SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

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

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

3. Article Addressed to:
Mr. Gary K. Crane, PhD.
Environmental Permitting
Ogden Martin Systems
40 Lane Rd
Fairfield, NJ 07007-2615

4. Article Number
P 256 395 047

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X Peter Fenlon

6. Signature – Agent
X

7. Date of Delivery 12-17

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Apr. 1989 ★U.S.G.P.O. 1989-238-815 **DOMESTIC RETURN RECEIPT**

P 256 395 047

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

Sent to Gary Crane	
Street and No. Ogden Martin	
P.O., State and ZIP Code 40 Lane Rd Fairfield NJ	
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 12-12-90 AC 35-115379 PSD-FL-113	

PS Form 3800, June 1985 ★U.S.G.P.O. 1989-234-555

Florida Department of Environmental Regulation

Central District • 3319 Maguire Boulevard, Suite 232 • Orlando, Florida 32803-3767

Lawton Chiles, Governor

Carol M. Browner, Secretary

October 23, 1991

OCD-AP-91-140

Gary K. Crane, Ph.D.
Executive Vice President
Environmental Permitting
Ogden Martin Systems, Inc.
40 Lane Road
Fairfield, New Jersey 07007-2615

Lake County - AP
Permit No. AC35-115379

Dear Dr. Crane:

We are in receipt of your October 4, 1991 letter explaining your interpretation of when each CO emission limit would be in effect for Ogden Martin Systems' incinerator.

You raised some interesting points but I would like to address the main issue first. The permit was issued by the Division of Air Resources Management in Tallahassee, and therefore any requests for interpretation of limits should be presented to the Division of Permitting in Tallahassee for clarification.

We request that you also apply for clarification or permit language changes to the Division of Permitting.

Concerning the sub-issues you bring up in your letter, I would like to make the following comments, even though the final ruling must come from the Division of Permitting:

> Douglas MacLaughlin, Office of General Counsel has stated during a conversation with Alan Zahm, P.E., that Ogden Martin Systems' incinerator is subject to the 100 ppm CO limit. The limit is enforceable and the amendment supercedes the condition in the construction permit.
>
> Similar conversations with Cindy Phillips in the Bureau of Air Regulation, have taken place and Cindy is quoted as saying the company is subject to the 100 ppm CO limit, but a request can be made from you to amend the permit back to 200 ppm.

Department of Environmental Regulation

Routing and Transmittal Slip

To: (Name, Office, Location)

1. Cindy Phillips
2. Bureau of Air Regulation
3. FDEP
4. Tallahassee

Remarks:

Cindy,
Please see that a copy of this gets in the main file.
Thanks,
Bruce

RECEIVED
OCT 2 1991
Division of Air Resources Management

From: Central District Air Resources Mgmt

Date: 10/23/91

Phone:

The second sub-issue, that even after you construct the conveyor system, that the limit would fluctuate back and forth between 100 and 200 ppm, should be clarified at once as we would see this as a possible compliance problem for our inspectors, even if it was approved.

The last sub-issue, that you should call us based only on emission exceedances of 200 ppm CO, would not be a valid assumption in light of the last permit amendment and reconfirmed by the opinions I have quoted. Therefore, until you have a revised permit condition which allows this, or you secure a legal interpretation from Mr. MacLaughlin that confirms your understanding, continue to report the values over 100 ppm.

Please let me know if I can assist you in any way.

Sincerely,

Charles M. Collins

Charles M. Collins, P.E.
Program Administrator
Air Resources Management

CMC:j

cc: Cindy Phillips
Douglas MacLaughlin

OGDEN MARTIN SYSTEMS, INC.

AN OGDEN COMPANY

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

January 3, 1991

State of Florida
Department of Environmental Regulation
3319 Maguire Blvd.
Suite 232
Orlando, Florida 32803-3767

Attention: A Zahm

Reference: Lake County Resource Recovery Facility
Okahumpka, Florida
LK0679L, Project C-1025

Subject: REFERENCE PERMIT AC35-115379
SCHEDULE OF COMPLIANCE TESTING

Gentlemen,

Supplementing our letter of December 21, 1990 which provided notification of our testing for air emissions on the subject facility, please be advised that on January 15 at 10:00 a.m. a walkdown of the facility followed by a meeting to answer any questions shall be conducted for all interested parties. The performance testing on the facility shall commence early afternoon on January 15th. Note that January 14 will be used as a set-up day.

Additionally, please find another copy of our Source Test Plan that has been corrected by replacing the second sheet in section 4.0 with a cross section of the facility.

We look forward to seeing you in the near future. Please do not hesitate to call me in the meantime with any questions or comments.

Very truly yours,

L. Peter Young
Project Manager

cc: C. Fancy - FDER (w/att.)
C. Phillips - FDER
D. Findell - Lake County (w/att.)
J. Treshler - OMS
D. Lehman - OMS
pf 5.1 Air Permit

pja/1250

OGDEN MARTIN SYSTEMS OF LAKE, INC.

3830 ROGERS INDUSTRIAL PARK ROAD
OKAHUMPKA, FL 34762
(904) 365-1611

AN OGDEN PROJECTS COMPANY

August 3, 1992

Florida Department of Environmental Regulation
Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Attention: Chuck Collins

Dear Mr. Collins:

In response to receiving our notice of the PERMIT ISSUANCE dated July 1, 1992 there are a few area's in which I would like to address.

Issue #1

The maximum individual MWC throughput shall not exceed 288 tons per day, 120 million Btu per hour and 69,000 pounds steam per hour, (3-hour average). The maximum throughput of bio-hazardous waste shall not exceed a total of 1.12 tons/hour and 26.88 tons/day for the entire facility.

Recently I spoke to Mr. Preston Lewis in the Tallahassee office of the Department of Environmental Regulations (FDER) and Mr. Allan Zahn who is out of your Central Office (DER) for the interpretation of the total tonnage of bio-hazardous and the definition of the wording in the permit,"entire facility".

Ogden Martin of Lake County is seeking permission for the DER to allow our Lake Facility to split the 1.12 tons/hour or the 26.88 tons/daily between both units. The primary reason for this change is to stay current with the trend in handling bio-medical in a bulb handling system, thus reducing the handling of the waste, this system would be designed for the second unit. Department of transportation has concurred with the medical waste industry haulers to move in this direction of bulk handling.

Per my conversation with Mr. Lewis and Mr. Zahn, both felt that this was already in the language as long as a mechanism was designed to handle the bio-medical separate from the MSW stream on unit #2 as in a similar fashion/method that handles the bio-medical waste for unit #1.

Your review and comments would be greatly appreciated and if you need any assistance please feel free to call me at (813) 684-5688

Sincerely,

John Power

John Power
Regional Environmental Coordinator

cc: P. Lewis
A. Zahn
D. Lehman
J. Treshler
S. Bass
G. Ball-llovera
B. Hurley

medhan.lak

RUDEN
McCLOSKY
SMITH
SCHUSTER &
RUSSELL, P.A.
ATTORNEYS AT LAW

215 SOUTH MONROE STREET
SUITE 815
TALLAHASSEE, FLORIDA 32301

TELEPHONE: (850) 681-9027
FAX: (850) 224-2032

E-MAIL: MFS@RUDEN.COM

July 15, 1998

Joseph Kahn, P.E.
Bureau of Air Regulation
Department of Environmental Protection
Mail Station 5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Via Hand Delivery

Re: Ogden Martin Systems of Lake, Inc.

Dear Joe:

Attached is a copy of draft minutes of the meeting between the Department and Ogden Martin Systems of Lake, Inc. regarding the processing of biomedical waste. I am copying Pat Comer on this correspondence as Clair requested. If you would make sure the appropriate people in the Bureau review this and get back to me with any comments, I would appreciate it.

Sincerely,

RUDEN, McCLOSKY, SMITH,
SCHUSTER & RUSSELL, P.A.

Mary

Mary F. Smallwood

MFS/cc
cc: Pat Comer (with attachment)

MINUTES OF MEETING BETWEEN FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND OGDEN MARTIN SYSTEMS OF LAKE, INC.

JULY 8, 1998

Representatives of the Department of Environmental Protection (DEP) and Ogden Martin Systems of Lake, Inc. (OMSL) met July 8, 1998, in Tallahassee to discuss OMSL's permits for the Lake County resource recovery facility and to confirm the steps remaining to allow processing of biomedical waste in Unit 2.

The following people were in attendance:

DEP: Clair Fancy, Joe Kahn, Pat Comer, Susan DeVore, Michael Hewitt, Len Kozlov (by telephone), Vivian Garfein (by telephone), Alan Zahm (by telephone), and Anatoly Sobilesky (by telephone).

OMSL: Brian Bahor, Joe Treshler, Jason Gorrie, and Mary Smallwood.

The purpose of the meeting was two-fold; first, to confirm the appropriate administrative mechanism OMSL was to follow to achieve acknowledgment from DEP that OMSL could commence processing biomedical waste in Unit 2, and second, to discuss the results of the stack tests conducted and witnessed by DEP representatives on April 21-23 on Unit No. 2 while processing biomedical waste at a maximum throughput of 2.02 TPH, in accordance with a DEP approved test protocol. These results were submitted to DEP and demonstrate compliance with all applicable emission limiting standards. Prior to the April 1998 test biomedical waste had not been processed in Unit 2 because that unit had not as yet been tested for biomedical waste processing. The construction permit for the facility, as modified and public noticed in December 1990, provides that biomedical waste may be processed at either unit without a specific throughput limitation.

Pat Comer explained that there is no federally enforceable maximum throughput of biomedical waste for the facility since the construction permit did not contain such a limitation. Accordingly, DEP insisted that a new construction permit must be issued for the facility with a maximum throughput specified. Pat was concerned that without a throughput limitation, the facility could theoretically process 100% biomedical waste, in which case it

would have to comply with all requirements of the state's regulations on biomedical waste incinerators and Subpart Cc of the federal regulations. OMSL explained that the facility already complies with such requirements and, thus, has no concerns with having such standards formally applied.

OMSL agreed to submit an application to revise the existing construction permit, as quickly as possible, identifying, among other things, the requested throughput of biomedical waste for the facility's two combustion units. That throughput will likely be in excess of the throughput specified in the existing operation permit and/or the throughput at which the facility has been tested in the past. OMSL explained that it would need flexibility in the processing rate to be established, particularly on a short term basis. Accordingly, OMSL will be applying for both short term and long term averaging limits. DEP advised that the construction permit application must provide reasonable assurances that all applicable regulatory requirements are met. Since the facility is already in existence and operating, reasonable assurances may include actual stack sampling, as well as description of the design standards and specific operating controls. Both parties recognized that because of the design of the facility and operational constraints, there is a limit to the amount of biomedical waste the facility can handle. OMSL agreed that the application will describe the specific biomedical waste feed systems being utilized on Units 1 and 2 and will address the environmental aspects of each system. DEP agreed that OMSL may retest the facility at a higher biomedical waste throughput rate prior to submitting the application so long as a test protocol is agreed upon by OMSL and the DEP district office.

DEP's notice of intended action on the permit application must be public noticed, allowing 30 days for public comment, similar to the process used by OMSL for all previous permit changes.

Upon issuance of the revised construction permit, OMSL may operate under the terms of the revised construction permit until such time as DEP processes and approves the facility's application for a Title V permit. It was Clair's position that no further operating permit modifications should be processed for the facility in the meantime because of the confused state of the existing permits. He indicated that he would direct DEP staff to expedite the processing of the facility's Title V application, and he

expected that could be completed in approximately 180 days after issuance of the construction permit.

The foregoing minutes were reviewed and agreed to by both DEP and OMSL.

TAL:18256:1

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

August 3, 1998

Ms. Mary F. Smallwood
Ruden, McClosky, Smith, Schuster & Russell, P.A.
Suite 815
215 South Monroe Street
Tallahassee, Florida 32301

Re: Ogden Martin Systems of Lake, Inc.

Dear Ms. Smallwood:

I reviewed the draft meeting minutes you submitted on July 15th, and solicited comments from other staff, including Pat Comer. Overall the minutes agree with our recollection of the July 8th meeting. However, our understanding was that the facility would conduct additional tests as part of reasonable assurance if it seeks in its construction permit application an increase in throughput above its previously tested rates. Those tests would be conducted at the throughput rate that the facility would prefer to be limited. Other than that clarification, I believe the minutes represent accurately our meeting.

Thank you for taking the time to document the meeting minutes. Please call me at 850/921-9519 if you have any questions or comments.

Sincerely,

Joseph Kahn, P.E.
Bureau of Air Regulation

RUDEN
McCLOSKY
SMITH
SCHUSTER &
RUSSELL, P.A.
ATTORNEYS AT LAW

215 SOUTH MONROE STREET
SUITE 815
TALLAHASSEE, FLORIDA 32301

TELEPHONE: (850) 681-9027
FAX: (850) 224-2032

E-MAIL: MFS@RUDEN.COM

July 15, 1998

Joseph Kahn, P.E.
Bureau of Air Regulation
Department of Environmental Protection
Mail Station 5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

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RUDEN, McCLOSKY, SMITH,
SCHUSTER & RUSSELL, P.A.

Mary

Mary F. Smallwood

MFS/cc
cc: Pat Comer (with attachment)

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would have to comply with all requirements of the state's regulations on biomedical waste incinerators and Subpart Cc of the federal regulations. OMSL explained that the facility already complies with such requirements and, thus, has no concerns with having such standards formally applied.

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expected that could be completed in approximately 180 days after issuance of the construction permit.

The foregoing minutes were reviewed and agreed to by both DEP and OMSL.

TAL:18256:1

OGDEN MARTIN SYSTEMS
OF LAKE, INC.

3830 ROGERS INDUSTRIAL PARK ROAD
OKAHUMPKA, FL 34762
(904) 365-1611

AN OGDEN
PROJECTS COMPANY

August 6, 1992

Mr. Clair Fancy
Bureau Chief
Florida Department of Environmental Regulation (FDER)
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee FL 32399-2400

Dear Mr. Fancy,

Attached is the material requested by Mr. Lewis and Mr. Mitchell during our July 15, 1992 meeting regarding Benlate 50DF and Ogden Martin's Supplemental Waste Procedures. This document was not included in the original package provided for your review because it was being updated at the time.

Thank you for your patience, and if I can further assist you and your staff, please feel free to call me at (813) 684-5688.

Sincerely,

John P. Power
Regional Environmental Coordinator

cc: C. Collins
B. Mitchell
P. Lewis
P. Comer
J. Pennington

benlate.ltr

OGDEN MARTIN SYSTEMS, INC.

SUPPLEMENTAL WASTE PROGRAM PROCEDURES

TABLE OF CONTENTS

PURPOSE

These procedures have been designed to ensure:

a) only non-hazardous waste is accepted and processed
b) no material likely to cause permit or regulatory violations is accepted or processed
c) no material likely to adversely affect worker safety, human health or the environment is accepted or processed
d) each business opportunity is promptly addressed
e) proper internal controls are maintained
f) compliance with service agreement is maintained

1.0 CONTRACTS

Except for supplemental waste processing performed for a governmental entity, a supplemental waste contract must be executed before any delivery of supplemental waste is accepted at the facility. While these contracts at times seem excessive, for example, a one-time delivery or an infrequent waste stream, they are a crucial tool in Ogden Martin's risk management/allocation for this business area. Test burn materials may be accepted before a final contract is executed, but only after interim approval of the waste stream solely for the purpose of the test burn.

1.1 The Facility Manager of Administration (Administrator) reviews the form contract language and the standardized pricing established for the facility with the supplier.

1.2 Any deviation from the standardized pricing must be approved, in writing, by the Operations Business Development Manager (Manager).

1.3 The Administrator is to mark-up the form contract (See Attachment A) to include any acceptable language changes requested by the supplier, fill-in the necessary information on the first page and complete Schedule C. Schedule B will be added during the processing of the contract.

1.4 The Administrator then completes the contract request form (See Attachment B), attaches it to the marked-up contract and forwards the package to the Manager.

1.5 The contract will be reviewed by the Program Manager, processed by Legal, executed by the Executive Vice President of Operations and forwarded to the supplier for execution.

1.5 An original, executed contract is returned to Operations for filing in Fairfield Legal files. A copy of the contract is retained at the facility for invoicing purposes.

2.0 WASTE STREAM APPROVAL

Each new waste stream entering the facility must receive prior approval in the manner described below and have a completed approval package kept on file at the facility before shipment.

2.1 The following materials are waste streams that will not be accepted at the facility:
- Hazardous wastes
- Paint enamels
- Compounds which would liberate excessive acid gases upon incineration that cannot be controlled with the facility's air pollution control devices
- Waste oils
- Automobile fluff
- Bulk liquids
- Others as determined

Most other materials are acceptable at the facility subject to specific packaging or handling conditions that must be observed as a condition of their acceptance.

2.2 Intermediates from a chemical or manufacturing process will be considered on a case-by-case basis. Due to the potential need for further analytical testing and research, the review process for these waste streams will be longer than for routine supplemental waste requests.

2.3 For each new material a supplier requests to be disposed of, a complete request package must be provided to supply sufficient data for meaningful review and analysis. The following is a description of each component of the request package required from the supplier.

A) Summary Letter - Each request is to be summarized in a letter detailing which OMS facility (of those in the program) is to be utilized, origin of the waste and a descriptive narrative to further characterize the waste stream.

B) Itemized List - If the request contains more than one item, a list of all requested items must also be attached. For items to be delivered in consumer packaging, a list of material names is sufficient. For deliveries not in consumer packaging, each material should be listed along with a sensory (visual and olfactory) description.

C) Material Characterization Form (MCF) - An MCF (See Attachment C) must be completely filled out for each item in a request. Each MCF must be signed by the supplier.

D) Material Support Documents - A supporting document for each item, dependent upon the type of waste stream, must be provided. Some examples of acceptable types of support documents are as follows:

1) Material Safety Data Sheet (MSDS) - An MSDS must be supplied for bulk raw materials and whenever else available.
2) Product Inserts - When the waste stream is a consumer product or pharmaceutical and an MSDS is not legally required, a product insert is to be provided. In some cases, package labels may be substituted for the product inserts. The list of all active and inactive ingredients must be completed in the MCF when product inserts or labels are submitted.
3) Analytical Results - TCLP, reactivity, ignitability, corrosivity flash point, pH, asbestos and other appropriate determinations must be provided on all industrial wastes and any items for which neither an MSDS nor product insert is available.

2.4 All waste request packages described in 2.3 will be sent to the Operations Business Development Representative (Representative) in Fairfield. There, the review process will be initiated. The Representative will review the submittal for completeness. Any incomplete request will be rejected and returned to the supplier.

2.5 The Representative will complete a Supplemental Waste Request Form (See Attachment D) and attach it to the submitted data. The database will be reviewed and any previous experience with the requested waste stream will be noted on the form. Any handling requirements will also be noted on the form. The Representative will reject any hazardous or previously rejected items. Approved requests are then forwarded to the Safety Manager.

2.6 The Safety Manager will review the request for employee health and safety and OSHA compliance issues. For approved requests, any relevant safety precautions or packaging requirements will be noted on the request form, the form signed and forwarded to the Environmental Engineer. For rejected requests, the reason is to be noted on the form, the form signed and returned to the Representative.

2.7 The Environmental Engineer will review the request for permit and regulatory compliance issues. Also, effects on air emissions and ash discharge will be reviewed. For approved requests, any relevant handling, packaging or processing requirements are to be noted on the request form and the form signed. For rejected requests, the reject reason is to be noted on the form and the form signed. The package is then returned to the Representative.

2.8 Requests approved on the corporate level are then forwarded to the Facility Manager. The Manager is to review the request for operational issues, such as pit management, boiler efficiency and grate maintenance. For approved requests, any relevant handling, packaging or processing requirements are to be noted on the request form and the form signed. For rejected requests, the reject reason is to be noted on the form and the form signed. The completed supplemental waste request form is to be faxed to the Representative.

2.9 Upon completed approval, the Representative will attach a cover letter to the approval package and notify the supplier, with a copy of the cover letter sent to the Facility, that the request has been approved and direct the supplier to contact the Facility Administrator to schedule delivery. The notification will include a listing of all acceptance parameters noted on the request form during the review process.

2.10 It is expected that some states will begin requiring review of acceptable waste streams by a state regulatory agency upon the completion of Ogden Martin's review. As these requirements take effect, these procedures will be updated and the affected suppliers notified.

2.11 A copy of all completed paperwork will be maintained in Fairfield. Also, the information of each reviewed item, both approved and rejected, will be entered into the database.

2.12 Whenever a waste stream is rejected, the Representative will attach a cover letter to the rejected approval package, with a copy sent to the facility, that the request has been denied. The cover letter will include an explanation of why the request was denied.

2.13 During the review process, any questions regarding the submitted data or the need for additional information from the supplier, should be directed to the Representative.

3.0 TEST BURNS

3.1 Some waste streams may require a test burn to be performed before final approval can be granted.

3.2 The Environmental Engineer in Fairfield will prepare a test protocol and review it with the Facility Manager.

3.3 The Representative will coordinate the date and time of the test burn with the supplier, facility and environmental department.

3.4 The Environmental Engineer or Environmental Specialist will be responsible for managing the test burn.

3.5 A complete test report is to be forwarded to the Business Representative within five (5) days after the final test results are received. The test results will be added to the approval package.

4.0 SCHEDULING DELIVERIES

4.1 The supplier of supplemental waste will contact the Administrator to schedule delivery. When scheduling the delivery, the supplier must provide the approval number. The Administrator is to ensure that the completed approval package is on file.

4.2 Deliveries are to scheduled when MSW waste deliveries are offpeak and normal traffic is light.

4.3 If the pit level of MSW is so high that proper blending of supplemental waste is unachievable or supplemental waste cannot be securely off-loaded directly into the pit, deliveries are not to be scheduled. Supplemental waste deliveries are to be scheduled and accepted only when the pit is in a manageable condition.

4.4 If the scheduling of supplemental waste deliveries must be suspended for more than a week, the Manager is to be notified immediately so that suppliers can be notified and the deliveries temporarily rerouted to another facility.

4.5 A bill of lading, or equivalent, for each scheduled delivery must be faxed to the facility prior to the delivery date and time. The bill of lading must include the name of the waste supplier, the approval number, a listing of each material in the delivery and the delivery date. A bill of lading supplied by the supplier is acceptable as long as it contains the required information. If the supplier does not provide a bill of lading as a routine matter of business, Ogden Martin's Receiving Document (See Attachment E) is to be utilized.

4.6 The Administrator is to compare the bill of lading to the approval package to verify that all items being shipped have been reviewed and approved. Any discrepancies of the bill of lading with the approval packaged covered in 2.9 are to be resolved by the Administrator with the supplier prior to delivery.

5.0 DELIVERY AND VISUAL INSPECTION

5.1 A schedule of all supplemental waste deliveries is to be prepared by the Administrator and given to the Environmental Specialist, Facility Manager and Shift Supervisors at the beginning of each week. This schedule must include the waste supplier's name, the approval number, the material being delivered, estimated quantity and a description of any acceptance parameters from the approved supplemental waste request form.

5.2 The Shift Supervisors will supply a copy of the schedule to the scale attendants, if applicable, the crane operators and the control room operators. A copy of the weekly schedule must also be posted on the facility's employee information board.

5.3 On a daily basis, scheduled supplemental waste deliveries are to be reviewed during the facility's morning meeting. The bill of lading is to be provided during the meeting. Acceptance parameters are to be reviewed and a delivery inspector designated for each delivery.

5.4 All handling procedures including personal protective equipment requirements are to be reviewed during the morning meeting and this information conveyed to all personnel that will be involved with the delivery. A copy of the approval package must be kept on file at the plant for employee review. Employees desiring additional information regarding the approval process or the nature of the materials may contact their Safety Coordinator, Shift Supervisor or Regional Safety Administrator who will assist them with their questions.

5.5 The Environmental Specialist will have primary responsibility for the quality control during deliveries. If the Specialist is unable to perform the duties of delivery inspection, a Shift Supervisor will be the inspector. However, at least one delivery a week must be inspected by the Specialist.

5.6 After being weighed, the truck is to be directed to an area on the tipping floor away from general traffic flow.

5.7 All deliveries of bulk materials are to be properly labelled. Each container must be labelled with the supplier's name, the material's name and the appropriate insignia, if applicable.

5.8 A representative sample of each delivery must be opened and visually inspected. Consumer packaged items are to be verified against the bill of lading. Bulk materials are to be compared against the item descriptions provided in the approval package. For a heterogeneous load, the

representative sample should include at least one container of each product being delivered. Approximately 5% of the delivered quantity in a homogenous load should be visually inspected.

5.9 Any discrepancies discovered during the visual inspection are to be resolved immediately. The following are the appropriate corrective action to be taken for various discrepancies that may occur:

A) The delivery was improperly loaded onto the vehicle - If the waste has shifted during transportation creating an unsafe situation in unloading (ie, pallets are crushed, material has shifted off the pallets, or packaging containers has been crushed causing a large quantity of waste to be loose, etc.), the supplier is to be contacted immediately by telephone and the safety concerns explained. If the supplier provides labor to unload the material and it passes visual inspection, the material is to be accepted. Otherwise, the delivery is to be rejected. If the supplier cannot be reached, the load is to be rejected.

B) Differences between the bill of lading and the approval package - The Inspector is to verify if the unapproved material is on the truck. If the unapproved items are can be easily segregated from acceptable items, they are to be returned to the vehicle and rejected. Acceptable material is to be offloaded and processed. If the unapproved waste cannot be easily segregated, the entire load is to be rejected.

C) Material not identified on the bill of lading is in the delivery - The Inspector is to compare the unexpected items to the approval package. If the item has been approved, the material may be accepted and processed. If the item has not been approved it is to be rejected. Again, if it can be easily segregated, the acceptable portion of the delivery is to be processed. If not, reject the entire load.

D) Bulk material does not match the visual and olfactory description of the waste - The supplier is to be contacted immediately by telephone and the discrepancy explained. If the supplier provides adequate information to resolve the discrepancy, the material is to be accepted. Otherwise, the waste is to be rejected. If the supplier cannot be reached, the item is to be rejected. Again, if it can be easily segregated, the acceptable portion of the delivery is to be processed. Otherwise, reject the entire load.

E) Delivered material cannot be identified(ie. it is unlabelled or not clearly labelled) - The supplier is to be contacted immediately by telephone and the discrepancy explained. If the supplier provides adequate

information to resolve the discrepancy, the material is to be accepted. Otherwise, the waste is to be rejected. If the supplier cannot be reached, the item is to be rejected. Again, if it can be easily segregated, the acceptable portion of the delivery is to be processed.

F) Hazardous material is identified in the delivery - No material is to be off-loaded from the vehicle. The facility O&M procedures for hazardous deliveries are to be followed.

Whenever there is a discrepancy the Facility Manager and Environmental Specialist are to determine the disposition of the load. If they are unable to agree on the rejection or acceptance of a load, the Facility Manager will be responsible for determining whether an item is processed. If both the Facility Manager and Environmental Specialist are unavailable, the Administrator will be notified.

5.9 Whenever there is a discrepancy, a Discrepancy Report (See Attachment F) will be completed and sent to the Manager within twenty-four (24) hours.

5.11 The discrepancy will be reported to the supplier and applicable notations will be entered into the database.

5.12 When unloading is completed, the Inspector signs a Certificate of Destruction, if applicable, and the truck is directed to the scalehouse and weighed out.

6.0 ANALYTICAL TESTING

NOTE: Random samples of bulk deliveries will be be tested prior to processing to verify the waste stream being delivered. When policies are developed and approved, this section of the procedures will be updated.

7.0 PIT DISPOSAL

7.1 When visual inspection of the load, as described in Section 6.0, has been satisfactorily completed, the truck is to be directed either to an empty bay and unloaded into the pit or transferred to the pit by a front-end loader.

7.2 All material is to be delivered to the pit in a secure fashion to ensure that no material is removed from the pit. Material is not to be unloaded if it cannot be placed in the pit.

7.3 All handling requirements noted on the approval package are to be followed. If nothing is noted, normal operating procedures are to be observed.

7.4 When supplemental waste is processed, the crane operator will make appropriate entries into the log book.

8.0 CONVEYOR FEEDING

8.1 When visual inspection of the load, as described in Section 6.0, has been satisfactorily completed, the truck is to be directed to the conveyor unloading area.

8.2 If possible, material should be directly offloaded from the truck directly to the conveyor system. The Inspector must remain on the tipping floor until all supplemental waste has been loaded onto the conveyor. No waste requiring conveyor feeding is to be unloaded if it cannot be placed onto the conveyor directly.

8.3 All handling requirements noted on the approval package are to be followed. Otherwise, normal operating procedures are to be observed.

8.4 When supplemental waste is processed, the crane operator will make appropriate entries into the log book.

9.0 MANUAL FEED

9.1 When visual inspection of the load, as described in Section 6.0, has been satisfactorily completed, the truck is to be directed to the unloading area nearest the elevator or other access to the feed chutes.

9.2 Material is to be directly offloaded from the truck directly to the elevator. The Inspector must remain on the tipping floor until all supplemental waste has been loaded onto the elevator.

9.3 All handling requirements noted on the approval package are to be followed. Otherwise, normal operating procedures are to be observed.

9.4 When supplemental waste is processed, the crane operator will make appropriate entries into the log book.

10.0 WITNESS BURNS

10.1 Any visitors who are at the facility to witness a secure burn are to follow facility safety requirements.

11.0 OPERATIONAL/ENVIRONMENTAL EXPERIENCES

11.1 When processing supplemental waste any operational experiences or environmental excursions are to be immediately reported by the Environmental Specialist to the Manager. Safety incidents are to be reported to the Safety Manager and accident report filled out by the shift supervisor if necessary. Within twenty four (24) hours after the incident, a completed Supplemental Waste Incident Report (See Attachment G) is to be sent to the Manager, with a copy forwarded to the Corporate Manager of Environmental Compliance.

11.2 The database is to be updated by the Environmental Specialist to include a description of the incident.

11.3 The Manager will review the incident with the Environmental Engineer to determine a status for future processing of the waste stream.

11.4 The Manager will notify the supplier of the final disposition of future waste stream acceptability. The facility will also receive a copy of the notification.

12.0 TRAINING

All employees are to be trained on the supplemental waste program, including the general procedures followed during the approval process. All approval paperwork will be kept on file in the facility and available for employee review upon request.

Employees directly involved in the waste management, including the Crane Operators, Front End Loader Operators, Shift Supervisors and Environmental Specialists must informed of the handling requirements for each load.

Training programs to meet these requirements will be provided by the Safety Manager, Environmental Engineer, site Safety Coordinators, site Environmental Specialists and the Regional Safety Administrators for their specific areas. These training programs are currently being developed.

13.0 MONTHLY REPORTING

13.1 A legible log of monthly supplemental waste activities is to be completed by the Administrator and sent to the Manager during the first week of each month using the Monthly Report Form (See Attachment H). The information must include, the waste supplier's name, the delivery date, the material delivered, the quantity delivered, the invoice amount, and Ogden Martin's revenue on the delivery.

14.0 ACCOUNTS RECEIVABLE

NOTE: The current accounts receivable activities of each facility will be reviewed. Site specific policies will be developed that meet the service agreement and trust indenture requirements for each site while satisfying corporate internal control and cash flow requirements. When these policies are completed, these procedures will be updated.

OGDEN MARTIN SYSTEMS, INC.
SUPPLEMENTAL WASTE PROCEDURES

ATTACHMENT A

SUPPLEMENTAL WASTE DISPOSAL AGREEMENT

This Supplemental Waste Disposal Agreement, as may from time to time be modified (the "Agreement"), is made as of this _____ day of _____, 19__, between Ogden Martin Systems of _____, Inc., a(n) _____ corporation ("OMS"), with offices at 40 Lane Road, Fairfield, NJ 07007-2615 and _____, a(n) _____ [corporation] [partnership] [other] (the "Supplier"), with offices at _____.

OMS operates a solid waste disposal and resource recovery facility (the "Facility") located at _____ (the "Facility Site").

The Supplier has requested and OMS has agreed to permit the Supplier to dispose of Supplemental Acceptable Waste (defined below) at the Facility in accordance with, and subject to, the terms and conditions of this Agreement.

In consideration of the obligations undertaken, and intending to be legally bound, OMS and the Supplier (together, the "Parties") agree as follows:

1. **Definitions.** Each of the capitalized terms used in this Agreement, unless otherwise expressly defined in this Agreement, shall have the meanings set forth in this Section. Such meaning shall apply equally to all forms of such term.

   a) "Hazardous Waste" shall have the meaning set forth in Schedule A.

   b) "Processing Rate" shall mean the then current applicable per short ton rate announced by OMS from time to time for disposal of Supplemental Acceptable Waste at the Facility, the current such rate being that which is set forth in Schedule C.

   c) "Receiving Time" means such hours as OMS designates for a given delivery.

   d) "Supplemental Acceptable Waste" shall have the meaning set forth in Schedule A.

   e) "State" shall mean the state in which the Facility is located.

   f) "Unacceptable Waste" shall have the meaning set forth in Schecule A.

2. **Representations of the Supplier.** The Supplier represents and warrants that:

a) The Supplier is a [corporation] [partnership] [other] in good standing under the laws of _____ and is duly qualified wherever necessary to perform its obligations under this Agreement.

b) The Supplier has the full power, authority and legal right to enter into and perform its obligations under this Agreement, and the execution, delivery and performance of this Agreement by the Supplier (i) has the requisite approval of all governmental bodies, (ii) will not violate any judgment, order, law or regulation applicable to the Supplier or any provisions of the Supplier's charter or by-laws; and, (iii) does not (A) conflict with, (B) constitute a default under or (C) except as specifically created hereby, result in the creation of any lien, charge, encumbrance or security interest upon any assets of the Supplier under any agreement or instrument to which the Supplier is a party or by which the Supplier or its assets may be bound or affected.

c) This Agreement, which has been duly authorized, executed and delivered by the Supplier, constitutes a legal, valid and binding obligation of the Supplier, envorceable in accordance with its terms, except as enforcement may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting the enforcement of creditors' rights generally, or by general equitable principles concerning remedies.

d) There is no litigation or proceeding pending or, to the knowledge of the Supplier, threatened against or affecting the Supplier which (i) challenges the validity of this Agreement, (ii) seeks to enjoin the performance by the Supplier of its obligations under this Agreement or (iii) if adversely determined, would materially adversely affect the financial condition of the Supplier, or the ability of the Supplier to perform its obligations under this Agreement.

3. **Delivery; Acceptance; Testing; Documentation.**

a) The Supplier shall have the right to deliver Supplemental Acceptable Waste to the Facility on a "spot" basis, that is, when Facility capacity is made available to the Supplier by OMS. OMS shall be under no obligation to make such Facility capacity available to the Supplier.

b) The Supplier shall deliver the Supplemental Acceptable Waste in vehicles and containers that comply with applicable law and are reasonably acceptable to OMS.

c) The Supplier shall deliver only Supplemental Acceptable Waste to the Facility. THE PARTIES RECOGNIZE THAT DELIVERY OF UNACCEPTABLE WASTE OR HAZARDOUS WASTE MAY HAVE A MATERIAL ADVERSE EFFECT ON OMS AND THE OPERATION OF THE FACILITY AND AGREE THAT ANY SUCH DELIVERY BY THE SUPPLIER SHALL BE GROUNDS FOR IMMEDIATE TERMINATION OF THIS AGREEMENT BY OMS AND THE BARRING OF ANY FUTURE DELIVERIES OF SUPPLEMENTAL ACCEPTABLE WASTE TO THE FACILITY BY THE SUPPLIER.

d) OMS may test samples drawn from the waste delivered by the Supplier to determine whether it constitutes Unacceptable Waste or Hazardous Waste. The cost of any tests conducted by OMS on such samples shall be borne by the Supplier if the results indicate that such waste contains Unacceptable Waste or Hazardous Waste.

e) Prior to any delivery of Supplemental Acceptable Waste, the Supplier shall present for OMS's review, documentation of the source, composition, packaging and such other characteristics of the Supplemental Acceptable Waste as may from time to time be requested by OMS.

4. <u>Rejection Rights; Unacceptable Waste and Hazardous Waste</u>.

a) OMS will not accept Supplemental Acceptable Waste delivered at hours other than the Receiving Time.

b) OMS in its sole discretion shall have the right to inspect at the Facility the contents of any vehicle and container of the Supplier to determine the presence of Unacceptable Waste or Hazardous Waste, including the right to require the person operating or such vehicle or delivering such container to unload the contents as directed by OMS for inspection or the taking of samples. If any such vehicle or container is found by OMS to contain Unacceptable Waste or Hazardous Waste, OMS may reject all or part of the contents of such vehicle or container. Upon notice from OMS of the discovery of Unacceptable Waste or Hazardous Waste, the Supplier shall be responsible for any Unacceptable Waste or Hazardous Waste delivered by the Supplier to the Facility.

c) The Supplier promptly shall cleanup and remove from the Facility any Unacceptable Waste or Hazardous Waste delivered by the Supplier and shall transport and dispose of such Unacceptable Waste or Hazardous Waste in

accordance with applicable law and any directives of any regulatory agency having jurisdiction.

d) OMS' sole obligations with regard to Unacceptable Waste or Hazardous Waste delivered by the Supplier to the Facility are as follows:

(i) upon discovery by OMS of any such Unacceptable Waste or Hazardous Waste at the Facility, OMS shall notify the Supplier;

(ii) OMS shall take such action as it deems appropriate, consistent with the permits governing the Facility, any directives of any regulatory agency having jurisdiction and applicable law, regarding: (A) the placement of such Unacceptable Waste or Hazardous Waste at a safe location, if any, within the Facility; and (B) removal of such Unacceptable Waste or Hazardous Waste from the Facility at the Supplier's expense, provided that OMS shall not in any event be obligated to transport and dispose of such Unacceptable Waste or Hazardous Waste;

(iii) OMS shall cooperate with the Supplier with regard to the Supplier's obligations promptly to clean-up and remove from the Facility and to dispose of such Unacceptable Waste or Hazardous Waste; and

(iv) OMS shall use ordinary care with regard to such Unacceptable Waste or Hazardous Waste when such Unacceptable Waste or Hazardous Waste is delivered to the Facility.

e) All activities of OMS with respect to such Unacceptable Waste or Hazardous Waste shall be as agent for the Supplier.

f) The Supplier shall reimburse OMS, on demand, for any costs incurred by OMS (i) to the extent provided by the Agreement, (ii) in performing its obligations under the Agreement, or (iii) otherwise resulting from the delivery by the Supplier to the Facility of Unacceptable Waste or Hazardous Waste.

5. **Weighing of Waste Deliveries and Supplier Vehicles.** OMS shall maintain and operate weighing facilities at the Facility, and shall weigh each vehicle of the Supplier before each delivery. All vehicles of the Supplier shall be weighed empty on a periodic basis as directed by OMS.

6. **Identification and Regulation of Suppliers.**

a) For security purposes, the Supplier shall provide all of its personnel who may enter the Facility Site with identification satisfactory to OMS and shall notify OMS of the identity of all such personnel.

b) The Supplier shall perform its obligations so as to not interfere with any facet of normal operations of the Facility. The Supplier shall comply with all applicable rules and regulations from time to time established by OMS concerning use of the Facility and Facility Site, including rules and regulations relating to traffic and parking. The current rules and regulations are attached hereto as Schedule B.

7. **Processing Rate.** The Supplier shall pay OMS the Processing Rate for each short ton of Supplemental Acceptable Waste accepted by OMS at the Facility, as set forth in Schedule C.

8. **Billing.**

a) Not later than 30 days following the end of each calendar month, OMS shall provide the Supplier with a statement setting forth for such calendar month the total number of short tons of Supplemental Acceptable Waste accepted by OMS at the Facility, the Processing Rate, and the amount due and owing for such tons.

b) The Supplier shall pay to OMS the amount due and owing on or before the 30th day following receipt of such statement.

9. **Insurance.**

a) Supplier shall obtain and maintain at its expense the following insurance coverages coverages from insurers who are licensed in the State where the Facility or site of OMS is located and who have a Best's rating of B+ or better: (i) worker's compensation insurance as required by law; (ii) employer's liability insurance having a minimum limit of liability of $1,000,000 per occurrence; (iii) comprehensive general liability primary insurance with a broad form endorsement including personal injury and blanket liability coverage but deleting the employment and contractual exclusions with respect to personal injury liability coverage having a minimum combined single limit of liability of $1,000,000 per occurrence; (iv) comprehensive automobile liability primary insurance applicable to all owned, hired and non-owned vehicles having a minimum combined single limit

of liability of $1,000,000 per occurrence; (v) if applicable, professional indemnity primary insurance having a minimum limit of liability of $2,000,000 per occurrence; (vi) property insurance covering all Supplier's equipment used in connection with this Agreement, other than incidental tools and equipment, having a minimum limit sufficient to replace all such equipment; and (vii) excess (of (ii), (iii) and (iv) above) liability insurance having a minimum limit of liability of $1,000,000 per occurrence.

b) Notwithstanding the minimum limits of coverage stated in subsection (a), the limit of each underlying insurance coverage must be at least as high as is necessary to support the excess liability insurance coverage. No individual insurance coverage shall have a deductible in excess of $10,000 without the prior express written consent of OMS's authorized representative. Each policy obtained pursuant to subsection (a)(ii) through (vii) above shall designate OMS and its affiliates as additional insureds, shall be primary to any insurance coverages maintained by or on behalf of OMS and shall contain a clause or endorsement stating that the waiver of claims set forth in the following sentence shall not affect the right of any insured to recover under such policy. Supplier waives any claim for recovery from OMS for any injury, loss or damage to Supplier arising out of the performance of this Agreement, to the extent compensation for such injury, loss or damage shall have been recovered under any insurance policy. Supplier shall furnish OMS at the time this Agreement is executed with certificates of insurance evidencing the insurance coverages required by subsection (a). Each certificate shall provide that 30 days prior written notice be given to OMS in the event of an expiration or cancellation of, or other material change in, any such coverages. Immediately upon the occurrence of any injury, loss or damage arising out of the performance of this Agreement, written notice shall be given by Supplier to OMS's authorized representative.

10. **Indemnity.** Supplier shall hold harmless and indemnify OMS and its affiliates and the directors, officers, employees, other agents and contractors of any tier of any of them, and OMS's client community(ies) (the "OMS Indemnified Parties") from and against any cost, expense, loss, claim or liability whatsoever, including attorney's fees, and shall defend the OMS Indemnified Parties in any proceeding, including appeals, for injury to any person or loss or damage to any property arising out of: (a) the negligence or wrongful misconduct of Supplier, its directors or partners (as applicable), officers,

employees, other agents or contractors of any tier; (b) the failure by Supplier, its directors or partners (as applicable), officers, employees, other agents or contractors of any tier to comply with applicable law; (c) the performance or nonperformance of the Supplier of this Agreement; or (d) any breach by Supplier of any representation or warranty made in this Agreement. Supplier is not required to hold harmless or indemnify any OMS Indemnified Party for any cost, expense, loss, claim or liability to the extent caused by OMS's negligence or wrongful misconduct.

11. **Survival of Obligations.** Supplier's obligations pursuant to Articles four, ten, twenty-two and twenty-three shall survive expiration or earlier termination of this Agreement until satisfied by Supplier or waived by OMS.

12. **Term.** Unless earlier terminated pursuant to this Agreement, this Agreement shall commence as of the date of this Agreement and continue for a period of [_____].

13. **Termination.** OMS may terminate this Agreement for [convenience or] cause without prejudice to any other rights or remedies OMS may have under the law if any of the following events occur: (a) The Supplier shall (i) suspend or liquidate its business, (ii) become insolvent or subject to a petition in bankruptcy or the appointment of a trustee or receiver, (iii) make an assignment for the benefit of creditors or (iv) fails to perform its obligations under this Agreement; or (b) OMS ceases to operate the Facility.

14. **Effect of Expiration or Termination.** Any obligation for the payment of money, indemnity or otherwise, which shall have arisen from the conduct of the Parties pursuant to this Agreement shall survive expiration or termination of this Agreement and shall remain in full force and effect until satisfied by Supplier or waived by OMS.

15. **Relationship of the Parties; Beneficiaries.** This Agreement reflects an arms-length transaction. Nothing in this Agreement creates a fiduciary, partnership, joint venture or employment or other agency relationship between the Parties. This Agreement is not entered into for the benefit of, nor are any rights granted to, any third party except as specifically provided herein.

16. **Assignment.** This Agreement shall not be assigned by Supplier without the prior express written consent of OMS. A permitted assignment shall neither be effective nor relieve Supplier of its obligations under this Agreement unless this Agreement shall have been assumed by the assignee.

17. **Notices.** Any notices or communications required or permitted under this Agreement shall be in writing and either delivered in person, transmitted by telecopier followed by a mailed confirmation copy or sent by certified or registered mail, return receipt requested, postage prepaid, at the addresses of the Parties set forth above. Changes in the phone numbers through which such telecopies may be transmitted or the addresses to which such notices shall be delivered may be made by written notice given in accordance with this Section.

18. **Waivers.** No provision of this Agreement shall be deemed waived without express written notice of waiver. Failure to demand strict performance in one instance shall not be deemed to waive either Party's right to insist on strict performance in any other instance.

19. **Entire Agreement; Modifications; Schedules.** The provisions of this Agreement (except captions), including the schedules annexed hereto, shall (a) constitute the entire agreement between the Parties, superseding all prior or contemporaneous negotiations, understandings or agreements and (b) not be modified in any respect except by express written agreement executed by the Parties. The Schedules attached hereto are incorporated by reference; provided that in the event of any conflict between the text of this Agreement and such schedules, the text of this Agreement shall govern.

20. **Severability.** If any provision of this Agreement shall be determined to be invalid, illegal or unenforceable, the Parties shall make good faith efforts to modify this Agreement to implement the intent of the Parties embodied in this Agreement. Any resulting modification and the remaining provisions of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

21. **Governing Law.** This Agreement shall be governed by the laws of the state where the Facility is located.

22. **Compliance with Laws.** Supplier shall comply with all applicable laws, rules, regulations, ordinances, permits and requirements of any governmental entity having jurisdiction, including all applicable health and safety, anti-discrimination, affirmative action and minority business opportunity laws, [as more particularly set forth in Schedule D,] and all applicable industry codes, specifications and standards.

23. **Publicity and Property Rights.** Supplier shall not advertise or otherwise use its contact with OMS hereunder in any public disclosure without the prior written consent of OMS. Such disclosure shall include, without limitation, issuing

brochures, listing references, placing advertisements and making any announcement or releasing any information concerning the existence or content of or performance under this Agreement or any facility or site of OMS or any of its affiliates to any third party. Supplier shall not permit any photographing, filming, taping or other audio or visual recording at, or allow any person to enter, the Facility Site unless prior express written consent is obtained from OMS's authorized representative. Supplier shall not use or permit the use of the trade or service names, marks or logos of OMS or any of its affiliates in any manner. This section shall survive the expiration or earlier termination of this Agreement.

24. **Counterparts.** This Agreement may be executed in more than one counterpart, each of which shall be deemed to be an original.

IN WITNESS WHEREOF, the Parties have signed this Agreement as of the date of this Agreement.

OMS

By: _____

Title: _____

Supplier

By: _____

Title: _____

SCHEDULE A

"Supplemental Acceptable Waste" shall mean any waste as may from time to time be acceptable to OMS under this Agreement, excluding however in each case Hazardous Waste and Unacceptable Waste.

"Hazardous Waste" shall mean (1) any material or substance which, by reason of its composition or characteristics, is (a) toxic or hazardous waste or hazardous substance as defined in either the Solid Waste Disposal Act, 42 U.S.C. §§ 6901 et seq., as replaced, amended, expanded or supplemented, the Resource Conservation and Recovery Act, 42 U.S.C. § 6903, as replaced, amended, expanded or supplemented, or any laws of similar purpose or effect, and such policies or regulations thereunder, or in the Massachusetts Solid Waste Management Act, Massachusetts General Laws Chapter 21E, as replaced, amended, expanded or supplemented, or any laws of similar purpose or effect, and any rules, regulations or policies thereunder, or (b) supplemental nuclear or by-products materials within the meaning of the Atomic Energy Act of 1954; (2) other materials which any governmental agency or unit having appropriate jurisdiction shall determine from time to time is harmful, toxic or dangerous, or otherwise ineligible for disposal through the Facility; and (3) any material which would result in Process Residue being Hazardous Waste under (1) or (2) above.

"Unacceptable Waste" shall mean waste such as, but not limited to, any waste or waste volume not permitted under the Facility's then current operating permits, any waste not permitted to be processed at the Facility pursuant to then current applicable law, any waste not required to be processed at the Facility pursuant to the Service Agreement or any waste which OMS, in its sole judgment, deems inappropriate for receipt or processing at the Facility.

SCHEDULE B

OGDEN PROJECTS OF _____ FACILITY RULES AND REGULATIONS

GENERAL

Facility Operations:

Each Supplier shall properly display and comply with state and local rules regarding truck and equipment identification and permitting.

A. Each delivery must be scheduled in advance.

B. All trucks to proceed to the scale house. After weighing in, the scale house operator will direct the truck to the tipping floor. A front end loader will be utilized to maintain a clean tipping floor. Empty trucks will exit the tipping hall as directed by the Facility staff, and proceed directly to the scale area. The truck will then be weighed empty and then exit the facility.

C. During periods of peak deliveries, solid waste vehicles awaiting weigh-in will queue in front of the entrance scales. If the single line of vehicles reaches the point of exceeding the Facility entrance road, a Facility staff member will direct incoming vehicles.

D. Suppliers shall follow standard vehicle safety practices at all times and observe OMS safety regulations.

Weight Tickets:

A. The driver of each truck disposing of waste at the Facility shall be presented with a weight ticket from the scale house attendant. Such tickets shall indicate Supplier's company name, vehicle identification, total weight, tare weight, and tons delivered. Each driver shall sign the weight ticket and retain the appropriate copy for Supplier's receipt for deliveries to the Facility.

B. Trucks arriving at the scale house which do not have appropriate hauler and truck identification may be rejected from the Facility at the discretion of OMS.

C. A Supplier who fails to sign for or receive a weight ticket shall be billed for such delivery as if a weight ticket had been signed and received.

Tipping Area Procedures:

A. Upon exiting the scale, trucks shall enter the enclosed tipping area and position to unload as directed. Upon unloading, the driver shall clean tail gate and rear assembly of his truck before exiting the Facility.

B. Trucks will be directed to a specific area on the tipping floor to unload for examination of waste being delivered. This spot check may result in some materials being rejected or in the discovery of Hazardous Waste.

1. For unacceptable waste which is not Hazardous Waste, the Supplier may be required at the direction of OMS to reload such materials for disposal at another location.

2. For Hazardous Waste as defined by Federal, State and local laws and regulations, Suppliers shall remain at the Facility until appropriate public health and law enforcement officials arrive.

C. Suppliers shall make every effort to unload in an expedient manner to assure even traffic flow through the Facility.

D. After unloading and being released by OMS, the truck shall proceed to the scalehouse and be weighed out.

Emergencies and Damages:

A. Suppliers at the Facility who discover a fire in their trucks (hot loads) shall be diverted to a designated area to unload. OMS employees shall use available equipment to extinguish all fires.

B. In the event of accidents, explosions or Facility damage which impairs the flow of traffic or ability to dispose of acceptable waste at the Facility, Suppliers shall follow directions and procedures from OMS employees in dealing with such events.

C. Any damage to Supplier's trucks or equipment, occurring at the Facility shall be promptly reported to the Facility Manager for appropriate motion.

Rejected Loads:

All unacceptable waste shall be rejected from the Facility if delivery is attempted. Suppliers who have received weight tickets for loads which contain a portion of unacceptable waste shall not receive a credit for such deliveries.

Enforcement and Interpretation:

Any violation of these rules and regulations shall be subject to the enforcement procedures and penalties, including suspension of tipping/processing privileges.

Driver Regulations:

To Apply to all Individuals Transported on any Supplier Vehicle:

1. All containers must be secured as to not allow leakage or spillage.

2. Trucks are not to be left unattended while on the plant site nor off the site if same impedes approach to or exit from plant.

3. All trucks must proceed with care and follow direction issued by appropriate plant staff.

4. Manual unloading will only be permitted in designated areas.

5. Trucks are not to bump or roll into pit guard rails.

6. Drivers should ascertain correct placements of containers before releasing loads.

7. Cigarettes or other sources of combustion are not to be in or around the pit areas or dumpsters.

8. Foul language and inappropriate behavior is not permitted on site (i.e., littering, spitting, swearing, lewd gestures, etc.)

9. No Supplier shall possess, consume, or be under the influence of any illegal or intoxicating substances.

10. 20 MPH speed limit is enforced on all roadways on the plant site.

11. No Supplier will be allowed to bang containers on tipping floor to aid in releasing the load.

Special

Special rules may be imposed for the handling.

SCHEDULE C

The processing rate for Supplemental Waste shall be that rate which is announced by OMS from time to time for disposal of Supplemental Waste at the Facility, except that the rate shall be as follows:

OGDEN MARTIN SYSTEMS, INC.
SUPPLEMENTAL WASTE PROCEDURES

ATTACHMENT B

AUTHORIZATION
CONTRACT/PURCHASE ORDER

FACILITY:

Contract Required
Yes ____
No ____

VENDOR: AMOUNT:

ORDER/CONTRACT NO. COST CODE:

SUMMARY DESCRIPTION AND JUSTIFICATION:

FACILITY MANAGER:_____ **DATE:**_____

FACILITY ADMINISTRATOR:_____ **DATE:**_____

COMMENTS

APPROVALS(*)

TITLE/AREA	SIGNATURE	DATE
Director/ Regional Bus. Administration		
Legal Department		
Chief Financial Officer		
Executive VP Operations		
President		

(*) Subject to current procurement procedures and expenditure levels

REV. 2/20/92
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OGDEN MARTIN SYSTEMS, INC.
SUPPLEMENTAL WASTE PROCEDURES

ATTACHMENT C

OGDEN MARTIN SYSTEMS, INC.
MATERIAL CHARACTERIZATION FORM

GENERAL INFORMATION

1.0 Name and Nature of Material

1.1 (Select One and Supply Name)

Raw Material _____

Intermediate Product _____

Production Waste _____

Finished Product _____

If Finished Product (Check One)

_____ Over The Counter

_____ Prescription

_____ Other

Description Of Other _____

2.0 Reason for Disposal

2.1 (Check One)

_____ Reject

_____ Expired

_____ Defective

Nature Of Defect _____

_____ Other

Description Of Other _____

3.0 Physical Form

3.1 (Check One)

_____ Liquid

_____ Powder

_____ Slurry

_____ Granular

_____ Other

Description of Other _____

4.0 Material Characteristics

4.1 Is It A Known Hazardous Material? (Circle One) Yes / No

4.2 Is The Material Characterized As: (Check All That Apply)

_____ Toxic

_____ Explosive

_____ Corrosive

PACKAGING DETAILS

1.0 Product Packaging

1.1 (Check One)

_____ Consumer Packaged

_____ Bulk Delivery

(Check All That Apply)

_____ Plastic

_____ Paper

_____ Foil

_____ Other

Description Of Other _____

2.0 Shipping Packaging

2.1 (Check One)

_____ Roll-Off Containers

_____ Fiber Drums

_____ Gaylord Boxes

_____ Plastic Buckets

_____ Other

Description Of Other _____

2.2 Volume Per Package

Gallons _____

Cubic Feet _____

Pounds _____

3.0 Delivery Schedule

3.1 Frequency (Check One)

_____ One Time Shipment

_____ Monthly

_____ Quarterly

_____ Bi-Annually

_____ Annually

_____ Other

Description Of Other _____

3.2 Estimated Tons Per Delivery _____

3.3 Estimated Percentage of Delivery Weight That Is Packaging _____

OGDEN MARTIN SYSTEMS, INC.
MATERIAL CHARACTERIZATION FORM

PHYSCIAL CHEMICAL CHARACTERISTICS

1.0 Type of Detail Attached

1.1 (Check All That Apply)

_____ MSDS (Required on raw materials and whenever else available)

_____ Package Inserts (required on finished products if no MSDS)

_____ TCLP Test Results (required on all requests except raw materials and finished products. Entire lab report with with regulatory criteria for all organics and metals.)

_____ Total Metals (required on all requests except raw materials and finished products. Entire lab report with range of concentrations.)

_____ Sample (required on all requests except raw materials and and finished products.)

2.0 General Information

2.1 CAS Number _____

2.2 Boiling Point _____

2.3 Melting Point _____

2.4 Volatile Nature _____

2.5 Particle Size _____

3.0 Chemical Names And Formula

3.1 Active Ingredients

NAME AND FORMULA	PERCENT

3.2 Inactive Ingredients

NAME AND FORMULA	PERCENT

CURRENT DISPOSAL PRACTICE

1.0 Type of Facility Currently Used

1.1 (Check One)

_____ Municipal Landfill

_____ Hazardous Landfill (*)

_____ Nonhazardous Incinerator

_____ Hazardous Incinerator (*)

_____ Other

Description Of Other _____

(*) Why? _____

SAFETY/STORAGE ISSUES

1.0 Worker Safety

1.1 Describe Any Safety Equipment Required During Handling

_____

_____

_____

_____

2.0 Fire Protection

1. Is Material Flammable? (Circle One) Yes / No

1.2 Describe Recommended Fire Fighting Equipment And Techniques

_____

_____

_____

3.0 Other Requirements

3.1 Describe Any Other Handling And Storage Requirements

_____

_____

_____

_____

CERTIFICATION SIGN-OFF

I hereby certify that all information submitted in this and all attached documents contain true and accurate descriptions of this material; and all relevant information regarding known or suspected hazards in the possession of the owner has been disclosed. I further certify that the material is nonhazardous and pose no serious public safety or health threat.

Signature _____ Title _____

Name (print) _____ Date _____

OGDEN MARTIN SYSTEMS, INC.
SUPPLEMENTAL WASTE PROCEDURES

ATTACHMENT D

SUPPLEMENTAL WASTE REQUEST FORM

FACILITY: _____ REQUEST NO: _____
DATE: _____ ESTIMATED FIRST SHIP DATE: _____

TYPE OF WASTE: _____
_____

ESTIMATED ANNUAL QUANTITY (IN TONS): _____
ESTIMATED ANNUAL REVENUE TO OMS (IN K$): _____

WASTE BROKER:
Name: _____
Contact: _____
Address: _____
Telephone: _____

WASTE GENERATOR:
Name: _____
Contact: _____
Address: _____
Telephone: _____

	CONCUR	DO NOT CONCUR	
1. Facility Manager	_____ (Signature)	_____ (Signature)	_____ (Date)
2. Safety Manager	_____ (Signature)	_____ (Signature)	_____ (Date)
3. Env. Specialist	_____ (Signature)	_____ (Signature)	_____ (Date)
4. Corporate	_____ (Signature)	_____ (Signature)	_____ (Date)

Comments: _____

OGDEN MARTIN SYSTEMS, INC.
SUPPLEMENTAL WASTE PROCEDURES

ATTACHMENT E

SUPPLEMENTAL WASTE RECEIVING DOCUMENT

FACILITY NAME: _____

DATE: _____ PAGE ____ OF ____

WASTE SUPPLIER: _____

ITEM NUMBER	MATERIAL DESCRIPTION	QUANTITY
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		

Results of Visual Inspection: _____

_____

_____

Delivery Approved By:

Load Inspector: _____

Truck Driver: _____

OGDEN MARTIN SYSTEMS, INC.
SUPPLEMENTAL WASTE PROCEDURES

ATTACHMENT F

SUPPLEMENTAL WASTE DELIVERY DISCREPANCY REPORT

Date of Delivery: _____

Facility: _____

Waste Supplier: _____

Approval Number(s): _____ Material Name(s): _____

_____ _____

_____ _____

TYPE OF DISCREPANCY (check appropriate box(es))

[ ] Improperly loaded vehicle

[ ] Bill of Lading and approval discrepancy

[ ] Waste delivered not on bill of lading
Was waste on listed on approval package? Yes_____ No _____

[ ] Bulk material did not match description provided

[ ] Unidentified material in the load

[ ] Attempted delivery of hazardous waste

[ ] Attempted delivery of a rejected waste

[ ] Other
Description: _____

_____

_____

Load Resolution (check one)

[ ] Accepted and processed entire load

[ ] Accepted partial load

[ ] Reject entire load

Was the client contacted? Yes _____ No _____

If so, whom? _____

Recommendations/Comments: _____

_____

Reported By:

_____
(signature)

_____
(date)

OGDEN MARTIN SYSTEMS, INC.
SUPPLEMENTAL WASTE PROCEDURES

ATTACHMENT G

SUPPLEMENTAL WASTE INCIDENT REPORT

Date of Incident: _____ Unit Number: _____

Facility: _____ Time: _____

Waste Supplier: _____

Approval Number(s): _____ Material Name(s): _____

_____ _____

_____ _____

TYPE OF INCIDENT (check one)

[ ] Environmental Excursion [ ] Opacity [ ] SO2 [ ] CO
[ ] Other Specify: _____

[ ] Operating/Maintenance Difficulties

[ ] Safety Problem (attach accident report if necessary)

Explanation/Description: _____

_____

_____

_____

Corrective Action Taken: _____

_____

_____

Recommendations/Comments: _____

_____

_____

Reported By:

_____
(signature)

_____
(date)

OGDEN MARTIN SYSTEMS, INC.
SUPPLEMENTAL WASTE PROCEDURES

ATTACHMENT H

SUPPLEMENTAL WASTE DELIVERY REPORT

FACILITY NAME: _____

FOR THE MONTH OF: _____

DELIVERY DATE	ITEM DESCRIPTION	QUANTITY (TONS)	INVOICE AMOUNT	OMS REVENUE

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt Fee will provide you the signature of the person delivered to and the date of delivery.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Jean Roop
PO Box 7
Lady Lake, Fl
32158-0007

4a. Article Number
P 062 921 932

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
12-21-92

5. Signature (Addressee)
Jean Roop

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

PS Form **3811**, November 1990 ☆U.S. GPO: 1991—287-066 **DOMESTIC RETURN RECEIPT**

P 062 921 932

Receipt for Certified Mail
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to Jean Roop	
Street and No. PO Box 7	
P.O. State and ZIP Code Lady Lake, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 12-17-92	
Waste Stream	

PS Form **3800**, June 1991

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

December 17, 1992

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. Jean Roop
Post Office Box 7
Lady Lake, Florida 32158-0007

Dear Ms. Roop:

Thank you for your letter of November 14, expressing additional concerns about the waste stream that is being incinerated at the Ogden Martin Systems of Lake, Inc. facility.

The Department's letter of August 26, provided a description of the waste stream that is permitted to be received and incinerated at the facility, as well as the waste streams that are not permitted to be received and processed at the facility. The Department uses periodic site inspections, annual compliance tests, and an annual operation report to evaluate compliance with the air permits for the facility.

Mr. John Power, Regional Environmental Coordinator with OMSLI, has extended an open invitation to you to visit the facility to see the waste material that is being received and processed. Mr. Power recommended that you call Mr. George Ball-llovera, Plant Manager at the facility, at (904)365-1611, to set up your visits. Mr. Power requested that you call him at (813)684-5688 if you experience difficulty in reaching Mr. Ball-llovera.

We very much appreciate your interest and concern. If we can be of further assistance, please call Mr. Bruce Mitchell at (904)488-1344.

Sincerely,

Howard L. Rhodes
Director
Division of Air Resources Management

HLR/BM/rbm

Enclosures

cc: Hon. Bob Graham, U.S. Senate
C. Fancy, DARM
D. Beason, Esq., DER
J. Ruddell, DWM
A. Alexander, Central District
J. Power, OMSLI

Florida Department of Environmental Regulation

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

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Sincerely,

Howard L. Rhodes
Director
Division of Air Resources Management

HLR/BM/rbm

Enclosures

cc: Hon. Bob Graham, U.S. Senate
C. Fancy, DARM
D. Beason, Esq., DER
J. Ruddell, DWM
A. Alexander, Central District
J. Power, OMSLI

November 14, 1992

Ms. Carol M. Browner
Secretary, Florida Dept of
Environmental Regulation
Twin Towers Office Bldg.
2600 Blair Stone Rd
Tallahassee, FL 32399-2400

Dear Ms. Browner:

Thank you for your letter of Augst 26 and all the information on mercury emissions and their effect on environment and ecosystems. We in this neighborhood found it interesting and informative but it still did not answer thequestion, if as your letter indicates the pollution is the fault of residents and their discarded batteries, why Ogden Martin refuses to say what they are burning.

Sincerely,

Jean Roop

cc: Senator Bob Graham

K-File

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor Carol M. Browner, Secretary

August 26, 1992

Ms. Jean Roop
Post Office Box 7
Lady Lake, Florida 32158-0007

Dear Ms. Roop:

Senator Bob Graham asked me to respond to your July 1 letter, in which you expressed concern about the mercury emissions and their effect on the environment and our ecosystems.

Mercury is a very hazardous and toxic pollutant which has received much attention in the past few years by the various regulatory and health organizations. Investigations are ongoing to trace various sources of mercury and how we can prevent further mercury deposition into the environment.

Fossil fuels contain various amounts of mercury, and coal contains the most. In the case of the Lake County facility, it is not permitted to use coal and only uses fuel oil and natural gas for a very limited time for startup, shutdown and malfunctions. If the incinerator proves to be the source of the mercury pollution alleged to have been found in Spanish moss near the facility, the mercury is not coming from the fuel, but from mercury-containing products, such as flashlight batteries and thermometers, that are burned in the incinerator. These types of mercury-containing products are being delivered to the facility through the waste stream.

Precautions taken by the facility's management, such as posting an entrance sign of acceptable and prohibited wastes, along with the screening of deliveries (1 out of 5 deliveries is dumped and checked for compliance prior to processing), have been taken to ensure compliance with the permits and the facility-county agreement [see enclosures]. All wastes brought to the facility must pass through the entrance dock, which is operated by Lake County. The Department's Central District compliance personnel make periodic site inspections for compliance verification.

Even with these procedures in place, however, the best way to prevent potential discharges of undesirable pollutant emissions, such as mercury, is to make sure that mercury-containing products do not get into the waste stream prior to collection and are properly recycled. Because the majority of the facility's waste

stream comes from residential collections, each citizen should take the responsibility to assure that they are doing their part to ensure that prohibited wastes are not being discarded into the garbage that is collected and delivered to the Lake County facility.

The Department is continually evaluating control technologies to reduce or eliminate various pollutant emissions, including mercury. There has been some promising progress observed with the injection of activated carbon into the flue gas stream to remove mercury emissions from municipal waste combustors. This facility does not currently employ this technology, but it may be a viable option that can be evaluated for the future.

In case you would like information regarding the ongoing studies of mercury currently being conducted in the State of Florida, please contact Dr. Tom Atkeson at (904)487-0472, or write to him at the letterhead address. The person that can provide information regarding any future hazardous waste collections in your area is Mrs. Jan Kleman at (904)488-0300, who can also be reached at the letterhead address. In addition, two Department documents on the hazardous waste collection program are enclosed.

We very much appreciate your interest and concern. If we can be of further assistance, please call the above referenced persons regarding their areas of expertise, or Mr. Clair Fancy, Chief, Bureau of Air Regulation at (904)488-1344.

Sincerely,

Carol M. Browner
Secretary

CMB/rbm

Enclosures

cc: Hon. Bob Graham, U.S. Senate
H. Rhodes, DARM
J. Ruddell, DWM
C. Fancy, DARM
A. Alexander, Central District
D. Beason, OGC

November 14, 1992

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Secretary, Florida Dept of
Environmental Regulation
Twin Towers Office Bldg.
2600 Blair Stone Rd
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Sincerely,

Jean Roop

cc: Senator Bob Graham

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

September 2, 1992

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Dr. Gary K. Crane, Ph.D.
Executive Vice President
Ogden Martin Systems of Lake, Inc.
40 Lane Road
Fairfield, New Jersey 07007-2615

Dear Dr. Crane:

Re: Request to Construct a Biohazardous Waste Conveyor System for Unit No. 2 at the Lake County Waste-To-Energy Facility
AC 35-115379 (PSD-FL-113)

The Department has reviewed Mr. John Power's August 3, 1992, letter requesting authorization to construct a biohazardous waste conveyor system to deliver biohazardous waste to Unit No. 2. On December 12, 1990, Units Nos. 1 and 2 were permitted to process biohazardous waste through a modification to construction permit No. AC 35-115379 (PSD-FL-113). Since the biohazardous waste must be containerized, the conveyor is not considered a source of air pollutant emissions, pursuant to Florida Administrative Code Chapter 17-2, and an air construction permit is not required. Once the conveyor system is constructed, Unit No. 2 shall be tested for compliance with the allowable air emissions.

The Department was asked to clarify the term "entire facility", which was used in the Department's notice of Permit Issuance dated July 1, 1992. Facility is defined in Florida Administrative Code Rule 17-2.100(84), as all stationary sources which are located on one or more adjacent properties and which are under control of the same person (or persons under common control). Therefore, the term "entire facility" would refer to both Units Nos. 1 and 2.

In order to achieve some operational flexibility, Ogden Martin requested to be allowed to process a maximum total of 1.12 tons/hr of biohazardous waste between both units. The Department finds this acceptable. Therefore, Unit No. 2 shall be tested for compliance with the allowable air emissions while processing 1.12 tons/hr of biohazardous waste via the conveyor system; and, both Units Nos. 1 and 2 are operating at their maximum capacity of

municipal waste. If the results are satisfactory, the facility will be permitted to process a maximum total of 1.12 tons/hr (26.88 tons/day) of biohazardous waste between both units. If the permittee desires to increase the combined maximum total throughput of biohazardous waste above 1.12 tons/hr, then a permit modification shall be required. A permit modification will require, at a minimum, the submittal of a complete application package and appropriate processing fee; and, public notice of the Department's Intent will be required.

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

Sincerely,

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/BM/rbm

Attachment

cc: C. Collins, CD
D. Beason, Esq., DER
J. Harper, EPA
B. Mitchell, NPS
J. Power, OMSLI

K-File

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

August 26, 1992

Ms. Jean Roop
Post Office Box 7
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Mercury is a very hazardous and toxic pollutant which has received much attention in the past few years by the various regulatory and health organizations. Investigations are ongoing to trace various sources of mercury and how we can prevent further mercury deposition into the environment.

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Sincerely,

Carol M. Browner
Secretary

CMB/rbm

Enclosures

cc: Hon. Bob Graham, U.S. Senate
H. Rhodes, DARM
J. Ruddell, DWM
C. Fancy, DARM
A. Alexander, Central District
D. Beason, OGC

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: Jan Rae Clark, Division of Waste Management, BS&HW

FROM: Bruce Mitchell, DARM/BAR

DATE: August 19, 1992

SUBJ: Cancellation of Request to Conduct Performance Tests While Firing Tires in the Ogden Martin System, Inc.'s Okahumpka Waste-To-Energy Facility Located in Lake County

Based on recent discussions with Jan Rae Clark, the proposed performance tests at the above referenced facility have been canceled due to funding problems. If there are any questions, please call Jan Rae or me at (904)922-6104 or (904)488-1344, respectively.

cc: C. Collins, Central District
P. Lewis, DARM/BAR
D. Beason, Esq., DER/OGC
T. LeDew, DWM/BS&HW
Reading File 8-19-92

File Copy

OGDEN MARTIN SYSTEMS
OF LAKE, INC.

3830 ROGERS INDUSTRIAL PK. RD.
P.O. BOX 189
OKAHUMPKA, FL 34762
(904) 365-1611
FAX: (904) 365-6359

AN OGDEN PROJECTS COMPANY

RECEIVED
AUG 3 1992 p.m.
Bureau of
Air Regulation

July 30, 1992

Mr. Clair Fancy
Bureau Chief
Florida Department of Environmental Regulation (FDER)
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee FL 32399-2400

Dear Mr. Fancy,

Per your staffs direction during our meeting of July 15, 1992 I am writing in response to the four (4) issues of concern. Your staff asked for further details and clarification on the following issues:

1. Charging rate of this material into our boilers at Lake County, and waste stream origination and tonnages.
2. Material Safety Data Sheets (MSDS) on the potting media.
3. Effect on the air testing of Benlate 50DF.

Issue #1
The aggregate charging rate of the material (vegetation treated by the Benlate 50DF) into our boilers through the months of October 1991 to June 1992 is shown in Attachment 1, and the tonnage received is itemized where the materials were received. The charging rate average is based on the amount of vegetation received throughout the period and divided by the boiler availability of both units. Also attached are Ogden Martin Systems standard procedures for mixing and blending materials in the refuse pit.

Issue #2
The MSDS for the bulking agent used in the potting media remaining on the roots of the dead vegetation is also attached. The substances used as a bulking agent were Vermiculite and Perlite. Although Perlite was mentioned, it has not been produced for the past two years according to Gary Carl of E.F. Houghton & Co. which manufactured the majority of this material in the past. Mr. Carl's name was provided by CHEMTREC who supplies hazardous material information for the Department of Transportation. Thus, the MSDS for vermiculite is the only sheet attached for this purpose.

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

2676538362

AIRBILL PACKAGE TRACKING NUMBER 2676538

Date 7/31/92

RECIPIENT'S COPY

From (Your Name) Please Print	Your Phone Number (Very Important)	To (Recipient's Name) Please Print	Recipient's Phone Number (Very Important)
J. POWER	(813)884-5686	MR. CLAIR FANCY	( )
Company	**Department/Floor No.**	**Company**	**Department/Floor No.**
EGDEN MARTIN SYSTEMS INC		BUREAU CHIEF, FLA-DER	
Street Address		**Exact Street Address** (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.)	
250 PALMERURG RD 3RD FL		2600 BLAIR STONE ROAD	
City / **State** / **ZIP Required**		**City** / **State** / **ZIP Required**	
TAMPA FL 33619		TALLAHASSEE FL 32399	

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.)
1025

IF HOLD FOR PICK-UP, Print FEDEX Address Here
Street Address
City / State / ZIP Required

PAYMENT 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No. 3 [ ] Bill 3rd Party FedEx Acct. No. 4 [ ] Bill Credit Card 5 [ ] Cash/Check

RECEIVED
AUG 0 3 1992
Division of Air Resources Management

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†)	Standard Overnight (Delivery by next business afternoon. No Saturday delivery†)
11 [ ] YOUR PACKAGING	51 [ ] YOUR PACKAGING
16 [X] FEDEX LETTER*	56 [ ] FEDEX LETTER*
12 [ ] FEDEX PAK*	52 [ ] FEDEX PAK*
13 [ ] FEDEX BOX	53 [ ] FEDEX BOX
14 [ ] FEDEX TUBE	54 [ ] FEDEX TUBE
Economy Two-Day (Delivery by second business day †)	**Government Overnight** (Restricted for authorized users only)
30 [ ] ECONOMY	46 [ ] GOVT LETTER
	41 [ ] GOVT PACKAGE

Freight Service (for packages over 150 lbs.)
70 [ ] OVERNIGHT FREIGHT** (Confirmed reservation required) 80 [ ] TWO-DAY FREIGHT**

†Delivery commitment may be later in some areas. *Declared Value Limit $500. **Call for delivery schedule.

5 DELIVERY AND SPECIAL HANDLING (Check services required)

1 [ ] HOLD FOR PICK-UP (Fill in Box H)
2 [X] DELIVER WEEKDAY
3 [ ] DELIVER SATURDAY (Extra charge) (Not available to all locations)
4 [ ] DANGEROUS GOODS (Extra charge)
5 [ ]
6 [ ] DRY ICE
7 [ ] OTHER SPECIAL SERVICE
8 [ ]
9 [ ] SATURDAY PICK-UP (Extra charge)
10 [ ]
12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

AUG 03 1992
Division of Air Resources Management

PACKAGES	WEIGHT (Pounds Only)	YOUR DECLARED VALUE
Total	Total	

DIM SHIPMENT (Chargeable Weight)
[ ] _____ lbs.
L x W x H

Received At
1 [ ] Regular Stop 3 [ ] Drop Box
2 [ ] On-Call Stop 4 [ ] B.S.C. 5 [ ] Station

6

Emp. No.	Date
[ ] Cash Received	
[ ] Return Shipment [ ] Third Party [ ] Chg. To Del. [ ] Chg. To Hold	
Street Address: Air	
City / State / Zip	
Received By: X	
Date/Time Received	FedEx Employee Number

7 Release Signature:

Federal Express Use
Base Charges
Declared Value Charge
Other 1
Other 2
Total Charges

REVISION DATE 2/92
PART #137204 FXEM 6/92
FORMAT #126
126

The MSDS is a result of DuPont's testing of the vegetation and traces of asbestiform found in the potting media (reference our July 8, 1992 letter). These tests raised concerns as to the traces of a natural occurring mineral that contains tremolite, a form of asbestos, in the ore body. Grace's mining, milling and expanding processes include systems which reduce asbestos content of the vermiculite to the lowest feasible levels. These processes reduce the respirable tremolite fiber content in the vermiculite to a level of .005% (50 parts per million) by weight or less. Once added to the soilless mix this level is reduced even more. As mentioned in that meeting by Mr. Pennington, the limits found in DuPont's test were well below the threshold at which DER regulates. Attachment 2 contains OSHA Standards regarding this form of asbestos.

Issue #3
The effects that burning Benlate 50DF would have on our stack emissions, if any, was also an area of interest to the FDER. Attachment 3 are copies of reports of two stack tests performed at our facility. Of the two stack tests attached, the first was performed during a period the facility was not receiving the vegetation material. The second test performed was during the months the material was being processed.

The results of the stack test were very similar, thus showing the vegetation had no negligible impact.

If I can be of further assistance, please contact me at (813) 684-5688.

Sincerely,

John P. Power
Regional Environmental Coordinator

Attachments

cc: P. Lewis / CHF
J. Pennington
B. Mitchell
C. Collins

8-4-92 RAM

fancy.ltr

ATTACHMENT 1

TONS OF NURSERY WASTE DELIVERED TO THE FACILITY.

LAKE COUNTY	3,287	
OUT OF COUNTY	2,410	POLK, ORANGE, DUVAL
TOTAL	5,697	TONS

FIRST DELIVERY IN OCTOBER 1991
LAST DELIVERY JUNE 1992 DISCONTINUED THE DAY NOTICE WAS RECEIVED

DURING THE 274 DAYS OF PROCESSING THIS MATERIAL BASED ON A 24 HOUR DAY,USING BOTH UNITS THE AVERAGE WAS ESTIMATED TO BE 866.33 LBS. OR .05% OF THE DAILY THROUGH PUT.

DURING THE MONTH OF JANUARY 1992 THERE WAS AN ANNUAL STACK TEST PERFORMED,WHICH CAN BE COMPARED TO THE ONE DATED FEBRUARY 1991, WHEN THE MATERIAL IN QUESTIONED WAS NOT BEING RECEIVED AT THE LAKE COUNTY RESOURCE RECOVERY.

THIS INFORMATION CAN BE VERIFIED BY COUNTY SCALEHOUSE TICKETS.

OGDEN MARTIN SYSTEMS OF LAKE

STANDING OPERATIONS ORDER NUMBER 2

REFUSE PIT MANAGEMENT

DATE: 6-20-90

DAY SHIFT

A. BACK STACK OR STACK TO ENDS AS REQUIRED TO KEEP A TRENCH IN THE MIDDLE BAY AS DEEP AS POSSIBLE.

B. DO NOT FEED THE HOPPERS FROM THE TRENCH. FEEDING FROM THE TRENCH, EVEN IF IT IS DAY, DOES NOT ALLOW FOR PROPER FUEL MIXTURE, NOR DOES IT GIVE THE OPERATOR THE OPPORTUNITY TO SEE LARGE, UNWANTED OBJECTS THAT MAY PLUG THE FEED CHUTE OR THE ASH DISCHARGER.

C. FEED FROM THE BACK WALL OR FROM FUEL LEFT OVER FROM THE PREVIOUS DAY.

NIGHT SHIFT

A. TRENCH THE BAYS DOWN AS FAR AS POSSIBLE. ALSO FEED FROM THE BACK WALL AS MUCH AS POSSIBLE TO BRING LEVEL DOWN BELOW TIPPING FLOOR LEVEL. TRY TO MAINTAIN PIT AS LEVEL AS POSSIBLE. ALWAYS SEARCH FOR LARGE AND UNWANTED OBJECTS.

WEEKEND

A. FRIDAY AFTER THE TRUCKS HAVE FINISHED, START DIGGING ONE SECTION OF THE PIT TO THE FLOOR.

B. FIRST WEEKEND-WEST END
SECOND WEEKEND-MIDDLE-SECTION
THIRD WEEKEND-EAST END

C. RECORD IN CRANE LOGBOOK WHICH SECTION WAS DUG.

George Ball-llovera
Plant Superintendent

ATTACHMENT 2

NO. 21568

MATERIAL SAFETY DATA SHEET

MSDS DATE: 7/16/90
CHANGE NO.: 6617

For Assistance, Contact:
Regulatory Affairs Dept.
PO Box 907 Ames, IA 50010
(800) 227-4224

HACH COMPANY
PO BOX 907
AMES, IA 50010

Emergency Telephone #
Rocky Mountain Poison Ctr.
(303) 623-5716

I. PRODUCT IDENTIFICATION

PRODUCT NAME: Vermiculite
CAS NO.: 1318-00-9
CHEMICAL NAME: Hydrated Magnesium-aluminum-iron Silicate
FORMULA: Not applicable CHEMICAL FAMILY: Not applicable

II. INGREDIENTS

Vermiculite
PCT: 100 CAS NO.: 1318-00-9 SARA: NOT LISTED
TLV: 10 mg/M3 PEL: 10 mg/M3
HAZARD: May cause irritation; nuisance dust

III. PHYSICAL DATA

STATE: solid APPEARANCE: Brown particles ODOR: None
SOLUBILITY IN: WATER: Insoluble ACID: Soluble conc. H2SO4
OTHER: Not determined BOILING POINT: NA MELTING PT.: NA
SPEC GRAVITY: NA pH: Not applicable VAPOR PRESSURE: Not applicable
VAPOR DENSITY (air=1): NA EVAPORATION RATE: NA
METAL CORROSIVITY - ALUMINUM: None STEEL: None STABILITY: Stable
STORAGE PRECAUTIONS: Store tightly closed in a dry place.

IV. FIRE, EXPLOSION HAZARD AND REACTIVITY DATA

FLASH PT.: Not applicable METHOD: NA
FLAMMABILITY LIMITS - LOWER: NA UPPER: NA
SUSCEPTIBILITY TO SPONTANEOUS HEATING: None
SHOCK SENSITIVITY: Not applicable AUTOIGNITION PT.: NA
EXTINGUISHING MEDIA: Not applicable
FIRE/EXPLOSION HAZARDS: None
HAZARDOUS DECOMP. PRODUCTS: Not determined
OXIDIZER: No NFPA Codes: Health: 0 Flammability: 0 Reactivity: 0
CONDITIONS TO AVOID: Agitation of open containers (creates dust)

V. HEALTH HAZARD DATA

THIS PRODUCT MAY BE: Irritating to eyes, skin and respiratory tract.
ACUTE TOXICITY: Practically non-toxic
ROUTES OF EXPOSURE: Not applicable
TARGET ORGANS: Not applicable
CHRONIC TOXICITY: Practically non-toxic
ROUTES OF EXPOSURE: Not applicable
TARGET ORGANS: Not applicable
CANCER INFORMATION: Not applicable
ROUTES OF EXPOSURE: Not applicable
TARGET ORGANS: Not applicable
OVEREXPOSURE: May cause irritation to eyes, skin, respiratory tract.
Classifiable as a nuisance dust: may cause reversible lung changes.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Respiratory problems

VI. PRECAUTIONARY MEASURES

Wash thoroughly after handling.
Avoid contact with eyes.
Do not breathe chemicals.
PROTECTIVE EQUIPMENT: adequate ventilation

VII. FIRST AID

EYE AND SKIN CONTACT: Immediately flush eyes with water for 15 minutes. Call physician. Flush skin with plenty of water.
INGESTION: Do not induce vomiting. Call physician immediately.
INHALATION: Remove to fresh air.

VIII. SPILL AND DISPOSAL PROCEDURES

IN CASE OF SPILL OR RELEASE: Put in a plastic bag and dispose of in a trash can.
DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

IX. TRANSPORTATION DATA

D.O.T. PROPER SHIPPING NAME: Not Currently Regulated
HAZARD CLASS: Not applicable ID: NA

I.C.A.O. PROPER SHIPPING NAME: Not Currently Regulated
HAZARD CLASS: NA ID: NA GROUP: NA

I.M.O. PROPER SHIPPING NAME: Not Currently Regulated
HAZARD CLASS: NA ID: NA -GROUP: NA

X. REFERENCES

1) TLV's Threshold Limit Values and Biological Exposure Indices for 1988-1989. American Conference of Governmental Industrial Hygienists, 1988.
2) Air Contaminants, Federal Register, Vol. 54, No. 12, Thursday, January 19, 1989. pp. 2332-2983.
3) The Merck Index, 10th Ed. Rahway, New Jersey: Merck and Co., Inc., 1983
4) Gessner G. Hawley, revised by, The Condensed Chemical Dictionary, Eleventh Ed., New York: Van Nostrand Reinhold Co., 1987
5) Vendor information.
6) Technical judgment
7) Sax, N. Irving. Dangerous Properties of Industrial Materials, 6th Ed. New York: Van Nostrand Reinhold Co. 1984.

Methylene Chloride

OSHA REOPENS RULEMAKING REC SETS HEARINGS FOR SEPTEMBER,

The rulemaking record for the Occupational Safety and Health Administration's proposed rule controlling exposure to methylene chloride was reopened by OSHA in a June 9 *Federal Register* notice (57 FR 24438).

At the same time, the agency announced public hearings scheduled for Sept. 16 in Washington, D.C., and Oct. 14 in San Francisco.

OSHA said the proposed rule published in November 1991 raised a number of serious questions during the original five-month comment period that closed April 6. The agency said it would accept further comments on the proposal through Aug. 24.

OSHA's notice reopening the comment period and establishing the hearing dates is published in the Full Text section of this issue.

OSHA said it also expects to receive comments from the agency's Advisory Committee on Construction Safety and Health, which in May met for the first time since the proposal was published (21 OSHR 1694). The advisory committee formed a working group on methylene chloride, and OSHA said the panel expects to make formal recommendations at its next meeting in late July.

In the hearing notice, OSHA restated and elicited testimony on a number of questions that were raised in the proposal. Among the issues addressed are the use of pharmacokinetic data in estimating risk from methylene chloride exposure, interpretation of the epidemiologic data, engineering control technology and work practices in degreasing operations, and substitution of other products for methylene chloride.

OSHA is proposing to reduce the permissible exposure limit for methylene chloride from 500 parts methylene chloride per million parts air to 25 ppm and establish an action level of 12.5 ppm, a short-term limit of 125 ppm, and other protective measures. The agency estimates the standard will cover 186,000 workers.

The public hearings are scheduled to begin at 9:30 a.m. Sept. 16 in the auditorium, Frances Perkins Department of Labor Building, 200 Constitution Ave. N.W., Washington, D.C. 20210, and at 9:30 a.m. Oct. 14 in the Coit Room, Holiday Inn, Financial District, 750 Kearny St., San Francisco, Calif. 94108.

Persons who wish to appear at the hearings must send quadruplicate notices of intention to appear, postmarked by Aug. 24, to Tom Hall, OSHA Division of Consumer Affairs, Docket H-71, Room N-3647, U.S. Department of Labor, 200 Constitution Ave. N.W., Washington, D.C., 20210; (202) 523-8615. Notices may be transmitted by facsimile machine to (202) 523-6986, provided the original and three copies are sent to the above address. For further information on the hearings, contact Hall.

Testimony and documentary evidence must be submitted to OSHA's Division of Consumer Affairs and be postmarked by Aug. 24 for the Washington, D.C., hearing and by Sept. 22 for the San Francisco hearing.

Written comments on OSHA's proposed rule must be postmarked by Aug. 24 and sent in quadruplicate to the Docket Officer, Docket H-71, Room N-2625, at the above Department of Labor address; (202) 523-7894. Comments of 10 or fewer pages may be sent by facsimile machine to (202) 523-6046.

ed rule, contact
n N-3647, at the
)23-8151.

Asbestos

OSHA REMOVES NON-ASBESTIFORM MINERALS FROM STANDARDS, TO REGULATE AS PARTICULATES

Non-asbestiform varieties of tremolite, anthophyllite, and actinolite are no longer regulated under the Occupational Safety and Health Administration's asbestos standards, but will be handled as particulates, OSHA said in a June 8 *Federal Register* announcement (57 FR 24310).

OSHA said it took that action because substantial evidence is lacking to conclude that the non-asbestiform minerals pose the same type or magnitude of health threat as asbestos.

OSHA's move is effective retroactively to May 29, the agency said. The agency will regulate the non-asbestiform minerals as particulates not otherwise regulated—part of its air contaminants standard in Table Z-1-A at 29 CFR 1910.1000 (Reference File, 31:8105).

OSHA's notice establishing the final rule for non-asbestiform minerals is published in the Full Text section of this issue.

The particulates standard carries a permissible exposure limit of 15 milligrams per cubic meter of air (total dust) and 5 mg/m³ (respirable dust). That is a less stringent exposure limit than the one contained in OSHA's asbestos standards, and the particulates standard does not require a number of other protective measures mandated by the comprehensive asbestos rules.

Responding to OSHA's decision, John Moran, safety and health director for the Laborers National Health & Safety Fund, told BNA June 9 that his organization was "shocked" at the agency's move. Asked if labor organizations would challenge the decision, Moran said the Laborers were considering their options.

Safety and health officers for the building and construction trades are scheduled to meet June 18, and the deregulation of non-asbestiform minerals likely will be a topic for discussion, he said.

The non-asbestiform minerals had been included in the 1986 revisions to OSHA's asbestos standards initially promulgated in 1972. But after a challenge by R.T. Vanderbilt Co., which mines and mills talc containing the minerals, OSHA stayed asbestos provisions concerning the non-asbestiform minerals.

While it reviewed the matter, OSHA regulated the minerals under the less stringent 1972 asbestos regulations. OSHA's action removes the stay of the 1986 asbestos standards and places the minerals under the category of particulates.

The Labor Department touted the action on non-asbestiform minerals as a major cost-savings to the economy in a recent report to President Bush on its regulatory moratorium and review of pending rulemakings (22 OSHR 5). The department estimates the move would save $73.6 million annually and affect approximately 600,000 workers in the construction, paint, tile, and pottery industries.

For further information, contact James F. Foster, Director of Information and Consumer Affairs, Occupational Safety and Health Administration, U.S. Department of Labor, Room N-3649, 200 Constitution Ave. N.W., Washington, D.C. 20210; (202) 523-8151.

ATTACHMENT 3

OGDEN MARTIN SYSTEMS, INC.

LANE ROAD
CN 2015
FAIRFIELD, NEW JERSEY 07007-2615
(201) 882-9000

AN OGDEN COMPANY

Environmental Engineering Department

VOLUME I

EXECUTIVE SUMMARY

ENVIRONMENTAL TEST REPORT

PREPARED FOR:	Ogden Martin Systems of Lake, Inc. 3830 Rogers Industrial Park P. O. Box 189 Opahumpka, Florida 34762
REGARDING:	Municipal Solid Waste-to-Energy Facility
PURPOSE:	To Demonstrate Compliance with Florida Department of Environmental Regulation, Permit No. AC 35-115379
TEST DATES:	January 15 - 16, 1991

PREPARED BY:

Todd B. Westersund,
Senior Environmental Engineer

G. J. Aldina, Assistant Vice President,
Environmental Testing

February 22, 1991
OPI Report No. 326

1.0 INTRODUCTION

Ogden Martin System of Lake, Inc, (OMSL) performed compliance emission tests at the Lake County Resource Recovery Facility from January 15 through 16, 1991. The purpose of this test program was to demonstrate compliance with the Florida Department of Environmental Regulation (FDER), Permit No. AC 35-115379, Specific Condition 4. The testing was performed by Entropy Environmentalists, Inc. (Entropy) in accordance with all procedures in the FDER approved test protocol. The FDER test observer, Mr. Gary Kuberski, witnessed the testing.

The OMSL municipal solid waste combustion facility is located in Okahumpka, FL. The facility is rated at 528 tons of municipal solid waste per day. Units 1 and 2 were tested for pollutant emissions at the outlet of the spray dryer absorber/fabric filter baghouse. Acid gas emissions were tested at the inlet and outlet of the air pollution control equipment.

A summary of emission test results for the facility is presented in Section 2.0, Table 2.1. The Entropy report (Volume 2) includes all data gathered at the site and all laboratory analytical data.

The test program, as indicated in the Source Test Plan (OPI Report No. 308), is presented in Section 3.0, Table 3.2. There were no modifications to the Source Test Plan. Test observers and participants are presented in Table 3.1. The Schedule of Activities is presented in Table 3.3.

2.0 SUMMARY OF RESULTS

TABLE 2.1

SUMMARY OF SOURCE TEST RESULTS - UNIT 1

Pollutant	----Run Number---- 1	2	3	Average	Permitted Compliance Emission Limits
SDA INLET					
Conc., ppm_{dv} @ 7% O_2					
Hydrogen Chloride	556	534	513	534	---
Conc., ppm_{dv} @ 12% CO_2					
Sulfur Dioxide	86.8	108	83.1	92.7	---
STACK					
Conc., ppm_{dv} @ 7% O_2					
Carbon Monoxide	13.0	15.8	18.3	15.7	100
Hydrogen Chloride	25.3	47.8	38.4	37.2	50
Conc., ppm_{dv} @ 12% CO_2					
Nitrogen Oxides	319	303	318	313	385
Sulfur Dioxide	32.8	29.6	32.9	31.7	60
Volatile Organic Compounds	1.3	0.9	0.4	0.9	70
Conc., gr/DSCF @ 7% O_2					
Particulate	0.0012	0.0001	0.0005	0.0006	0.02
Conc., gr/DSCF @ 12% CO_2					
Particulate	0.0013	0.0001	0.0005	0.0006	0.015
Fluoride	1.60E-05	1.55E-05	1.32E-05	1.49E-05	1.5E-03
Beryllium	ND[1]	ND	ND	ND	ND
Lead	ND	ND	2.90E-06	9.67E-07	3.1E-04
Mercury	2.40E-04	2.09E-04	2.03E-04	2.17E-04	3.4E-04
Opacity, %					
Visible Emissions	0	0	0	0	15

[1]ND = Not Detected, used as zero (0)

TABLE 2.2

SUMMARY OF SOURCE TEST RESULTS - UNIT 2

Pollutant	-----Run Number---- 1	2	3	Average	Permitted Compliance Emission Limits
SDA INLET					
Conc., ppm_{dv} @ 7% O_2					
Hydrogen Chloride	628	526	471	542	---
Conc., ppm_{dv} @ 12% CO_2					
Sulfur Dioxide	58.0	73.6	62.9	64.8	---
STACK					
Conc., ppm_{dv} @ 7% O_2					
Carbon Monoxide	24.8	23.4	18.6	22.3	100
Hydrogen Chloride	28.1	32.3	32.2	30.9	50
Conc., ppm_{dv} @ 12% CO_2					
Nitrogen Oxides	331	320	315	322	385
Sulfur Dioxide	22.9	19.5	16.9	19.8	60
Volatile Organic Compounds	5.3	2.0	2.4	3.2	70
Conc., gr/DSCF @ 7% O_2					
Particulate	0.0013	0.0004	0.0002	0.0006	0.02
Conc., gr/DSCF @ 12% CO_2					
Particulate	0.0012	0.0004	0.0002	0.0006	0.015
Fluoride	1.16E-05	2.94E-05	1.28E-05	1.79E-05	1.5E-03
Beryllium	ND	ND	ND	ND	2.0E-07
Lead	2.91E-06	1.92E-06	ND	1.61E-06	3.1E-04
Mercury	2.23E-04	1.54E-04	1.41E-04	1.73E-04	3.4E-04
Opacity, %					
Visible Emissions	0	0	0	0	15

3.0 TEST PROGRAM

TABLE 3.1

TEST PARTICIPANTS

Ogden Martin Systems, Inc.

Todd B. Westersund

Lake County

Bill Cummins

Florida Department of Environmental Regulation

Chuck Collins
Gary Kuberski

R. W. Beck and Associates

Rick Reiff
Evis Couppis
Linda Long
Michelle Rouch

Brown and Caldwell

Tom Stucker
Russ Bowan

TABLE 3.2

TEST PROGRAM

Parameter	Method
Particulate Matter (PM)	U.S. EPA Method 5
Sulfur Dioxide (SO_2)[1]	U.S. EPA Method 6C
Nitrogen Oxides (NO_x)	U.S. EPA Method 7E
Carbon Monoxide (CO)	U.S. EPA Method 10
Volatile Organic Compounds (VOC)	U.S. EPA Method 25A
Lead (Pb)	U.S. EPA Method 12
Mercury (Hg)	U.S. EPA Method 101A
Fluorides (F)	U.S. EPA Method 13B
Beryllium (Be)	U.S. EPA Method 104
Visible Emissions (VE)	U.S. EPA Method 9
Hydrogen Chloride (HCl)[1]	U.S. EPA Method 26

[1] SO_2 and HCl sampled at the inlet and outlet of the air pollution control equipment.

OGDEN MARTIN SYSTEMS, INC.

40 LANE ROAD
P.O. BOX 2615
FAIRFIELD, NEW JERSEY 07007-2615
(201) 882-9000

AN OGDEN PROJECTS COMPANY

Environmental Engineering Department

VOLUME 2

ENTROPY REPORT ON COMPLIANCE TESTING

ENVIRONMENTAL TEST REPORT

PREPARED FOR:	Ogden Martin Systems of Lake, Inc. 3830 Rogers Industrial Park P. O. Box 189 Okahumpka, Florida 34762
REGARDING:	Municipal Solid Waste-to-Energy Facility
PURPOSE:	To Demonstrate Compliance with Florida Department of Environmental Regulation, Permit No. AC 35-115379
TEST DATES:	January 14 - 15, 1992
ASSOCIATED REPORTS:	OPI Report No. 387R

RECEIVED
MAR 0 5 1992
Ogden Martin Systems

February 26, 1992
OPI Report No. 408

1.0 INTRODUCTION

Ogden Martin System of Lake, Inc, (OMSL) performed compliance emission tests at the Lake County Resource Recovery Facility from January 14 through 15, 1992. The purpose of this test program was to demonstrate compliance with the Florida Department of Environmental Regulation (FDER), Permit No. AC 35-115379, Specific Condition 4. The testing was performed by Entropy Environmentalists, Inc. (Entropy) in accordance with all procedures in the FDER approved test protocol.

The OMSL municipal solid waste combustion facility is located in Okahumpka, FL. The facility is rated at 528 tons of municipal solid waste per day. Units 1 and 2 were tested for pollutant emissions at the outlet of the spray dryer absorber/fabric filter baghouse. Acid gas emissions were tested at the inlet and outlet of the air pollution control equipment. Testing on Unit 1 was performed while co-firing boxes containing medical waste. A total of about 20,200 lbs. of medical waste was charged to Unit 1 on January 14, 1992, at an average rate of 2240 lbs. per hour. Each medical waste box was weighed and then fed to the unit by a conveyor travelling from the tipping floor up to the Unit 1 feed hopper.

A summary of emission test results for the facility is presented in Section 2.0, Tables 2.1 and 2.2. The Entropy report (Volume 2) includes all testing data gathered at the site and all laboratory analytical data.

The test program, as indicated in the Source Test Plan (OPI Report No. 387R), is presented in Section 3.0, Table 3.2. There were no modifications to the Source Test Plan. Test observers and participants are presented in Table 3.1. The Schedule of Activities is presented in Table 3.3.

TABLE 2.2

SUMMARY OF SOURCE TEST RESULTS - UNIT 2

Pollutant	-----Run Number---- 1	2	3	Average	Permitted Compliance Emission Limits
SDA INLET					
Conc., ppm_{dv} @ 7% O_2					
Hydrogen Chloride	211	609	521	447	---
Conc., ppm_{dv} @ 12% CO_2					
Sulfur Dioxide	54.6	50.2	82.6	62.5	---
STACK					
Conc., ppm_{dv} @ 7% O_2					
Carbon Monoxide	10.2	6.9	6.7	7.9	100
Hydrogen Chloride	4.7	2.5	4.8	4.0	50
Conc., ppm_{dv} @ 12% CO_2					
Nitrogen Oxides	279	274	284	279	385
Sulfur Dioxide	0.00	0.12	0.37	0.16	60
Conc., gr/DSCF @ 7% O_2					
Particulate	0.0018	0.0023	0.0029	0.0023	0.02
Conc., gr/DSCF @ 12% CO_2					
Particulate	0.0018	0.0022	0.0029	0.0023	0.015
Removal Efficiency, %					
Hydrogen Chloride	97.8	99.6	99.1	98.8	90
Sulfur Dioxide	100	99.8	99.6	99.8	70
Opacity, %					
Visible Emissions	0	0	0	0	15

TABLE 2.1

SUMMARY OF SOURCE TEST RESULTS - UNIT 1

Pollutant	----Run Number---- 1	2	3	Average	Permitted Compliance Emission Limits
SDA INLET					
Conc., ppm_{dv} @ 7% O_2					
Hydrogen Chloride	369	591	924	628	---
Conc., ppm_{dv} @ 12% CO_2					
Sulfur Dioxide	36.7	80.8	66.3	61.3	---
STACK					
Conc., ppm_{dv} @ 7% O_2					
Carbon Monoxide	8.75	5.43	5.88	6.69	100
Hydrogen Chloride	2.78	0.868	3.21	2.29	50
Conc., ppm_{dv} @ 12% CO_2					
Nitrogen Oxides	210	235	234	226	385
Sulfur Dioxide	0.0	0.0	1.1	0.36	60
Conc., gr/DSCF @ 7% O_2					
Particulate	0.0039	0.0029	0.0037	0.0035	0.02
Conc., gr/DSCF @ 12% CO_2					
Particulate	0.0036	0.0028	0.0036	0.0033	0.015
Removal Efficiency, %					
Hydrogen Chloride	99.3	99.9	99.7	99.6	90
Sulfur Dioxide	100	100	98.4	99.5	70
Opacity, %					
Visible Emissions	0	0	0	0	15

TABLE 3.1

TEST PARTICIPANTS

Ogden Martin Systems, Inc.

G. J. Aldina
Todd B. Westersund

Florida Department of Environmental Regulation

Gary Kuberski

Entropy Environmentalists, Inc.

Barry F. Rudd

TABLE 3.2

TEST PROGRAM

Parameter	Method
Particulate Matter (PM)	U.S. EPA Method 5
Sulfur Dioxide (SO_2)[1]	U.S. EPA Method 6C
Nitrogen Oxides (NO_x)	U.S. EPA Method 7E
Carbon Monoxide (CO)	U.S. EPA Method 10
Visible Emissions (VE)	U.S. EPA Method 9
Hydrogen Chloride (HCl)[1]	U.S. EPA Method 26

[1] SO_2 and HCl sampled at the inlet and outlet of the air pollution control equipment.

OGDEN MARTIN SYSTEMS
OF LAKE, INC.

3830 ROGERS INDUSTRIAL PARK ROAD
OKAHUMPKA, FL 34762
(904) 365-1611

AN OGDEN
PROJECTS COMPANY

July 8, 1992

Mr. Clair Fancy
Bureau Chief
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: LAKE COUNTY SOLID WASTE RESOURCE RECOVERY FACILITY
IN FURTHER RESPONSE TO DER LETTER OWL-AP-92-217

Dear Mr. Fancy:

Please find attached the additional information which we promised to provide to your office for review regarding our response (dated June 24, 1992) to Mr. Charles Collins of the Department's Central Division Office.

We look forward to meeting with you and the designated members of your staff at your Tallahassee office on July 15, 1992 at 1:30 to further discuss these issues.

Thank you for your consideration in resolving this matter.

Very truly yours,

John Power
Regional Environmental Coordinator

JP/pg
Attachment

cc: C. Shine
A. Alexander
B. Andrews
J. Glen
P. Lewis
File Lake 1.4 FDER correspondence

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL PACKAGE TRACKING NUMBER 676539062

2676539062

RECIPIENT'S COPY

Date: 7/8/92

From (Your Name) Please Print: JOHN PUGER

Your Phone Number (Very Important): (813) 884-7688

To (Recipient's Name) Please Print: CLAIR FANCY

Recipient's Phone Number (Very Important): ( )

Company: GREEN MARTIN SYSTEMS INC

Department/Floor No.:

Company: DEPT. OF ENVIRONMENTAL REGULATION

Department/Floor No.:

Street Address: 356 FALKENBURG RD 3RD FL

Exact Street Address *(We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.)*: 2600 Blair Stone Rd.

City: TAMPA **State:** FL **ZIP Required:** 33619

City: Tallahassee, **State:** FL **ZIP Required:** 32399-2400

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.): 1025

IF HOLD FOR PICK-UP, Print FEDEX Address Here
Street Address:
City: State: ZIP Required:

PAYMENT 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No. 3 [ ] Bill 3rd Party FedEx Acct. No. 4 [ ] Bill Credit Card 5 [ ] Cash/Check

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning†)
- 11 [ ] YOUR PACKAGING
- 16 [X] FEDEX LETTER*
- 12 [ ] FEDEX PAK*
- 13 [ ] FEDEX BOX
- 14 [ ] FEDEX TUBE

Standard Overnight (Delivery by next business afternoon. No Saturday delivery†)
- 51 [ ] YOUR PACKAGING
- 56 [ ] FEDEX LETTER*
- 52 [ ] FEDEX PAK*
- 53 [ ] FEDEX BOX
- 54 [ ] FEDEX TUBE

Economy Two-Day (Delivery by second business day †)
- 30 [ ] ECONOMY

Government Overnight (Restricted for authorized users only)
- 46 [ ] GOVT LETTER
- 41 [ ] GOVT PACKAGE

Freight Service (for packages over 150 lbs.)
- 70 [ ] OVERNIGHT FREIGHT** (Confirmed reservation required)
- 80 [ ] TWO-DAY FREIGHT**

†Delivery commitment may be later in some areas. *Declared Value Limit $500. **Call for delivery schedule.

5 DELIVERY AND SPECIAL HANDLING (Check services required)
- 1 [ ] HOLD FOR PICK-UP (Fill in Box H)
- 2 [ ] DELIVER WEEKDAY
- 3 DELIVER SATURDAY (Extra charge) [ ] (Not available to all locations)
- 4 [ ] DANGEROUS GOODS (Extra charge)
- 5 [ ]
- 6 [ ] DRY ICE ____ Lbs.
- 7 [ ] OTHER SPECIAL SERVICE
- 8 [ ]
- 9 [ ] SATURDAY PICK-UP (Extra charge)
- 10 [ ]
- 12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

6

PACKAGES	WEIGHT In Pounds Only	YOUR DECLARED VALUE
	JUL 09 1992	
	Division of Air Resources Management	
Total	Total	Total

DIM SHIPMENT (Chargeable Weight)
[ ] ____ lbs.
L x W x H

Received At:
1 [X] Regular Stop 3 [ ] Drop Box
2 [ ] On-Call Stop 4 [ ] B.S.C. 5 [ ] Station

7
Release Signature:

Emp. No. Date

[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg. To Del. [ ] Chg. To Hold

Street Address

City State Zip

Received By: X

Date/Time Received FedEx Employee Number

Federal Express Use
- Base Charges
- Declared Value Charge
- Other 1
- Other 2
- Total Charges

REVISION DATE 2/92
PART #137204 FXEM 6/92
FORMAT #126

126

ATTACHMENT A

OGDEN MARTIN SYSTEMS OF LAKE, INC.
REQUEST FOR CLARIFICATION REGARDING
DEPARTMENT OF ENVIRONMENTAL REGULATIONS
LETTER of May 19, 1992
OWL-A8-92-217

Ogden Martin Systems of Lake, Inc. (Ogden) in response to the letter referenced above and the recommendation by DER Central Region Staff during the meeting held on June 15, 1992 in Orlando, Florida, has prepared this document to clarify for DER our understanding of the technical issues regarding combustion at our facility of nursery plants and potting media upon which Benlate 50 DF has been previously applied. The following provides an explanation of our actions in accordance with the existing Facility Operating Permit AO-35-P193817 and our understanding of the applicability and report of Section 17-716 and 17-701 of the Florida Administrative Code (FAC), Title 40, Section 60.30a.et.seq of the Code of Federal Regulations (CFR) and Chapter 403, Florida Statutes (1991).

ISSUE NO. 1

The above-referenced letter states that the material disposed of was "non-municipal solid waste", specifically composed of Benlate contaminated soils and plants.

RESPONSE

Ogden would respectfully disagree with the assertion in Mr. Alexander's letter that Ogden is incinerating non-municipal solid waste at the Lake County Resource Recovery Facility, which includes Benlate contaminated soils and plants. To our knowledge, the materials disposed of constitute solid waste acceptable under the facility permit, based on our reading of the applicable law and past experience. It is our understanding that we were disposing of only materials which clearly qualified as municipal solid waste (MSW).

Initially, it should be clearly understood that we were disposing of potting media and dead vegetation, not soil and dead vegetation, at the Lake County Facility. The difference between potting media and soil is substantial. These differences were illustrated to us by Jean Brenner of the Hillsborough County Agricultural Extension Office who stated that the majority of potting media utilized by nurseries throughout the State is composed of a combination of peat moss, leaf mold, ground tree bark, fertilizer, minerals, perlite and/or vermiculite (Attachment 1).

Ogden believes that the materials which we were requested to dispose of at the Lake County Solid Waste Resource Recovery Facility fall within the definition of MSW as found in FAC Section 17-716.200(6) and CFR Title 40 Section 60.31a as well as

definitions for solid waste (SW) found in Section 403.703(13) Florida Statutes (1991) and FAC Section 17-701.020(57). The definition of MSW in the FAC is more narrow than the definition for SW contained in the Florida statutes and the FAC. This probably results from the fact that the MSW definition is found in the section of the FAC dealing with recycling as opposed to disposal of solid waste. On the other hand, the definition for SW is found within the provisions of the State Statutes and FAC dealing with the disposal of SW via the Resource Recovery and Management Act. We are utilizing a Resource Recovery Facility permitted under authority that is distinct from the specific definitions relating to recycling of MSW.

However, under any of these definitions, both waste resulting from the operation of commercial establishments and yard trash, are included. The material was received from nurseries (commercial operations) and consisted of spent potting media and dead vegetation (yard trash). Therefore, we believe that the material is authorized for disposal at our facility regardless of its classification as SW or MSW.

We have thoroughly discussed the properties of Benlate with Richard Haden, the Environmental Manager of DuPont Agricultural Products. Mr. Haden stated that the active ingredient in Benlate is a chemical called Benomyl. Benomyl breaks down rapidly after application, and studies have shown that it has a half life of less than one day in soil and vegetation. Therefore, it is quite likely that the Benlate has substantially dissipated, or disappeared completely, by the time the dead vegetation and potting media arrive at our facility for disposal.

Mr. Haden went on to say that their studies have revealed that Benomyl (and, thus, Benlate also) does not present any health risk even though it is directly applied to plants which will later be consumed by humans. Furthermore, Mr. Haden stated that the vast majority of nurserymen in the industry would not consider their plants to be contaminated after Benlate application.

In conclusion, Mr. Haden expanded upon his prior comments concerning disposal of vegetation and potting media which have been treated with Benlate, by unequivocally stating that disposal of such material in a Resource Recovery Facility does not pose any kind of health threat in air emissions or otherwise.

Mr. Haden's position is further buttressed by the fact that the material in question, Benlate 50 DF, had been determined to be non-hazardous and not regulated by the Florida Department of Agriculture and, following review by DER Tallahassee (Attachment 2), acceptable for disposal in landfills along with other MSW. This is consistent with Mr. Haden's research into this subject which has indicated that disposal of these materials in a Class I,

as opposed to a Class III, landfill is acceptable. However, it is extremely important to note that the reason that these materials cannot be disposed of in a Class III landfill has nothing to do with the application of Benlate prior to disposal. Rather, the potting media and plants contain a high concentration of fertilizer, and there is a concern about ground water contamination if they are disposed of in an unlined (Class III) landfill. Furthermore, Dr. Marion Fuller, who holds a Doctorate in Toxicology and is the Bureau Chief of Pesticides for the Florida Agricultural Department, has stated that she concurs with the information that Benlate is not a hazardous waste. In addition, in her opinion, the disposal of Benlate treated material is acceptable either through incineration or landfilling and poses no health risk.

The position we have taken in agreeing to the processing of this material is supported by the findings and opinions of two Florida County Governmental Solid Waste Management Departments (Hillsborough County and Lake County, Florida). In the case of Hillsborough County, (Hillsborough County is served by a separate operating company, Ogden Martin Systems of Hillsborough, Inc.) active research into this issue was conducted by the County's Special Waste Committee in concert with the manufacturer of Benlate 50 DF (DuPont Agricultural Products), the State of Florida Department of Environmental Regulation (Attachment 3). The results of their review led them to concur that the best method of disposal for this material was via incineration. This would satisfy the main objection of having "...the material destroyed..." and, in the words of Lake County's Executive Director of Environmental Services, would eliminate concerns expressed to him "...that solid waste personnel in some other [Florida] Counties are somewhat leery about disposing of these materials in their landfills..."

Our contention remains that the material we processed is well within the State's definition of municipal solid waste.

ISSUE NO. 2

The letter states "incineration at your facility without prior written approval from DER Specific Condition Number 1c of your permit #AO-35-193817 requires written permission of incineration of other waste not listed in the permit".

RESPONSE

It is our firm belief that our actions concerning the disposal of these materials were fully in accordance with the conditions of our existing operating permit issued by DER for the Lake County Solid Waste Resource Recovery Facility. As we have previously stated, our review of this material with DuPont (the manufacturer), our client community governmental staffs and several State agencies,

including DER, support our belief that we processed material within the State's definition of municipal solid waste. Our past record at OMSL concerning the development of special waste processing approval for the Lake Facility, specifically, DER approval for the disposal of boxed medical waste (Amendment Compliance to Permit No. AO-35-193817 demonstrated April 24, 1992) and our in-progress draft permit modification for the processing of waste tires at material rates greater than 3% (proposed letter amendment to Air Operations Permit No. AO-35-193817 and PSD-FL-113B dated May 19, 1992), illustrate our established practice of seeking clarification based on review of reliable technical information and approval from DER prior to embarking on the processing and disposal of materials outside the established definition of municipal solid waste.

ATTACHMENT 1

AG-1324 REV. 8/89

Srm 5/27/92

Ernie

DU PONT

AGRICULTURAL PRODUCTS
Walker's Mill, Barley Mill Plaza
P.O. Box 80038
Wilmington, Delaware 19880-0038

July 29, 1991

Mr. Daryl H. Smith
Director
Hillsborough County Solid Waste Dept.
P. O. Box 1110
Tampa FL 33601

Dear Sir:

This letter is to inform you that nursery operators in many Florida counties have approached Du Pont for assistance with disposal of plants and planting media. We believe the most suitable method of disposal for these materials is placement in a sanitary landfill. We have reviewed this with the State of Florida Departments of Environmental Regulation and Agriculture and they have encouraged us to recommend this method of disposal. We request your support for these local businesses by accepting these plant materials, growing media and pots for placement in your landfill..

The plants and nursery material that are being disposed of have been treated with our "Benlate" 50 DF fungicide by these nurseries for control of plant diseases. The owners of these materials have determined that they are not suitable for sale and have decided to dispose of them. We have conducted EPA's Toxicity Characteristic Leaching Procedure (TCLP) analysis on growing media samples representative of the various types of nursery operations in Florida to verify that nothing related to the use of "Benlate" 50 DF would cause the materials to be classified "hazardous" under Florida hazardous waste regulations and Federal RCRA regulations. These tests confirm that pesticides, organics and heavy metals are not present above permitted levels. Copies of the analytical results are attached for your files.

Du Pont is working with growers to arrange removal of plants and growing media from each nursery for delivery to your landfill. We would appreciate your cooperation with these businesses in your community.

Please advise if you have any questions about the attachments or about receiving the materials from local growers.

Very truly yours,

J. Richard Haden Jr

J. Richard Haden, Jr.
Environmental Manager
Du Pont Agricultural Products
Phone: 302-992-6374
FAX: 302-992-6477

Attachments
cc: David S. Vogel, Florida DER
Richard J. Budell, Florida DACS

Location: BRADENTON
Sample Source:
Sample Number: BRA-FBLK
Date Sampled: JUNE 10, 1991
Lab ID: ITC B106076-09

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0	< 0.10		MG/L
D005	BARIUM	7440-39-3	100.0	0.022	0.024	MG/L
D006	CADMIUM	7440-43-9	1.0	< 0.0050		MG/L
D007	CHROMIUM	7440-47-3	5.0	< 0.010		MG/L
D008	LEAD	7439-92-1	5.0	< 0.050		MG/L
D009	MERCURY	7439-97-6	0.2	< 0.0002		MG/L
D010	SELENIUM	7782-49-2	1.0	< 0.10		MG/L
D011	SILVER	7440-22-4	5.0	< 0.010		MG/L
D012	ENDRIN	72-20-8	0.02	< 0.001		MG/L
D013	LINDANE	58-89-9	0.4	< 0.0005		MG/L
D014	METHOXYCHLOR	72-43-5	10.0	< 0.005		MG/L
D015	TOXAPHENE	8001-35-2	0.5	< 0.01		MG/L
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5	< 0.005		MG/L
D019	CARBON TETRACHLORIDE	56-23-5	0.5	< 0.005		MG/L
D020	CHLORDANE	57-74-9	0.03	< 0.005		MG/L
D021	CHLOROBENZENE	108-90-7	100.0	< 0.005		MG/L
D022	CHLOROFORM	67-66-3	6.0	< 0.005		MG/L
D023	o-CRESOL	95-48-7	200.0			
D024	m-CRESOL	108-39-4	200.0 (4)			
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5			
D028	1,2-DICHLOROETHANE	107-06-2	0.5	< 0.005		MG/L
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7	< 0.005		MG/L
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)			
D031	HEPTACHLOR	76-44-8	0.008	< 0.0005		MG/L
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)			
D033	HEXACHLOROBUTADIENE	87-68-3	0.5			
D034	HEXACHLOROETHANE	67-72-1	3.0			
D035	2-BUTANONE	78-93-3	200.0	< 0.1		MG/L
D036	NITROBENZENE	98-95-3	2.0			
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)			
D038	PYRIDINE	110-86-1	5.0			
D039	TETRACHLOROETHYLENE	127-18-4	0.7	< 0.005		MG/L
D040	TRICHLOROETHYLENE	79-01-6	0.5	< 0.005		MG/L
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0			
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0			
D043	VINYL CHLORIDE	75-01-4	0.2	< 0.01		MG/L

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
(2) If o-, m- and p-Cresol concentration can not be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/l.
(3) The Agency is proposing a new regulatory level (5.0 mg/l) for this constituent based upon the latest toxicity information.
(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentraction is reported as m-CRESOL.

Comments:

8080: HEPTACHLOR EPOXIDE < 0.0005 MG/L

Location: BRADENTON
Sample Source:
Sample Number: BRA-SOIL-1
Date Sampled: JUNE 10, 1991
Lab ID: ITC B106076-01

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0	< 0.50		MG/L
D005	BARIUM	7440-39-3	100.0	0.067	0.074	MG/L
D006	CADMIUM	7440-43-9	1.0	< 0.025		MG/L
D007	CHROMIUM	7440-47-3	5.0	< 0.050		MG/L
D008	LEAD	7439-92-1	5.0	< 0.25		MG/L
D009	MERCURY	7439-97-6	0.2	0.0003	0.00036	MG/L
D010	SELENIUM	7782-49-2	1.0	< 0.50		MG/L
D011	SILVER	7440-22-4	5.0	< 0.050		MG/L
D012	ENDRIN	72-20-8	0.02	< 0.001		MG/L
D013	LINDANE	58-89-9	0.4	< 0.0005		MG/L
D014	METHOXYCHLOR	72-43-5	10.0	< 0.005		MG/L
D015	TOXAPHENE	8001-35-2	0.5	< 0.01		MG/L
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5	< 0.03		MG/L
D019	CARBON TETRACHLORIDE	56-23-5	0.5	< 0.03		MG/L
D020	CHLORDANE	57-74-9	0.03	< 0.005		MG/L
D021	CHLOROBENZENE	108-90-7	100.0	< 0.03		MG/L
D022	CHLOROFORM	67-66-3	6.0	< 0.03		MG/L
D023	o-CRESOL	95-48-7	200.0			
D024	m-CRESOL	108-39-4	200.0 (4)			
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5			
D028	1,2-DICHLOROETHANE	107-06-2	0.5	< 0.03		MG/L
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7	< 0.03		MG/L
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)			
D031	HEPTACHLOR	76-44-8	0.008	< 0.0005		MG/L
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)			
D033	HEXACHLOROBUTADIENE	87-68-3	0.5			
D034	HEXACHLOROETHANE	67-72-1	3.0			
D035	2-BUTANONE	78-93-3	200.0	< 0.5		MG/L
D036	NITROBENZENE	98-95-3	2.0			
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)			
D038	PYRIDINE	110-86-1	5.0			
D039	TETRACHLOROETHYLENE	127-18-4	0.7	< 0.03		MG/L
D040	TRICHLOROETHYLENE	79-01-6	0.5	< 0.03		MG/L
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0			
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0			
D043	VINYL CHLORIDE	75-01-4	0.2	< 0.05		MG/L

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
(2) If o-, m- and p-Cresol concentration can not be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/l.
(3) The Agency is proposing a new regulatory level (5.0 mg/l) for this constituent based upon the latest toxicity information.
(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentraction is reported as m-CRESOL.

Comments:

8080: HEPTACHLOR EPOXIDE < 0.0005 MG/L

Location: BRADENTON
Sample Source:
Sample Number: BRA-SOIL-2
Date Sampled: JUNE 10, 1991
Lab ID: ITC B106076-02

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0	< 0.50		MG/L
D005	BARIUM	7440-39-3	100.0	< 0.050		MG/L
D006	CADMIUM	7440-43-9	1.0	< 0.025		MG/L
D007	CHROMIUM	7440-47-3	5.0	< 0.050		MG/L
D008	LEAD	7439-92-1	5.0	< 0.25		MG/L
D009	MERCURY	7439-97-6	0.2	0.0006	0.00072	MG/L
D010	SELENIUM	7782-49-2	1.0	< 0.50		MG/L
D011	SILVER	7440-22-4	5.0	< 0.050		MG/L
D012	ENDRIN	72-20-8	0.02	< 0.001		MG/L
D013	LINDANE	58-89-9	0.4	< 0.0005		MG/L
D014	METHOXYCHLOR	72-43-5	10.0	< 0.005		MG/L
D015	TOXAPHENE	8001-35-2	0.5	< 0.01		MG/L
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5	< 0.03		MG/L
D019	CARBON TETRACHLORIDE	56-23-5	0.5	< 0.03		MG/L
D020	CHLORDANE	57-74-9	0.03	< 0.005		MG/L
D021	CHLOROBENZENE	108-90-7	100.0	< 0.03		MG/L
D022	CHLOROFORM	67-66-3	6.0	< 0.03		MG/L
D023	o-CRESOL	95-48-7	200.0			
D024	m-CRESOL	108-39-4	200.0 (4)			
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5			
D028	1,2-DICHLOROETHANE	107-06-2	0.5	< 0.03		MG/L
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7	< 0.03		MG/L
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)			
D031	HEPTACHLOR	76-44-8	0.008	< 0.0005		MG/L
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)			
D033	HEXACHLOROBUTADIENE	87-68-3	0.5			
D034	HEXACHLOROETHANE	67-72-1	3.0			
D035	2-BUTANONE	78-93-3	200.0	< 0.5		MG/L
D036	NITROBENZENE	98-95-3	2.0			
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)			
D038	PYRIDINE	110-86-1	5.0			
D039	TETRACHLOROETHYLENE	127-18-4	0.7	< 0.03		MG/L
D040	TRICHLOROETHYLENE	79-01-6	0.5	< 0.03		MG/L
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0			
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0			
D043	VINYL CHLORIDE	75-01-4	0.2	< 0.05		MG/L

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
(2) If o-, m- and p-Cresol concentration can not be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/l.
(3) The Agency is proposing a new regulatory level (5.0 mg/l) for this constituent based upon the latest toxicity information.
(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentraction is reported as m-CRESOL.

omments:

8080: HEPTACHLOR EPOXIDE < 0.0005 MG/L

Location: BRADENTON
Sample Source:
Sample Number: BRA-SOIL-3
Date Sampled: JUNE 10, 1991
Lab ID: ITC B106076-03

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0	< 0.50		MG/L
D005	BARIUM	7440-39-3	100.0	< 0.050		MG/L
D006	CADMIUM	7440-43-9	1.0	< 0.025		MG/L
D007	CHROMIUM	7440-47-3	5.0	< 0.050		MG/L
D008	LEAD	7439-92-1	5.0	< 0.25		MG/L
D009	MERCURY	7439-97-6	0.2	< 0.0002		MG/L
D010	SELENIUM	7782-49-2	1.0	< 0.50		MG/L
D011	SILVER	7440-22-4	5.0	< 0.050		MG/L
D012	ENDRIN	72-20-8	0.02	< 0.001		MG/L
D013	LINDANE	58-89-9	0.4	< 0.0005		MG/L
D014	METHOXYCHLOR	72-43-5	10.0	< 0.005		MG/L
D015	TOXAPHENE	8001-35-2	0.5	< 0.01		MG/L
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5	< 0.03		MG/L
D019	CARBON TETRACHLORIDE	56-23-5	0.5	< 0.03		MG/L
D020	CHLORDANE	57-74-9	0.03	< 0.005		MG/L
D021	CHLOROBENZENE	108-90-7	100.0	< 0.03		MG/L
D022	CHLOROFORM	67-66-3	6.0	< 0.03		MG/L
D023	o-CRESOL	95-48-7	200.0			
D024	m-CRESOL	108-39-4	200.0 (4)			
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5			
D028	1,2-DICHLOROETHANE	107-06-2	0.5	< 0.03		MG/L
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7	< 0.03		MG/L
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)			
D031	HEPTACHLOR	76-44-8	0.008	< 0.0005		MG/L
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)			
D033	HEXACHLOROBUTADIENE	87-68-3	0.5			
D034	HEXACHLOROETHANE	67-72-1	3.0			
D035	2-BUTANONE	78-93-3	200.0	< 0.5		MG/L
D036	NITROBENZENE	98-95-3	2.0			
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)			
D038	PYRIDINE	110-86-1	5.0			
D039	TETRACHLOROETHYLENE	127-18-4	0.7	< 0.03		MG/L
D040	TRICHLOROETHYLENE	79-01-6	0.5	< 0.03		MG/L
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0			
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0			
D043	VINYL CHLORIDE	75-01-4	0.2	< 0.05		MG/L

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
(2) If o-, m- and p-Cresol concentration can not be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/l.
(3) The Agency is proposing a new regulatory level (5.0 mg/l) for this constituent based upon the latest toxicity information.
(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentraction is reported as m-CRESOL.

Comments:

8080: HEPTACHLOR EPOXIDE < 0.0005 MG/L

Location: BRADENTON
Sample Source:
Sample Number: BRA-SOIL-4
Date Sampled: JUNE 10, 1991
Lab ID: ITC B106076-04

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0	< 0.50		MG/L
D005	BARIUM	7440-39-3	100.0	< 0.050		MG/L
D006	CADMIUM	7440-43-9	1.0	< 0.025		MG/L
D007	CHROMIUM	7440-47-3	5.0	< 0.050		MG/L
D008	LEAD	7439-92-1	5.0	< 0.25		MG/L
D009	MERCURY	7439-97-6	0.2	< 0.0002		MG/L
D010	SELENIUM	7782-49-2	1.0	< 0.50		MG/L
D011	SILVER	7440-22-4	5.0	< 0.050		MG/L
D012	ENDRIN	72-20-8	0.02	< 0.001		MG/L
D013	LINDANE	58-89-9	0.4	< 0.0005		MG/L
D014	METHOXYCHLOR	72-43-5	10.0	< 0.005		MG/L
D015	TOXAPHENE	8001-35-2	0.5	< 0.01		MG/L
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5	< 0.03		MG/L
D019	CARBON TETRACHLORIDE	56-23-5	0.5	< 0.03		MG/L
D020	CHLORDANE	57-74-9	0.03	< 0.005		MG/L
D021	CHLOROBENZENE	108-90-7	100.0	< 0.03		MG/L
D022	CHLOROFORM	67-66-3	6.0	< 0.03		MG/L
D023	o-CRESOL	95-48-7	200.0			
D024	m-CRESOL	108-39-4	200.0 (4)			
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5			
D028	1,2-DICHLOROETHANE	107-06-2	0.5	< 0.03		MG/L
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7	< 0.03		MG/L
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)			
D031	HEPTACHLOR	76-44-8	0.008	< 0.0005		MG/L
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)			
D033	HEXACHLOROBUTADIENE	87-68-3	0.5			
D034	HEXACHLOROETHANE	67-72-1	3.0			
D035	2-BUTANONE	78-93-3	200.0	< 0.5		MG/L
D036	NITROBENZENE	98-95-3	2.0			
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)			
D038	PYRIDINE	110-86-1	5.0			
D039	TETRACHLOROETHYLENE	127-18-4	0.7	< 0.03		MG/L
D040	TRICHLOROETHYLENE	79-01-6	0.5	< 0.03		MG/L
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0			
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0			
D043	VINYL CHLORIDE	75-01-4	0.2	< 0.05		MG/L

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
(2) If o-, m- and p-Cresol concentration can not be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/l.
(3) The Agency is proposing a new regulatory level (5.0 mg/l) for this constituent based upon the latest toxicity information.
(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentraction is reported as m-CRESOL.

Comments:

8080: HEPTACHLOR EPOXIDE < 0.0005 MG/L

Location: BRADENTON
Sample Source:
Sample Number: BRA-SOIL-4 DUP
Date Sampled: JUNE 10, 1991
Lab ID: ITC B106076-05

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0	< 0.50		MG/L
D005	BARIUM	7440-39-3	100.0	< 0.050		MG/L
D006	CADMIUM	7440-43-9	1.0	< 0.025		MG/L
D007	CHROMIUM	7440-47-3	5.0	< 0.050		MG/L
D008	LEAD	7439-92-1	5.0	< 0.25		MG/L
D009	MERCURY	7439-97-6	0.2	< 0.0002		MG/L
D010	SELENIUM	7782-49-2	1.0	< 0.50		MG/L
D011	SILVER	7440-22-4	5.0	< 0.050		MG/L
D012	ENDRIN	72-20-8	0.02	< 0.001		MG/L
D013	LINDANE	58-89-9	0.4	< 0.0005		MG/L
D014	METHOXYCHLOR	72-43-5	10.0	< 0.005		MG/L
D015	TOXAPHENE	8001-35-2	0.5	< 0.01		MG/L
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5	< 0.03		MG/L
D019	CARBON TETRACHLORIDE	56-23-5	0.5	< 0.03		MG/L
D020	CHLORDANE	57-74-9	0.03	< 0.005		MG/L
D021	CHLOROBENZENE	108-90-7	100.0	< 0.03		MG/L
D022	CHLOROFORM	67-66-3	6.0	< 0.03		MG/L
D023	o-CRESOL	95-48-7	200.0			
D024	m-CRESOL	108-39-4	200.0 (4)			
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5			
D028	1,2-DICHLOROETHANE	107-06-2	0.5	< 0.03		MG/L
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7	< 0.03		MG/L
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)			
D031	HEPTACHLOR	76-44-8	0.008	< 0.0005		MG/L
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)			
D033	HEXACHLOROBUTADIENE	87-68-3	0.5			
D034	HEXACHLOROETHANE	67-72-1	3.0			
D035	2-BUTANONE	78-93-3	200.0	< 0.5		MG/L
D036	NITROBENZENE	98-95-3	2.0			
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)			
D038	PYRIDINE	110-86-1	5.0			
D039	TETRACHLOROETHYLENE	127-18-4	0.7	< 0.03		MG/L
D040	TRICHLOROETHYLENE	79-01-6	0.5	< 0.03		MG/L
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0			
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0			
D043	VINYL CHLORIDE	75-01-4	0.2	< 0.05		MG/L

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
(2) If o-, m- and p-Cresol concentration can not be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/l.
(3) The Agency is proposing a new regulatory level (5.0 mg/l) for this constituent based upon the latest toxicity information.
(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentraction is reported as m-CRESOL.

Comments:

8080: HEPTACHLOR EPOXIDE < 0.0005 MG/L

Location: BRADENTON
Sample Source:
Sample Number: BRA-SOIL-5
Date Sampled: JUNE 10, 1991
Lab ID: ITC B106076-06

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0	< 0.50		MG/L
D005	BARIUM	7440-39-3	100.0	< 0.050		MG/L
D006	CADMIUM	7440-43-9	1.0	< 0.025		MG/L
D007	CHROMIUM	7440-47-3	5.0	< 0.050		MG/L
D008	LEAD	7439-92-1	5.0	< 0.25		MG/L
D009	MERCURY	7439-97-6	0.2	< 0.0002		MG/L
D010	SELENIUM	7782-49-2	1.0	< 0.50		MG/L
D011	SILVER	7440-22-4	5.0	< 0.050		MG/L
D012	ENDRIN	72-20-8	0.02	< 0.001		MG/L
D013	LINDANE	58-89-9	0.4	< 0.0005		MG/L
D014	METHOXYCHLOR	72-43-5	10.0	< 0.005		MG/L
D015	TOXAPHENE	8001-35-2	0.5	< 0.01		MG/L
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5	< 0.03		MG/L
D019	CARBON TETRACHLORIDE	56-23-5	0.5	< 0.03		MG/L
D020	CHLORDANE	57-74-9	0.03	< 0.005		MG/L
D021	CHLOROBENZENE	108-90-7	100.0	< 0.03		MG/L
D022	CHLOROFORM	67-66-3	6.0	< 0.03		MG/L
D023	o-CRESOL	95-48-7	200.0			
D024	m-CRESOL	108-39-4	200.0 (4)			
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5			
D028	1,2-DICHLOROETHANE	107-06-2	0.5	< 0.03		MG/L
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7	< 0.03		MG/L
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)			
D031	HEPTACHLOR	76-44-8	0.008	< 0.0005		MG/L
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)			
D033	HEXACHLOROBUTADIENE	87-68-3	0.5			
D034	HEXACHLOROETHANE	67-72-1	3.0			
D035	2-BUTANONE	78-93-3	200.0	< 0.5		MG/L
D036	NITROBENZENE	98-95-3	2.0			
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)			
D038	PYRIDINE	110-86-1	5.0			
D039	TETRACHLOROETHYLENE	127-18-4	0.7	< 0.03		MG/L
D040	TRICHLOROETHYLENE	79-01-6	0.5	< 0.03		MG/L
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0			
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0			
D043	VINYL CHLORIDE	75-01-4	0.2	< 0.05		MG/L

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
(2) If o-, m- and p-Cresol concentration can not be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/l.
(3) The Agency is proposing a new regulatory level (5.0 mg/l) for this constituent based upon the latest toxicity information.
(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentraction is reported as m-CRESOL.

Location: BRADENTON
Sample Source:
Sample Number: BRA-SOIL-6
Date Sampled: JUNE 10, 1991
Lab ID: ITC B106076-07

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0	< 0.50		MG/L
D005	BARIUM	7440-39-3	100.0	0.087	0.096	MG/L
D006	CADMIUM	7440-43-9	1.0	< 0.025		MG/L
D007	CHROMIUM	7440-47-3	5.0	< 0.050		MG/L
D008	LEAD	7439-92-1	5.0	< 0.25		MG/L
D009	MERCURY	7439-97-6	0.2	< 0.0002		MG/L
D010	SELENIUM	7782-49-2	1.0	< 0.50		MG/L
D011	SILVER	7440-22-4	5.0	< 0.050		MG/L
D012	ENDRIN	72-20-8	0.02	< 0.001		MG/L
D013	LINDANE	58-89-9	0.4	< 0.0005		MG/L
D014	METHOXYCHLOR	72-43-5	10.0	< 0.005		MG/L
D015	TOXAPHENE	8001-35-2	0.5	< 0.01		MG/L
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5	< 0.03		MG/L
D019	CARBON TETRACHLORIDE	56-23-5	0.5	< 0.03		MG/L
D020	CHLORDANE	57-74-9	0.03	< 0.005		MG/L
D021	CHLOROBENZENE	108-90-7	100.0	< 0.03		MG/L
D022	CHLOROFORM	67-66-3	6.0	< 0.03		MG/L
D023	o-CRESOL	95-48-7	200.0			
D024	m-CRESOL	108-39-4	200.0 (4)			
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5			
D028	1,2-DICHLOROETHANE	107-06-2	0.5	< 0.03		MG/L
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7	< 0.03		MG/L
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)			
D031	HEPTACHLOR	76-44-8	0.008	< 0.0005		MG/L
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)			
D033	HEXACHLOROBUTADIENE	87-68-3	0.5			
D034	HEXACHLOROETHANE	67-72-1	3.0			
D035	2-BUTANONE	78-93-3	200.0	< 0.5		MG/L
D036	NITROBENZENE	98-95-3	2.0			
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)			
D038	PYRIDINE	110-86-1	5.0			
D039	TETRACHLOROETHYLENE	127-18-4	0.7	< 0.03		MG/L
D040	TRICHLOROETHYLENE	79-01-6	0.5	< 0.03		MG/L
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0			
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0			
D043	VINYL CHLORIDE	75-01-4	0.2	< 0.05		MG/L

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
(2) If o-, m- and p-Cresol concentration can not be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/l.
(3) The Agency is proposing a new regulatory level (5.0 mg/l) for this constituent based upon the latest toxicity information.
(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentraction is reported as m-CRESOL.

Comments:

8080: HEPTACHLOR EPOXIDE < 0.0005 MG/L

Location: BRADENTON
Sample Source:
Sample Number: BRA-TBLK
Date Sampled: JUNE 10, 1991
Lab ID: ITC B106076-10

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0			
D005	BARIUM	7440-39-3	100.0			
D006	CADMIUM	7440-43-9	1.0			
D007	CHROMIUM	7440-47-3	5.0			
D008	LEAD	7439-92-1	5.0			
D009	MERCURY	7439-97-6	0.2			
D010	SELENIUM	7782-49-2	1.0			
D011	SILVER	7440-22-4	5.0			
D012	ENDRIN	72-20-8	0.02			
D013	LINDANE	58-89-9	0.4			
D014	METHOXYCHLOR	72-43-5	10.0			
D015	TOXAPHENE	8001-35-2	0.5			
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5	< 0.005		MG/L
D019	CARBON TETRACHLORIDE	56-23-5	0.5	< 0.005		MG/L
D020	CHLORDANE	57-74-9	0.03			
D021	CHLOROBENZENE	108-90-7	100.0	< 0.005		MG/L
D022	CHLOROFORM	67-66-3	6.0	< 0.005		MG/L
D023	o-CRESOL	95-48-7	200.0			
D024	m-CRESOL	108-39-4	200.0 (4)			
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5			
D028	1,2-DICHLOROETHANE	107-06-2	0.5	< 0.005		MG/L
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7	< 0.005		MG/L
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)			
D031	HEPTACHLOR	76-44-8	0.008			
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)			
D033	HEXACHLOROBUTADIENE	87-68-3	0.5			
D034	HEXACHLOROETHANE	67-72-1	3.0			
D035	2-BUTANONE	78-93-3	200.0	< 0.1		MG/L
D036	NITROBENZENE	98-95-3	2.0			
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)			
D038	PYRIDINE	110-86-1	5.0			
D039	TETRACHLOROETHYLENE	127-18-4	0.7	< 0.005		MG/L
D040	TRICHLOROETHYLENE	79-01-6	0.5	< 0.005		MG/L
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0			
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0			
D043	VINYL CHLORIDE	75-01-4	0.2	< 0.01		MG/L

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
(2) If o-, m- and p-Cresol concentration can not be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/l.
(3) The Agency is proposing a new regulatory level (5.0 mg/l) for this constituent based upon the latest toxicity information.
(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentraction is reported as m-CRESOL.

Location: BRADENTON
Sample Source: BRA-FBLK
Sample Number: BRA-FBLK
Date Sampled: JUNE 10, 1991
Lab ID: PONCA CITY P106015-08

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0			
D005	BARIUM	7440-39-3	100.0			
D006	CADMIUM	7440-43-9	1.0			
D007	CHROMIUM	7440-47-3	5.0			
D008	LEAD	7439-92-1	5.0			
D009	MERCURY	7439-97-6	0.2			
D010	SELENIUM	7782-49-2	1.0			
D011	SILVER	7440-22-4	5.0			
D012	ENDRIN	72-20-8	0.02			
D013	LINDANE	58-89-9	0.4			
D014	METHOXYCHLOR	72-43-5	10.0			
D015	TOXAPHENE	8001-35-2	0.5			
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5			
D019	CARBON TETRACHLORIDE	56-23-5	0.5			
D020	CHLORDANE	57-74-9	0.03			
D021	CHLOROBENZENE	108-90-7	100.0			
D022	CHLOROFORM	67-66-3	6.0			
D023	o-CRESOL	95-48-7	200.0	< 0.1		MG/L
D024	m-CRESOL	108-39-4	200.0 (4)	< 0.1		MG/L
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5	< 0.1		MG/L
D028	1,2-DICHLOROETHANE	107-06-2	0.5			
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7			
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)	< 0.1		MG/L
D031	HEPTACHLOR	76-44-8	0.008			
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)	< 0.1		MG/L
D033	HEXACHLOROBUTADIENE	87-68-3	0.5	< 0.1		MG/L
D034	HEXACHLOROETHANE	67-72-1	3.0	< 0.1		MG/L
D035	2-BUTANONE	78-93-3	200.0			
D036	NITROBENZENE	98-95-3	2.0	< 0.1		MG/L
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)	< 0.5		MG/L
D038	PYRIDINE	110-86-1	5.0	< 0.1		MG/L
D039	TETRACHLOROETHYLENE	127-18-4	0.7			
D040	TRICHLOROETHYLENE	79-01-6	0.5			
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0	< 0.1		MG/L
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0	< 0.1		MG/L
D043	VINYL CHLORIDE	75-01-4	0.2			

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
(2) If o-, m- and p-Cresol concentration can not be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/l.
(3) The Agency is proposing a new regulatory level (5.0 mg/l) for this constituent based upon the latest toxicity information.
(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentraction is reported as m-CRESOL.

Comments:

8270 RE. MATRIX SPIKE AND SPIKE DUP: SURROGATE RECOVERIES WERE DILUTED OUT.

Location: BRADENTON
Sample Source: BRA-SOIL-1
Sample Number: BRA-SOIL-1
Date Sampled: JUNE 10, 1991
Lab ID: PONCA CITY P106015-01

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0			
D005	BARIUM	7440-39-3	100.0			
D006	CADMIUM	7440-43-9	1.0			
D007	CHROMIUM	7440-47-3	5.0			
D008	LEAD	7439-92-1	5.0			
D009	MERCURY	7439-97-6	0.2			
D010	SELENIUM	7782-49-2	1.0			
D011	SILVER	7440-22-4	5.0			
D012	ENDRIN	72-20-8	0.02			
D013	LINDANE	58-89-9	0.4			
D014	METHOXYCHLOR	72-43-5	10.0			
D015	TOXAPHENE	8001-35-2	0.5			
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5			
D019	CARBON TETRACHLORIDE	56-23-5	0.5			
D020	CHLORDANE	57-74-9	0.03			
D021	CHLOROBENZENE	108-90-7	100.0			
D022	CHLOROFORM	67-66-3	6.0			
D023	o-CRESOL	95-48-7	200.0	< 0.1		MG/L
D024	m-CRESOL	108-39-4	200.0 (4)	< 0.1		MG/L
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5	< 0.1		MG/L
D028	1,2-DICHLOROETHANE	107-06-2	0.5			
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7			
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)	< 0.1		MG/L
D031	HEPTACHLOR	76-44-8	0.008			
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)	< 0.1		MG/L
D033	HEXACHLOROBUTADIENE	87-68-3	0.5	< 0.1		MG/L
D034	HEXACHLOROETHANE	67-72-1	3.0	< 0.1		MG/L
D035	2-BUTANONE	78-93-3	200.0			
D036	NITROBENZENE	98-95-3	2.0	< 0.1		MG/L
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)	< 0.5		MG/L
D038	PYRIDINE	110-86-1	5.0	< 0.1		MG/L
D039	TETRACHLOROETHYLENE	127-18-4	0.7			
D040	TRICHLOROETHYLENE	79-01-6	0.5			
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0	< 0.1		MG/L
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0	< 0.1		MG/L
D043	VINYL CHLORIDE	75-01-4	0.2			

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
(2) If o-, m- and p-Cresol concentration can not be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/l.
(3) The Agency is proposing a new regulatory level (5.0 mg/l) for this constituent based upon the latest toxicity information.
(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentraction is reported as m-CRESOL.

Comments:

8270 RE. MATRIX SPIKE AND SPIKE DUP: SURROGATE RECOVERIES WERE DILUTED OUT.

Location: BRADENTON
Sample Source: BRA-SOIL-2
Sample Number: BRA-SOIL-2
Date Sampled: JUNE 10, 1991
Lab ID: PONCA CITY P106015-02

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0			
D005	BARIUM	7440-39-3	100.0			
D006	CADMIUM	7440-43-9	1.0			
D007	CHROMIUM	7440-47-3	5.0			
D008	LEAD	7439-92-1	5.0			
D009	MERCURY	7439-97-6	0.2			
D010	SELENIUM	7782-49-2	1.0			
D011	SILVER	7440-22-4	5.0			
D012	ENDRIN	72-20-8	0.02			
D013	LINDANE	58-89-9	0.4			
D014	METHOXYCHLOR	72-43-5	10.0			
D015	TOXAPHENE	8001-35-2	0.5			
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5			
D019	CARBON TETRACHLORIDE	56-23-5	0.5			
D020	CHLORDANE	57-74-9	0.03			
D021	CHLOROBENZENE	108-90-7	100.0			
D022	CHLOROFORM	67-66-3	6.0			
D023	o-CRESOL	95-48-7	200.0	< 0.1		MG/L
D024	m-CRESOL	108-39-4	200.0 (4)	< 0.1		MG/L
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5	< 0.1		MG/L
D028	1,2-DICHLOROETHANE	107-06-2	0.5			
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7			
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)	< 0.1		MG/L
D031	HEPTACHLOR	76-44-8	0.008			
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)	< 0.1		MG/L
D033	HEXACHLOROBUTADIENE	87-68-3	0.5	< 0.1		MG/L
D034	HEXACHLOROETHANE	67-72-1	3.0	< 0.1		MG/L
D035	2-BUTANONE	78-93-3	200.0			
D036	NITROBENZENE	98-95-3	2.0	< 0.1		MG/L
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)	< 0.5		MG/L
D038	PYRIDINE	110-86-1	5.0	< 0.1		MG/L
D039	TETRACHLOROETHYLENE	127-18-4	0.7			
D040	TRICHLOROETHYLENE	79-01-6	0.5			
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0	< 0.1		MG/L
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0	< 0.1		MG/L
D043	VINYL CHLORIDE	75-01-4	0.2			

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
(2) If o-, m- and p-Cresol concentration can not be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/l.
(3) The Agency is proposing a new regulatory level (5.0 mg/l) for this constituent based upon the latest toxicity information.
(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentraction is reported as m-CRESOL.

Comments:

8270 RE. MATRIX SPIKE AND SPIKE DUP: SURROGATE RECOVERIES WERE DILUTED OUT.

Location: BRADENTON
Sample Source: BRA-SOIL-3
Sample Number: BRA-SOIL-3
Date Sampled: JUNE 10, 1991
Lab ID: PONCA CITY P106015-03

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0			
D005	BARIUM	7440-39-3	100.0			
D006	CADMIUM	7440-43-9	1.0			
D007	CHROMIUM	7440-47-3	5.0			
D008	LEAD	7439-92-1	5.0			
D009	MERCURY	7439-97-6	0.2			
D010	SELENIUM	7782-49-2	1.0			
D011	SILVER	7440-22-4	5.0			
D012	ENDRIN	72-20-8	0.02			
D013	LINDANE	58-89-9	0.4			
D014	METHOXYCHLOR	72-43-5	10.0			
D015	TOXAPHENE	8001-35-2	0.5			
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5			
D019	CARBON TETRACHLORIDE	56-23-5	0.5			
D020	CHLORDANE	57-74-9	0.03			
D021	CHLOROBENZENE	108-90-7	100.0			
D022	CHLOROFORM	67-66-3	6.0			
D023	o-CRESOL	95-48-7	200.0	< 0.1		MG/L
D024	m-CRESOL	108-39-4	200.0 (4)	< 0.1		MG/L
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5	< 0.1		MG/L
D028	1,2-DICHLOROETHANE	107-06-2	0.5			
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7			
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)	< 0.1		MG/L
D031	HEPTACHLOR	76-44-8	0.008			
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)	< 0.1		MG/L
D033	HEXACHLOROBUTADIENE	87-68-3	0.5	< 0.1		MG/L
D034	HEXACHLOROETHANE	67-72-1	3.0	< 0.1		MG/L
D035	2-BUTANONE	78-93-3	200.0			
D036	NITROBENZENE	98-95-3	2.0	< 0.1		MG/L
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)	< 0.5		MG/L
D038	PYRIDINE	110-86-1	5.0	< 0.1		MG/L
D039	TETRACHLOROETHYLENE	127-18-4	0.7			
D040	TRICHLOROETHYLENE	79-01-6	0.5			
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0	< 0.1		MG/L
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0	< 0.1		MG/L
D043	VINYL CHLORIDE	75-01-4	0.2			

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
(2) If o-, m- and p-Cresol concentration can not be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/l.
(3) The Agency is proposing a new regulatory level (5.0 mg/l) for this constituent based upon the latest toxicity information.
(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentraction is reported as m-CRESOL.

Comments:

8270 RE. MATRIX SPIKE AND SPIKE DUP: SURROGATE RECOVERIES WERE DILUTED OUT.

Location: BRADENTON
Sample Source: BRA-SOIL-4
Sample Number: BRA-SOIL-4
Date Sampled: JUNE 10, 1991
Lab ID: PONCA CITY P106015-04

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0			
D005	BARIUM	7440-39-3	100.0			
D006	CADMIUM	7440-43-9	1.0			
D007	CHROMIUM	7440-47-3	5.0			
D008	LEAD	7439-92-1	5.0			
D009	MERCURY	7439-97-6	0.2			
D010	SELENIUM	7782-49-2	1.0			
D011	SILVER	7440-22-4	5.0			
D012	ENDRIN	72-20-8	0.02			
D013	LINDANE	58-89-9	0.4			
D014	METHOXYCHLOR	72-43-5	10.0			
D015	TOXAPHENE	8001-35-2	0.5			
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5			
D019	CARBON TETRACHLORIDE	56-23-5	0.5			
D020	CHLORDANE	57-74-9	0.03			
D021	CHLOROBENZENE	108-90-7	100.0			
D022	CHLOROFORM	67-66-3	6.0			
D023	o-CRESOL	95-48-7	200.0	< 0.1		MG/L
D024	m-CRESOL	108-39-4	200.0 (4)	< 0.1		MG/L
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5	< 0.1		MG/L
D028	1,2-DICHLOROETHANE	107-06-2	0.5			
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7			
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)	< 0.1		MG/L
D031	HEPTACHLOR	76-44-8	0.008			
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)	< 0.1		MG/L
D033	HEXACHLOROBUTADIENE	87-68-3	0.5	< 0.1		MG/L
D034	HEXACHLOROETHANE	67-72-1	3.0	< 0.1		MG/L
D035	2-BUTANONE	78-93-3	200.0			
D036	NITROBENZENE	98-95-3	2.0	< 0.1		MG/L
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)	< 0.5		MG/L
D038	PYRIDINE	110-86-1	5.0	< 0.1		MG/L
D039	TETRACHLOROETHYLENE	127-18-4	0.7			
D040	TRICHLOROETHYLENE	79-01-6	0.5			
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0	< 0.1		MG/L
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0	< 0.1		MG/L
D043	VINYL CHLORIDE	75-01-4	0.2			

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
(2) If o-, m- and p-Cresol concentration can not be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/l.
(3) The Agency is proposing a new regulatory level (5.0 mg/l) for this constituent based upon the latest toxicity information.
(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentraction is reported as m-CRESOL.

Comments:

8270 RE. MATRIX SPIKE AND SPIKE DUP: SURROGATE RECOVERIES WERE DILUTED OUT.

Location: BRADENTON
Sample Source: BRA-SOIL-4-DUP
Sample Number: BRA-SOIL-4-DUP
Date Sampled: JUNE 10, 1991
Lab ID: PONCA CITY P106015-05

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0			
D005	BARIUM	7440-39-3	100.0			
D006	CADMIUM	7440-43-9	1.0			
D007	CHROMIUM	7440-47-3	5.0			
D008	LEAD	7439-92-1	5.0			
D009	MERCURY	7439-97-6	0.2			
D010	SELENIUM	7782-49-2	1.0			
D011	SILVER	7440-22-4	5.0			
D012	ENDRIN	72-20-8	0.02			
D013	LINDANE	58-89-9	0.4			
D014	METHOXYCHLOR	72-43-5	10.0			
D015	TOXAPHENE	8001-35-2	0.5			
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5			
D019	CARBON TETRACHLORIDE	56-23-5	0.5			
D020	CHLORDANE	57-74-9	0.03			
D021	CHLOROBENZENE	108-90-7	100.0			
D022	CHLOROFORM	67-66-3	6.0			
D023	o-CRESOL	95-48-7	200.0	< 0.1		MG/L
D024	m-CRESOL	108-39-4	200.0 (4)	< 0.1		MG/L
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5	< 0.1		MG/L
D028	1,2-DICHLOROETHANE	107-06-2	0.5			
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7			
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)	< 0.1		MG/L
D031	HEPTACHLOR	76-44-8	0.008			
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)	< 0.1		MG/L
D033	HEXACHLOROBUTADIENE	87-68-3	0.5	< 0.1		MG/L
D034	HEXACHLOROETHANE	67-72-1	3.0	< 0.1		MG/L
D035	2-BUTANONE	78-93-3	200.0			
D036	NITROBENZENE	98-95-3	2.0	< 0.1		MG/L
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)	< 0.5		MG/L
D038	PYRIDINE	110-86-1	5.0	< 0.1		MG/L
D039	TETRACHLOROETHYLENE	127-18-4	0.7			
D040	TRICHLOROETHYLENE	79-01-6	0.5			
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0	< 0.1		MG/L
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0	< 0.1		MG/L
D043	VINYL CHLORIDE	75-01-4	0.2			

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
(2) If o-, m- and p-Cresol concentration can not be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/l.
(3) The Agency is proposing a new regulatory level (5.0 mg/l) for this constituent based upon the latest toxicity information.
(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentraction is reported as m-CRESOL.

Comments:

8270 RE. MATRIX SPIKE AND SPIKE DUP: SURROGATE RECOVERIES WERE DILUTED OUT.

Location: BRADENTON
Sample Source: BRA-SOIL-5
Sample Number: BRA-SOIL-5
Date Sampled: JUNE 10, 1991
Lab ID: PONCA CITY P106015-06

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0			
D005	BARIUM	7440-39-3	100.0			
D006	CADMIUM	7440-43-9	1.0			
D007	CHROMIUM	7440-47-3	5.0			
D008	LEAD	7439-92-1	5.0			
D009	MERCURY	7439-97-6	0.2			
D010	SELENIUM	7782-49-2	1.0			
D011	SILVER	7440-22-4	5.0			
D012	ENDRIN	72-20-8	0.02			
D013	LINDANE	58-89-9	0.4			
D014	METHOXYCHLOR	72-43-5	10.0			
D015	TOXAPHENE	8001-35-2	0.5			
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5			
D019	CARBON TETRACHLORIDE	56-23-5	0.5			
D020	CHLORDANE	57-74-9	0.03			
D021	CHLOROBENZENE	108-90-7	100.0			
D022	CHLOROFORM	67-66-3	6.0			
D023	o-CRESOL	95-48-7	200.0	< 0.1		MG/L
D024	m-CRESOL	108-39-4	200.0 (4)	< 0.1		MG/L
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5	< 0.1		MG/L
D028	1,2-DICHLOROETHANE	107-06-2	0.5			
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7			
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)	< 0.1		MG/L
D031	HEPTACHLOR	76-44-8	0.008			
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)	< 0.1		MG/L
D033	HEXACHLOROBUTADIENE	87-68-3	0.5	< 0.1		MG/L
D034	HEXACHLOROETHANE	67-72-1	3.0	< 0.1		MG/L
D035	2-BUTANONE	78-93-3	200.0			
D036	NITROBENZENE	98-95-3	2.0	< 0.1		MG/L
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)	< 0.5		MG/L
D038	PYRIDINE	110-86-1	5.0	< 0.1		MG/L
D039	TETRACHLOROETHYLENE	127-18-4	0.7			
D040	TRICHLOROETHYLENE	79-01-6	0.5			
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0	< 0.1		MG/L
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0	< 0.1		MG/L
D043	VINYL CHLORIDE	75-01-4	0.2			

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
(2) If o-, m- and p-Cresol concentration can not be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/l.
(3) The Agency is proposing a new regulatory level (5.0 mg/l) for this constituent based upon the latest toxicity information.
(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentraction is reported as m-CRESOL.

Comments:

8270 RE. MATRIX SPIKE AND SPIKE DUP: SURROGATE RECOVERIES WERE DILUTED OUT.

Location: BRADENTON
Sample Source: BRA-SOIL-6
Sample Number: BRA-SOIL-6
Date Sampled: JUNE 10, 1991
Lab ID: PONCA CITY P106015-07

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0			
D005	BARIUM	7440-39-3	100.0			
D006	CADMIUM	7440-43-9	1.0			
D007	CHROMIUM	7440-47-3	5.0			
D008	LEAD	7439-92-1	5.0			
D009	MERCURY	7439-97-6	0.2			
D010	SELENIUM	7782-49-2	1.0			
D011	SILVER	7440-22-4	5.0			
D012	ENDRIN	72-20-8	0.02			
D013	LINDANE	58-89-9	0.4			
D014	METHOXYCHLOR	72-43-5	10.0			
D015	TOXAPHENE	8001-35-2	0.5			
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5			
D019	CARBON TETRACHLORIDE	56-23-5	0.5			
D020	CHLORDANE	57-74-9	0.03			
D021	CHLOROBENZENE	108-90-7	100.0			
D022	CHLOROFORM	67-66-3	6.0			
D023	o-CRESOL	95-48-7	200.0	< 0.1		MG/L
D024	m-CRESOL	108-39-4	200.0 (4)	< 0.1		MG/L
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5	< 0.1		MG/L
D028	1,2-DICHLOROETHANE	107-06-2	0.5			
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7			
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)	< 0.1		MG/L
D031	HEPTACHLOR	76-44-8	0.008			
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)	< 0.1		MG/L
D033	HEXACHLOROBUTADIENE	87-68-3	0.5	< 0.1		MG/L
D034	HEXACHLOROETHANE	67-72-1	3.0	< 0.1		MG/L
D035	2-BUTANONE	78-93-3	200.0			
D036	NITROBENZENE	98-95-3	2.0	< 0.1		MG/L
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)	< 0.5		MG/L
D038	PYRIDINE	110-86-1	5.0	< 0.1		MG/L
D039	TETRACHLOROETHYLENE	127-18-4	0.7			
D040	TRICHLOROETHYLENE	79-01-6	0.5			
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0	< 0.1		MG/L
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0	< 0.1		MG/L
D043	VINYL CHLORIDE	75-01-4	0.2			

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
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Comments:

8270 RE. MATRIX SPIKE AND SPIKE DUP: SURROGATE RECOVERIES WERE DILUTED OUT.

DEPARTMENT OF
ENVIRONMENTAL SERVICES
315 WEST MAIN STREET
TAVARES, FLORIDA 32778

ADMINISTRATION
PHONE: 904-343-9739
POLLUTION CONTROL
PHONE: 904-343-9738
SUNCOM: 659-1794
SOLID AND HAZARDOUS WASTE MANAGEMENT
PHONE: 904-343-9819
SUNCOM: 659-1519
MOSQUITO/AQUATIC PLANT MANAGEMENT
PHONE: 904-343-2011
SUNCOM: 659-1582
LAKE SOIL & WATER CONSERVATION
PHONE: 904-343-2401
AGRICULTURAL CENTER
PHONE: 904-343-4101

August 26, 1991

Mr. Kyle Garrett
Facility Administrator
Ogden Martin Systems of Lake, Inc.
P. O. Box 189
Okahumpka, FL 34762

Dear Kyle:

Attached is a letter and analytical information from Dick Haden at Du Pont Agricultural Products requesting the County's assistance in the disposal of Benlate treated plant materials. I would appreciate it if you would pass the analytical information on to your environmental staff to determine if there is any problem in the disposal of these materials in the waste-to-energy waste stream or ash residue.

Mr. Haden has indicated that solid waste management personnel in some other County's are somewhat leery about disposing of these materials in their landfills, so there may be some potential for disposal in the incinerator, of these waste materials from other counties, if such disposal will not cause either plant operational or environmental problems.

I advised Mr. Haden that I would pass this information along to you and that you would call him later this week. If he doesn't hear from you by the latter part of the week he will give you a call. In the meantime, he is attempting to quantify the amount of materials that will have to be disposed of from each county.

Please let me know the outcome of Ogden's review of the information and any conversations from Mr. Haden, so that I may coordinate on my end. Thanks, as always, for your cooperation and assistance.

Best regards,

Don Findell
Executive Director

Attachments

DF:bat

cc: Al Thelon, County Manager
Bill Cummins, Solid and Hazardous Waste Management Division

Printed on Recycled Paper

AG-4224 REV. 8/89

DEPT. OF POLLUTION CONTROL

AUG 2 1991

DU PONT

AGRICULTURAL PRODUCTS
Walker's Mill, Barley Mill Plaza
P.O. Box 80038
Wilmington, Delaware 19880-0038

July 29, 1991

Mr. Don Findell
Executive Director
Lake City Dept of Environmental Ser.
315 West Main Street
Tavares FL 32778

Dear Sir:

This letter is to inform you that nursery operators in many Florida counties have approached Du Pont for assistance with disposal of plants and planting media. We believe the most suitable method of disposal for these materials is placement in a sanitary landfill. We have reviewed this with the State of Florida Departments of Environmental Regulation and Agriculture and they have encouraged us to recommend this method of disposal. We request your support for these local businesses by accepting these plant materials, growing media and pots for placement in your landfill.

The plants and nursery material that are being disposed of have been treated with our "Benlate" 50 DF fungicide by these nurseries for control of plant diseases. The owners of these materials have determined that they are not suitable for sale and have decided to dispose of them. We have conducted EPA's Toxicity Characteristic Leaching Procedure (TCLP) analysis on growing media samples representative of the various types of nursery operations in Florida to verify that nothing related to the use of "Benlate" 50 DF would cause the materials to be classified "hazardous" under Florida hazardous waste regulations and Federal RCRA regulations. These tests confirm that pesticides, organics and heavy metals are not present above permitted levels. Copies of the analytical results are attached for your files.

Du Pont is working with growers to arrange removal of plants and growing media from each nursery for delivery to your landfill. We would appreciate your cooperation with these businesses in your community.

Please advise if you have any questions about the attachments or about receiving the materials from local growers.

Very truly yours,

J. Richard Haden Jr

called 6/6/92 1:55 p.m.

J. Richard Haden, Jr.
Environmental Manager
Du Pont Agricultural Products
Phone: 302-992-6374
FAX: 302-992-6477

Attachments
cc: David S. Vogel, Florida DER
Richard J. Budell, Florida DACS

AG-4224 (Rev. 4/89)

AGRICULTURAL PRODUCTS
Walker's Mill, Barley Mill Plaza
P.O. Box 80038
Wilmington, Delaware 19880-0038

September 5, 1991

Mr. Kyle Garrett
Facility Administrator
Ogden Martin Systems of Lake, Inc.
P.O. Box 189
Okahumpka, FL 34762

Via Fax # 904-365-6359

Dear Kyle:

Thank you for your willingness to evaluate the disposal of plants and planting media from ornamental nursery growers in Lake County, and, if necessary, from nearby counties in Florida.

To assist you with your evaluation, attached are Material Safety Data Sheets for Benlate® 50 DF, the Du Pont fungicide with which these plants have been treated and for a typical potting mix used by most Florida ornamental growers. As you can tell, the major components are peat moss, bark, vermiculite and water.

Prompt completion of your evaluation will be very much appreciated as nursery operators in Lake County are ready to begin disposal.

Please notify me if you need additional information or have questions.

Very truly yours,

J.R. Haden /nab

J. R. HADEN
Environmental Manager

JRH/nab
Attachments
:42

Conoco Environmental Services
TC Report

Location: BRADENTON
Sample Source:
Sample Number: BRA-FELK
Date Sampled: JUNE 10, 1991
Lab ID: ITC B106076-09

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0	< 0.10		MG/L
D005	BARIUM	7440-39-3	100.0	0.022	0.024	MG/L
D006	CADMIUM	7440-43-9	1.0	< 0.0050		MG/L
D007	CHROMIUM	7440-47-3	5.0	< 0.010		MG/L
D008	LEAD	7439-92-1	5.0	< 0.050		MG/L
D009	MERCURY	7439-97-6	0.2	< 0.0002		MG/L
D010	SELENIUM	7782-49-2	1.0	< 0.10		MG/L
D011	SILVER	7440-22-4	5.0	< 0.010		MG/L
D012	ENDRIN	72-20-8	0.02	< 0.001		MG/L
D013	LINDANE	58-89-9	0.4	< 0.0005		MG/L
D014	METHOXYCHLOR	72-43-5	10.0	< 0.005		MG/L
D015	TOXAPHENE	8001-35-2	0.5	< 0.01		MG/L
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5	< 0.005		MG/L
D019	CARBON TETRACHLORIDE	56-23-5	0.5	< 0.005		MG/L
D020	CHLORDANE	57-74-9	0.03	< 0.005		MG/L
D021	CHLOROBENZENE	108-90-7	100.0	< 0.005		MG/L
D022	CHLOROFORM	67-66-3	6.0	< 0.005		MG/L
D023	o-CRESOL	95-48-7	200.0			
D024	m-CRESOL	108-39-4	200.0 (4)			
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5			
D028	1,2-DICHLOROETHANE	107-06-2	0.5	< 0.005		MG/L
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7	< 0.005		MG/L
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)			
D031	HEPTACHLOR	76-44-8	0.008	< 0.0005		MG/L
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)			
D033	HEXACHLOROBUTADIENE	87-68-3	0.5			
D034	HEXACHLOROETHANE	67-72-1	3.0			
D035	2-BUTANONE	78-93-3	200.0	< 0.1		MG/L
D036	NITROBENZENE	98-95-3	2.0			
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)			
D038	PYRIDINE	110-86-1	5.0			
D039	TETRACHLOROETHYLENE	127-18-4	0.7	< 0.005		MG/L
D040	TRICHLOROETHYLENE	79-01-6	0.5	< 0.005		MG/L
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0			
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0			
D043	VINYL CHLORIDE	75-01-4	0.2	< 0.01		MG/L

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
(2) If o-, m- and p-Cresol concentration can not be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/l.
(3) The Agency is proposing a new regulatory level (5.0 mg/l) for this constituent based upon the latest toxicity information.
(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentration is reported as M-CRESOL.

Comments:

8080: HEPTACHLOR EPOXIDE < 0.0005 MG/L

Conoco Environmental Services
TC Report

Location: BRADENTON
Sample Source:
Sample Number: BRA-SOIL-1
Date Sampled: JUNE 10, 1991
Lab ID: ITC B106076-01

Type: Regulated

EPA No.	Constituent	CAS No.	Reg. Level (MG/L) *	Result	Scaled Result	Unit
D004	ARSENIC	7440-38-2	5.0	< 0.50		MG/L
D005	BARIUM	7440-39-3	100.0	0.067	0.074	MG/L
D006	CADMIUM	7440-43-9	1.0	< 0.020		MG/L
D007	CHROMIUM	7440-47-3	5.0	< 0.050		MG/L
D008	LEAD	7439-92-1	5.0	< 0.25		MG/L
D009	MERCURY	7439-97-6	0.2	0.0003	0.00036	MG/L
D010	SELENIUM	7782-49-2	1.0	< 0.50		MG/L
D011	SILVER	7440-22-4	5.0	< 0.050		MG/L
D012	ENDRIN	72-20-8	0.02	< 0.001		MG/L
D013	LINDANE	58-89-9	0.4	< 0.0005		MG/L
D014	METHOXYCHLOR	72-43-5	10.0	< 0.005		MG/L
D015	TOXAPHENE	8001-35-2	0.5	< 0.01		MG/L
D016	2,4-D	94-75-7	10.0			
D017	2,4,5-TP	93-72-1	1.0			
D018	BENZENE	71-43-2	0.5	< 0.03		MG/L
D019	CARBON TETRACHLORIDE	56-23-5	0.5	< 0.03		MG/L
D020	CHLORDANE	57-74-9	0.03	< 0.005		MG/L
D021	CHLOROBENZENE	108-90-7	100.0	< 0.03		MG/L
D022	CHLOROFORM	67-66-3	6.0	< 0.03		MG/L
D023	o-CRESOL	95-48-7	200.0			
D024	m-CRESOL	108-39-4	200.0 (4)			
D025	p-CRESOL	106-44-5	200.0			
D026	CRESOLS (TOTAL)		200.0 (2)			
D027	1,4-DICHLOROBENZENE	106-46-7	7.5			
D028	1,2-DICHLOROETHANE	107-06-2	0.5	< 0.03		MG/L
D029	1,1-DICHLOROETHYLENE	75-35-4	0.7	< 0.03		MG/L
D030	2,4-DINITROTOLUENE	121-14-2	0.13 (1)			
D031	HEPTACHLOR	76-44-8	0.008	< 0.0005		MG/L
D032	HEXACHLOROBENZENE	118-74-1	0.13 (1)			
D033	HEXACHLOROBUTADIENE	87-68-3	0.5			
D034	HEXACHLOROETHANE	67-72-1	3.0			
D035	2-BUTANONE	78-93-3	200.0	< 0.5		MG/L
D036	NITROBENZENE	98-95-3	2.0			
D037	PENTACHLOROPHENOL	87-86-5	100.0 (3)			
D038	PYRIDINE	110-86-1	5.0			
D039	TETRACHLOROETHYLENE	127-18-4	0.7	< 0.03		MG/L
D040	TRICHLOROETHYLENE	79-01-6	0.5	< 0.03		MG/L
D041	2,4,5-TRICHLOROPHENOL	95-95-4	400.0			
D042	2,4,6-TRICHLOROPHENOL	88-06-2	2.0			
D043	VINYL CHLORIDE	75-01-4	0.2	< 0.05		MG/L

* Based on an EPA draft document.
(1) Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
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(4) m- and p- Cresol concentration can not be differentiated, total m- and p- concentration is reported as m-CRESOL.

Comments:

8080: HEPTACHLOR EPOXIDE < 0.0005 MG/L

MATERIAL IDENTIFICATION

"BENLATE" 50 DF Fungicide

MSDS NUMBER : M00000179
CORPORATE NUMBER : D00021O2

"BENLATE" is a registered trademark of Du Pont.

Revision Date : 21-Jan-91
Date Printed : 06-Aug-91

MANUFACTURER/DISTRIBUTOR
Du Pont
1007 Market Street
Wilmington, DE 19898

PHONE NUMBERS
PRODUCT INFORMATION : 1-(800)441-7515
TRANSPORT EMERGENCY : 1-(800)424-9300
MEDICAL EMERGENCY : 1-(800)441-3637

GRADE : 50% FORMULATION
CHEMICAL FAMILY : BENZIMIDAZOLE

DU PONT REGISTRY NUMBER: OP382-75-6
NFPA RATINGS : Health: 1 Flammability: 1 Reactivity: 0
NPCA-HMIS RATINGS : Health: 2 Flammability: 1 Reactivity: 0
Personal Protection rating to be supplied by user depending on use conditions.

COMPONENTS

Material	CAS Number	%
BENOMYL (METHYL 1-(BUTYLCARBAMOYL)-2-BENZIMIDAZOLECARBAMATE)	17804-35-2	50
INERT INGREDIENTS		50

PHYSICAL DATA

Water Solubility : Dispersible
Odor : None
Form : Solid
Color : Cream
Bulk Density : 28 lbs/cu ft (loose) 36 lbs/cu ft (packed)

HAZARDOUS REACTIVITY

Instability	: Stable at normal temperatures and storage condition
Incompatibility	: None reasonably foreseeable.
Decomposition	: Decomposes with heat. Hazardous gases/vapors produced are n-butyl isocyanate, a strong lachrymator. High humidity or moisture levels and/or high temperatures can also lead to the generation of n-butyl isocyanate.
Polymerization	: Polymerization will not occur.

FIRE AND EXPLOSION DATA

Flammable Limits in Air, % by Volume
LEL : 0.077g/L
Autoignition : 453 deg C (848 deg F)

May be ignited by heat or open flame.

FIRE AND EXPLOSION HAZARDS
Hazardous gases/vapors produced in fire are n-butylisocyanate.

EXTINGUISHING MEDIA
Water Spray. Dry Chemical.

SPECIAL FIRE FIGHTING INSTRUCTIONS
Evacuate personnel to a safe area. Keep personnel removed & upwind of fire. Wear self-contained breathing apparatus. Use water spray. Cool tank/container with water spray.

* HEALTH HAZARD INFORMATION

CAUTION! May irritate eyes, nose, throat and skin. This product may cause a temporary allergic skin reaction in a few susceptible persons.

ANIMAL DATA

INGESTION

LD50: >5,000 mg/kg
Very low toxicity by ingestion.

INHALATION

4 hour LC50: >4 mg/L (rat)
Based on similar dry formulation, Low to moderate toxicity by inhalation.

SKIN

(HEALTH HAZARD INFORMATION - Continued)

LD50: >2,000 mg/kg (rabbit)
Moderately toxic by contact. Male guinea pig - application to shaved skin with formulated product (in distilled water) produced weak sensitization; not a skin irritant for rabbits.

EYE

(Rabbit): Moderate eye irritant. Corneal opacity and other effects were reversed and eyes appeared normal 7 days after exposure.

CHRONIC STUDIES - BENOMYL

FEEDING STUDY (Rat, Dog)

In two-year feeding studies (with 2,500 ppm, the highest dietary level), the no observable effect level was 2,500 ppm for rats and 500 ppm for dogs. In dogs fed 2,500 ppm, there was biochemical evidence of impaired liver function and histologic evidence of liver cirrhosis. No oncogenic effects were observed in rats. In a two-year feeding study with mice, the no-observable effect level was 500 ppm except for changes in the liver. Oncogenic effects were observed in the livers of male and female mice at all dietary levels (500 to 5,000 ppm).

REPRODUCTION (3 Generations)

No adverse effect on reproduction performance at dietary levels as high as 2,500 ppm; no pathological changes found in tissues from weanling pups of F3B generation (2,500 ppm).

TERATOGENICITY (Rat, Rabbit)

Not embryotoxic or teratogenic to rats by dietary administration at levels as high as 5,000 ppm (equivalent to 373 mg/kg/day, approx.). By gavage, statistically significant teratogenic response was obtained at dose levels of 62.5 mg/kg/day and above, but not at 30 mg/kg/day and below. No teratogenic effects were found in studies with rabbits fed 500 ppm in the diet (equivalent to 20 mg/kg/day, approx.).

MUTAGENICITY/GENOTOXICITY

Benomyl has been evaluated in numerous tests for mutagenicity and genotoxicity. The vast majority of these tests were negative. The weight of evidence from all studies indicates that benomyl is not a heritable gene mutagen. It does not interact with cellular DNA, induce point or germ cell mutations. Benomyl is not considered clastogenic. The only genotoxic endpoint for which benomyl produces specific

DU PONT
Material Safety Data Sheet

(HEALTH HAZARD INFORMATION - Continued)

responses in numerical chromosome aberrations or aneuploidy. This is the mechanism by which benomyl exerts its fungicidal activity.

CARCINOGENICITY

None of the components in this material is listed by IARC, NTP, OSHA, or ACGIH as a carcinogen.

APPLICABLE EXPOSURE LIMITS

BENOMYL

AEL * (Du Pont): 3 mg/m3, 8 & 12 Hr. TWA
TLV (ACGIH) : 0.84 ppm, 10 mg/m3 - 8 Hr TWA
PEL (OSHA) : 10 mg/m3, Total Dust - 8 Hr TWA
5 mg/m3, Respirable Dust - 8 Hr TWA

* AEL is Du Pont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

SAFETY PRECAUTIONS

Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling. Wash clothing after use.

FIRST AID

INHALATION

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician

SKIN CONTACT

In case of contact, immediately wash skin with soap and water. Wash contaminated clothing before reuse.

EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION

No specific intervention is indicated as compound is not likely to be hazardous by ingestion. Consult physician if necessary.

PROTECTION INFORMATION

GENERALLY APPLICABLE CONTROL MEASURES AND PRECAUTIONS

Use only with adequate ventilation. Keep away from heat, sparks and flames. Do not consume food, drink or tobacco in the areas where they may become contaminated with this material.

(PROTECTION INFORMATION - Continued)

PERSONAL PROTECTIVE EQUIPMENT

End users of this product should follow Label instructions when using this product. Label instructions state: "During mixing and loading of the concentrated product wear the following: Long sleeve shirt and long legged pants; chemical resistant gloves, apron, shoes, shoe coverings, or boots. Wear a dust mask or a respirator approved by NIOSH when mixing or loading for aerial application.

Wear the following protective clothing during application, equipment repair, equipment cleaning, and during reentry to treated areas before expiration of the 24-hour reentry interval: Long sleeve shirt and long legged pants; chemical resistant gloves, shoes, shoe coverings, or boots."

"Important! Before removing gloves, wash them with soap and water. Always wash hands, face, and arms with soap and water before smoking, eating, drinking or toileting.

After work, take off all clothes and shoes. Shower using soap and water. Wear only clean clothes. Do not use contaminated clothing. Wash protective clothing and protective equipment with soap/detergent and water after each use. Personal and protective clothing worn during use must be laundered separately from household articles. Clothing or protective equipment heavily contaminated or drenched with benomyl must be destroyed according to state and local regulations. Heavily contaminated or drenched clothing cannot be adequately decontaminated."

DISPOSAL INFORMATION

AQUATIC TOXICITY

Benomyl

96 hour LC50, rainbow trout: 0.41 ppm

SPILL, LEAK, OR RELEASE

NOTE: Review FIRE AND EXPLOSION HAZARDS and SAFETY PRECAUTIONS before proceeding with clean up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up.
Dike spill. Prevent liquid from entering sewers, waterways or low areas. Shovel or sweep up.

WASTE DISPOSAL

Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Remove nonusable solid material and/or contaminated soil, for disposal in an approved and permitted landfill. Do not flush to surface water or sanitary sewer system.

BEST AVAILABLE COPY

(DISPOSAL INFORMATION - Continued)

Do not contaminate water when disposing of equipment washwaters.

Do not reuse container; dispose of according to approved Federal, State or Local procedures under the Resource Conservation and Recovery Act.

SHIPPING INFORMATION

DOT

Proper Shipping Name : NOT REGULATED BY D.O.T.

DOT/IMO

Proper Shipping Name : Environmentally Hazardous Substance, Solid, N.O.S. (50% benomyl)
Hazard Class : Class 9
UN No. : UN 3077
DOT/IMO Label : Marine Pollutant
Special Information: (P)
Packaging Group : III

STORAGE CONDITIONS

Store in well ventilated area. Keep container tightly closed. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

TITLE III HAZARD CLASSIFICATIONS

Acute : Yes
Chronic : Yes
Fire : No
Reactivity : No
Pressure : No

ADDITIONAL INFORMATION AND REFERENCES

Never allow "BENLATE" 50 DF to become wet during storage. This may lead to certain chemical changes which will reduce the effectiveness of "BENLATE" 50 DF as a fungicide.

"BENLATE" 50 DF Fungicide is a FIFRA regulated product.

EPA Reg. No. 352-447.

BEST AVAILABLE COP

Material Safety Data Sheet

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS : Du Pont
Agricultural Products
Registration & Regulatory Aff.
Wilmington, DE 19898
800-441-7515

# Indicates updated section.

End of MSDS

H-88320 MATERIAL SAFETY DATA SHEET Page 1 of 8

SECTION I - PRODUCT IDENTIFICATION

Trade Names and Synonyms: METRO-MIX® GROWING MEDIUM
Terra-Lite® Professional Soil Mix

Chemical Names and Family: Covers all Metro-Mix® Blends
Product Use: Plant Bed or Planting Media
Formula: Mixture

CAS# (Chemical Abstract Service): MIXTURE-NA

MSDS Number: H-88320 Cancels MSDS # MEH Date: 03/22/1990

MSDS PREPARED BY: Environmental Health Dept. Construction Products Div.

GRACE SIERRA HORTICULTURAL
PRODUCTS COMPANY

Telephone Number for Information and Emergency Response
(617) 876-1400 X3277/3861

Transportation Hazard Classification

United States DOT	Canadian Regulations
PROPER SHIPPING NAME: Not Applicable	TDG CLASS: Nonhazardous
HAZARD CLASS: Nonhazardous	
IDENTIFICATION #: Not Applicable	
LABEL(s) REQUIRED: Not Applicable	

Surface Freight Classification: Plant Bed Media

NPCA-HMIS Hazard Index:
- Health: 1
- Flammability: 1
- Reactivity: 0
- Personal Protection: B,E (See Section VIII)

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

INGREDIENT (Chemical Name, CAS#, & Common Name)	% By Wt.	TOXICITY DATA: LD_{50} & LC_{50} (See Section IX for Exposure Limits)
May contain one or more of the following:		
Gypsum (calcium sulfate) CAS# 1010-14-4	Up to 5.0%	No Toxicity Data Available
Perlite CAS#73763-70-3	Up to 37.0%	No Toxicity Data Available
Calcium Carbonate CAS# 1317-65-3	Approx. 1.0%	No Toxicity Data Available
Sand (quartz) CAS# 14808-60-7	0 to 4% max.	No Toxicity Data Available.

SECTION III - PHYSICAL DATA/CHEMICAL CHARACTERISTICS

Boiling Point:	Not Applicable	Specific Gravity (H2O = 1)	Not Applicable
Vapor Pressure (mm Hg.)	Not Applicable	% Volatiles	35-40% (As Water)
Vapor Density(AIR = 1)	Not Applicable	Evaporation Rate (Butyl Acetate = 1)	Same As Water
Solubility in Water:	Negligible	pH	4.5 - 6.8

Bulk Density (#/cu. ft): 7.55-22.5 PCF

Appearance and Odor: Coarse, moist, free-flowing particles. Brown in color with earthy smell.

Odor Threshold:
Not Determined

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: Not Applicable
Method Used: Not Applicable
Flammable Limits: LEL NA UEL NA
N.F.P.A. Rating: H-0 F-1 R-0

Extinguishing Media
In case of fire, soak or flood with water.

Special Fire Fighting Procedures
Not Applicable

Unusual Fire and Explosion Hazards
None Known

SECTION V - REACTIVITY DATA

Stable under normal conditions (yes or no): YES

Conditions or Materials to avoid (which may react or cause instability):
This product contains 35-40% water; avoid contact with any materials which may react violently with water.

Hazardous Decomposition or Byproducts:
None Known

Hazardous Polymerization:
Will not occur

Conditions to Avoid:
None Known

SECTION VI - HEALTH HAZARD DATA & TOXICOLOGICAL PROPERTIES

(Include all known acute and chronic effects, signs, and symptoms of exposure and medical conditions generally aggravated by exposure)

Routes of Exposure:

Inhalation:

This product contains 35-40% water which significantly minimizes release of airborne particulates. Dust that may be released in handling may cause symptoms typical of nuisance dust including coughing, sneezing and minor upper respiratory irritation. Long term excessive exposure to quartz dust present in common soil-mix ingredients such as perlite, gypsum and sand components may cause risk of lung damage (silicosis). However, significant exposure is unlikely to occur under typical use conditions.

Skin and Eye:

Direct eye contact may cause minor physical irritation. Skin contact is not expected to cause harmful effects.

Ingestion:

Material is not considered harmful by ingestion.

Carcinogenicity According to NTP, IARC and OSHA:

This product contains ingredients which may contain small amounts of quartz (crystalline silica). Crystalline silica has been classified by IARC, a unit of the World Health Organization, as a Group 2a probable human carcinogen. This product has not been classified as a carcinogen by NTP and/or OSHA.

VII EMERGENCY AND FIRST AID PROCEDURES

In case of EYE contact, do not rub eyes. Flush with plenty of water while holding eyelids apart. If irritation, blinking or tearing occur and persist, consult a physician.

Adverse health effects are not expected if SWALLOWED. Consult a physician if adverse symptoms develop.

If INHALED get fresh air. If symptoms of irritation occur and persist, consult a physician.

SECTION VIII - PREVENTIVE & CONTROL MEASURES

Warning Statements:
CAUTION! MAY CAUSE SLIGHT IRRITATION.

... Contains Vermiculite (CAS# 1318-00-9), Water (CAS# 7732-18-5), Bark and Related Material (CAS# NA), Sphagnum Peat Moss (CAS# NA). May contain: Quartz (CAS# 14808-60-7), Gypsum (CAS# 10101-14-4), Perlite (CAS# 73763-70-3), Calcium Carbonate (CAS# 1317-65-3) and Expanded Polystyrene (CAS# 9003-53-6).
... Eye contact may cause minor physical irritation.
... Inhalation of dust may cause minor upper respiratory irritation with coughing and sneezing.
... Long term overexposure to airborne dust containing quartz (crystalline silica) may cause risk of lung damage (silicosis). IARC has classified crystalline silica as a probable human carcinogen (Group 2a).

Precautionary Measures:
... Avoid contact with eyes.
... Avoid creating dust.
... Provide adequate ventilation and respiratory protection if necessary.
... For professional use only. Keep out of children's reach.

Respiratory Protection:
Not generally required. A NIOSH-approved disposable dust mask (Type TC-21C-XXX) is recommended if dust is created in handling. However, dust levels are expected to be minimal as long as product remains moist.

Ventilation:

Local Exhaust:	Not generally required but should be used where available.
Mechanical:	Not generally required but should be used where available.
Special:	None
Other:	None

Skin Protection:
Not generally required. Work gloves may be desirable to keep hands and fingernails clean.

Eye Protection:
Safety glasses with side shields are recommended to prevent eye contact with dust particles.

Other Protective Clothing or Equipment:
Normal work clothes.

Work/Hygienic Practices:

Observe Precautionary Measures listed above.

Supplemental Information:

One of the primary ingredients in Grace soilless mixes is vermiculite, a naturally occurring mineral that contains Tremolite, a form of asbestos, in the ore body. Grace's mining, milling and expanding processes include systems which reduce the asbestos content of the vermiculite to the lowest feasible levels. These processes typically reduce the respirable tremolite fiber content in the vermiculite to a level of .005% (50 parts per million) by weight or less. Once added to the soilless mix this level is reduced even more.

Current OSHA regulations include a maximum airborne exposure for asbestos fibers or Permissible Exposure Level (PEL) of 0.2 fibers/cc (8 hr. Time Weighted Average), and Excursion Limit of 1.0 fibers/cc (30 minute average) and an Action Level of 0.1 fibers/cc (8 hr. Time Weighted Average). In accordance with this regulation, the vermiculite used to produce Grace soilless mixes, along with its tremolite content, has been blended with water and other raw materials to assure that "during any reasonably foreseeable use, handling, storage, disposal, processing, or transportation no airborne fibers...in excess of the action level and/or excursion limit will be released." (29 CFR 1910.1001 (j) (4) (i). Subsequent provisions of the regulation do not apply where objective data are available to show that the applicable exposure limits will not be exceeded. Further information regarding objective data are available upon request.

0593f

SECTION IX - HAZARDOUS INGREDIENTS EXPOSURE LIMITS - U.S. Only

INGREDIENT:	Exposure Limits OSHA	ACGIH	OTHER
CALCIUM CARBONATE CAS# 01317-65-3	PEL: Total: 15 mg/m^3 Respirable: 5 mg/m3	TLV: Total: 10 mg/m^3	None Established
PERLITE CAS# 73763-70-3	PEL/TWA: 15mg/m ^{3}	TLV/TWA: 10mg/m ^{3}	---
QUARTZ CAS# 14808-60-7	PEL/TWA 0.1 mg/m^3 for quartz as respirable dust	TLV/TWA 0.1 mg/m^3 for quartz as respirable dust	----------
RESPIRABLE DUST* CAS# NA	PEL/TWA: 5 mg/m ^{3}	----	----
TOTAL DUST* CAS# NA	PEL/TWA: 15 mg/m^3	TLV/TWA: 10 mg/m^3	None Established

SECTION X - SPILL & DISPOSAL INFORMATION - U.S. Only

Use methods to clean spilled material which avoid creating airborne dust. Remove for disposal or recycling.

According to the EPA, waste of this product is not defined as hazardous. Consult local and state definitions of hazardous waste to determine if they differ from the EPA. Dispose of waste in accordance with applicable regulations.

SECTION XI - GOVERNMENT REPORTING INFORMATION - U. S. Only

SARA Title III Reporting Information
Tier I & II Hazard Categories: IMMEDIATE-ACUTE

Contains Extremely Hazardous-SARA III Section 302 Ingredient: NO
Comments: Not Applicable

Contains Toxic Chemical Release-SARA III Section 313 Ingredient: NO
Comments: Not Applicable

Other Government Reporting Requirements:
California Proposition 65: Warning! This product contains substances known to the State of California to cause cancer, birth defects or other reproductive harm.

Non-Hazardous Ingredient Disclosure:
Vermiculite (CAS# 1318-00-9), Sphagnum Peat Moss (CAS# NA), Expanded Polystyrene (CAS# 9003-53-6), Water (CAS# 7732-18-5), Bark and Related Materials (CAS# NA).

SECTION XII - PRODUCT IDENTIFICATION/TRADENAME ADDENDUM

None

"THE DATA INCLUDED HEREIN ARE PRESENTED ACCORDING TO W. R. GRACE & CO.-CONN's PRACTICES CURRENT AT THE TIME OF PREPARATION HEREOF, ARE MADE AVAILABLE SOLELY FOR THE CONSIDERATION, INVESTIGATION AND VERIFICATION OF THE ORIGINAL RECIPIENTS HEREOF AND DO NOT CONSTITUTE A REPRESENTATION OR WARRANTY FOR WHICH GRACE ASSUMES LEGAL RESPONSIBILITY. IT IS THE RESPONSIBILITY OF A RECIPIENT OF THIS DATA TO REMAIN CURRENTLY INFORMED ON CHEMICAL HAZARD INFORMATION, TO DESIGN AND UPDATE ITS OWN PROGRAM AND TO COMPLY WITH ALL NATIONAL, FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS APPLICABLE TO SAFETY, OCCUPATIONAL HEALTH, RIGHT-TO-KNOW AND ENVIRONMENTAL PROTECTION."

IX HAZARDOUS INGREDIENTS EXPOSURE LIMITS - Canada Only

Provincial Exposure Limits

Ingredients	ACGIH	ALBERTA	B.C.	ONTARIO	QUEBEC
TOTAL DUST:	10mg/m ^{3} TWA	10mg/m ^{3} 8hr OEL	10mg/m ^{3} 8hr. 20 mg/m ^{3} 15 min.	10mg/m ^{3} TWAEV	10mg/m ^{3} 8hr
RESPIRABLE DUST:	---	5mg/m ^{3} 8hr OEL	---	---	5mg/m ^{3} 8hr
QUARTZ (SILICA)***	0.1mg/m ^{3} TWA ---	0.1mg/m ^{3} 8hr OEL ---	***	0.1mg/m ^{3} TWAEV 0.2mg/m ^{3} CEV	***

CALCIUM CARBONATE: *See Limits for Total Dust and Respirable Dust.*

CALCIUM SULFATE: See Limits for Total Dust and Respirable Dust.

PERLITE: See Limits for Total Dust and Respirable Dust.

*** B.C. & Quebec Regulations for dust containing Quartz: Total Dust 30 mg/m^3 / % Quartz + 2; Respirable Dust 10 mg/m^3 / % Quartz + 2

For additional information, refer to:
American Conference of Governmental and Industrial Hygienists
Ontario Occupational Health and Safety Act
Quebec Environment Quality Act
Alberta Occupational Health and Safety Act
British Columbia Workers' Compensation Act

SECTION X SPILL & DISPOSAL INFORMATION - Canada Only

Use methods to clean spilled material which avoid creating airborne dust. Remove for disposal or recycling.

Dispose of waste in accordance with all applicable regulations.

SECTION XI OTHER GOVERNMENT INFORMATION - Canada Only

HMIS CLASS:
Not Controlled

SECTION XII - PRODUCT IDENTIFICATION/TRADENAME ADDENDUM

None

"The data included herein are presented according to W. R. Grace & Co. of Canada Ltd.'s practical current k the time of preparation hereof are made available solely for the consideration, investigation and verification of the original recipients hereof and do not constitute a representation or warranty for which G assumes legal responsibility. It is the responsibility of a recipient of this data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all federal, provincial and local laws and regulations applicable to safety, occupational health right-to-know and environmental protection."

ATTACHMENT 2

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee
To _____ Location _____
To _____ Location _____
To _____ Location _____
From _____ Date _____

Interoffice Memorandum

TO: District Waste Program Administrators

FROM: Bill Hinkley, Administrator
Solid Waste Section

DATE: August 13, 1991

SUBJECT: Landfilling of Plant Potting Media Contaminated with Herbicide

We have been advised by the Bureau of Drinking Water & Ground Water Resources that certain agricultural producers, in particular, ornamental nurseries, have recently encountered a problem with plant damage due to use of a fungicide product contaminated with a herbicide compound. Growing plants appear to be extremely sensitive to this herbicide contaminant. This has resulted in the need for growers to dispose of plant tissue and potting media. Growers are attempting to dispose of these materials in sanitary landfills but questions have been raised as to the acceptability of landfilling the potting media.

DuPont Agricultural Products, the manufacturer of the fungicide Benlate, has performed the U.S. Environmental Protection Agency Toxicity Characteristic Leaching Procedure (TCLP) analysis on growing media. Results have been reviewed by the Department's Hazardous Waste Section, and found not to be classified as a hazardous waste. (See Attachment) DuPont performed analyses on samples from a variety of growing media.

Therefore, we believe that Benlate contaminated plants and potting media are acceptable for disposal in sanitary landfills, and landfill operators may accept these materials. If you or any landfill operators desire additional information regarding the sampling protocol used to characterize the potting media, contact David Vogel, Administrator, Pesticides and Data Review Section, SunCom 278-3801, (904) 488-3601, or J. Richard Haden, DuPont Agricultural Products, telephone (302) 992-6374, FAX (302) 992-6477.

WWH/tkm

cc: David Vogel
Satish Kastury
J. Richard Haden

AGRICULTURAL PRODUCTS
Walker's Mill, Barley Mill Plaza
P.O. Box 80038
Wilmington, Delaware 19880-0038

July 29, 1991

Mr. Marty Kelly
Director
Highlands County Solid Waste
6000 Skipper Road
Sebring Fl. 33870

Dear Sir:

This letter is to inform you that nursery operators in many Florida counties have approached Du Pont for assistance with disposal of plants and planting media. We believe the most suitable method of disposal for these materials is placement in a sanitary landfill. We have reviewed this with the State of Florida Departments of Environmental Regulation and Agriculture and they have encouraged us to recommend this method of disposal. We request your support for these local businesses by accepting these plant materials, growing media and pots for placement in your landfill.

The plants and nursery material that are being disposed of have been treated with our "Benlate" 50 DF fungicide by these nurseries for control of plant diseases. The owners of these materials have determined that they are not suitable for sale and have decided to dispose of them. We have conducted EPA's Toxicity Characteristic Leaching Procedure (TCLP) analysis on growing media samples representative of the various types of nursery operations in Florida to verify that nothing related to the use of "Benlate" 50 DF would cause the materials to be classified "hazardous" under Florida hazardous waste regulations and Federal RCRA regulations. These tests confirm that pesticides, organics and heavy metals are not present above permitted levels. Copies of the analytical results are attached for your files.

Du Pont is working with growers to arrange removal of plants and growing media from each nursery for delivery to your landfill. We would appreciate your cooperation with these businesses in your community.

Please advise if you have any questions about the attachments or about receiving the materials from local growers.

Roy Hamlin
Jean Sharp
DuPont Centers

Very truly yours,

J. Richard Haden, Jr.

J. Richard Haden, Jr.
Environmental Manager
Du Pont Agricultural Products
Phone: 302-992-6374
FAX: 302-992-6477

800-253-5225

Attachments
cc: David S. Vogel, Florida DER
Richard J. Budell, Florida DACS

BOARD OF COUNTY COMMISSIONERS
HILLSBOROUGH COUNTY, FLORIDA

Office of the County Administrator

Frederick B. Karl
County Administrator

P.O. Box 1110
Tampa, Florida 33601

August 15, 1991

FILE

Mr. J. Richard Haden Jr.
Du Pont Agricultural Products
Walker's Mill, Barley Mills Plaza
P. O. Box 80038
Wilmington, Delaware 19880-0038

Dear Mr. Haden:

The Hillsborough County Department of Solid Waste has received and reviewed your July 29, 1991 letter and supporting analysis relative to the disposal of plants and planting media. While we can appreciate your concern for Florida Nursery Operators and the disposal problem created by Du Pont, the Department of Solid Waste Special Waste Committee continues with it's position that soil, treated or untreated, not be accepted at the Southeast County Landfill. We believe that landfill space is too valuable to be used for materials that do not need to be placed there.

On the other hand, the Committee does recommend the acceptance of plants and the "empty" containers for incineration at the Resource Recovery Facility. The following conditions must be met prior to any acceptance of this waste stream:

1) All plants must be removed from containers.

2) Plant root systems must be as free as possible of all soil content.

3) "Empty Containers" must be free of all soil.

4) "Empty containers" must be made of a burnable type material, such as plastic.

5) Other non-burnable "empty containers" must be transported to the Southeast County Landfill. No soils will be accepted.

Spotters will be utilized to insure the integrity of the waste stream.

Should you have any further questions concerning this issue, please feel free to contact Ernie Mayes at 272-6674.

Sincerely,

Daryl H. Smith, Director
Department of Solid Waste

DHS/em

cc: David S. Vogel, Florida DER
Richard J. Budell, Florida DACS
Special Waste Committee Members

ATTACHMENT 3

HILLSBOROUGH COUNTY

Florida

Office of the County Administrator
Frederick B. Karl

M E M O R A N D U M

DATE: April 14, 1992

TO: Thomas G. Smith, Executive Manager
Department of Solid Waste

FROM: Thomas J. Snow, Waste Reduction Specialist

SUBJECT: Update on Benlate DF

The Department of Solid Waste was contacted on July 29, 1991 by the Dupont Agricultural Products Division advising this Department that numerous nursery operations in Hillsborough County had contacted them in regards to the disposal of tons of plants and planting media.

The plants had been treated with Benlate 50 DF fungicide by the nurseries for the control of plant diseases. Upon application the plants became discolored, disfigured and died. The Benlate 50 DF was manufactured by the Dupont Company in 1987.

Dupont submitted complex analytical data that was obtained using the EPA TCLP Procedure to determine if the plants and plant media were hazardous. These tests confirmed that nothing related to the use of Benlate 50 DF would cause the materials to be classified "hazardous" under Florida hazardous waste regulations and Federal RCRA regulations. The tests submitted to this Department, the State of Florida's Departments of Environmental Regulation and Agriculture confirmed that pesticides, organics and heavy metals were not present above permitted levels.

In order to obtain additional information relative to the health problems associated with the Dupont fungicide, the Department contacted the State of Florida's Department of Agriculture. The Department of Agriculture confirmed that the material to be disposed of was not a hazardous waste and was not regulated. They advised the Department that the Benlate 50 DF was contaminated with atrazine. They further advised that the fungicide was not considered hazardous after it has been applied, little expected environmental hazard was associated with the product, and it is not acutely toxic. Repeated direct contact with the fungicide has, however, been shown to cause allergic skin reactions.

The Department of Solid Waste notified the Dupont Company on August 15, 1991 that the County would accept the plants and plant media for disposal if the following conditions were met:

1) All plants must be removed from the original containers.

2) No soil of any kind associated with this waste would be accepted.

3) Plant root systems must be free of all soil content.

4) Empty containers must be free of all soil.

5) Empty containers must be made of a burnable type material, such as plastic.

All the above material must be disposed of at the Hillsborough County Resource Recovery Facility. Other non-burnable empty containers must be transported to the Southeast County Landfill.

The Department of Solid Waste Special Waste Committee agreed that to place soil in the Southeast County Landfill would be a waste of valuable landfill space and upheld Department policy relative to the non-acceptance of any type soil at the Landfill. The Department considered the possibility of composting the waste material and it was decided that this disposal option was not in the best interest of the County. Compost must be a very clean, weed free, pathogen free material when it is marketed. Therefore, due to the fact that no one, including the Dupont Company, has found a valid reason as to why the Benlate 50 DF that was manufactured in 1987 caused the plants to die. The main objective of the Dupont Company and their insurance company was to have the material destroyed or buried and removed from the farmers' properties.

The Dupont problem has affected the agricultural community throughout this State. To date 18,899 tons of plants and plant media has been disposed of at the County Resource Recovery Facility. This material came from 26 nurseries located in Hillsborough County, Florida.

To date this Department has not been notified in regards to any adverse effects of this material and continue to receive this material at the Resource Recovery Facility. Numerous, recent press articles on this subject have expressed the concern of the agricultural community in regards to the health problems associated with Benlate 50 DF. The articles also indicated that the

University of Florida has on-going tests and research in progress to determine if a health problem is associated with this product. The product has been recalled by the Dupont Company and is not being manufactured at this time.

TJS:lp

cc: Special Waste Committee

OGDEN MARTIN SYSTEMS
OF LAKE, INC.

3830 ROGERS INDUSTRIAL PARK ROAD
OKAHUMPKA, FL 34762
(904) 365-1611

AN OGDEN PROJECTS COMPANY

RECEIVED
JUN 29 1992
Division of Air
Resources Management

June 24, 1992

Mr. Charles Collins
Air Compliance Specialist
Central DER
3319 Maguire Blvd., Suite 232
Orlando, FL 32803

RE: LAKE COUNTY SOLID WASTE RESOURCE RECOVERY FACILITY JUNE 15, 1992 MEETING WITH THE FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION, CENTRAL DIVISION

Dear Mr. Collins:

We appreciated the opportunity to meet with you on June 15, 1992 following receipt of the Department's letter OWL-AS-92-217, received by our Dr. Gary Crane on June 2, 1992. This letter addressed the processing of spent potting medium and vegetation damaged by the application of the fungicide Benlate 50 DF which had been delivered to us by nurseries for disposal at the Lake County Solid Waste Resource Recovery Facility. We believe that the Florida Administrative Code supports our position that spent potting media and vegetation material constitutes municipal solid waste (MSW) as referenced within our facility operating permit and that the incineration of this material at the Lake County Solid Waste Resource Recovery Facility is indeed the most environmentally sound method of disposal for this material.

We will proceed with your recommendation that we seek review of this issue by the appropriate Department personnel in Tallahassee. We are currently preparing a packet of information for review by the Department which fully presents our stated position. Following the Department's review of our submittal, we suggest that a joint meeting be held in Tallahassee to discuss all aspects of this issue and promptly reach resolution.

We would appreciate your office's formal acknowledgement of our response and suggested plan of action.

Please advise me directly of any additional information required in the review of these matters or to expedite coordination of the future meeting we have suggested.

Sincerely yours,

John P. Power
Regional Environmental Coordinator

JPP/pg

cc: C. Shine
A. Alexander
B. Andrews
C. Fancy
J. Glen
P. Lewis
File Lake 1.4 FDER correspondence

Department of Environmental Regulation

Routing and Transmittal Slip

To: (Name, Office, Location)
1. Mrs. Chris Shaver
2.
3.
4.

Remarks:

PSD-FL-113B

The attached request will be processed in the same manner as previous tire issues.

Please address any comments to Bruce Mitchell by May 1, 1992.

From:	Date
C. H. Fancy	4-22-92
	Phone (904) 488-1344

Permit File Scanning Request from _____

Priority: ☐-ASAP (Public Records Request, etc.) ☒-Place in Normal Scanning Queue

Facility ID	Project#/PATS#	Type	PSD #	Submittal Date	Batch #
0690046					

☒ File Approved For Disposal ☑ Correspondence ☐ Intent ☐ Permit ☐ Draft (Title V)

☐ Return File to BAR ☐ Amendment ☐ Application ☐ OGC ☐ Proposed (Title V)

Document Date 4/22/92

Department of Environmental Regulation

Routing and Transmittal Slip

To: (Name, Office, Location)

1. Jewell Harper
2.
3.
4.

Remarks:

The attached request will be processed in the same manner as previous tire issues.

Please address any comments to Bruce Mitchell by May 1, 1992.

PSD-FL-113B

From:	Date
C. H. Fancy	4-22-92
	Phone 904/488-1344

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor — Carol M. Browner, Secretary

March 24, 1992

Mr Joseph Treshler
Odgen Martin Systems, Inc.
P.O. Box 0709
Brandon, Florida 33509-0709

Subject: Minutes of March 10, 1992 Meeting.

Dear Mr. Treshler:

Attached are copies of the minutes of our meeting on March 10, 1992 concerning air testing approach and protocol for the proposed tire burn at your Lake facility. Please let me know, in the next few weeks if you have any comments on the contents of these minutes. I am thanking you for you time and consideration.

Sincerely,

Thomas A. LeDew.
Project Manager,
Solid Waste Section

CC: J. Aldina OPI
P. Lewis BAR
B. Parker BSHW
G. Ball-llovea OML
B. Mitchell BAR
J.R. Clark BSHW
G. Godfrey DER Contracts

March 23, 1992

MINUTES OF MARCH 10, 1992 MEETING BETWEEN FDER SOLID WASTE, FDER AIR REGULATION AND ODGEN MARTIN.

The meeting was held on March 10, 1992 at 10:00 a.m. in room 439 of the Twin Towers office building.

In attendance;

Joe Aldina OPI	George Ball-llovea OML
Joseph Treshler OMS	Bruce Mitchell FDER AIR
Preston Lewis FDER AIR	Jan Rae Clark FDER SW
Bill Parker FDER SW	Gwenn Godfrey FDER Contracts
Tom LeDew FDER SW	

The purpose of this meeting is to discuss testing approach and protocol for burning tires at Odgen Martin's MSW incinerator at Okahumpka.

A question was directed to OMS, what is intention of this test burn proposal? Joe Treshler responded the long range intent was to burn waste tires with MSW with no adverse effect, and to establish the upper limit of tires mixed with MSW.

Bruce Mitchell made the following statements concerning requirements of FDER BAR;

1. Both incineration units must be tested.
2. Permit for waste tire burning run, will be good only for thirty (30) days, All testing must be done in that time.
3. Run incinerators with the maximum anticipated percentage of tires and test, then back off volume of tires if necessary.
4. Direct proposal on this air test to Mr. Clair Fancy, BAR at the above address.
5. A Florida registered P.E. must conduct the testing.
6. Need base line for both incinerators, this data is necessary to obtain approval to conduct the test burn of tires.

Odgen mentioned that annual testing was conducted in January.

B. Mitchell stated that data could probably be used for the baseline.

The attached lists of air tests were handed out. (Table 5, Summary of Test Parameters)

G. Aldina stated that PM10 data is variable, suggested PM5. He would submit background on the PM10 testing, but said it must be looked at with a trained eye.

B. Mitchell suggested Odgen propose any testing variables to BAR.

B. Mitchell was asked to describe the audit trail.

March 10, 1992
Meeting Minutes
Continued

B. Mitchell said to run the plant for about two (2) weeks, then run the tests, assuming the plant is in a steady state.

1. If CO and total HC from baseline test is the same as the tire test, then DOX and FUR are not necessary.
2. However if there is a change in CO and HC, DOX and FUR will be required.
3. B. Mitchell will check with EPA and report the possibility of using CO and HC as an indicator.
4. Baseline test could be run at any time as long as the incinerator was running at full capacity.
5. The reason for testing is to identify the "windows" for burning tires.

Odgen proposes to collect data over a varied mixture of MSW and tires chips.

B. Mitchell said BAR would only permit for bringing plant to a stabilized state and running tests, after testing the burn must stop.

B. Mitchell said;

1. The permit would be classified a minor modification to the existing plant air permit,
2. The fee for the modification would be $250.00 and must be included with the proposal to burn MSW and tires.
3. The permit modification would be good for thirty (30) days from the time the testing starts.
4. The DER District the Okahumpka MSW plant is located, must be notified at least fifteen (15) days in advance of testing.
5. DER will observe testing, person doing observation is not known at this time.
6. DER BAR does not have any specifications for the analytical work other than the EPA methods.

OMS was asked at what rate the lake facility was operating, and when they anticipated submittal of their testing proposal.

OMS replied the plant was operating at 92%, and would submit the proposal in two (2) weeks. (about 3-24)

DER SW asked for submittals requested from our first meeting on February 13, 1992, these included;

1. Data from OMS tire burn in France.
2. Data from OMS tire burn at Huntsville.

OMS was asked what firm would do their analytical work. The reply was they would recommend Entropy, Clean Air or Brown Coldwell.

OMS anticipated their proposal would probably use 750 tons of tires during the one (1) month testing period.

March 10, 1992
Meeting Minutes
Continued

DER Contracts stated that DGS approval must be obtained for contracting for additional testing at a cost plus basis.

OMS will submit cost estimates for the air testing.

T. LeDew will check with the local DER district to determine what permits will be necessary to handle the waste tires for this test.

DER proposed making this contract for as long as possible so there would be sufficient time to line up all materials needed for this test.

OMS said their plant turnaround was planned for the last week in March and first week in April. DER personnel were invited to inspect the plant during this time. Let OML know in advance.

END OF MEETING

TABLE 5

SUMMARY OF TEST PARAMETERS

Particulate Matter PM_{10} / $P.M_{2.5}$	EPA Method 5 EPA Method 201 or 201A
Visible Emissions	EPA Method 9
Metals:	EPA Method 5 (filter and probe rinse)
Aluminum Arsenic Cadmium Chromium (Total) Lead Zinc	Barium Copper Nickel Iron Vanadium
NO_x	EPA Method 7
Sulfur Dioxide	EPA Method 6 (in back half of Method 5 train)
Carbon Monoxide	EPA Method 10
Volatile Organic Compounds	VOST
Semi-Volatile Organic Compounds	Modified Method 5
CO_2/O_2	EPA Method 3
Stack Gas Flow/Moisture/Temp.	EPA Methods 2 and 4 (in conjunction with EPA Method 5)
PCDDS/PCDFS	EPA Method 23
Polynuclear Aromatic Hydrocarbons	Modified Method 5
Benzene	EPA Method 18
Mercury	EPA Method 101 or 101A
HCl	EPA Method 26A

OGDEN MARTIN SYSTEMS, INC.
40 LANE ROAD
FAIRFIELD, N.J. 07007-2615

CL AFR

GARY K. CRANE, PH.D.
EXECUTIVE VICE PRESIDENT
(201) 882-7248

11/15 Jim

FYI
then pass to John B as he will be getting permit mod request. I met with them yesterday.

Bruce – have the probable permit engineer set up a folder then brief both of us today after receipt of application

November 3, 1994

Mr. Alex Alexander
State of Florida
Department of Environmental Protection
Central District
3319 Maguire Boulevard, Suite 232
Orlando Florida 32803-3767

Subject: Warning Letters OWL-AP-94-0298, AP-94-0294, and AP-94-0278

Dear Mr. Alexander:

This is a followup to an October 19, 1994 meeting with Ms. Caroline Shine, Mr. Anatoly Sobelesky, and Mr. Chuck Collins of your staff regarding the above letters. Based on the discussions and agreements reached at that meeting, Ogden Martin Systems of Lake, Inc. (OMSL) wishes to enter an Administrative Consent Order with FDEP to resolve the issues raised in the above Warning Letters and codify the means through which OMSL will address the Department's concerns.

As noted below in Item # 2, OMSL is arranging a meeting with FDEP Tallahassee in the near future to discuss a permit amendment request on processing rate measurement, the subject of warning letter AP-94-0278.

Attached are the following documents discussed during our October 19,1994 meeting:

1. Corrective Action Plan for minimizing pluggage and carbon monoxide during upset events.

   Attachment 1 summarizes Ogden Projects, Inc.'s corrective action plan to minimize potential interruptions in municipal solid waste (MSW) feed to OMSL's combustion units. Standard methods for handling refuse fuel to minimize feedchute/ash discharger pluggage were provided in my October 17, 1994 letter. Attachment 1 also details steps which have been either implemented by OMSL or will be implemented shortly to minimize pluggages and resultant carbon monoxide emissions during upset events.

2. Throughput calculations based on heat release

   Warning letter (OWL 94-0278) addresses facility processing rate. OMSL must respectfully restate that the use of crane load cells as the measure of waste processing rate is inappropriate as these load cells provide only information on the amount of refuse lifted by a given grapple, not the amount charged to the furnace as discussed below.

To our knowledge, no other waste-to-energy facility in the State of Florida is required by permit or regulation to have crane load cell devices installed or operational, nor especially to use any resulting data employed as a compliance monitoring tool.

This stems from two facts:

(1) The load cells themselves require frequent calibration. For each load to be weighed the grapple must be completely stopped, which is not done during normal operations. As crane cells are not compliance monitoring tools, no federal or state regulation requires ongoing calibration. Load cells are found to routinely drift out of calibration, so data generated is inherently imprecise.

(2) Data from the crane cells only approximate the amount of refuse actually charged to any given unit. To minimize potential feed chute pluggage, as documented in our discussions and in materials submitted to you in writing, requires refuse be fed over the lip of the feed hopper. This results in a substantial percentage of MSW, which after being recorded on the crane load cells, to fall back into the refuse pit. Crane load cells data of the type that FDEP and USEPA inspectors observed in OMSL'S internal daily production reports (not intended for compliance monitoring), can systematically overestimate the amount of refuse fed into a unit.

Tables 1 and 3 present the calculation of actual refuse tonnage processed for the days referenced in your September 12, 1994 letter. These throughput numbers are calculated from a reliable engineering method (ASME Power Test Code for steam generating units, PTC 4.1, Section 4 (1972)) based on actual heat release from incoming MSW as measured by actual steam production. Presented are two scenarios for high and low BTU fuel. Even the "low BTU" data (which generally requires more refuse be processed to achieve the boiler's design heat release rate) clearly demonstrates that were such low BTU fuel processed on the days in question, neither unit would have exceeded either the 288 TPD nor heat release limits in the PSD permit.

Table 2, using the same engineering method, presents projected steamflow and heat release which would occur were either high or low BTU fuel fed to the individual units in the quantity indicated by the crane load cells. Comparison to actual facility steamload records for the days in question, as shown in Table 1, highlights the fact that crane cell data overestimates actual waste processed.

3. Chronology of Throughput Correspondence.

Attachment 2 is a chronology of the somewhat lengthy correspondence between the Department and OMSL attempting to clarify and coordinate Air and Solid Waste permit language on maximum permitted throughput. OMSL will investigate approriateness of a formal permit language amendment to clarify allowable throughput mesurement and averaging period.

As your staff recommended, OMSL will seek to clarify the long-standing discrepancy between air and solid waste permit's averaging periods and confirm an appropriate method to demonstrate daily charging rate through permit amendment processes. A recent Department decision which gives Ogden comfort that this permit issue can be successfully resolved is approval of a permit amendment for Ogden's Hillsborough facility,

authorizing steam flow as an acceptable surrogate for hourly and daily charging rate limitations. This approval also accepts demonstration of compliance with an annual average charging rate based on truck scale records (52 week rolling average of solid waste received and processed).

We therefore request that, pending outcome of permit amendment efforts and dialogue with FDEP in Tallahassee on the processing rate, that the ACO we have agreed to enter include the following:

A) FDEP acknowledgement of Ogden's assertions about the limitations of crane load cell data,

B) during the effective term of the ACO, OMSL demonstrate compliance with the 288 TPD throughput daily limit consistent with the above ASME method, and

C) that the ACO will terminate as of the date of a final Department determination on OMSL's permit amendment to address the method of measuring MSW throughput.

We appreciate the time and effort which your staff has taken to work with us during the review of these various concerns.

We look forward towards successful resolution of any remaining concerns and would appreciate the opportunity to work with FDEP in development of the administrative consent order document.

Sincerely yours,

Gary K. Crane, Ph. D.

cc: Chuck Collins
Caroline Shine
Howard Rhodes
Cecil Boatwright
Jason Gorrie
Drew Lehman
Kurt Rieke

Attachment 1

OMS of Lake, Inc.

1. As of August 31 of this year, OMS Lake completed an enhanced training program for crane operators. All operators have been "re-trained" on refuse handling procedures, with an emphasis on materials that may have the potential to plug feedchutes. This training will be reconducted every year.

2. OMS Lake has enhanced the preventative maintenance schedule for the microwave sensors serving the feedchute, by increasing the schedule from yearly to quarterly. The enhanced schedule will provide the operators with improved confidence that any plug within the feedchute will be detected by the sensors.

3. OMS Lake has upgraded the Continuous Emissions Monitoring System computer to display 1-minute CO averages, as opposed to the 15-minute averages previously employed. The new program allows operators to instantaneously react to any elevated CO reading observed by the CO analyzer.

4. OMS Lake has reconfigured the CEM display monitor, such that it can now be observed from any point within the control room.

5. OMS Lake has upgraded the components of the auxiliary gas burner system. The upgrades have resulted in a more reliable system, thus providing operators with an additional tool to minimize CO formation.

6. OMS Lake has replaced the lenses on the cameras viewing the feedchutes. This has enabled a clearer picture of the feedchute system.

7. OMS Lake intends to install a purge air system around the casing of the lens of the camera viewing the feedchute. Such a system will prevent dust from building up on the lens, thus providing a much clearer picture of the feedchute, enabling operators to identify potential pluggages in a much more rapid fashion.

Table 1.
Ogden Martin Systems of Lake, Inc.
Process Rate Based on Measured Steam Flow

Date	Indicated Crane Scale Tonnage (TPD)	Calculated Throughput[1] (TPD)	BTU Per/lb	Calculated Heat Release BTU/Hour	Actual Average Daily Steam Flow lbs/Hour
June 8, 1994	306	252 270	5,100 4,750	107,000,000 107,000,000	61,800 61,800
June 9, 1994	291	256 275	5,100 4,750	109,000,000 109,000,000	62,900 62,900
June 10, 1994	292	252 270	5,100 4,750	107,000,000 107,000,000	61,400 61,400
June 23, 1994	289	256 275	5,100 4,750	109,000,000 109,000,000	62,700 62,700
June 25, 1994	294	235 253	5,100 4,750	100,000,000 100,000,000	57,700 57,700
July 24, 1994	289	214 230	5,100 4,750	91,000,000 91,000,000	52,600 52,600
August 16, 1994	319	252 270	5,100 4,750	107,000,000 107,000,000	61,500 61,500

Notes

[1] Measured heat capacity of OMSL boiler = 1,739 BTU/lb of steam flow.
See Table 3 for calculation.

Table 2.
Ogden Martin Systems of Lake, Inc.
Projected Boiler Parameters Using Crane Scale Tonnage

Date	Indicated Crane Scale Tonnage	BTU Per/Lb	Projected[2] Heat Release at Crane Scale Tonnage (MMBTU/Hr)	Projected[2] Steam Flow at Crane Scale Tonnage (MMBTU/Hr)	Actual Daily Average Steamflow (Lbs/Hr)
June 8, 1994	306	4,750 5,100	121,000,000 130,000,000	69,580 74,756	61,800
June 9, 1994	291	4,750 5,100	115,000,000 124,000,000	66,130 71,305	62,900
June 10, 1994	292	4,750 5,100	116,000,000 124,000,000	66,705 71,305	61,400
June 23, 1994	289	4,750 5,100	114,000,000 123,000,000	65,555 70,730	62,700
June 25, 1994	294	4,750 5,100	116,000,000 125,000,000	66,705 71,880	57,700
July 24, 1994	289	4,750 5,100	114,000,000 123,000,000	65,555 70,730	52,600
August 16, 1994	319	4,750 5,100	126,000,000 136,000,000	72,455 78,206	61,500

Notes

[1] Measured heat capacity of OMSL boiler = 1,739 BTU/lb of steam flow.
See Table 3 for calculation.

[2] Neither projected heat release nor steam flow actually occurred.
They are projected heat release values based on indicated crane scale tonnages.

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Table 3.
Ogden Martin Systems of Lake, Inc.
Sample Calculation Heat Release/Throughput

8 9 10	B	C	D	E	F
11 12 13	Date	BTU Per/lb	Heat Release BTU Per Hour	LB Steam Flow Per/Hr. (3-Hr. Avg.)	Fuel Tonnage (TPD)
14 15 16 17 18	June 8, 1994	5,100 4,750	@Round(E15*1739,-6) @Round(E16*1739,-6)	61,800 61,800	((D15/C15)/2000)*24 ((D16/C16)/2000)*24
19 20 21	Calculated lbs. Steam at Reported Tons Processed (PSD conditions)	5000	@Round((C21*2000*F21)/24,-6)	+D21/1739	306

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ATTACHMENT 2

ITEM NO.	DATE	EVENT SUMMARY
1	11-8-88	Mr. A. Alexander modification of permit conditions letter to OMSL changes solid waste limit from a maximum of 500 tons per day of solid waste received to "576 tons per day computed as an annual average (total annual tons of solid waste divided by the total number of operating days per year)."
2	2-8-91	Mr. A. Alexander issues solid waste permit to operate which states that "the facility has a maximum processing rate of 528 tons/day nominal which includes operating 24 hours per day, seven (7) days per week."
3	3-8-91	OMS letter to G. Cheryan, FDEP Solid Waste Permitting, Orlando Office, requests clarification that facility is designed to operate up to a maximum of 576 TPD as an annual average. OMS letter specifically requests clarification "to maintain consistency between the solid waste permit and conditions in the air permit for this facility." OMS specifically requests FDEP assistance in clarifying the written record with respect to processing rate. Letter copied to Mr. Richard Tedder (SW) and Clair Fancy (Air), FDEP Tallahassee.
4	3-26-91	Mr. A. Alexander letter again modifies solid waste permit to "reflect that the actual maximum throughput for the above referenced facility shall be 576 tons per day of solid waste computed as an annual average (total annual tons of solid waste divided by the total number of operating days per year)."
5	6-26-91	OMS letter to Alan Zahm, FDEP Orlando District Office Air permitting, specifically indicates "units have a combined maximum capacity of handling 576 tons of MSW per day, computed as an annual average, etc." Attached facility description accompanying that application for air permit to operate specifically cites design capacity as 576 TPD.
6	12-6-91	Air operating permit issued by A. Alexander references 250 TPD limit. OMS requests air permit reflect previously approved (Item Nos. 1 and 7) 576 TPD language.
7	1-29-92	Amended air operating permit issued by A. Alexander (superceded (Item No. 6) amending 12/6/91 air permit to specify 288 TPD maximum (equal to 576 TPD facility wide) individual MWC throughput.

Attachment 2
Item 1

Florida Department of Environmental Regulatio

Central District • 3319 Maguire Boulevard, Suite 232 • Orlando, Florida 32803-3767 • 407-894-7

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretar
Alex Alexander, Deputy Assistant Secre

November 8, 1988

Ogden Martin Systems of Lake, Inc.
40 Lane Road, CN 2615
Fairfield, NJ 07007-2615

OCD-SW-88-1107

Attn: Gary Crane,
Vice President

Lake County - SW
Lake County Waste to Energy Facility
(NRG/Recovery Group, Inc.)
Permit No. SC35-117519
Modification of Conditions

Dear Mr. Crane:

We are in receipt of your request for modification of a permit condition. The condition is changed as follows:

Condition	From	To
Specific Condition #21	The facility shall have a maximum capacity of 500 tons of solid waste received per day.	The facility shall receive a maximum of 1,000 tons of solid waste on any given day and a maximum of 576 tons of solid waste per day computed as an annual average (total annual tons of solid waste divided by total number of operating days per year).

All other conditions of this permit remain unchanged.

This letter must be attached to permit number SC35-117519 and becomes a part of that permit.

Sincerely,

A. Alexander, P.E.
Deputy Assistant Secretary

AA/ats/ew

Florida Department of Environmental Regulation

Central District ● 3319 Maguire Boulevard, Suite 232 ● Orlando, Florida 32803-3767 ● 407-894-7555

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary
Alex Alexander, Deputy Assistant Secretary

NOTICE OF PERMIT

Ogden Martin Systems of Lake, Inc.
40 Lane Road
Fairfield, New Jersey 07007-2615

Attention: Dr. Gary Crane
Executive Vice President

Lake County - SW to Energy Facility
Lake County Resource Recovery Facility

Dear Dr. Crane:

Enclosed is Permit Number SO35-187342, dated 2-5-91, to operate the Lake County Resource Recovery Facility issued pursuant to Section 403.061(14) and 403.707, Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Order is filed with the Clerk of the Department.

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

A. Alexander
Deputy Assistant Secretary
3319 Maguire Boulevard
Suite 232
Orlando, Florida 32803

FILING AND ACKNOWLEDGEMENT

FILED, on this date, pursuant to Section 120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk Date

AA/gcw

Copies furnished to:

Glan Griswold
L. Peter Young
John Reese, DER - Tallahassee
Don Findell, Director, Lake County Environmental Services
Richard Roof, Director, Lake County Pollution Control
Fred Wick, DER - Tallahassee

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on 2/11/91 to the listed persons, by E. D. Williams

Florida Department of Environmental Regulation

Central District ● 3319 Maguire Boulevard, Suite 232 ● Orlando, Florida 32803-3767 ● 407-894-7555

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary
Alex Alexander, Deputy Assistant Secretary

Permittee:
Ogden Martin Systems of Lake, Inc.
40 Lane Road
Fairfield, New Jersey 07007-2615

Attention: Dr. Gary Crane
Executive Vice President

I. D. Number:
Permit/Certification Number
SO35-187342
Date of Issue:
Expiration Date: 12/20/95
County: Lake
Section/Township/Range:
15 & 22/20 South/24 East
Latitude/Longitude:
28°44'25"/81°53'20"
Project: Lake County Resource Recovery Facility

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-4 and 17-701. 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:

To operate the Lake County Resource Recovery Facility designed to receive, handle and combust solid waste for the generation of steam and power.

The facility occupies 13.5 acres and is within the property boundary of 15.0 acres.

The facility has a maximum processing rate of 528 tons/day nominal which includes operating 24 hours per day, seven (7) days per week.

LOCATION: The waste to energy facility is located west of Haywood Farm Road, one-half mile south of County Road 48 on 3830 Rogers Industrial Park Road in Okahumpka, in Lake County, Florida.

General Conditions are attached to be distributed to the permittee only.

Attachment 2
Item 3

Best Available Copy

OGDEN MARTIN
SYSTEMS, INC.

[illegible]
[illegible]
[illegible]

[illegible]
MANAGER [illegible] COMPLIANCE
[illegible]

March 8, 1991

Mr. George Cheryan
Florida Department of Environmental Regulation
Central District
3319 Maguire Blvd., Suite 232
Orlando, FL 32803

SUBJECT: LAKE COUNTY WASTE TO ENERGY FACILITY
PERMIT NO. SO35-187342

Dear Mr. Cheryan:

Responding to the February 8, 1991 Operating Permit issued by Mr. A. Alexander of your office and as follow-up to our March 5, 1991 telephone conversation together with Mr. Brian Bahor of Ogden Projects, we request the following clarification be made to the subject permit. We are seeking to clarify use of the term nominal when used with the facility throughput rate of 528 tons per day.

As stated in the enclosed November 8, 1988 permit modification issued by Mr. A. Alexander on this project, the Lake County facility is designed to operate up to a maximum of 576 tons per day of solid waste, computed as an annual average.

This clarification is requested to maintain consistency between the solid waste permit and conditions in the air permit for this facility (see attached), where the maximum throughput per municipal waste combustor unit shall not exceed 288 tons per day, i.e., 115% of the design rated capacity of 250 tons per day, per unit.

Your assistance will be greatly appreciated in clarifying the written record to reflect that the actual maximum throughput would be 576 tpd, annual average. The nominal rate of 528 tons per day

cited in our solid waste permit application and your February 8, 1991 operating permit is essentially the mid-point of the 500 tpd to 576 tpd normal operating range of this facility.

Thank you for your continued assistance.

Very truly yours,

Andrew T. Lehman, Manager
Environmental Compliance

ATL:lkm
correspd.dft
lkm\d

Atta.

cc: R. Tedder (FDER)
C. Fancy (FDER)
G. Ball-Llovera (OMSL)
B. Bahor (OPI)

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

Mr. Walt Walters, President
NRG Recovery Group
1616 Athens Street
Lakeland, Florida 33803

February 24, 1988

Enclosed is permit No. AC 35-115379, PSD-FL-113, for Lake County Waste to Energy Facility NRG Recovery Group to construct two 250 tons per day (design capacity) municipal solid waste fired combustors which will generate steam and produce nominally 12.3 megawatts of electricity. The proposed waste recovery facility wil be located on Jim Rogers Road, Okahumpka, Lake County, Florida. This permit is issued pursuant to Section 403, Florida Statutes.

Any Party to this permit has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this permit is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

Copy furnished to:

Tom Sawicki, CF Dist.
Barry Andrews, DER
Tom Rogers, DER
Wayne Aronson, EPA
Miguel Flores, NPS
R.V. Chalfant, LGM
Dan Robuck, Esq.

GENERAL CONDITIONS:

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

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

SPECIFIC CONDITIONS:

1. Municipal Waste Combustor

a. Each of the two municipal waste combustors (MWC) shall have a design rated capacity of 250 tons Muncipal Solid Waste (MSW) per day, 104 million Btu input per hour and 60,200 pounds steam output per hour with MSW having a heating value of 5,000 Btu per pound.

b. The maximum individual MWC throughput shall not exceed 288 tons per day, 120 million Btu per hour and 69,000 pounds steam per hour, (3-hour average).

(LK-11)

Florida Department of Environmental Regulat.
Central District • 3319 Maguire Boulevard, Suite 232 • Orlando, Florida 32803-3767 • 407-8
Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Sec
Alex Alexander, Deputy Assistant

November 8, 1988

Ogden Martin Systems of Lake, Inc.
40 Lane Road, CN 2615
Fairfield, NJ 07007-2615

OCD-SW-88-1107

Attn: Gary Crane,
Vice President

Lake County - SW
Lake County Waste to Energy Facility
(NRG/Recovery Group, Inc.)
Permit No. SC35-117519
Modification of Conditions

Dear Mr. Crane:

We are in receipt of your request for modification of a permit condition. The condition is changed as follows:

Condition	From	To
Specific Condition #21	The facility shall have a maximum capacity of 500 tons of solid waste received per day.	The facility shall receive a maximum of 1,000 tons of solid waste on any given day and a maximum of 576 tons of solid waste per day computed as an annual average (total annual tons of solid waste divided by total number of operating days per year).

All other conditions of this permit remain unchanged.

This letter must be attached to permit number SC35-117519 and becomes a part of that permit.

Sincerely,

A. Alexander, P.E.
Deputy Assistant Secretary

AA/ats/ew

Florida Department of Environmental Regulation
Central District • 3319 Maguire Boulevard, Suite 232 • Orlando, Florida 32803-3767
Lawton Chiles, Governor
Carol M. Browner, Secretary

March 26, 1991

Ogden Martin Systems of Lake, Inc.
40 Lane Road
Fairfield, New Jersey 07007-2615

OCD-SW-91-0125

Attn: Dr. Gary Crane
Executive Vice President

Lake County - SW to Energy Facility
Lake County Resource Recovery Facility
Permit No. SO35-187342 (Modification)

Dear Dr. Crane:

Your request submitted March 12, 1991 regarding clarification of processing rates for the Lake County Resource Recovery Facility is considered to be a minor modification.

Permit No. SO35-187342 is modified to reflect that the actual maximum throughput for the above referenced facility shall be 576 tons per day of solid waste computed as an annual average (total annual tons of solid waste divided by the total number of operating days per year). The nominal rate of 528 tons per day is essentially the mid-point of the 500 tons per day to 576 tons per day normal operating range of this facility.

All other conditions of the subject permit remain unchanged.

This letter must be attached to your permit and becomes part of that permit.

Sincerely,

A. Alexander, P.E.
Deputy Assistant Secretary

AA/gcw

RECEIVED
APR 1 1991
ENVIRONMENTAL DEPT.

cc: A. T. Lehman, Manager, Environmental Compliance
L. P. Young
John Reese, DER - Tallahassee
Don Findell, Director, Lake County Environmental Services
Richard Roof, Director, Lake County Pollution Control

OGDEN MARTIN SYSTEMS, INC.

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

AN OGDEN COMPA

June 26, 1991

Mr. Alan D. Zahm, P.E.
Supervisor, Permitting
Air Resources Management
Florida Department of Environmental Regulation
3319 Maguire Boulevard
Suite 232
Orlando, Florida 32803-3767

SUBJECT: LAKE COUNTY RESOURCE RECOVERY FACILITY
APPLICATION FOR PERMIT TO OPERATE AN AIR POLLUTION SOURCE
(AC35-115329)
RESPONSE TO COMPLETENESS SUMMARY

Dear Mr. Zahm:

This letter is in response to your request for further information to complete the Application to Operate an Air Pollution Source for the Lake County Resource Recovery Facility, which is operated by Ogden Martin Systems of Lake, Inc.

Responses to each of your comments are given below.

1. **Clarify whether the completed facility deviates from the construction application by describing any changes.**

   The completed Facility deviates from the description given in the construction application in various ways. The original Facility description has been updated to describe the completed Facility and is attached as Attachment A. All changes that have been made to that description are shown in highlighted print. The major deviations are listed below.

   WASTE HANDLING

   The truck scale is 80 feet long.

   The waste storage pit has 3 days storage volume (2376 tons).

   Each of the two refuse cranes has a capacity of 7 tons.

   The units have a combined maximum capacity of handling 576 tons of MSW per day, computed as an annual average (total annual tons of solid waste divided by the total number of operating days per year).

ENERGY RECOVERY

The superheater outlet design conditions are 865 PSIG and 830°F.

The steam turbine generator is an extraction-condensing unit with a nominal throttle condition of 850 PSIG/825°F.

AIR EMISSION CONTROLS

The air emission control system consists of a baghouse for particulate control and a dry scrubber for acid gas control.

The average flue gas flow rate is 59,400 acfm at 270°F, and flue gas velocity is approximately 70 feet per second at the stack.

The stack height is 199 feet to the top of the flues.

The baghouses are supported by a mat foundation, as are the economizers and dust collectors.

STRUCTURES

The area of the site is approximately 15 acres.

The site is enclosed by a 7-foot chain link fence with access through one automated gate and one manual emergency gate.

The final dimensions of several buildings are different from the original predicted dimensions. They are as follows:

The refuse building is approximately 163' long x 71' wide x 102' high at the eaves, and the truck unloading enclosure is 128' long by 90' wide and 30 feet high at the low eave.

The refuse pit is 101.5' long by 47' wide by 27' deep.

The turbine-generator building is approximately 80' long by 60' wide by 58' high.

The administration building is approximately 96' long by 57' wide by 14.5' high.

Access to the tipping building is through two 16' wide by 20' high motor-operated doors.

OTHER SYSTEMS

Water is circulated to the condensor by two 50% capacity pumps.

2. Clarify the status of the facility's design to handle the permitted biohazardous waste.

Ogden Martin Systems of Lake, Inc. is in the process of procuring the conveyor belt and ancillary equipment that will deposit biohazardous waste directly into the refuse hopper. The Florida DER will be notified of its installation.

(Note: The facility will also process sanitized (autoclaved) medical waste, which will be handled similar to that of normal MSW [i.e., co-mingled in the pit in lieu of a conveyor to hopper]).

3. Identify the process data in Volumes 2 and 3 which you wish to be considered confidential, and the reasons for this request.

Only data from Volume 3 of the Environmental Test Report should be considered confidential. These include the process data that are used in controlling and refining every aspect of the combustion process, such as pressure and temperature at different points along the combustion train and added combustion air flow rates, as well as resulting steam flow rates and pressure. Competitors could possibly use this valuable information to undermine the competitive advantage Ogden Martin has gained because of the knowledge gathered from its operating facilities.

4. Identify the composition of the municipal solid waste which was used during the compliance test.

The waste combusted during the January, 1991 Compliance Tests was mostly residential waste, as is the entire Lake County waste stream. The Lake County Department of Environmental Services writes that they believe that the waste received just prior to and during compliance testing is representative of the waste types that will be received daily during ongoing operations (see Attachment B).

Copies of the scale house log sheets during the period of performance testing as well as one week prior to testing are included in Attachment B to support this.

Sincerely yours,

for Caroline G. Nagge
Environmental Planner

CGN:lkm
quescomm.ltr
lkm\c

Atta.

cc: L. Peter Young
John Turner, FDER
George Ball-Llovera

FACILITY DESCRIPTION

The overall facility is designed for the efficient receipt, handling and combustion of municipal solid waste for the generation of steam and power and for the disposal of ash residues. Within this overall purpose, the following items are pertinent:

- Fuel Handling Equipment
- Steam Generation Equipment
- Power Generation
- Environmental Systems
- Structures
- Sitework

Each of these items are discussed in the following sections.

FUEL HANDLING EQUIPMENT

Waste will be received from municipal and/or contractor trucks principally on a five day week basis. An above ground 60 ton truck scale **(80 feet long)** is provided in the access road to the unloading area. The scale is remotely monitored, with weight data recorded by computer.

The trucks are routed to a waste pit provided with unloading bays. The waste will be dumped in the pit which has approximately **three days storage** volume **(2376 tons)**. Two overhead cranes provided with grapple feeders service this area for distribution of the waste to the combustion equipment. Either crane is capable of servicing the design throughput of the facility while the other crane is being maintained. The crane operating station will be **located in the Main Control Room**, with complete visibility of the waste pit to allow for control of either crane. Each crane has a capacity of **7 tons**.

STEAM GENERATION EQUIPMENT

Waste is distributed to two boilers for combustion and generation of steam. The combustion system for each boiler consists of a waste hopper, hydraulic ram feeder and reciprocating grates. Waste is fed into the furnace by the hydraulic ram feeder which responds to steam load requirements. The combustion process is further controlled by modulating the reciprocating grates and the undergrate combustion air. Negative furnace pressure is controlled by modulating the inlet dampers to the induced draft fan. An overfire air system is used to provide

turbulence throughout the lower section of the furnace resulting in optimum combustion. Both the undergrate air and the overfire air fans take suction from the waste pit area to aid in ventilation and provide odor control.

Steam is generated in two circulation boilers with water cooled furnace walls. The units are designed to operate at 865 PSIG/830°F at superheater outlet. They have the capability of handling a combined maximum capacity of 576 tons of MSW per day (annual average). The steam generation system includes an economizer, boiler and superheater. Furnace volume and gas path areas are liberally sized for proper combustion of the municipal solid waste with an assumed heating value of 5,000 Btu/lb. The sizing also ensures good superheater, convection bank and economizer tube life and heat transfer. Retractable soot blowers are provided in the convection bank and at the entrance to the superheater areas and rotary soot blowers are provided in the economizer areas, in order to maintain clean, efficient heat transfer surfaces.

Materials of construction are selected to ensure that corrosion and mechanical wear problems associated with municipal solid waste combustion are minimal.

The feedwater system consists of the following:

Demineralizer
Demineralized Water Storage Tank
Demineralized Water Transfer Pumps
One Continuous Boiler Blowdown Heat Exchanger
to Heat the Water to the Deaerator
One Motor Driven Feedwater Pump
One Turbine Driven Feedwater Pump
Using Steam From the 180 PSI Extraction Point
on the Power Turbine
Deaerator, Complete with Trim
One Chemical Feed Set for the Boilers
One Chemical Feed Set for the Deaerator

All hot pipes and breeching with usable energy are insulated and lagged for outdoor service. Other hot lines and breeching are insulated and lagged where required for personnel protection.

A set of platforms and stairs are supplied to serve all operating points of all equipment. An additional egress mode is supplied in the form of OSHA standard ladders.

All equipment is completely piped per applicable codes.

The instrumentation and control systems allow automatic or manual operation of the stoker, feedwater flow and feedwater treatment system.

A cooling tower to cool the circulating water of the steam condenser is installed. Cooling air is induced over the trickling water by fans in the top of the tower. To control algae and other contaminants, a chemical feed set is installed.

Water is circulated back to the condenser by two 50% capacity pumps.

The following station service, instrument and controls work is installed:

- motor control centers
- instrument and control panel boards
- complete electrical raceway system
- all power and control wiring
- complete indoor and outdoor lighting system per OSHA and NEC
- TV and communication system

POWER GENERATION

A single steam turbine generator is used to generate power at approximately 12.3 MW for distribution to the utility grid. This steam turbine generator is an extraction-condensing unit with a nominal throttle condition of 850 PSIG/825°F, extractions of 180, 55 and 16.5 psia and an exhaust pressure of 3 inch HgA. This generator is supported with the normal auxiliary equipment such as air ejection equipment, gland seal equipment and condensate pumps. The generator is designed to utilize the steam flow from both boilers when operating at full load.

A primary feeder from the generator to the utility breaker and meter station is installed, in addition to a full complement of switchgear.

ENVIRONMENTAL SYSTEMS

The pollution control and ash handling systems is designed to provide for disposal of combustion products in an environmentally acceptable manner. This is accomplished by the installation of equipment to capture fly ash and bottom ash. Bottom ash and fly ash are water quenched in The Ash Dischargers and subsequently discharged onto an ash conveyor system which conveys the ash to storage bunkers. Fly ash is collected in the boiler pass and economizer hoppers and routed by gravity through rotary seal valves to the ash discharger.

The final control of fly ash is accomplished by a baghouse. This equipment provides for the particulate collection efficiencies mandates by environmental regulations. Fly ash that is collected by the baghouse will be routed through rotary seal valves and screw conveyors to the ash discharger. The combustion

gases of each boiler are drawn through the system by an induced draft fan. Each fan discharges into a free standing stack complying with EPA height standards. The stack is fitted with test ports and platform with access ladder.

The process wastewater system collects boiler blowdown, demineralizer regenerant wastes, floor drains in the water treatment area and the chemical treatment area, and the cooling tower blowdown. The process wastewater is disposed of in a three-cell percolation pond.

Sanitary waste is processed by a septic tank system.

STRUCTURES

The refuse building is approximately 163 feet long by 71 feet wide by 102 feet high at the eaves, plus 128 feet long by 90 feet wide truck unloading enclosure which is 30 feet high at the low eave. The refuse building encloses the refuse pit (101.5 feet by 47 feet wide by 27 feet deep). Structures are wide flange steel column and beam with appropriate cross bracing, channel girts to support siding and LH bar joists for the roof of the larger building. Uninsulated painted metal siding and roofing is used to enclose the refuse building and truck unloading area. Also enclosed in the refuse building are the electrical rooms control room and crane operator control area which are all "stacked" adjacent to the refuse pit side wall. Additionally, there is the turbine/generator building that is approximately 80 feet long by 60 feet wide by 58 feet high, and the administration building that is 96 feet long by 57 feet wide by 14.5 feet high. The control room and administration building are air-conditioned. The boilers are supported on structural steel outside the building. Crane operator space is located in the control room.

Access to the unloading building is through two 16 feet wide by 20 feet high motor operated doors. Cranes are controlled from the crane operator's area. Crane rails run the entire length of the building, allowing the grapples to rest on the end mezzanines. Stoker supply hoppers are supported on a structural steel frame.

Men's and women's locker rooms, showers and restrooms are located at the administration building level. Included are basic lockers, benches and toilet accessories.

Air-conditioning for the control room is supplied by ducts from a central air-conditioning unit. Shower, locker, and restrooms are ventilated with outside air by exhaust fans.

A fire protection system is installed to include Halon in control room, plus sprinkler systems in the pit area. A fire hose stand pipe is located in the boiler area. The fire protection loop is fed by a storage tank and fire pump and

encompasses the facility. Three fire hydrants are located on each side of the building. There is also one at the scale house and one at the cooling tower.

Baghouses are supported by a mat foundation as are the boilers, economizers, and dust collectors. The ash removal system is supported by structural steel. All other equipment outside the building, including the Turbine Generator, is on concrete slabs at or near existing grade.

Soil bearing capability is based on 2,000 lb/sf. The Turbine Generator is housed in a **building** with interior lighting and ventilation. Turbine maintenance or a repair service company supplies necessary structural framework and lifts for this structure as necessary.

SITEWORK

Spread footings and mat foundations are considered adequate for all structures and equipment. Maximum depth of excavation considered is 10 feet, with the water table assumed lower than 10 feet. No extensive dewatering is considered.

The site is approximately 15 acres; a 15 feet wide gravel (8 inches compacted locally available aggregate) entrance and perimeter road serving all facilities is included. A concrete maneuvering apron is provided in front of the enclosed truck unloading area. Also included in the civil work is excavation for the refuse storage pit.

Landscaping consists of grading, replacing topsoil and reseeding (with grass) areas disturbed by construction.

The site is enclosed with a 7 foot chain link fence with access through one automated operated gate and one manual emergency gate.

EMISSION CONTROL DESIGN DETAILS

1. Type:

   Scrubber/Baghouse

2. Gas flow:

   59,400 acfm at 270°F at stack exit

3. Gas velocity:

   70 fps at stack exit

4. Specific collection area:

   N/A

5. Outlet gas particulate concentration:

   Guaranteed 0.0150 gr/dscf corrected to 12% CO_2

BOILER DESIGN DETAILS

1. Fuel:

   Unprepared municipal solid waste (MSW)

   Design heat value: 5000 Btu/lb

   Design moisture content: 24.4%

   Design ash content: 23.4%

2. Boiler type:

   Mass burning water-wall furnace

3. Boiler efficiency:

   70% approximate

4. Heat release:

   <10,000 Btu/cu. ft/hr

5. Design capacity:

   288 tons MSW/day per unit or a 576 TPD maximum throughput (annual average)

   110 MBtu/hr

Attachment 2
Item 6

Florida Department of Environmental Regulation

Central District • 3319 Maguire Boulevard, Suite 232 • Orlando, Florida 32803-3767

Lawton Chiles, Governor

Carol M. Browner, Secretary

NOTICE OF PERMIT ISSUANCE

Ogden Martin Systems of Lake, Incorporated
40 Lane Road
Fairfield, New Jersey 07007-2615

Attention: Gary K. Crane, Ph.D., Executive Vice President

Lake County - AP
Waste to Energy Facility Units No. 1 and 2

Dear Dr. Crane:

Enclosed is Permit Number A035-193817 to operate the above referenced source issued pursuant to Section(s) 403.087, Florida Statutes.

A person whose substantial interests are affected by this permit may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of receipt of this Permit. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;
(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by Petitioner, if any; (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this permit. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, F.A.C. Upon timely filing of a petition or a request for an extension of time this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Final Order is filed with the Clerk of the Department.

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

cmc

A. Alexander
District Director
3319 Maguire Boulevard
Suite 232
Orlando, Florida 32803

FILING AND ACKNOWLEDGEMENT FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk 12/6/91
Clerk Date

AA/jtt

Copies furnished to:
Joseph R. Treshler, P.E.
Local officials
Barry Andrews
John W. Seabury
George Ball-Ilovera

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT ISSUANCE and all copies were mailed before the close of business on December 11, 1991 to the listed persons, by [illegible].

Rev. 4/91

Florida Department of Environmental Regulation

Central District • 3319 Maguire Boulevard, Suite 232 • Orlando, Florida 32803-3767

Lawton Chiles, Governor — Carol M. Browner, Secretary

Permittee:
Ogden Martin Systems of Lake, Inc.
40 Lane Road
Fairfield, NJ 07007-2615

Attention: Gary K. Crane, Ph.D.,
Exec. V.P.

I. D. Number:
Permit/Certification
Number: A035-193817
Date of Issue:
Expiration Date: October 25, 1996
County: Lake
Latitude/Longitude:
28°44'22"N/81°53'23"W
UTM: 17-413.12 KmE; 3179.21 KmN
Project: Waste to Energy Facility
Units No. 1 and 2

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2. 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:

The permittee can operate two 250 ton-per-day Combustors which are fueled by wood chips and municipal solid waste.

The facility is rated for a maximum of 15.7 megawatts of energy production.

These sources are located at 3830 Rogers Industrial Park Road in Okahumpka, Lake County, Florida.

General Conditions are attached to be distributed to the permittee only.

GENERAL CONDITIONS:

1. *The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.*

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), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither 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 is not 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 this 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, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; 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 properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and 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 and at reasonable times, access to the premises where the permitted activity is located or conducted to:*

   (a) Have access to and copy any records that must be kept under conditions of the permit;

   (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

   (c) Sample or monitor 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 provide the Department with the following information:*

   (a) A description of and cause of noncompliance; and

   (b) The period of noncompliance, including 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.

   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 for revocation of this permit.

PERMITTEE:
Ogden Martin Systems of Lake, Inc.

Attention: Gary K. Crane, Ph.D.,
Exec. V.P.

I. D. Number:
Permit/Certification Number:
A035-193817
Date of Issue:
Expiration Date: October 25, 1996

SPECIFIC CONDITIONS:

OPERATING CONDITIONS

1. Municipal Waste Combustor

   a. Each of the two municipal waste combustors (MWC) shall have a design rated capacity of 250 tons of Municipal Solid Waste (MSW) per day, 104 million Btu input per hour and 60,200 pounds steam output per hour with MSW having a heating value of 5,000 Btu per pound.

   b. The maximum individual MWC throughput shall not exceed 250 tons per day, 120 million Btu per hour and 69,000 pounds steam per hour, (3-hour average).

   c. The design furnace mean temperature at the fully mixed zone of the combustor shall be no less than 1800° for a combustion gas residence time of at least one second.

   d. The MWC shall be fueled with wood chips or municipal solid waste. Radioactive waste may not be burned unless the combustor has been issued a permit for such burning or the waste is such quantity to be exempt in accordance with Department of Health and Rehabilitative Services (HRS) Rule 10D-91 or 10D-104.003, F.A.C. Hazardous waste may not be burned unless the combustor has been issued a permit for such burning or the waste is of such quantity to be exempt in accordance with Department Rule 17-30, F.A.C. Other wastes and special wastes shall not be burned without specific prior written approval of the Florida DER.

   e. Auxiliary fuel burners shall be fueled only with distillate fuel oil or gas (e.g., natural or propane). The annual capacity factor for fuel oil or gas shall be less than 10%, as determined by 40 CFR 60.43b(d). If the annual capacity factor for fuel oil or gas is greater than 10%, the facility shall be subject to 40 CFR 60.44b, standards for nitrogen oxides.

   f. Auxiliary fuel burner(s) shall be used at start up during the introduction of MSW fuel until design furnace gas temperature is achieved. All air pollution control and continuous emission monitoring equipment shall be operational and functioning properly prior to the incineration or ignition of waste and until all the wastes are incinerated. During shut down, the combustion chamber temperature requirement shall be maintained using auxiliary burners until wastes are complete combusted.

PERMITTEE:
Ogden Martin Systems of Lake, Inc.

Attention: Gary K. Crane, Ph.D.,
Exec. V.P.

I. D. Number:
Permit/Certification Number:
A035-193817
Date of Issue:
Expiration Date: October 25, 1996

SPECIFIC CONDITIONS:
(Continued)

(5) The owner or operator shall maintain a file of all measurements, including continuous monitoring systems performance evaluations; monitoring systems or monitoring device calibration; checks; adjustments and maintenance performed on these systems or devices; and all other information required by this permit recorded in a permanent form suitable for inspection (60.7(d)).

d. Each calendar year on or before March 1, submit for each source, an Annual Operations Report DER Form 17-1.202(6) for the preceding calendar year.

EXPIRATION DATE

10. An operation permit renewal must be submitted at least 60 days prior to the expiration date of this permit (Rule 17-4.09, F.A.C.).

ISSUED 12-6-91

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

By _____
A. Alexander, District Director
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803

Florida Department of Environmental Regulation

Central District • 3319 Maguire Boulevard, Suite 232 • Orlando, Florida 32803-3767

Lawton Chiles, Governor — Carol M. Browner, Secretary

NOTICE OF PERMIT ISSUANCE

Ogden Martin Systems of Lake, Incorporated
40 Lane Road
Fairfield, New Jersey 07007-2615

Attention: Gary K. Crane, Ph.D., Executive Vice President

Lake County - AP
Waste to Energy Facility Units No. 1 and 2

Dear Dr. Crane:

Enclosed is the amended Permit Number A035-193817 to operate the above referenced source issued pursuant to Section(s) 403.087, Florida Statutes.

A person whose substantial interests are affected by this permit may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of receipt of this Permit. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;
(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by Petitioner, if any; (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this permit. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, F.A.C. Upon timely filing of a petition or a request for an extension of time this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Final Order is filed with the Clerk of the Department.

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

cmc

A. Alexander
District Director
3319 Maguire Boulevard
Suite 232
Orlando, Florida 32803

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk 1/29/92 Date

AA/azt

Copies furnished to:
Joseph R. Treshler, P.E.
Local officials
Barry Andrews
John W. Seabury
George Ball-Ilovera

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT ISSUANCE and all copies were mailed before the close of business on 1-29-92 to the listed persons, by D. Jones, Adm. Sec.

Rev. 4/91

Florida Department of Environmental Regulation

Central District • 3319 Maguire Boulevard, Suite 232 • Orlando, Florida 32803-3767

Lawton Chiles, Governor — Carol M. Browner, Secretary

Permittee:
Ogden Martin Systems of Lake, Inc.
40 Lane Road
Fairfield, NJ 07007-2615

Attention: Gary K. Crane, Ph.D.,
Exec. V.P.

I. D. Number:
Permit/Certification
Number: A035-193817
Date of Issue:
Expiration Date: October 25, 1996
County: Lake
Latitude/Longitude:
28°44'22"N/81°53'23"W
UTM: 17-413.12 KmE; 3179.21 KmN
Project: Waste to Energy Facility
Units No. 1 and 2

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2. 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:

The permittee can operate two 288 ton-per-day Combustors which are fueled by wood chips and municipal solid waste.

The facility is rated for a maximum of 15.7 megawatts of energy production.

These sources are located at 3830 Rogers Industrial Park Road in Okahumpka, Lake County, Florida.

General Conditions are attached to be distributed to the permittee only.

GENERAL CONDITIONS:

1. *The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.*

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), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither 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 is not 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 this 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, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; 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 properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and 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 and at reasonable times, access to the premises where the permitted activity is located or conducted to:*

   (a) Have access to and copy any records that must be kept under conditions of the permit;

   (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

   (c) Sample or monitor 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 provide the Department with the following information:*

   (a) A description of and cause of noncompliance; and

   (b) The period of noncompliance, including 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.

   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 for revocation of this permit.

PERMITTEE:
Ogden Martin Systems of Lake, Inc.

Attention: Gary K. Crane, Ph.D.,
Exec. V.P.

I. D. Number:
Permit/Certification Number:
A035-193817
Date of Issue:
Expiration Date: October 25, 1996

SPECIFIC CONDITIONS:

OPERATING CONDITIONS

1. Municipal Waste Combustor

   a. The maximum individual MWC throughput shall not exceed 288 tons per day, 120 million Btu per hour and 69,000 pounds steam per hour, (3-hour average).

   b. The design furnace mean temperature at the fully mixed zone of the combustor shall be no less than 1800° for a combustion gas residence time of at least one second.

   c. The MWC shall be fueled with wood chips or municipal solid waste. Radioactive waste may not be burned unless the combustor has been issued a permit for such burning or the waste is such quantity to be exempt in accordance with Department of Health and Rehabilitative Services (HRS) Rule 10D-91 or 10D-104.003, F.A.C. Hazardous waste may not be burned unless the combustor has been issued a permit for such burning or the waste is of such quantity to be exempt in accordance with Department Rule 17-30, F.A.C. Other wastes and special wastes shall not be burned without specific prior written approval of the Florida DER.

   d. Auxiliary fuel burners shall be fueled only with distillate fuel oil or gas (e.g., natural or propane). The annual capacity factor for fuel oil or gas shall be less than 10%, as determined by 40 CFR 60.43b(d). If the annual capacity factor for fuel oil or gas is greater than 10%, the facility shall be subject to 40 CFR 60.44b, standards for nitrogen oxides.

   e. Auxiliary fuel burner(s) shall be used at start up during the introduction of MSW fuel until design furnace gas temperature is achieved. All air pollution control and continuous emission monitoring equipment shall be operational and functioning properly prior to the incineration or ignition of waste and until all the wastes are incinerated. During shut down, the combustion chamber temperature requirement shall be maintained using auxiliary burners until wastes are complete combusted.

PERMITTEE:
Ogden Martin Systems of Lake, Inc.

Attention: Gary K. Crane, Ph.D.,
Exec. V.P.

I. D. Number:
Permit/Certification Number:
A035-193817
Date of Issue:
Expiration Date: October 25, 1996

EXPIRATION DATE

10. An operation permit renewal must be submitted at least 60 days prior to the expiration date of this permit (Rule 17-4.09, F.A.C.).

ISSUED 1-29-96

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

A. Alexander, District Director
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803

OGDEN MARTIN SYSTEMS
OF LAKE, INC.

3830 ROGERS INDUSTRIAL PARK ROAD
OKAHUMPKA, FL 34762
(904) 365-1611

AN OGDEN
PROJECTS COMPANY

February 5, 1993

Mr. R. Bruce Mitchell
State of Florida
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee FL 32399-2400

Dear Mr. Mitchell,

Ogden Martin Systems of Lake, Inc. Has been requested by Environmental Health Care, Inc. to process shredded plastic pesticide containers. These containers have been triple rinsed and rendered non-hazardous.

Please review the attached reports from the testing laboratory. If the Department determines this material unacceptable, or if further information is needed, please call me at (813) 684-5688.

Sincerely,

John P. Power
Regional Environmental Coordinator

cc: S. Bass
G. Ball-llovera

shredded.ltr

OGDEN MARTIN SYSTEMS, INC.
MATERIAL CHARACTERIZATION FORM

(407) 894-7555

GENERAL INFORMATION

1.0 Name and Nature of Material

1.1 (Select One and Supply Name)

Raw Material _____

Intermediate Product SHREDDED PLASTIC CHIPS

Production Waste _____

Finished Product _____

If Finished Product (Check One)

_____ Over The Counter

_____ Prescription

_____ Other

Description Of Other _____

2.0 Reason for Disposal

2.1 (Check One)

_____ Reject

_____ Expired

_____ Defective

Nature Of Defect _____

✓ Other Collected, Rinsed + SHREDDED

Description Of Other PLASTIC Pesticide Containers

3.0 Physical Form

3.1 (Check One)

_____ Liquid

_____ Powder

_____ Slurry

✓ Granular

_____ Other

Description of Other _____

4.0 Material Characteristics

4.1 Is It A Known Hazardous Material? (Circle One) Yes (No)

4.2 Is The Material Characterized As: (Check All That Apply)

_____ Toxic

_____ Explosive

_____ Corrosive

PACKAGING DETAILS

1.0 Product Packaging

1.1 (Check One)

_____ Consumer Packaged

✓ Bulk Delivery

(Check All That Apply)

✓ Plastic HDPE

_____ Paper

_____ Foil

_____ Other

Description Of Other _____

2.0 Shipping Packaging

2.1 (Check One)

_____ Roll-Off Containers

_____ Fiber Drums

_____ Gaylord Boxes

_____ Plastic Buckets

✓ Other

Description Of Other Mini bulk bags ✓

2.2 Volume Per Package

Gallons _____

Cubic Feet _____

Pounds 1,200 - 1,800 lbs.

3.0 Delivery Schedule

3.1 Frequency (Check One)

_____ One Time Shipment

_____ Monthly

_____ Quarterly

_____ Bi-Annually

_____ Annually

_____ Other

Depends on logistics to deliver 40-50 trailer loads.

Description Of Other _____

3.2 Estimated Tons Per Delivery 20

3.3 Estimated Percentage of Delivery Weight That Is Packaging _____

OGDEN MARTIN SYSTEMS, INC.
MATERIAL CHARACTERIZATION FORM

PHYSCIAL CHEMICAL CHARACTERISTICS

1.0 Type of Detail Attached

1.1 (Check All That Apply)

_____ MSDS (Required on raw materials and whenever else available)

_____ Package Inserts (required on finished products if no MSDS)

__✓__ TCLP Test Results (required on all requests except raw materials and finished products. Entire lab report with with regulatory criteria for all organics and metals.)

_____ Total Metals (required on all requests except raw materials and finished products. Entire lab report with range of concentrations.)

_____ Sample (required on all requests except raw materials and and finished products.)

2.0 General Information

2.1 CAS Number _____

2.2 Boiling Point _____

2.3 Melting Point _____

2.4 Volatile Nature _____

2.5 Particle Size _____

3.0 Chemical Names And Formula

3.1 Active Ingredients

NAME AND FORMULA	PERCENT

3.2 Inactive Ingredients

NAME AND FORMULA	PERCENT

CURRENT DISPOSAL PRACTICE

1.0 Type of Facility Currently Used

1.1 (Check One)

_____ Municipal Landfill

_____ Hazardous Landfill

_____ Nonhazardous Incinerator

_____ Hazardous Incinerator

__✓__ Other STORAGE FOR RECYCLING

Description Of Other _____

SAFETY/STORAGE ISSUES

1.0 Worker Safety

1.1 Describe Any Safety Equipment Required During Handling

N/A

2.0 Fire Protection

1. Is Material Flammable? (Circle One) Yes / No

1.2 Describe Recommended Fire Fighting Equipment And Techniques

N/A

3.0 Other Requirements

3.1 Describe Any Other Handling And Storage Requirements

N/A

CERTIFICATION SIGN-OFF

I hereby certify that all information submitted in this and all attached docu
contain true and accurate descriptions of this material; and all relevant info
regarding known or suspected hazards in the possession of the owner has b
disclosed. I further certify that the material is nonhazardous and pose no
public safety or health threat.

Signature Brian Stenz Title President

Name (print) BRIAN STENZ Date 12/9/92

Founded 1929 St. Louis Testing Laboratories INCORPORATED

2810 Clark Avenue
St. Louis, MO 63103-2674
(314) 531-8080 • FAX (314) 531-8085

OFFICIAL REPORT

11444

September 12, 1991
Lab No. 91C-1578
P.O. No. 128404
Invoice No. 15432

RIEDEL WASTE MANAGEMENT
22 North Euclid
Saint Louis, Missouri 63108

ATTENTION: John Schnarre

REPORT OF TESTS

SAMPLE ID: Plastic Pestioide Container 8-3-81

RESULTS: mg/l

		MDL	METHOD NUMBER
Metals per TCLP:			
Arsenic, mg/l	ND	.005	206.2
Barium, mg/l	.51	.01	200.7
Cadmium, mg/l	ND	.01	200.7
Chromium, mg/l	.13	.01	200.7
Lead, mg/l	.59	.10	239.2
Mercury, mg/l	ND	.0005	245.1
Selenium, mg/l	.0007	.005	270.2
Silver, mg/l	ND	.01	200.7

ND: Not-Detected/ MDL: Method Detection Limit

Identification of tested specimen provided by the client.

Donavon DeRousse
Manager, Inorganic
Chemistry Department

DD:gar

ACCREDITED

MEMBERS

Founded 1929 St. Louis Testing Laboratories INCORPORATED
2810 Clark Avenue
St. Louis, MO 63103-2574
(314) 531-8080 • FAX (314) 531-8065

OFFICIAL REPORT
10344

September 30, 1991
Lab No. 91C-001579
Invoice No. 15432
P.O. No. 128404

Riedel Waste Management
22 North Euclid Road
St. Louis, Missouri 63108

Attention: John Schnarre

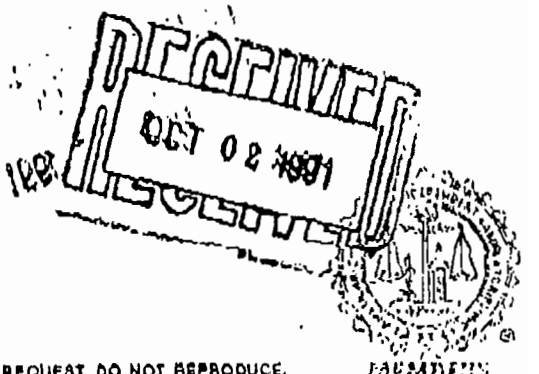
Report of Analysis

Results: mg/L

Sample Identification: Plastic Pesticide container 9-3-91

TCLP Volatile and Solvent Analysis (EPA Methods 8240, 8270)

		MDL
Carbon Tetrachloride	N.D.	0.005
Chlorobenzene	N.D.	0.005
o-Cresol	N.D.	0.020
m,p-Cresols	N.D.	0.020
Tetrachloroethene	N.D.	0.005
Pyridine	N.D.	0.020
1,1-Dichloroethylene	N.D.	0.005
Vinyl Chloride	N.D.	0.005
Benzene	N.D.	0.005
Chloroform	N.D.	0.005
Methyl Ethyl Ketone	N.D.	0.020
Trichloroethylene	N.D.	0.005
1,4-Dichlorobenzene	N.D.	0.005
1,2-Dichloroethane	N.D.	0.005



ACCREDITED

Founded 1929 St. Louis Testing Laboratories INCORPORATED
2810 Clark Avenue
St. Louis, MO 63103-2574
(314) 531-8080 • FAX (314) 531-8085

OFFICIAL REPORT
10345

September 20, 1991

TCLP Non-Volatile Organics (EPA Method 8270)

Nitrobenzene	N.D.	0.100
Hexachlorobenzene	N.D.	0.100
2,4-Dinitrotoluene	N.D.	0.100
2,4,5-Trichlorophenol	N.D.	0.100
2,4,6-Trichlorophenol	N.D.	0.100
Hexachlorobutadiene	N.D.	0.100
Hexachloroethane	N.D.	0.100
Pentachlorophenol	N.D.	0.100

TCLP Pesticides/Herbicides (EPA Method 8080)

Chlordane	N.D.	0.100
Endrin	N.D.	0.010
Lindane	N.D.	0.010
Toxaphene	N.D.	0.500
Heptachlor	N.D.	0.010
Methoxychlor	N.D.	0.100
2,4-Dichlorophenoxy acetate	2.040	0.040
2,4,5-T (Silvex)	N.D.	0.020

MDL - Method Detection Limit
N.D. - Not Detected

David W. Hall

David W. Hall, Manager
Organic Chemistry

ACCREDITED

MEMBERS

Steve Dutwell

the reverse side? | your RETURN ADDRESS complete

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- W... "Return Receipt Requested" on the mailpiece below the article number.
- ...Return Receipt will show to whom the article was delivered and the date ...ed.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
John P Power, REC
Ogden Martin Systems of lake
3830 Rogers Indust. Park
Okahumpka, Fl 34762

4a. Article Number
P 360 185 711

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
10:25 A 4/5

5. Signature (Addressee)
D O'Connor

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.

PS Form 3811 ... DOMESTIC RETURN RECEIPT

P 360 185 711

Receipt for Certified Mail
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

UNITED STATES POSTAL SERVICE

Sent to: John P Power	
Street and No.: Ogden Martin Sys.	
P.O., State and ZIP Code: Okahumpka, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date: 4-1-93 AC35-115379	

PS Form 3800, June 1991

Florida Department of Environmental Regulation
Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400
Lawton Chiles, Governor
Carol M. Browner, Secretary

March 31, 1993

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John P. Power
Regional Environmental Coordinator
Ogden Martin Systems of Lake, Inc.
3830 Rogers Industrial Park Road
Okahumpka, Florida 34762

Dear Mr. Power:

Re: Request to Burn Shredded Plastic Pesticide Containers in the Ogden Martin System's Lake County Waste-to-Energy Facility
AC 35-115379 (PSD-FL-113)

The Department has reviewed your February 5, 1993, letter requesting authorization to burn 80-100 tons of high density polyethylene shredded plastic pesticide containers, which had been triple-rinsed prior to shredding. On March 3, 1993, in a phone conversation with Mr. Bruce Mitchell, you stated that Ogden Martin Systems, U.S.A., had decided to not pursue the potential contract for the shredded plastic, which was being stockpiled in Canada. However, you said that you would still like to pursue the issue of potentially processing this type of material in the Lake County facility and would like a response.

According to the literature, polyethylene is composed of carbon and hydrogen, which could be of some Btu value in the combustion process. Many plastics contain chlorine and other elements that could result in the formation of acid gases and other pollutant emissions when burned. From an air permitting perspective, if there is an increase in the actual emissions of any pollutant already permitted (federally enforceable), or a new pollutant is emitted from a change in operation, then a modification review is required by rule.

The Lake County facility is a permitted waste-to-energy facility that burns solid waste, of which plastics are an inevitable component of both household and commercial waste streams. There was not an intent to permit waste-to-energy facilities, as depositors for large homogeneous slugs of commercial and industrial waste streams (i.e., tires, plastics, hazardous and toxic wastes etc.), which could require additional control strategies to handle the increase of air pollutants that would be emitted. Other Departmental programs (i.e., the Waste Program) would also be involved in the permitting process. The new Boiler and Industrial Furnace regulations are specifically aimed at these types of facilities that desire to process commercial and industrial waste streams consisting of hazardous and toxic wastes.

In your correspondence, you stated that the plastic was non-hazardous because it had been triple-rinsed prior to shredding the containers. However, 2,4-dichlorophenolic acetate (2,4-D; an herbicide) was still found through sampling and analysis using EPA Method 8080 (TCLP for Pesticides/ Herbicides). 2,4-D salts and esters are on the list of the Hazardous Pollutants identified in the Clean Air Act Amendments of 1990.

During the initial review of the request, the Division of Waste Management was consulted. It was stated that, if the containers were triple-rinsed and rendered non-hazardous, then the material could be landfilled or possibly used as a cover material. Because permitted landfill space in Florida is limited, due to the difficulty in siting such a facility, it is not desirable to landfill this material because it would displace household and commercial solid waste.

We should support any effort to reuse and/or recycle our waste streams. The Bureau of Air Regulation does not want to recommend a blanket approval for the processing of "plastics" at the Lake County facility or any other waste-to-energy facility, but to continue to review such requests on a case-by-case basis. A permit modification will require, at a minimum, the submittal of a complete application package, sealed by a Florida registered P.E., and the appropriate processing fee; and, public notice of the Department's Intent will be required. A permit amendment also requires a processing fee and could require a public notice, with all related technical information bearing the seal of a Florida registered P.E.

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

Sincerely,

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/BM/rbm

Attachment

cc: H. Rhodes, DARM
J. Ruddell, DWM
C. Collins, CD
D. Beason, Esq., DER

TO: Kanani
FROM: Teresa

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

Date: 10-Jul-1995 09:28am EST
From: Alvaro Linero TAL
LINERO_A
Dept: Air Resources Management
Tel No: 904/921-9532
SUNCOM: 291-9532

Lake county

TO: Teresa Heron TAL (HERON_T)
TO: John Reynolds TAL (REYNOLDS_J)

CC: Michael Hewett TAL (HEWETT_M)
CC: Charles Collins ORL (COLLINS_C @ A1 @ ORL1)
CC: Clair Fancy TAL (FANCY_C)

Subject: Ogden - Martin at Lake - Medical Waste burning

There will be a meeting on Monday about 10:00 or 11:00 am, July 24, to discuss Ogden Martins plans to burn medical waste in their Unit # 2. Jason Gorrie called and said that the Central District would only allow them to burn it in Unit 1. He claimed that the operating permit referred to the entire facility. I told him that the Central District can interpret its operating permits and that we don't need to do it for them.

I told them that in fact they can only do what is allowed within the scope of their federally-enforceable construction permit. I told him that anything new needs to be properly noticed and all parties advised. I told him that the character of the facility appears to be changing from the original intent of burning MSW with the addition of oily wastes, filters, medical waste, etc.

If they increase the amount of medical waste, it may be that they are affected by the moratorium. It might be helpful to have this matter reviewed by our attorney. Kanani - can you try to list the previous construction permit actions to date and who processed them? Teresa - can you discuss with Mike Hewett how we might decide if this facility is covered by the moratorium and which attorney might be able to help us? Also, please look at the exact definition of MSW applicable to this facility. So far they only burn about 2 TPD but it looks like they will want to burn more and more of it. Also look at the definition of Medical waste in the CFR applicable to any recent NSPS or MACT that might affect the facility if it burns medical waste.

We need to meet on this once we have the facts and before we talk with Ogden Martin so we can give them a precise story.

change in conditions
from original permit

Ogden - Martin

AC 267939
262712
212201
115379 2/24/86 3/17/86 Marty

0102069

OGDEN MARTIN SYSTEMS, INC.

3755
2223

40 LANE ROAD, CN 2615
FAIRFIELD, NJ 07007-2615

TEL: (201) 882-7236
FAX: (201) 882-4167

BRIAN BAHOR
ASSISTANT VICE PRESIDENT
ENVIRONMENTAL QUALITY MANAGEMENT

AN OGDEN PROJECTS COMPANY

Lake

1995 MAR 20 11 8 03

March 13, 1995

Mr. Claire Fancy
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Request for Permit Amendment
Ogden Martin Systems of Lake (OMSL)
Permit #AO35-193817

Dear Mr. Fancy:

Please find enclosed an application for an amendment to the OMSL Air Operating Permit for the acceptance of solid waste containing petroleum-based materials. This is a generic application in that it does not represent waste from specific generators. The application, in essence, presents standard procedures for disposing of certain categories of waste, which include:

1) Clean-up materials and debris associated with virgin petroleum spills and tank cleanings;
2) Solid waste contaminated with Used Oil; and,
3) Filters (such as automotive filters, etc.).

We are seeking this amendment based on our positive experience with the Department and the successful processing of similar types of materials at our OMS of Pasco facility, at the request of the Florida Department of Environmental Protection (FDEP) Southwest District during the August 1993 Tampa Bay oil barge spill.

The wastes described in this permit amendment are within the definition of municipal solid waste and can be processed according to the conditions of the OMSL Solid Waste Permit (No. SO35-187342). We believe that the proposed solid waste management strategy provides for the most effective disposal option when considering recycling and environmental impacts, and that the proposed amendment will not require or necessitate any other permit changes. Compliance with the Air Construction Permit will be maintained while processing any of the aforementioned waste streams. If you have any questions, or need further information, please do not hesitate to contact either me or Karen Stepsus at (202) 882-7282.

Very Truly Yours,

Brian Bahor
Asst. Vice President
Environmental Quality Management

0102069 3346

NRG/RECOVERY GROUP, INC.
40 LANE ROAD
FAIRFIELD, NEW JERSEY 07007-2615

March 17 1995

63-626/631
8

PAY TO THE ORDER OF Florida Department of Environmental Protection $ 250.00

Two-hundred fifty 00/100 DOLLARS

Barnett Bank
052-008
401 North 14th Street
Leesburg, Florida 34748

FOR

Kyle Grant

⑈003346⑈ ⑆063106268⑆ 1520020318⑈

©CLARKE AMERICAN BA GUARDIAN® SAFETY

3755

6/19 al
I don't think we should authorize any increase in capacity.
Clair

AC 35-175379
PSD-FL-113

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

Date: 10-Mar-1995 10:44am EST
From: Alvaro Linero TAL
LINERO_A
Dept: Air Resources Management
Tel No: 904/921-9532
SUNCOM: 291-9532

TO: See Below

Subject: Applicability of Moratorium on Biomedical Waste Incineration

Larry. I got a letter from Chuck Collins on this matter. Specifically, Ogden-Martin at Lake may want to increase the amount of Biomedical waste burned at it Municipal Waste Combustor (a 500 TPD) facility.

The original construction permit made no mention of such waste. However through a couple of construction permit modifications, they have been allowed to burn up to 26.88 TPD of biomedical waste. There are additional details regarding the manner, etc.

How does the moratorium apply? The way it is written is that there should not be emissions increases from biomedical waste incineration. If these guys claim that they will offset by burning less municipal waste, does the moratorium still apply?

Initially, I think it does apply. The alternative doesn't make sense because there would nothing (except the original permit) to prevent this facility from burning mostly biomedical waste (with some municipal waste). In any case, it looks like increasing the amount of biomedical waste burned increases biomedical waste emissions and I don't think decreases of municipal waste burned fit into the equation.

I will leave a copy of Chuck's letter on your desk along with a package of relevant information put together by Teresa Heron. There appears to be an evolution in the definition of Municipal Solid Waste in some of the CFR rules which we may or may not have adopted. Please contact Teresa if you have any questions. I will be out next week and much of the rest of the month. Thanks.

Distribution:

TO:	Larry George TAL	(GEORGE_L)
CC:	Charles Collins ORL	(COLLINS_C @ A1 @ ORL1)
CC:	Clair Fancy TAL	(FANCY_C)
CC:	Teresa Heron TAL	(HERON_T)
CC:	Bruce Mitchell TAL	(MITCHELL_B)
CC:	Michael Hewett TAL	(HEWETT_M)

Department of
Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

January 20, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Gary K. Crane, Ph.D.
Executive President
Ogden Martin Systems, Inc.
40 Lane Road
Fairfield, New Jersey 07007-2615

Re: PSD-FL-113(A) and AC 35-115379

Dear Mr. Crane:

We appreciate your comments regarding the limitations and accuracy of your present method of determining solid waste throughput from crane load cell data. We note, however, that the inherent inaccuracy and variability in the proposed method (back-calculating daily/hourly throughput from steam production) may be even greater. This is due to variability in heat content of the waste burned, the state of heat transfer surfaces, possible limitation in steam demand, etc. Therefore, we do not consider steam flow to be a better method to document throughput.

We note that municipal waste combustors (MWC) previously permitted under Prevention of Significant Deterioration (PSD) will submit Title V applications by April 2, 1995. We plan, thereafter, to review the issue of throughput documentation in a more consistent manner statewide.

In the OMS letter of March 8, 1991 (Lehman to Cheryan), "nominal rate" was given as 528 tons per day (TPD) and explained as "essentially the midpoint of the 500 tpd to 576 tpd normal operating range of this facility." It would seem that to add a nominal rate of 576 tpd in the air permit, will allow more than 288 tpd per unit to be burned on a given day. It is clear from the existing permit that no more than 288 tpd per unit (on a given day) may be burned rather than 288 tpd on an annualized daily average.

The Department will review the referenced New Source Performance standards and consider the appropriate portions for adoption later this year.

If you have any questions in this matter, please feel free to call Teresa Heron, Review Engineer, at (904)488-1344 or write to me at the above address.

Sincerely,

A. A. Linero, P.E.
Supervisor
New Source Review Section

AAL/TH/bjb

Attachments to be Incorporated

Mr. Gary Crane's letter of December 16, 1994
Mr. Andrew T. Lehman's letter of March 8, 1991

cc: Charles Colline, CD
Jewell Harper, EPA
John Bunyak, NPS

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3. Article Addressed to:

Mr. Gary K. Crane, Ph.D.
Executive Vice President
Ogden Martin Systems, Inc.
40 Lane Road
Fairfield, NH 07007-2615

4a. Article Number

P 872 563 685

4b. Service Type

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7. Date of Delivery

JAN 2 3 1995

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PS Form **3811**, December 1991 ☆U.S. GPO: 1992—323-402 **DOMESTIC RETURN RECEIPT**

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PS Form **3800**, JUNE 1991

MEMORANDUM

Date: January 17, 1994/5

To: Teresa Heron

From: Al Linero

Subject: Ogden Martin Request of December 16, 1994

Following our discussions and review of the information provided by Ogden Martin to amend their permit at OMS Lake, Inc., here are my comments:

1. Despite OMS comments about the limitations and accuracy of the crane load cells, the inherent inaccuracy and variability in heat content of waste burned are probably as great.

2. Even the amount of heat input to produce a given amount of steam can vary depending on the state of heat transfer surfaces, thus introducing other inaccuracies and limitations.

3. Changing the throughput from 288 tons per day per unit to 576 tons per day (for the facility) on a 52-week rolling average essentially means that on a given day more can be processed than presently allowed. Thus actual emissions are likely to increase even though the potential-to-emit appears to remain the same.

4. It may be possible to "calibrate" the crane cells by comparing long-term measurements obtained from them with long term truck weights. Thus the crane cells can provide valid information on what is actually burned on a given day.

5. It is conceivable that one could burn more material on a given day than required to produce the maximum amount of steam.

6. It is not clear how the hourly limits on biological waste burning would be maintained.

7. Based on the above, it does not appear to me that steam production is actually a surrogate for material burned.

8. Contrary to the OMS letter, we did not amend the permit for the Hillsborough facility "to reflect that steamload is the appropriate surrogate for refuse processing rate."

9. We should revisit these matters during the course of Title V permitting when all major sources, including MWC's, will need to review their compliance methods. Their permit applications are due on April 2, 1995.

Please consider my comments when drafting our letter to OMS of Lake, Inc.

Gould Environmental
Jason Curry
Drew Shaw
(201) - 882-7058
N. Jersey
Florida Lake County Facility
Gary

OGDEN

GARY K. CRANE, Ph.D.
Executive Vice President, Environmental
Ogden Projects, Inc.

40 Lane Road
Fairfield, NJ 07007-2615
201 882 7248
Fax 201 882 4167

December 4, 1995

Mr. Charles Collins, P.E.
District Air Program Administrator
Central District Office
Florida Department of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803

Dear Mr. Collins:

Ogden Martin Systems of Lake, Inc. (OMSL) is seeking the Central Districts' concurrence with a program to demonstrate compliance with State regulatory limits for HCl and CO while processing biomedical waste on Unit #2 such that the regulatory requirements related to the processing of medical waste in Unit #2 at the Facility are fulfilled. A recent meeting with personnel in the Department's Bureau of Air Regulation in Tallahassee clarified that the facility's PSD permit (PSD-FL-113) clearly allows for such processing in either or both units. Accordingly, we seek your guidance as it relates to the facility's operating permit, AO35-193817. This does not a request an increase above the current facility biological waste throughput limit of 51.6 tons per day.

An amendment to AO35-193817 on May 25, 1993, added the language "for Unit 1 only" to Specific Condition No. 1.a., as relates to the biological waste throughput limitation at the facility. This language has resulted in significant confusion in that other Specific Conditions (see Condition 1.e. and 7.e.) indicate that biological waste may be processed in either unit. Additionally, a September 2, 1992 letter from Mr. Clair Fancy to myself specifies that "Unit #2 shall be tested for compliance with allowable air emissions" once a biological waste conveyor system is constructed.

As stated above, Ogden Martin Systems of Lake is seeking the Central District's concurrence so OMSL can begin processing medical waste in Unit #2. At present, significant disruption of disposal options for biological waste generators throughout the state has resulted when Unit #1 is not operating, such as during routine, scheduled outages. In order to provide scheduling flexibility, it has become necessary to have the option of utilizing the permitted combustion capability of the identical Unit #2. Once compliance is demonstrated on Unit #2, we suggest that the words "for Unit 1 only" be removed from the permit.

Please note that both units currently operate under the more restrictive biological waste combustor emission limitations. OMS of Lake would anticipate that the limitations for Unit #2 will be returned to their previous levels (e.g. CO=200 ppmc, 4 hour rolling average) unless and until Unit #2 is allowed to process biological waste. Thank you for your assistance in this matter, and we look forward to hearing from you in the near future.

Sincerely,

Gary Crane

cc: Clair Fancy
Al Linero
Cecil Boat wright

Florida Department of
Environmental Protection

Memorandum

TO: Clair Fancy

FROM: Jim Pennington JKP

DATE: April 7, 1995

SUBJECT: Ogden Martin Systems of Lake, Inc. (Lake County) Violation History

The Ogden Martin Resource Recovery Facility in Lake County has had 5 violations in the last 3 years.

In April of 1992, they were cited for burning benalate contaminated material in Unit 1. This violation was resolved by consent order on 3/16/94.

In July of 1993, the SO_2 limits were exceeded, both the 6 hour and 1 hour averages, in Unit 1. These violations were resolved by consent order on 2/28/94.

In February and April of 1994 the CO emission limits were exceeded by Unit 1. These violations have been resolved by consent order on 3/20/95.

In the June through August, 1994 time frame, the process rate limit on unit 2 was exceeded on 7 different days. These violations have been resolved by consent order on 3/20/95.

Attached is the APIS printout detailing their history.

JKP/cd

Attachment

cc: D. Spingler
D. Tober

OGDEN

(1) Marty - F.Y.I.
(2) Kanani - Ogden at Lake files. Lake County Waste AC35-153??? for permitting

Ogden Projects, Inc.
40 Lane Road, CN 2615
Fairfield, NJ 07007-2615 USA
Tel: 201 882 9000

January 12, 1996

Mr. Michael D. Harley, P.E., DEE
P.E. Administrator
Emissions Monitoring Section
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blairstone Road
Tallahassee, FL 32399-2400

RECEIVED
JAN 17 1996
BUREAU OF
AIR REGULATION

RE: **OMS of Lake, Inc.**
Permit No. AO35-193817
Request for Amendments to Specific Condition 8f (Test Methods)

Dear Mr. Harley:

An alternate sampling procedure is requested for the determination of lead and beryllium emissions from the OMS Lake Facility. It is requested that sampling methods described at 40 CFR 266, Appendix IX, Section 3.1 be allowed for determination of lead and beryllium using a multimetal sampling train instead of the individual EPA Methods 12 and 104. Below please find the documentation necessary for approval of an alternate test method as stated in Rule 62-297.620(2)(a)-(d), F.A.C.

Rule 62-297.620(2) states the following:

(a) Specific emissions unit and permit number, if any, for which exception is requested.

The emission units for which an exception is requested are lead and beryllium. These metals are required to be tested according to permit number AO35-193817 for the Lake County Resource Recovery Facility.

(b) The specific provision(s) of this chapter from which an exception is sought.

Specific condition 8f in permit number AO35-193817 requires that EPA Method 12 be used for determination of lead and EPA Method 104 be used for determination of beryllium.

(c) The basis for the exception including but not limited to any hardship which would result from compliance with the provisions of this chapter.

Using EPA Methods 12 and 104 for determination of lead and beryllium respectively is redundant. These methods can be sampled in one train (40 CFR 60, Appendix IX, Section 3.1). Using a single train is more efficient and cost effective.

(d) The alternate procedure(s) or requirement(s) for which approval is sought and a demonstration that such alternate procedure(s) or requirement(s) shall be adequate to demonstrate compliance with applicable emission limiting standards contained in the rules of the Department of any permit issued pursuant to those rules.

The method described in 40 CFR 60, Appendix IX, Section 3.1 is requested for the determination of lead and beryllium emissions. This is an EPA approved method that produces reliable and accurate results. This method allows for the determination of these metals in one sampling train. The method is more time efficient and cost effective without compromising the results.

If you have any questions or comments please call me at (201) 882-7173.

Sincerely,

Michelle L. Herman

Michelle L. Herman
Environmental Engineer

MLH:rj

cc: G. J. Aldina
G. Crane
J. Brown - FLDER
C. Boatwright
J. Gorrie
D. Porter

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: Chuck Collins, CD

FROM: Bruce Mitchell, BAR RPM

THRU: Preston Lewis, BAR Preston

DATE: March 20, 1992

SUBJ: Meeting held on March 10, 1992, with representatives of Ogden Martin, the Bureau of Solid Waste-RCRA, Contracts-DER, and the Bureau of Air Regulation

Preston and I met with the above referenced persons on March 10th (Tuesday) in order to discuss a testing approach and protocol to gather emissions data on Ogden Martin's two MSW incinerator units located at Okahumpka if they were to utilize tires/tire derived fuel (TDF) as a fuel supplement. The attachment depicts the pollutants and testing methodology that will be imposed on a baseline test and a test while utilizing TDF in both units. The Department might accept the compliance tests conducted in January, 1992, as representative of baseline conditions. However, any pollutants not previously tested for will be imposed (i.e., dioxin, furan, etc.); also, and OK'd by EPA, CO and THC will be used as indicators to screen for any potential increase in dioxin or furan formation, by comparing the second test emissions with the baseline (any noticeable/significant increase would raise suspicions about an increase in the formation of chlorinated organics (dioxin/furan) and would necessitate testing for these pollutants). It is to be noted that EPA will allow the use of this screening procedure because of the testing costs associated with these pollutants.

We are currently awaiting a clarification from EPA on what is meant by "noticeable/significant increase in emissions". Also, the Department (Contracts-DER) will be contracting for the tests; and, each unit will have to be tested (i.e., baseline and TDF utilization) and be evaluated per its emissions data to determine the permitting requirements for approval to utilize TDF as a fuel supplement.

Ogden Martin will be presenting DER with a request for testing approval under a seal of a registered Florida P.E. An Intent will be issued with a Public Notice requirement (14-day). If issued, the Central District will be required to receive a 15-day pretesting notification in writing and a Type I audit will be imposed.

BM/rbm

Attachment

cc: C. Fancy, BAR
T. LeDew, BWP&R
J. Clark, BWP&R
B. Parker, BWP&R
G. Godfrey, C-DER

TABLE 5

SUMMARY OF TEST PARAMETERS

Particulate Matter PM10 / PM2.5		EPA Method 5 EPA Method 201 or 201A
Visible Emissions		EPA Method 9
Metals:		EPA Method 5 (filter and probe rinse)
Aluminum	Barium	Beryllium
Arsenic	Copper	Silver
Cadmium	Nickel	
Chromium (Total)	Iron	
Lead	Vanadium	
Zinc		
NO_X		EPA Method 7
Sulfur Dioxide		EPA Method 6 (in back half of Method 5 train)
Carbon Monoxide		EPA Method 10
Volatile Organic Compounds		VOST
Semi-Volatile Organic Compounds		Modified Method 5
CO_2/O_2		EPA Method 3
Stack Gas Flow/Moisture/Temp.		EPA Methods 2 and 4 (in conjunction with EPA Method 5)
PCDDS/PCDFS		EPA Method 23
Polynuclear Aromatic Hydrocarbons		Modified Method 5
Benzene		EPA Method 18
Mercury		EPA Method 101 or 101A
HCl		EPA Method 26A
THC		EPA Method 25A

Table A-1. Test Burn Sampling Plan

I. DCRR Ash; Tarmac Clinker, Cement, and ESP Dust

A. Metals	Method
Arsenic	3050/7060
Barium	3050/7080
Beryllium	3050/7091
Cadmium	3050/7131
Chromium (Total)	3050/7191
Copper	3050/7210
Iron	3050/7380
Lead	3050/7421
Mercury	7471
Nickel	3050/7520
Silver	3050/7760
Vanadium	3050/7911
Zinc	3050/7950

B. Nonmetals	
Chloride	9252
Dioxin	625
Nitrogen	SM417-420
PAHs	8100
Pthalates	8060
Sulfur	SM304

II. Kiln 3 Stack

A. Metals
EPA multi-metals train for sample collection, and methods listed above for analysis.

B. Nonmetals

CO_2/O_2	EPA Method 3
Dioxin/Furans	EPA Method 23/EPA 8290
~~Hydrogen Chloride~~	~~Method 0050~~
PAHs	Modified Method 5/8100
Particulate Matter	Modified Method 5
Semi-Volatile Organic Compounds	Modified Method 5/8270
Stack Gas Flow/Moisture/Temperature	EPA Methods 2, 4, and 5
Volatile Organic Compounds (including benzene)	VOST

PM_{10}	EPA Method 5 or 201/201A
VE	" " 9
NO_x	" " 7 or 7E
SO_2	" " 8
CO	" " 10
HCL	" " 26

(1) See Clair Francy for Permits (send letter to request test)

250.00 fee

3-4 Days for Processing

14 Advertise

MONITOR

PUBLICATION OF THE REGIONAL AIR POLLUTION CONTROL AGENCY
MAIN OFFICE: 451 W. THIRD STREET, DAYTON, OHIO 45422

Bill Bruce Tom FYI

SPRING 1991

Southwestern Portland Cement Stack Testing Completed

The long awaited stack testing at SWPC's hazardous waste burning cement kiln was completed April 23, 1991. Tests were conducted on twelve heavy metals, six Principle Organic Hazardous Constituents (POHCs) and thirty-two Products of Incomplete Combustion (PICs). Separate samples were taken for each of three operating conditions: a) coal only, b) burning hazardous waste fuels (with heavy metal input), tires, and coal, and c) burning hazardous waste fuels (low metal input), tires, and coal.

The following is a detailed listing of the pollutants which were sampled:

32 Products of Incomplete Combustion (PICs)

Volatiles

Benzene
Carbon Tetrachloride
Chlorobenzene
Chloroform
Chloromethane
Ethylbenzene
Styrene
Tetrachloroethene
Toluene
1,1,1-Trichloroethane
Trichloroethylene
Vinyl Chloride
Xylene (mixed)

Semivolatiles

Acenaphthene
Benzoic Acid
Benzo (a)pyrene
2-Chlorophenol
2 Chrysene
Dibenzo(a)anthracene
1,2-Dichlorobenzene
1,4 Dichlorobenzene
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachloroethane
Naphthalene
Phenol
Pyrene
1,2,4-Trichlorobenzene
1,2,4,5 Tetrachlorobenzene
2-Chlorophenol
Pentachlorobenzene

3/10
Bruce,
Info on VOST
+ Method 18
under Specific
Hydrocarbons (2nd pg)
Syed

THE ENTROPY QUARTERLY

(919) 781-3550 VOL. VII SUMMER, 1986 NO. 2

CHOOSING A METHOD TO MEASURE HYDROCARBONS

Introduction. Among the many methods available for measuring hydrocarbon and organic emissions are EPA Methods 18, 25, 25A, 25B, 106 and 110, Modified Method 5, the volatile organic sampling train (VOST) method, and hybrid adaptations of Method 5 involving impinger reagent analysis. Because each method offers distinct advantages and limitations, the specific testing needs must be considered. For instance, Method 25 (the EPA's universal method for counting hydrocarbons) cannot give valid measures of hydrocarbon concentrations below 100ppm and usually yields results biased high by the presence of moisture and carbon dioxide (CO_2). Choosing the best method requires 1) identification of the constituent to be measured—either *total* hydrocarbons or a *specific* compound, 2) estimation of constituent concentrations in the gas stream, and 3) identification of interfering components—i.e., moisture or CO_2—in the gas stream.

Measuring Total Hydrocarbons. Methods 25, 25A, 25B and Method 5 reagent analysis all attempt to count hydrocarbon atoms, giving results in parts per million as carbon (ppmC). None of these methods does the job very well, so the decision becomes one of choosing the best available alternative.

Method 25. Method 25 is the best alternative for gas streams where organic carbon concentrations are greater than 100ppm and moisture is *either* less than 5% with an associated high CO_2 concentration (>5%) *or* less than 10% with an associated low CO_2 concentration (<5%). The interference which results from CO_2 dissolving in condensed moisture can bias the results high as much as 150ppm in the presence of moisture concentrations exceeding 10%.

(continued on page 2)

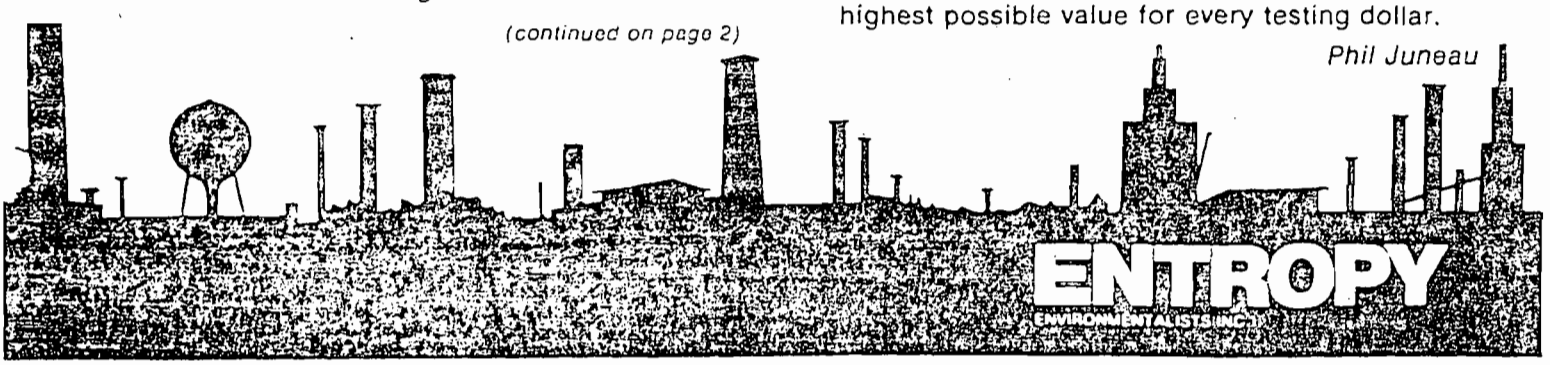
FIELD DATA ANALYSIS GETS A BOOST

Entropy's CEM/Engineering Division has recently developed and implemented an IBM PC-based data acquisition system (DAS) for use with our transportable continuous emission monitoring system for SO_2, NO_x, CO, CO_2, and O_2. The DAS is already providing increased efficiency for field work by calculating real time emission rates, averaging data, and recording CEMS calibration in tabular form. In the past, providing these data in the field consumed valuable field time because CEMS responses had to be read from strip chart records and the results had to be calculated manually. The DAS eliminates potential errors associated with reading strip charts and frees testing personnel to focus on ensuring that all CEMS testing programs run smoothly.

Client response to the new DAS has been so enthusiastic that the CEM/Engineering Division has recently added a second DAS (using a Compaq Portable II computer) to our equipment lineup to facilitate scheduling. We have also added spreadsheet and graphics software to the DASs in order to provide more data analysis in the field. By loading field data files directly onto a spreadsheet, any number of calculations can be performed on large volumes of data with speed and accuracy. The graphics software uses spreadsheet data to create trends, bar graphs, or X-Y graphs in a matter of minutes. This means that field personnel can provide high quality data summaries and graphs to clients prior to leaving the test site.

The combination of the DAS and Mobile CEMS/Laboratory allows Entropy's CEM/Engineering Division to reduce field time (a cost savings to the client), while maintaining the highest level of performance for our clients. Development of the DAS and the Mobile CEMS/Laboratory is in keeping with Entropy's continuing commitment to provide our clients with both state-of-the-art testing capabilities and the highest possible value for every testing dollar.

Phil Juneau



Choosing a Method, *continued*

Even with the use of techniques to combat high-moisture interference, the Method 25 results would still be accurate only to ±100ppm, which is an acceptable error for measuring concentrations greater than 1000ppm. When it is necessary to use Method 25 for high-moisture gas streams, a hybrid sampling train, such as a Method 5 train with a slipstream leading from the third impinger to the Method 25 train, could be used. The organic concentration from the Method 5 impinger reagent analysis would be added to the concentrations measured by the Method 25 train to give the total organic concentration.

Analytical results for Method 25 samples usually include noise levels between 15 and 50ppm, depending upon conditions and technique. It is considered good practice for this measurement error to comprise nc more than 10% of the organic sample being measured. Therefore, organic concentrations below 100ppm cannot be analyzed within the acceptable range of error. This problem can be remedied by increasing the sample volume (and consequently the concentration in the trap) to a more confidently measured concentration or by using flame ionization detection (FID) analysis as in Method 25A.

Method 25A. Method 25A is 25 to 100% efficient for measuring hydrocarbon concentrations greater than 2ppm due to instrument response. This changing efficiency is the reason why the EPA does not use Method 25A very often except when the hydrocarbons are all hydrogen and carbon. When applied to measuring hydrocarbons containing oxygen, nitrogen, and chlorine, the efficiency of the method is reduced.

Proper application of Method 25A requires that a hot gas stream be fed directly into a hot FID to prevent condensation, and that the moisture content of the gas stream sampled be below 10%. Measured hydrocarbon concentrations above 4% are usually inaccurate unless the sample is diluted. Supplying a convenient complement to Method 25, Method 25A using flame ionization detection works best for hydrocarbon concentrations below 100ppm.

Method 25B. Method 25B uses a nondispersive infrared analyzer to measure hydrocarbons and is best applied to measuring concentrations ranging from 1000ppm to 100%. This method is commonly used to measure hydrocarbon concentrations in vapor recovery units at gasoline bulk loading terminals. The presence of moisture and CO_2 will interfere with Method 25B.

Specific Hydrocarbons. There are several methods for specific hydrocarbons, including EPA Method 106 for vinyl chloride, EPA Method 110 for benzene, and the two unofficial RCRA methods, the VOST Method and Modified Method 5. In addition, there is EPA Method 18 which provides a set of general guidelines rather than specifications. The method is so general, in fact, that the VOST Method and Modified Method 5 fit within its requirements.

Method 18 is a gas chromatographic analysis method, which is applied to appropriate sample collection techniques. The gas chromatograph can be any type, from an FID to an MS. Samples may be collected into Tedlar bags, passed directly into the gas chromatograph, or collected onto sorbents such as charcoal, Tenax, or silica gel.

Although Method 18 permits a variety of sample collection techniques, each technique has specific implications. Samples may be collected into Tedlar bags, or stainless steel or aluminum tanks, when the sampled gas stream contains no condensable substance into which the hydrocarbon can dissolve, and when the tank pressure is below the saturation vapor pressure of the hydrocarbon at room temperature. The bag samples should be analyzed quickly on site, while the samples tank can be held for off site analysis.

Direct connections of the sample gas stream to the GC are limited by the portability of the GC and the temperature of the gas stream. Potential problems are the formation of condensate in the GC system from moisture or other gas components, and contamination of the GC column by heavy hydrocarbons in the sample gas.

The best way to take hydrocarbons to the lab for analysis is to collect them onto sorbents. Charcoal is useful for collecting volatile compounds in dry gas streams. However, in sampling trains for use at wet sources, a condenser must be installed upstream of the charcoal media. The total hydrocarbon catch must be greater than 100μg, but must comprise less than 20% of the weight of the charcoal. Analytical methods for samples adsorbed onto charcoal can be found in the NIOSH manuals. For total catches of volatile compounds in the range of 0.1 to 100μg, Tenax is the best collection medium, and thermal desorption purge trap is the best analytical technique. This method is usually labeled the VOST method.

The Modified Method 5 train is preferred for the collection of heavy hydrocarbons which condense (boiling point >100°C). The sorbent used in this train is usually a XAD-2 resin, which is later extracted with hexane. This method is appropriate for dioxin, PCBs, PAHs and many other compounds.

Summary. All the methods for measuring organic compounds have applicabilities and limitations which must be understood in order to anticipate the problems which might occur in the field or in the lab. Choosing the right method is dependent upon an understanding of the method, the source, and the objectives of the test program.

Section 1 - Introduction

Ogden Martin Systems of Lake, Inc., a wholly owned subsidiary of Ogden Martin Systems, Inc., is pleased to present to the Florida Department of Environmental Regulation (FDER) this proposal for the development of a demonstration project for the disposal of waste tires utilizing innovative technology. Our proposed project will be capable of processing 750 tons of shredded tires over a period not to exceed three months, which is equivalent to processing 250 tons per month on average. The proposed project is intended to demonstrate that waste tires may be co-combusted with municipal solid waste for recovery of their energy content in a cost-effective, efficient and environmentally safe manner.

The cornerstone of this proposal is Ogden Martin's Lake County Resource Recovery Facility located in Okahumpka, FL. This Facility has a design capacity of 528 tons per day of municipal solid waste and utilizes the proprietary Martin mass-burn refuse combustion technology. The Facility is currently in start-up operation with full commercial operation expected to commence in March, 1991. This proposal is subject to the Lake County Facility reaching full commercial operations prior to commencement of the demonstration project. Energy in the form of electricity is recovered through the combustion of waste and is sold to Florida Power Corporation. The Facility is the sixteenth operating waste-to-energy facility developed and operated by Ogden Martin.

We have reviewed the proposed contract document included as Attachment H of the RFP as well as the discussion of initial contracts and type of contract contemplated by FDER in the RFP. Any agreement entered into with FDER as a result of this proposal must not contravene the pre-existing obligations contained in the Lake County Facility project agreements. It is additionally understood that FDER's form contract terms and conditions will be expanded and the language amplified during negotiations to be conducted pursuant to Section A.6 of Attachment B of the RFP. Consistent with the introduction to the form contract set forth as Attachment H in the RFP (which indicates that the form contract shall prevail where the RFP and the form contract conflict), we understand that, as provided in the form contract, termination will be the sole remedy for contractor fault.

We believe that shredded tire material can be processed in accordance with the existing Lake County Facility permits. However, if this proves not to be the case, then discussions with FDER regarding modifications to those permits will be necessary.

Section 2 - Abstract

A. Technology

The technology utilized for this project will be the co-combustion of shredded tire material with municipal solid waste and recovery of the energy content of the tire material in the form of electrical power.

The proposed project will be conducted at the Lake County (Florida) Resource Recovery Facility. This Facility, built and operated by Ogden Martin utilizes the proprietary refuse combustion technology developed by Martin GmbH of Munich, West Germany. Ogden Martin brings to this project significant experience in this technology. Our Huntsville (Alabama) Refuse Fired Steam Facility is successfully combusting shredded tires and municipal solid waste utilizing the same technology offered for this project. Valuable experience has also been obtained from Martin GmbH, our technology partner, as a result of a test burn of tires in a Martin-equipped incinerator in France. The environmental safety of tire burning is further documented in a study sponsored by Ogden Martin and conducted by RTP Environmental Associates.

B. Products and Wastes

Products that will be produced as a result of this project are electricity and ferrous metals. Combustion of 750 tons of tire material over a three month period will produce approximately 1,575 kilowatt-hours per ton of electricity. All electrical power generated as a result of this program will be sold to Florida Power Corporation pursuant to an existing power purchase agreement. Project wastes will consist of ash residue from the combustion of shredded tire material. This waste is estimated to be 15% by weight of the received tire material. Residue will be disposed of at the Lake County Astatula Ash Residue Monofill at a cost of $1.50 per ton of tire material processed.

Combustion flue gas amounts are expected to increase by 4.5% when burning the refuse/tire mixture. Estimated chemical composition of the flue gas is provided in detail in Section 6 of this submittal.

C. Unit Cost and Financing

This proposed project will utilize the processing equipment, operating and management staff and residue disposal operations currently in place at the Lake County Facility. No additional capital costs will be incurred as a result of this project, and no financing will be required.

Our pricing of shredded tire processing/disposal and transportation fees does not include loading of shredded tire material into transport vehicles at the FDER designated site.

For the purposes of this proposal, it is assumed that all vehicle loading activities will be provided by FDER or their designated representatives as part of a shredding or tire pile management operation.

Unit cost for disposal of 750 tons of shredded tire material over a period not to exceed three months will be as follows:

Transportation:	$0.11/ton/mile
Processing/Disposal:	$51.00/ton

Total project funding commitment is estimated to be $50,625 based on the maximum transportation distance (150 miles) between an existing tire site identified by FDER in the RFP and the Lake County Facility.

D. Project Scheduling

It is anticipated that no modification of current Lake County Facility operating permits will be necessary. Data in support of this assumption will be submitted to FDER for its review. That review is estimated to require less than 3 months. No additional time will be required to commence operations following this FDER review. Demonstration of the project's efficiency and environmental safety will be performed during the proposed three month demonstration period.

Section 3 - Company Description

A. Historical Background

Ogden Martin Systems of Lake, Inc. is a wholly owned, special purpose subsidiary of Ogden Martin Systems, Inc., established to undertake the construction and operation of the Lake County Resource Recovery Facility. Ogden Martin Systems, Inc. designs, permits, constructs, operates, maintains and, if requested by the client, owns waste-to-energy facilities. Ogden Martin has the exclusive North American rights to implement facilities utilizing the refuse combustion technology of Martin GmbH of Munich, West Germany.

For more than half a century, Martin GmbH has developed, refined and implemented proprietary technology specifically designed to burn municipal refuse and waste from agricultural processes. Today, there are more than 150 Martin technology installations in operation or under construction worldwide with a total installed capacity of more than 98,000 tons per day. Most are energy recovery facilities.

Ogden Martin Systems, Inc. is 100 percent owned by Ogden Projects, Inc. (OPI), an environmental services company whose stock is publicly traded on the New York Stock Exchange. Since its formation in 1983 Ogden Martin has established itself as a leading systems contractor in the waste-to-energy industry. More than 290 employees at our home office are dedicated to the resource recovery business. Currently, Ogden Martin operates 15 waste-to-energy facilities, is constructing four more and has been awarded an additional seven projects. These facilities serve an estimated 13 million people nationwide and can be characterized as follows:

- Aggregate waste disposal capacity: 28,105 tons per day
- Aggregate construction costs: $2.4 billion
- Aggregate project financing: $3.8 billion

With the exception of two projects developed by others and acquired in the construction stages, each of our waste-to-energy projects utilizes the proprietary Martin technology and is similar in design to the Lake County Facility to be utilized for this proposed demonstration program.

All Ogden Martin facilities have been or are being completed on budget and on schedule and operate in compliance with applicable environmental standards and regulations. Facilities operated by Ogden Martin have already disposed of more than 9.5 million tons of municipal solid waste and recovered more than 3.6 billion kwh of electricity.

Since April, 1990 our Huntsville, Alabama Refuse Fired Steam Facility has been disposing of shredded tire material through

co-combustion with municipal solid waste. On average, approximately 240 tires per day are disposed of at the Huntsville Facility. See Section 5, Part A of this submittal for a full description of the Huntsville project.

B. Corporate Organization

- Ogden Martin Systems, Inc., through its subsidiary Ogden Martin Systems of Lake, Inc., will be the single overall center of responsibility to the FDER for the demonstration project. Ogden Martin will apply its direct experience in the management and operation of waste-to-energy projects burning refuse and tire materials.

- Martin GmbH (Martin), a world leader in the waste-to-energy industry, will provide its know-how and operational experience in an advisory capacity to Ogden Martin for this demonstration project.

- Ogden Projects, Inc. (OPI) will provide financial capabilities that may be required to undertake the proposed demonstration project.

The organizational relationships of these entities is depicted in Figure 3.1.

C. Major Subcontractors

Ogden Martin will have single source responsibility to the FDER for the successful management and operation of this project. Subcontracting will be limited exclusively to the transportation portion of this proposal.

The following firm, or one of equivalent qualifications, will be utilized to transport shredded tires from the site designated by FDER to the Lake County Resource Recovery Facility:

AAA Refuse Service
P.O. Box 1054
Tavares, FL 32778
(904) 343-8811

Documentation of our subcontractor arrangement with AAA and a description of the company are provided in Part E of this submittal.

Section 4 - Company Financial Capabilities and Project Financing

Financial Capabilities

Ogden Projects, Inc. demonstrates the following financial qualifications:

	1989
Net Worth	$145 million
Total Assets	$1.9 billion
Service/ Construction Contract Revenues	$335 million
Net Income	$25.4 million

The bank trustee handling Ogden Martin's account for the Facility is Mr. Ron Feldman of Southeast Bank N.A., Corporate Trust Department, One Southeast Financial Center, Miami, Florida 33131.

A summary of Ogden Martin waste-to-energy project commitments is presented below.

Expected Capitalization of This Project

Since the proposed demonstration project will be conducted at an existing facility and assumes that the input material (shredded tires) will be provided by others, there is no project financing or capital outlay expected for the project.

Alexandria/Arlington Resource Recovery Facility

Size: 975 TPD
Location: Alexandria, VA
Contracted Completion Date: 2\88
Actual Completion Date: 2\88
Construction Price: $75.9 million
Customer Contact:

Thomas O'Kane, Director
Transportation & Environmental Services
City Hall, P.O. Box 178
301 King Street
Alexandria, Virginia 22314
(703) 838-4966

Babylon Resource Recovery Facility

Size: 750 TPD
Location: West Babylon, NY
Contracted Completion Date: 4\89
Actual Completion Date: 4\89
Construction Price: $83.9 million
Customer Contact:

Arthur Pitts, Town Supervisor
Town of Babylon
200 East Sunrise Highway
Lindenhurst, New York 11757
(516) 957-3000

Bristol Resource Recovery Facility

Size: 650 TPD
Location: Bristol, CT
Contracted Completion Date: 6\88
Actual Completion Date: 5\88
Construction Price: $58.4 million
Customer Contact:

Mayor John Leone
City Hall
111 North Main Street
Bristol, Connecticut 06010
(203) 584-7613

Haverhill Resource Recovery Facility

Size: 1,650 TPD
Location: Haverhill, MA
Contracted Completion Date: 6\89
Actual Completion Date: 6\89
Construction Price: $120 million
Customer Contact:

Albert Rizzotti, Chairman
Board of Health
4 Summer Street Room 208
Haverhill, MA 01830
(508) 374-2325

Hillsborough County Resource Recovery Facility

Size: 1,200 TPD
Location: Tampa, FL
Contracted Completion Date: 11\87
Actual Completion Date: 10\87
Construction Price: $80 million
Customer Contact:

Daryl Smith, Director
Department of Solid Waste
P.O. Box 1110
Tampa, Florida 33601
(813) 272-6874

Huntsville Refuse Fired Steam Facility

Size: 690 TPD
Location: Huntsville, AL
Contracted Completion Date:. 10\90
Actual Completion Date: 5\90
Construction Price: $71.5 million
Customer Contact:

Eddie Coker, Executive Director
The Solid Waste Disposal Authority of the City of Huntsville
3322 South Memorial Parkway
Building 200, Suite #1
Huntsville, Alabama 35801
(205) 880-6054

I-95 Energy/Resource Recovery Facility

Size: 3,000 TPD
Location: Fairfax, VA
Contracted Completion Date: 8\90
Actual Completion Date: 6\90
Construction Price: $195.5 million
Customer Contact:

Joyce Doughty, Director
Department of Public Works
3930 Pender Drive
Fairfax, Virginia 22030
(703) 246-5048

Indianapolis Resource Recovery Facility

Size: 2,362 TPD
Location: Indianapolis, IN
Contracted Completion Date: 12\88
Actual Completion Date: 12\88
Construction Price: $83.8 million
Customer Contact:

Patrick Stevens, Director
Department of Public Works
2460 City/County Building
Indianapolis, Indiana 46204
(317) 236-4400

Kent County Waste-to-Energy Facility

Size: 625 TPD
Location: Grand Rapids, MI
Contracted Completion Date: 3\90
Actual Completion Date: 1\90
Construction Price: $62 million
Customer Contact:

William R. Allen, Project Director
Department of Public Works
1500 Scribner Avenue, N.W.
Grand Rapids, Michigan 49504-3299
(616) 774-3694

Lake County Resource Recovery Facility

Size: 528 TPD
Location: Okahumpka, FL
Contracted Completion Date: 3\91
Construction Price: $60 million
Actual Completion Date: 3\91 (Anticipated)
Customer Contact:

Alan Thelen
County Administrator
315 West Main Street
Tavares, Florida 32778
(904) 343-9888

Marion County Solid Waste-to-Energy Facility
Size: 550 TPD
Location: Brooks, OR
Contracted Completion Date: 3\87
Actual Completion Date: 3\87
Construction Price: $47.5 million
Customer Contact:

Commissioner Randy Franke
Marion County Board of Commissioners
Marion County Courthouse
Salem, Oregon 97301-3670
(503) 588-5212

Stanislaus Resource Recovery Facility

Size: 800 TPD
Location: Crows Landing, CA
Contracted Completion Date: 2\89
Actual Completion Date: 1\89
Construction Price: $82.2 million
Customer Contact:

Dale Davis
Solid Waste Program Manager
1012-I Street, Suite 16
Modesto, California 95354
(209) 577-5492

Wallingford Resource Recovery Facility

Size: 420 TPD
Location: Wallingford, CT
Completion Date: 4/90 *
Construction Price: $40 million
Customer Contact:

Robert Wright
Executive Vice President
Connecticut Resources Recovery Authority
179 Allyn Street
Hartford, CT 06103
(203) 549-6390

* Facility was purchased by Ogden Martin after completion of construction.

Walter B. Hall Resource Recovery Facility

Size: 1,125 TPD
Location: Tulsa, OK
Tulsa Unit I&II
Contracted Completion Date: 11\86
Actual Completion Date: 10\88
Tulsa Unit III
Contracted Completion Date: 11\86
Actual Completion Date: 10\86
Construction Price: $76 million
Customer Contact:

Charles Hart, City Engineer
City Hall
200 Civic Center, 5th Floor
Tulsa, Oklahoma 74103
(918) 596-9606

Section 5 - Processing Method and Capabilities

A. Process History

Information for this proposal has been developed through the successful processing of shredded tires at the Huntsville Refuse Fired Steam Facility in Huntsville, AL, which was constructed and is operated by Ogden Martin. Additional supporting data has been provided from a tire burning test project conducted by Martin GmbH and through a tire burning study sponsored by Ogden Martin and conducted by RTP Environmental Associates in 1987.

Reference Facility Data

Name:	Huntsville Refuse Fired Steam Facility
Owner:	Solid Waste Disposal Authority of the City of Huntsville
Operator:	Ogden Martin Systems of Huntsville, Inc.
Location:	5252 Triana Boulevard Huntsville, Al 35805
Operational Date:	May 1990
System:	Two, 345 tons per day Martin mass burn units.
Waste Type:	Municipal, residential and commercial solid waste (MSW), dried sewage sludge and shredded tires. Average quantity of tires burned is 200 tires per day, over a 24 hour period.
Air Pollution Control Equipment:	Dry flue gas scrubbers and fabric filter baghouses
Energy:	Steam sold to the United States Army's Redstone Arsenal; energy used for heating and cooling.
Applicable Permits:	Air Permit (ADEM) #709-I104-X001 City of Huntsville Air Permit #7-09-I-104-X002 Solid Waste Permit (ADEM) #7-09-I104-X001

Shredded tires have been co-combusted in the Huntsville Facility since July 1990. The average waste tire throughput by weight is approximately 0.5%. Occasional peaks of one to three days duration are experienced when there are area wide tire sales or seasonal changes. Shredded tires equaling up to approximately 5% of the average throughput capacity of the Facility have been co-combusted during peak times.

The Huntsville Facility utilizes the same combustion technology

as that used at the Lake County Resource Recovery Facility. The tire processing protocol for the proposed demonstration project will be similar to that successfully utilized in Huntsville. Tire throughput peak capacity figures for Huntsville are similar to those proposed to be demonstrated for the FDER.

In addition to Ogden Martin's experience with co-combustion of tires at the Huntsville Facility, Martin GmbH performed a test burn using tires in December 1980 in a Martin-equipped incinerator in France. This plant has a similar stoker-combustion system to the Lake County Facility. Those tests included the combustion of up to 15% by weight of the municipal solid waste throughput as tires. The conclusion drawn from the test was that not more than approximately 5 to 10% by weight of tires should be co-burned with solid waste. It was also concluded that up to 5% by weight can be co-combusted without serious detrimental effects to the overall combustion system, while higher percentages could require certain changes/improvements to the combustion and air pollution control systems.

The environmental safety of combusting tires co-mingled with municipal solid waste was documented in a study conducted by RTP Environmental Associates in 1987. The study concluded that adding 25-30% tires by weight to the total throughput of a facility is feasible without seriously impacting air emission rates and hence ambient impacts. The study also noted that although functional limits to facility operations may lower the feasible throughput of waste tires, environmental and health impacts would not be impacted at the rates described above.

B. Input Material Contemplated

For this proposal it is anticipated that all tire material will be cut or shredded into pieces not larger than approximately 4 x 4 inches. Size reduction (shredding) has not been included in the price of this proposal.

C. Planned Method of Retrieving Tires

Transport vehicles will be loaded with shredded tire material at the FDER designated site as part of the tire shredding operation performed by the FDER or others. The loaded vehicles will then proceed to the Lake County Facility. It is anticipated that approximately four hauling trips per week will be necessary during the demonstration period.

Trucks will enter the Lake County Facility site via the front gate and proceed to the scale house to be weighed. After passing through the scales, the trucks will travel down the site roadway into the tipping building. Upon entering the enclosed tipping floor area, the truck will maneuver into an

open tipping bay and unload directly into the refuse storage pit.

Two overhead traveling bridge cranes with orange peel type grapples will mix the shredded tire material with the municipal solid waste delivered by others and already deposited in the storage pit. The cranes will then transfer the refuse/tire mixture from the pit to the charging hoppers of the furnaces.

To demonstrate the feasibility of co-combusting tires at the Lake County Facility, it is planned to perform controlled test burns of 750 tons of shredded tire material over a period not to exceed 3 months. During this time period, the condition of the ash, temperature of the stoker and the flue gas and the SO_2 levels after the scrubber will be monitored. The feed rate of tires will be increased in increments to determine an optional maximum feed rate attainable on a sustained basis without negative impacts on the combustion and air pollution control systems.

250 tn/mo

Based on our experience at Huntsville and the Martin test burn in France, the expected waste tire capacity of this project in full commercial operation, will be 5% by weight of the actual refuse throughput of the Lake County Facility.

26 tpd
2600 tons/day

D. Processing Method to be Employed

Combustion of the refuse\tire mixture will take place in one or both of the Facility combustion units, each of which consists of an integrated waterwall furnace/boiler. After being charged into the feed hopper of a unit, the refuse/tire mixture will be metered out from the bottom of the feed chute by hydraulic feed rams onto the stoker grate.

In the furnace, the stoker grate is inclined downward from the feed end toward the discharge and consists of alternating rows of fixed and moving grate bars. Unlike conventional stoker designs, the moving grate bars push upward against the natural gravitational movement of the refuse at 30 to 50 strokes per hour. This movement agitates the burning waste mixture to form an even depth of fuel bed. Burning waste is pushed back underneath the freshly fed waste to achieve continuous drying, volatilization, ignition and combustion.

A series of plenum chambers underneath the stoker grate admit primary combustion air at rates controlled to suit the combustion conditions of each burning zone. Secondary or overfire air is provided through nozzles located in the front and rear furnace walls. The majority of the combustion air is taken from the tipping floor and storage pit area and is directed to the underfire air fan inlet.

As the hot gases from combustion move through the boiler sections of each unit, water in the boiler tubes is heated, and steam is generated. The steam is directed to a turbine-generator to produce electricity. Exhaust steam from the turbine-generator is condensed in a watercooled condenser. The electricity produced flows to the electrical switchgear and then over an interconnection line into the Florida Power Corporation (FPC) distribution system. Approximately 12.5 megawatts of the 15 megawatts produced at full load is sold to FPC. After leaving the steam generators, combustion gases pass through dry flue gas scrubbers for removal of SO_2 and other acid gases and through baghouse-type fabric filters for removal of particulates prior to discharge of cleaned gases through the 199-foot steel stack.

Each combustion unit is furnished with a proprietary Martin residue discharger, which receives burned-out material as it falls over the residue roller into a quench chamber. Bottom ash and grate siftings from the combustion units are collected and quenched in the proprietary Martin residue dischargers. From the Martin residue discharger cooled residue is moved via vibratory conveyors and belt conveyors to an enclosed residue storage building. Residue is removed from this building for final disposal at the Astatula Ash Monofill.

The ash removal system is 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 is collected separately and conveyed to the ash removal system for handling and disposal in admixture with the bottom ash.

See Figure 5.1 for simplified process flow diagram of the Lake County Resource Recovery Facility.

Major Equipment Components

The principal components of the project are the proprietary Martin grate system, the overhead refuse cranes, the boilers, the dry flue gas scrubbers, the baghouse-type fabric filters, and the turbine-generator set.

E. Physical Plant Description

See Figure 5.2 for a layout of the Lake County Resource Recovery Facility. All necessary utilities, including on-site wells for potable and industrial water systems, a septic system for sanitary wastes, and three 50 percent capacity percolation ponds for discharge of cooling and process water are provided at the existing Facility. Electricity for in-plant use is generated primarily by the Facility. The Facility is tied into the Florida Power Corporation electrical grid at the on-site switchyard. Natural gas service is provided by the City of Leesburg. Telephone service is supplied from the existing

telephone lines. No additional land, utilities or physical structures will be required for the implementation of this demonstration project other than those already available at the Lake County Facility.

F. Location of the Project

This demonstration project will be conducted at the Lake County Resource Recovery Facility located on approximately 15 acres of land on the southwest corner of Rogers Industrial Park Road and Haywood Worm Farm Road in Okahumpka, Florida.

Address: Lake County Resource Recovery Facility
3830 Rodgers Industrial Park Road
Okahumpka, Florida 34762

Section 6 - Products and Wastes

Tire material obtained for this demonstration project will be processed as a supplemental fuel to be co-mingled with municipal solid waste delivered to the Lake County Facility. The processing of this combined fuel will produce electrical power and ash residue in incremental quantities above those produced by the combustion of refuse alone. Estimates of actual product and waste residues from tires are provided below. Firm, long term agreements are currently in place for the sale of the electrical power and disposal of the residue resulting from this operating Facility.

A. Product Description

It is expected that the flue gas quantity and composition from burning refuse only or a refuse/tire mixture will be as follows:

	Refuse	Refuse & Tires
Flow per unit (SCFM) (wet & by volume)	38,083	39,787
CO_2	8.13	7.81
O_2	9.18	9.77
N_2	69.17	70.20
H_2O	13.46	12.16
SO_2	0.010	0.0152
HCL	0.050	0.044

As shown above, the flue gas quantity is expected to increase by approximately 4.5% when burning the refuse/tire mixture, well within the current Lake County Facility equipment margins of 10 plus percent. The average SO_2 content of the flue gas is expected to increase by approximately 50%, but will stay well below the maximum design capacity of the Facility. Additional lime usage in the existing scrubber system is expected to keep the SO_2 stack exit levels within the permit limits already established for the Facility.

It is expected that the ash residue generated by the introduction of shredded tire material into the Lake County Facility will not be significantly different than that produced by the burning of municipal solid waste. A typical ash residue composition table is provided below for your reference.

Typical Ash Composition Table

Chemical Compound	% by Weight
SiO_2	37.00
Al_2O_3	9.03
Fe_2O_3	20.45
C_9O	16.28
M_gO	1.62
SO_3	4.15
Other	5.53

B. Unit Market Value of Product

The unit market value of the electrical power generated by combusting the tires is calculated to be approximately $64.00 per ton of tire material. Ash residue will be approximately 15% of the tire material. Residue will be disposed of in Lake County's Astatula Ash Residue Monofill. This monofill has been permitted by Lake County specifically for disposal of residue from the Lake County Facility. The monofill was permitted under application numbers SC35-166829 and SO35-166830. The current cost of ash disposal for the Facility is $10.00 per ton of residue which is approximately equivalent to $ 1.50 per ton of tire material.

Ferrous metal contained in the tires that remains in the ash after combustion will be removed from the residue and recovered for resale value. Under current market conditions we expect to market recovered ferrous materials for approximately $30 per ton.

C. Customer Contact

Electrical power produced from the combustion of the refuse/tire mixture will be sold to Florida Power Corporation (FPC) utilizing the existing electrical interconnection. A power purchase agreement has been executed wherein FPC agrees to accept and purchase all electrical energy produced by the Facility, net of in-plant usage. The energy payments will be based on FPC's actual avoided energy costs. The power purchase agreement is on file and a copy is available upon request. The contact person at FPC is:

Mr. Tom Wetherington
3201 34th Street South
St. Petersburg, Florida 33711
(813) 866-5660

D. Product Quantity

It is calculated that approximately 1,575 kilowatt-hours per ton of tires processed will be delivered to FPC and 0.15 tons of residue per ton of tires processed will be disposed of at the monofill.

E. Purchase Agreement

The power purchase agreement with FPC and the agreement between Ogden Martin and Lake County for the availability of an ash disposal facility are on file at the Lake County Resource Recovery Facility and are available upon request. Copies of selected pages from these documents are presented in Appendix A.

Section 7 - Past Performance

Waste Tire Projects

Ogden Martin's experience with the combustion of waste tires began in July of 1990 with the acceptance of tire material at our Huntsville Refuse Fired Steam Project in Huntsville, Alabama. We believe that our experience at this facility in conjunction with the experience gained from constructing and operating multiple municipal solid waste-to-energy projects has provided valuable implementation and operational experience on which to base this proposal. Details regarding the Huntsville tire disposal operation are provided in Section 5 of this submittal. The following is a list of all of our operating mass burn projects for your reference. Each of these facilities are municipal solid waste facilities, similar in design to the Lake County Facility.

IN OPERATION	*TONS-PER DAY*	*CONSTRUCTION PRICE (1)*	*EQUITY (1)*	*BOND (2) FINANCING*	*TOTAL PROJECT COST*
Tulsa, OK (I)(3)	750	$51,480	$0 (4)	$0 (4)	$74,375 (4)
Haverhill/Lawrence, MA-RDF (5)	950	(6)	$27,257 (6)	$87,535 (7)	$114,792 (6)(7)
Marion County, OR	550	$47,500	$12,600	$57,325	$69,925
Hillsborough County, FL (8)	1,200	$80,079	$0	$144,045	$144,045
Tulsa, OK (II) (3)	375	$24,500	$0 (4)	$0 (4)	$39,200 (4)
Bristol, CT	650	$58,480	$17,820	$73,520	$91,340
Alexandria/Arlington, VA (5)	975	$75,944	$26,000 (9)	$75,650	$101,650
Indianapolis, IN (5)	2,362	$83,804	$20,951 (9)	$109,000	$129,951
Stanislaus County, CA (5)	800	$82,200	$19,375 (9)	$101,175 (10)	$120,550
Babylon, NY (5)	750	$83,220	$17,944 (9)	$88,900	$120,844 (11)
Haverhill MA-Mass Burn (5)	1,650	$120,000	$13,000	$135,740	$148,740
Kent County, MI (8)	625	$62,190	$0	$89,760	$89,760
Wallingford, CT (6) (12)	420	$40,000	$9,100	$52,000	$61,100
Fairfax County, VA (5)	3,000	$195,512	$30,975	$252,080	$283,055
Huntsville, AL (8)	690	$71,749	$0	$121,310 (13)	$121,310
SUBTOTAL	15,747	$1,076,658	$195,022	$1,388,040	$1,710,637
UNDER CONSTRUCTION					
Lake County, FL	528	$60,000	$10,000	$79,000	$89,000
Lancaster County, PA (8)	1,200	$98,357	$0	$135,600	$149,571 (14)
Pasco County, FL (8)	1,050	$90,288	$0	$106,425	$106,425
Huntington, NY (5)	750	$153,008	$31,260 (9)	$176,550	$221,810 (11)
SUBTOTAL	3,528	$401,653	$41,260	$497,575	$566,806
AWARDED BUT NOT *UNDER CONSTRUCTION*					
Hudson County, NJ (5)	1,500	$169,513	$31,783	$200,000 (15)	$231,783
Union County, NJ (8)	1,440	$146,228	$0	$237,180	$237,180
Eastern/Central CT (5)	550	$78,710	$18,356	$115,100 (16)	$133,456
Johnston, RI (8)	750	$79,968	$0	$127,000	$127,000
Onondaga County, NY (5)	990	$132,244	$26,449	$185,000	$211,449
Montgomery County, MD (8)	1,800	$259,000	$0	$403,200	$403,200
Lee County, FL (8)	1,800	$146,965	$0	$191,500	$208,500 (17)
SUBTOTAL	8,830	$1,012,626	$76,588	$1,458,980	$1,552,568
TOTAL	28,105	$2,490,937	$312,870	$3,344,595	$3,830,011

Footnotes:

(1) Unless otherwise noted, amounts in table relect amounts stated in the Service Agreements as originally entered into and exclude any price adjustments, or with respect to Service Agreements that have not been entered into amounts set forth in the Company's proposal for the project.

(2) Represents amount actually financed for projects in operation and projects under construction and, except as indicated, represents an estimate of amount which will be required to be financed for projects awarded but not under construction. Does not reflect excess proceeds redemptions.

(3) Facility is owned by an owner/trustee.

(4) Equity was recovered and bonds assumed by lessor in the sale/leaseback of all three units. Amount in the Total Project Cost Column reflects the original equity and bond financing amounts prior to the sale/leaseback transaction.

(5) Site is leased (or, with respect to facilities not under construction, is to be leased) from the Client Community or other third party.

(6) Facility was purchased after completion. Equity amount represents amount committed to the Project Bank to be expended in connection with the purchase of and repairs to facility including certain development costs. To the extent such amounts are not expended for such purposes they are required to be used to redeem bonds.

(7) Issued to refinance prior debt.

(8) Facility is owned (or, with respect to facilities not under construction, is to be owned) by the Client Community.

(9) Portions of the respective Operating Subsidiaries' equity were financed through the sale of additional tax-exempt bonds for the Alexandria, Indianapolis, Stanislaus, Babylon and Huntington projects.

(10) Refinanced with $91,960,000 in tax-exempt bonds.

(11) Includes $14.0 million in N.Y.S. Environmental Equity Bond Act grant funds.

(12) The Company had no responsibility for setting the construction price, and the amount stated is an approximation.

(13) Originally, $111,855,000 in taxable bonds were issued, $77,825,000 of which were redeemed with the proceeds of $87,260,000 in tax-exempt issues.

(14) Includes Lancaster Authority funds, including tipping fees collected during construction.

(15) Partially financed.

(16) Financed.

(17) Includes $17,000,000 in Lee County funds.

Section 8 - Project Management

Management and operations of the demonstration project will be provided by the operating staff of the Lake County Resource Recovery Facility in Okahumpka, FL and will be performed in conjunction with current operating practices.

Routine day-to-day coordination of tire deliveries and residue disposal as well as other matters relating to the operation of the demonstration project will be conducted by the Lake County Facility staff under the direction of the Plant Superintendent, who will also be responsible for coordination with a designated FDER representative and the selected waste tire hauler. The Lake County Plant Superintendent will be supported by the Operations and Engineering Department at Ogden Martin Systems, Inc. headquarters in Fairfield, NJ.

The Lake County Facility crane operator will be responsible for mixing the tire material with the municipal solid waste received at the facility to prevent sharp swings in the heating value of the refuse being fired. Once the refuse/tire mixture is fed into the furnace, automatic systems will control efficient combustion, electricity generation, and residue processing. Facility personnel will monitor the equipment and take action as necessary to maintain efficient operations. Performance will be monitored and controlled from the main control room.

Facility operations will be accomplished by four shifts each comprising one Shift Supervisor, one Shift Engineer and two Auxiliary Engineers (crane operators). The shift crews provide 24-hour coverage.

Each Shift Supervisor will be responsible for the safe and efficient operation of the boilers, turbine/generator and all auxiliary systems and equipment during an assigned shift. In carrying out these responsibilities, it is the Shift Supervisor's duty to oversee the work of all operators and other personnel assigned to the shift and to direct and supervise the operation of the plant equipment and other related activities.

Working under the direction of the Shift Supervisor, each crew includes a Shift Engineer assigned as control room operator. It is the Shift Engineer's responsibility to operate and monitor the resource recovery boilers and turbine/generator unit from the control room and to coordinate the operation functions of the Auxiliary Engineers.

Each shift will assign one Auxiliary Engineer as operator of the refuse pit bridge crane. The other Auxiliary Engineer will be responsible for locally monitoring various equipment and

systems throughout the plant and for performing operations and minor maintenance as directed by the Shift Supervisor.

Major maintenance of equipment and implementation of preventative maintenance programs will be the responsibility of the Lake County Facility Maintenance Supervisor.

Presented in Appendix B are resumes of key employees whose expertise is available for this project and who exemplify the quality of personnel that would have significant responsibility for operations and management of this project.

The environmental safety of co-combusting waste tires at the Lake County Facility will be demonstrated by analysis of continuous emission monitoring (CEM) data and other Facility data that will be recorded during the 3 month demonstration that period. Parameters typically to be monitored will include: opacity (a surrogate for particulate), sulfur oxides, carbon monoxide (an indication of combustion efficiency), and furnace temperatures. Compliance with applicable existing Lake County permit conditions can be demonstrated from this CEM data. Efficient combustion will be controlled by the Facility's unique automatic combustion control system. Emissions of particulate and sulfur oxides will be controlled by the spray dryer absorber/fabric filter air pollution control system. At the request of the FDER, stack tests would be conducted to further demonstrate permit compliance. This additional testing would be provided to the FDER on a cost plus basis.

Ash residue resulting from the combustion of waste tires will be handled in compliance with FDER ash management regulations codified in FAC17-702 in the same manner that all ash residue from the Facility is currently managed. These regulations provide for environmentally safe handling of this material.

Section 9 - Economics

A. This proposal and all pricing contained herein includes transportation of shredded tire material from the FDER designated site to the Lake County Facility. All loading of shredded tire material is assumed to be provided by FDER or their designated representatives as part of their shredding operation.

Transportation:	$0.11/ton/mile
Processing and Disposal:	$51.00/ton of shredded tire material

These prices are predicated on the commencement of the demonstration program no later than July 1, 1991.

Since the Lake County Facility does not now receive waste tires for disposal, no estimate of avoided costs can be provided at this time.

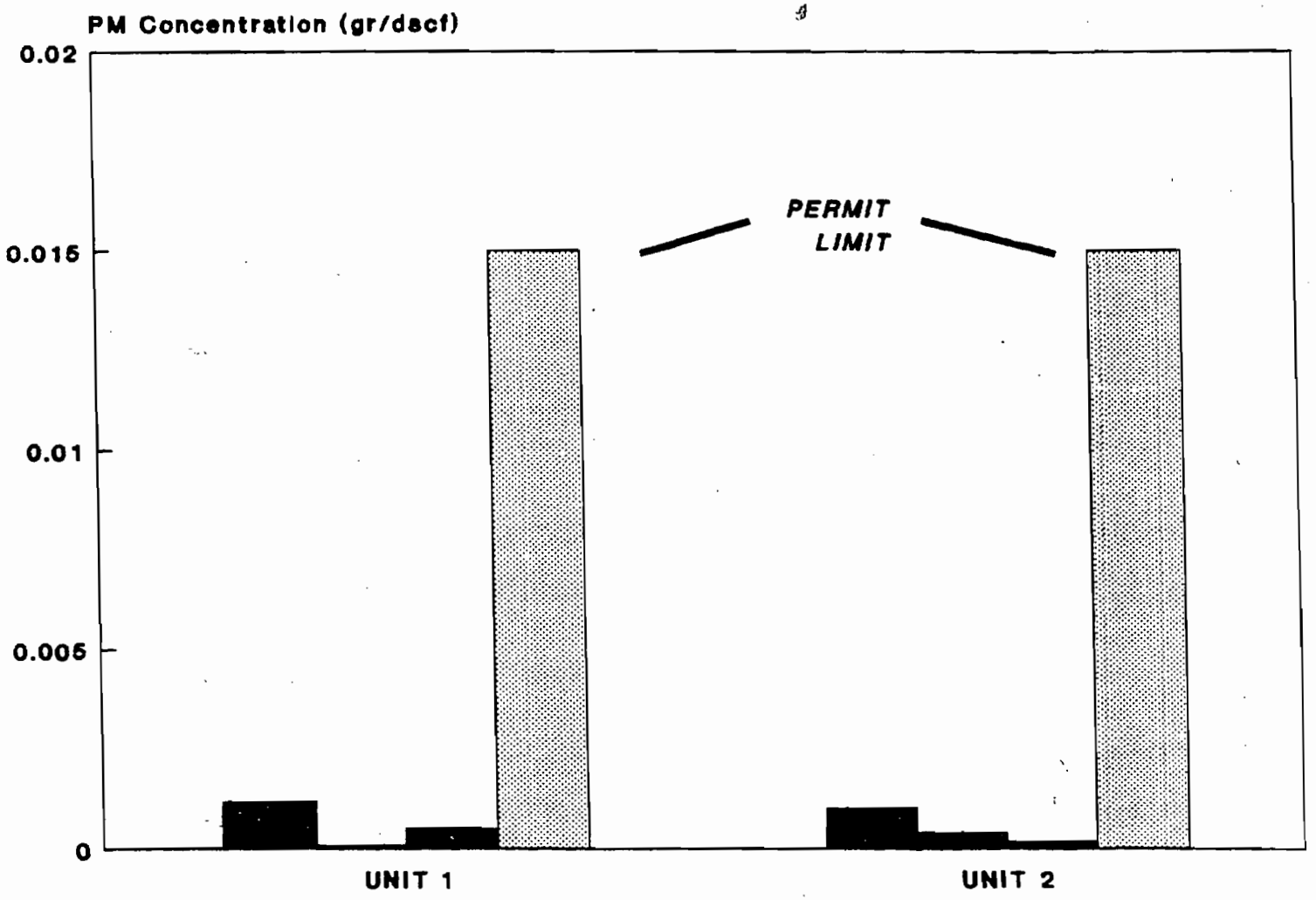
B. Total funds of $50,625 are estimated to be required for transportation, processing and disposal of 750 tons of shredded tire material over a period of 3 months. This figure assumes a transportation distance of 150 miles, which is the maximum distance that could be incurred. Actual distances are likely to be less.

Section 10 Project Scheduling

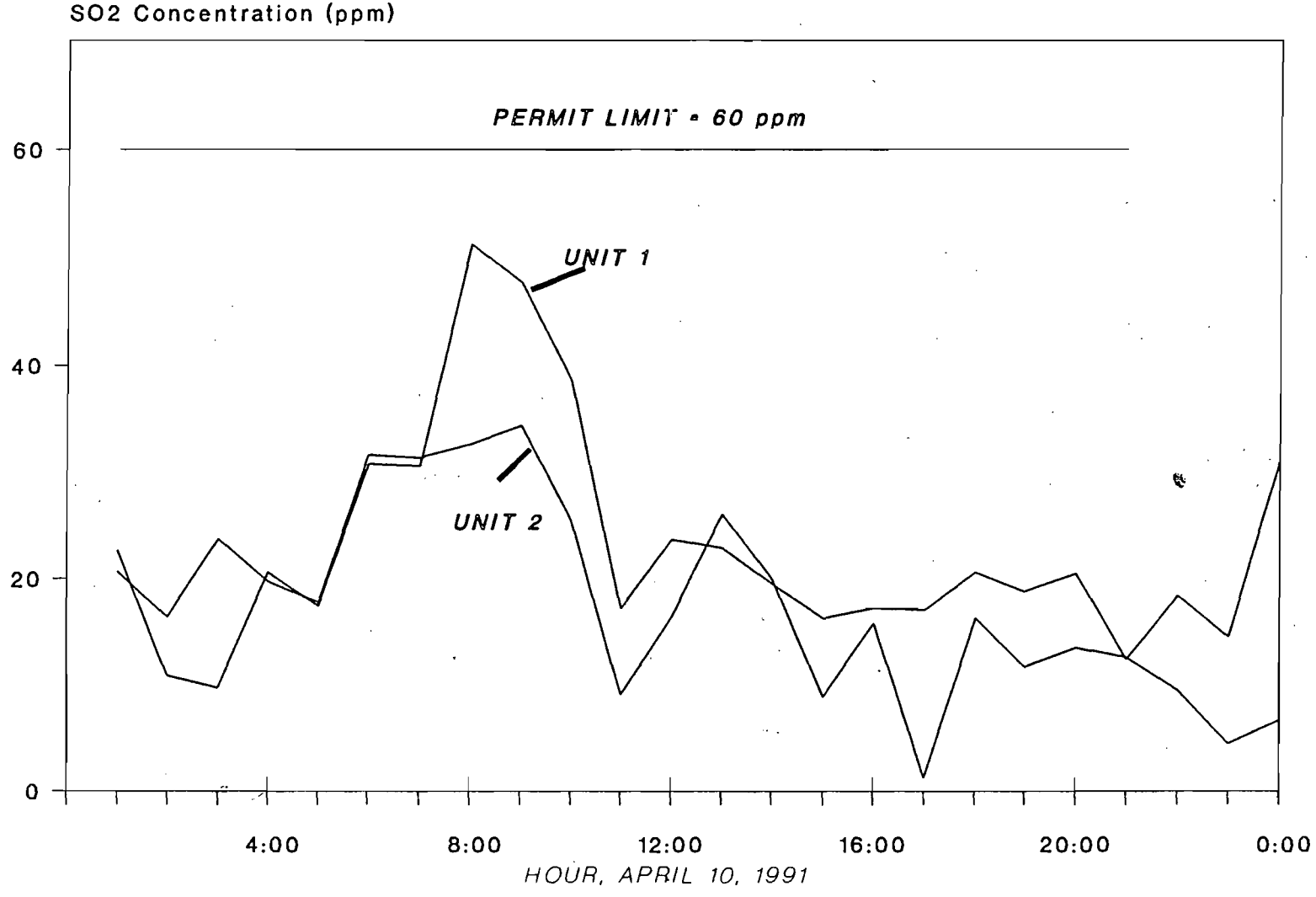
Waste tires (a designated special waste pursuant to Chapter 17-7, FAC) when processed and combusted in the manner proposed can be considered a solid waste as also defined under Chapter 17-7, FAC, which is the approved material for processing at the Lake County Facility. Therefore, no modification to the existing air and solid waste permit approval should be necessary. Permitting activities to implement the proposed demonstration project, if any, are expected to be relatively minor, and should be limited to the preparation and review of support documentation to ensure the environmental safety of the proposed project. Preparation and subsequent FDER review is envisioned not to exceed three (3) months. No additional time will be required to commence operation of the demonstration project.

Demonstration of the project's efficiency, cost effectiveness and environmental safety will be performed concurrent with the 3 month demonstration period.

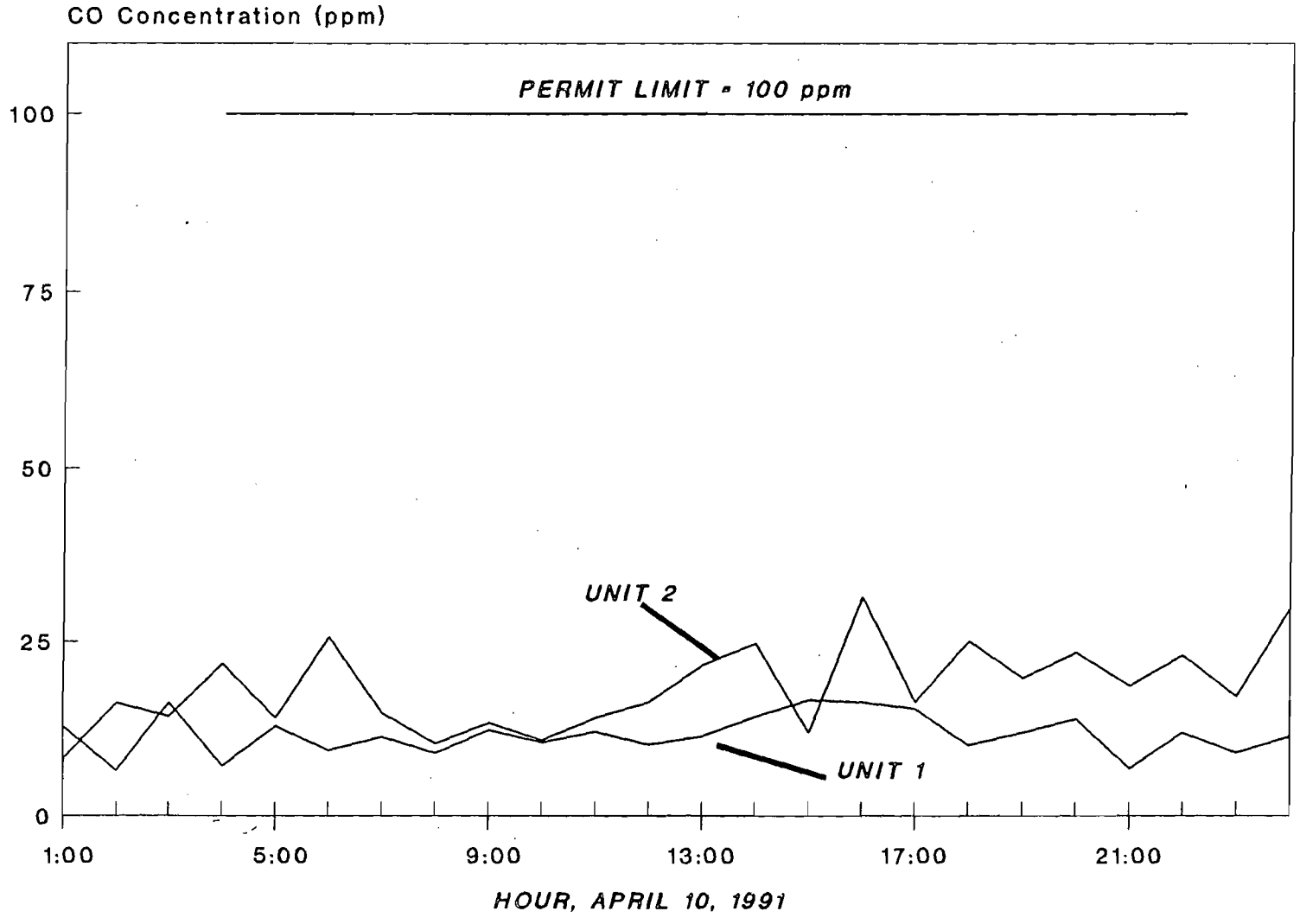
PARTICULATE MATTER TEST RESULTS FOR LAKE COUNTY



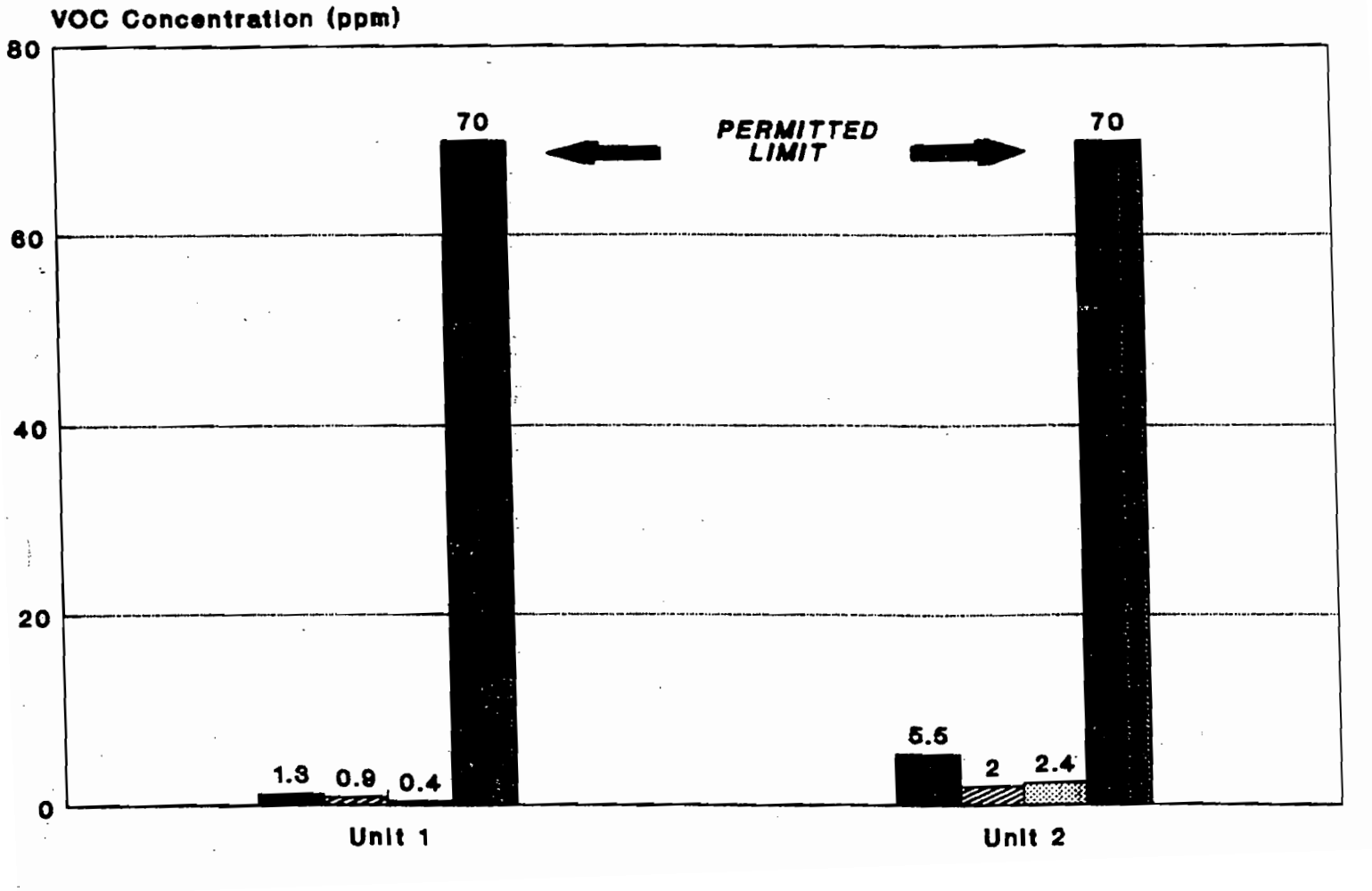
SULFUR DIOXIDE OUTLET CONCENTRATIONS FOR LAKE COUNTY



Carbon Monoxide Concentration for Lake County



VOLATILE ORGANIC COMPOUNDS
LAKE COUNTY COMPLIANCE TEST RESULTS
COMPARED WITH PERMITTED LIMIT



METAL CHARACTERISTICS OF TIRE-DERIVED FUELS

Elemental Mineral Analysis	% by Wt.
Zinc	1.52
Calcium	.38
Iron	.32
Chromium	.0007
Cadmium	.0008
Lead	.0065

Others Below Detectable Limits

ESTIMATED METAL EMISSIONS OF TIRE-DERIVED FUELS (MICROGRAMS/METER CUBED)

METAL EMISSIONS	AVG. EMISSIONS	EST. INCREMENTAL INCREASE	UPPER 95% CONFIDENCE LIMIT
ZINC	79.87	18.69	176.08
CHROMIUM	5.42	.009	13.82
CADMIUM	4.16	.01	9.43
LEAD	25.69	.08	72.82

The performance test(s) shall be subject to the following conditions:

1. The permittee shall notify, in writing, the Department's Southwest District and Bureau of Air Regulation (BAR) offices at least 15 days prior to commencement of the performance test(s). A written report shall be submitted to these offices within 45 days upon completion of the last test run.

2. Prior to or after conducting tests on TDF and coal (Post-tests), performance tests (Pre-tests) shall be conducted while firing 100% coal for all of the identified pollutants and pollutant categories in order to establish background levels, unless performance tests have already been conducted and the results can be provided to the Department. These tests, "Pre-tests" (i.e., coal only), shall be compared to the post-tests (TDF and coal) to determine if:

   a) PSD review is required, which includes a construction permit application package and appropriate processing fee; or,

   b) the current construction and PSD permits can be amended to allow the use of TDF with coal.

3. All post-test results shall be compared to "actual emissions" for PSD review purposes (see Region IV, U.S. EPA's letter dated April 4, 1990).

4. The contents of Dr. John B. Koogler's letter received March 14, 1990, are adopted by reference, with exceptions to part A, of which the following pollutants/pollutant categories will also be tested for:

Pollutant/Pollutant Category	Test Method
o Metals (continued)	
Barium	EPA Method 5
Copper	
Nickel	
Iron	
Vanadium	
o PCDDs and PCDFs	EPA Method 23
o PAHs (polynuclear aromatic hydrocarbons)	Modified Method 5 vs EPA 23
o Benzene	EPA Method 18 vs VOST
o Mercury	EPA Method 101 or 101A

5. An ultimate analysis of the particulate filter(s) shall be required. Also, an ultimate analysis of a representative sample(s) from the baghouse hopper shall be required.

OGDEN

Ogden Martin Systems of Lake, Inc.
3830 Rogers Industrial Park Rd.
Okahumpka, FL 34762
352 365 1611
Fax 352 365 6359

July 7, 1998

Mr. Garry Kuberski
Air Compliance Division
Florida Department of Environmental Protection
Central District Office
3319 Maguire Blvd.
Suite 232
Orlando, Florida 32803

SUBJ: Addendum to OEG Report No. 2252A
Summary of Process Data
Mercury Re-test

Dear Mr. Kuberski:

The following data are provided as a summary of the facility process data collected during mercury compliance testing on April 21, 1998 (Unit 2) and April 23, 1998 (Unit 1).

Unit #1 (4/23/98)

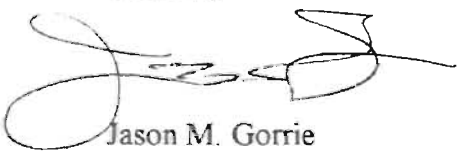
Medical Waste Throughput	belt conveyor (tons per hour)	crane bucket system (tons per hour)	Total (tons per hour)
Run #1	1.62	0.00	1.62
Run #2	1.04	0.00	1.04
Run #3	0.70	0.00	0.70
		Average	1.12

Unit #2 (4/21/98)

Medical Waste Throughput	bulk conveyor system (tons per hour)	crane bucket system (tons per hour)	Total (tons per hour)
Run #1	1.21	0.90	2.11
Run #2	1.06	0.52	1.58
Run #3	0.91	1.46	2.37
		Average	2.02

Attached are the 1-hr steamflow averages generated by the facilty's continuous emission monitoring system (CEM). Submitted under separate cover is the same summary data for full scale compliance testing (all permit specified pollutants) conducted on Unit #2 while combusting medical waste. If additional information is needed, please contact me at (352) 365-1611.

Sincerely,



Jason M. Gorrie
Senior Environmental Engineer
Ogden Martin Systems of Lake, Inc.

cc: J. Kahn (BAR)
C. Boatwright
J. Aldina (OEG)
file

DATA LISTING

NAME: U-1&2 1H PROCESS LOCATION: OMS of LAKE STATION ID: 9

CHAN NAME		1STMf	1SDAt	1UFAf	1OFAf	2STMf	2SDAt	2UFAf	2OFAf
CHAN UNITS		K#/HR	DEG f	K#/HR	K#/HR	K#/HR	DEG f	K#/HR	K#/HR
FULL SCALE		75.0	600.0	130.0	50.0	75.0	600.0	130.0	50.0
ZERO OFFSET		0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0
START / CHANNEL		01	02	03	04	05	06	07	08
04/21/98	00:00	63.6	285.5	62.3	34.3	60.4	284.4	65.4	41.2
04/21/98	01:00	64.4	285.6	62.3	34.4	60.5	285.5	59.8	40.9
04/21/98	02:00	63.2	285.5	62.3	33.6	59.8	288.2	66.4	41.1
04/21/98	03:00	63.1	285.6	68.6	35.2	60.6	291.1	66.4	41.0
04/21/98	04:00	63.3	285.8	68.8	35.6	60.4	285.7	65.1	40.5
04/21/98	05:00	63.2	285.4	68.7	35.7	60.6	275.4	54.0	38.5
04/21/98	06:00	63.5	287.1	68.8	35.8	58.8	286.1	64.7	40.8
04/21/98	07:00	63.2	290.7	68.7	35.9	58.6	284.3	63.7	40.5
04/21/98	08:00	63.2	290.5	68.8	35.6	62.3	288.7	68.5	41.0
04/21/98	09:00	63.7	290.6	68.8	35.6	62.1	288.6	69.0	40.9
04/21/98	10:00	62.8	290.6	68.8	35.8	62.9	283.3	69.0	40.8
04/21/98	11:00	62.7	290.6	68.8	35.9	61.9	287.1	69.1	41.0
04/21/98	12:00	63.8	290.4	68.7	35.9	62.8	273.9	64.4	40.4
04/21/98	13:00	63.0	290.5	68.7	36.0	62.5	274.7	62.8	40.1
04/21/98	14:00	63.2	290.6	68.8	35.9	64.0	280.0	62.9	40.2
04/21/98	15:00	63.0	290.5	68.8	36.0	63.1	282.4	62.8	40.0
04/21/98	16:00	62.7	290.8	68.8	35.9	63.9	282.0	62.8	39.9
04/21/98	17:00	64.6	290.6	68.8	35.8	62.7	282.4	62.8	39.8
04/21/98	18:00	64.2	290.5	68.8	35.8	62.5	280.9	62.8	39.9
04/21/98	19:00	62.5	290.7	68.7	35.7	63.1	283.0	62.8	40.0
04/21/98	20:00	63.4	290.8	68.7	35.9	62.8	282.4	62.8	40.1
04/21/98	21:00	63.9	290.5	68.8	36.1	62.5	284.1	62.9	40.0
04/21/98	22:00	63.2	290.6	68.7	36.1	61.1	281.9	62.8	39.2
04/21/98	23:00	63.4	290.8	68.7	36.2	62.3	282.3	62.8	39.5
		19:00	05:00	01:00	02:00	07:00	12:00	05:00	05:00
Minimum		62.5	285.4	62.3	33.6	58.6	273.9	54.0	38.5
1-hour Values									
Maximum		64.6	290.8	68.8	36.2	64.0	291.1	69.1	41.2
		17:00	16:00	06:00	23:00	14:00	03:00	11:00	00:00
Average		63.4	289.2	67.9	35.6	61.8	283.3	64.0	40.3
Total		1520.8	6941.0	1630.7	854.8	1482.5	6798.6	1536.7	967.1
Recovery (%)		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

DATA LISTING

NAME: U-1&2 1H PROCESS LOCATION: OMS of LAKE STATION ID: 9

CHAN NAME		1CARB	2CARB
CHAN UNITS		#\HR	#/HR
FULL SCALE		22.4	22.4
ZERO OFFSET		0.0	0.0
START / CHANNEL		09	10
04/21/98	00:00	11.2	11.2
04/21/98	01:00	11.2	11.2
04/21/98	02:00	11.2	11.2
04/21/98	03:00	11.2	11.2
04/21/98	04:00	11.2	11.2
04/21/98	05:00	11.2	11.2
04/21/98	06:00	11.2	11.2
04/21/98	07:00	11.2	11.2
04/21/98	08:00	11.2	11.2
04/21/98	09:00	11.2	11.2
04/21/98	10:00	11.2	11.2
04/21/98	11:00	11.2	11.2
04/21/98	12:00	11.2	11.2
04/21/98	13:00	11.2	11.2
04/21/98	14:00	11.2	11.2
04/21/98	15:00	11.2	11.2
04/21/98	16:00	11.2	11.2
04/21/98	17:00	11.2	11.2
04/21/98	18:00	11.2	11.2
04/21/98	19:00	11.2	11.2
04/21/98	20:00	11.2	11.2
04/21/98	21:00	11.2	11.2
04/21/98	22:00	11.2	11.2
04/21/98	23:00	11.2	11.2
		14:00	15:00
Minimum		11.2	11.2
1-hour Values			
Maximum		11.2	11.2
		00:00	00:00
Average		11.2	11.2
Total		269.5	268.3
Recovery (%)		100.00	100.00

DATA LISTING

NAME: U-1&2 1H PROCESS LOCATION: OMS of LAKE STATION ID: 9

CHAN NAME		1STMf	1SDAt	1UFAf	1OFAf	2STMf	2SDAt	2UFAf	2OFAf
CHAN UNITS		K#/HR	DEG f	K#/HR	K#/HR	K#/HR	DEG f	K#/HR	K#/HR
FULL SCALE		75.0	600.0	130.0	50.0	75.0	600.0	130.0	50.0
ZERO OFFSET		0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0
START / CHANNEL		01	02	03	04	05	06	07	08
04/22/98	00:00	63.7	290.4	68.9	36.3	64.1	282.5	62.9	39.8
04/22/98	01:00	62.8	290.6	68.7	36.4	61.0	272.5	60.9	39.2
04/22/98	02:00	62.5	290.4	68.5	36.4	60.6	287.0	61.9	39.3
04/22/98	03:00	62.9	290.4	65.5	36.3	58.5	286.6	66.4	39.8
04/22/98	04:00	63.3	290.5	65.5	36.2	61.2	285.8	66.5	40.0
04/22/98	05:00	63.2	290.8	65.6	36.3	60.0	285.4	66.5	40.2
04/22/98	06:00	63.6	290.3	65.4	36.5	61.0	287.1	67.4	40.5
04/22/98	07:00	62.6	290.6	65.5	36.4	61.4	287.5	67.5	41.1
04/22/98	08:00	63.4	291.1	65.5	36.6	62.1	285.0	67.2	41.1
04/22/98	09:00	63.0	291.1	65.5	36.6	62.8	286.7	65.6	41.0
04/22/98	10:00	63.9	291.2	65.5	36.5	61.8	281.8	65.8	40.8
04/22/98	11:00	64.0	291.7	65.5	36.5	63.0	283.4	65.8	40.8
04/22/98	12:00	63.5	291.5	65.5	36.4	62.7	285.9	65.8	40.7
04/22/98	13:00	64.5	291.0	64.7	36.4	63.8	282.9	63.9	40.6
04/22/98	14:00	64.1	291.9	63.4	36.0	64.2	282.7	61.3	40.2
04/22/98	15:00	62.9	291.4	63.4	35.8	62.6	287.9	59.1	39.5
04/22/98	16:00	63.4	290.0	61.5	35.5	62.7	278.8	56.1	38.9
04/22/98	17:00	63.0	291.3	58.8	34.8	61.3	289.4	55.5	38.2
04/22/98	18:00	63.1	292.6	58.9	34.8	61.8	284.0	58.2	39.0
04/22/98	19:00	63.3	292.5	59.1	34.9	62.4	286.4	59.0	39.5
04/22/98	20:00	63.5	292.3	58.9	35.0	64.7	287.3	59.4	40.0
04/22/98	21:00	64.7	285.0	59.0	35.2	63.0	289.3	62.8	40.5
04/22/98	22:00	64.1	292.7	61.6	35.8	63.3	285.2	63.5	40.6
04/22/98	23:00	63.9	288.8	62.2	36.0	62.7	288.9	65.8	41.0
		02:00	21:00	17:00	18:00	03:00	01:00	17:00	17:00
Minimum 1-hour Values		62.5	285.0	58.8	34.8	58.5	272.5	55.5	38.2
Maximum		64.7	292.7	68.9	36.6	64.7	289.4	67.5	41.1
		21:00	22:00	00:00	08:00	20:00	17:00	07:00	07:00
Average		63.5	290.8	63.9	36.0	62.2	285.0	63.1	40.1
Total		1522.8	6980.3	1532.7	863.5	1492.7	6840.0	1514.6	962.5
Recovery (%)		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

DATA LISTING

NAME: U-1&2 1H PROCESS LOCATION: OMS of LAKE STATION ID: 9

CHAN NAME		1CARB	2CARB
CHAN UNITS		#\HR	#/HR
FULL SCALE		22.4	22.4
ZERO OFFSET		0.0	0.0
START / CHANNEL		09	10
04/22/98	00:00	11.2	11.2
04/22/98	01:00	11.2	11.2
04/22/98	02:00	11.2	11.2
04/22/98	03:00	11.2	11.2
04/22/98	04:00	11.2	11.2
04/22/98	05:00	11.2	11.2
04/22/98	06:00	11.2	11.2
04/22/98	07:00	11.2<	11.2<
04/22/98	08:00	11.2	11.2
04/22/98	09:00	11.2	11.2
04/22/98	10:00	11.2	11.2
04/22/98	11:00	11.2	11.2
04/22/98	12:00	11.2	11.2
04/22/98	13:00	11.2	11.2
04/22/98	14:00	11.2	11.2
04/22/98	15:00	11.2	11.2
04/22/98	16:00	11.2	11.2
04/22/98	17:00	11.2	11.2
04/22/98	18:00	11.2	11.2
04/22/98	19:00	11.2	11.2
04/22/98	20:00	11.2	11.2
04/22/98	21:00	11.2	11.2
04/22/98	22:00	11.2	11.2
04/22/98	23:00	11.2	11.2
		12:00	13:00
Minimum		11.2	11.2
1-hour Values			
Maximum		11.2	11.2
		21:00	23:00
Average		11.2	11.2
Total		269.7	268.5
Recovery (%)		100.00	100.00

DATA LISTING

NAME: U-1&2 1H PROCESS LOCATION: OMS of LAKE STATION ID: 9

CHAN NAME		1STMf	1SDAt	1UFAf	1OFAf	2STMf	2SDAt	2UFAf	2OFAf
CHAN UNITS		K#/HR	DEG f	K#/HR	K#/HR	K#/HR	DEG f	K#/HR	K#/HR
FULL SCALE		75.0	600.0	130.0	50.0	75.0	600.0	130.0	50.0
ZERO OFFSET		0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0
START / CHANNEL		01	02	03	04	05	06	07	08
04/23/98	00:00	64.2	289.0	62.3	36.1	62.9	285.5	65.8	41.1
04/23/98	01:00	64.1	291.1	61.5	35.8	62.6	286.5	65.9	41.2
04/23/98	02:00	64.7	288.4	59.9	35.7	63.6	286.8	65.8	41.2
04/23/98	03:00	63.3	295.6	59.6	35.3	63.2	286.0	65.8	41.1
04/23/98	04:00	62.8	292.6	59.0	35.0	61.8	287.1	65.8	41.1
04/23/98	05:00	63.6	294.6	59.4	35.2	61.4	287.4	65.8	41.2
04/23/98	06:00	64.8	293.2	58.5	35.5	63.0	282.1	65.5	41.4
04/23/98	07:00	62.9	293.5	58.8	35.3	62.2	286.9	64.3	41.2
04/23/98	08:00	63.9	289.7	59.4	35.6	63.3	284.2	63.3	41.2
04/23/98	09:00	61.6	291.1	58.7	34.9	61.3	285.2	62.7	40.8
04/23/98	10:00	63.2	290.5	58.9	35.0	62.2	284.6	62.6	41.1
04/23/98	11:00	63.9	290.1	59.4	35.2	62.5	285.0	64.1	41.5
04/23/98	12:00	62.6	290.8	61.7	35.4	62.6	283.0	61.8	41.2
04/23/98	13:00	64.2	290.0	60.4	35.4	63.5	284.3	61.5	41.3
04/23/98	14:00	62.7	291.0	59.5	34.9	62.6	284.1	61.6	41.1
04/23/98	15:00	62.2	290.5	58.9	34.6	62.8	285.0	61.6	41.1
04/23/98	16:00	63.6	290.8	60.2	35.2	62.6	286.1	62.7	41.3
04/23/98	17:00	62.6	290.3	59.0	34.7	62.8	283.7	62.8	41.4
04/23/98	18:00	64.5	290.6	59.6	35.3	63.1	285.2	63.1	41.5
04/23/98	19:00	62.9	291.0	59.7	34.8	63.2	286.6	62.9	41.1
04/23/98	20:00	63.2	290.3	59.6	34.9	62.1	284.0	62.8	40.7
04/23/98	21:00	62.4	292.5	59.6	34.8	61.3	286.0	62.2	40.6
04/23/98	22:00	62.8	291.7	59.6	35.0	58.9	280.0	60.3	40.0
04/23/98	23:00	62.7	294.4	59.7	35.0	60.7	285.5	60.5	40.5
		09:00	02:00	06:00	15:00	22:00	22:00	22:00	22:00
Minimum		61.6	288.4	58.5	34.6	58.9	280.0	60.3	40.0
1-hour Values									
Maximum		64.8	295.6	62.3	36.1	63.6	287.4	65.9	41.5
		06:00	03:00	00:00	00:00	02:00	05:00	01:00	18:00
Average		63.3	291.4	59.7	35.2	62.3	285.0	63.4	41.1
Total		1519.5	6993.6	1432.7	844.6	1496.2	6841.0	1521.3	985.7
Recovery (%)		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

DATA LISTING

NAME: U-1&2 1H PROCESS LOCATION: OMS of LAKE STATION ID: 9

CHAN NAME		1CARB	2CARB
CHAN UNITS		#\HR	#/HR
FULL SCALE		22.4	22.4
ZERO OFFSET		0.0	0.0
START / CHANNEL		09	10
04/23/98	00:00	11.2	11.2
04/23/98	01:00	11.2	11.2
04/23/98	02:00	11.2	11.2
04/23/98	03:00	11.2	11.2
04/23/98	04:00	11.2	11.2
04/23/98	05:00	11.2	11.2
04/23/98	06:00	11.2	11.2
04/23/98	07:00	11.2	11.2
04/23/98	08:00	11.2	11.2
04/23/98	09:00	11.2	11.2
04/23/98	10:00	11.2	11.2
04/23/98	11:00	11.2	11.2
04/23/98	12:00	11.2	11.2
04/23/98	13:00	11.2	11.2
04/23/98	14:00	11.2	11.2
04/23/98	15:00	11.2	11.2
04/23/98	16:00	11.2	11.2
04/23/98	17:00	11.2	11.2
04/23/98	18:00	11.2	11.2
04/23/98	19:00	11.2	11.2
04/23/98	20:00	11.2	11.2
04/23/98	21:00	11.2	11.2
04/23/98	22:00	11.2	11.2
04/23/98	23:00	11.3	11.2
		11:00	10:00
Minimum		11.2	11.2
1-hour Values			
Maximum		11.3	11.2
		23:00	22:00
Average		11.2	11.2
Total		269.9	268.6
Recovery (%)		100.00	100.00

OGDEN

Ogden Martin Systems of Lake, Inc.
3830 Rogers Industrial Park Rd.
Okahumpka, FL 34762
352 365 1611
Fax 352 365 6359

July 7, 1998

Mr. Garry Kuberski
Air Compliance Division
Florida Department of Environmental Protection
Central District Office
3319 Maguire Blvd.
Suite 232
Orlando, Florida 32803

SUBJ: Addendum to OEG Report No. 2278
Summary of Process Data
Unit 2 Compliance Testing while combusting Medical Waste

Dear Mr. Kuberski:

The following data are provided as a summary of the facility process data collected during mercury compliance testing on April 21, 1998 (Unit 2) and April 23, 1998 (Unit 1).

Unit #2 (4/21/98) - Hg only

Medical Waste Throughput	bulk conveyor system (tons per hour)	crane bucket system (tons per hour)	Total (tons per hour)
Run #1	1.21	0.90	2.11
Run #2	1.06	0.52	1.58
Run #3	0.91	1.46	2.37
		Average	2.02

Unit #2 (4/22/98) - HCl, PM, CO, etc.

Medical Waste Throughput	bulk conveyor system (tons per hour)	crane bucket system (tons per hour)	Total (tons per hour)
Run #1	0.66	1.34	2.00
Run #2	1.15	1.34	2.49
Run #3	0.83	1.18	2.01
		Average	2.17

Attached are the 1-hr steamflow averages generated by the facility's continuous emission monitoring system (CEM). Submitted under separate cover is the same summary data for mercury compliance testing only on both units. If additional information is needed, please contact me at (352) 365-1611.

Sincerely,

Jason M. Gorrie
Senior Environmental Engineer
Ogden Martin Systems of Lake, Inc.

cc: J. Kahn (BAR)
C. Boatwright
J. Aldina
file

DATA LISTING

NAME: U-1&2 1H PROCESS LOCATION: OMS of LAKE STATION ID: 9

CHAN NAME		1STMf	1SDAt	1UFAf	1OFAf	2STMf	2SDAt	2UFAf	2OFAf
CHAN UNITS		K#/HR	DEG f	K#/HR	K#/HR	K#/HR	DEG f	K#/HR	K#/HR
FULL SCALE		75.0	600.0	130.0	50.0	75.0	600.0	130.0	50.0
ZERO OFFSET		0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0
START / CHANNEL		01	02	03	04	05	06	07	08
04/21/98	00:00	63.6	285.5	62.3	34.3	60.4	284.4	65.4	41.2
04/21/98	01:00	64.4	285.6	62.3	34.4	60.5	285.5	59.8	40.9
04/21/98	02:00	63.2	285.5	62.3	33.6	59.8	288.2	66.4	41.1
04/21/98	03:00	63.1	285.6	68.6	35.2	60.6	291.1	66.4	41.0
04/21/98	04:00	63.3	285.8	68.8	35.6	60.4	285.7	65.1	40.5
04/21/98	05:00	63.2	285.4	68.7	35.7	60.6	275.4	54.0	38.5
04/21/98	06:00	63.5	287.1	68.8	35.8	58.8	286.1	64.7	40.8
04/21/98	07:00	63.2	290.7	68.7	35.9	58.6	284.3	63.7	40.5
04/21/98	08:00	63.2	290.5	68.8	35.6	62.3	288.7	68.5	41.0
04/21/98	09:00	63.7	290.6	68.8	35.6	62.1	288.6	69.0	40.9
04/21/98	10:00	62.8	290.6	68.8	35.8	62.9	283.3	69.0	40.8
04/21/98	11:00	62.7	290.6	68.8	35.9	61.9	287.1	69.1	41.0
04/21/98	12:00	63.8	290.4	68.7	35.9	62.8	273.9	64.4	40.4
04/21/98	13:00	63.0	290.5	68.7	36.0	62.5	274.7	62.8	40.1
04/21/98	14:00	63.2	290.6	68.8	35.9	64.0	280.0	62.9	40.2
04/21/98	15:00	63.0	290.5	68.8	36.0	63.1	282.4	62.8	40.0
04/21/98	16:00	62.7	290.8	68.8	35.9	63.9	282.0	62.8	39.9
04/21/98	17:00	64.6	290.6	68.8	35.8	62.7	282.4	62.8	39.8
04/21/98	18:00	64.2	290.5	68.8	35.8	62.5	280.9	62.8	39.9
04/21/98	19:00	62.5	290.7	68.7	35.7	63.1	283.0	62.8	40.0
04/21/98	20:00	63.4	290.8	68.7	35.9	62.8	282.4	62.8	40.1
04/21/98	21:00	63.9	290.5	68.8	36.1	62.5	284.1	62.9	40.0
04/21/98	22:00	63.2	290.6	68.7	36.1	61.1	281.9	62.8	39.2
04/21/98	23:00	63.4	290.8	68.7	36.2	62.3	282.3	62.8	39.5
		19:00	05:00	01:00	02:00	07:00	12:00	05:00	05:00
Minimum 1-hour Values		62.5	285.4	62.3	33.6	58.6	273.9	54.0	38.5
Maximum		64.6	290.8	68.8	36.2	64.0	291.1	69.1	41.2
		17:00	16:00	06:00	23:00	14:00	03:00	11:00	00:00
Average		63.4	289.2	67.9	35.6	61.8	283.3	64.0	40.3
Total		1520.8	6941.0	1630.7	854.8	1482.5	6798.6	1536.7	967.1
Recovery (%)		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

DATA LISTING

NAME: U-1&2 1H PROCESS LOCATION: OMS of LAKE STATION ID: 9

CHAN NAME		1CARB	2CARB
CHAN UNITS		#\HR	#/HR
FULL SCALE		22.4	22.4
ZERO OFFSET		0.0	0.0
START / CHANNEL		09	10
04/21/98	00:00	11.2	11.2
04/21/98	01:00	11.2	11.2
04/21/98	02:00	11.2	11.2
04/21/98	03:00	11.2	11.2
04/21/98	04:00	11.2	11.2
04/21/98	05:00	11.2	11.2
04/21/98	06:00	11.2	11.2
04/21/98	07:00	11.2	11.2
04/21/98	08:00	11.2	11.2
04/21/98	09:00	11.2	11.2
04/21/98	10:00	11.2	11.2
04/21/98	11:00	11.2	11.2
04/21/98	12:00	11.2	11.2
04/21/98	13:00	11.2	11.2
04/21/98	14:00	11.2	11.2
04/21/98	15:00	11.2	11.2
04/21/98	16:00	11.2	11.2
04/21/98	17:00	11.2	11.2
04/21/98	18:00	11.2	11.2
04/21/98	19:00	11.2	11.2
04/21/98	20:00	11.2	11.2
04/21/98	21:00	11.2	11.2
04/21/98	22:00	11.2	11.2
04/21/98	23:00	11.2	11.2
		14:00	15:00
Minimum		11.2	11.2
1-hour Values			
Maximum		11.2	11.2
		00:00	00:00
Average		11.2	11.2
Total		269.5	268.3
Recovery (%)		100.00	100.00

DATA LISTING

NAME: U-1&2 1H PROCESS LOCATION: OMS of LAKE STATION ID: 9

CHAN NAME		1STMf	1SDAt	1UFAf	1OFAf	2STMf	2SDAt	2UFAf	2OFAf
CHAN UNITS		K#/HR	DEG f	K#/HR	K#/HR	K#/HR	DEG f	K#/HR	K#/HR
FULL SCALE		75.0	600.0	130.0	50.0	75.0	600.0	130.0	50.0
ZERO OFFSET		0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0
START / CHANNEL		01	02	03	04	05	06	07	08
04/22/98	00:00	63.7	290.4	68.9	36.3	64.1	282.5	62.9	39.8
04/22/98	01:00	62.8	290.6	68.7	36.4	61.0	272.5	60.9	39.2
04/22/98	02:00	62.5	290.4	68.5	36.4	60.6	287.0	61.9	39.3
04/22/98	03:00	62.9	290.4	65.5	36.3	58.5	286.6	66.4	39.8
04/22/98	04:00	63.3	290.5	65.5	36.2	61.2	285.8	66.5	40.0
04/22/98	05:00	63.2	290.8	65.6	36.3	60.0	285.4	66.5	40.2
04/22/98	06:00	63.6	290.3	65.4	36.5	61.0	287.1	67.4	40.5
04/22/98	07:00	62.6	290.6	65.5	36.4	61.4	287.5	67.5	41.1
04/22/98	08:00	63.4	291.1	65.5	36.6	62.1	285.0	67.2	41.1
04/22/98	09:00	63.0	291.1	65.5	36.6	62.8	286.7	65.6	41.0
04/22/98	10:00	63.9	291.2	65.5	36.5	61.8	281.8	65.8	40.8
04/22/98	11:00	64.0	291.7	65.5	36.5	63.0	283.4	65.8	40.8
04/22/98	12:00	63.5	291.5	65.5	36.4	62.7	285.9	65.8	40.7
04/22/98	13:00	64.5	291.0	64.7	36.4	63.8	282.9	63.9	40.6
04/22/98	14:00	64.1	291.9	63.4	36.0	64.2	282.7	61.3	40.2
04/22/98	15:00	62.9	291.4	63.4	35.8	62.6	287.9	59.1	39.5
04/22/98	16:00	63.4	290.0	61.5	35.5	62.7	278.8	56.1	38.9
04/22/98	17:00	63.0	291.3	58.8	34.8	61.3	289.4	55.5	38.2
04/22/98	18:00	63.1	292.6	58.9	34.8	61.8	284.0	58.2	39.0
04/22/98	19:00	63.3	292.5	59.1	34.9	62.4	286.4	59.0	39.5
04/22/98	20:00	63.5	292.3	58.9	35.0	64.7	287.3	59.4	40.0
04/22/98	21:00	64.7	285.0	59.0	35.2	63.0	289.3	62.8	40.5
04/22/98	22:00	64.1	292.7	61.6	35.8	63.3	285.2	63.5	40.6
04/22/98	23:00	63.9	288.8	62.2	36.0	62.7	288.9	65.8	41.0
		02:00	21:00	17:00	18:00	03:00	01:00	17:00	17:00
Minimum 1-hour Values		62.5	285.0	58.8	34.8	58.5	272.5	55.5	38.2
Maximum		64.7	292.7	68.9	36.6	64.7	289.4	67.5	41.1
		21:00	22:00	00:00	08:00	20:00	17:00	07:00	07:00
Average		63.5	290.8	63.9	36.0	62.2	285.0	63.1	40.1
Total		1522.8	6980.3	1532.7	863.5	1492.7	6840.0	1514.6	962.5
Recovery (%)		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

DATA LISTING

NAME: U-1&2 1H PROCESS LOCATION: OMS of LAKE STATION ID: 9

CHAN NAME		1CARB	2CARB
CHAN UNITS		#\HR	#/HR
FULL SCALE		22.4	22.4
ZERO OFFSET		0.0	0.0
START / CHANNEL		09	10
04/22/98	00:00	11.2	11.2
04/22/98	01:00	11.2	11.2
04/22/98	02:00	11.2	11.2
04/22/98	03:00	11.2	11.2
04/22/98	04:00	11.2	11.2
04/22/98	05:00	11.2	11.2
04/22/98	06:00	11.2	11.2
04/22/98	07:00	11.2<	11.2<
04/22/98	08:00	11.2	11.2
04/22/98	09:00	11.2	11.2
04/22/98	10:00	11.2	11.2
04/22/98	11:00	11.2	11.2
04/22/98	12:00	11.2	11.2
04/22/98	13:00	11.2	11.2
04/22/98	14:00	11.2	11.2
04/22/98	15:00	11.2	11.2
04/22/98	16:00	11.2	11.2
04/22/98	17:00	11.2	11.2
04/22/98	18:00	11.2	11.2
04/22/98	19:00	11.2	11.2
04/22/98	20:00	11.2	11.2
04/22/98	21:00	11.2	11.2
04/22/98	22:00	11.2	11.2
04/22/98	23:00	11.2	11.2
		12:00	13:00
Minimum		11.2	11.2
1-hour Values			
Maximum		11.2	11.2
		21:00	23:00
Average		11.2	11.2
Total		269.7	268.5
Recovery (%)		100.00	100.00

DATA LISTING

NAME: U-1&2 1H PROCESS LOCATION: OMS of LAKE STATION ID: 9

CHAN NAME		1STMf	1SDAt	1UFAf	1OFAf	2STMf	2SDAt	2UFAf	2OFAf
CHAN UNITS		K#/HR	DEG f	K#/HR	K#/HR	K#/HR	DEG f	K#/HR	K#/HR
FULL SCALE		75.0	600.0	130.0	50.0	75.0	600.0	130.0	50.0
ZERO OFFSET		0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0
START / CHANNEL		01	02	03	04	05	06	07	08
04/23/98	00:00	64.2	289.0	62.3	36.1	62.9	285.5	65.8	41.1
04/23/98	01:00	64.1	291.1	61.5	35.8	62.6	286.5	65.9	41.2
04/23/98	02:00	64.7	288.4	59.9	35.7	63.6	286.8	65.8	41.2
04/23/98	03:00	63.3	295.6	59.6	35.3	63.2	286.0	65.8	41.1
04/23/98	04:00	62.8	292.6	59.0	35.0	61.8	287.1	65.8	41.1
04/23/98	05:00	63.6	294.6	59.4	35.2	61.4	287.4	65.8	41.2
04/23/98	06:00	64.8	293.2	58.5	35.5	63.0	282.1	65.5	41.4
04/23/98	07:00	62.9	293.5	58.8	35.3	62.2	286.9	64.3	41.2
04/23/98	08:00	63.9	289.7	59.4	35.6	63.3	284.2	63.3	41.2
04/23/98	09:00	61.6	291.1	58.7	34.9	61.3	285.2	62.7	40.8
04/23/98	10:00	63.2	290.5	58.9	35.0	62.2	284.6	62.6	41.1
04/23/98	11:00	63.9	290.1	59.4	35.2	62.5	285.0	64.1	41.5
04/23/98	12:00	62.6	290.8	61.7	35.4	62.6	283.0	61.8	41.2
04/23/98	13:00	64.2	290.0	60.4	35.4	63.5	284.3	61.5	41.3
04/23/98	14:00	62.7	291.0	59.5	34.9	62.6	284.1	61.6	41.1
04/23/98	15:00	62.2	290.5	58.9	34.6	62.8	285.0	61.6	41.1
04/23/98	16:00	63.6	290.8	60.2	35.2	62.6	286.1	62.7	41.3
04/23/98	17:00	62.6	290.3	59.0	34.7	62.8	283.7	62.8	41.4
04/23/98	18:00	64.5	290.6	59.6	35.3	63.1	285.2	63.1	41.5
04/23/98	19:00	62.9	291.0	59.7	34.8	63.2	286.6	62.9	41.1
04/23/98	20:00	63.2	290.3	59.6	34.9	62.1	284.0	62.8	40.7
04/23/98	21:00	62.4	292.5	59.6	34.8	61.3	286.0	62.2	40.6
04/23/98	22:00	62.8	291.7	59.6	35.0	58.9	280.0	60.3	40.0
04/23/98	23:00	62.7	294.4	59.7	35.0	60.7	285.5	60.5	40.5
		09:00	02:00	06:00	15:00	22:00	22:00	22:00	22:00
Minimum		61.6	288.4	58.5	34.6	58.9	280.0	60.3	40.0
1-hour Values									
Maximum		64.8	295.6	62.3	36.1	63.6	287.4	65.9	41.5
		06:00	03:00	00:00	00:00	02:00	05:00	01:00	18:00
Average		63.3	291.4	59.7	35.2	62.3	285.0	63.4	41.1
Total		1519.5	6993.6	1432.7	844.6	1496.2	6841.0	1521.3	985.7
Recovery (%)		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

DATA LISTING

NAME: U-1&2 1H PROCESS LOCATION: OMS of LAKE STATION ID: 9

CHAN NAME		1CARB	2CARB
CHAN UNITS		#\HR	#/HR
FULL SCALE		22.4	22.4
ZERO OFFSET		0.0	0.0
START / CHANNEL		09	10
04/23/98	00:00	11.2	11.2
04/23/98	01:00	11.2	11.2
04/23/98	02:00	11.2	11.2
04/23/98	03:00	11.2	11.2
04/23/98	04:00	11.2	11.2
04/23/98	05:00	11.2	11.2
04/23/98	06:00	11.2	11.2
04/23/98	07:00	11.2	11.2
04/23/98	08:00	11.2	11.2
04/23/98	09:00	11.2	11.2
04/23/98	10:00	11.2	11.2
04/23/98	11:00	11.2	11.2
04/23/98	12:00	11.2	11.2
04/23/98	13:00	11.2	11.2
04/23/98	14:00	11.2	11.2
04/23/98	15:00	11.2	11.2
04/23/98	16:00	11.2	11.2
04/23/98	17:00	11.2	11.2
04/23/98	18:00	11.2	11.2
04/23/98	19:00	11.2	11.2
04/23/98	20:00	11.2	11.2
04/23/98	21:00	11.2	11.2
04/23/98	22:00	11.2	11.2
04/23/98	23:00	11.3	11.2
		11:00	10:00
Minimum		11.2	11.2
1-hour Values			
Maximum		11.3	11.2
		23:00	22:00
Average		11.2	11.2
Total		269.9	268.6
Recovery (%)		100.00	100.00

OGDEN

Ogden Martin Systems of Lake, Inc.
3830 Rogers Industrial Park Rd.
Okahumpka, FL 34762
352 365 1611
Fax 352 365 6359

June 2, 1998

Ms. Cindy Phillips
Title V Permitting Engineer
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Rd.
Tallahassee, Florida 32399-2400

SUBJ: Title V Permitting
Ogden Martin Systems of Lake, Inc.

Dear Ms. Phillips:

On April 17, 1998, Ms. Mary Smallwood met with Mr. Clair Fancy and other Department representatives to discuss the protocol for demonstrating that the Lake County Resource Recovery Facility, Unit #2, is capable of processing biomedical waste in compliance with applicable medical waste incinerator regulations. During that meeting, it was agreed that such testing could be conducted under the authority of the existing construction permit. It was further agreed during the 4/17/98 meeting that continued processing of biomedical waste in Unit #2 would not be authorized until the facility's operating permit was modified. Accordingly, Mr. Fancy resolved to have the Department re-prioritize the in-house Title V applications such that the facility's application would be processed as soon as possible.

Attached, please find the results of such testing for your review and inclusion with the previously submitted Title V permit application. We trust that the information contained in the test results is sufficient to allow the Department to clearly authorize the continued processing of biomedical waste in Unit #2 via the Title V permit. Because this will be the first Title V permit issued in the State for a municipal waste combustor, we anticipate that you will have a number of questions. We are prepared to meet with you in your office (or at the facility if you would prefer) to facilitate an expeditious review of the application. I will be contacting you shortly to discuss any concerns or questions you may have and to arrange such a meeting should it be deemed necessary.

Ms. Cindy Phillips
June 1, 1998

Thank you for your attention to this matter. We look forward to working with you in the coming weeks during your review and writing of the permit.

Sincerely,

Jason M. Gorrie
Senior Environmental Engineer
Ogden Martin Systems of Lake, Inc.

cc: M. Smallwood, Ruden, McCloskey, Smith, Schuster & Russell (w/o attachment)
C. Fancy, FDEP BAR (w/o attachment)
L. Kozlov, FDEP Central District (w/ attachment)
C. Boatwright, OMS Lake (w/o attachment)

Meeting with Clair Fancy and Al Linearo
December 2, 1996

Concerning call from Anatoli: Lake County RRF request not to burn medical waste in unit 2 during January compliance test so that they will have to test again after permit is amended in March or April to allow med waste to be burned in unit 2.

History: Earlier this year representatives from Ogden Martin asked me to intervene in the central district's decision not to allow them to burn med waste in unit 2. They have been permitted to burn up to 26 tons per day in unit 1 for years without trouble. Unit 2 is exactly the same as unit 1. They did not want to burn any more med waste, they just wanted the option to burn in unit 1 or unit 2. It sounded like a misunderstanding and after talking to district everyone seemed OK with the idea. Some time later the district issued an operating permit amendment to allows Lake County to burn 26 TPD in unit 1 AND 26 TPD in unit 2 (a total of 52 TPD). Also, they did not public notice the amendment. Clair was more than a little upset and so the district rescind that part of the amendment that allowed med waste to be burned in unit 2 but the amended permit still says that they can burn up to 52 TPD med waste (presumably all in unit 1). It is now a legal issue and will not be resolved for some time.

Solution: The district could issue a letter authorizing the burning of X lbs of medical waste only during the compliance test. Such an authorization would take a few months to issue and Al did not like the idea of allowing them to burn any medical waste in unit 2 before the permitting issue is resolved. Clair and Al agreed that the best way to handle would be for the County to test unit 1 while burning med waste, unit 1 w/o med waste, and unit 2 w/o med waste. Because the two units are identical, the unit 1 tests could substitute for unit 2 tests in showing that there is no negative effect while burning med waste.

Date: 12/10/96 10:43:34 AM
From: Leonard Kozlov ORL
Subject: Compliance Testing/Ogden Martin- Lake County
To: See Below

Folks:

I had discussions with my staff regarding the request by Ogden Martin to test Unit 1 without medical waste burning and then again with medical and then extrapolate the results for unit 2 to burn medical wastes. Initially I thought this would be a good idea, but I have reversed my position on this after discussions with my staff. Mike you mentioned in your email of 12-6-96 that it is my call.

My call is that Ogden martin will do their testing on units 1and 2 as a regular required test and when the amendment is applied for and approved for unit 2 to burn medical waste, then they will have to do the required compliance testing for unit2 when they obtain the proper permits to burn medical waste. If you have any questions, let me know.

Len

To: Michael Hewett TAL
To: Alvaro Linero TAL
CC: Clair Fancy TAL
CC: Dina Jones ORL
CC: Anatoliy Sobolevskiy ORL
CC: Garry Kuberski ORL

Heather: to Ogden Martin at Lake file.
AL

Date: 06/18/1998 4:25:41 PM
From: Joseph Kahn TAL
Subject: Ogden Lake
To: Alvaro Linero TAL
CC: Susan DeVore TAL

Susan and I spoke today by phone with Jason Gorrie of Ogden regarding issuing an AC permit modification to address burning of biomedical waste in unit 2 at Ogden Lake. I told Jason that our review of the file suggested that the issuance of an AO permit to burn 51.6 TPD of biomedical waste was an error, and that it seemed to never be the Department's intention to allow for more than 26.88 TPD in both units. I told him that Susan could issue an intent to issue an AC modification within a week or so if we limit the BMW facility-wide to 26.88 TPD.

Jason said that Ogden's position is that the AC permit actually provides for the firing of up to 288 TPD of BMW in each unit, by virtue of the way the BMW was permitted in an AC modification, defining BMW as MSW. He agreed with me that, although the AC permit language could be read that way, as a practical matter, this defied logic. Jason said the units are really not capable of firing more than about 2 TPH in each unit, because any additional BMW displaces too much MSW, and the facility has to meet its contractual commitment to Lake County regarding MSW. Jason stated that Ogden's position is that it is allowed by operation permit to burn 51.6 TPD of BMW, that it is building up its BMW business, and is not in a position to accept a facility wide cap at less than about 51.6 TPD. Ogden does want the flexibility to burn up to 51.6 TPD facility wide, in any combination of units 1 and 2.

I told him that the Department staff that attended the last meeting with Mary Smallwood clearly recall that she said the facility does not want to burn more than the original 26.88 TPD facility wide, and that I did not have the authority to authorize more than that amount in this permitting action. Jason asked that we meet on this issue when Clair returns to the office. I told him I would refer the matter back to you, and that we would likely review the matter internally before Clair returns so we can brief him on our position.

Date: 06/30/1998 2:52:46 PM
From: Cindy Phillips TAL
Subject: Re: FWD: Comments on Ogden Martin Systems of Lake, Inc, Stack Test of Ap
To: Anatoliy Sobolevskiy ORL
CC: Susan DeVore TAL

Thanks for your comments Toliy. I'm going to forward them to Susan Devore Fillmore. Though I will eventually be preparing the Title V permit for this facility, Susan is working on the AC revision.

I have reviewed the Mercury Test Report for units 1 and 2 and the Compliance test report for Unit 2 for the above referenced facility.

I have the following comments:

1. Production data is included in the test report in the form of printouts for steam production and copies of weight records for medical waste and MSW. A summary of the steam produced in kilopounds steam per hour and the medical waste burned in terms of tons per hour, over the period of the test, is not included in the test.

I discussed this with Jason Gorrie 6/30/98. He is presently preparing a summary of the production data and will submit it as a addendum to the report. Jason stated that he would submit the addendum by the end of the week. He also stated that medical waste rate for unit 2, averaged over the period of the test, was 2.02 tons per hour.

2. HF,Be, Pb, and VOC were not tested on unit 2 while burning medical waste.

They were tested in January of '96 as required by the permit.

3. A sketch of the duct showing the sampling ports is not included in the report as required by 62-297.310 (8)7. (Test Reports)

The sketch is not in the test report, but it has been submitted in previous pretest plans.

4. Paragraph 4.2 of the AirKinetics,Inc. test report Location Description, describes the ducts and distances to nearest flow disturbances in terms of equivalent diameters. It appears that an error was made in substituting feet for inches.

Jason Gorrie stated that he would check the paragraph.

5. Compliance with tested emission limits were demonstrated with both tests.

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

August 14, 1996

Certified Mail–Return Receipt Requested

Ms. Michelle L. Herman
Environmental Engineer
Ogden Martin Systems, Inc.
40 Lane Road
Fairfield, New Jersey 07007-2615

Dear Ms. Herman:

Enclosed is a copy of an administrative order concerning the request for approval to use the sampling method described in 40 CFR 266 Appendix IX, Section 3.1 for the simultaneous measurement of arsenic (As), beryllium (Be), and lead (Pb) emissions from Ogden Martin's Lake County Solid Waste Resource Recovery Facility, Permit No. PSD-FL-113. The administrative order also addresses the use of EPA Method 29 at the subject facility.

If you have any questions about the above, please call Ramesh Menon at 904/488-6140, or write to me.

Sincerely,

M. D. Harley, P.E., DEE
P.E. Administrator
Emissions Monitoring Section

\MDH

Enclosure

cc: Pat Comer, FDEP
Len Kozlov, Central District
Ceccil Boatwright, Ogden Martin
Joe Aldina, Ogden Martin

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In the matter of:	Permit No.	PSD-FL-113 AO 35-193817
Ogden Martin Systems, Inc.	ASP No.	96-A-01
Petitioner.		

ORDER ON REQUEST
FOR
ALTERNATE PROCEDURES AND REQUIREMENTS

Pursuant to Rule 62-297.620, Florida Administrative Code (F.A.C.), Ogden Martin Systems Inc. petitioned for approval to use the EPA Method described in 40 CFR 266, Appendix IX, Section 3.1 in lieu of EPA Method 104 and EPA Method 12 for measuring beryllium (Be) and lead (Pb) emissions, respectively, from Petitioner's Municipal Waste Combustor Facility, permit numbers PSD-FL-113 and AO 35-193817, located in Lake County.

Having considered Petitioner's written request and all supporting documentation, the following Findings of Fact, Conclusions of Law, and Order are entered:

FINDINGS OF FACT

1. On January 12, 1996, Petitioner specifically requested approval to use the EPA method described in Section 3.1 of 40 CFR 266, Appendix IX, "Methodology for the Determination of Metals Emissions in Exhaust Gases from Hazardous Waste Incineration and Similar Combustion Processes", as the compliance verification procedure for simultaneously determining emissions of beryllium (Be) and lead (Pb) from the Lake County Municipal Waste Combustor (PSD-FL-113 and AO 35-193817) using a single sampling train. [Exhibit 1]

2. As justification for the use of the EPA Method described in Section 3.1 of 40 CFR 266, Appendix IX, Petitioner stated, "The method described in 40 CFR 266, Appendix IX, Section 3.1 is requested for the determination of lead, and beryllium. This is an EPA approved Method that produces reliable and accurate results. This method allows for the determination of these metals in one sampling train. The method is more time efficient and cost effective without compromising the results." [Exhibit 1]

3. The applicability section of the method described in Section 3.1.1.1 of 40 CFR 266, Appendix IX states, "This method is being developed for the determination of total chromium (Cr), cadmium (Cd), arsenic (As), nickel (Ni), manganese (Mn),

beryllium (Be), copper (Cu), zinc (Zn), lead (Pb), selenium (Se), phosphorous (P), thallium (Tl), silver (Ag), antimony (Sb), barium (Ba), and mercury (Hg) stack emissions from hazardous waste incinerators and similar combustion processes."

4. On April 25, 1996, the Environmental Protection Agency promulgated EPA Method 29, "Determination of Metals Emissions from Stationary Sources" in the Federal Register (Volume 61, Number 81, Page 18260-18280). EPA Method 29 is an addition to Appendix A of 40 CFR Part 60.

CONCLUSIONS OF LAW

1. The Department has jurisdiction to consider Petitioner's request pursuant to Section 403.061, Florida Statutes (F.S.), and Rule 62-297.620, F.A.C.

2. Pursuant to Rule 62-297.310(7), F.A.C., the Department may require Petitioner to conduct compliance tests that identify the nature and quantity of pollutant emissions, if, after investigation, it is believed that any applicable emission standard or condition of a permit is being violated.

3. Petitioner has provided reasonable justification that the EPA Method described in Section 3.1 of 40 CFR 266, Appendix IX will be adequate to verify compliance with the beryllium (Be), and lead (Pb) emission limiting standards.

ORDER

Having considered Petitioner's written request and supporting documentation, it is hereby ordered that:

1. Petitioner's request to use the EPA method described in Section 3.1 of 40 CFR 266, Appendix IX to measure emissions of beryllium (Be), and lead (Pb) in a single train is granted;

2. Petitioner may also use EPA Method 29, "Determination of Metals Emissions from Stationary Sources", to measure emissions of beryllium (Be), and lead (Pb); and,

3. The Department retains the right to require Petitioner to measure emissions using EPA Method 104 for beryllium (Be), and EPA Method 12 for lead (Pb) if, after investigation, it is believed that the use of these methods is necessary to accurately assess the compliance status of the emission unit.

PETITION FOR ADMINISTRATIVE REVIEW

1. A person whose substantial interests are affected by the Department's decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, F.S. The petition must contain the information set forth below and must be filed (received)

in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, within 21 days of receipt of this Order. The petitioner shall mail a copy of the petition to the applicant at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, F.S.

2. The petition shall contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, and the Department File Number;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by each petitioner, if any;

(e) A statement of facts which each petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes each petitioner contends require reversal or modification of the Department's action or proposed action; and,

(g) A statement of the relief sought by each petitioner, stating precisely the action each petitioner wants the Department to take with respect to the Department's action or proposed action.

3. If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Order. Persons whose substantial interests will be affected by any decision of the Department with regard to the petition have the right to petition to become a party to the proceeding. The petition must conform with the requirements specified above and be filed (received) within 21 days of receipt of this notice in the Office of General Counsel at 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

4. This Order constitutes final agency action unless a petition is filed in accordance with the above paragraphs. Upon timely filing of a petition, this Order will not be effective until further Order of the Department.

RIGHT TO APPEAL

Any party to this Order has the right to seek judicial review of the Order pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000; and, by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Notice of Agency Action is filed with the Clerk of the Department.

DONE AND ORDERED this 9 day of August, 1996 in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Howard L. Rhodes

HOWARD L. RHODES
Director
Division of Air Resources Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

(904) 488-0114

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that a true copy of the foregoing was mailed to Ms. Michelle L. Herman, Environmental Engineer, Ogden Martin Systems, Inc., 40 Lane Road, Fairfield, New Jersey 07007-2615 on this 14th day of August 1996.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Martha Jane Wise 8/14/96
Clerk Date

OGDEN

Ogden Projects, Inc.
40 Lane Road, CN 2615
Fairfield, NJ 07007-2615 USA
Tel: 201 882 9000

January 12, 1996

Mr. Michael D. Harley, P.E., DEE
P.E. Administrator
Emissions Monitoring Section
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blairstone Road
Tallahassee, FL 32399-2400

RE: OMS of Lake, Inc.
Permit No. AO35-193817
Request for Amendments to Specific Condition 8f (Test Methods)

Dear Mr. Harley:

An alternate sampling procedure is requested for the determination of lead and beryllium emissions from the OMS Lake Facility. It is requested that sampling methods described at 40 CFR 266, Appendix IX, Section 3.1 be allowed for determination of lead and beryllium using a multimetal sampling train instead of the individual EPA Methods 12 and 104. Below please find the documentation necessary for approval of an alternate test method as stated in Rule 62-297.620(2)(a)-(d), F.A.C.

Rule 62-297.620(2) states the following:

(a) Specific emissions unit and permit number, if any, for which exception is requested.

The emission units for which an exception is requested are lead and beryllium. These metals are required to be tested according to permit number AO35-193817 for the Lake County Resource Recovery Facility.

(b) The specific provision(s) of this chapter from which an exception is sought.

Specific condition 8f in permit number AO35-193817 requires that EPA Method 12 be used for determination of lead and EPA Method 104 be used for determination of beryllium.

Exhibit 1

(c) The basis for the exception including but not limited to any hardship which would result from compliance with the provisions of this chapter.

Using EPA Methods 12 and 104 for determination of lead and beryllium respectively is redundant. These methods can be sampled in one train (40 CFR 60, Appendix IX, Section 3.1). Using a single train is more efficient and cost effective.

(d) The alternate procedure(s) or requirement(s) for which approval is sought and a demonstration that such alternate procedure(s) or requirement(s) shall be adequate to demonstrate compliance with applicable emission limiting standards contained in the rules of the Department of any permit issued pursuant to those rules.

The method described in 40 CFR 60, Appendix IX, Section 3.1 is requested for the determination of lead and beryllium emissions. This is an EPA approved method that produces reliable and accurate results. This method allows for the determination of these metals in one sampling train. The method is more time efficient and cost effective without compromising the results.

If you have any questions or comments please call me at (201) 882-7173.

Sincerely,

Michelle L. Herman

Michelle L. Herman
Environmental Engineer

MLH:rj

cc: G. J. Aldina
G. Crane
J. Brown - FLDER
C. Boatwright
J. Gorrie
D. Porter