
Initial Generator Synchronization	09/02/94		23
Start Acceptance Testing	10/11/94		24
Target Acceptance Date	11/28/94		25
Scheduled Acceptance Date	01/27/95	. •	27

5. PROBLEM AREAS/EXCEPTION REPORT

No problems exist or are anticipated that would jeopardize the timely completion of the Facility in accordance with the Construction Agreement.

6. PHOTOGRAPHS

LEE COUNTY, FLORIDA

DEPARTMENT OF SOLID WASTE MANAGEMENT



LEE COUNTY RESOURCE RECOVERY FACILITY CONSTRUCTION MONITORING REPORT

March 1993

Malcolm Pirnie, Inc. 6320 Beau Drive North Fort Myers, Florida 33903

LEE COUNTY SOLID WASTE ENERGY RECOVERY PROJECT

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LEE COUNTY SOLID WASTE ENERGY RECOVERY PROJECT

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MONTHLY PROJECT REPORT MARCH 1993 LEE COUNTY SOLID WASTE ENERGY RECOVERY PROJECT

1.0 OVERVIEW

Construction activities at the site included the continuing piling installation for the refuse pit and boiler areas, commencement of piling installation for the turbine generator pedestal and building as well as the continuation of site work activities. Site work included the continuation of construction activities related to fencing, site grading and dewatering of the refuse pit, concrete placement for the refuse pit slab, installation of underground piping and construction of the FP&L Switchyard pad.

At the monthly project progress meeting held on 2 March 1993, Ogden Martin Systems of Lee (OMSL) presented a progress report and overview of construction activities.

This report represents a summary of OMSL construction activities as witnessed by Malcolm Pirnie, Inc.

2.0 CONSTRUCTION ACTIVITIES PERFORMED

The following specific construction activities were performed during the month of March 1993 by OMSL.

2.1 Site Work

- resumed perimeter fencing at main entrance and northeast corner.
- installed insulator spacing assemblies at fence isolation joints.
- removed soil surcharge pile and separated rock for residue handling building area.
- continued site grading (berm and detention pond banks) and drainage work
 (culverts and headwalls)
- commenced excavation for propane piping west of ash area.
- continued fabrication/assembly and commenced installation of propane and ammonia piping.
- continued delivery of precast piles for refuse pit, boiler area and turbine/generator building.
- continued dewatering activity for refuse pit excavation.
- performed on-site separation of rock from fill for off-site disposal

- performed pile testing (lateral, compression and tension by Law Engineering) for test piles in refuse pit area and boiler building.
- completed installation of precast piles at refuse pit area and boiler building.
- performed maintenance of silt barrier protection for off-site wetlands.
- continued installation of underground utility piping potable water, sanitary and reuse water.
- Universal Testing Co. continued soil and concrete testing.
- OMSL threshold inspector continued weekly inspection visits and issuance of inspection report.
- performed grading of turbine/generator area for pile installation.
- commenced installation of precast piles at turbine/generator building on 3/29/93.
- installed culverts and manholes adjacent to the fire standpipe and detention pond
 # 3.
- commenced pile cap/foundation for turbine/generator pedestal framework and reinforcing steel.
- performed hydrostatic testing of 8-inch reuse water piping.
- cut off precast piles to required elevation at refuse pit area.
- commenced installation of refuse pit slab (placed mud-mat, installed forms and reinforcing steel, placed concrete for south section)
- commenced backfill for FP&L Switchyard pad
- backfilled and graded balance of entrance road between security houses.

2.2 Structures

- 2.2.1 Tipping Floor no work performed
- 2.2.2 Refuse and Administration Building see comments in Site Work section above
- 2.2.3 Boiler/Power Generation Island see comments in Site Work section above
- 2.2.4 APC Equipment and Stack no work performed
- 2.2.5 Other (cooling tower, fire water pump house, storage tanks, etc.) -no work performed

2.3 Procurement

Major equipment purchased during this reporting period included:

- medium volt electrical switchgear and MCCs
- distributed control system

secondary unit substation

2.4 General

Every month OMSL reports on what construction activities are planned for the following month. In this section Malcolm Pirnie compares the reported planned activities to what was accomplished in the field.

All activities proposed by OMSL for performance during this reporting period (March 1993) were confirmed with the following exceptions. The reported purchase of the chimney actually occurred previously and the scheduled purchase of the wastewater treatment system and demineralizer system was postponed. The scheduled installation of underground electrical ductbanks did not commence.

3.0 DRAWDOWN ANALYSIS

Application for Payment (AFP) No. 6 was submitted by OMSL during this reporting period. Malcolm Pirnie received AFP-6 and found OMSL to be entitled to the full request of 4.207 %. To date OMSL has received 22.90 % of the Facility Price.

4.0 PROGRESS SCHEDULE

The overall construction progress is estimated to be 9.0 percent complete versus the 12 percent planned for the period ending March 20, 1993. A copy of the OMSL "Construction Progress Curve" and "Total Manpower Curve" are attached for reference.

5.0 PHOTOGRAPHS

Photographs included in Appendix A document construction progress during the reporting period.

6.0 OFF-SITE WATER UTILITIES

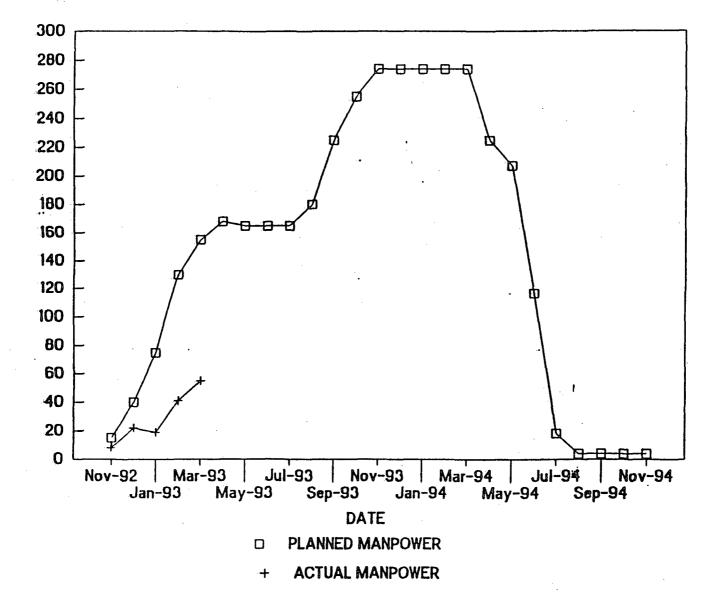
MPI subconsultant, Ink Engineering, Inc. continued the development of the contract documents and preliminary engineering plans for the offsite water utilities. Ink Engineering is finalizing the plans and are awaiting information from several agencies to accomplish this task. Preliminary plans were submitted to FDER and SFWMD for their review and comment on 31 March 1993.

TOTAL MANPOWER CURVE

Section 3.4

OMSL-LEE COUNTY FACILITY

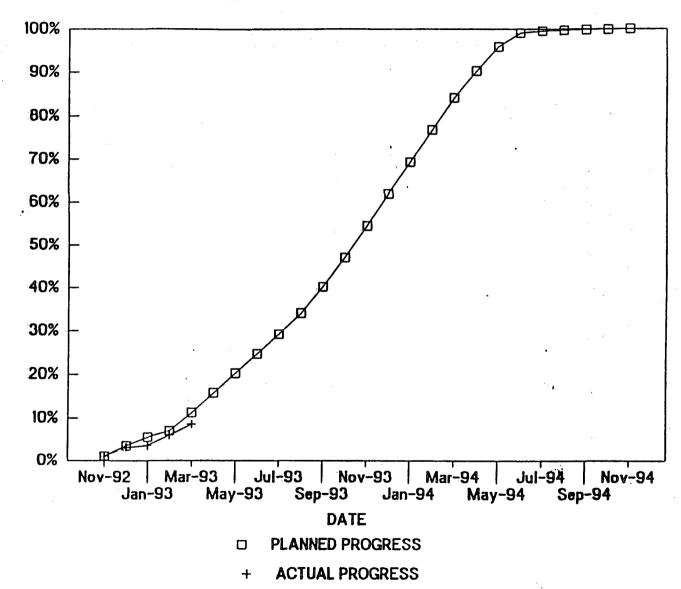
TOTAL MANPOWER CURVE-03/20/93



LEE

OMSL-LEE COUNTY FACILITY

CONSTRUCTION PROGRESS CURVE-03/20/93



7.0 RECLAIMED WATER PLANT IMPROVEMENTS

The Lee County Board of County Commissioners approved the Amendment to the Interlocal agreement during this reporting period, following the Department of Solid Waste review and approval of the engineering proposal for the associated design services. The City of Fort Myers is scheduled to approve the Amendment to the Interlocal Agreement on April 5, 1993.

8.0 OUTFALL PATH IMPROVEMENTS/POWER TRANSMISSION LINE SERVICE ROAD

8.1 Outfall Path

- concrete placed for mitered ends at drainage culverts beneath FP&L access roads.
- final sodding, seeding and mulch completed during this reporting period.

8.2 Transmission Service Road

- installed sod for embankments of service road.
- seeded and mulched the 10 foot wide stabilized road top area this reporting period.

NOTE: A Meeting was held at the site on 22 March 1993 with the contractor (LeMar Construction), Lee County Department of Solid Waste, LCDOT&E and MPI to perform final inspection and punchlisting for both the outfall path and transmission line service roads.

Punchlist items were completed by the contractor during the reporting period.

9.0 FP&L INTERCONNECTION

FP&L continued engineering activity for design of power line and substation. A meeting was held on 17 March 1993 at the FP&L Juno Beach offices between OMSL, Lee County, Malcolm Pirnie and FP&L. Purpose of the meeting was geared towards finalizing interface design for utilities, review the overall interconnection design status and update action item list from the previous months meeting.

FP&L representatives were on site on 29 March 1993 to inspect switchyard progress.

OMSL was required to have the switchyard pad rough grading completed by April 1, 1993 for FP&L to mobilize and commence installation of the switchyard pull off structure. This task was completed.

10.0 GROUND WATER MONITORING SYSTEM

By July 1993 the County is required to begin sampling the monitoring wells installed on site. The County is in the process of procuring the services of a certified laboratory to analyze the samples.

11.0 WETLAND MITIGATION/MONITORING PROGRAM/EXOTICS PLAN

11.1 Wetland Mitigation/Monitoring Program

- Wetland mitigation construction bid documents were finalized this reporting period.
- Bid advertisements scheduled to run on April 2 and 9, 1993.
- Pre-Bid conference scheduled for April 13, 1993 with bids due by April 28, 1993.

11.2 Exotics Plan

 Awaiting comments back from FDER and SFWMD on exotics plan (in receipt of comments by Southwest Florida Regional Planning Council). Comments by regulatory agencies will be addressed in one single submittal.

12.0 <u>SR82/BUCKINGHAM ROAD INTERSECTION AND BUCKINGHAM ROAD/SITE INTERSECTION</u>

12.1 SR82/Buckingham

LCDOT&E is awaiting approval from Lee County Board of County Commissioners on the property transfer related to intersection design. This is scheduled before the County Commission during the month of April. The construction schedule for the intersection improvements will be finalized pending Board approval.

12.2 Buckingham Road/Site

- Final design for site access road tie-in at the Buckingham Road completed by LCDOT&E this reporting period.
- Authorization by Lee County Department of Solid Waste for construction of intersection improvements scheduled for month of April 1993.
- LCDOT&E scheduled to award construction contract by May 1, 1993. Work is scheduled to commence shortly thereafter and be completed within sixty calendar days.

13.0 CONSTRUCTION ADMINISTRATION

13.1 Site Inspection

Malcolm Pirnie continued full-time monitoring of construction progress. See daily progress reports for summary/log of daily construction activities and administrative issues.

13.2 <u>Drawings/Design Review</u>

The following total number of shop drawings and/or technical specifications were received by Malcolm Pirnie for review:

	Fort Myers	White Plains
No. of shop drawings received	49	46
No. of specifications received	1	7
No. of shop drawings reviewed	34	62
No. of specifications reviewed	1	25

13.3 Maintain Files

Malcolm Pirnie maintains a complete set of drawings and specifications on behalf of Lee County at the County's trailer at the facility site. MPI made specific requests of Ogden to supply additional drawings to be maintained in the County file.

13.4 Review Requisitions and Change Orders

Application for Payment (AFP) No. 6 was received during the reporting period. See Section 3.0 Drawdown Analysis for specific information.

14.0 CONSTRUCTION ACTIVITIES PLANNED FOR THE NEXT REPORTING PERIOD

The following specific construction activities are proposed for the month of April 1993 by OMSL.

14.1 Site Work

- commence installation of underground electrical duct work.
- continue installation of underground piping.
- begin site final grading and drainage work (berms, ponds banks)
- continue site permanent road sub-base installation.
- continue separating rock from fill for offsite disposal.
- seed and mulch perimeter berm and pond banks.
- complete site perimeter fencing.

14.2 Structures

14.2.1 Tipping Floor - none

14.2.2 Refuse and Admin Bldg

- complete installation of precast piles at refuse pit area.
- continue installation of refuse pit slab and walls.
- apply water proofing material to refuse pit slab and walls.
- commence backfilling of refuse pit slab and walls.

14.2.3 Boiler/Power Generation Island

- complete installation of precast piles.
- place concrete for turbine generator pedestal foundation mat.
- commence concrete placement for boiler building pile caps.
- continue turbine/generator pedestal installation.

14.2.4 APC Equipment and Stack

- complete precast pile installation for spray dryer absorbers and lime slurry area.
- commence installation of stack precast piles.

14.2.5 Other (cooling tower, fire water pump house, storage tanks, etc.) -none

14.3 Procurement

The following equipment is scheduled to be purchased during the next reporting period:

- heat exchanger
- fire pumps
- effluent pretreatment system
- wastewater treatment system
- demineralizer system
- various tankage

APPENDIX A PHOTOGRAPHS



1. Pile driving operations at refuse pit and boiler areas. (Looking South)



 Cutting piles to elevation at refuse pit. (Looking East)



3. Place concrete mud mat at base of refuse pit.



4. Installing plastic and paraseal liners at base of refuse pit slab.



5. Placing forms and reinforcing steel for refuse pit south slab section. (Looking Northeast)



6. Installing and securing waterstop at refuse pit slab to wall construction joint. (Looking South)



 Completing final preparations for turbine/generator pedestal foundations. (Looking South)



8. Placing concrete for initial refuse pit slab section. (Looking Southeast)



 Installing manholes at drainage culverts adjacent to detention pond #3.



10. Installing potable water line. (Looking South)



11. FP&L Switchyard area rough grading complete. (Looking South)



12. Installing site permanent road sub base material.



13. Concrete test cylinders from headwall pour.



14. Fire department representative performing pressure/flow test on hydrant nearest to resource recovery site.



15. Concrete placed for culvert mitered ends at FP&L access roads along Buckingham Road. (Looking West)



16. Buckingham Road swale improvements, seeding and mulching. (Looking East)

OGDEN MARTIN SYSTEMS OF LEE, INC.



40 LANE ROAD CN 2615 FAIRFIELD, NJ 07007-2615 (201) 882-9000

April 16, 1993

Lee County, Florida 2013 Altamont Ave. Ft. Myers, FL 33901

Attention: L. Johnson

Reference: Lee County Solid Waste Resource Recovery Facility

Ft. Myers, Florida

Project C-1033, Our Ref. LE0407L

Subject: QUARTERLY PROGRESS REPORT NO. 2

Dear Larry,

Attached please find a copy of our quarterly progress report for the period covering January through March 1993 for your information and use.

Very truly yours,

L. Peter Young

Assistant Vice President -

Project Management

cc: P. Barbaccia - FDER South District

S. Coughanour - SFWMD

D. Cerrato - Malcolm Pirnie

J. Kowal - OMSL

J. Treshler - OMSL

pf 7.2 Quarterly Report

RECEIVED

APR 21 1993

O.E.R. SOUTH DISTRICT

OVERSIZED DRAWING(S) REMOVED

(SEE OCULUS UNDER SAME INDEXING INFORMATION)

LEE COUNTY, FLORIDA

DEPARTMENT OF SOLID WASTE MANAGEMENT



LEE COUNTY RESOURCE RECOVERY FACILITY CONSTRUCTION MONITORING REPORT

February 1993

Malcolm Pirnie, Inc.
6320 Beau Drive
North Fort Myers, Florida 33903

LEE COUNTY SOLID WASTE ENERGY RECOVERY PROJECT

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1971-01-2207

PROGRESS SCHEDULE

MONTHLY PROJECT REPORT FEBRUARY 1993 LEE COUNTY SOLID WASTE ENERGY RECOVERY PROJECT

1.0 OVERVIEW

Construction activities at the site were limited to site work and included the completion of mobilization and installation of perimeter fencing, continued site grading and dewatering of the refuse pit, as well as initiation of underground piping and piling for the refuse pit and boiler areas.

Monthly project progress meeting held on 2/2/93 - OMSL presented progress report and overview of construction activities. See meeting minutes on file.

OMSL continues to provide monthly manhour tracking of all local subcontractors, including minority.

2.0 CONSTRUCTION ACTIVITIES PERFORMED

The following specific construction activities were performed during the month of February 1993 by Ogden Martin Systems of Lee, Inc. (OMSL).

2.1 Site Work

- completed perimeter fencing with exception of main entrance and northeast corner
- removed soil surcharges for cooling tower and water tank locations
- completed installation of temporary facilities (parking lot and office/storage trailer complex)
- installed construction power and telephone to office trailer complex
- continued site grading and drainage work (culverts and headwalls)
- commenced fabrication/assembly of yard piping no installation. Certification of welders performed.
- completed grading of perimeter berm service road
- continued delivery of precast piles for refuse pit and boiler area

- · completed excavation of refuse pit
- continued dewatering activity for refuse pit 1000gpm
- performed on-site separation of rock for off-site disposal
- commenced installation of precast piles at refuse pit area and boiler building.
 Numerous pile driving equipment breakdowns delayed progress during the reporting period total of 3 pile driving rigs and 2 conventional cranes at site.
- performed pile testing (lateral, compression and tension by Law Engineering) for test piles in refuse pit area and boiler building
- performed maintenance of silt barrier protection for off-site wetlands
- commenced installation of underground utility piping potable water, sanitary and reuse water. Suspended installation to re-design for proper clearance/spacing between pipes.
- Universal Testing Co. continued soil and concrete testing
- OMSL threshhold inspector continued weekly inspection visits

2.2 Structures

- 2.2.1 Tipping Floor no work performed
- 2.2.2 Refuse and Admin Bldg see comments in Site Work section above
- 2.2.3 Boiler/Power Generation Island see comments in Site Work section above
- 2.2.4 APC Equipment and Stack no work performed
- 2.2.5 Other (cooling tower, firewater pump house, storage tanks, etc.) -no work performed

2.3 Procurement

Major equipment purchased during this reporting period included:

- truck scales
- circulating water pumps
- condensate pumps
- boiler pumps

2.4 General

All activities proposed by OMSL for performance during this period (February 1993) were confirmed.

3. CONSTRUCTION ACTIVITIES PLANNED

The following specific construction activities are proposed during the month of March 1993 by OMSL.

3.1 Site Work

- continue installation of precast piles at refuse pit area
- continue dewatering activity at refuse pit area
- continue installation of precast piles for boiler building
- commence installation of precast piles in turbine area
- continue site preparation and drainage work
- commence installation of underground electrical ductbanks
- resume installation of underground piping

3.2 Structures

- 3.2.1 Tipping Floor none
- 3.2.2 Refuse and Admin Bldg -
 - continue dewatering activity at refuse pit area
 - continue installation of precast piles at refuse pit area
- 3.2.3 Boiler/Power Generation Island continue installation of precast piles
- 3.2.4 APC Equipment and Stack none
- 3.2.5 Other (cooling tower, firewater pump house, storage tanks, etc.) -none

3.3 Procurement

The following equipment is scheduled to be purchased during the next reporting period:

- distributed control system (DCS)
- electrical switchgear
- wastewater treatment system

demineralizer system

4.0 DRAWDOWN ANALYSIS

No drawdown was submitted by OMSL for this reporting period. Based on Schedule 6 of the Agreement, the total not-to-exceed cumulative drawdown percentage of the Facility Price allowable through Application for Payment (AFP) No. 5 of 18.4% cannot be exceeded.

5.0 PROGRESS SCHEDULE

The overall construction progress is 6.0% complete versus 7.0% planned for the period ending February 20, 1993. A copy of the OMSL "Progress Curve - Total Construction" and "Total Manpower Curve" is attached for reference.

6.0 PHOTOGRAPHS

Photographs included in Appendix A document construction progress during the reporting period.

7.0 OFF-SITE WATER UTILITIES

Continued development of contract documents and preparation of permit applications. Meeting held at request of OMSL on 2/17/93 with FDER to discuss pipeline tie-ins. Contract documents scheduled for issuance by Malcolm Pirnie by 3/15/93.

8.0 RECLAIMED WATER PLANT IMPROVEMENTS

Malcolm Pirnie met with County and City (Fort Myers) on 2/16/93 to review schedule, permitting, design and construction issues. All issues resolved and final draft of interlocal agreement will be submitted to County and City for approval.

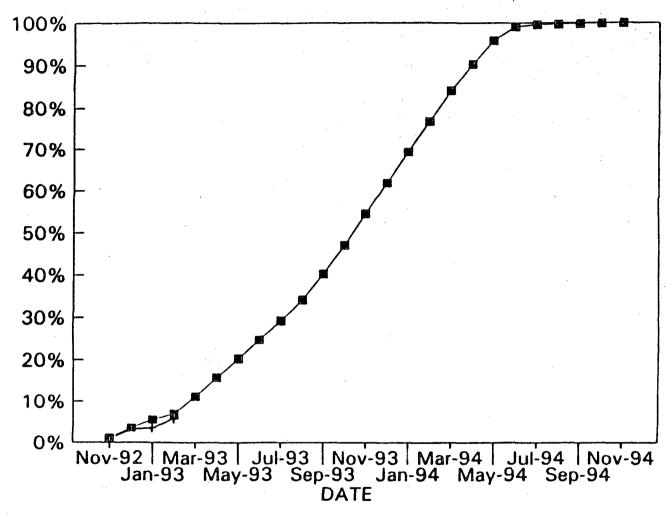
9.0 OUTFALL PATH IMPROVEMENTS/POWER TRANSMISSION LINE SERVICE ROAD

Completed excavation of swale and rock removal for Outfall Path Improvements. Completed fill for service road.

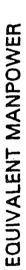
1971-01-2207 - 4 - 2/93 MPR

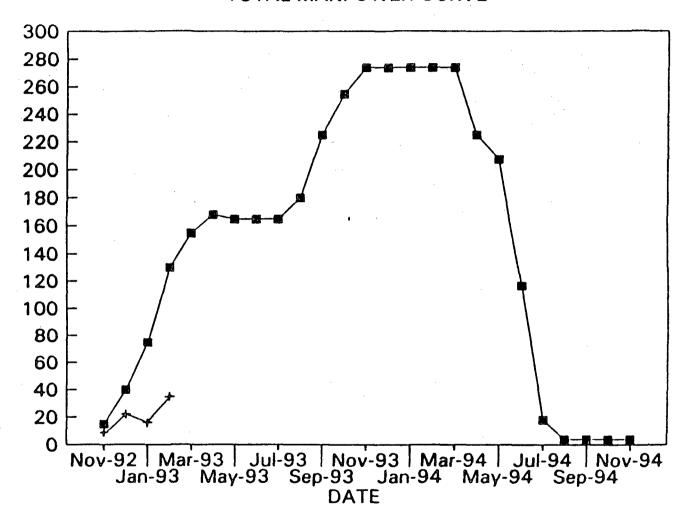
OMSL-LEE COUNTY FACILITY

PROGRESS CURVE-TOTAL CONSTRUCTION



- PLANNED PROGRESS
- ACHTAL PROGRESS





- PLANNED MANPOWER
- ACTUAL MANPOWER

10.0 FP&L INTERCONNECTION

FP&L continued engineering activity for design of power line and substation. Contract for Lazy Acres substation foundations to be available by 4/1/93. Meeting held on 2/4/93 with FP&L representatives to review service road and site requirements. EMF compliance report submitted to regulatory agencies on 2/11/93.

11.0 GROUND WATER MONITORING SYSTEM

Upcoming sampling activity - by 7/93 - required for primary and secondary standards for monitor wells. County is selecting analytical laboratory for future sampling activities.

12.0 WETLAND MITIGATION/MONITORING PROGRAM

Submitted baseline monitoring information to regulatory agency on 2/22/93. Presented contract documents for wetlands creation area and exotics removal to County for review. Submitted Exotics Plan to required regulatory agencies.

13.0 SR82/BUCKINGHAM ROAD INTERSECTION

County will submit proposed schedule for intersection and facility entrance by 3/26/93 to ensure completion of construction by 12/31/93.

14.0 CONSTRUCTION ADMINISTRATION

14.1 Site Inspection

Malcolm Pirnie continued full-time monitoring of construction progress. Office trailer installation completed during this period. See daily progress reports for summary/log of daily construction activities and administrative issues.

14.2 <u>Drawings/Design Review</u>

The following total number of shop drawings and/or technical specifications were received by Malcolm Pirnie for review:

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	Fort Myers	White Plains
No. of shop drawings received	143	94
No. of specifications received	43	25
No. of shop drawings reviewed	22	24
No. of specifications reviewed	16	16

14.3 Maintain Files

Continued development of project filing system for joint use by County and Malcolm Pirnie.

14.4 Review Requisitions and Change Orders

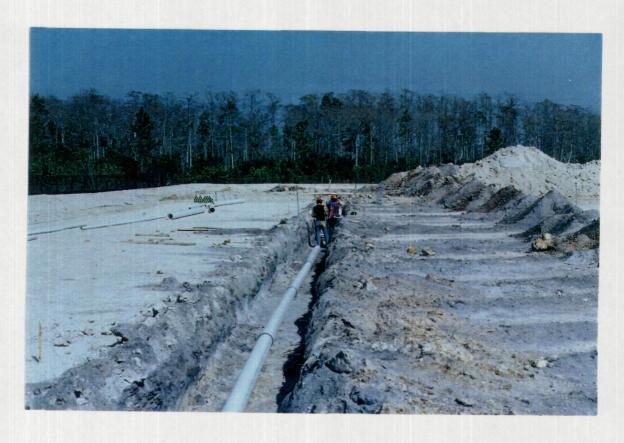
No Application for Payments (AFP) received during the reporting period.

1971-01-2207

APPENDIX A PHOTOGRAPHS



1. Excavation for swale along Outfall Path Improvements. 2/93



2. Installation of 8-inch diameter reclaimed water pipeline looking North. 2/93



3. Installation of test piles at Refuse Pit Area. 2/93



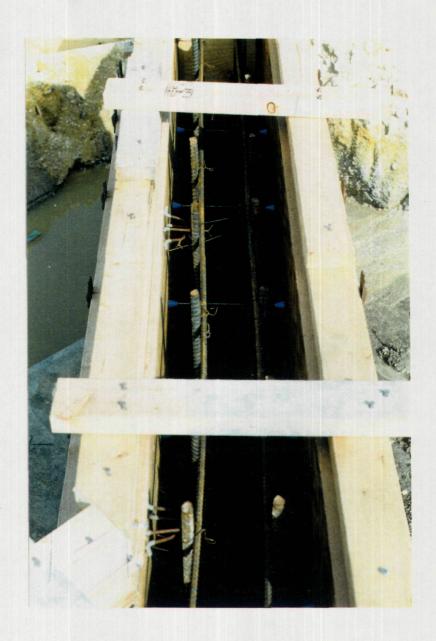
4. Fire Standpipe. 2/93



5. Tension test for precast piles at Refuse Pit Area. 2/93



6. Lateral test for precast piles at Refuse Pit Area. 2/93



7. Forwork and reinforcing steel for headwall at Southwest Detention Pond. 2/93

LEE COUNTY, FLORIDA

DEPARTMENT OF SOLID WASTE MANAGEMENT



LEE COUNTY RESOURCE RECOVERY FACILITY CONSTRUCTION MONITORING REPORT

January 1993

Malcolm Pirnie, Inc. 6320 Beau Drive North Fort Myers, Florida 33903

LEE COUNTY SOLID WASTE ENERGY RECOVERY PROJECT

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PHOTOGRAPHS

MONTHLY PROJECT REPORT JANUARY 1993 LEE COUNTY SOLID WASTE ENERGY RECOVERY PROJECT

1.0 OVERVIEW

Construction activities at the site were limited to site work and included the continuation of mobilization, installation of perimeter fencing, mobilization of piling subcontractor, site grading and dewatering of the refuse pit.

Monthly project progress meeting held on 1/5/93 - OMSL presented progress report, provided updated CPM and provided overview of construction activities. See meeting minutes on file.

OMSL continues to provide monthly manhour tracking of all local subcontractors, including minority.

2.0 CONSTRUCTION ACTIVITIES PERFORMED

The following specific construction activities were performed during the month of January 1993 by Ogden Martin Systems of Lee, Inc. (OMSL).

2.1 Site Work

- perimeter fencing 60% complete
- completed soil surcharges for cooling tower and water tank locations
- continued installation of temporary facilities (parking lot and office trailer complex)
- installed construction power and telephone to office trailer complex
- continued site grading and drainage work (culverts and headwalls)
- completed installation of dewatering system for refuse pit. Contractor indicated a 12 calendar day delay in this operation due to alternate disposal location requirements, but the delay was more realistically 2 calendar days. Due to flucuating ground water levels, a french drain system and sump pumps were added

1/21/93. Additionally, on 1/27/93, 3 foot of gravel was added to bottom of excavation to enhance drainage system.

- · continued grading of perimeter berm service road
- delivered portion of piles for refuse pit
- resumed excavation of refuse pit at 2:00pm on 1/19/93. (overtime work performed during the following weekend)
- SFWMD personnel performed inspection of stormwater management system on 1/14/93

2.2 Structures

- 2.2.1 Tipping Floor no work performed
- 2.2.2 Refuse and Admin Bldg see comments in Site Work section above
- 2.2.3 Boiler/Power Generation Island no work performed
- 2.2.4 APC Equipment and Stack no work performed
- 2.2.5 Other (cooling tower, firewater pump house, storage tanks, etc.) no work performed

2.3 Procurement

Major equipment purchased during this reporting period included:

- cooling tower
- stack
- inclined conveyor for bulk residue

2.4 General

All activities proposed by OMSL for performance during this period (January 1993) were confirmed with the exception that the distributed control system (DCS) was not purchased.

3. CONSTRUCTION ACTIVITIES PLANNED

The following specific construction activities are proposed during the month of February 1993 by OMSL.

3.1 Site Work

- Commence installation of precast piles at refuse pit area
- Continue dewatering activity at refuse pit area
- Commence installation of piping for reuse water, sanitary and potable water
- Complete installation of perimeter security fencing
- Continue site preparation and drainage work

3.2 Structures

- 3.2.1 Tipping Floor none
- 3.2.2 Refuse and Admin Bldg -
 - continue dewatering activity at refuse pit area
 - commence installation of precast piles at refuse pit area
- 3.2.3 Boiler/Power Generation Island none
- 3.2.4 APC Equipment and Stack none
- 3.2.5 Other (cooling tower, firewater pump house, storage tanks, etc.) -none

3.3 Procurement

The following equipment is scheduled to be purchased during the next reporting period:

- boiler feedwater pumps
- condensate pumps
- circulating water pumps
- fly ash handling system

4.0 DRAWDOWN ANALYSIS

The drawdown for this reporting period was 0.107 percent actual versus 4.75 percent scheduled for payment through application for payment (AFP) no. 4 resulting in a total cumulative drawdown to date of 17.028 percent actual versus 14.0 percent scheduled. Based on Schedule 6 of the Agreement, the total not-to-exceed cumulative drawdown percentage of the Facility Price allowable through AFP No. 4 of 14.0% cannot be exceeded. Therefore, payment in the amount of 4.75% is allowed (difference between previous and current not-to-exceed cumulative drawdown percentage).

5.0 PROGRESS SCHEDULE

The overall construction progress is 3.6% complete versus 5.5% planned for the period ending January 20, 1993. A copy of the OMSL "Progress Curve - Total Construction" and "Total Manpower Curve" is attached for reference.

6.0 PHOTOGRAPHS

Photographs included in Appendix A document construction progress during the reporting period.

7.0 OFF-SITE WATER UTILITIES

Continued development of contract documents and commenced preparation of permit applications.

8.0 RECLAIMED WATER PLANT IMPROVEMENTS

Malcolm Pirnie met with County and City (Fort Myers) representatives to review scope of work, permitting and design issues. Interlocal agreement scheduled for approval during next reporting period.

9.0 OUTFALL PATH IMPROVEMENTS/POWER TRANSMISSION LINE SERVICE ROAD

Kickoff meeting for Outfall Path Improvements and Power Transmission Line Service Road contracts was held on 1/6/93. NTP for the contract was issued on 1/11/93, although the Contractor commenced clearing and grubbing on 1/6/93.

Installation of silt fencing and hay bales preceded hauling and placement of fill material. Excavation of the Outfall Path commenced on 1/27/93. Drainage culverts for FP&L access roads were delivered on 1/15/93.

10.0 FP&L INTERCONNECTION

FP&L continued engineering activity for design of power line and substation.

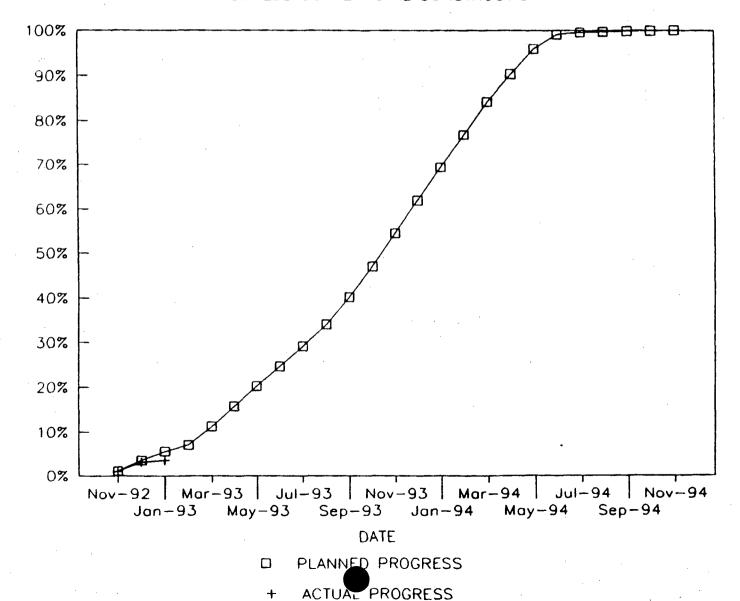
11.0 GROUND WATER MONITORING SYSTEM

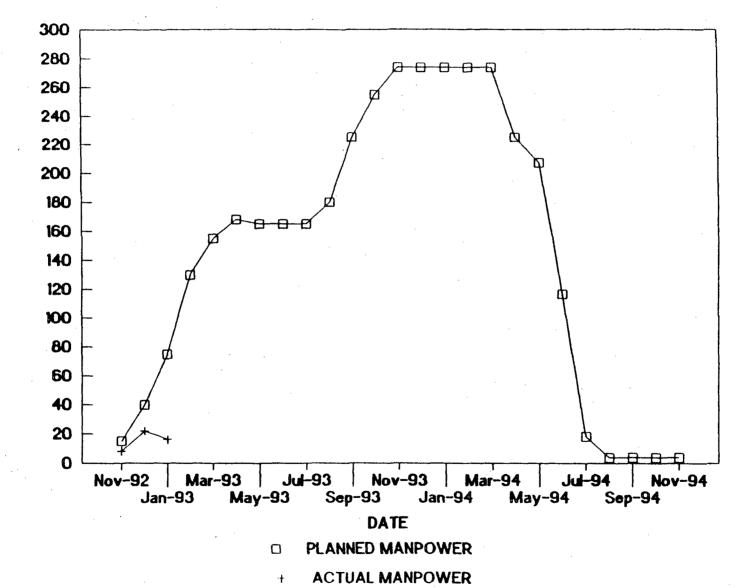
Malcolm Pirnie submitted Ground Water Monitoring Well Completion Report to FDER and SFWMD on 1/19/93.

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OMSL-LEE COUNTY FACILITY

PROGRESS CURVE-TOTAL CONSTRUCTION





EQUIVALENT MANPOWER

12.0 WETLAND MITIGATION/MONITORING PROGRAM

Presented outline of technical specifications (prepared by Kevin Erwin, Inc.) for wetlands creation area and exotics removal to County for review.

13.0 SR82/BUCKINGHAM ROAD INTERSECTION

Intersection design on hold pending County/private party land exchange.

14.0 CONSTRUCTION ADMINISTRATION

14.1 Site Inspection

Malcolm Pirnie continued full-time monitoring of construction progress. Office trailer installation not completed during this period, so off-site office location maintained. See daily progress reports for summary/log of daily construction activities and administrative issues.

14.2 <u>Drawings/Design Review</u>

The following total number of shop drawings and/or technical specifications were received by Malcolm Pirnie for review:

	Fort Myers	White Plains
No. of shop drawings received	165	38
No. of specifications received	2	12
No. of shop drawings reviewed	44	13
No. of specifications reviewed	2	2

14.3 Maintain Files

Continued development of project filing system for joint use by County and Malcolm Pirnie.

14.4 Review Requisitions and Change Orders

Performed review of AFP No. 3 and 4 during this period. See discussion concerning payment in section entitled "Drawdown".

APPENDIX A
PHOTOGRAPHS



1. Power Transmission Line Service Road. 1/93



2. Excavation of Refuse Pit Area. 1/93



3. Installation of Gravel @ Bottom of Refuse Pit Area Excavation. 1/93



4. Culvert and headwall at Southwest Stormawater Detention Pond. 1/93



MALCOLM PIRNIE, INC. **ENVIRONMENTAL ENGINEERS, SCIENTISTS & PLANNERS**

DOC STORES. W. DANTO SON M. RON MB

April 22, 1993

Florida Department of Environmental Regulation

South District Office

2295 Victoria Avenue

Suite 364

Fort Myers, FL 33901

Attention: Mr. Philip A. Barbaccia

Environmental Administrator

Program Administrator Waste Management

RE:

Lee County Solid Waste Energy Recovery Facility

Power Plant Site Certification - DER Case No. PA 90-30

Subject:

Quarterly Construction Report #2

Dear Mr. Barbaccia:

On behalf of Lee County, Florida (the "County"), Malcolm Pirnie, Inc., is submitting two copies of the County's second Quarterly Construction Report, in compliance with the conditions of certification for the Lee County Solid Waste Energy Recovery Facility. The condition that specifically requires the submittal of the following information is:

CONDITIONS OF CERTIFICATION

SUBJECT

XIII (C)

Reporting

813-332-8324

Specifically, this submittal contains information regarding the construction progress of the Solid Waste Energy Recovery Facility as well as the ancillary facilities associated with the project.

This report supplements the Ogden Martin Systems of Lee, Inc. Quarterly Progress Report # 2 previously submitted to the South District Office.

If you have any questions regarding the enclosed, please do not hesitate to contact us.

Very truly yours,

MALCOLM PIRNIE, INC.

mbel L. Morklyns Donald R. Markley

Assistant Project Manager

APR 26 1993

D.E.R. Suurr viv.

encl.

P.O. BOX 490

MALCOLM PIRNIE

Mr. Barbaccia F.D.E.R.

March 31, 1993 Page 2

c:

- S, Coughanour, SFWMD, WPB (w/one enclosure)
- C. Merriam, SFWMD, Ft. Myers (w/one enclosure)
- L. Johnson, Lee County Division of Solid Waste (w/o encl.)
- L. Sampson, Lee County Division of Solid Waste (w/o encl.)
- D. Dee, Carlton Fields, et al. (w/o encl.)
- P. Young, OMSL (w/o encl.)
- J. Kowal, OMSL (w/o encl.)
- J. Treshler, OMSL (w/o encl.)
- D. Cerrato, NNJ (w/o encl.)

福田 建美国

APR 26 1993

DAR Someron west

OVERSIZED DRAWING(S) REMOVED

(SEE OCULUS UNDER SAME INDEXING INFORMATION)