→ P4/16

Check Sheet

Company Name: DRE Environmental
Permit Number: AC 16-187650, 189522
PSD Number:
County:
Permit Engineer:
Others involved:

Application:
- [x] Initial Application
- [x] Incompleteness Letters
- [x] Responses
- [ ] Final Application (if applicable)
- [ ] Waiver of Department Action
- [ ] Department Response

Intent:
- [ ] Intent to Issue
- [x] Notice to Public
- [x] Technical Evaluation
- [ ] BACT Determination
- [x] Unsigned Permit

  Attachments:
  - [ ]
  - [ ]
  - [ ]

- [ ] Correspondence with:
  - [ ] EPA
  - [ ] Park Services
  - [ ] County
  - [x] Other
- [x] Proof of Publication
- [ ] Petitions - (Related to extensions, hearings, etc.)

Final Determination:
- [x] Final Determination
- [ ] Signed Permit
- [ ] BACT Determination

Post Permit Correspondence:
- [x] Extensions
- [x] Amendments/Modifications
- [ ] Response from EPA
- [ ] Response from County
- [ ] Response from Park Services

Is your RETURN ADDRESS completed on the reverse side?

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 will show to whom the article was delivered and the date delivered.

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:

Mr. Mike McRae
Vice President-Project Development
Anderson Columbia Thermal
Systems, Inc.
P. O. Box 1386
Lake City, Florida 32056-1386

4a. Article Number
Z 751 860 011

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

7. Date of Delivery
12-22-94

5. Signature (Addressee)
Brian P Schreiber

6. Signature (Agent)

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

1994 22 DEC JACKSON. FL 32 PM

PS Form **3811**, December 1991 ☆U.S. GPO: 1992—323-402 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Z 751 860 011

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

UNITED STATES POSTAL SERVICE

Sent to Mr. Mike McRae	
Street and No. P. O. Box 1386	
P.O., State and ZIP Code Lake City, FL 32056-1386	
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 Mailed: 12/20/94 AC16-187650A and AC16-189522A	

PS Form **3800**, March 1993

Department of
Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

December 12, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Mike McRae
Vice President-Project Development
Anderson Columbia Thermal Systems, Inc.
P. O. Box 1386
Lake City, Florida 32056-1386

Dear Mr. McRae:

Re: Amendment of Permits
Permit Nos. AC 16-187650A and AC 16-189522A

The Department of Environmental Protection (Department) is in receipt of your November 15, 1994 letter requesting that the referenced permits for two 35 TPH mobile soil thermal treatment facilities be amended to reflect the new name of the Corporation and to extend the expiration date for the construction permit for Unit No. 2. The extension is needed because this unit has not operated in Florida.

These requests are acceptable to the Department and, by copy of this letter, the name of the owner of the referenced permits is changed from D.R.E. Environmental Corporation to Anderson Columbia Thermal System, Inc. The mailing address is unchanged.

The expiration date for construction permit, No. AC 16-189522A, for Unit No. 2, is extended from January 1, 1995, to January 1, 1996. All compliance tests specified in this permit shall be conducted at its first operation site in Florida and annually thereafter.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes (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 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this amendment. Petitions filed by other

persons must be filed within 14 days of publication of the public notice or within 14 days of their receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to theapplicant 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, F.S.

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 intent. 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 intent 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, Florida Administrative Code.

A copy of this letter shall be filed with each referenced permit and shall become a part of those permits.

Sincerely,

Howard L. Rhodes
Director
Division of Air Resources Management

HLR/WH/bjb

Attachments: Anderson Columbia letter received November 21, 1994.
Permit No. AC 16-187650A.
Permit No. AC 16-189522A.

cc: District Air Program Administrators
County Air Program Administrators

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this AMENDMENT and all copies were mailed by certified mail before the close of business on 12/20/94 to the listed persons.

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.

Charlotte J Hayes 12/20/94
Clerk Date

Department of
Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

December 12, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Mike McRae
Vice President-Project Development
Anderson Columbia Thermal Systems, Inc.
P. O. Box 1386
Lake City, Florida 32056-1386

Dear Mr. McRae:

Re: Amendment of Permits
Permit Nos. AC 16-187650A and AC 16-189522A

The Department of Environmental Protection (Department) is in receipt of your November 15, 1994 letter requesting that the referenced permits for two 35 TPH mobile soil thermal treatment facilities be amended to reflect the new name of the Corporation and to extend the expiration date for the construction permit for Unit No. 2. The extension is needed because this unit has not operated in Florida.

These requests are acceptable to the Department and, by copy of this letter, the name of the owner of the referenced permits is changed from D.R.E. Environmental Corporation to Anderson Columbia Thermal System, Inc. The mailing address is unchanged.

The expiration date for construction permit, No. AC 16-189522A, for Unit No. 2, is extended from January 1, 1995, to January 1, 1996. All compliance tests specified in this permit shall be conducted at its first operation site in Florida and annually thereafter.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes (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 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this amendment. Petitions filed by other

persons must be filed within 14 days of publication of the public notice or within 14 days of their receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to theapplicant 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, F.S.

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 intent. 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 intent 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, Florida Administrative Code.

A copy of this letter shall be filed with each referenced permit and shall become a part of those permits.

Sincerely,

Howard L. Rhodes
Director
Division of Air Resources
Management

HLR/WH/bjb

Attachments: Anderson Columbia letter received November 21, 1994.
Permit No. AC 16-187650A.
Permit No. AC 16-189522A.

cc: District Air Program Administrators
County Air Program Administrators

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

_____
C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this AMENDMENT and all copies were mailed by certified mail before the close of business on _____ to the listed persons.

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.

_____ _____
Clerk Date

ANDERSON COLUMBIA
ENVIRONMENTAL, INC.

Providing Solutions to
Environmental Problems

November 15, 1994

Florida Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Attn: C. H. Fancy, P.E.

Subject: Notification of Name Change of Corporation

Dear Mr. Fancy:

As follow-up to my conversation this date with Mr. Willard Hanks of your Bureau, I am requesting that the Department amend our permits, AC16-189522A and AO16-231440 to reflect the name change of the Corporation from DRE Environmental, Inc. to Anderson Columbia Thermal Systems, Inc. Please find enclosed a check for $100 to cover the required fee of $50 per permit.

Secondly, I would like to request that permit AC16-189522 be extended for another year as we are optimistic that the business climate for mobile thermal services in Florida may improve in the next year.

Finally, we would like to request that you send us copies of our amended permits so that we may complete our file. The contact person for future correspondence regarding Anderson Columbia Thermal Systems, Inc. is:

Mike McRae
Vice President Project Development
Anderson Columbia Thermal Systems, Inc.
P. O. Box 1386
Lake City, Florida 32056-1386
(904) 755-1196
(904) 758-9050 FAX

If there are any questions or should you require further information, please call (904)755-1196.

Sincerely,

ANDERSON COLUMBIA THERMAL SYSTEMS, INC.

Michael H. McRae
Vice President
MHM/rt
Enclosed Check

cc: Mr. T. H. McRae, President
Mr. J. R. Fulkerson, VP

Memorandum

Florida Department of
Environmental Protection

TO: Howard Rhodes

FROM: Clair Fancy

DATE: December 9, 1994

SUBJECT: Amendment of Permits
D.R.E. Environmental Corporation

Attached for your approval and signature is a letter that will amend the permits for two mobile soil thermal treatment facilities. The amendments are to change the name of the owner; and, to extend the expiration date of the construction permit for one unit that has not operated in Florida.

I recommend your approval and signature.

CHF/WH/bjb

Attachment

Z 751 860 010

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

Sent to: Mr. Mike McRae	
Street and No.: P. O. Box 1386	
P.O., State and ZIP Code: Lake City, FL 32056-1386	
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: Mailed: 12/16/94 AC16-187650A & AC 16-189522A	

PS Form 3800, March 1993

ANDERSON COLUMBIA
ENVIRONMENTAL, INC.

Providing Solutions to Environmental Problems

November 15, 1994

Florida Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Attn: C. H. Fancy, P.E.

Subject: Notification of Name Change of Corporation

Dear Mr. Fancy:

As follow-up to my conversation this date with Mr. Willard Hanks of your Bureau, I am requesting that the Department amend our permits, AC16-189522A and AO16-231440 to reflect the name change of the Corporation from DRE Environmental, Inc. to Anderson Columbia Thermal Systems, Inc. Please find enclosed a check for $100 to cover the required fee of $50 per permit.

Secondly, I would like to request that permit AC16-189522 be extended for another year as we are optimistic that the business climate for mobile thermal services in Florida may improve in the next year.

Finally, we would like to request that you send us copies of our amended permits so that we may complete our file. The contact person for future correspondence regarding Anderson Columbia Thermal Systems, Inc. is:

Mike McRae
Vice President Project Development
Anderson Columbia Thermal Systems, Inc.
P. O. Box 1386
Lake City, Florida 32056-1386
(904) 755-1196
(904) 758-9050 FAX

If there are any questions or should you require further information, please call (904)755-1196.

Sincerely,

ANDERSON COLUMBIA THERMAL SYSTEMS, INC.

Michael H. McRae
Vice President
MHM/rt
Enclosed Check

cc: Mr. T. H. McRae, President
Mr. J. R. Fulkerson, VP

ANDERSON COLUMBIA
ENVIRONMENTAL, INC.
P.O. Box 1386
Lake City, Florida 32056-1386

JACKSONVILLE, FL 322
PM
17 NOV
1994

LAKE CITY FLA
NOV 17 '94
U.S. POSTAGE
7826489

Florida Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

ATTN: C.H. Fancy, P.E.

ANDERSON COLUMBIA
ENVIRONMENTAL INC
P.O. BOX 1386 • LAKE CITY, FL 32056-1386
(904) 755-1196

GENERAL ACCOUNT

BARNETT BANK OF
NORTH CENTRAL FLORIDA
LAKE CITY, FL
[redacted]

017192

0006932

DATE 11-16-94

AMOUNT $100.00

******ONE HUNDRED DOLLARS AND 00/100*************

PAY TO THE ORDER OF
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR REGULATION
2600 BLAIR STONE ROAD
TALLAHASSEE, FL 32399-2400

[redacted]

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTIFICATION OF NAME CHANGE OF CORPORATION
PERMITS AC16-189522A
AO16-231440
$50.00 EACH
11-16-94

ANDERSON COLUMBIA

P 872 562 583

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

UNITED STATES POSTAL SERVICE

Sent to Mr. John S. Anderson	
Street and No. P. O. Box 1386	
P.O., State and ZIP Code Lake City, FL 32056-1386	
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 Mailed: 1/20/94 D.R.E. Environmental, Inc. AC 16-187650 AC 16-189522	

PS Form 3800, JUNE 1991

Is your RETURN ADDRESS completed on the reverse side?

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 will show to whom the article was delivered and the date delivered.

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:
Mr. John S. Anderson
D.R.E. Environmental, Inc.
P. O. Box 1386
Lake City, Florida 32056-1386

4a. Article Number
P 872 562 583

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

7. Date of Delivery
1-25-94

5. Signature (Addressee)

6. Signature (Agent)
Jackie DeBennett

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

Thank you for using Return Receipt Service.

PS Form 3811, December 1991 ★U.S. GPO: 1992—323-402 **DOMESTIC RETURN RECEIPT**

Florida Department of
Environmental Protection

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

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

January 14, 1994

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John S. Anderson
D.R.E. Environmental, Inc.
P.O. Box 1386
Lake City, Florida 32056-1386

Dear Mr. Anderson:

Re: Amendment of Permits
D.R.E. Environmental, Inc.

The Department is in receipt of your September 1, 1993, letter requesting permit No. AC 16-189522 for a mobile soil thermal treatment facility (Unit No. 2) be extended. On December 1, 1992, the Department adopted regulations for soil thermal treatment facilities. In response to your request, the Department is amending construction permit Nos. AC 16-187650 and AC 16-189522 for units 1 and 2, respectively, to incorporate the new requirements and extending the permit for Unit 2 for one year.

The enclosed permits replace permit No. AC 16-187650 and AC 16-189522.

Sincerely,

Howard L. Rhodes

Howard L. Rhodes
Director
Division of Air Resources
Management

HLR/WH/bjb

Attachment: AC 16-187650 and AC 16-189522 A

cc: District Air Program Administrators
County Air Program Administrators

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT ISSUANCE

CERTIFIED MAIL

In the Matter of an Application for Permit by:

DER File No. **AC16-187650A**
AC16-189522A

D.R.E. Environmental, Inc.
P.O. Box 1386
Lake City, Florida 32056-1386
_____/

Enclosed are amended Permit Numbers **AC 16-187650A** and **AC 16-189522A** to construct two mobile soil thermal treatment facilities, issued pursuant to Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-210, 17-212, and 17-4.

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 Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT ISSUANCE and all copies were mailed by certified mail before the close of business on 1/20/94 the listed persons.

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.

Barbara J. Boutwell (Clerk) 1/20/94 (Date)

Copies furnished to:
District Air Program Administrators
County Air Program Administrators

Florida Department of
Environmental Protection

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

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

PERMITTEE:
D.R.E. Environmental, Inc.
P. O. Box 1386
Lake City, Florida 32056-1386

Permit Number: AC 16-187650A
Expiration Date: January 1, 1995
County: Mobile Operation
Project: 35 TPH Mobile Soil Remediation Unit No. 1

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-212 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto and specifically described as follows:

Authorization to construct a 35 TPH mobile soil remediation unit. The unit consists of a 15 ton bin to receive the contaminated soil, a 24 inch wide belt conveyor for transferring up to 35 tons per hour (TPH) of wet soil to the kiln, a rotary kiln (5 feet diameter by 28 feet long), a Hauck BH390-8 baghouse, a 98.42% efficient (minimum) Hauck afterburner capable of operating above 1600°F with a 1 second residence time, two propane or natural gas burners (23 MMBtu/hr for kiln and 22 MMBtu/hr for afterburner), a 200 KW generator, instruments to measure and record the feed rate to the kiln, the pressure drop across the baghouse, the temperature of the afterburner, and associated controls. The unit is equipped with a stack (3 feet diameter by 30 feet high) that discharges approximately 36,077 acfm at 1600°F to the atmosphere.

The unit may be used throughout the State (all counties) after receiving Department authorization to operate at a new location, except that the unit shall not be operated in Okaloosa and Hernando counties or within one mile of the the boundry of Hernando County.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:
1. Application received Oct. 9, 1990.
2. DER letter dated Oct. 24, 1990.
3. D.R.E. letter dated Oct. 5, 1990.
4. D.R.E. letter dated Nov. 28, 1990.
5. D.R.E. letter dated February 26, 1991.
6. Settlement Stipulation (Herb Shapiro, John H. Austin, and Hernando County).
7. Stipulation and Settlement Agreement Between John N. Austin, Susanne S. Trogdon, and D.R.E. Environmental, Inc.

8. D.R.E. letter dated March 19, 1991.
9. Bay County letter dated February 18, 1991.
10. Final Order (DOAH Case No. 91-0941 and 1020).

Florida Department of
Environmental Protection

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

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

PERMITTEE:
D.R.E. Environmental, Inc.
P. O. Box 1386
Lake City, Florida 32056-1386

Permit Number: AC 16-189522A
Expiration Date: January 1, 1995
County: Mobile Operation
Project: 35 TPH Mobile Soil Remediation Unit No. 2

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-212 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto and specifically described as follows:

Authorization to construct a 35 TPH mobile soil remediation unit. The unit consists of a 15 ton bin to receive the contaminated soil, a 24 inch wide belt conveyor for transferring up to 35 tons per hour (TPH) of wet soil to the kiln, a rotary kiln (5 feet diameter by 28 feet long), a Hauck BH390-8 baghouse, a 98.42% efficient (minimum) Hauck afterburner capable of operating above 1600°F with a 1 second residence time, two propane or natural gas burners (23 MMBtu/hr for kiln and 22 MMBtu/hr for afterburner), a 200 KW generator, instruments to measure and record the feed rate to the kiln, the pressure drop across the baghouse, the temperature of the afterburner, and associated controls. The unit is equipped with a stack (3 feet diameter by 30 feet high) that discharges approximately 36,077 acfm at 1600°F to the atmosphere.

The unit may be used throughout the State (all counties) after receiving Department authorization to operate at a new location, except that the unit shall not be operated in Okaloosa and Hernando counties or within one mile of the the boundry of Hernando County.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:
1. Application received Oct. 9, 1990.
2. DER letter dated Oct. 24, 1990.
3. D.R.E. letter dated Oct. 5, 1990.
4. D.R.E. letter dated Nov. 28, 1990.
5. D.R.E. letter dated February 26, 1991.
6. Settlement Stipulation (Herb Shapiro, John H. Austin, and Hernando County).

7. Stipulation and Settlement Agreement Between John N. Austin, Susanne S. Trogdon, and D.R.E. Environmental, Inc.
8. D.R.E. letter dated March 19, 1991.
9. Bay County letter dated February 18, 1991.
10. Final Order (DOAH Case No. 91-0941 and 1020).
11. D.R.E. letter dated September 1, 1993.

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 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. 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), Florida Statutes, 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 the permit.

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

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, 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 or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

GENERAL CONDITIONS:

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 a reasonable time, 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 the 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 non-compliance; and

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

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

GENERAL CONDITIONS:

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

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold 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) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained 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 dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

GENERAL CONDITIONS:

14. 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 corrected promptly.

SPECIFIC CONDITIONS:

PLANT OPERATION PARAMETERS

1. The facility shall only treat petroleum contaminated soil as defined in F.A.C. Rule 17-775, (F.A.C. Rule 17-296.415).

2. Hazardous waste as defined in 40 CFR 261.3 shall not be processed by this facility (F.A.C. Rule 17-775).

3. This facility shall not treat polychlorinated biphenyls (PCBs) contaminated soil (F.A.C. Rule 17-775).

4. Based on data in the application, the input of Total Recoverable Petroleum Hydrocarbons (TRPH) in the soil into the facility shall not exceed 1400 lbs/hr (daily avg.). Daily average is the pounds of TRPH in the untreated soil processed during a calendar day divided by the facility's actual hours of operation during that day.

5. For determining applicability of Title V, the benzene content of the untreated soil is limited to 3260 ppm. This is equivalent to 2.28 lb/hr and 10 TPY benzene emissions.

6. The afterburner shall be operated above 1600 °F with a 1 second retention time (F.A.C. Rule 17-296.415).

7. The facility may operate continuously, 8760 hrs/yr. It shall not be operated at a site with another soil thermal treatment facility (combined emissions may make a major facility subject to Title V and other regulations and the impact of the emissions may exceed the AAC).

8. The maximum contaminated soil charging rate to this facility shall be 35 TPH. The facility shall have a calibrated belt scale to monitor the charging rate to the kiln. The permittee shall demonstrate compliance with the particulate matter (PM) and visible emission standard of this permit within 45 day of initial operation in Florida.

9. Soil entering the kiln cannot be larger than 2 inches in diameter (F.A.C. Rule 17-775).

SPECIFIC CONDITIONS:

10. As proposed by the permittee, only natural gas, propane, or No. 2 fuel oil containing a maximum of 0.3% sulfur shall be used as fuel for the kiln and afterburner. The maximum permitted fuel consumption, equivalent to 45 MMBtu/hr heat input, is 45,000 CFH natural gas, 500 GPH propane, or 330 GPH No. 2 fuel oil. The electrical generator is allowed to burn 13.2 GPH diesel fuel (1.8 MMBtu/hr).

EMISSION LIMITS

11. Particulate matter emissions from the afterburner stack shall neither exceed 0.04 grains/dscf, 7.4 lbs/hr, nor 32.4 TPY (F.A.C. Rule 17-296.415(2)(b)).

12. Visible emissions from the facility stack shall not exceed 5 percent opacity (F.A.C. Rule 17-296.415(2)(a)).

13. Carbon monoxide emissions shall not exceed 100 parts per million by volume, dry, during any 60 consecutive minute period (Rule 17-296.415(1)(b), F.A.C.).

14. The operation of this facility shall not result in the emissions of air pollutants which cause or contribute to an objectionable odor pursuant to F.A.C. Rule 17-296.320.

15. Untreated soil removed from the ground shall be stored under waterproof covers to minimize unconfined emissions of petroleum products (F.A.C. Rule 17-296.310).

16. Reasonable precautions shall be used to minimize unconfined emissions of particulate matter generated by the operation (F.A.C. Rule 17-296.310). Reasonable precautions shall be defined as keeping the work areas wet where the soil is being removed, treated, handled, and stored or disposed of.

GENERAL REQUIREMENTS

17. The system shall be properly operated and maintained (F.A.C. Rule 17-210.300). No person shall circumvent any pollution control device or allow the emissions of air pollutants without the applicable air pollution control device operating properly (F.A.C. rule 17-210.650). The permittee's operation of the soil thermal treatment facility in Florida is conditioned upon the baghouse and the afterburner of the facility being fully operational, as demonstrated by monitoring instrumentation on the baghouse and afterburner.

SPECIFIC CONDITIONS:

18. The unit shall not be operated at a location or in a manner that may create a nuisance. The unit shall not operate in Okaloosa or Hernando counties or within one mile of the boundaries of Hernando County (Settlement Stipulation, Case No. 90-941).

EMISSION TESTING REQUIREMENTS

19. This facility shall be tested (EPA test methods are specified in 40 CFR 60, Appendix A, revised July 1, 1993) at 90 - 100 percent of its permitted process rate for visible emissions during startup at each new site it is operated at and annually for:

(A) Particulate matter (PM) emissions by EPA Methods 1, 2, 3, 4, and 5.

(B) Visible emissions by EPA Method 9.

(C) Carbon monoxide (CO) emissions by averaging each hour of the readings from the CO continuous emission monitor during the PM test period.

(D) Afterburner temperature by averaging each hour of the temperature readings from the continuous temperature monitor during the PM test period.

(E) Afterburner residence time using the test data collected by EPA Methods 1 and 2.

(F) Fuel oil sulfur limits based on analysis referenced in 40 CFR 60.17 or other methods after Department approval. A certified analysis by the fuel oil supplier will be acceptable.

(G) Contaminated soil analysis for volatile organic aromatics (VOA), total recoverable petroleum hydrocarbons (TRPH), polynuclear aromatic hydrocarbons (PAH), volatile organic halocarbons (VOH), and metals as required by Rule 17-775.410, F.A.C., of the soil being treated during the particulate matter compliance test.

20. This facility must be tested for particulate matter and visible emissions within 30 days of operation in Florida. All compliance tests shall meet the requirements listed in F.A.C. Rule 17-297. The facility shall not operate above the maximum permitted process rate of 35 TPH.

SPECIFIC CONDITIONS:

21. When the Department, after investigation, has good reason (such as complaints, increased visible emissions, or questionable maintenance of control equipment) to believe that any applicable emission standard contained in F.A.C. Rule 17-296.415 or in this permit is being violated, it may require the owner or operator of the unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the source and to provide a report on the results of said tests to the Department (F.A.C. Rule 17-297.340(2)).

RECORD KEEPING REQUIREMENTS

22. Pressure drop across the baghouse, temperature of the afterburner, and CO emissions shall be recorded continuously during operations. The instruments used to obtain these measurements shall be properly calibrated, maintained, and in operation any time the facility is in service.

23. The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements, all continuous monitoring system performance evaluations, all continuous monitoring system or monitoring device calibration checks, adjustments and maintenance performed on these systems or devices, all soil analysis required by F.A.C. Rule 17-775 and all other information required by rules and this permit, recorded in a permanent form suitable for inspection. The file shall be retained for at least 3 years following the date of such measurements, maintenance, reports, and records.

24. The permittee shall maintain a daily log that shows the date, location, operation time, pressure drop across the PM control device, processing rate, type and quantity of fuel consumption in the dryer and afterburner, and any operation problems. These records shall be maintained for a minimum of 3 years.

ADMINISTRATIVE REQUIREMENTS

25. The Bureau of Air Regulation (BAR) and the District with jurisdiction over the contaminated site shall be notified in writing at least 15 days in advance of any scheduled compliance test to be conducted on this facility (F.A.C. Rule 17-297.340(1)(i)).

26. Compliance test results shall be submitted to the BAR and the District that the tests were conducted in within 45 days of the test (F.A.C. Rule 17-297.570(2)).

27. The permittee for a mobile unit shall notify the BAR, local government (city and/or county) and the Department District office by registered mail at least 5 days prior to moving to a new

SPECIFIC CONDITIONS:

operating site. The notification shall provide the permit number of the facility, a copy of the last stack test results, the date of the proposed move, the new work site for the facility, the amount of contaminated soil at the new site, and the locations and contamination levels of the soils to be treated. The Department will notify the permittee of any new restrictions for the facility that will apply while it is operating at the new site (F.A.C. Rule 17-775.700(1)).

28. The permittee shall submit to the BAR each calendar year, on or before March 1, an Annual Operation Report DER Form 17-1.202(c) for this facility for the preceding calendar year containing at least the following information pursuant to Subsection 403.061(13), F.S.:

(A) Annual amount of material and/or fuels utilized.

(B) Annual emissions in TPY (note calculation basis).

(C) Annual hours of operation.

(D) Any changes in the information contained in the application.

(E) All compliance tests reports for the preceding year.

(F) Temperature and CO exceedance reports for the year.

29. An application for an operating permit must be submitted to the BAR at least 90 days prior to the expiration date of this permit. To apply for an operation permit, the applicant shall submit the appropriate application form, fee, a report on any physical change or major maintenance to the facility, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

Issued this 20TH day
of January, 1994

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Howard L. Rhodes
Director
Division of Air Resources Management

Florida Department of
Environmental Protection

Memorandum

TO: Howard L. Rhodes

FROM: C. H. Fancy

DATE: January 19, 1994

SUBJECT: Amendment of Permit
D.R.E. Environmental

Attached for your approval and signature are two reissued permits to construct mobile soil thermal treatment facilities. The amendments are to make the permits consistent with F.A.C. Rule 17-296.415. Also, the permit to construct Unit No. 2 (AC 16-189322A) is being extended because it has not operated in Florida to date.

I recommend your approval and signature.

CHF/WH/bjb

Attachment

D. R. E.
ENVIRONMENTAL INC.
PH. (904) 758-3164 FAX (904) 755-5430
" Destruction Removal Efficiencies "

RECEIVED
SEP 3 1993
Division of Air
Resources Management

September 1, 1993

State of Florida Department of Environmental Protection
2600 Blairstone Road
Tallahassee, Florida 32399-2400

RE: Operating Permit Extension

Dear Mr. Fancy;

D.R.E. Environmental, Inc currently holds an operating permit request for our Unit # 2. This permit is nearing renewal.

This letter is to serve as a request from our firm to extend our permit application for another period. This is due in part to the fact that the unit has not yet operated in Florida.

Thank you for your consideration to this matter.

Sincerely;

D.R.E. Environmental, Inc.

John S. Anderson
JSA/dn

cc: Willard Hanks

P 230 524 390

Receipt for Certified Mail

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

UNITED STATES POSTAL SERVICE

Sent to: Mr. John S. Anderson	
Street and No.: P. O. Box 1386	
P.O., State and ZIP Code: Lake City, FL 32056-1366	
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: Mailed: 9/10/93 DRE Environmental, Unit #2 Request for Permit Extension	

PS Form **3800**, June 1991

Is your RETURN ADDRESS completed on the reverse side?

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 will show to whom the article was delivered and the date delivered.

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:

Mr. John S. Anderson
D.R.E. Environmental, Inc.
P. O. Box 1386
Lake City, Florida 32056-1366

4a. Article Number: P 230 524 390

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

7. Date of Delivery: SEP 14 1993

5. Signature (Addressee): Jackie Dostennett

6. Signature (Agent)

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

Thank you for using Return Receipt Service.

PS Form **3811**, December 1991 ☆U.S. GPO: 1992—323-402 **DOMESTIC RETURN RECEIPT**

Florida Department of
Environmental Protection

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

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

September 9, 1993

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. John S. Anderson
D.R.E. Environmental Inc.
P. O. Box 1386
Lake City, Florida 32056-1366

Dear Mr. Anderson:

RE: D.R.E. Environmental, Unit #2
Request for Permit Extension

The Bureau of Air Regulation received your September 1, 1993, request for the above referenced project. On October 30, 1991, Rule 17-4.050(4)(o), F.A.C., was changed to require a $50 processing fee for a permit extention; therefore, we will not be able to take action on your request until the fee is received. If you have any questions, please call Patty Adams at (904)488-1344.

Sincerely,

Patricia B. Adams

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

CHF/pa

cc: Willard Hanks

Florida Department of
Environmental Protection

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

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

September 9, 1993

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. John S. Anderson
D.R.E. Environmental Inc.
P. O. Box 1386
Lake City, Florida 32056-1366

0000602

Dear Mr. Anderson:

RE: D.R.E. Environmental, Unit #2
Request for Permit Extension

The Bureau of Air Regulation received your September 1, 1993, request for the above referenced project. On October 30, 1991, Rule 17-4.050(4)(o), F.A.C., was changed to require a $50 processing fee for a permit extention; therefore, we will not be able to take action on your request until the fee is received. If you have any questions, please call Patty Adams at (904)488-1344.

Sincerely,

Patricia G. Adams

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

CHF/pa

cc: Willard Hanks

0222

D.R.E. ENVIRONMENTAL, INC.

2231

OUR REF. #	YOUR INVOICE #	INVOICE DATE	INVOICE AMOUNT	AMOUNT PAID	DISCOUNT TAKEN	NET CHECK AMOUNT
	PERMIT	9/17/93	50.00	50.00		50.00

VENDOR: FLORIDA DEPARTMENT OF

Memo _____

2231

D.R.E. ENVIRONMENTAL, INC.
2 GUERDON ROAD - P.O. BOX 1386
LAKE CITY, FL 32056-1386
PHONE 904-758-3164

BARNETT BANK
LAKE CITY, FLORIDA 32056
[redacted]

000602

Fifty and 00/100

9/17/93 **DATE**

$50.00 **AMOUNT**

PAY TO THE ORDER OF

FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATIONS
2600 BLAIR STONE ROAD
TALLAHASSEE, FL 32399-2400

[redacted]

P+H

D. R. E.
ENVIRONMENTAL INC.

PH. (904) 758-3164 FAX (904) 755-5430

" Destruction Removal Efficiencies "

RECEIVED
SEP 3 1993
Division of Air Resources Management

September 1, 1993

State of Florida Department of Environmental Protection
2600 Blairstone Road
Tallahassee, Florida 32399-2400

RE: Operating Permit Extension

Dear Mr. Fancy;

D.R.E. Environmental, Inc currently holds an operating permit request for our Unit # 2. This permit is nearing renewal.

This letter is to serve as a request from our firm to extend our permit application for another period. This is due in part to the fact that the unit has not yet operated in Florida.

Thank you for your consideration to this matter.

Sincerely;

D.R.E. Environmental, Inc.

John S. Anderson
JSA/dn

cc: Willard Hanks

SUNBELT RESOURCES, INC. 194
5453 Jug Factory Rd
Tuscaloosa, Al 35405

465

0000680 9-27 19 93

PAY TO THE ORDER OF Fla. Dept. of Environmental Protection $ 50.00

Fifty and no/100 DOLLARS

AMSOUTH
AmSouth Bank N.A.
Tuscaloosa, Alabama 35401

Sunbelt Resources, Inc.

FOR Permit # AC 37-216863 [redacted]

CERTIFIED MAIL-RETURN RECEIPT

0000680

RECEIVED
BUREAU OF AIR REGULATION
93 OCT -4 AM 10:20

John B. Koogler, Ph.D., P.E.
Koogler and Associates
4014 N.W. Thirteenth Street
Gainesville, Florida 32609

Dear Dr. Koogler:

RE: Sunbelt Resources, Inc.
Request for Permit Extension

The Bureau of Air Regulation received your September 22, 1993, request for the above referenced project. On October 30, 1991, Rule 17-4.050(4)(o), F.A.C., was changed to require a $50 processing fee for a permit extention; therefore, we will not be able to take action on your request until the fee is received. If you have any questions, please call Patty Adams at (904)488-1344.

Sincerely,

Patricia G. Adams

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

CHF/pa

cc: Willard Hanks

Mailed on 9/27/93
Ck. # 465

Printed on recycled paper.

D. R. E.
ENVIRONMENTAL INC.

PH. (904) 758-3164 FAX (904) 755-5430

" Destruction Removal Efficiencies "

September 1, 1993

State of Florida Department of Environmental Protection
2600 Blairstone Road
Tallahassee, Florida 32399-2400

RE: Operating Permit Extension

Dear Mr. Fancy;

D.R.E. Environmental, Inc currently holds an operating permit request for our Unit # 2. This permit is nearing renewal.

This letter is to serve as a request from our firm to extend our permit application for another period. This is due in part to the fact that the unit has not yet operated in Florida.

Thank you for your consideration to this matter.

Sincerely;

D.R.E. Environmental, Inc.
John S. Anderson
JSA/dn

cc: Willard Hanks

Willard - 9/24
They paid
$50 on 9/24/93
Patty

POST OFFICE BOX 1386, LAKE CITY, FLORIDA 32056-1386

P 360 185 703

Receipt for Certified Mail

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

Sent to	Chris Sleeper
Street and No.	DRE Envio
P.O., State and ZIP Code	Lake City, 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	2-22-93
	AC 16-187650
	2 letters

PS Form 3800, June 1991

Is your RETURN ADDRESS completed on the reverse side?

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 will show to whom the article was delivered and the date delivered.

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:
Chris K. Sleeper Pres
DRE Environmental Inc
PO Box 1386
Lake City, Fl
32056-1386

4a. Article Number
P 360 185 703

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

7. Date of Delivery
2/26/93

5. Signature (Addressee)

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

6. Signature (Agent)
Tom Hu

PS Form 3811, December 1991 *U.S. GPO: 1992—323-402 DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

February 19, 1993

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Chris K. Sleeper, President
D. R. E. Environmental Inc.
P. O. Box 1386
Lake City, FL 32056-1386

Dear Mr. Sleeper:

Re: AC16-187650, CSXT Boca Grande Site

The Department has reviewed the request to treat soil contaminated with dibenzofuran at the above reference site. Environmental Science & Engineering, Inc. concluded in their February 13, 1993, letter, that this soil can be processed at a rate of 20 TPH in your soil thermal treatment facility without causing an exceedance of the derived inhalation health criteria for dibenzofuran.

Based on ESE's conclusion and our own calculations that showed the derived Acceptable Ambient Air Concentration for dibenzofuran of 0.48 ug/cubic meter would not be exceeded by this operation, the Department will authorize, with conditions, the treatment of soil containing up to 3.7 ppm dibenzofuran at the CSXT site in Boca Grande. The conditions to this approval are that the soil shall not be processed at a rate greater than 20 TPH and the soil thermal treatment facility shall be operated in compliance with all other conditions in its permit and the Department's regulation.

The permission to treat soil containing dibenzofuran in your unit granted by this letter is limited to the soil at the referenced site. Treatment of other than petroleum contaminated soil as specified in F.A.C. Rule 17-775 by this unit at any other site in Florida is prohibited.

A person whose substantial interests are affected by the Department's proposed permitting decision 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 amendment. 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 intent. 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 intent 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.

A copy of this letter must be kept with the permit for this unit while it is operating at the Boca Grande site.

Sincerely,

Howard L. Rhodes, Director
Division of Air Resources Management

c: David Knowles, SFD
Tom Conrardy, BWC
Ronald Crane, ESE

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

February 20, 1993

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Chris K. Sleeper, President
D. R. E. Environmental Inc.
P. O. Box 1386
Lake City, FL 32056-1386

Dear Mr. Sleeper:

Re: AC16-187650, CSXT Boca Grande Site

The Department recently amended the referenced permit for your soil thermal treatment facility to allow the processing of petroleum contaminated soil containing low levels of dibenzofuran at the CSXT site in Boca Grande. The processing fee for this amendment is $250.00. Please submit a check for this amount payable to the Department of Environmental Regulation for this service.

Sincerely,

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

c: Mr. Paul Janssen, CSXT

D.R.E. ENVIRONMENTAL, INC.

1713

DEPT. OF ENVIRONMENTAL REGULATION
3/12/93
AMOUNT: $250.00 8080
FOR: PERMIT AMENDMENT

Air
2-20-93
AC 16-187-650
001031

1713

D.R.E. ENVIRONMENTAL, INC.
2 GUERDON ROAD - P.O. BOX 1386
LAKE CITY, FL 32056-1386
PHONE 904-758-3164

BARNETT BANK
LAKE CITY, FLORIDA 32056
[redacted]

0576

DATE	AMOUNT
3/12/93	$250.00******

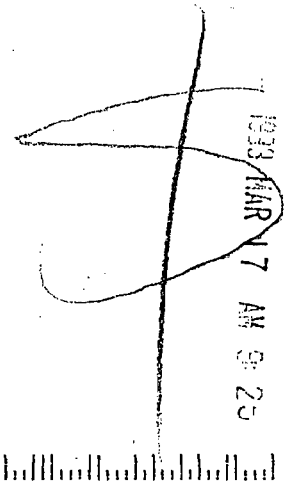
PAY TO THE ORDER OF TWO - HUNDRED - FIFTY AND 00/100

DEPARTMENT OF ENVIRONMENTAL REGULATION

[redacted]

D. R. E.
ENVIRONMENTAL INC.
Post Office Box 1386
Lake City, Florida 32056-1386

Fla. Dept. of Environmental Regulation
2600 Blair Stone Rd.
Tallahassee, Fl. 32399-2400



32399-2400

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: Howard Rhodes

From: Clair Fancy

Date: February 19, 1993

Subject: Amendment of Permit
Soil Thermal Treatment Facility

Attached for your approval and signature is a letter that will amend the permit of DRE Environmental's permit for a soil thermal treatment facility. The amendment will allow the treatment of soil containing low concentration (3.7 ppm) non-chlorinated dibenzofuran at the CSXT site in Boca Grande, Florida. After extensive research, the Bureau has concluded that treatment of this soil will be in compliance with our Toxic Guidance Procedure.

I recommend your approval.

attach.

10^{-3}
.001, .5

D. R. E.
ENVIRONMENTAL INC.
PH. (904) 758-3164 FAX (904) 755-5430
" Destruction Removal Efficiencies "

February 2, 1993

Mr. Willard Hanks
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Stack Testing Boca Grande, Fl.
D.R.E. Environmental, Inc.

Dear Sir,

Pursuant to our permit requirements Permit #AC16-187650, specific condition 26, DRE Environmental, Inc. hereby gives notice to the BAR of our annual compliance test for this source.

DRE has scheduled the testing for February 25 & 26, 1993.

Site location: CSXT Boca Grande
Railyard Facility
Boca Grande, FL

Testing to begin at 8:00 AM until complete. Stack testing crew will set up and begin testing on February 25, 1993. If testing can not be completed during the 12 hour day, testing will be concluded the next day, February 26, 1993.

DRE will be testing its equipment per the new 17.2 Table 700-1 Test Procedures, effective date December 1, 1992. Testing will include EPA Method 5, EPA Method 10 and EPA Method 9.

POST OFFICE BOX 1386, LAKE CITY, FLORIDA 32056-1386

If you have any questions regarding the testing schedule, please call our office at (904)758-3164.

Sincerely,

DRE ENVIRONMENTAL, INC.

Chris K. Sleeper
President

CKS:dln

cc: DER South District
ATTN: David Knowles
ESE Ron Crane
CSX Paul Janssen REM

P 062 921 931

Receipt for Certified Mail

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

Sent to	Chris Sleeper
Street and No.	DRE Enviro.
P.O., State and ZIP Code	Lake City 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	12-16-92

AC 16-187650
" " 189522

PS Form 3800, June 1991

Is your RETURN ADDRESS completed on the reverse side?

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 will show to whom the article was delivered and the date delivered.

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:
Chris Sleeper
DRE Environmental, Inc
PO Box 1386
Lake City, FL 32056
1386

4a. Article Number
P 062 921 931

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

7. Date of Delivery

5. Signature (Addressee)

6. Signature (Agent)

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

Thank you for using Return Receipt Service.

PS Form 3811, December 1991 ☆ U.S.G.P.O. : 1992-307-530 **DOMESTIC RETURN RECEIPT**

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 10, 1992

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Chris K. Sleeper
D.R.E. Environmental, Inc.
Post Office Box 1386
Lake City, Florida 32056-1386

Dear Mr. Sleeper:

Re: Amendment of Permits **AC**16-187650 and **AC**16-189522

The Department is in receipt of your October 27, 1992, letter requesting an extension of the referenced construction permits for your mobile soil thermal treatment facilities because they have not been operating in Florida.

This request is acceptable and the expiration dates of the referenced permits are extended from January 1, 1993, to January 1, 1994. As a condition to this extension, you are required to conduct the emissions tests at the first site in Florida that these facilities operate at and to submit the test results to the Department within 45 days of the tests. A copy of this letter must be filed with the referenced permits and shall become a part of those permits.

A person whose substantial interests are affected by the Department's proposed permitting decision 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. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of their receipt of this intent, whichever first occurs. 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 intent. 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 intent 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.

Sincerely,

Howard L. Rhodes

Howard L. Rhodes
Director
Division of Air Resources
Management

HLR/WH/w

Attach: DRE October 27, 1992, letter

cc: District Air Program Administrators
County Air Program Administrators

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: Howard L. Rhodes

FROM: Clair Fancy

DATE: December 10, 1992

SUBJECT: Amendment to Construction Permit
D.R.E. Environmental, Inc.

Attached for your approval and signature is a letter that will extend the expiration dates of two permits to construct mobile soil thermal treatment facilities.

These facilities, which evaporate and burn petroleum products from contaminated soil, have been operating out of state. As a result, they have been unable to conduct the stack tests required for the applications for permits to operate that could be observed by the Department.

I recommend your approval and signature.

WH/kw

Attachment

D. R. E.
ENVIRONMENTAL INC.

PH. (904) 758-3164 FAX (904) 755-5430

" Destruction Removal Efficiencies "

October 27, 1992

Mr. Willard Hanks
Department of Environmental Regulations
Bureau of Air Regulations
2600 Blairstone Road
Tallahassee, Florida 32399-2400

RE: Request for Construction Permit Extension
AC 16-187650, AC 189522

Dear Sir:

DRE Environmental, Inc. possesses two construction air permits for our mobile soil remediation units that are due to expire in January 1993.

DRE Environmental, Inc. is currently working outside of the state of Florida and expects to be out of state for the next two months. DRE is currently finalizing details on a project in the Fort Meyers, Florida area that will start up in December or January.

DRE requests that the department grant a 12 month extension of our construction permits to allow our company to finalize a project in Florida and to complete the necessary emissions testing as per the new 17-2.600 F.A.C. Table 700-1 standards.

Please find enclosed the extension fee of $100.00 for both permits.

If there are any questions regarding this matter please call our office at 904-758-3164.

Sincerely,

DRE ENVIRONMENTAL, INC.

001031

Chris K. Sleeper

Chris K. Sleeper

CKS/dln

P 062 921 913

Receipt for Certified Mail

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

Sent to Mr. Chris K. Sleeper	
Street and No. P.O. Box 1386	
P.O., State and ZIP Code Lake City, FL 32056	
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 11/6/92	

PS Form 3800, June 1991

PS Form 3811, July 1983 447-845

SENDER: Complete items 1, 2, 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 service(s) requested.

1. ☐ Show to whom, date and address of delivery.
2. ☐ Restricted Delivery.

3. Article Addressed to:
Mr Chris K. Sleeper
Post OFFICE Box 1386
Lake City, FL 32056-1386

4. Type of Service:
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail

Article Number
P 062 921 913

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X

6. Signature – Agent
X Thomas Haden

7. Date of Delivery

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

DOMESTIC RETURN RECEIPT

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

November 6, 1992

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Chris K. Sleeper, President
D.R.E. Environmental, Inc.
Post Office Box 1386
Lake City, Florida 32056-1386

Dear Mr. Sleeper:

The Department has reviewed your September 30, 1992, letter concerning the new requirements for soil thermal treatment facilities in Florida's air pollution control regulations that will be effective on December 1, 1992. You specifically asked: if the locations of your temperature and carbon monoxide (CO) monitors were acceptable; if the Teledyne 9150S CO monitor would meet the Performance Specifications in 40 CFR 60, Appendix B; and what is the Department's position if the CO monitor cannot be installed until the end of December, 1992.

In response to your questions, the Department has determined that the locations of your temperature monitor, (located 4 feet from the end of the afterburner,) and the CO monitor, (located in the afterburner nozzle that holds the stack) are satisfactory. We assume that air cannot leak into the system between the locations of the monitors.

The Department has no basis for commenting on any specific monitor's ability to meet the performance specifications. The performance specifications require each individual instrument to undergo tests to prove that it meets the specifications. We recommend you contact the instrument manufacturer's representative to obtain any performance data on the instrument's ability to meet the specifications prior to conducting your own performance tests which could by costly.

You have indicated that the CO monitor may not be installed and in operation on your existing facility until the end of December, 1992. Operation of a soil thermal treatment facility after December 1, 1992, without a CO monitor will be in violation of the Department's air pollution control regulations.

Please write to me or call Willard Hanks if you need any clarification on these issues.

Sincerely,

John C. Brown, Jr., P.E.
Administrator
Air Permitting and Standards

JCB/WMH/w

cc: District Air Programs Administrators
County Air Program Administrators

D.R.E. ENVIRONMENTAL, INC.

1327

OUR REF. #	YOUR INVOICE #	INVOICE DATE	INVOICE AMOUNT	AMOUNT PAID	DISCOUNT TAKEN	NET CHECK AMOUNT
	PERMEXT	10/27/92	100.00	100.00		100.00

VENDOR: DEPT. OF ENVIRONMENTAL REGULATI

Memo _____

1327

D.R.E. ENVIRONMENTAL, INC.
2 GUERDON ROAD - P.O. BOX 1386
LAKE CITY, FL 32056-1386
PHONE 904-758-3164

BARNETT BANK
LAKE CITY, FLORIDA 32056
[redacted]

11/5/92 DATE $100.00 AMOUNT

One hundred and 00/100

PAY
TO THE
ORDER
OF

DEPT. OF ENVIRONMENTAL REGULATI
BUREAU OF AIR REGULATIONS
2600 BLAIRSTONE ROAD
TALLAHASSEE, FL 32399-2400

[redacted]

D. R. E.
ENVIRONMENTAL INC.

PH. (904) 758-3164 FAX (904) 755-5430

" Destruction Removal Efficiencies "

17-296.400(3)

September 30, 1992

Willard Hanks
Dept. of Environmental Regulations
2600 Blair Stone Road
Tallahassee, Fl 32399-2400

RE: CLARIFICATION TO MODIFICATIONS OF RULE 17.2.600 FAC SPECIFIC EMISSION AND PERFORMANCE STANDARDS.

Dear Sir:

After reviewing the changes to the emission monitoring requirements for thermal treatment facilities as referenced above we find it necessary to ask for clarification regarding the term "co-located" as stated on page 3, line 17, with regards to temperature and CO monitors.

DRE has been monitoring for CO and O2 since May of 1991, since our unit has come on line in the state of Florida. Currently, DRE monitors its afterburner temperature approximately 4' from the entrance to the stack at the top, center of the chamber. It also currently measures CO 1' above the junction of the refractory lined stack and the afterburner chamber. DRE does not utilize dilution air anywhere in its system to show compliance with the air emission standards.

Our system is not co-located as it is referred to in the new modified rule. DRE, after much testing and time, has determined that these current positions are the best locations for our unit. Please refer to Drawing #1 for more detail. Any change in our current configuration would cause undue down time and costly modifications for our company. DRE requests that we be approved by the department utilizing our current configuration of monitoring locations for CO and temperature.

Secondly, please qualify if the electrochemical cell detection methodology for CO analysis as used by the Teledyne 9150S is considered to meet the new state requirements. DRE is currently using this instrument for CO + 02 analysis on its portable treatment system. DRE will upgrade its equipment to provide for the rolling AVG.

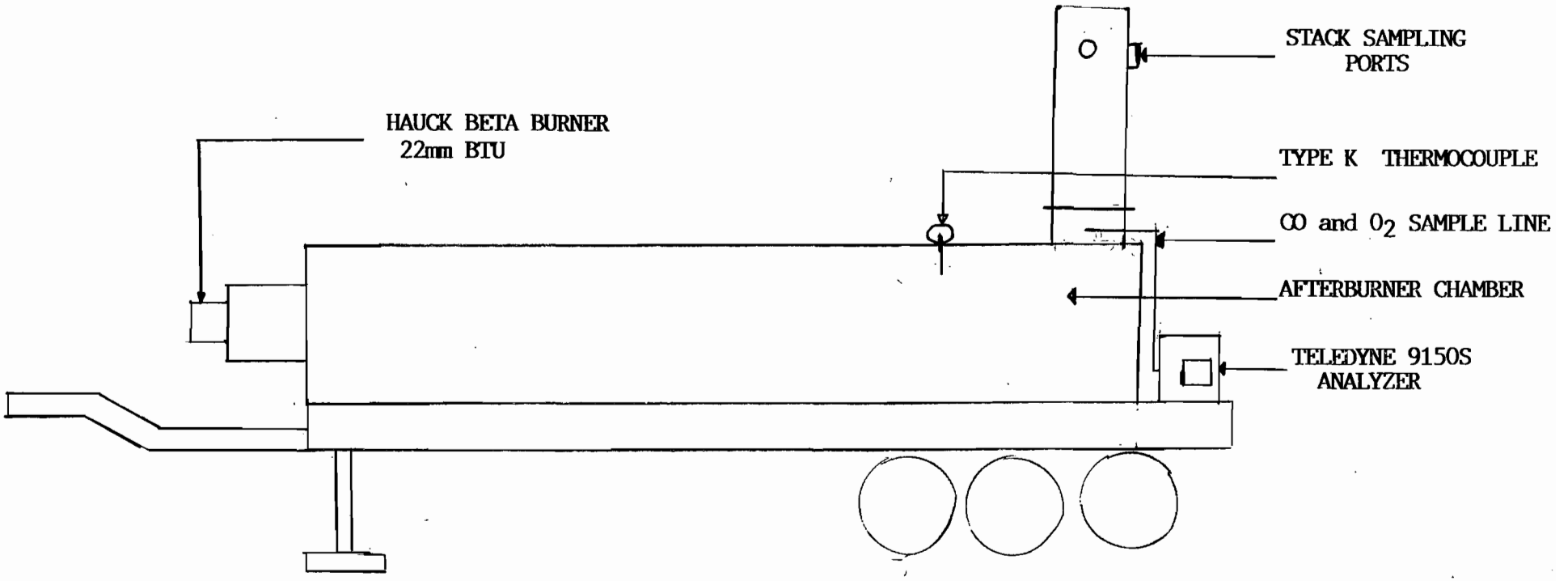
Thirdly, the turn around time to receive new equipment from the industry is ranging from 8 to 12 weeks, not including installation, testing and calibration of the equipment. It appears that it will be the end of the year before it would be possible to be on line. Please review this requirement of the new rule to allow sufficient time to properly install the equipment.

Please review the above mentioned items as soon as possible so as to allow time to make the necessary modifications to stay in compliance with the regulations. If you have any questions, please feel free to contact our office at (904) 758-3164.

Sincerely,

Chris K. Sleeper
President

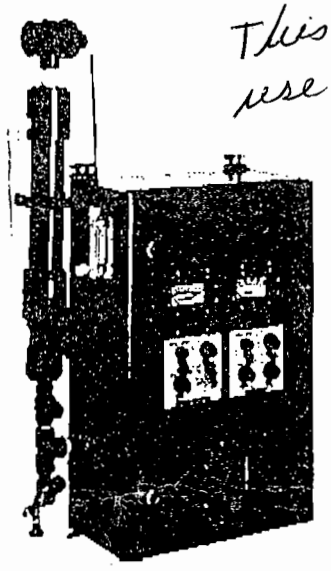
CKS/spw



DRE ENVIRONMENTAAL, INC.
AFTERBURNER LAY OUT
DRAWING #1

Model 9150

Flue Gas CO and O_2 Analysis System



This is what we use now.

The Model 9150 Carbon Monoxide (CO) and Oxygen (O_2) Online Analysis System monitors exhaust gas from combustion processes that burn "clean" fuels such as natural gas and light, low-sulfur fuel oils. The compact, rugged Model 9150 is ideal for optimizing efficiency of boilers, furnaces, fireboxes, process heaters and many other commercial and industrial combustion processes. Its simple, air-operated sampling system makes the Model 9150 particularly useful for applications where cooling water (for scrubbing flue gas sample) is unavailable or of poor quality.

Housed in a NEMA 4 enclosure, the compact Model 9150 can be conveniently placed at or near the stack for cost effective online monitoring of O_2 and CO. With these two measurements, the combustion process can be fine-tuned for optimum combustion efficiency—providing outstanding fuel savings and reduced exhaust emissions.

Reliable Air-Operated System

The Model 9150 sampling system uses an air-operated jet pump, an input selector valve, a heat exchanger and a flowmeter. System operation is as follows: The flue gas sample is drawn into the inlet by the jet pump. The sample passes through a finned stainless-steel tube surrounded by an air jacket. Water vapor, which is present in the sample, condenses in the sample line and runs into the sample inlet along with the gas. As the condensed water is drawn through the jet pump along with the sample gas, a jet of compressed air blows through the water, causing evaporation and cooling of the air stream. This cool air is then directed to flow over the finned heat exchanger tube. Thus, the sample flowing through this tube is cooled to below ambient temperature. The dew point of the flowing sample, in turn, is lowered, preventing condensation inside the analyzer.

Maintenance-Free Sensors

Teledyne's patented Micro-Fuel Cell sensor provides the Model 9150's O_2 analysis capability. This sensor produces an output that is directly proportional and linear with respect to the O_2 concentration in flue gas. The parts-per-million CO measurement is accomplished with another field-proven Teledyne sensor, whose output is directly proportional and linear to the CO concentration. Two CO ranges of analysis are provided: 0-500 and 0-1000 ppm CO.

Both sensors are sealed electrochemical devices with no electrolyte to change or electrodes to clean, so they are virtually maintenance free. Only a periodic calibration is needed to assure accurate, reliable performance.

Easy Calibration

Because it has an absolute zero, no zero gases are needed to calibrate the Micro-Fuel Cell O_2 sensor. And because its output is linear, air (20.9% O_2) is used for span purposes. The CO sensor is nearly as simple to calibrate, requiring only a CO span gas of known concentration.

"Split Version" Option

The Model 9150/SV "split version" provides a separate control unit (including readouts, outputs, calibration controls, optional alarms, etc.) that can be remotely mounted in a control room, instrument shed or other convenient location. In this configuration, the system's analysis section—which includes the sampling system and gas sensors—can be mounted on or near the flue gas stack. This configuration can simplify certain installations and helps achieve minimal sample lag time.

Accessories and Special Systems

Teledyne offers a complete line of flue gas sample probes and conditioners for a wide range of temperatures and applications. Teledyne also provides special sensors, custom-engineered analyzers and complete monitoring systems to satisfy unique application requirements.

Options

- 100 or 220 VAC, 50 or 60 Hz operation
- Special ranges
- Digital meters
- One or two alarms
- Millivolt output signals
- Current output signals
- Isolated outputs
- Pneumatic outputs
- Sample probes and lines
- Water educted system and external preconditioners for particulate-laden flue gas
- Air blowback for clearing sample lines
- CO span kit
- Fiberglass enclosure
- Purged enclosure
- Heated enclosure
- Separate analysis section section and remote-mounted control unit ("split version" Model 9150/SV)
- Custom-designed systems for special requirements

Features

- Continuous and simultaneous monitoring of CO and O_2 in flue gas
- Simple, reliable air-operated sampling system
- Maintenance-free sensors
- Low initial price
- Cost-effective operation
- Convenient off-stack access
- Easy to install
- Easy to service and maintain
- Integral analog meter readouts (digital readouts optional)
- NEMA 4 enclosure
- 0-1 VDC outputs (current outputs optional)

SPECIFICATIONS

OXYGEN SECTION

Ranges:
0-5%, 0-10% and 0-25% O_2

Sensitivity:
0.5% of full scale

Accuracy:
±2% of full scale at constant temperature; ±5% of full scale throughout the operating temperature range

Sensor:
Micro-Fuel Cell Class A-5 (90% response in 45 seconds)

Calibration:
Ambient air (20.9% O_2)—no zero gas needed

CARBON MONOXIDE SECTION

Range:
0-500 and 0-1000 ppm CO

Sensitivity:
±2% of full scale

Accuracy:
±2% of full scale at constant temperature; ±5% of full scale throughout the operating temperature range

Calibration:
With certified gas (700-900 ppm CO in air or N2, or 350-450 ppm CO in air or N2)

Sensor:
Class F-1R electrochemical (90% response in 45 seconds)

SYSTEM SPECIFICATIONS

Operating Power:
Less than 400 W at 120VAC, 60Hz (220VAC, 50HZ optional)

Operating Temp. Range:
32° F to 122° F (0° C to 50° C). (Optional auxiliary heating is available for operation in below-freezing temperatures.)

Enclosure:
NEMA 4/12/13 (rated)

Sample System Material:
Selected for high resistance to corrosion in flue gas applications, e.g., organic plastics, 316 stainless steel, etc.

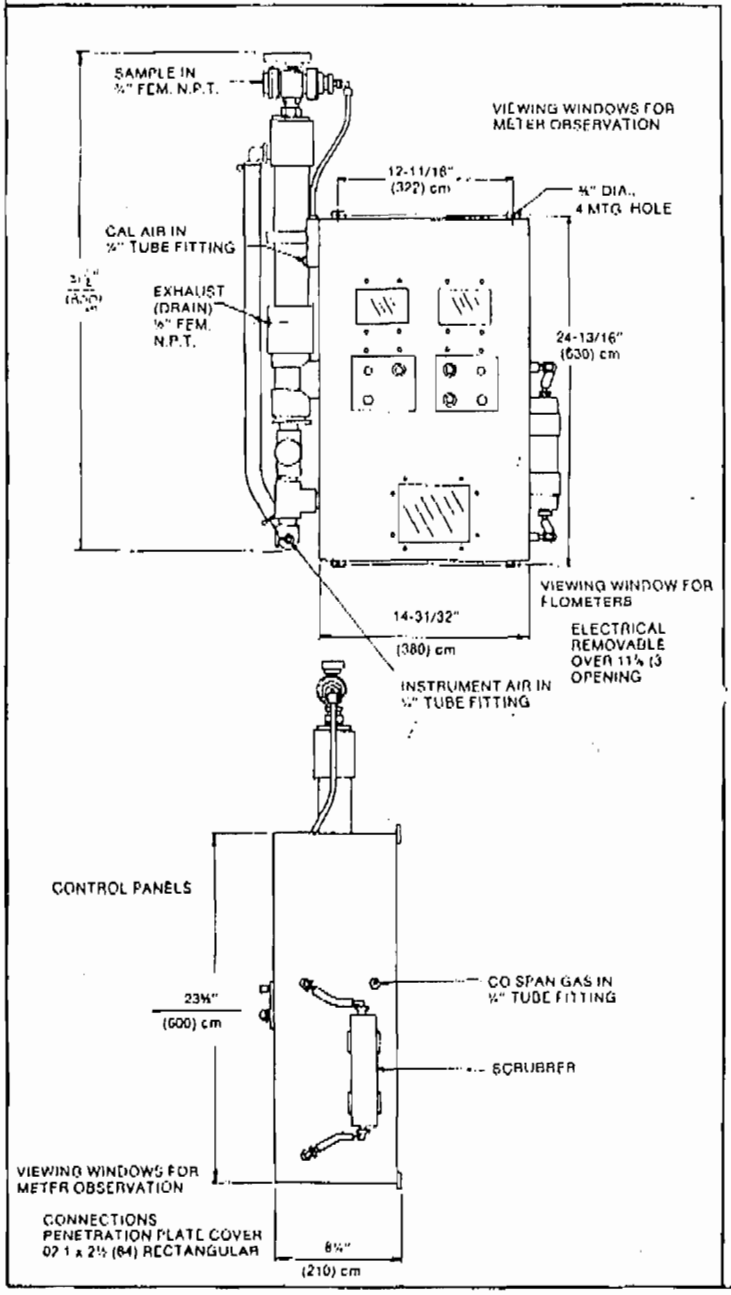
Readout:
Local analog meters

TELEDYNE ANALYTICAL INSTRUMENTS

16830 CHESTNUT STREET, CITY OF INDUSTRY, CA 91749-1580 U.S.A. • (818) 961-9221 • (213) 283-7181 • EASY LINK 628-31862 • FAX (818) 961-2538

SPECIFICATIONS

Operating Power	Less than 400 Watts at 120 VAC, 60 Hz (220 VAC, 50 Hz)
Operating Temperature Range	32°F to 122°F (0°C to 50°) (Optional auxiliary heating is available for operation in below-freezing temperatures.)
Enclosure	NEMA 4/12/13 (rated)
Sample System Material	Selected for high resistance to corrosion in flue gas applications, e.g., organic plastics, 316SS, etc.



Readout	Local Analog Meters
OXYGEN SECTION	
Ranges	0-5%, 0-10%, 0-25% O_2
Sensitivity	0.5% of full scale
Accuracy	±2% of full scale at constant temp. ±5% of full scale throughout operating temperature range
Sensor	Micro-Fuel Cell,* Class A-5 (90% response in 45 seconds)
Calibration	Ambient air
CARBON MONOXIDE SECTION	
Range	0-500 ppm, 0-1000 ppm CO
Sensitivity	2% of full scale
Accuracy	±2% of full scale at constant temp. ±5% of full scale throughout operating temperature range
Calibration	With certified gas (700-900 ppm CO in air or N_2, or 350-450 ppm CO in air or N_2)
Sensor	Class F-1 Electrochemical (90% response in 45 seconds)

SYSTEM OPTIONS

- Special ranges
- Digital meters
- One fully adjustable alarm setpoint and Form "C" relay contacts (DPDT) rated at 3 A resistive (non-latching, high or low — specify)
- Two fully adjustable alarm setpoints and Form "C" relay contacts (DPDT) rated at 3 A resistive (non-latching, high or low — specify)
- Current output signal (1-5, 4-20, 10-50mADC; negative ground or isolated.)
- Isolated voltage output signal (0-1, 0-5 VDC)
- Pneumatic output signal (I/P)
- Water educted system for particulate laden sample

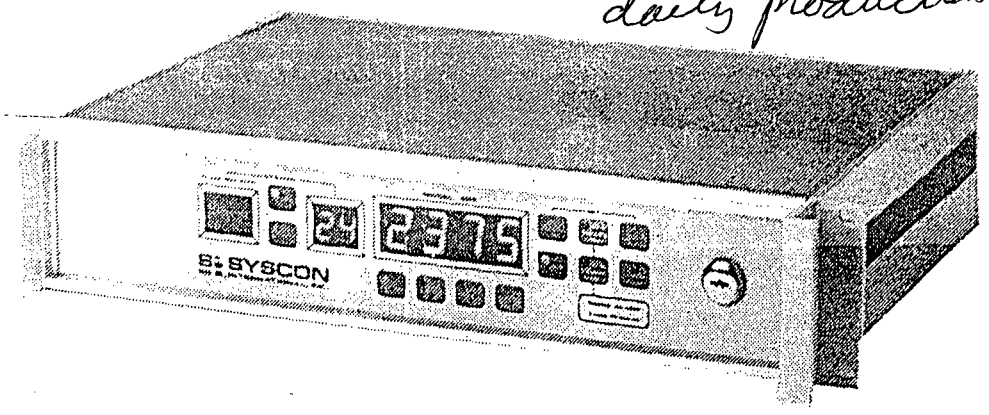
*U.S. Patent Nos. 3,429,796 and 3,767,552

TELEDYNE ANALYTICAL INSTRUMENTS

16830 CHESTNUT STREET, CITY OF INDUSTRY, CA 91749-1580 U.S.A. • (818) 961-9221 • (213) 283-7181 • TWX (910) 584-1887 • TDYANYL COID • FAX (818) 961-2538

INTRODUCTION

This unit collects the data and then prints it out on a print sheet for daily production runs.



Model 525 multi-channel datalogger...
complete temperature and process monitoring with independent strip chart graphics.

When it comes to datalogging capability, Syscon's 525 stands alone. Syscon datalogging equipment lets you precisely monitor up to 24 separate channels sequentially-each with independent readout to a strip chart, each with high and low alarms.

Whether you use a solid-state, microprocessor-based Syscon data monitor by itself, or add a versatile Syscon printer and graphics programming to make a complete datalogging system, you'll get performance that's precise enough for even the most demanding application. And, the RS232C output of the 525 is compatible with most popular personal computers.

Precision, reliability, economy. That's why, more and more, leading companies worldwide are choosing Syscon components for all their system control needs.

FRONT PANEL AND CABINET DIMENSIONS

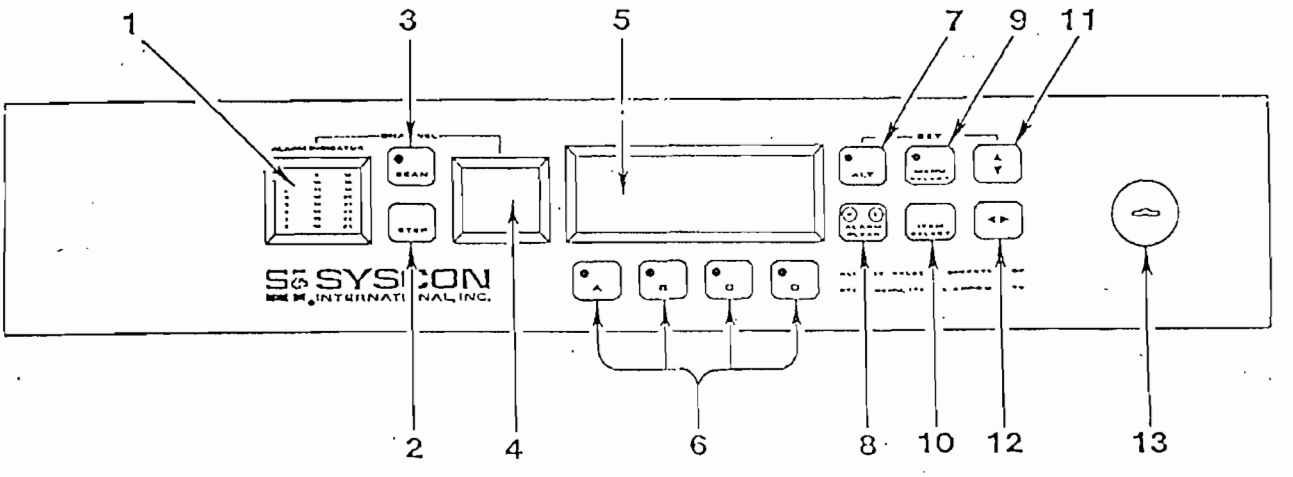


Figure No. 1 - Front Panel Diagram

1. CHANNEL ALARM INDICATOR - This display consists of 8, 16, or 24 indicators (depending on model ordered) which light when the corresponding channel is in alarm.

During setup, this display will indicate which channel is being edited.

2. CHANNEL STEP - The STEP button is used to manually step the indicator to the next channel. It will step through all channels even if the channel is turned off. Pressing the STEP button will not cancel the scan mode. If the ALT key is enabled, the channels will appear in reverse order.

3. CHANNEL SCAN - When the SCAN button is pressed, the MODEL 525 will go into the scan mode and the SCAN indicating LED will light. Only those channels with an input type selected will be scanned. To exit the scan mode, press the scan button again.

4. CHANNEL/SET-UP DISPLAY - In the normal operating mode this indicates which channel is being displayed. During set-up it displays abbreviated symbols (HM,MD.YR, etc.) for the parameter being set.

5. PROCESS DATA DISPLAY -This display reads from -999 to 9999. A blank display indicates an inactive channel. Four dashes (----) indicate an open sensor condition.

During set-up this will display numerical values or ON, OFF, etc., as appropriate.

6. PROGRAM RECIPE SELECTOR SWITCHES - Four different program recipes can be selected or changed by pressing the appropriate button.

7. **ALT** - Pressing the ALT key changes the direction of the STEP, MENU, ITEM, INC, and SHIFT keys. If pressed during set-up, items will appear in the reverse of their normal order.

8. **HIGH/LOW ALARM** - The alarm button contains two LED's which indicate when either a high or low alarm condition exists. If alarm latching is on, the alarm button must be pressed to clear an alarm.

9. **MENU SELECT** - When the MENU SELECT button is pressed during set-up, the MODEL 525 advances from one menu to the next. If the ALT key is lit, menus will appear in reverse sequence.

10. ITEM SELECT - This button is used during set-up to advance from one menu item to the next. If pressed when the ALT key is lit, menu items will appear in reverse order.

11. INCREMENT - The INC button is used in set-up to increase the value of the digit being set. A single push will cause the number to increment by one. By holding the button in, the number will continue to count. The INC button will affect only the digit at the cursor position, except when setting either the clock or calendar functions. In those instances, the INC button will affect two positions, stepping the minutes from 00 to 59, the hours from 01 to 23, the days from 01 to 31, the months from 01 to 12, and the years from 00 to 99. When the ALT key is lit, pressing the INC button will cause the number to decrement.

12. SHIFT - This button is used in set-up to move the cursor position from right to left. The cursor, a flashing decimal point, indicates which digit is being set by use of the INC button. When the ALT key is lit, pressing the shift button will move the cursor from left to right.

13. KEY SWITCH - In the vertical position, the key switch allows data setting through the front panel keypad. In the locked (horizontal) position, operation of the key switch is dependent on the Recipe Access settings. If RA is off, all front panel buttons except SCAN and STEP are disabled. If Recipe Access is on, the operator can switch between recipes. The key can only be removed in the locked position.

P 617 884 138

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

UNITED STATES POSTAL SERVICE

Sent to: Chris Sleeper	
Street & No.: DRE Env. Inc	
P.O., State & ZIP Code: Lake City, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date & Address of Delivery	
TOTAL Postage & Fees	$
Postmark or Date Amendment AC 16-187650 189522 1-15-92	

PS Form **3800**, June 1990

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

January 10, 1992

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Chris Sleeper
D.R.E. Environmental, Inc.
P. O. Box 1386
Lake City, Florida 32056-1386

Dear Mr. Sleeper:

Re: Amendment of Permits Nos. AC 16-187650 and 189522

The Department is in receipt of your December 20, 1991, letter requesting that the referenced construction permits be extended. The extensions are needed because the units are operating outside of the state of Florida.

This request is acceptable and the expiration dates of construction permits Nos. AC 16-187650 and 189522 are extended from January 1, 1992 to January 1, 1993. To confirm that the units are operating outside the state of Florida, the Department requests that copies of all air emissions test results on these units obtained in other states be sent to the Bureau of Air Regulation. The Department will require that a complete compliance test be performed on each unit when they begin operation in Florida and that the test reports be submitted to the Bureau of Air Regulation within 45 days of the compliance tests. Also be informed that the Department is currently in the process of adopting regulations that could require additional restrictions and/or upgrading of the air pollution control equipment on these units prior to their operation in Florida.

A copy of this letter shall be filed with the referenced permits and shall become a part of those permits.

Sincerely,

Carol M. Browner
Secretary

CMB/plm

Attach: D.R.E. Dec. 20, 1991, letter

D. R. E.
ENVIRONMENTAL INC.
PH. (904) 758-3164
FAX (904) 755-5430
" Destruction Removal Efficiencies "

December 20, 1991

Mr. Willard Hanks
Dept. of Environmental Regulations
Bureau of Air Regulations
2600 Blairstone Road
Tallahasse, Fl 32399-2400

RE: Request for Construction Permit Extension
AC 16-187650, AC189522

Dear Sir:

DRE Environmental, Inc. has two construction air permits for mobile soil remediation units that will expire in January 1992.

DRE Environmental, Inc. is currently working outside of the state of Florida and expects to be out of state for the next 6-8 months. It is our current understanding that stack tests performed in other states are not acceptable by the Bureau of Air Regulations of Florida.

DRE requests that the department grant a 12 month extension to allow our company time to obtain a project in Florida and complete the necessary stack testing to obtain an operating permit.

Please find enclosed the extension fee of $100.00 for both permits.

If you have any questions please call (904) 758-3164.

Sincerely,

Chris Sleeper

CS/sw

POST OFFICE BOX 1386, LAKE CITY, FLORIDA 32056-1386

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: Carol Browner

for FROM: Steve Smallwood

DATE: January 10, 1992

SUBJ: Amendment of Construction Permits

Attached for your approval and signature is a letter that will extend the expiration dates of two construction permits for transportable soil thermal treatment facilities. The extension was requested because the units are operating outside the state of Florida.

This request is not controversial. I recommend your approval and signature.

SS/WH/plm

Attachment

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL PACKAGE TRACKING NUMBER 1780047021

1350M 1780047021

RECIPIENT'S COPY

1 Date 12-20-91

From (Your Name) Please Print: Chris Sleeper
Your Phone Number (Very Important): (904)-755-1196
Company: D R E ENVIRONMENTAL INC
Department/Floor No.:
Street Address: 2 GUERDON RD
City: LAKE CITY State: FL ZIP Required: 3 2 0 5 5

2 To (Recipient's Name) Please Print: Mr. Willard Hanks
Recipient's Phone Number (Very Important): ( )
Company: Dept. of Environmental Reg. Bureau of Air Regulation
Department/Floor No.:
Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 2600 Blairstone Rd.
City: Tall State: Fl. ZIP Required: 32399-2400

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

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

3 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†)	Standard Overnight (Delivery by next business afternoon†)
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 Extra Large or any package over 150 lbs.)
70 [ ] OVERNIGHT FREIGHT ** (Contained reservation required) 80 [ ] TWO-DAY FREIGHT **
†Delivery commitment may be later in some areas. *Declared Value Limit $100. **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 ____ Lbs
7 [ ] OTHER SPECIAL SERVICE ____
8 [ ]
9 [ ] SATURDAY PICK-UP (Extra charge)
10 [ ]
11 [ ] DESCRIPTION
12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

6

PACKAGES	WEIGHT In Pounds Only	YOUR DECLARED VALUE
Total	Total	Total

DIM SHIPMENT (Chargeable Weight)
[ ] ____ lbs.
L x W x H = ____
Received At
1 [ ] Regular Stop 3 [ ] Drop Box
2 [X] On-Call Stop 4 [ ] B.S.C. 5 [ ] Station

7 Release Signature: S. Woodx
FedEx Emp. No. Date/Time

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 6/91
PART #137204 FXEM11/91
FORMAT #099
099

D.R.E. ENVIRONMENTAL, INC.

Receipt:

Check To DER-BUREAU OF AIR REGULATIONS for $100.00 on Friday, December 20, 1991.

1044

D.R.E. ENVIRONMENTAL, INC.
2 GUERDON ROAD P.O. BOX 1386
LAKE CITY, FL 32056-1386
PH. 904-758-3164

BARNETT BANK
LAKE CITY, FL 32056
[redacted]

PAY
Memo PERMITS

TO THE ORDER OF	DATE	AMOUNT
One hundred and 00/100	12/20/91	$100.00

DER-BUREAU OF AIR REGULATIONS
2600 BLAIRSTONE ROAD
TALLAHASSEE, FL 32399

Chris M. Sleyer

[redacted]

081192/0-89

D.R.E. ENVIRONMENTAL, INC.

1044

001031

LETTER OF TRANSMITTAL

ANDERSON COLUMBIA
ENVIRONMENTAL, INC.

P.O. Box 1386
Lake City, Florida 32056-1386
(904) 755-1196 (904) 755-5430 FAX

DATE 10/11/91

ATTENTION Mr. Willard Hanks

RE Report from testing Co.

TO Dep. of Env. Reg.
Bureau of Air Reg.
2600 Blairstone Rd.
Tallahassee, FL
32399-2400

WE ARE SENDING ☐ ATTACHED ☐ UNDER SEPARATE COVER VIA _____:

- ☐ SAMPLES
- ☐ LITERATURE
- ☐ PLANS
- ☐ PRINTS
- ☐ SHOP DRAWINGS
- ☐ ENGINEERING DRAWINGS
- ☐ CHANGE ORDERS
- ☐ LETTERS
- ☐ CONTRACTS
- ☐ OTHER _____

COPIES	DATE	NO	DESCRIPTION

THESE ARE BEING SENT:

- ☐ FOR YOUR APPROVAL
- ☐ FOR YOUR USE
- ☐ FOR YOUR REVIEW
- ☐ FOR YOUR COMMENTS
- ☐ FOR YOUR SIGNATURE
- ☐ FOR YOUR _____
- ☐ APPROVED AS NOTED
- ☐ APPROVED AS SUBMITTED
- ☐ APPROVED AS CHANGED
- ☐ REJECTED AS NOTED
- ☐ REJECTED AS CHANGED
- ☐ RETURNED FOR CORRECTIONS
- ☐ RESUBMIT _____ COPIES FOR APPROVAL
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- ☐ RENEW _____ COPIES FOR _____
- ☐ _____
- _____

NOTES _____

COPY TO

SIGNATURE Jachi

TITLE

DATE 10/11/91

PARTICULATE MATTER EMISSION MEASUREMENTS

MOBILE SOIL REMEDIATION UNIT

D.R.E. ENVIRONMENTAL, INC.
MT. VERNON, ALABAMA

August 15, 1991

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 N.W. 13TH STREET
GAINESVILLE, FLORIDA 32609
(904) 377-5822

KOOGLER & ASSOCIATES

TABLE OF CONTENTS

To the best of my knowledge, all applicable field and analytical procedures comply with Florida Department of Environmental Regulation requirements and all test data and plant operating data are true and correct.

John B. Koogler, PH.D., P.E.

State of Florida
Registration No. 12925

9/23/01
Date

SEAL

KOOGLER & ASSOCIATES

1.0 INTRODUCTION

On August 15, 1991, Koogler & Associates Environmental Services of Gainesville, Florida conducted particulate matter emission measurements on a mobile soil remediation unit for D.R.E. Environmental, Inc., while it was processing contaminated soil at a location in Mt. Vernon, Alabama.

Particulate matter emission measurements and visible emissions observations were made in accordance with EPA Methods 5 and 9, respectively, as described in 40CFR60, Appendix A. Particulate matter emission measurements ranged from 4.46 to 4.85 pounds per hour and averaged 4.61 pounds per hour. A summary of the particulate matter emissions, gas flow and stack parameters is presented in Table 1. During a 30-minute observation period, no visible emissions were noted.

Allowable 7.4 lbs/hr

During the test period on August 15, 1991, the input rate to the dryer averaged 15.4 tons per hour. The allowable particulate matter concentration in the stack gas is 0.08 grains per dry standard cubic foot, corrected to 50 percent excess air, or about 7.1 pounds per hour. Therefore, based on the above data, it can be concluded that the mobile soil remediation unit meets the particulate matter emission limits established by permit conditions.

Allowable 35 TPH

2.0 PROCESS DESCRIPTION

D.R.E. Environmental, Inc. owns and operates a 35 TPH portable rotary kiln/afterburner system to decontaminate soil. The unit consists of a soil feed hopper, a 25 MMBTU/hr rotary kiln, a baghouse, a 22 MMBTU/hr afterburner, a propane/natural gas fuel system, a diesel electric generator, and associated equipment.

Max. Heat Input 45mm Btu/hr

Contaminated soils pass through a kiln where the VOCs are evaporated. The gas stream leaving the kiln passes through a baghouse and an afterburner for control of particulate matter and VOC emissions.

Propane gas is the primary fuel and natural gas is the alternate fuel for both the kiln and afterburner. The maximum heat input to the rotary kiln/afterburner system is 45 MMBTU/hr (500 gallons of propane per hour).

Contaminated soils are reduced to lumps that are a maximum of two inches in diameter prior to being fed to the kiln. The soil is heated to about 700^{o}F in the kiln to evaporate the petroleum products. The gas stream then passes through a baghouse which removes particulate matter, and into an afterburner to control the petroleum vapors. The afterburner operates at a minimum temperature of 1600^{o}F and a minimum residence time of one second.

The stack from the afterburner is three feet in diameter and approximately 30 feet high. Two sampling ports are located at 90 degrees to one another, as shown in Figure 1.

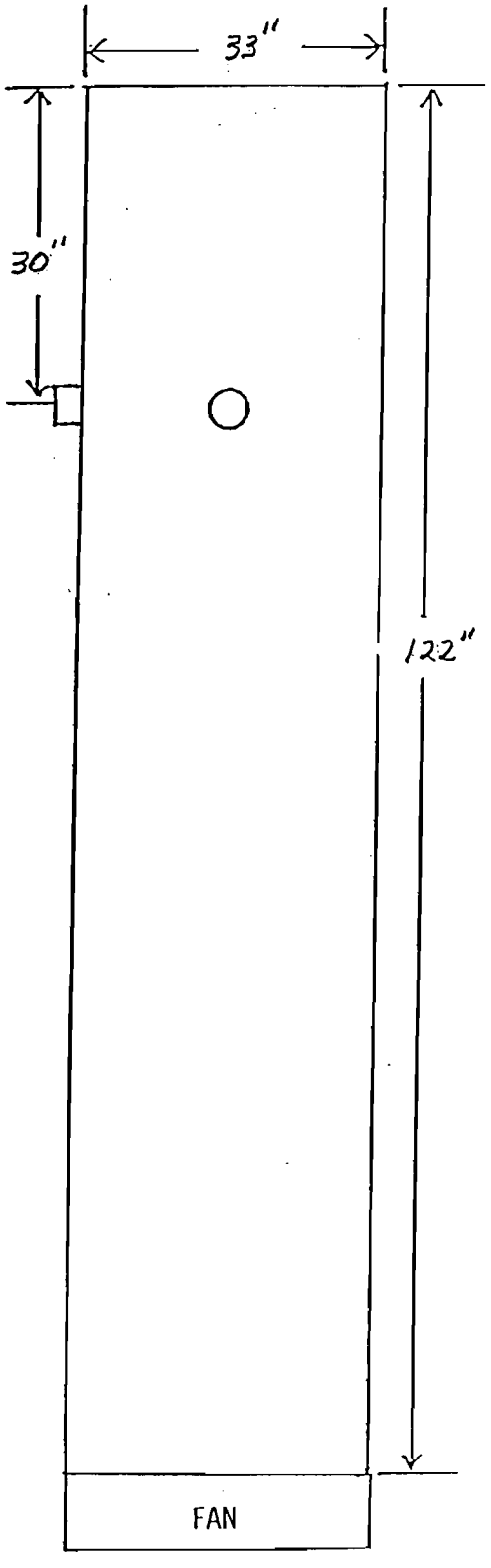


FIGURE 1

SAMPLING POINT LOCATIONS

TRANSPORTABLE INCINERATOR SYSTEM

D.R.E. ENVIRONMENTAL, INC.

Traverse Point No.	Inches Inside Stack Wall
1	1.00
2	2.21
3	3.93
4	5.84
5	8.25
6	11.76
7	21.12
8	24.75
9	27.06
10	29.04
11	30.69
12	32.00

KOOGLER & ASSOCIATES

3.0 FIELD AND ANALYTICAL PROCEDURES

Particulate matter emission measurements were made using EPA Method 5, as described in 40CFR60, Appendix A. The sampling point locations for the EPA Method 5 test were established in accordance with EPA Method 1.

Stack gas velocity measurements and stack gas moisture measurements were made in conjunction with the EPA Method 5 tests in accordance with EPA Methods 2 and 4, both as described in 40CFR60, Appendix A.

$E_{gr/dscf} = \frac{4.61 \text{ lbs}}{\text{hr}} \frac{7000 \text{ gr}}{\text{lb}} \frac{\text{hr}}{60 \text{ min}} \frac{1}{11,092 \text{ ft}^3}$

$= 0.048 \text{ gr/dscf}$

4.0 SUMMARY OF RESULTS

Results of the particulate matter emission measurements conducted on the mobile soil remediation unit on August 15, 1991 are summarized in Table 1. The particulate matter concentration in the stack gas during the three tests averaged 0.0525 grains per dry standard cubic foot, corrected to seven percent oxygen, and the mass emission rate averaged 4.61 pounds per hour. The stack gas flow rate averaged 11092 SCFMD, the stack gas temperature averaged 1412°F and the stack gas moisture averaged 28.1 percent. During the test period, the input rate to the dryer averaged 15.4 tons per hour. The permit for the soil remediation unit limits the particulate matter concentration in the stack gas to 0.08 grains per dry standard cubic foot, corrected to 50 percent excess air; equivalent to a mass emission rate of about 7.1 pounds per hour.

Therefore, based on the above data, it can be concluded that the mobile soil remediation meets the permitted particulate matter emission limits.

All calculations, field and analytical data sheets, plant operating data, equipment calibrations and a list of project participants are included in the Appendix of this report.

MODEL FOR PERMIT	TEST
ST. HT. = 30 FT	30
ST. TEMP. = 1600°F	1412
dscfm = 36,077	54,707 dscfm (Calc)
dscfm	11092
25 TPH feed	15.4 TPH
	153.5 FPS

TABLE 1

SUMMARY OF SOURCE EMISSION TEST DATA

D.R.E. ENVIROMENTAL INC.
BAGHOUSE/AFTERBURNER
AUGUST 15,1991

Run No.	Process Weight Rate (Tons/Hr)	Stack Gas Flow Rate (SCFMD)	Stack Gas Temperature (Deg F)	Stack Gas Moisture (%)	Particulate Matter	
					Conc. (gr/dscf@ 50% excess air)	Emission Rate (Lbs/Hr)
1	15.0	11129	1388.0	29.1	0.0474	4.46
2	14.7	10649	1448.0	30.4	0.0476	4.52
3	16.6	11497	1401.0	24.9	0.0570	4.85
Average	15.4	11092	1412.3	28.1	0.0507	4.61

Allowable Particulate Matter Emission Rate = 0.08 gr/dscf @ 50% excess air

APPENDIX

1. Calculations
2. Field and Laboratory Data Sheets
3. Plant Information
4. Equipment Calibrations
5. Project Participants

CALCULATIONS

KOOGLER & ASSOCIATES

GENERAL DATA

DATA FILE NAME: DRE-MTVJ

Company	: D.R.E. ENVIROMENTAL INC.				
Source/Unit	: BAGHOUSE/AFTERBURNER				
Date	: AUGUST 15,1991		Cp	: 0.840	
Stack dia.	: 33.0 inch	OR :	Duct Length	: 0.00	inch
Oxygen Corr.:	7 percent		Duct Width	: 0.00	inch
			Std. Temp.	: 68	dF

FUEL ANALYSIS DATA,
(for calculating F-Factor)

Hydrogen,wt%	: 0.00	Process Wt.		
Carbon, wt%	: 0.00	Run 1	: 0.0	tons/hr
Sulfur, wt%	: 0.00	Run 2	: 0.0	
Nitrogen,wt%	: 0.00	Run 3	: 0.0	
Oxygen, wt%	: 0.00			
Btu/lb	: 0			

F-Factor : dscf/MMBtu; enter this value or (F9) for result.

FIELD DATA	RUN 1	RUN 2	RUN 3	
Meter Temp., Tm (dF)	98.8	92.3	107.0	
Stack Temp., Ts (dF)	1388.0	1448.0	1401.0	
Sq.Rt. dP	1.4000	1.3800	1.3780	
dH (in. H2O)	2.2000	2.2400	2.2400	
Meter Vol.,Vm (ft3)	50.501	51.320	51.103	
Meter Y	1.001	1.001	1.001	
Bar. Press.,Pb (in.Hg.)	29.96	29.96	29.96	
Vol. H2O, Vlc (ml)	420.0	458.0	337.0	
Static Press.,Ps (in.H2O)	-0.5	-0.5	-0.5	
Test Time (min.)	60	60	60	
Nozzle Dia.,Dn (in.)	0.285	0.285	0.285	
Oxygen, O2 (%)	7.6	6.9	9.4	
Carbon Dioxide, CO2 (%)	8.3	8.0	6.7	
Carbon Monoxide, CO (%)	0.0	0.0	0.0	
Flow Rate, dscfm (optional)	0	0	0	5

LABORATORY RESULTS	RUN 1	RUN 2	RUN 3	
GRAVIMETRIC ANALYSIS :				
Front Half Wash (FHW)	0.0400	0.0398	0.0428	grams
Filterable Particulate (MF)	0.1058	0.1188	0.1101	
Condensible Particulate (BHW)	0.0000	0.0000	0.0000	
SO2 ANALYSIS :				
SO2 ANALYSIS :	0.00	0.00	0.00	mg H2SO4
Sample Volume, ml	100.0	100.0	100.0	
Sample Aliquot, ml	20.0	20.0	20.0	
Volume of Titer, ml	0.0	0.0	0.0	
Volume of Titer Blank, ml	0.0	0.0	0.0	

Normality of BaCl2 ..... 0.0000000

LABORATORY RESULTS (Continued)

SULFATE ANALYSIS (FRONT HALF) :				
ACID MIST/SO3 ANALYSIS (FRONT HALF)	0.00	0.00	0.00	mg H2SO4
Sample Volume, ml	1000.0	1000.0	1000.0	
Sample Aliquot, ml	100.0	100.0	100.0	
Volume of Titer, ml	0.0	0.0	0.0	
Volume of Titer Blank, ml	0.0	0.0	0.0	
Normality of BaCl2				0.0000000

SULFATE ANALYSIS (BACK HALF) :				
ACID MIST/SO3 ANALYSIS (BACK HALF) :	0.00	0.00	0.00	mg H2SO4
Sample Volume, ml	1000.0	1000.0	1000.0	
Sample Aliquot, ml	100.0	100.0	100.0	
Volume of Titer, ml	0.0	0.0	0.0	
Volume of Titer Blank, ml	0.0	0.0	0.0	
Normality of BaCl2				0.0000000

SOURCE TEST CALCULATIONS

PLANT : D.R.E. ENVIROMENTAL INC.
BAGHOUSE/AFTERBURNER

RUN NO.: 1
DATE : AUGUST 15,1991

STD.TEMP, Tstd	= 68 DEG. F	STATIC PRESS.,Ps	=	-0.53	in. H20
METER TEMP, Tm	= 98.8 DEG. F	PITOT COFF., Cp	=	0.840	
STACK TEMP, Ts	=1388.0 DEG. F	STACK I.D.	=	33.00	inch
AVG.VEL.HEAD,dP	= 1.96 in. H20	DUCT LENGTH	=		inch
METER ORIFICE,dH	= 2.20 in. H20	DUCT WIDTH	=		inch
METER VOL., Vm	=50.501 Cu.Ft.	STACK AREA, As	=	5.940	Sq.Ft.
METER COFF., Y	= 1.001	TEST TIME	=	60.00	min.
BAR. PRESS., Pb	= 29.96 in.Hg	NOZZLE DIA.	=	0.285	inch
COND.(Vlc)	= 420.0 ml	NOZZLE DIA., An	=	4.4E-04	Sq.Ft.

GAS ANALYSIS = 7.60 % O2 0.00 % CO
8.30 % CO2 84.10 % N2

****

Vm(std) = [T(std) + 460 / 29.92] x Vm x Y x (Pb + (dH / 13.6)) / (Tm + 460)..... = 48.087 dscf

Vw(std) =(8.9148 x 10e-5) x (Tstd + 460) x Vlc = 19.769 scf

Bws = Vw(std) / (Vm(std) + Vw(std))..... = 0.291 ¦ Lower ¦ Bws

Bws @ Saturated Conditions = Vapor Press. of H20 @ Dew Point Temp. / (Ps, in.Hg.) ..... = 1.000 ¦ value ¦ used.

%EA =(%O2 - 0.5%CO)/(0.264%N2 - (%O2-0.5%CO)) x 100 = 52.05

Md =(.44 x %CO2)+(.32 x %O2)+[.28 x (%N2 + %CO)] = 29.63

Ms = (Md x (1-Bws)) + (18.0 x Bws)..... = 26.24

P(stack) = Pbar + (Ps / 13.6) ..... = 29.92 in. Hg

vs = 85.49 x CP x (Sq.Rt.dP) x [Sq.Rt.(Ts + 460) / (Ms x P(stack))] ..... = 154.23 ft/sec

Qs = vs x As x 60 ..... = 54,965 acf/min

Qs(std) = Qs x (1-Bws)x((Tstd + 460)/(Ts + 460)) x (P(stack)/29.92) ..... = 11,129 dscf/min

I = (Ts+460) x [(0.002669 x Vlc) + (Vm(std) / (T(std) + 460) / 29.92] x 100 / [Time x P(stack) x An x vs x 60] ..... = 96.36 %

SOURCE TEST CALCULATIONS

PLANT : D.R.E. ENVIROMENTAL INC.
BAGHOUSE/AFTERBURNER

RUN NO.: 2
DATE : AUGUST 15,1991

STD.TEMP, Tstd	= 68 DEG. F	STATIC PRESS.,Ps	=	-0.53	in. H2O
METER TEMP, Tm	= 92.30 DEG. F	PITOT COFF., Cp	=	0.840	
STACK TEMP, Ts	=1448.0 DEG. F	STACK I.D.	=	33.00	inch
AVG.VEL.HEAD,dP	= 1.90 in. H2O	DUCT LENGTH	=		inch
METER ORIFICE,dH	= 2.24 in. H2O	DUCT WIDTH	=		inch
METER VOL., Vm	=51.320 Cu.Ft.	STACK AREA, As	=	5.940	Sq.Ft.
METER COFF., Y	= 1.001	TEST TIME	=	60.00	min.
BAR. PRESS., Pb	= 29.96 in.Hg	NOZZLE DIA.	=	0.285	inch
COND.(Vlc)	= 458.0 ml	NOZZLE DIA., An	=	4.4E-04	Sq.Ft.

GAS ANALYSIS = 6.90 % O2 0.00 % CO
8.00 % CO2 85.10 % N2

****

Vm(std) = [T(std) + 460 / 29.92] x Vm x Y x
(Pb + (dH / 13.6)) / (Tm + 460)..... = 49.447 dscf

Vw(std) =(8.9148 x 10e-5) x (Tstd + 460) x Vlc = 21.558 scf

Bws = Vw(std) / (Vm(std) + Vw(std))..... = 0.304 | Lower Bws value used.

Bws @ Saturated Conditions = Vapor Press. of H2O @ Dew Point Temp. / (Ps, in.Hg.) ..... = 1.000

%EA =(%O2 - 0.5%CO)/(0.264%N2 - (%O2-0.5%CO)) x 100 = 44.33

Md =(.44 x %CO2)+(.32 x %O2)+[.28 x (%N2 + %CO)] = 29.56

Ms = (Md x (1-Bws)) +, (18.0 x Bws)..... = 26.05

P(stack) = Pbar + (Ps / 13.6) ..... = 29.92 in. Hg

vs = 85.49 x CP x (Sq.Rt.dP) x [Sq.Rt.(Ts + 460)
/ (Ms x P(stack))] ..... = 155.06 ft/sec

Qs = vs x As x 60 ..... = 55,258 acf/min

Qs(std) = Qs x (1-Bws)x((Tstd + 460)/(Ts + 460))
x (P(stack)/29.92) ..... = 10,649 dscf/min

I = (Ts+460) x [(0.002669 x Vlc) + (Vm(std) /
(T(std) + 460) / 29.92] x 100 / [Time x
P(stack) x An x vs x 60] ..... = 103.56 %

SOURCE TEST CALCULATIONS

PLANT : D.R.E. ENVIROMENTAL INC.
BAGHOUSE/AFTERBURNER

RUN NO.: 3
DATE : AUGUST 15,1991

STD.TEMP, Tstd	= 68 DEG. F	STATIC PRESS.,Ps	=	-0.53	in. H2O
METER TEMP, Tm	=107.00 DEG. F	PITOT COFF., Cp	=	0.840	
STACK TEMP, Ts	=1401.0 DEG. F	STACK I.D.	=	33.00	inch
AVG.VEL.HEAD,dP	= 1.90 in. H2O	DUCT LENGTH	=		inch
METER ORIFICE,dH	= 2.24 in. H2O	DUCT WIDTH	=		inch
METER VOL., Vm	=51.103 Cu.Ft.	STACK AREA, As	=	5.940	Sq.Ft.
METER COFF., Y	= 1.001	TEST TIME	=	60.00	min.
BAR. PRESS., Pb	= 29.96 in.Hg	NOZZLE DIA.	=	0.285	inch
COND.(Vlc)	= 337.0 ml	NOZZLE DIA., An	=	4.4E-04	Sq.Ft.

GAS ANALYSIS = 9.40 % O2 0.00 % CO
6.70 % CO2 83.90 % N2

****

Vm(std) = [T(std) + 460 / 29.92] x Vm x Y x (Pb + (dH / 13.6)) / (Tm + 460)..... = 47.961 dscf

Vw(std) =(8.9148 x 10e-5) x (Tstd + 460) x Vlc = 15.863 scf

Bws = Vw(std) / (Vm(std) + Vw(std))..... = 0.249 | Lower Bws value used.

Bws @ Saturated Conditions = Vapor Press. of H2O @ Dew Point Temp. / (Ps, in.Hg.) ..... = 1.000

%EA =(%O2 - 0.5%CO)/(0.264%N2 - (%O2-0.5%CO)) x 100 = 73.73

Md =(.44 x %CO2)+(.32 x %O2)+[.28 x (%N2 + %CO)] = 29.45

Ms = (Md x (1-Bws)) + (18.0 x Bws)..... = 26.60

P(stack) = Pbar + (Ps / 13.6) ..... = 29.92 in. Hg

vs = 85.49 x CP x (Sq.Rt.dP) x [Sq.Rt.(Ts + 460) / (Ms x P(stack))] ..... = 151.31 ft/sec

Qs = vs x As x 60 ..... = 53,923 acf/min

Qs(std) = Qs x (1-Bws)x((Tstd + 460)/(Ts + 460)) x (P(stack)/29.92) ..... = 11,497 dscf/min

I = (Ts+460) x [(0.002669 x Vlc) + (Vm(std) / (T(std) + 460) / 29.92] x 100 / [Time x P(stack) x An x vs x 60] ..... = 93.04 %

A. FIELD DATA SUMMARY

PLANT : D.R.E. ENVIROMENTAL INC.
BAGHOUSE/AFTERBURNER
DATE : AUGUST 15,1991

	RUN 1	RUN 2	RUN 3
Vlc = Vol water collected in train, ml	420.0	458.0	337.0
Vm = Sample gas vol, meter cond., dacf	50.501	51.320	51.103
Y = Meter calibration factor	1.0010	1.0010	1.0010
Pbar = Barometric pressure, in. Hg	29.96	29.96	29.96
Pstatic = Stack static pressure, in. H2O	-0.53	-0.53	-0.53
dH = Avg meter pressure diff, in. H2O	2.20	2.24	2.24
Tm = Absolute meter temp., degrees R	558.8	552.3	567.0
Vm(std) = Sample gas vol, Std. cond., dscf	48.087	49.447	47.961
Bws = Water vapor in gas stream, fraction	0.291	0.304	0.249
MF = Moisture factor (1 - Bws)	0.709	0.696	0.751
CO2 = Carbon Dioxide, dry, volume %	8.30	8.00	6.70
O2 = Oxygen, dry, volume %	7.60	6.90	9.40
N2 = Nitrogen, dry volume %	84.10	85.10	83.90
Md = Molecular weight of stack gas, dry	29.63	29.56	29.45
Ms = Molecular weight of stack gas, wet	26.24	26.05	26.60
Cp = Pitot tube coefficient	0.84	0.84	0.84
Sq.Rt. dP = Avg. square root of each dP	1.4000	1.3800	1.3780
Ts = Absolute stack temp., degrees R	1848.0	1908.0	1861.0
A = Area of stack, ft2	5.94	5.94	5.94
Qstd = Volumetric flowrate, dscfm	11,129	10,649	11,497
An = Nozzle area, ft2	4.44E-04	4.44E-04	4.44E-04
O = Sample time, minutes	60.00	60.00	60.00
%I = Isokinetic variation, percent	96.36	103.56	93.04

B. PARTICULATE DATA SUMMARY

PLANT : D.R.E. ENVIROMENTAL INC.
BAGHOUSE/AFTERBURNER
DATE : AUGUST 15,1991

	RUN 1	RUN 2	RUN 3
Particulate Weight (FHW + MF + BHW), mg ...	145.80	158.60	152.90
Meter Volume, standard cond., Vm(std)	48.087	49.447	47.961
Carbon Dioxide, percent	8.30	8.00	6.70
Oxygen, percent	7.60	6.90	9.40
Particulate Concentration :			
gr/scf	0.0332	0.0345	0.0370
gr/dscf	0.0468	0.0495	0.0492
gr/dscf @ 12 % CO2	0.0676	0.0742	0.0881
gr/dscf @ 7% O2	0.0489	0.0491	0.0594

EMISSION RATE CALCULATIONS

PLANT :D.R.E. ENVIROMENTAL INC.
BAGHOUSE/AFTERBURNER

RUN NO.: 1
DATE : AUGUST 15,1991
O2 CORR.: 7.0 %

STANDARD TEMP. : 68 DEG. F

Front Half Wash (FHW)	0.04000	grams	Vm(std)	48.087	ft3
Mass Filter (MF)	0.10580	grams	Vw(std)	19.769	ft3
Back Half Wash (BHW)	0.00000	grams	Qs(std)	11,129	dscfm
Front Half Sulfate (FHS)		mg H2SO4	Bws	0.291	
Back Half Sulfate (BHS)		mg H2SO4	CO2	8.30	%
H2O2 Catch (SO2)		mg H2SO4	O2	7.60	%

F-FACTOR

10E6 x [3.64(%H) + 1.53(%C) + 0.57(%S) + 0.14(%N) - 0.46(%O2)] / (Btu/lb) x [(Tstd + 460)/528] ..... dscf/MMBtu

FILTERABLE PARTICULATE

15.432 x (FHW + MF) / [Vm(std) + Vw(std)]	0.0332	gr/scf
15.432 x (FHW + MF) / Vm(std)	0.0468	gr/dscf
gr/dscf x (12 / %CO2)	0.0676	@ 12% CO2
gr/dscf x [(21 - Oxygen corr.) / (21 - %O2)]	0.0489	@ 7% O2
0.00857 x Qs(std) x gr/dscf	4.46	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..		lb/MMBtu

TOTAL PARTICULATE

15.432 x (FHW + MF + BHW) / [(Vm(std) + Vw(std)] ...	0.0332	gr/scf
15.432 x (FHW + MF + BHW) / (Vm(std)	0.0468	gr/dscf
gr/dscf x (12 / %CO2)	0.0676	@ 12% CO2
gr/dscf x [(21 - Oxygen Corr.) / (21 - %O2)]	0.0489	@ 7% O2
0.00857 x Qs(std) x gr/dscf	4.46	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..		lb/MMBtu

TOTAL SULFATE

0.015432 x (FHS + BHS) / [Vm(std) + Vw(std)]	gr/scf
0.015432 x (FHS + BHS) / Vm(std)	gr/dscf
gr/dscf x (12 / %CO2)	@ 12% CO2
0.00857 x Qs(std) x gr/dscf	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..	lb/MMBtu

SULFUR DIOXIDE (SO2)

1.60864 x [T(std) + 460] x (mg H2SO4) / [98.076 x Vm(std)]	ppm
ppm x [(20.9 - Oxygen Corr.) / (20.9 - %O2)]	@ O2 corr.
ppm x (1 - Bws)	ppm (wet)
8.223E-5 x Qs(std) x 64.062 x ppm / [T(std) + 460]..	lb/hr
F-Factor x 64.062 x [1.3711E-6 / [T(std)+ 460]] x [20.9 / (20.9 - %O2)] x ppm	lb/MMBtu
lb/hr / (dscfm x 60 min/hr)	lb/dscf

EMISSION RATE CALCULATIONS

PLANT :D.R.E. ENVIROMENTAL INC.
BAGHOUSE/AFTERBURNER

RUN NO.: 2
DATE : AUGUST 15,1991
O2 CORR.: 7.0 %

STANDARD TEMP. : 68 DEG. F

Front Half Wash (FHW)	0.03980	grams	Vm(std)	49.447	ft3
Mass Filter (MF)	0.11880	grams	Vw(std)	21.558	ft3
Back Half Wash (BHW)	0.00000	grams	Qs(std)	10,649	dscfm
Front Half Sulfate (FHS)		mg H2SO4	Bws	0.304	
Back Half Sulfate (BHS)		mg H2SO4	CO2	8.00	%
H2O2 Catch (SO2)		mg H2SO4	O2	6.90	%

F-FACTOR

10E6 x [3.64(%H) + 1.53(%C) + 0.57(%S) + 0.14(%N) - 0.46(%O2)] / (Btu/lb) x [(Tstd + 460)/528] ..... dscf/MMBtu

FILTERABLE PARTICULATE

15.432 x (FHW + MF) / [Vm(std) + Vw(std)]	0.0345	gr/scf
15.432 x (FHW + MF) / Vm(std)	0.0495	gr/dscf
gr/dscf x (12 / %CO2)	0.0742	@ 12% CO2
gd/dscf x [(21 - Oxygen Corr.) / (21 - %O2)]	0.0491	@ 7% O2
0.00857 x Qs(std) x gr/dscf	4.52	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..		lb/MMBtu

TOTAL PARTICULATE

15.432 x (FHW + MF + BHW) / [(Vm(std) + Vw(std)] ...	0.0345	gr/scf
15.432 x (FHW + MF + BHW) / (Vm(std)	0.0495	gr/dscf
gr/dscf x (12 / %CO2)	0.0742	@ 12% CO2
gr/dscf x [(21 - Oxygen Corr.) / (21 - %O2)]	0.0491	@ 7% O2
0.00857 x Qs(std) x gr/dscf	4.52	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..		lb/MMBtu

TOTAL SULFATE

0.015432 x (FHS + BHS) / [Vm(std) + Vw(std)]	gr/scf
0.015432 x (FHS + BHS) / Vm(std)	gr/dscf
gr/dscf x (12 / %CO2)	@ 12% CO2
0.00857 x Qs(std) x gr/dscf	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..	lb/MMBtu

SULFUR DIOXIDE (SO2)

1.60864 x [T(std) + 460] x (mg H2SO4) / [98.076 x Vm(std)]	ppm
ppm x [(20.9 - Oxygen Corr.) / (20.9 - %O2)]	@ O2 corr.
ppm x (1 - Bws)	ppm (wet)
8.223E-5 x Qs(std) x 64.062 x ppm / [T(std) + 460]..	lb/hr
F-Factor x 64.062 x [1.3711E-6 / [T(std)+ 460]] x [20.9 / (20.9 - %O2)] x ppm	lb/MMBtu
lb/hr / (dscfm x 60 min/hr)	lb/dscf

EMISSION RATE CALCULATIONS

PLANT :D.R.E. ENVIROMENTAL INC.
BAGHOUSE/AFTERBURNER

RUN NO.: 3
DATE : AUGUST 15,1991
O2 CORR.: 7.0 %

STANDARD TEMP. : 68 DEG. F

Front Half Wash (FHW)	0.04280	grams	Vm(std)	47.961	ft3
Mass Filter (MF)	0.11010	grams	Vw(std)	15.863	ft3
Back Half Wash (BHW)	0.00000	grams	Qs(std)	11,497	dscfm
Front Half Sulfate (FHS)		mg H2SO4	Bws	0.249	
Back Half Sulfate (BHS)		mg H2SO4	CO2	6.70	%
H2O2 Catch (SO2)		mg H2SO4	O2	9.40	%

F-FACTOR

10E6 x [3.64(%H) + 1.53(%C) + 0.57(%S) + 0.14(%N) - 0.46(%O2)] / (Btu/lb) x [(Tstd + 460)/528] ..... dscf/MMBtu

FILTERABLE PARTICULATE

15.432 x (FHW + MF) / [Vm(std) + Vw(std)]	0.0370	gr/scf
15.432 x (FHW + MF) / Vm(std)	0.0492	gr/dscf
gr/dscf x (12 / %CO2)	0.0881	@ 12% CO2
gr/dscf x [(21 - Oxygen Corr.) / (21 - %O2)]	0.0594	@ 7% O2
0.00857 x Qs(std) x gr/dscf	4.85	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..		lb/MMBtu

TOTAL PARTICULATE

15.432 x (FHW + MF + BHW) / [(Vm(std) + Vw(std)] ...	0.0370	gr/scf
15.432 x (FHW + MF + BHW) / (Vm(std)	0.0492	gr/dscf
gr/dscf x (12 / %CO2)	0.0881	@ 12% CO2
gr/dscf x [(21 - Oxygen Corr.) / (21 - %O2)]	0.0594	@ 7% O2
0.00857 x Qs(std) x gr/dscf	4.85	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..		lb/MMBtu

TOTAL SULFATE

0.015432 x (FHS + BHS) / [Vm(std) + Vw(std)]	gr/scf
0.015432 x (FHS + BHS) / Vm(std)	gr/dscf
gr/dscf x (12 / %CO2)	@ 12% CO2
0.00857 x Qs(std) x gr/dscf	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..	lb/MMBtu

SULFUR DIOXIDE (SO2)

1.60864 x [T(std) + 460] x (mg H2SO4) / [98.076 x Vm(std)]	ppm
ppm x [(20.9 - Oxygen Corr.) / (20.9 - %O2)]	@ O2 corr.
ppm x (1 - Bws)	ppm (wet)
8.223E-5 x Qs(std) x 64.062 x ppm / [T(std) + 460]..	lb/hr
F-Factor x 64.062 x [1.3711E-6 / [T(std)+ 460]] x [20.9 / (20.9 - %O2)] x ppm	lb/MMBtu
lb/hr / (dscfm x 60 min/hr)	lb/dscf

KOOGLER AND ASSOCIATES, ENVIRONMENTAL SERVICES
SUMMARY OF VISIBLE EMISSIONS

PLANT : D.R.E. ENVIROMENTAL INC.
SOURCE: SOIL PROCESS
DATE : 8/15/91
TIME : 1731-1800

MINUTES /	SECONDS / 5	15	30	45
	OPACITY (%)			
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0
15	0	0	0	0
16	0	0	0	0
17	0	0	0	0
18	0	0	0	0
19	0	0	0	0
20	0	0	0	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0
24	0	0	0	0
25	0	0	0	0
26	0	0	0	0
27	0	0	0	0
28	0	0	0	0
29	0	0	0	0
30	0	0	0	0

AVERAGE OPACITY: 0.0 %

MAXIMUM OPACITY: 0 %

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

THIS IS TO CERTIFY THAT

RODNEY C. PAUL, has completed the STATE OF FLORIDA visible emissions evaluation training and is a qualified observer of visible emissions as specified by EPA reference method 9.

THIS CERTIFICATE EXPIRES

Dec 4, 1991

Michael R. Clark — CERTIFICATE OFFICER

Rodney C Paul — BEARER'S SIGNATURE

KOOGLER AND ASSOCIATES, ENVIRONMENTAL SERVICES
SIX-MINUTE AVERAGES OF VISIBLE EMISSIONS

PLANT : D.R.E. ENVIROMENTAL INC.
SOURCE: SOIL PROCESS
DATE : 8/15/91
TIME : 1731-1800

MINUTES	--- SIX-MINUTE ROLLING AVERAGES ---			
1	-	-	-	-
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	-	0.0
7	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0

HIGHEST SIX-MINUTE ROLLING AVERAGE: 0.0 %

FIELD AND LABORATORY DATA SHEETS

KOOGLER & ASSOCIATES

Plant: DRE Environmental Inc.
Sample Loc.: Mt Vernon Ala.
Control Type: Baghouse & Afterburner
Sample Type: Part
Date: 8-15-91 Run No.: 1
Time Start: 1109 Time End: ~~1218~~
Sample Time: 2.5 min/port 60 total min.
Dry Bulb: °F Wet Bulb: °F VP @ DP:
Bar. Pressure 29.96 "Hg Stack Press.: "Hg Ps: -0.53 "H2O
Moisture: 25 % FDA: Gas Density Factor:
Temperature: 80 °F Wind Dir.: Vari Wind Speed: 3-8
Weather: Overcast Thermocouple Readout: KA-1
Sample Box #: KA1 Meter Box No.: KA-1
Meter Y: 1.001 @ Delta H: 1.67 Pitot Corr.: 0.84
Nozzle Diameter: ~~0.~~ in. 0.2853 Probe Length: ~~7~~
Probe Heater Setting: Nomograph Cf: 1.11
Stack Dimentions: 33" in
Stack Area: 5.94 ft²
Effective Stack Area: 5.94 ft²
Stack Height: ft

Spot checks of Orsat

8.2 CO_2 %
~~8.4 O_2 %~~

8.4 CO_2 %
~~7.8 O_2 %~~

Avg
8.3 CO_2 %
~~8.1 O_2 %~~

Stack Dimentions

Umbilical: 100'
Thermocouple
Probe No.: KA-~~7~~1
Pitot Tube: KA-75

Material Processing Rate:
Final Gas Meter Reading: 630.001 ft³
Initial Gas Meter Reading: 579.500 ft³
Total Metered Gas Volume: 50.501 ft³
Condensate Gain in Impingers: 406 mL
Weight Gain in Silica Gel: 14 g
Total Moisture Gain: 420 mL
Silica Gel Container No.: 25
Filter Number: 5-

Leak Check – Meter Box
Initial: 0.00 cfm @ 15 in. H2O
Final: 0.00 cfm @ 13 in. H2O
Leak Check – Pitot Tubes
Impact 3 "H2O for 15 sec: (Stable) / Leak
Static 3 "H2O for 15 sec: (Stable), Leak

KOOGLER & ASSOCIATES

Test Conducted By: R Paul - J Webb
Stack Test Observers:

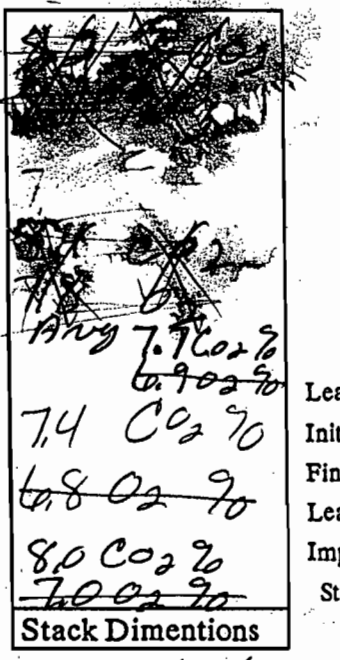
Port and Traverse Point No.	Distance from Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft³)	Stack Velocity Head (~~Δp~~) ("H2O)	Meter Orifice Pressure Difference ("H2O) Calculated	Meter Orifice Pressure Difference ("H2O) Actual	Stack Gas Temperature (°F)	Sample Box Temperature (°F)	Last Impinger Temperature (°F)	Meter Temperature (°F)	Vacuum on Sample Train ("Hg)	Oxygen Meter Reading (% O2)
Average:				1.4		2.2	1398			98.8		7.6
1			579.500	1.7	1.89	1.89	1374	241	80	95	7	7.5
2			81.5	1.7	1.89	1.89	1373	252	65	95	8	7.8
3			83.4	1.7	1.89	1.88	1368	258	61	96	8	10.0
4			85.3	1.6	1.78	1.78	1392	259	62	96	7	10.0
5			87.2	1.6	1.78	1.78	1366	253	62	96	7	8.8
6			89.1	1.6	1.78	1.78	1370	248	61	97	7	7.5
7			91.1	1.7	1.89	1.89	1385	249	62	97	8	7.0
8			93.2	2.4	2.66	2.66	1373	246	62	97	12	6.9

Port and Traverse Point No.	Distance from Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft^3)	Stack Velocity Head ("H2O)	Meter Orifice Pressure Difference ("H2O)		Stack Gas Temperature (°F)	Sample Box Temperature (°F)	Last Impinger Temperature (°F)	Meter Temperature (°F)	Vacuum on Sample Train ("Hg)	Oxygen Meter Reading (% O2)
					Calculated	Actual						
9			95.2	2.5	2.78	2.78	1573	246	64	97	12	6.9
10			97.5	2.7	3.0	2.8	1377	244	65	97	13	6.5
11			600.000	2.5	2.78	2.78	1378	248	66	98	13	6.6
12			2.4	2.5	2.78	2.78	1388	255	67	98	13	6.2
1			4.8	1.5	1.67	1.67	1360	244	79	99	7	6.5
2			6.6	1.4	1.55	1.55	1359	241	67	99	7	6.5
3			8.3	1.4	1.55	1.55	1362	236	65	100	7	6.2
4			10.1	1.5	1.67	1.67	1353	240	64	100	8	6.6
5			12.0	1.5	1.67	1.67	1359	249	65	100	8	6.6
6			13.8	1.5	1.67	1.67	1368	253	65	101	8	7.5
7			15.7	2.2	2.44	2.44	1370	262	65	101	11	8.2
8			17.8	2.5	2.78	2.78	1375	271	65	102	12	8.1
9			20.2	2.5	2.78	2.78	1374	267	66	102	13	9.0
10			22.7	2.5	2.78	2.78	1373	261	65	102	13	9.5
11			25.1	2.5	2.78	2.78	1367	258	65	103	13	8.1
12			27.5	2.5	2.78	2.78	1369	259	64	103	13	7.8

Best Available Copy

Plant: D.R.E. Environmental Svc.
Sample Loc.: Mt Vernon Alg.
Control Type: Baghouse Effluent
Sample Type: Dust
Date: 8-15-91 Run No.: 2
Time Start: 1430 Time End: 1535
Sample Time: 2.5 min/port 60 total min.
Dry Bulb: °F Wet Bulb: °F VP @ DP:
Bar. Pressure 29.91 "Hg Stack Press.: "Hg Ps: -0.53"H2O
Moisture: 2.9 % FDA: Gas Density Factor:
Temperature: 81 °F Wind Dir.: Vari Wind Speed: 3-8
Weather: Sunny Thermocouple Readout: KA-1
Sample Box #: KA 1 Meter Box No.:
Meter Y: 1.001 @ Delta H: 1.67 Pitot Corr.: 0.84
Nozzle Diameter: 0.2853 in. Probe Length: 7 Flex ft
Probe Heater Setting: 4 Nomograph Cf: 1.17

Stack Dimentions: 33" in
Stack Area: 5.94 ft²
Effective Stack Area: 5.94 ft²
Stack Height: ft



Stack Dimentions

Umbilical: 100'
Thermocouple
Probe No.: KA-71
Pitot Tube: KA-51

Material Processing Rate:
Final Gas Meter Reading: 682.320 ft³
Initial Gas Meter Reading: 631.000 ft³
Total Metered Gas Volume: 51.320 ft³
Condensate Gain in Impingers: 445 mL
Weight Gain in Silica Gel: 13 g
Total Moisture Gain: 458 mL
Silica Gel Container No.: 14
Filter Number: 04

Leak Check – Meter Box
Initial: 0.00 cfm @ 15 in. H2O
Final: 0.00 cfm @ 14 in. H2O
Leak Check – Pitot Tubes
Impact 3 "H2O for 15 sec: Stable / Leak
Static 3 "H2O for 15 sec: Stable / Leak

KOOGLER & ASSOCIATES

Test Conducted By: R Paul - J Wells
Stack Test Observers:

Port and Traverse Point No.	Distance from Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft³)	Stack Velocity Head ("H2O)	Meter Orifice Pressure Difference ("H2O) Calculated	Meter Orifice Pressure Difference ("H2O) Actual	Stack Gas Temperature (°F)	Sample Box Temperature (°F)	Last Impinger Temperature (°F)	Meter Temperature (°F)	Vacuum on Sample Train ("Hg)	Oxygen Meter Reading (% O2)
Average:				1.38		2.24	1448			92.3		6.9
1			31.0	1.6	1.9	1.9	1366	254	73	91	7	7.0
2			33.0	1.8	2.14	2.14	1369	266	55	91	9	7.0
3			34.9	1.6	1.9	1.9	1369	263	54	90	9	7.0
4			36.9	1.3	1.55	1.55	1366	259	54	90	8	6.9
5			38.7	1.3	1.55	1.55	1370	257	54	90	8	6.9
6			40.6	1.5	1.99	1.99	1370	262	54	90	9	6.9
7			42.5	1.8	2.14	2.14	1397	270	55	90	10	8.0
8			44.6	2.3	2.74	2.74	1369	272	54	90	13	6.8

Port and Traverse Point No.	Distance from Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft^3)	Stack Velocity Head ("H2O)	Meter Orifice Pressure Difference ("H2O)		Stack Gas Temperature (°F)	Sample Box Temperature (°F)	Last Impinger Temperature (°F)	Meter Temperature (°F)	Vacuum on Sample Train ("Hg)	Oxygen Meter Reading (% O2)
					Calculated	Actual						
1			47.1	2.4	2.86	2.7	1370	267	56	90	14	8.0
10			49.3	2.4	2.86	2.7	1482	269	57	90	14	8.0
11			51.7	2.5	2.98	2.7	1421	263	57	90	14	8.0
12			54.1	2.5	2.98	2.7	1372	263	57	91	14	8.0
1			56.5	1.8	2.14	2.14	1366	259	61	92	10	7.0
2			58.4	1.5	1.79	1.79	1366	251	56	92	9	7.0
3			60.4	1.5	1.79	1.79	1364	250	57	93	9	6.9
4			62.4	1.5	1.79	1.79	1366	250	56	93	9	6.9
5			64.3	1.5	1.79	1.79	1317	253	57	94	9	7.0
6			66.3	1.7	2.02	2.02	1372	258	56	95	9	7.0
7			68.4	1.9	2.26	2.26	1387	266	57	95	10	6.6
8			70.4	2.2	2.62	2.62	1399	273	57	96	12	6.9
9			72.7	2.4	2.86	2.7	1364	268	57	96	14	6.9
10			75.0	2.5	3.0	2.7	1367	259	57	98	14	6.5
11			77.6	2.5	3.0	2.7	1366	257	57	99	14	6.7
12			80.0	2.5	3.0	2.7	1371	248	57	100	14	6.9

Plant: DRE Environmental Inc.
Sample Loc.: Mt Vernon Dlg.
Control Type: Baghouse Afterburner
Sample Type: Part
Date: 8-15-91 Run No.: 3
Time Start: 1623 Time End: 1726
Sample Time: 2.5 min/port 60 total min.
Dry Bulb: °F Wet Bulb: °F VP @ DP:
Bar. Pressure 29.96 "Hg Stack Press.: "Hg Ps: .053 "H20
Moisture: 29 % FDA: Gas Density Factor:
Temperature: 85 °F Wind Dir.: Var Wind Speed: 3-8
Weather: Partly Cldy Thermocouple Readout:
Sample Box #: KA-1 Meter Box No.: KA-1
Meter Y: 1.001 @ Delta H: 1.67 Pitot Corr.: 0.84
Nozzle Diameter: 0.2857 in. Probe Length: 7 feet
Probe Heater Setting: 4 Nomograph Cf: 1.19
Stack Dimentions: 33" in
Stack Area: 5.94 ft²
Effective Stack Area: 5.94 ft²
Stack Height: ft

6.6 Co2 %
9.0 O2 %
6.8 Co2 %
8.8 O2 %
Avg
6.7 Co2 %
8.900 %

Stack Dimentions
Umbilical: 100'
Thermocouple
Probe No.: KA-76
Pitot Tube: KA-75

Material Processing Rate:
Final Gas Meter Reading: 733.909 ft³
Initial Gas Meter Reading: 682.806 ft³
Total Metered Gas Volume: 51.103 ft³
Condensate Gain in Impingers: 325 mL
Weight Gain in Silica Gel: 12 g
Total Moisture Gain: 337 mL
Silica Gel Container No.: 24
Filter Number: 6

Leak Check – Meter Box
Initial: 0.00 cfm @ 15 in. H2O
Final: 0.00 cfm @ 14 in. H2O
Leak Check – Pitot Tubes
Impact 3 "H2O for 15 sec: (Stable) Leak
Static 3 "H2O for 15 sec: (Stable) Leak

KOOGLER & ASSOCIATES

Test Conducted By: R Paul - J Wells
Stack Test Observers:

Port and Traverse Point No.	Distance from Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft³)	Stack Velocity Head ("H2O)	Meter Orifice Pressure Difference ("H2O) Calculated	Meter Orifice Pressure Difference ("H2O) Actual	Stack Gas Temperature (°F)	Sample Box Temperature (°F)	Last Impinger Temperature (°F)	Meter Temperature (°F)	Vacuum on Sample Train ("Hg)	Oxygen Meter Reading (% O2)
Average:				1.378		2.24	1401			107		9.4
1			82.8	1.3	1.55	1.55	1369	246	75	106	7	7.2
2			84.6	1.5	1.79	1.79	1367	239	63	106	8	7.5
3			86.4	1.5	1.79	1.79	1368	242	59	106	8	7.0
4			88.3	1.5	1.79	1.79	1369	248	60	106	9	6.9
5			90.1	1.4	1.67	1.67	1490	256	62	106	9	11.8
6			92.0	1.6	1.9	1.9	1370	269	62	106	10	11.5
7			94.0	1.9	2.26	2.26	1374	256	62	106	13	10.5
8			96.0	2.2	2.62	2.4	1376	251	61	106	14	10.5

Port and Traverse Point No.	Distance from Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft^3)	Stack Velocity Head ("H2O)	Meter Orifice Pressure Difference ("H2O)		Stack Gas Temperature (°F)	Sample Box Temperature (°F)	Last Impinger Temperature (°F)	Meter Temperature (°F)	Vacuum on Sample Train ("Hg)	Oxygen Meter Reading (% O2)
					Calculated	Actual						
9			98.4	2.4	2.86	2.4	1548	253	62	106	14	10.0
10			700.7	2.4	2.86	2.4	1367	258	62	106	14	10.0
11			3.0	2.6	3.09	3.09	1632	264	62	106	13	9.5
12			5.6	2.6	3.09	3.09	1377	263	62	106	12	9.5
1			7.9	1.4	1.66	1.66	1364	253	66	107	5	9.0
2			9.6	1.7	2.02	2.02	1365	258	64	107	6	9.0
3			11.6	1.7	2.02	2.02	1366	268	64	107	6	8.6
4			13.7	1.5	1.79	1.79	1376	264	64	108	6	8.6
5			15.6	1.6	1.9	1.9	1351	261	64	108	6	9.0
6			17.6	1.6	1.9	1.9	1381	258	65	108	6	9.0
7			19.6	2.0	2.38	2.38	1369	261	64	108	7	8.6
8			21.7	2.0	2.38	2.38	1553	263	65	108	7	10.1
9			24.0	2.2	2.62	2.62	1382	259	65	109	8	11.1
10			26.4	2.4	2.86	2.86	1368	262	65	109	8	10.6
11			28.7	2.6	3.09	3.09	1371	267	64	110	10	10.2
12			31.3	2.6	3.09	3.09	1369	262	64	110	10	10.0

KOOGLER & ASSOCIATES

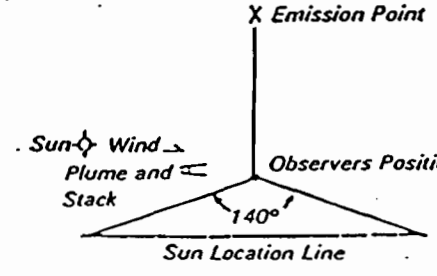
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 • FAX 377-7158

CONTINUED ON VEO FORM NUMBER

Visible Emission Observation Form

SOURCE NAME: DRE Environmental Inc.
ADDRESS: SR 43/15 miles N of I-65
CITY: Mt Vernon | STATE: Fla. | ZIP:
PHONE: | SOURCE ID NUMBER:
PROCESS EQUIPMENT: Dryer | OPERATING MODE: 100 %
CONTROL EQUIPMENT: After burner | OPERATING MODE: 100 %
DESCRIBE EMISSION POINT: START Top stack STOP same
HEIGHT ABOVE GROUND LEVEL: START 25' STOP 25' | HEIGHT RELATIVE TO OBSERVER: START 25' STOP 25'
DISTANCE FROM OBSERVER: START 60' STOP 60' | DIRECTION FROM OBSERVER: START E STOP E
DESCRIBE EMISSIONS: START Clear STOP Clear
EMISSION COLOR: START Clear STOP Clear | PLUME TYPE: CONTINUOUS ☐ FUGITIVE ☐ INTERMITTENT ☐
WATER DROPLETS PRESENT: NO ☒ YES ☐ | IF WATER DROPLET PLUME: ATTACHED ☐ DETACHED ☐
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED: START Top of stack STOP same
DESCRIBE BACKGROUND: START Clear STOP Clear
BACKGROUND COLOR: START Blue STOP Blue | SKY CONDITIONS: START 20% STOP 20%
WIND SPEED: START 3-8 STOP 3-8 | WIND DIRECTION: START Var STOP Var
AMBIENT TEMP.: START 80 STOP 80 | WET BULB TEMP.: | RH,percent:

Source Layout Sketch — Draw North Arrow



OBSERVATION DATE: 8-15-91 | START TIME: 1731 | END TIME: 1800

SEC / MIN	0	15	30	45	COMMENTS
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

COMMENTS:

I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS
SIGNATURE:
TITLE: | DATE:

OBSERVER'S NAME (PRINT): Rodney C. Paul
OBSERVER'S SIGNATURE: Rodney C Paul | DATE: 8-15-91
ORGANIZATION: Koogler & Assoc.
CERTIFIED BY: CTA | DATE:

PLANT INFORMATION

KOOGLER & ASSOCIATES

PROCESS WEIGHT RATE

Owner DRE Environmental

Date 8-15-91 Source Dryer

Permit No. _____ Permitted Rate _____

		Time		Input Rate
Run 1	From	1109	To 1218	15.0 TPH
Run 2	From	1430	To 1535	14.7 TPH
Run 3	From	1623	To 1726	16.6 TPH
V.E.	From	1731	To 1800	Avg 15.4 TPH

To the Best of my knowledge, the above data is true and correct.

_____
Signature

_____
Title

KOOGLER & ASSOCIATES

D.R.E ENVIRONMENTAL INC. PRODUCTION REPORT

UNIT #_____ DATE 9-15-91

BEST AVAILABLE COPY

SHIFT____ JOB #____ LOCATION Mt. Vernon, AL OPERATOR Carlisle, L

HOUR	Draft	SCC % OPEN	SCC TEMP	PTU TEMP	PTU % OPEN	B.H. TEMP	B.H. PRESS	SOIL TEMP	TONS PER HR	Tot Ton
st										
1:10	.5	68.5	1622	454	52.0	380	6.5	872	13.1	12.
1:25	.5	68.0	1623	456	40.0	396	6.5	859	9.1	15.
11:40	.5	64.6	1625	438	49.9	379	6	848	16.8	19.
1:55	.5	68.0	1616	460	50.7	387	6.5	919	20.1	24.
12:10	.5	60.6	1626	479	40.7	388	6.5	905	15.3	26
12:20	.5	69.2	1624	433	47.6	385	6	887	15.7	29.
d Test										
4:30	.5	62.2	1627	477	50.5	379	6	954	14.4	38.
14:45	.5	54.7	1627	491	45.5	399	6	957	12.4	41.
5:00	.5	58.8	1623	457	50.0	398	6	989	16.1	46.
5:15	.5	56.5	1627	461	50.0	395	1.5	976	20.6	49.
15:30	.5	56.6	1627	456	50.0	395	6.5	952	11.0	53
5:36	.5	58.3	1626	500	40.5	400	6	981	13.9	54.
rd st										
6:25	.5	54.3	1628	499	45.0	397	6.5	1040	13.1	65.
16:40	.5	65.2	1623	430	40.0	397	6	1035	15.9	69.
16:55	.5	68.6	1624	421	45.0	382	6	977	15.8	72
17.10	.5	64.7	1624	488	45.0	489	6	871	16.8	75
7:25	.5	66.4	1623	438	37.2	397	6	886	18.7	77
7:30	.5	49.1	1626	424	60.2	387	6	852	19.2	79.

Codes:
O=Operator
R=Repairs
S=Standby
W=Weather

Fuel_____
Ending_____
Start_____
Total_____

Electric/Diesel
Ending_____
Start_____
Total_____

Tonnage_____
Reject_____
Billable_____
Total_____

SERIAL # 11001593

ENERAC MODEL 2000

COMBUSTION TEST RECORD

FOR: A.R.B.

TIME: 15:38:54
DATE: 00/02/00

FUEL NATURAL GAS:21870 BTU/LB

COMBUSTION EFFICIENCY:	22.8	%
AMBIENT TEMPERATURE:	89	°F
STACK TEMPERATURE:	344	°F
OXYGEN:	12.0	%
CARBON MONOXIDE:	2036	PPM
CARBON DIOXIDE:	05.1	%
COMBUSTIBLE GASES:	OVER	%
STACK DRAFT (INCHES H20):	+ 00.0	
EXCESS AIR:	119	%
CARBON MONOXIDE ALARM:	50	PPM

MODE:PPM OXY_REF=TRUE%

SERIAL # 11001593

ENERAC MODEL 2000

COMBUSTION TEST RECORD

FOR: A.R.B.

TIME: 15:39:23
DATE: 00/02/00

FUEL NATURAL GAS:21870 BTU/LB

COMBUSTION EFFICIENCY:	22.4	%
AMBIENT TEMPERATURE:	89	°F
STACK TEMPERATURE:	347	°F
OXYGEN:	12.0	%
CARBON MONOXIDE:	2060	PPM
CARBON DIOXIDE:	05.0	%
COMBUSTIBLE GASES:	OVER	%
STACK DRAFT (INCHES H20):	+ 00.0	
EXCESS AIR:	119	%
CARBON MONOXIDE ALARM:	50	PPM

MODE:PPM OXY_REF=TRUE%

SERIAL # 11001593

SERIAL # 11001593

ENERAC MODEL 2000

COMBUSTION TEST RECORD

FOR: A.R.B.

TIME: 15:47:14
DATE: 00/02/00

FUEL NATURAL GAS:21870 BTU/LB

COMBUSTION EFFICIENCY:	49.1	%
AMBIENT TEMPERATURE:	112	°F
STACK TEMPERATURE:	1513	°F
OXYGEN:	06.(	%
CARBON MONOXIDE:	3	PPM
CARBON DIOXIDE:	08.1	%
COMBUSTIBLE GASES:	0.08	%
STACK DRAFT (INCHES H20):	+ 00.0	
EXCESS AIR:	41	%
CARBON MONOXIDE ALARM:	50	PPM

MODE:PPM OXY_REF=TRUE%

SERIAL # 11001593

ENERAC MODEL 2000

COMBUSTION TEST RECORD

FOR: A.R.B.

TIME: 15:47:48
DATE: 00/02/00

FUEL NATURAL GAS:21870 BTU/LB

COMBUSTION EFFICIENCY:	48.9	%
AMBIENT TEMPERATURE:	113	°F
STACK TEMPERATURE:	1495	°F
OXYGEN:	06.7	%
CARBON MONOXIDE:	0	PPM
CARBON DIOXIDE:	08.0	%
COMBUSTIBLE GASES:	0.21	%
STACK DRAFT (INCHES H20):	+ 00.0	
EXCESS AIR:	44	%
CARBON MONOXIDE ALARM:	50	PPM

MODE:PPM OXY_REF=TRUE%

EQUIPMENT CALIBRATIONS

KOOGLER & ASSOCIATES

PITOT TUBE CALIBRATION MEASUREMENTS

PITOT TUBE IDENTIFICATION NO. KA-SI

DATE CALIBRATED 8-9-90

PITOT TUBE ASSEMBLY LEVEL ? ✓ YES _____ NO

PITOT TUBE OPENINGS DAMAGED ? ____ YES (EXPLAIN BELOW) ✓ NO

a_1= 2.0 ° (<10°) a_2= 1.5 ° (<10°)

β_1= 2.5 ° (<5°) β_2= 2.0 ° (<5°)

Y= 2.5 °, θ= 1.0 °, A= 0.928 IN. = (PA+PB)

Z = A SIN Y = 0.0405 IN. (<0.125 IN.)

W = A SIN θ = 0.0162 IN. (<0.031 IN.)

P_A 0.465 IN. P_b 0.463 IN.

D_t 0.374 IN. (≥ 0.1875 IN. ≤ 0.3750 IN.)

COMMENTS: Pitot tubes leak OK on test duct

CALIBRATION REQUIRED? _____ YES ✓ NO

CALIBRATED BY: RC Paul

PTCMFORM 1/8/87

KOOGLER & ASSOCIATES

NOZZLE CALIBRATION

DATE 8-15-91

PLANT NAME DRE Environmental

LOCATION Mt Vernon Alabama

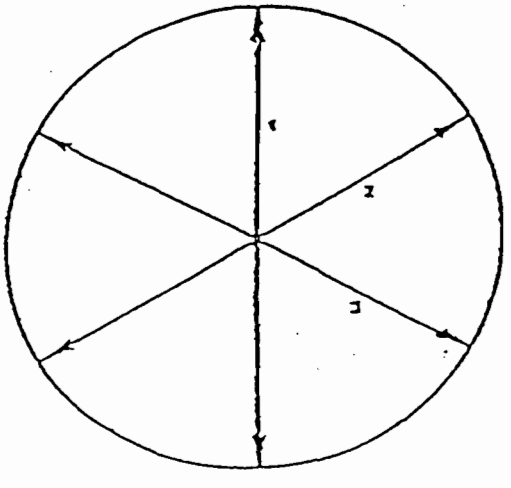
SOURCE Dryer

Measurement No.	Inside Diameter (inches)
1	0.285
2	0.285
3	0.286

Average 0.2853

Area of Nozzle 0.000444 ft^2

Calibrated by: RC Paul



Nozzle X-Section

KOOGLER & ASSOCIATES

POST-TEST DRY GAS METER CALIBRATION FORM

Date: 8-19-91 Meter Box No.: KA-1 Plant: DRE Environmental

Barometric Pressure, P_b = 30.11 In Hg Test Meter No.: KA-1 Pretest Y: 1.001

Orifice Manometer Setting, (ΔH) In. H_2O	Gas Volume		Dry Gas Meter Temperature				Time (θ), Min.	Vacuum Setting In. Hg.	Y_I	$\frac{Y_I P_b (t_d + 460)}{V_d (P_b + \frac{\Delta H}{13.6})(t_T + 460)}$
	Test Meter (V_{T_3}), Ft.	Dry Gas Meter (V_{d_3}), Ft.	Test Meter (t_T), °F	Inlet (t_{d_I}), °F	Outlet (t_{d_O}), °F	Average (t_d), a °F				
2.2	16.528	16.203	85			89	19.0	14	1.022	
2.2	24.530	24.367	87			94	28.5	14	1.014	
2.2	11.615	11.699	88			96	13.5	14	1.02	
									Y=1.019	

[a] If there is only one thermometer on the day gas meter, record the temperature under t_d

where:

V_T = Gas volume passing through the test meter, ft^3.

V_d = Gas volume passing through the dry gas meter, ft^3.

t_T = Temperature of the gas in the test meter, °F.

t_{d_I} = Temperature of the inlet gas of the dry gas meter, °F.

t_{d_O} = Temperature of the outlet gas of the dry gas meter, °F.

t_d = Average temperature of the gas in the dry gas meter, obtained by the average of t_{d_I} and t_{d_O}, °F.

ΔH = Pressure differential across orifice, in. H_2O

Y_I = Ratio of accuracy of test meter to dry gas meter for each run.

Y = Average ratio of accuracy of test meter to dry gas meter for all three runs; tolerance = pretest Y ±0.05Y.

P_b = Barometric pressure, in. Hg.

θ = Time of calibration run, min.

KOOGLER & ASSOCIATES

METER CALIBRATION FORM

GAS METER METHOD

DATE: 5-14-91

METER BOX NO: KA-1

BAROMETRIC PRESSURE: 30.04

TEST ΔH	ORIFICE ΔH	TEST GAS METER VOLUME			DRY GAS METER VOLUME			TEMP OF TEST METER °F	TEMP OF DRY METER °F	RUN TIME MINUTES
		FINAL	INITIAL	ACTUAL FT3	FINAL	INITIAL	ACTUAL FT3			
-0.25	0.5	45.150	36.469	8.688	80.237	71.628	8.609	88	87	20.5
-0.23	1.0	53.445	45.150	8.295	88.445	80.237	8.208	88	86	14.0
-0.25	1.5	20.181	12.007	8.174	55.428	47.333	8.095	88	87	11.5
-0.27	2.5	62.833	53.445	9.388	97.798	88.445	9.353	88	86	10.0
-0.30	3.5	36.469	20.181	16.288	71.628	55.428	16.200	88	87	15.0

GAS METER THERMOMETER CALIBRATION

N.B.S. MERCURY °F	METER BOX °F
32	34
45	46
75	75
90	90
110	111

SIGNATURE: Rodney C Paul

DRY GAS METER AND ORIFICE CALIBRATION

CONTROL BOX NO. KA-1 BAROMETRIC PRESS. 30.04 IN. HG.

DATE 05/14/91 PERFORMED BY ROC

	RUN 1	RUN 2	RUN 3	RUN 4	RUN 5
VACUUM ("Hg)	0	0	0	0	(
dHw ("H2O)	-0.25	-0.23	-0.25	-0.27	-0.3
dHd ("H2O)	0.5	1	1.5	2.5	3.5
INITIAL WTM	636.469	645.15	612.007	653.445	620.181
FINAL WTM	645.15	653.445	620.181	662.833	636.469
INITIAL DGM	971.628	980.237	947.333	988.445	955.428
FINAL DGM	980.237	988.445	955.428	997.798	971.628
TEMP. WTM (F)	88	88	88	88	88
TEMP. DGM (F)	87	86	87	86	87
TEST TIME (MIN.)	20.5	14	11.5	10	15
NET VOLUME WTM	8.681	8.295	8.174	9.388	16.288
NET VOLUME DGM	8.609	8.208	8.095	9.353	16.200
Y	1.006	1.005	1.005	0.995	0.996
dH@	1.615	1.653	1.720	1.646	1.720

AVERAGE Y = 1.001

ACCEPTABLE Y RANGE = 0.981 TO 1.021

AVERAGE dH@ = 1.671

$$Y = (Vw\ (Pb - (dHw / 13.6)) \times (Td + 460)) / (Vd\ (Pb + (dHd / 13.6)) \times (Tw + 460)$$

$$dH@ = 0.0317 \times dHd / (Pb\ (Td + 460)) \times ((Tw + 460) \times time) / Vw)^2$$

SAMPLING RATE CALCULATIONS

Date 8-15-91

Plant Name DRE.

Location Mt Vernon

Source Dryer

ΔH = Orifice Reading (Inches H_2O)
Dn = Nozzle Diameter (Inches)
ΔH@ = Meter Box Constant
Bw = Moisture Fraction
Tm = Meter Temperature (°F)
Ts = Stack Temperature (°F)
Ms = Wet Molecular Weight of Stack Gas (From Table)
ΔP = Pitot Reading (Inches H_2O)

$$\left[\frac{Tm + 460}{Ms(Ts+460)} (1 - Bw)^2 \; \Delta H@ \; (Dn)^4 \; 17741\right] \; \Delta P = \Delta H$$

Moisture Fraction	Ms
0.0	29.0
0.05	28.5
0.10	27.9
0.15	27.4
0.20	26.8
0.25	26.2
0.30	25.7
0.35	25.2
0.40	24.6

$\frac{556}{26.2\,(2090)}$ 54758

$\frac{567}{25.8\,(1835)}$ 47343

	Run 1	Run 2	Run 3
$\frac{Tm + 460}{Ms\ (Ts + 460)}$ =	0.01004	0.01198	
× $(1 - Bw)^2$ =	0.5625	0.5041	
× ΔH@ =	1.67	1.67	
× $(Dn)^4$ =	0.000663	0.000663	
× 17741 =	17741	17741	
× ΔP =	1.11 / 167.4	1.19	

KOOGLER & ASSOCIATES

CHAIN OF CUSTODY RECORD

Project Number 501-91-0

Project Name DRE Environmental One

Sample Location Mt Vernon Blvd.
Draper

Sample Identification	Remarks
1-DRE-P	Probe Wash Run 1
2-DRE-P	〃 〃 2
3-DRE-P	〃 〃 3
5	Filter Holder Run 1
4	〃 〃 2
6	〃 〃 3
25	Silica Gel Run 1
14	〃 〃 2
24	〃 〃 3

Sampled By: (Signature) RC Paul Date: 8-15-91 Time: See data

Relinquished By: (Sign) RC Paul Date: 8-16-91 Time: 1500

Received By: (Sign) _____ Date: _____ Time: _____

Relinquished By: (Sign) _____ Date: _____ Time: _____

Received By: (Sign) _____ Date: _____ Time: _____

Relinquished By: (Sign) _____ Date: _____ Time: _____

Received By Lab: (Sign) RC Paul Date: 8-16-91 Time: 1500

Sample Shipped VIA: _____ UPS _____ Fed Express _____ Bus

Shipping Bill Number: _____

KOOGLER & ASSOCIATES

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 ▪ FAX 377-7158

PARTICULATE LAB DATA SHEET

TEST DATE 8-15-91

PLANT NAME DRE-Mt Vernon

SOURCE Dryer

	Run 1	Run 2	Run 3	Blank
Container No.	KA-18	KA-21	KA-25	
Total Volume (ml)	200	200	200	
Aliquot Evaporated (ml)	200	200	200	
Final Weight (g)	101.2468	101.2769	94.9375	
Tare Weight (g)	- 101.2068	- 101.2371	- 94.8947	-
Gross Weight Gained (g)	0.0400	0.0398	0.0428	
Average Blank (g)	- —	- —	- —	-
Net Weight (g)	0.0400	0.0398	0.0428	
Aliquot Factor	x 1.0	x 1.0	x 1.0	x
Total Net Weight (mg)	40.0	39.8	42.8	
Container No.	1-A	2-A	3-A	
Filter No.	313	312	311	
Final Weight (g)	0.5087	0.5214	0.5097	
Tare Weight (g)	-0.4029	-0.4026	~~0.3995~~ 0.3996	-
Gross Weight Gained (g)	0.1058	0.1188	0.1101	
Average Blank (g)	- —	- —	- —	-
Total Net Weight (mg)	105.8	118.8	110.1	

Tare Balance Check

0.0	✓	10.0	✓
1.0	✓	50.0	✓
5.0	✓	100.0	✓

T/H

By RC Paul

Date 8-16-91

Final Balance Check

0.0	✓	10.0	✓
1.0	✓	50.0	✓
5.0	✓	100.0	✓

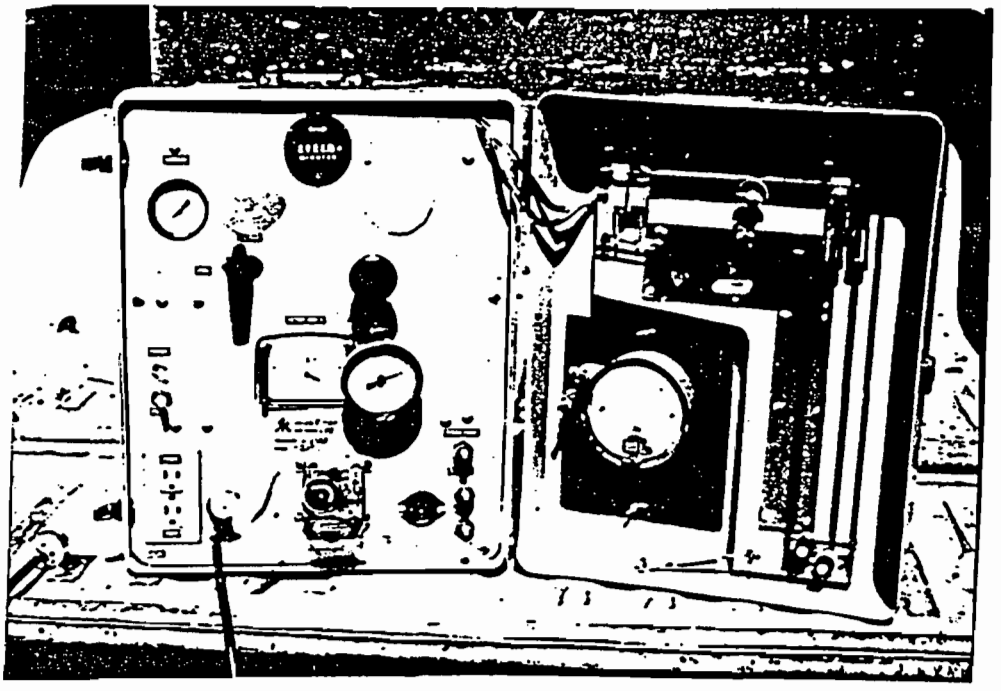
T/H

By RC Paul

Date 8-19-91

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

SOURCE SAMPLING EQUIPMENT



METER BOX

Equipment used in Source Sampling is either manufactured by or assembled by Koogler & Associates. The guidelines followed are A.P.T.D. 0581, Details of Isokinetic Source Sampling Equipment, and A.P.T.D. 0576, Maintenance, Calibration and Operation of Isokinetic Source Sampling Equipment.

KOOGLER & ASSOCIATES

PROJECT PARTICIPANTS

KOOGLER & ASSOCIATES

PROJECT PARTICIPANTS

John B. Koogler, Ph.D., P.E.	Project Advisor
Rodney C. Paul	Project Supervisor
James L. Webb	Field Test Crew

KOOGLER & ASSOCIATES

D. R. E.
ENVIRONMENTAL INC.

PH. (904) 758-3164 FAX (904) 755-5430

" Destruction Removal Efficiencies "

October 9, 1991

Mr. Willard Hanks
Department of Environmental Regulations
Buerau of Air Regulations
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Re: Particulate Data
D.R.E. Environmental, Inc. 8/15/91

Dear Mr. Hanks,

D.R.E. Environmental, Inc.(DRE) is pleased to submit our second test results of our unit for particulate matter while operating at a site in Mobile, Alabama. The test data shows PM levels at .0474 grs/dscf for run #1, .0476 grs/dscf for run #2, and .0570 grs/dscf for run #3, when corrected to 50% excess air.

The average PM levels were .0507 grs/dscf for the tests.

Particulate matter emission measurements ranged from 4.46 to 4.85 pounds per hour and averaged 4.61 pounds per hour. The maximum allowable emission rate for this unit is 7.4 lbs per hour as per our permit. Therefore DRE believes the we have satisfied the State of Florida permit conditions under our construction permit.

Please find enclosed the report from the testing company.

If you should have any questions concerning these documents please contact me at (904)758-3164.

Sincerely,

Chris K. Sleeper
President

CKS/jet

STACK TEST 8/1591
Calculations

RUN #1 .0468grs/dscf
Excess Air 52.05%

.0468(100+52.05)/150

PM = .04743 grs/dscf corrected to 50% EA

RUN #2 .0495grs/dscf
Excess Air 44.33%

.0495(100+44.33)/150

PM= .047628grs/dscf corrected to 50% EA

RUN #3 .0492grs/dscf
Excess Air 73.73%

.0492(100+73.73)/150

.05698grs/dscf corrected to 50% EA

Max PM per hour 7.4 lbs/hr

D. R. E.
ENVIRONMENTAL INC.

PH. (904) 758-3164 FAX (904) 755-5430

" Destruction Removal Efficiencies "

August 23, 1991

Mr. Willard Hanks
Department of Environmental Regulations
Bureau of Air Regulations
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Re: Retest for Particulate Matter 8/15/91

Dear Mr. Hanks,

D.R.E. Environmental, Inc. notified your office that we would be retesting our unit for particulate emissions on 8/15/91 in Mt. Vernon, Alabama.

The results of this testing averaged .0513 gr/dscf corrected to fifty percent excess air for the three tests. In reviewing the test data of the latest test and our previous tests on 5/21/91 the actual grain loading appears to be quite similar. However the major difference was the reduced excess air which averaged 62.69%, in comparison to 233.29% excess air on the first testing data.

It appears that by reducing the excess air that we have brought our unit into compliance with the particulate emissions levels of .08 gr/dscf corrcted to 50% excess air.

It is my opinion that using the excess air factor in the calculations of particulate emissions can be misleading. I understand the rationale behind reducing the excess air to 50% to insure that a dilution effect is not used to show compliance. However in our case this was not the intent. I believe that our unit was in compliance for PM during the project in Malone, Florida and that only because of the formula using excess air were we penalized and thus showing higher readings than what was true.

I am not saying that this is always the case, but I feel like there may be room for error in judgement in using this correction factor. Would it be possible to set the standard at a maximum gr/dscf, noting excess air as a requirement? Then if it appears to be a question of compliance have the owner determine where the excess air is being drawn into the system and reduce the excess air percent as low as possible. This idea would be a good solution for the state and the permittee where both parties would be working together to better the efficiencies of the system and its emissions.

If you have any questions concerning this matter please contact me at (904)758-3154.

Sincerely,

Chris K. Sleeper
President

CKS/jet

D. R. E.
ENVIRONMENTAL INC.

PH. (904) 758-3164 FAX (904) 755-5430

" Destruction Removal Efficiencies "

August 5, 1991

Mr. Willard Hanks
Department of Environmental Regulations
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Re: Metal Emissions Calculations for D.R.E. Environmental, Inc.
Thermal Treatment Unit
May 21, 1991 Test Date.

Dear Mr. Hanks,

Please find enclosed the calculations for the metal emissions from our unit tested on May 21, 1991.

All results are below the no threat limits (NTL), as outlined by the State of Florida Department of Environmental Regulations (DER).

These tests were performed in addition to the requirements of our Air Permit, so as to satisfy ourselves and any other interested party that we are in compliance with all current regulations for soil treatment facilities.

If you have any questions please call (904)758-3164.

Sincerely,

D.R.E. ENVIRONMENTAL, INC.

Chris K. Sleeper
President

CKS/jet

attachments

RECEIVED

AUG 0 8 1991

Division of Air
Resources Management

POST OFFICE BOX 1386, LAKE CITY, FLORIDA 32056-1386

Metal Emission Test Data
Performed on May 21, 1991

		DER No Threat Limit
Arsenic		
8 hour impact	2.3 X 10^{-4} ug/m^3	2 ug/m^3
24 hour impact	1.3 X 10^{-4} ug/m^3	0.48 ug/m^3
annual impact	3.28 X 10^{-5} ug/m^3	2.3 X 10^{-4} ug/m^3
Barium		
8 hour impact	3.2 X10^{-4} ug/m^3	5 ug/m^3
24 hour impact	1.8 X 10^{-4} ug/m^3	1.2 ug/m3
annual impact	4.6 X 10^{-5} ug/m^3	5 X 10^{+1} ug/m^3
Cadmium		
8 hour impact	4.93 X 10^{-6} ug/m^3	.5 ug/m^3
24 hour impact	2.812 X 10^{-6} ug/m^3	1.2 ug/m^3
annual impact	7.03 X 10^{-7} ug/m^3	5.16 X 10^{-4} ug/m^3
Chromium		
8 hour impact	1.973 X 10^{-4} ug/m^3	.5 ug/m^3
24 hour impact	1.13 X 10^{-4} ug/m^3	.12 ug/m^3
annual impact	2.81 X 10^{-5} ug/m^3	8.3 X 10^{-5} ug/m^3
Lead		
8 hour impact	4.60 X 10^{-4} ug/m^3	1.5 ug/m^3
24 hour impact	2.63 X 10^{-4} ug/m^3	.36 ug/m^3
annual impact	6.57 X 10^{-5} ug/m^3	9 X 10^{-2} ug/m^3
Mercury		
8 hour impact	2.22 X 10^{-4} ug/m^3	.5 ug/m^3
24 hour impact	1.27 X 10^{-4} ug/m^3	.12 ug/m^3
annual impact	3.17 X 10^{-5} ug/m^3	0.3 ug/m^3

Selenium		
8 hour impact	1.14×10^{-3} ug/m^3	.2 ug/m^3
24 hour impact	6.52×10^{-4} ug/m^3	.48 ug/m^3
annual impact	1.63×10^{-4} ug/m^3	none
Silver		
8 hour impact	3.45×10^{-4} ug/m^3	.1 ug/m^3
24 hour impact	1.97×10^{-4} ug/m^3	.024 ug/m^3
annual impact	4.93×10^{-5} ug/m^3	3×10^{0} ug/m^3

D. R. E.
ENVIRONMENTAL INC.

PH. (904) 758-3164 FAX (904) 755-5430

" Destruction Removal Efficiencies "

August 20, 1991

Mr. Willard Hanks
Department of Environmental Regulations
Bureau of Air Regulations
2600 Blairstone Road
Tallahassee, Florida

Re: Particulate Emission Data.

Dear Mr. Hanks,

D.R.E. Environmental, Inc. (DRE) has further reviewed the particulate emission data submitted to you in July of 1991. The data submitted had not been corrected to 50% excess air as specified by the permit therefore showing incorrect results. Please find enclosed the correct figures for this test which are now above the .08 gr/dscf limits.

Since our conversation, DRE has been researching the problem to determine where the excess air percent is entering the system.

DRE has now installed a mist eliminator above the soil quench auger to better control the dust situation and has removed the steam return line to the back of the drum. This was the only partially open line to atmosphere where excess air could enter the unit.

DRE performed 3, 1 hour tests for particulate on 8/15/91 to verify emissions from the unit after the changes were installed.

Once I've reviewed the data I will forward it on to DER for your review.

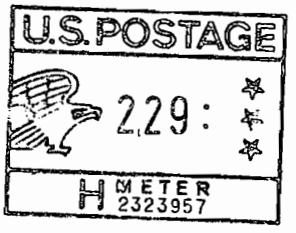
If you have any questions concerning this matter or I can be of further assistance please call (904)758-3164.

Sincerely,

Chris K. Sleeper
President

CKS/jet
enclosure

POST OFFICE BOX 1386, LAKE CITY, FLORIDA 32056-1386



D. R. E.
ENVIRONMENTAL INC.
Post Office Box 1386 • Lake City, Florida 32056-1386
(904) 758-3164 **(904) 758-9050 FAX**

RECEIVED
AUG 6 1991
Division of Air
Resources Management

TO:

WILLARD HANKS
DER
BUEARU OF AIR REGULATIONS
2600 BLAIRSTONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

CALCULATIONS TO CORRECT PARTICULATE MATTER CONCENTRATION TO 50% EXCESS AIR

RUN 1

Measured P.M. Concentration	=	0.0755 gr/dscf
Excess Air	=	239.97%
PM @ 50% excess air	=	0.0755 (100 + 239.97)/150
	=	0.171 gr/dscf

RUN 2

Measured P.M. Concentration	=	0.0453 gr/dscf
Excess Air	=	253.80%
PM @ 50% excess air	=	0.0453 (100 + 253.80)/150
	=	0.107 gr/dscf

RUN 3

Measured P.M. Concentration	=	0.0570 gr/dscf
Excess Air	=	206.09%
PM @ 50% excess air	=	0.0570 (100 + 206.09)/150
	=	0.116 gr/dscf
Averaging	=	0.131 gr/dscf @ 50% excess air

TABLE 1

SUMMARY OF SOURCE EMISSION TEST DATA

D.R.E. ENVIRONMENTAL
BAGHOUSE/AFTERBURNER
MAY 21, 1991

Run No.	Process Weight Rate (Tons/Hr)	Stack Gas Flow Rate (SCFMD)	Stack Gas Temperature (°F)	Stack Gas Moisture (%)	Particulate Matter Conc (gr/dscf @ 50% xs air)	Particulate Matter Emission Rate (Lbs/hr)
1	26.0	9133	1623.0	29.1	0.171	5.91
2	28.0	10687	1654.0	27.7	0.107	4.15
3	30.0	9831	1636.0	32.6	0.116	4.80
Avg	28.0	9884	1637.7	29.8	0.131	4.95

Allowable Particulate Matter Emission Rate = 0.08 gr/dscf @ 50% excess air.

PARTICULATE MATTER, VOLATILE ORGANIC COMPOUNDS, TOTAL PETROLEUM HYDROCARBONS, CARBON MONOXIDE AND METALS EMISSION MEASUREMENTS

D.R.E. ENVIRONMENTAL, INC.
MALONE, FLORIDA

MAY 21, 1991

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 N.W. 13TH STREET
GAINESVILLE, FL 32609
(904) 377-5822

KOOGLER & ASSOCIATES

TABLE OF CONTENTS

KOOGLER & ASSOCIATES

To the best of my knowledge, all applicable field and analytical procedures comply with Florida Department of Environmental Regulation requirements and all test data and plant operating data are true and correct.

John B. Koogler, PH.D., P.E.

State of Florida
Registration No. 12925

7/10/91
Date

SEAL

KOOGLER & ASSOCIATES

1.0 INTRODUCTION

On May 21, 1991, Koogler & Associates Environmental Services conducted emission measurements for particulate matter, metals, volatile organic compounds, total petroleum hydrocarbons and carbon monoxide on a mobile soil remediation unit for D.R.E. Environmental, Inc., at Malone, Florida.

Particulate matter emission measurements were made in accordance with EPA Method 5 and in conjunction with the multi-metals train described in EPA publication PB91-120-006. The particulate matter emission measurements ranged from 4.15 to 5.91 pounds per hour and averaged 4.95 pounds per hour. A summary of the particulate matter emissions, gas flow and stack parameters is presented in Table 1.

Volatile organic compounds emission measurements were made with the Volatile Organic Sampling Train (VOST) by EPA Method SW846 0030. Benzene averaged 1.1×10^{-4} pounds per hour for the three runs while toluene averaged 3.9×10^{-4} pounds per hour; ethylbenzene averaged 1.9×10^{-4} pounds per hour; and xylene averaged 13.0×10^{-4} pounds per hour. A summary of the BTEX emission measurements is presented in Table 2.

Total hydrocarbon (THC) emission measurements were made with a FID by EPA Method 25A. The emissions ranged from 0.022 to 0.105 pounds per hour and averaged 0.060 pounds per hour (calculated as propane). Carbon monoxide emissions measured with a continuous emission monitor by EPA Method 10A ranged from 0.24 to 0.29 pounds per hour and averaged 0.27 pounds per hour

S.C. # 4

$E_{PM} = 0.08$ gr/dscf
@ 50% EA

and
7.4 lbs/hr

(13.9 ppm at 7.0 percent oxygen). A summary of the THC and CO emissions is presented in Table 3.

A comparison of the total hydrocarbons from the stack and in the soil feed is presented in Table 4 and shows an average destruction efficiency of 99.6 percent.

Metals emissions ranged from less than 6×10^{-5} pounds per hour for cadmium to 1.39×10^{-3} pounds per hour for selenium. Arsenic, cadmium, lead, nickel, silver and selenium were found at or below the detection limits. A summary of the metals emission rates is presented in Table 5.

Didn't see
where destruction
efficiency calc
included HC
left in treated
soil

2.0 PROCESS DESCRIPTION

D.R.E. Environmental, Inc. owns and operates a 35 TPH portable rotary kiln/afterburner system to decontaminate soil. The unit consists of a soil feed hopper, a 25 MMBTU/hr rotary kiln, a baghouse, a 22 MMBTU/hr afterburner, a propane/natural gas fuel system, a diesel electric generator, and associated equipment.

Contaminated soils pass through a kiln where the VOCs are evaporated. The gas stream leaving the kiln passes through a baghouse and an afterburner for control of particulate matter and VOC emissions.

Propane gas is the primary fuel and natural gas is the alternate fuel. The maximum heat input to the rotary kiln/afterburner system is 45 MMBTU/hr (500 gallons of propane per hour).

Contaminated soils are reduced to lumps that are a maximum of two inches in diameter prior to being fed to the kiln. The soil is heated to about 700°F in the kiln to evaporate the petroleum products. The gas stream then passes through a baghouse which removes particulate matter, and into an afterburner to control the petroleum vapors. The afterburner operates at a minimum temperature of 1600°F and a minimum residence time of one second.

The stack from the afterburner is three feet in diameter and approximately 30 feet high. Two sampling ports are located at 90° to one another and are shown in Figure 1, along with the sampling point locations.

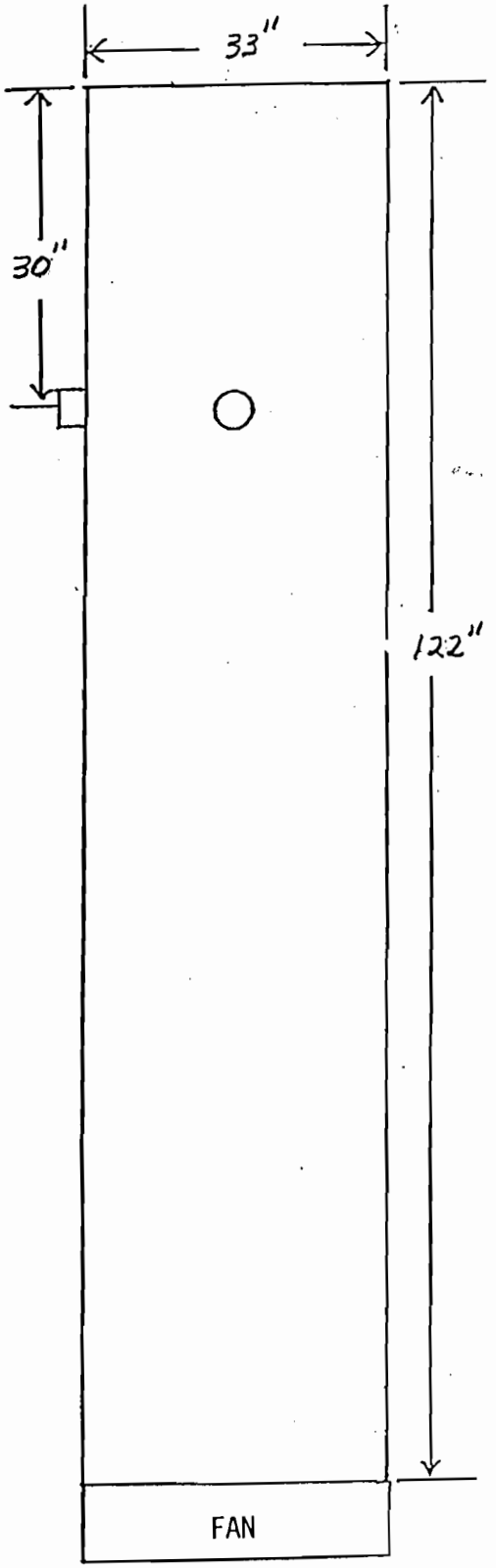


FIGURE 1

SAMPLING POINT LOCATIONS

TRANSPORTABLE INCINERATOR SYSTEM

D.R.E. ENVIRONMENTAL, INC.
MALONE, FLORIDA

MAY 21, 1991

Traverse Point No.	Inches Inside Stack Wall
1	1.00
2	2.21
3	3.93
4	5.84
5	8.25
6	11.76
7	21.12
8	24.75
9	27.06
10	29.04
11	30.69
12	32.00

KOOGLER & ASSOCIATES

3.0 FIELD AND ANALYTICAL PROCEDURES

Particulate matter emission measurements were made using EPA Method 5 as adopted by FDER in Section 17-2.700(6)(b)5, FAC. The sampling point locations for the EPA Method 5 test were established in accordance with EPA Method 1 as adopted by FDER in Section 17-2.700(6)(b)1, FAC.

Stack gas velocity measurements and stack gas moisture measurements were made in conjunction with the EPA Method 5 tests in accordance with EPA Method 2 (17-2.700(6)(b)2, FAC and EPA Method 4 (17-2.700(6)(b)9, FAC).

Metals emission measurements were made with the EPA Draft Multi-Metals Method published in Document PB91-12006, December 1990.

Carbon monoxide emission measurements were made using a Thermo Electron Carbon Monoxide Model 45H analyzer by EPA Method 10B. Volatile organic compounds emission measurements were made with a Ratfisch Model 55CA oven heated total hydrocarbon analyzer by EPA Method 25A.

Volatile organic compound emission measurements were made with the Volatile Organic Sampling Train (VOST) by EPA Method SW846 0030.

4.0 SUMMARY OF RESULTS

Particulate matter concentrations in the stack gas during the three tests averaged 0.0593 grains per dry standard cubic foot and the mass emission rate averaged 4.95 pounds per hour. This compares to the allowable 0.08 grains per dry standard cubic foot and 28.3 pounds per hour, per FAC Rule 17-2.610(1)(b).

Total hydrocarbon emissions averaged 0.060 pounds per hour, compared to the allowable of 22.1 pounds per hour. The emission rates averaged 1.1 x 10^{-4} pounds per hour for benzene; 3.9 x 10^{-4} pounds per hour for toluene; 1.9 x 10^{-4} pounds per hour for ethylbenzene; and 13.0 x 10^{-4} pounds per hour for xylene. Benzene, which is regulated by the permit, was well below the maximum emission limit of 8.6 pounds per hour.

Total hydrocarbons in the stack gas averaged 0.060 pounds per hour as propane (0.049 lb/hr as carbon) during the three tests. When compared to the average feed rate of petroleum hydrocarbons of 15.36 pounds per hour (11.94 lb/hr as carbon), the resulting destruction efficiency is 99.6 percent.

Carbon monoxide emissions averaged 0.27 pounds per hour during the three tests. The allowable CO emissions are 2.5 pounds per hour.

Metals emissions were all quite low with five of ten metals at or below the detection limit of the analysis.

↑

Any HC in product

(reduce eff)

↑

Std is 0.08 gr / dscf

@ 50% EA

TABLE 1

SUMMARY OF SOURCE EMISSION TEST DATA

D.R.E. Environmental
Baghouse / Afterburner
May 21, 1991

Run No.	Process Weight Rate (Tons/Hr)	Stack Gas Flow Rate (SCFMD)	Stack Gas Temperature (°F)	Stack Gas Moisture (%)	Particulate Matter Conc. (gr/dscf)	Particulate Matter Emission Rate (Lbs/Hr)
1	26.0	9133	1623.0	29.1	0.0755	5.91
2	28.0	10687	1654.0	27.7	0.0453	4.15
3	30.0	9831	1636.0	32.6	0.0570	4.80
Average	28.0	9884	1637.7	29.8	0.0593	4.95

Allowable Particulate Matter Emission Rate = 28.3 Lbs/hr
As per F.A.C. Rule 17-2.610(1)(b)

NOT SUBJ PROCESS WT TABLE

TABLE 2

Summary of Emission Rates

D.R.E. Environmental
Baghouse / Afterburner - VOST
May 21, 1991

Compound	Emission Rate (lbs/hr) Run 1	Run 2	Run 3	Average
Chloromethane	0.00006	0.00005	0.00005	0.00006
Trichlorofluorom	0.00010	0.00013	0.00011	0.00011
Acetone	0.00003	<0.00003	<0.00003	0.00001
Carbon Disulfide	0.12048	0.00049	0.00167	0.04088
1,1,1-Trichloroe	0.00008	0.00006	0.00006	0.00006
Carbon Tetrachlo	0.00005	0.00005	0.00004	0.00005
Benzene	0.00012	0.00012	0.00008	0.00011
Toluene	0.00038	0.00053	0.00024	0.00039
Tetrachloroethen	0.00007	0.00007	0.00010	0.00008
Chlorobenzene	<0.00000	0.00006	<0.00000	0.00002
Ethylbenzene	0.00006	0.00039	0.00012	0.00019
Xylene (total)	0.00021	0.00286	0.00083	0.00130
Styrene	<0.00000	0.00020	0.00006	0.00009

TABLE 3

SUMMARY OF TOTAL HYDROCARBONS AND
CARBON MONOXIDE EMISSION MEASUREMENTS

	POUNDS PER HOUR			
	Run 1	Run 2	Run 3	Average
THC	0.105 (1.7 ppm)	0.052 (0.7 ppm)	0.022 (0.3 ppm)	0.060 (0.90 ppm, stack cond)
CO	0.29 (7.2 ppm) (16.4 ppm)	0.28 (6.0 ppm) (14.0 ppm)	0.24 (5.6 ppm) (11.4 ppm)	0.27 (6.3 ppm, stack cond) (13.9 ppm, 7.0% O_2)

x 1.2

TABLE 4

COMPARISON OF TPHC IN FEED AND STACK TO
DETERMINE DESTRUCTION EFFICIENCY (DRE)

Run	Feed (lbs/hr)		Stack (lbs/hr)		DRE* (%)
	as TPHC	as Carbon	as Propane	as Carbon	
1	22.00	17.09	0.105	0.086	99.5
2	8.74	6.79	0.052	0.043	99.4
3	15.36	11.93	0.022	0.018	99.8
Average	15.36	11.94	0.060	0.049	99.6

* Based on carbon.

↑ THC in feed

TPHC in product ?

TABLE 5

Summary of Metals Emission Rates

D.R.E. Environmental
Baghouse / Afterburner
May 21, 1991

Metal	Emission Rate (lbs/hr) Run 1	Run 2	Run 3	Average
Arsenic	<0.00026	<0.00026	<0.00026	0.00028
Barium	0.00030	0.00052	0.00037	0.00040
Cadmium	<0.00006	<0.00006	<0.00006	0.00006
Chromium	0.00018	0.00031	0.00023	0.00024
Lead	<0.00051	<0.00051	<0.00051	0.00056
Mercury	0.00034	0.00030	0.00018	0.00027
Nickel	<0.00032	<0.00032	<0.00032	0.00035
Silver	<0.00038	<0.00038	<0.00038	0.00042
Selenium	<0.00128	<0.00128	<0.00128	0.00139

CALCULATIONS

KOOGLER & ASSOCIATES

PM CALCULATIONS

KOOGLER & ASSOCIATES

GENERAL DATA

DATA FILE NAME: dre591

Company : D.R.E. Environmental
Source/Unit : Baghouse / Afterburner
Date : May 21, 1991
Stack dia. : 33.0 inch OR : Duct Length : 0.00 inch
Oxygen Corr.: 0 percent Duct Width : 0.00 inch
Cp : 0.840
Std. Temp. : 68 dF

FUEL ANALYSIS DATA,
(for calculating F-Factor)

Hydrogen,wt% :	0.00	Run 1 :	26.0 tons/hr
Carbon, wt% :	0.00	Run 2 :	28.0
Sulfur, wt% :	0.00	Run 3 :	30.0
Nitrogen,wt% :	0.00		
Oxygen, wt% :	0.00		
Btu/lb :	0		

Process Wt.

F-Factor : dscf/MMBtu; enter this value or (F9) for result.

FIELD DATA	RUN 1	RUN 2	RUN 3	
Meter Temp., Tm (dF)	87.5	80.9	83.2	
Stack Temp., Ts (dF)	1623.0	1654.0	1636.0	
Sq.Rt. dP	1.2170	1.4110	1.3735	
dH (in. H2O)	2.8388	3.9800	3.5400	
Meter Vol.,Vm (ft3)	57.632	57.748	56.459	
Meter Y	0.991	0.991	0.991	
Bar. Press.,Pb (in.Hg.)	29.93	29.93	29.93	
Vol. H2O, Vlc (ml)	483.4	459.5	564.1	
Static Press.,Ps (in.H2O)	0.6	0.6	0.6	
Test Time (min.)	60	60	60	
Nozzle Dia.,Dn (in.)	0.310	0.310	0.310	
Oxygen, O2 (%)	14.7	15.0	14.1	
Carbon Dioxide, CO2 (%)	6.2	5.9	6.8	
Carbon Monoxide, CO (%)	0.0	0.0	0.0	
Flow Rate, dscfm (optional)	0	0	0	

LABORATORY RESULTS	RUN 1	RUN 2	RUN 3	
GRAVIMETRIC ANALYSIS :				
Front Half Wash (FHW)	0.2610	0.1640	0.2000	grams
Filterable Particulate (MF)	0.0104	0.0018	0.0027	
Condensible Particulate (BHW)	0.0000	0.0000	0.0000	
SO2 ANALYSIS :				
Sample Volume, ml	100.0	100.0	100.0	
Sample Aliquot, ml	20.0	20.0	20.0	
Volume of Titer, ml	0.0	0.0	0.0	
Volume of Titer Blank, ml	0.0	0.0	0.0	

Normality of BaCl 0.0000000

LABORATORY RESULTS (Continued)

H2SO4 ANALYSIS (FRONT HALF) :

Sample Volume, ml	1000.0	1000.0	1000.0
Sample Aliquot, ml	100.0	100.0	100.0
Volume of Titer, ml	0.0	0.0	0.0
Volume of Titer Blank, ml	0.0	0.0	0.0

Normality of BaCl 0.0000000

H2SO4 ANALYSIS (BACK HALF) :

Sample Volume, ml	1000.0	1000.0	1000.0
Sample Aliquot, ml	100.0	100.0	100.0
Volume of Titer, ml	0.0	0.0	0.0
Volume of Titer Blank, ml	0.0	0.0	0.0

Normality of BaCl 0.0000000

SOURCE TEST CALCULATIONS

PLANT : D.R.E. Environmental
Baghouse / Afterburner

RUN NO.: 1
DATE : May 21, 1991

STD.TEMP, Tstd	= 68 °F	STATIC PRESS., Ps	=	0.60	"H2O
METER TEMP, Tm	= 87.54 °F	PITOT COFF., Cp	=	0.840	
STACK TEMP, Ts	=1623.0 °F	STACK I.D.	=	33.00	inch
AVG.VEL.HEAD, dP	= 1.48 in. H2O	DUCT LENGTH	=		inch
METER ORIFICE, dH	= 2.84 in. H2O	DUCT WIDTH	=		inch
METER VOL., Vm	=57.632 ft³	STACK AREA, As	=	5.940	ft²
METER COFF., Y	= 0.991	TEST TIME	=	60.00	min.
BAR. PRESS., Pb	= 29.93 "HG	NOZZLE DIA.	=	0.310	inch
COND.(Vlc)	= 483.4 mL	NOZZLE DIA., An	=	5.2E-04	ft²

GAS ANALYSIS = 14.74 % O2 — 0.00 % CO
6.16 % CO2 — 79.10 % N2

****

Vm(std) = [T(std) + 460 / 29.92] x Vm x Y x
(Pb + (dH / 13.6)) / (Tm + 460)..... = 55.478 dscf

Vw(std) = (8.9148E-05) x (Tstd + 460) x Vlc = 22.754 scf

Bws = Vw(std) / (Vm(std) + Vw(std))..... = 0.291 | Lower Bws value used.

Bws @ Saturated Conditions = Vapor Press. of H2O @ Dew Point Temp. / (Ps, in.Hg.) ..... = 1.000

%EA =(%O2 - 0.5%CO)/(0.264%N2 - (%O2-0.5%CO)) x 100 = 239.97

Md =(.44 x %CO2)+(.32 x %O2)+[.28 x (%N2 + %CO)] = 29.58

Ms = (Md x (1-Bws)) + (18.0 x Bws)..... = 26.21

P(stack) = Pbar + (Ps / 13.6) ..... = 29.97 in. Hg

vs = 85.49 x CP x (Sq.Rt.dP) x [Sq.Rt.(Ts + 460)
/ (Ms x P(stack))] ..... = 142.31 ft/sec

Qs = vs x As x 60 ..... = 50,716 acf/min

Qs(std) = Qs x (1-Bws)x((Tstd + 460)/(Ts + 460))
x (P(stack)/29.92) ..... = 9,133 dscf/min

I = (Ts+460) x [(0.002669 x Vlc) + (Vm(std) /
(T(std) + 460) / 29.92] x 100 / [Time x
P(stack) x An x vs x 60] ..... = 114.75 %

SOURCE TEST CALCULATIONS

PLANT : D.R.E. Environmental
Baghouse / Afterburner

RUN NO.: 2
DATE : May 21, 1991

STD.TEMP, Tstd	= 68 °F	STATIC PRESS.,Ps	=	0.60	"H2O
METER TEMP, Tm	= 80.88 °F	PITOT COFF., Cp	=	0.840	
STACK TEMP, Ts	=1654.0 °F	STACK I.D.	=	33.00	inch
AVG.VEL.HEAD,dP	= 1.99 in. H2O	DUCT LENGTH	=		inch
METER ORIFICE,dH	= 3.98 in. H2O	DUCT WIDTH	=		inch
METER VOL., Vm	=57.748 ft³	STACK AREA, As	=	5.940	ft²
METER COFF., Y	= 0.991	TEST TIME	=	60.00	min.
BAR. PRESS., Pb	= 29.93 "HG	NOZZLE DIA.	=	0.310	inch
COND.(Vlc)	= 459.5 mL	NOZZLE DIA., An	=	5.2E-04	ft²

GAS ANALYSIS = 14.98 % O2 0.00 % CO
5.92 % CO2 79.10 % N2

****

Vm(std) = [T(std) + 460 / 29.92] x Vm x Y x (Pb + (dH / 13.6)) / (Tm + 460)..... = 56.431 dscf

Vw(std) =(8.9148 x 10e-5) x (Tstd + 460) x Vlc = 21.629 scf

Bws = Vw(std) / (Vm(std) + Vw(std))..... = 0.277 | Lower Bws

Bws @ Saturated Conditions = Vapor Press. of H2O @ Dew Point Temp. / (Ps, in.Hg.) ..... = 1.000 | value used.

%EA =(%O2 - 0.5%CO)/(0.264%N2 - (%O2-0.5%CO)) x 100 = 253.80

Md =(.44 x %CO2)+(.32 x %O2)+[.28 x (%N2 + %CO)] = 29.55

Ms = (Md x (1-Bws)) + (18.0 x Bws)..... = 26.35

P(stack) = Pbar + (Ps / 13.6) ..... = 29.97 in. Hg

vs = 85.49 x CP x (Sq.Rt.dP) x [Sq.Rt.(Ts + 460) / (Ms x P(stack))] ..... = 165.78 ft/sec

Qs = vs x As x 60 ..... = 59,080 acf/min

Qs(std) = Qs x (1-Bws)x((Tstd + 460)/(Ts + 460)) x (P(stack)/29.92) ..... = 10,687 dscf/min

I = (Ts+460) x [(0.002669 x Vlc) + (Vm(std) / (T(std) + 460) / 29.92] x 100 / [Time x P(stack) x An x vs x 60] ..... = 99.75 %

SOURCE TEST CALCULATIONS

PLANT : D.R.E. Environmental
Baghouse / Afterburner

RUN NO.: 3
DATE : May 21, 1991

STD.TEMP, Tstd	= 68 °F	STATIC PRESS.,Ps	=	0.60	"H2O
METER TEMP, Tm	= 83.20 °F	PITOT COFF., Cp	=	0.840	
STACK TEMP, Ts	=1636.0 °F	STACK I.D.	=	33.00	inch
AVG.VEL.HEAD,dP	= 1.89 in. H2O	DUCT LENGTH	=		inch
METER ORIFICE,dH	= 3.54 in. H2O	DUCT WIDTH	=		inch
METER VOL., Vm	=56.459 ft³	STACK AREA, As	=	5.940	ft²
METER COFF., Y	= 0.991	TEST TIME	=	60.00	min.
BAR. PRESS., Pb	= 29.93 "HG	NOZZLE DIA.	=	0.310	inch
COND.(Vlc)	= 564.1 mL	NOZZLE DIA., An	=	5.2E-04	ft²

GAS ANALYSIS = 14.06 % O2 0.00 % CO
6.84 % CO2 79.10 % N2

****

Vm(std) = [T(std) + 460 / 29.92] x Vm x Y x
(Pb + (dH / 13.6)) / (Tm + 460)..... = 54.877 dscf

Vw(std) =(8.9148 x 10e-5) x (Tstd + 460) x Vlc = 26.552 scf

Bws = Vw(std) / (Vm(std) + Vw(std))..... = 0.326 | Lower Bws

Bws @ Saturated Conditions = Vapor Press. of H2O @ Dew Point Temp. / (Ps, in.Hg.) ..... = 1.000 | value used.

%EA =(%O2 - 0.5%CO)/(0.264%N2 - (%O2-0.5%CO)) x 100 = 206.09

Md =(.44 x %CO2)+(.32 x %O2)+[.28 x (%N2 + %CO)] = 29.66

Ms = (Md x (1-Bws)) + (18.0 x Bws)..... = 25.86

P(stack) = Pbar + (Ps / 13.6) ..... = 29.97 in. Hg

vs = 85.49 x CP x (Sq.Rt.dP) x [Sq.Rt.(Ts + 460)
/ (Ms x P(stack))] ..... = 162.21 ft/sec

Qs = vs x As x 60 ..... = 57,806 acf/min

Qs(std) = Qs x (1-Bws)x((Tstd + 460)/(Ts + 460))
x (P(stack)/29.92) ..... = 9,831 dscf/min

I = (Ts+460) x [(0.002669 x Vlc) + (Vm(std) /
(T(std) + 460) / 29.92] x 100 / [Time x
P(stack) x An x vs x 60] ..... = 105.44 %

A. FIELD DATA SUMMARY

PLANT : D.R.E. Environmental
Baghouse / Afterburner
DATE : May 21, 1991

	RUN 1	RUN 2	RUN 3
Vlc = Vol water collected in train, mL	483.4	459.5	564.1
Vm = Sample gas vol, meter cond., dacf	57.632	57.748	56.459
Y = Meter calibration factor	0.9910	0.9910	0.9910
Pbar = Barometric pressure, "Hg	29.93	29.93	29.93
Pstatic = Stack static pressure, "H2O	0.60	0.60	0.60
dH = Avg meter pressure diff, "H2O	2.84	3.98	3.54
Tm = Absolute meter temp., °R	547.5	540.9	543.2
Vm(std) = Sample gas vol, Std. cond., dscf	55.478	56.431	54.877
Bws = Water vapor in gas stream, fraction	0.291	0.277	0.326
MF = Moisture factor (1 - Bws)	0.709	0.723	0.674
CO2 = Carbon Dioxide, dry, volume %	6.16	5.92	6.84
O2 = Oxygen, dry, volume %	14.74	14.98	14.06
N2 = Nitrogen, dry volume %	79.10	79.10	79.10
Md = Molecular weight of stack gas, dry	29.58	29.55	29.66
Ms = Molecular weight of stack gas, wet	26.21	26.35	25.86
Cp = Pitot tube coefficient	0.84	0.84	0.84
Sq.Rt. dP = Avg. square root of each dP	1.2170	1.4110	1.3735
Ts = Absolute stack temp., °R	2083.0	2114.0	2096.0
A = Area of stack, ft^2	5.94	5.94	5.94
Qstd = Volumetric flowrate, dscfm	9,133	10,687	9,831
An = Nozzle area, ft^2	5.24E-04	5.24E-04	5.24E-04
O = Sample time, minutes	60.00	60.00	60.00
%I = Isokinetic variation, percent	114.75	99.75	105.44

B. PARTICULATE DATA SUMMARY

PLANT : D.R.E. Environmental
Baghouse / Afterburner
DATE : May 21, 1991

	RUN 1	RUN 2	RUN 3
Particulate Weight (FHW + MF + BHW), mg ...	271.40	165.80	202.70
Meter Volume, standard cond., Vm(std)	55.478	56.431	54.877
Carbon Dioxide, percent	6.16	5.92	6.84
Oxygen, percent	14.74	14.98	14.06
Particulate Concentration :			
gr/scf	0.0535	0.0328	0.0384
gr/dscf	0.0755	0.0453	0.0570
gr/dscf @ 12 % CO2	0.1471	0.0919	0.1000
gr/dscf @ 0% O2	0.2533	0.1582	0.1725

STD .08 gr/dscf @ 50% EA

EMISSION RATE CALCULATIONS

PLANT : D.R.E. Environmental
Baghouse / Afterburner

RUN NO.: 1
DATE : May 21, 1991
O2 CORR.: 0.0 %

STANDARD TEMP. : 68 DEG. F

Front Half Wash (FHW)	0.26100 grams	Vm(std)	55.478	ft³
Mass Filter (MF)	0.01040 grams	Vw(std)	22.754	ft³
Back Half Wash (BHW)	0.00000 grams	Qs(std)	9,133	dscfm
Front Half H2SO4 (FHS)	0.00 mg H2SO4	Bws	0.291	
Back Half H2SO4 (BHS)	0.00 mg H2SO4	CO2	6.16	%
H2O2 Catch (SO2)	0.00 mg H2SO4	O2	14.74	%

F-FACTOR

10E6 x [3.64(%H) + 1.53(%C) + 0.57(%S) + 0.14(%N) - 0.46(%O2)] / (Btu/lb) x [(Tstd + 460)/528] ..... dscf/MMBtu

FILTERABLE PARTICULATE

15.432 x (FHW + MF) / [Vm(std) + Vw(std)]	0.0535	gr/scf
15.432 x (FHW + MF) / Vm(std)	0.0755	gr/dscf
gr/dscf x (12 / %CO2)	0.1471	@ 12% CO2
gr/dscf x [(21 - Oxygen corr.) / (21 - %O2)]	0.2533	@ 0% O2
0.00857 x Qs(std) x gr/dscf	5.91	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..		lb/MMBtu

TOTAL PARTICULATE

15.432 x (FHW + MF + BHW) / [(Vm(std) + Vw(std)] ...	0.0535	gr/scf
15.432 x (FHW + MF + BHW) / (Vm(std)	0.0755	gr/dscf
gr/dscf x (12 / %CO2)	0.1471	@ 12% CO2
gr/dscf x [(21 - Oxygen Corr.) / (21 - %O2)]	0.2533	@ 0% O2
0.00857 x Qs(std) x gr/dscf	5.91	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..		lb/MMBtu

TOTAL H2SO4

0.015432 x (FHS + BHS) / [Vm(std) + Vw(std)]	0.0000	gr/scf
0.015432 x (FHS + BHS) / Vm(std)	0.0000	gr/dscf
gr/dscf x (12 / %CO2)	0.0000	@ 12% CO2
0.00857 x Qs(std) x gr/dscf	0.00	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..		lb/MMBtu

SULFUR DIOXIDE (SO2)

1.60864 x [T(std) + 460] x (mg H2SO4) / [98.076 x Vm(std)]	0.00	ppm
ppm x [(20.9 - Oxygen Corr.) / (20.9 - %O2)]	0.00	@ O2 corr.
ppm x (1 - Bws)	0.00	ppm (wet)
8.223E-5 x Qs(std) x 64.062 x ppm / [T(std) + 460]..	0.00	lb/hr
F-Factor x 64.062 x [1.3711E-6 / [T(std)+ 460]] x [20.9 / (20.9 - %O2)] x ppm		lb/MMBtu
lb/hr / (dscfm x 60 min/hr) .....0.00E+00		lb/dscf

EMISSION RATE CALCULATIONS

PLANT : D.R.E. Environmental
Baghouse / Afterburner

RUN NO.: 2
DATE : May 21, 1991
O2 CORR.: 0.0 %

STANDARD TEMP. : 68 DEG. F

Front Half Wash (FHW)	0.16400 grams	Vm(std)	56.431	ft³
Mass Filter (MF)	0.00180 grams	Vw(std)	21.629	ft³
Back Half Wash (BHW)	0.00000 grams	Qs(std)	10,687	dscfm
Front Half H2SO4 (FHS)	0.00 mg H2SO4	Bws	0.277	
Back Half H2SO4 (BHS)	0.00 mg H2SO4	CO2	5.92	%
H2O2 Catch (SO2)	0.00 mg H2SO4	O2	14.98	%

F-FACTOR

10E6 x [3.64(%H) + 1.53(%C) + 0.57(%S) + 0.14(%N) - 0.46(%O2)] / (Btu/lb) x [(Tstd + 460)/528] ..... dscf/MMBtu

FILTERABLE PARTICULATE

15.432 x (FHW + MF) / [Vm(std) + Vw(std)]	0.0328	gr/scf
15.432 x (FHW + MF) / Vm(std)	0.0453	gr/dscf
gr/dscf x (12 / %CO2)	0.0919	@ 12% CO2
gd/dscf x [(21 - Oxygen Corr.) / (21 - %O2)]	0.1582	@ 0% O2
0.00857 x Qs(std) x gr/dscf	4.15	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..		lb/MMBtu

TOTAL PARTICULATE

15.432 x (FHW + MF + BHW) / [(Vm(std) + Vw(std)] ...	0.0328	gr/scf
15.432 x (FHW + MF + BHW) / (Vm(std)	0.0453	gr/dscf
gr/dscf x (12 / %CO2)	0.0919	@ 12% CO2
gr/dscf x [(21 - Oxygen Corr.) / (21 - %O2)]	0.1582	@ 0% O2
0.00857 x Qs(std) x gr/dscf	4.15	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..		lb/MMBtu

TOTAL H2SO4

0.015432 x (FHS + BHS) / [Vm(std) + Vw(std)]	0.0000	gr/scf
0.015432 x (FHS + BHS) / Vm(std)	0.0000	gr/dscf
gr/dscf x (12 / %CO2)	0.0000	@ 12% CO2
0.00857 x Qs(std) x gr/dscf	0.00	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..		lb/MMBtu

SULFUR DIOXIDE (SO2)

1.60864 x [T(std) + 460] x (mg H2SO4) / [98.076 x Vm(std)]	0.00	ppm
ppm x [(20.9 - Oxygen Corr.) / (20.9 - %O2)]	0.00	@ O2 corr.
ppm x (1 - Bws)	0.00	ppm (wet)
8.223E-5 x Qs(std) x 64.062 x ppm / [T(std) + 460]..	0.00	lb/hr
F-Factor x 64.062 x [1.3711E-6 / [T(std)+ 460]] x [20.9 / (20.9 - %O2)] x ppm		lb/MMBtu
lb/hr / (dscfm x 60 min/hr)	0.00E+00	lb/dscf

EMISSION RATE CALCULATIONS

PLANT : D.R.E. Environmental
Baghouse / Afterburner

RUN NO.: 3
DATE : May 21, 1991
O2 CORR.: 0.0 %

STANDARD TEMP. : 68 DEG. F

Front Half Wash (FHW)	0.20000 grams	Vm(std)	54.877	ft³
Mass Filter (MF)	0.00270 grams	Vw(std)	26.552	ft³
Back Half Wash (BHW)	0.00000 grams	Qs(std)	9,831	dscfm
Front Half H2SO4 (FHS)	0.00 mg H2SO4	Bws	0.326	
Back Half H2SO4 (BHS)	0.00 mg H2SO4	CO2	6.84	%
H2O2 Catch (SO2)	0.00 mg H2SO4	O2	14.06	%

F-FACTOR

10E6 x [3.64(%H) + 1.53(%C) + 0.57(%S) + 0.14(%N) - 0.46(%O2)] / (Btu/lb) x [(Tstd + 460)/528] ..... dscf/MMBtu

FILTERABLE PARTICULATE

15.432 x (FHW + MF) / [Vm(std) + Vw(std)]	0.0384	gr/scf
15.432 x (FHW + MF) / Vm(std)	0.0570	gr/dscf
gr/dscf x (12 / %CO2)	0.1000	@ 12% CO2
gr/dscf x [(21 - Oxygen Corr.) / (21 - %O2)]	0.1725	@ 0% O2
0.00857 x Qs(std) x gr/dscf	4.80	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..		lb/MMBtu

TOTAL PARTICULATE

15.432 x (FHW + MF + BHW) / [(Vm(std) + Vw(std)] ...	0.0384	gr/scf
15.432 x (FHW + MF + BHW) / (Vm(std)	0.0570	gr/dscf
gr/dscf x (12 / %CO2)	0.1000	@ 12% CO2
gr/dscf x [(21 - Oxygen Corr.) / (21 - %O2)]	0.1725	@ 0% O2
0.00857 x Qs(std) x gr/dscf	4.80	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..		lb/MMBtu

TOTAL H2SO4

0.015432 x (FHS + BHS) / [Vm(std) + Vw(std)]	0.0000	gr/scf
0.015432 x (FHS + BHS) / Vm(std)	0.0000	gr/dscf
gr/dscf x (12 / %CO2)	0.0000	@ 12% CO2
0.00857 x Qs(std) x gr/dscf	0.00	lb/hr
F-Fac x 1.4286E-4 x [20.9 / (20.9-%O2)] x gr/dscf ..		lb/MMBtu

SULFUR DIOXIDE (SO2)

1.60864 x [T(std) + 460] x (mg H2SO4) / [98.076 x Vm(std)]	0.00	ppm
ppm x [(20.9 - Oxygen Corr.) / (20.9 - %O2)]	0.00	@ O2 corr.
ppm x (1 - Bws)	0.00	ppm (wet)
8.223E-5 x Qs(std) x 64.062 x ppm / [T(std) + 460]..	0.00	lb/hr
F-Factor x 64.062 x [1.3711E-6 / [T(std)+ 460]] x [20.9 / (20.9 - %O2)] x ppm		lb/MMBtu
lb/hr / (dscfm x 60 min/hr) .....0.00E+00		lb/dscf

VOCs CALCULATIONS

KOOGLER & ASSOCIATES

GENERAL DATA

DATA FILE NAME:dre591v

Company :D.R.E. Environmental
Test Description:Baghouse / Afterburner - VOST
Date :May 21, 1991

SAMPLING DATA

	Run 1	Run 2	Run 3
Sample Gas Volume, Vm(std) (dscf):	0.706	0.706	0.706
Stack Gas Flow Rate, Qs(std) (dscfm):	9,133	10,687	9,831
Total Particulate Matter Weight (g):	N/A	N/A	N/A

Number of Compounds Analyzed: 13
Sample Weight Unit (g, mg, ug, ng): ng

LABORATORY DATA

Compound Name	Blank	Nanograms of Sample Run 1	Run 2	Run 3	Lower Detection Limit
Chloromethane	0.0	33.0	26.0	29.0	0.0
Trichlorofluorome	0.0	57.0	63.0	57.0	0.0
Acetone	79.0	98.0	0.0	0.0	0.0
Carbon Disulfide	0.0	69000.0	240.0	890.0	0.0
1,1,1-Trichloroet	0.0	43.0	30.0	31.0	0.0
Carbon Tetrachlor	0.0	26.0	23.0	23.0	0.0
Benzene	0.0	68.0	61.0	42.0	0.0
Toluene	0.0	220.0	260.0	130.0	0.0
Tetrachloroethene	0.0	42.0	34.0	53.0	0.0
Chlorobenzene	0.0	0.0	29.0	0.0	0.0
Ethylbenzene	0.0	36.0	190.0	65.0	0.0
Xylene (total)	0.0	120.0	1400.0	440.0	0.0
Styrene	0.0	0.0	100.0	32.0	0.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0

Emission Rate Calculations

D.R.E. Environmental — Run No.: 1
Baghouse / Afterburner - VOST — Date: May 21, 1991

****

Sample Gas Volume, Vm(std), (dscf) = 0.706
Stack Gas Flow Rate, Qs(std), (dscfm) = 9,133
Total Particulate Matter, Mp, (g) =N/A

****

Compound	Sample Weight (ng)	Effectiv Blank Weight (ng)	(Sample - Blank) /1.0E+09 = grams	Concen- tration x 15.432 / Vm(std) = gr/dscf	Emission Rate x .00857 x Qs(std) = lbs/hr
Chloromethane	33.00	0.00	3.30E-08	7.21E-07	5.76E-05
Trichlorofluorom	57.00	0.00	5.70E-08	1.25E-06	9.95E-05
Acetone	98.00	79.00	1.90E-08	4.15E-07	3.32E-05
Carbon Disulfide	69,000	0.00	6.90E-05	1.51E-03	1.20E-01
1,1,1-Trichloroe	43.00	0.00	4.30E-08	9.40E-07	7.51E-05
Carbon Tetrachlo	26.00	0.00	2.60E-08	5.68E-07	4.54E-05
Benzene	68.00	0.00	6.80E-08	1.49E-06	1.19E-04
Toluene	220.00	0.00	2.20E-07	4.81E-06	3.84E-04
Tetrachloroethen	42.00	0.00	4.20E-08	9.18E-07	7.33E-05
Chlorobenzene	0.00	0.00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	36.00	0.00	3.60E-08	7.87E-07	6.29E-05
Xylene (total)	120.00	0.00	1.20E-07	2.62E-06	2.10E-04
Styrene	0.00	0.00	0.00E+00	0.00E+00	0.00E+00

Emission Rate Calculations

D.R.E. Environmental — Run No.: 2
Baghouse / Afterburner - VOST — Date: May 21, 1991

****

Sample Gas Volume, Vm(std), (dscf) = 0.706
Stack Gas Flow Rate, Qs(std), (dscfm) = 10,687
Total Particulate Matter, Mp, (g) =N/A

****

Compound	Sample Weight (ng)	Effectiv Blank Weight (ng)	(Sample - Blank) /1.0E+09 = grams	Concen- tration x 15.432 / Vm(std) = gr/dscf	Emission Rate x .00857 x Qs(std) = lbs/hr
Chloromethane	26.00	0.00	2.60E-08	5.68E-07	5.31E-05
Trichlorofluorom	63.00	0.00	6.30E-08	1.38E-06	1.29E-04
Acetone	0.00	79.00	0.00E+00	0.00E+00	0.00E+00
Carbon Disulfide	240.00	0.00	2.40E-07	5.24E-06	4.90E-04
1,1,1-Trichloroe	30.00	0.00	3.00E-08	6.55E-07	6.13E-05
Carbon Tetrachlo	23.00	0.00	2.30E-08	5.03E-07	4.70E-05
Benzene	61.00	0.00	6.10E-08	1.33E-06	1.25E-04
Toluene	260.00	0.00	2.60E-07	5.68E-06	5.31E-04
Tetrachloroethen	34.00	0.00	3.40E-08	7.43E-07	6.95E-05
Chlorobenzene	29.00	0.00	2.90E-08	6.34E-07	5.93E-05
Ethylbenzene	190.00	0.00	1.90E-07	4.15E-06	3.88E-04
Xylene (total)	1400.00	0.00	1.40E-06	3.06E-05	2.86E-03
Styrene	100.00	0.00	1.00E-07	2.18E-06	2.04E-04

Emission Rate Calculations

D.R.E. Environmental — Run No.: 3
Baghouse / Afterburner - VOST — Date: May 21, 1991

****

Sample Gas Volume, Vm(std), (dscf) = 0.706
Stack Gas Flow Rate, Qs(std), (dscfm) = 9,831
Total Particulate Matter, Mp, (g) =N/A

****

Compound	Sample Weight (ng)	Effectiv Blank Weight (ng)	(Sample - Blank) /1.0E+09 = grams	Concen-tration x 15.432 / Vm(std) = gr/dscf	Emission Rate x .00857 x Qs(std) = lbs/hr
Chloromethane	29.00	0.00	2.90E-08	6.34E-07	5.45E-05
Trichlorofluorom	57.00	0.00	5.70E-08	1.25E-06	1.07E-04
Acetone	0.00	79.00	0.00E+00	0.00E+00	0.00E+00
Carbon Disulfide	890.00	0.00	8.90E-07	1.94E-05	1.67E-03
1,1,1-Trichloroe	31.00	0.00	3.10E-08	6.77E-07	5.83E-05
Carbon Tetrachlo	23.00	0.00	2.30E-08	5.03E-07	4.32E-05
Benzene	42.00	0.00	4.20E-08	9.18E-07	7.89E-05
Toluene	130.00	0.00	1.30E-07	2.84E-06	2.44E-04
Tetrachloroethen	53.00	0.00	5.30E-08	1.16E-06	9.96E-05
Chlorobenzene	0.00	0.00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	65.00	0.00	6.50E-08	1.42E-06	1.22E-04
Xylene (total)	440.00	0.00	4.40E-07	9.61E-06	8.27E-04
Styrene	32.00	0.00	3.20E-08	6.99E-07	6.01E-05

TOTAL HYDROCARBONS IN STACK GAS CALCULATIONS

THC = 1.679 ppm
Qs = 9133 dscfm

RUN 1. 1.679 ppm = (1.679×10^{-6}) ft^3 VOC/ft^3 x 1/385 lb-mol/ft^3 x 44 lb propane/lb-mol
$= 1.92 \times 10^{-7}$ lb/ft^3, as propane

(1.92×10^{-7}) lb/ft^3 x 9133 dscfm x 60 min/hr = 0.105 lb/hr, as propane

THC = 0.713 ppm
Qs = 10687 dscfm

RUN 2. 0.713 ppm = 0.81×10^{-7} lb/ft^3, as propane

(0.81×10^{-7}) lb/ft^3 x 10687 dscfm x 60 min/hr = 0.052 lb/hr, as propane

THC = 0.333 ppm
Qs = 9831 dscfm

RUN 3. 0.333 ppm = 0.38×10^{-7} lb/ft^3, as propane

(0.38×10^{-7}) lb/ft^3 x 9831 dscfm x 60 min/hr = 0.022 lb/hr, as propane

AVERAGE 0.060 lb/hr as propane (81.8% carbon)

CARBON MONOXIDE CALCULATIONS

CO = 7.25 ppm
Qs = 9133 dscfm

Run 1. $7.25 \text{ ppm} = (7.25 \times 10^{-6}) \text{ ft}^3 \times 1/385 \text{ lb-mol/ft}^3 \times 28 \text{ lb CO/lb-mol}$
$= 5.27 \times 10^{-7} \text{ lb/ft}^3 \text{ as CO}$

$(5.27 \times 10^{-7}) \text{ lb/ft}^3 \times 9133 \text{ dscfm} \times 60 \text{ min/hr} = 0.289 \text{ lb/hr}$

$CO = 7.25 \text{ ppm @ } 14.74\% \ O_2$

$$CO \text{ @ } 7\% \ O_2 = 7.25 \text{ ppm} \times \frac{20.9 - 7.0}{20.9 - 14.74} = 16.4 \text{ ppm}$$

CO = 5.98 ppm
Qs = 10687 dscfm

Run 2. $5.98 \text{ ppm} = 4.35 \times 10^{-7} \text{ lb/ft}^3 \text{ as CO}$

$(4.35 \times 10^{-7}) \text{ lb/ft}^3 \times 10687 \text{ dscfm} \times 60 \text{ min/hr} = 0.279 \text{ lb/hr}$

$CO = 5.98 \text{ ppm @ } 14.98\% \ O_2$

$$CO \text{ @ } 7\% \ O_2 = 5.98 \text{ ppm} \times \frac{20.9 - 7.0}{20.9 - 14.98} = 14.0 \text{ ppm}$$

O = 5.62 ppm
Qs = 9831 dscfm

Run 3. $5.62 \text{ ppm} = 4.09 \times 10^{-7} \text{ lb/ft}^3 \text{ as CO}$

$(4.09 \times 10^{-7}) \times 9831 \text{ dscfm} \times 60 \text{ min/hr} = 0.241 \text{ lb/hr}$

$CO = 5.62 \text{ ppm @ } 14.06\% \ O_2$

$$CO \text{ @ } 7\% \ O_2 = 5.62 \text{ ppm} \times \frac{20.9 - 7.0}{20.9 - 14.06} = 11.4 \text{ ppm}$$

SUMMARY OF WASTE FEED TPHC CALCULATIONS

TPHC in Feed

RUN 1. 423 mg/kg = 423 x 10^{-6} lb TPHC/lb soil

RUN 2. 156 mg/kg = 156 x 10^{-6} lb TPHC/lb soil

RUN 3. 256 mg/kg = 256 x 10^{-6} lb TPHC/lb soil

Mass TPHC in Feed Soil

RUN 1. 423×10^{-6} lb/lb x $\frac{2000 \text{ lb}}{\text{ton}}$ x 26 tons/hr = 22.00 lbs/hr

RUN 2. 156×10^{-6} lb/lb x $\frac{2000 \text{ lb}}{\text{ton}}$ x 28 tons/hr = 8.74 lbs/hr

RUN 2. 256×10^{-6} lb/lb x $\frac{2000 \text{ lb}}{\text{ton}}$ x 30 tons/hr = 15.36 lbs/hr

AVERAGE = 15.36 lbs/hr as 77.7% carbon

METALS CALCULATIONS

KOOGLER & ASSOCIATES

GENERAL DATA

DATA FILE NAME:dre591

Company :D.R.E. Environmental
Test Description:Baghouse / Afterburner
Date :May 21, 1991

SAMPLING DATA

	Run 1	Run 2	Run 3
Sample Gas Volume, Vm(std) (dscf):	55.478	56.431	54.877
Stack Gas Flow Rate, Qs(std) (dscfm):	8,744	9,913	9,924
Total Particulate Matter Weight (g):	0.2714	0.1658	0.2027

Number of Metals Analyzed: 9
Sample Weight Unit (g, mg, ug, ng): ug

LABORATORY DATA

Metal Name	Blank	Micrograms of Sample Run 1	Run 2	Run 3	Lower Detection Limit
Arsenic	0.0	12.0	12.0	12.0	12.0
Barium	0.0	14.0	22.0	15.0	0.0
Cadmium	0.0	2.6	2.6	2.6	2.6
Chromium	0.0	8.6	12.9	9.4	3.0
Lead	0.0	24.0	24.0	24.0	24.0
Mercury	0.0	15.8	12.5	7.2	0.0
Nickel	0.0	15.0	15.0	15.0	15.0
Silver	0.0	18.0	18.0	18.0	18.0
Selenium	0.0	60.0	60.0	60.0	60.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0
XXXXXXXXXX	0.0	0.0	0.0	0.0	0.0

Metal Emission Rate Calculations

D.R.E. Environmental
Baghouse / Afterburner

Run No.: 1
Date: May 21, 1991

****
Sample Gas Volume, Vm(std), (dscf) = 55.478
Stack Gas Flow Rate, Qs(std), (dscfm) = 8,744
Total Particulate Matter, Mp, (g) = 0.2714
****

Metal	Sample Weight (ug)	Effective Blank Weight (ug)	(Sample - Blank) /1000000 = grams	Concentration grams x 15.432 / Vm(std) = gr/dscf	Emission Rate gr/dscf x .00857 x Qs(std) = lbs/hr	Metal conc in total part. mass (ug/g) 1000000 * grams / Mp	M-775 MAX CONC PPM
Arsenic	12.00	0.00	1.20E-05	3.34E-06	2.55E-04	44.22	55
Barium	14.00	0.00	1.40E-05	3.89E-06	2.98E-04	51.58	2750
Cadmium	2.60	0.00	2.60E-06	7.23E-07	5.53E-05	9.58	55
Chromium	8.60	0.00	8.60E-06	2.39E-06	1.83E-04	31.69	275
Lead	24.00	0.00	2.40E-05	6.68E-06	5.11E-04	88.43	77
Mercury	15.80	0.00	1.58E-05	4.39E-06	3.36E-04	58.22	17
Nickel	15.00	0.00	1.50E-05	4.17E-06	3.19E-04	55.27	165
Silver	18.00	0.00	1.80E-05	5.01E-06	3.83E-04	66.32	165
Selenium	60.00	0.00	6.00E-05	1.67E-05	1.28E-03	221.08	

PPM

Metal Emission Rate Calculations

D.R.E. Environmental
Baghouse / Afterburner

Run No.: 2
Date: May 21, 1991

****

Sample Gas Volume, Vm(std), (dscf) = 56.431
Stack Gas Flow Rate, Qs(std), (dscfm) = 9,913
Total Particulate Matter, Mp, (g) = 0.1658

****

Metal	Sample Weight (ug)	Effective Blank Weight (ug)	(Sample - Blank) /1000000 = grams	Concentration grams x 15.432 / Vm(std) = gr/dscf	Emission Rate gr/dscf x .00857 x Qs(std) = lbs/hr	Metal conc in total part. mass (ug/g) 1000000 * grams / Mp
Arsenic	12.00	0.00	1.20E-05	3.28E-06	2.85E-04	72.38
Barium	22.00	0.00	2.20E-05	6.02E-06	5.22E-04	132.69
Cadmium	2.60	0.00	2.60E-06	7.11E-07	6.17E-05	15.68
Chromium	12.90	0.00	1.29E-05	3.53E-06	3.06E-04	77.80
Lead	24.00	0.00	2.40E-05	6.56E-06	5.69E-04	144.75
Mercury	12.50	0.00	1.25E-05	3.42E-06	2.97E-04	75.39
Nickel	15.00	0.00	1.50E-05	4.10E-06	3.56E-04	90.47
Silver	18.00	0.00	1.80E-05	4.92E-06	4.27E-04	108.56
Selenium	60.00	0.00	6.00E-05	1.64E-05	1.42E-03	361.88

Metal Emission Rate Calculations

D.R.E. Environmental
Baghouse / Afterburner

Run No.: 3
Date: May 21, 1991

****

Sample Gas Volume, Vm(std), (dscf) = 54.877
Stack Gas Flow Rate, Qs(std), (dscfm) = 9,924
Total Particulate Matter, Mp, (g) = 0.2027

****

Metal	Sample Weight (ug)	Effective Blank Weight (ug)	(Sample - Blank) /1000000 = grams	Concentration grams x 15.432 / Vm(std) = gr/dscf	Emission Rate gr/dscf x .00857 x Qs(std) = lbs/hr	Metal conc in total part. mass (ug/g) 1000000 * grams / Mp
Arsenic	12.00	0.00	1.20E-05	3.37E-06	2.93E-04	59.20
Barium	15.00	0.00	1.50E-05	4.22E-06	3.66E-04	74.00
Cadmium	2.60	0.00	2.60E-06	7.31E-07	6.35E-05	12.83
Chromium	9.40	0.00	9.40E-06	2.64E-06	2.30E-04	46.37
Lead	24.00	0.00	2.40E-05	6.75E-06	5.86E-04	118.40
Mercury	7.20	0.00	7.20E-06	2.02E-06	1.76E-04	35.52
Nickel	15.00	0.00	1.50E-05	4.22E-06	3.66E-04	74.00
Silver	18.00	0.00	1.80E-05	5.06E-06	4.40E-04	88.80
Selenium	60.00	0.00	6.00E-05	1.69E-05	1.47E-03	296.00

Summary of Metals Emission Rates

D.R.E. Environmental
Baghouse / Afterburner
May 21, 1991

Metal	Emission Rate (lbs/hr) Run 1	Run 2	Run 3	Average
Arsenic	<0.00026	<0.00026	<0.00026	0.00028
Barium	0.00030	0.00052	0.00037	0.00040
Cadmium	<0.00006	<0.00006	<0.00006	0.00006
Chromium	0.00018	0.00031	0.00023	0.00024
Lead	<0.00051	<0.00051	<0.00051	0.00056
Mercury	0.00034	0.00030	0.00018	0.00027
Nickel	<0.00032	<0.00032	<0.00032	0.00035
Silver	<0.00038	<0.00038	<0.00038	0.00042
Selenium	<0.00128	<0.00128	<0.00128	0.00139

Summary of Metals Concentration in Total Particulate Matter

D.R.E. Environmental
Baghouse / Afterburner
May 21, 1991

Metal	Concentration in total Particulate (ug/g) Run 1	Run 2	Run 3	Average
Arsenic	<44.2	<72.4	<59.2	58.6
Barium	51.6	132.7	74.0	86.1
Cadmium	<9.6	<15.7	<12.8	12.7
Chromium	31.7	77.8	46.4	52.0
Lead	<88.4	<144.8	<118.4	117.2
Mercury	58.2	75.4	35.5	56.4
Nickel	<55.3	<90.5	<74.0	73.2
Silver	<66.3	<108.6	<88.8	87.9
Selenium	<221.1	<361.9	<296.0	293.0

FIELD AND LABORATORY DATA SHEETS

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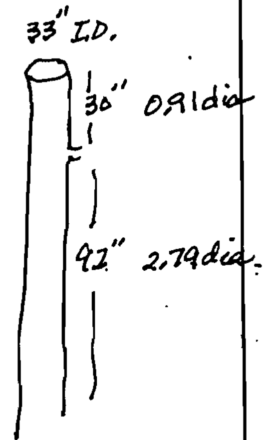
SOURCE SAMPLING FIELD DATA SHEET

Plant: DRE ENV.
Sampling Location: MALONE, FL.
Type of Control: BAGHOUSE, AFT. BURNER
Type of Samples: PM + MULTI METALS
Date: 5-21-91 Run No. 1
Time Start: 1837 Time End: 2042
Sample Time: 2.5 min/pt 60 Total min
DB ___ °F, WB ___ °F, VP @ DP ___ "Hg
Bar. Press. ___ "Hg, Stack Press. ___ "Hg
Moisture ___ %, FDA ___, Gas Density Factor ___
Temp. ___ °F, W/D ___, W/S ___
Weather ___ Thermocouple Readout ___
Sample Box No: ___ Meter Box No. ___
Meter ΔH@ 1.548 Pitot Corr. Factor 0.84
Nozzle Dia. 0.31 in., Probe Length 6 ft
Probe Heater Setting ___ Nomograph C_f 1.96
Stack Dimensions 33 in
Stack Area 5.94 ft²
Effective Stack Area 5.94 ft²
Stack Height ___ ft



Y = 0.991
P_s = 0.6

Stack Dimensions

Umbilical Cord ___
Thermocouple Probe No. ___
Pitot Tube No. ___

Mat'l Processing Rate ___
Final Gas Meter Reading 707.864 ft³ 57.632
Initial Gas Meter Reading 650.232 ft³
Condensate Increase in Impingers 465 ml
Moisture in Silica Gel 18.4 gm
Silica Gel Container No. 13 Filter No. ~~219~~ 221

Orsat:				
$\%CO_2$				
$\%O_2$				
%CO				
$\%N_2$				

Test Conducted By: M. Joye, S. Bell, Geo. Garcia
Stack Test Observers: ___

Leak Check Meter Box
Initial 0.00 cfm @ 15 In Hg
Final 0.00 cfm @ 10 In Hg

Pitot Tubes
Impact 3 In H_2O for 15 sec. Stable, Leak
Static 3 In H_2O for 15 sec. Stable, Leak

Port and Traverse Point No.	Distance From Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft³) (1.482)	Stack Velocity Head ("H_2O) ~~2.3642~~	Meter Orifice Press. Diff. ("H_2O) ~~2.6542~~ 2.8326 Calc.	Actual	Stack Gas Temp. (°F)	Sample Box Temp. (°F) 250	Last Imp. Temp. (°F) 76.71	Meter Temp. (°F) 87.54	Vacuum on Sample Train ("Hg)	O_2 % 14.74	CO ppm 7.246	VOC
1	1.0		650.232	1.98	3.88	2.60		221	69	82	13	13	7.6	[illegible]
2	2.21		652.1	1.90	3.72	2.80		210	66	82	13	19.5	7.7	[illegible]
3	3.93		654.4	1.60	3.14	2.60		209	63	84	13	13.5	7.1	[illegible]
4	5.84		656.4	1.50	2.94	2.60		220	65	84	13	14.0	7.0	[illegible]
5	8.25		659.4	1.40	2.74	2.60		235	66	84	13	14.5	8.0	[illegible]
6	11.76		661.8	1.30	2.55	2.55		251	65	84	13	14.0	[illegible]	[illegible]
7	21.12		664.3	1.70	3.33	2.60		261	66	88	13	14.5	[illegible]	[illegible]
8	24.75		666.8	2.50	4.90	2.60		269	66	90	13			

2 MIN. ↓ IN RUN ↑ 5 MIN. LATER

Port and Traverse Point No.	Distance From Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft^3)	Stack Velocity Head ("H_2O)	Meter Orifice Press. Diff. ("H_2O)		Stack Gas Temp. (°F)	Sample Box Temp (°F)	Last Imp. Temp. (°F)	Meter Temp. (°F)	Vacuum on Sample Train ("Hg)	O_2	CO	V
					Calc.	Actual								
9	27.06		669.3	2.30	451	2.70		274	67	90	13	13.5	7.3	1.
10	29.04		671.8	1.60	3.14	2.70		273	67	90	13	13.5	7.1	1.
11	30.69		674.4	1.40	2.74	2.70		274	68	96	13	13.5	7.0	1.
12	32		676.9	1.40	2.74	2.70		269	70	92	12.5	14.5	7.1	1.
1			679.4	1.40	2.74	2.70		267	74	92	13	14.0	7.7	1.
2			681.9	1.30	2.55	2.55		264	75	92	13	13.5	7.4	1.
3			684.3	1.40	2.74	2.70		260	79	93	13	14.0	7.2	1.
4			686.8	1.30	2.55	2.55		255	81	90	13	13.5	7.2	1.
5			689.3	1.30	2.55	2.55		255	84	88	13	14.0	7.8	1.
6			691.7	1.30	2.55	2.55		253	87	88	13	13.5	7.5	3.
7			693.9	1.30	2.55	2.55		253	90	87	12.5	13.8	7.1	2.
8			696.4	1.30	2.55	2.55		252	92	87	12.5	15.0	6.6	1.
9			698.7	1.30	2.55	2.55		249	94	86	12.5	14.0	6.6	1.
10			701.0	1.10	2.18	2.18		246	95	86	12.0	15.5	6.6	1.
11			703.2	1.20	2.35	2.35		242	96	86	11.0	16.5	7.4	2.
12			705.5	1.20	2.35	2.35		238	96	86	11.0	17.0	7.0	1
			707.86A											

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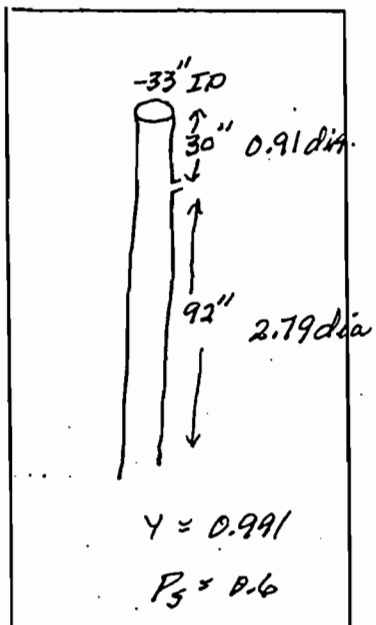
SOURCE SAMPLING FIELD DATA SHEET

Plant DRE
Sampling Location MALONE, FL.
Type of Control BAGHOUSE - AFTERBURNER
Type of Samples PM - MULTI-METALS
Date 5-21-91 Run No. 2
Time Start ~~0~~2203 Time End 2203
Sample Time 2.5 min/pt 60 Total min
DB ____ °F, WB ____ °F, VP @ DP ____ "Hg
Bar. Press. ____ "Hg, Stack Press. ____ "Hg
Moisture ____ %, FDA ____, Gas Density Factor ____
Temp. ____ °F, W/D ____, W/S ____
Weather ____ Thermocouple Readout ____
Sample Box No: ____ Meter Box No. ____
Meter ΔH@ 1.548 Pitot Corr. Factor 0.84
Nozzle Dia. 0.31 in., Probe Length 6 ft
Probe Heater Setting ____ Nomograph C_f 1.96
Stack Dimensions 33 in
Stack Area 5.94 ft^2
Effective Stack Area 5.94 ft^2
Stack Height ____ ft
0.8 - 2.0 (



Stack Dimensions

Umbilical Cord ____
Thermocouple
Probe No. ____
Pitot Tube No. ____

Mat'l Processing Rate ____
Final Gas Meter Reading 765.890 ft^3 57.748
Initial Gas Meter Reading 708.142 ft^3 ~~54.23~~
Condensate Increase in Impingers 440 ml
Moisture in Silica Gel 19.5 gm
Silica Gel Container No. ____ Filter No. 219
Orsat: %CO_2 ____
%O_2 ____
%CO ____
%N_2 ____

Test Conducted By: M. Joyce, S. Bell, Geo Garcia

Stack Test Observers: ____

Leak Check Meter Box
Initial 0.00 cfm @ 15 In H_2
Final 0.00 cfm @ 10 In Hg

Pitot Tubes
Impact 3 In H_2O for 15 sec. Stable, Leak
Static 3 In H_2O for 15 sec. Stable, Leak

Port and Traverse Point No.	Distance From Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft^3) (1.990)	Stack Velocity Head (Δ ("H_2O)) 1.2959 ~~1.2313~~	Meter Orifice Press. Diff. 3.98 ("H_2O) Calc.	Actual	Stack Gas Temp. (°F)	Sample Box Temp. (°F) 238.2	Last Imp. Temp. (°F) 78.67	Meter Temp. (°F) 80.88	Vacuum on Sample Train ("Hg)	14.98 O2 %	5.98 CO %	0.1 VC PPM
1			708.142	1.90	3.72	2.6		247	76	82	8.0	19.5	1.2	0.8
2			710.4	1.90	3.72	2.6		231	69	82	8.5	14.0	6.4	0.8
3			712.4	2.40	4.70	2.5		247	68	80	9.0	10.0	6.5	0.8
4			714.7	2.50	4.90	2.6		232	68	80	9.0	12.5	6.8	0.
5			716.9	2.60	5.09	2.60		222	69	80	9.5	13.5	6.0	0.
6			719.3	1.50	2.94	2.60		218	69	79	9.5			
7			721.6	1.50	2.94	2.60		220	70	78	9.5	10.5		
8			724.1	1.60	3.14	2.60		223	71	78	9.5			

Port and Traverse Point No.	Distance From Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft^3)	Stack Velocity Head ("H_2O)	Meter Orifice Press. Diff. ("H_2O)		Stack Gas Temp. (°F)	Sample Box Temp (°F)	Last Imp. Temp. (°F)	Meter Temp. (°F)	Vacuum on Sample Train ("Hg)	O_2	CO	VC
					Calc.	Actual								
9			726.5	1.50	2.94	2.60		229	72	80	9.0	15.5	6.4	0.9
10			729.1	1.70	3.33	2.60		234	73	80	9.0	16.0	6.0	0.8
11			731.5	1.60	4.96	2.60		243	75	80	9.0	14.5	6.1	0.8
12			734.2	1.60	3.13 3.13	2.60		249	76	80	8.0	15.5	5.7	0.7
1			736.7	1.50	2.94	2.60		254	79	80	8.0	15.5	6.7	0.7
2			739.1	1.50	2.94	2.60		251	80	80	8.0	15.5	6.7	0.6
3			741.5	2.00	3.92	2.60		258	82	80	8.0	16.0	5.8	0
4			744.0	3.00	5.88	2.60		256	83	80	8.0	15.5	5.9	0.7
5			746.5	2.50	4.90	2.60		254	85	80	8.0	16.0	5.8	0.
6			748.9	2.50	4.90	2.60		251	86	80	8.0	16.0	6.3	0.
7			751.4	2.40	4.70	2.60		248	87	82	8.0	16.0	5.9	0.
8			753.9	2.20	4.31	2.60		242	88	84	8.0	16.0	5.7	0.
9			756.3	2.10	4.11	2.60		234	89	84	8.0	16.0	5.9	0.
10			758.8	2.10	4.11	2.60		228	90	84	8.0	16.0	6.3	0.
11			761.6	2.10	4.11	2.60		224	91	84	7.5	16.0	6.4	0.
12			763.5	2.10	4.11	2.60		221	92	84	7.0	16.0	6.1	
			765.890											

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SOURCE SAMPLING FIELD DATA SHEET

Plant: DRE, ENV.
Sampling Location: ______
Type of Control: ______
Type of Samples: PM + MM
Date: 5-21-91 Run No. 3
Time Start: 2305 Time End: ______
Sample Time: 2.5 min/pt 60 Total min
DB ____ °F, WB ____ °F, VP @ DP ______ "Hg
Bar. Press. ______ "Hg, Stack Press. ______ "Hg
Moisture ____ %, FDA ____, Gas Density Factor ____
Temp. ____ °F, W/D ______, W/S ______
Weather ______ Thermocouple Readout ______
Sample Box No. ______ meter Box No. KA 2
Meter ΔH@ 1.548 Pitot Corr. Factor ______
Nozzle Dia. 0.31 in., Probe Length 6 ft
Probe Heater Setting ____ Nomograph C_f 1.85
Stack Dimensions 33 in
Stack Area 5.94 ft^2
Effective Stack Area 5.94 ft^2
Stack Height ______ ft

Stack Dimensions

Umbilical Cord ______
Thermocouple Probe No. ______
Pitot Tube No. ______

Mat'l Processing Rate ______
Final Gas Meter Reading 822.602 ft^3
Initial Gas Meter Reading 766.143 ft^3 56.459
Condensate Increase in Impingers 545 ml
Moisture in Silica Gel 19.1 gm
Silica Gel Container No. 27 Filter No. 218

Orsat:				
$\%CO_2$				
$\%O_2$				
%CO				
$\%N_2$				

Test Conducted By: M. Jaye, S. Bell, Geo Garcia

Stack Test Observers: ______

Leak Check Meter Box: Initial 0.00 cfm @ 15 In Hg; Final 0.00 cfm @ 10 In Hg

Pitot Tubes:
Impact 3 In H_2O for 15 sec. Stable, Leak
Static 3 In H_2O for 15 sec. Stable, Leak

Port and Traverse Point No.	Distance From Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft^3) (1.887)	Stack Velocity Head ("H_2O") 1.3738 ~~3.7792~~	Meter Orifice Press. Diff. ("H_2O") ~~3.54~~ Calc.	Actual	Stack Gas Temp. (°F)	Sample Box Temp. (°F) 269.5	Last Imp. Temp. (°F) 75.5	Meter Temp. (°F) 83.2	Vacuum on Sample Train ("Hg")
1			766.143	1.70	3.145	2.50		281	71	82	8.0
2			767.9	1.60	2.96	2.60		276	63	82	9.0
3			770.4	2.6	4.81	2.60		254	63	82	9.0
4			772.7	2.6	4.81	2.60		231	64	82	9.0
5			774.9	2.0	3.70	2.50		230	64	82	9.5
6			777.3	1.6	2.96	2.60		230	64	82	10.0
7			779.7	1.4	2.59	2.60		234	64	82	9.5
8			782.0	1.4	2.59	2.60		241	65	82	9.0

O_2 % (14.06)	CO (5.62)	VOC ppm
14.5	5.6	0.
14.5	5.8	0.
14.5	5.5	0.
14.5	6.8	0.
13.5	5.7	0.
13.5	5.1	0.
14.5	6.1	
14.0		

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Port and Traverse Point No.	Distance From Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft^3)	Stack Velocity Head ("H_2O)	Meter Orifice Press. Diff. ("H_2O)		Stack Gas Temp. (°F)	Sample Box Temp (°F)	Last Imp. Temp. (°F)	Meter Temp. (°F)	Vacuum on Sample Train ("Hg)	O_2 %	CO ppm	VOC
					Calc.	Actual								
9			784.3	1.50	2.78	2.60		249	65	82	10	14.5	5.4	0.3
10			786.7	1.50	2.78	2.60		256	66	82	11	14.5	5.4	0.4
11			789.1	1.50	2.78	2.60		265	68	82	11	14.0	5.2	0.3
12			791.6	1.50	2.78	2.60		273	68	82	11	14.0	5.8	0.
1			794.0	1.40	2.59	2.60		280	70	82	11	14.0	5.8	0.
2			796.3	1.50	2.78	2.60		284	72	82	11	13.5	5.4	0.
3			798.6	1.70	3.15	2.60		285	75	83	11	13.5	5.6	0.3
4			801.2	1.60	2.96	2.60		288	75	84	12	13.0	6.1	0.
5			803.4	2.00	3.70	2.60		292	82	85	12	14.0	5.5	0.
6			805.8	2.60	4.81	2.60		293	85	85	12.5	14.0	5.3	0
7			808.3	2.60	4.81	2.60		295	89	85	12.5	14.0	5.1	0
8			810.6	2.60	4.81	2.60		292	92	85	12.5	14.5	5.5	0.
9			812.9	2.40	4.44	2.60		290	94	85	13	13.5	5.1	0.
10			815.3	2.20	4.07	2.40		286	96	85	13	13.5	5.6	0
11			817.7	2.20	4.07	2.40		282	98	86	13	14.5	5.5	0
12			820.1	2.20	4.07	2.50		280	98	86	13	15.0	5.8	0
			822.60Z											

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SAMPLING RATE CALCULATIONS

Date 5-21-91

Plant Name DRE

Location MALONE, FL.

Source

ΔH = Orifice Reading (inches H_2O)
Dn = Nozzle Diameter (inches)
ΔH@ = Meter Box Constant
Bw = Moisture Fraction
Tm = Meter Temperature (°F)
Ts = Stack Temperature (°F)
Ms = Wet Molecular Weight of Stack Gas (From Table)
ΔP = Pitot Reading (inches H_2O)

$$\left[\frac{Tm + 460}{Ms(Ts+460)} (1 - Bw)^2 \; \Delta H@ \; (Dn)^4 \cdot 17741\right] \quad \Delta P = \Delta H$$

Moisture Fraction	Ms
0.0	29.0
0.05	28.5
0.10	27.9
0.15	27.4
0.20	26.8
0.25	26.2
0.30	25.7
0.35	25.2
0.40	24.6

$\frac{540}{28.2(2060)}$ 58092 = .00930

1 - .8

	Run 1	Run 2	Run 3
$\frac{Tm + 460}{Ms\ (Ts + 460)}$ =	0.00930	0.00912	0.0104
× $(1 - Bw)^2$ =	0.8464	0.8464	0.4225
× ΔH@ =	1.6	1.548	1.548
× $(Dn)^4$ =	0.00924	0.00924	0.00924
× 17741 =	17741	17741	17741
× ΔP =	2.06	1.96	1.12
	223.4	211.95	120.67

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DRE - 5-11-11
MALONE
RUN 1 - PM + MULTI-METALS

MULTI METALS WORKSHEET

CONTAINER NUMBER	ITEM	INIT. VOL. (ML)	FINAL VOL. (ML)	GAIN
1	FILTER	#221 ✓ tare	=0.4035	
2	ACETONE RINSE	100	100	-
3	0.1N HNO_3 RINSE	100	100	-
4	IMP. 1-3			
	1	0	287	287
	2	100	246	146
	3	100	132	32
	SUBTOTAL		665	465
	WASH			
	TOTAL			
5A	IMP 4	0	105	105
5B	IMP 5-6	200/100 +100	200	200
5C	HCl RINSE			
6	SILICA GEL #~~213~~ 213 ✓	200 GMS	218.4 GMS	18.4 GMS
7	ACETONE BLANK	100		
8A	0.1N HNO_3 BLANK	300		
8B	DI HNO_3 BLANK	100		
9	5% HNO_3/10% H_2O_2	200		
10	ACID $KMNO_4$	100		
11	8N HCl BLANK	25 + 200		
12	3 FILTERS (BLANKS)			

RUN 2
5-21-91
2045 -

MULTI METALS WORKSHEET

CONTAINER NUMBER	ITEM	INIT. VOL. (ML)	FINAL VOL. (ML)	GAIN
1	FILTER	# 219 (tare = 0.4102)		
2	ACETONE RINSE	100	100	—
3	0.1N HNO_3 RINSE	100	100	—
4	IMP. 1-3			
	1	0	250	250
	2	100	260	160
	3	100	130	30
	SUBTOTAL		640	440
	WASH			
	TOTAL			
5A	IMP 4	0	5	5
5B	IMP 5-6	200	100+50 150	
5C	HCl RINSE			
6	SILICA GEL #25	200 GMS	219.5 GMS	19.5 GMS
7	ACETONE BLANK	100		
8A	0.1N HNO_3 BLANK	300		
8B	DI HNO_3 BLANK	100		
9	5% HNO_3/10% H_2O_2	200		
10	ACID $KMNO_4$	100		
11	8N HCl BLANK	25 + 200		
12	3 FILTERS (BLANKS)			

RUN 3
2800
5-21-91

Pete Murphy
126
Chris 132

MULTI METALS WORKSHEET

CONTAINER NUMBER	ITEM	INIT. VOL. (ML)	FINAL VOL. (ML)	GAIN
1	FILTER	218 (tare) = 0.4117		
2	ACETONE RINSE	100	100	—
3	0.1N HNO_3 RINSE	100	100	—
4	IMP. 1-3			
	1	0	330	~~330~~ 330
	2	100	275	175
	3	100	140	40
	SUBTOTAL		745	545
	WASH			
	TOTAL			
5A	IMP 4	0	5+50	55
5B	IMP 5-6	200 100+50	150	—
5C	HCl RINSE			
6	SILICA GEL #27	200 GMS	219.1 GMS	19.1 GMS
7	ACETONE BLANK	100		
8A	0.1N HNO_3 BLANK	300		
8B	DI HNO_3 BLANK	100		
9	5% HNO_3/10% H_2O_2	200		
10	ACID $KMNO_4$	100		
11	8N HCl BLANK	25 + 200		
12	3 FILTERS (BLANKS)			

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SOURCE SAMPLING FIELD DATA SHEET

Plant: DRE. SRU.
Sampling Location: Malone FL, STACK
Type of Control: Baghouse
Type of Samples: VOST
Date: 5-21-91 Run No.: 1
Time Start: 1915 Time End: 1935
Sample Time: 5 min/pt 20 Total min
DB ____ °F, WB ____ °F, VP @ DP ____ "Hg
Bar. Press. 30.18 "Hg, Stack Press. .6 "Hg
Moisture ____ %, FDA ____, Gas Density Factor ____
Temp. 85 °F, W/D 0, W/S 0
Weather: OVERCAST Thermocouple Readout: KA3-
Sample Box No: ____ Meter Box No. VOST TRAIN
Meter ΔH@ ____ Pitot Corr. Factor ____
Nozzle Dia. / in., Probe Length 4 ft
Probe Heater Setting ____ Nomograph C_f ____
Stack Dimensions 33 in
Stack Area 2. ft^2
Effective Stack Area ____ ft^2
Stack Height ____ ft

Stack Dimensions

Umbilical Cord ____
Thermocouple Probe No. ____
Pitot Tube No. ____

Mat'l Processing Rate ____
Final Gas Meter Reading ____ ft^3
Initial Gas Meter Reading ____ ft^3
Condensate Increase in Impingers ____ ml
Moisture in Silica Gel ____ gm
Silica Gel Container No. ____ Filter No. ____

Orsat:				
$\%CO_2$				
$\%O_2$				
%CO				
81/75 $\%N_2$				

Test Conducted By: Steve Bell

Stack Test Observers: ____

Leak Check Meter Box
Initial 0.01 cfm @ 15 In H_2
Final 0.01 cfm @ 13 In Hg

Pitot Tubes
Impact 3 In H_2O for 15 sec. Stable, Leak
Static 3 In H_2O for 15 sec. Stable, Leak

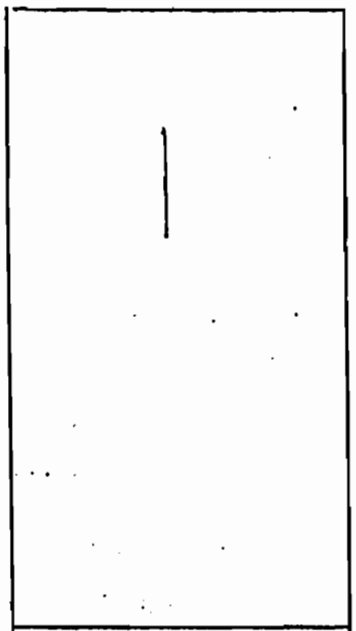
Port and Traverse Point No.	Distance From Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft^3) mass flow LPM	Stack Velocity Head ("H_2O")	Meter Orifice Press. Diff. ("H_2O") Calc.	Meter Orifice Press. Diff. ("H_2O") Actual	Stack Gas Temp. (°F)	Sample Box Temp. (°F)	Last Imp. Temp. (°F) Cond.	Meter Temp. (°F)	Vacuum on Sample Train ("Hg)
							1648				
1			1.00				↓		55	|	10
2			1.00				↓		45	|	10
3			1.00				↓		43	|	11
4			1.00						47	|	11
									47.5		

KOOGLER & ASSOCIATES

KOOGLER & ASSOCIATES, *Environmental Services*
4014 N.W. 13th Street • Gainesville, Florida 32609 • 904/377-5822

SOURCE SAMPLING FIELD DATA SHEET

Plant D.R.E. S.R.U.
Sampling Location Malone FL. STACK
Type of Control Baghouse
Type of Samples VOST
Date 5-21-91 Run No. 2
Time Start 21:20 Time End 21:40
Sample Time 5 min/pt 20 Total min
DB ____ °F, WB ____ °F, VP @ DP ____ "Hg
Bar. Press. 30.18 "Hg, Stack Press. ____ "Hg
Moisture ____ %, FDA ____, Gas Density Factor ____
Temp. 80 °F, W/D 0, W/S 0
Weather Dark Thermocouple Readout ____
Sample Box No: ____ meter Box No. VOST Thmin
Meter ΔH@ ____ Pitot Corr. Factor ____
Nozzle Dia. ____ in., Probe Length 4 ft
Probe Heater Setting ____ Nomograph C_f ____
Stack Dimensions 33 in
Stack Area 7 ft^2
Effective Stack Area ____ ft^2
Stack Height ____ ft



Umbilical Cord ✓
Thermocouple Probe No. ____
Pitot Tube No. ____

Mat'l Processing Rate ____
Final Gas Meter Reading ____ ft^3
Initial Gas Meter Reading ____ ft^3
Condensate Increase in Impingers ____ ml
Moisture in Silica Gel ____ gm
Silica Gel Container No. ____ Filter No. ____

Orsat: 81/74

$\%CO_2$					
$\%O_2$					
%CO					
$\%N_2$					

Test Conducted By: Steve Bell
Stack Test Observers: ____

Leak Check Meter Box
Initial 0.01 cfm @ 14 In H_2
Final 0.00 cfm @ 9 In Hg

Pitot Tubes –
Impact 3 In H_2O for 15 sec. Stable, Leak
Static 3 In H_2O for 15 sec. Stable, Leak

Port and Traverse Point No.	Distance From Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft^3) MASS FLOW L.R.M.	Stack Velocity Head ("H_2O)	Meter Orifice Press. Diff. ("H_2O) Calc.	Meter Orifice Press. Diff. ("H_2O) Actual	Stack Gas Temp. (°F) 1648	Sample Box Temp. (°F)	Last Imp. Temp. (°F) First Cond.	Meter Temp. (°F)	Vacuum on Sample Train ("Hg)
1			1.00				(		55		9
2			1.00						52		9
3			1.00						52		9
4			1.00				)		54		9

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SOURCE SAMPLING FIELD DATA SHEET

Plant D.R.E. S.R.U.
Sampling Location Malone FL Stack
Type of Control Baghouse
Type of Samples VOST
Date 5-21-91 Run No. 3
Time Start 1345 Time End 0005
Sample Time 5 min/pt 20 Total min
DB ____ °F, WB ____ °F, VP @ DP ____ "Hg
Bar. Press. 30.18 "Hg, Stack Press. ____ "Hg
Moisture ____ %, FDA ____, Gas Density Factor ____
Temp. 80 °F, W/D 0, W/S 0
Weather Dark Thermocouple Readout ____
Sample Box No: ____ meter Box No. VOST Train
Meter ΔH@ ____ Pitot Corr. Factor ____
Nozzle Dia. ____ in., Probe Length 4 ft
Probe Heater Setting ____ Nomograph C_f ____
Stack Dimensions ____ in
Stack Area ____ ft^2
Effective Stack Area ____ ft^2
Stack Height ____ ft

Stack Dimensions

Umbilical Cord ____
Thermocouple Probe No. ____
Pitot Tube No. ____

Mat'l Processing Rate ____
Final Gas Meter Reading ____ ft^3
Initial Gas Meter Reading ____ ft^3
Condensate Increase in Impingers ____ ml
Moisture in Silica Gel ____ gm
Silica Gel Container No. ____ Filter No. ____

Orsat:

$\%CO_2$				
$\%O_2$				
%CO				
$\%N_2$				

Test Conducted By: Steve Bell

Stack Test Observers: ____

Leak Check Meter Box
Initial 0.01 cfm @ 14 In H_2
Final 0.01 cfm @ 10 In Hg

Pitot Tubes –
Impact 3 In H_2O for 15 sec. Stable, Leak
Static 3 In H_2O for 15 sec. Stable, Leak

Port and Traverse Point No.	Distance From Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft^3) MASS FLOW L.P.M.	Stack Velocity Head ("H_2O)	Meter Orifice Press. Diff. ("H_2O) Calc.	Meter Orifice Press. Diff. ("H_2O) Actual	Stack Gas Temp. (°F)	Sample Box Temp. (°F)	Last Imp. Temp. (°F) First Cond	Meter Temp. (°F)	Vacuum on Sample Train ("Hg)
							1648				
1			1.00						59		4
2			1.00						62		4
3			1.01						62		6
4			1.00						60		6

KOOGLER & ASSOCIATES

PROCESS WEIGHT AND PRODUCTION INFORMATION

KOOGLER & ASSOCIATES

1ST TEST
START: 18:44
STOP: 1946

DAILY PROCESS DATA SHEET TIS UNIT

DATE: 5-22-91 OPERATOR: GALLOWAY SHIFT: 1

	1900	1930	2000			
PRIMARY						
TOTAL TONS	1050	1062	1069			
FEEDRATE TPH	22	27	25			
PTU GAS TEMP	472	472	470			
% BURNER VALVE	99.9	99.9	99.9			
DRAFT " w.g.	.50	.50	.50			
OROFICE D.P."						
BURNER MM BTU/HR						
SCC						
GAS TEMP	1604	1650	1641			
% BURNER VALVE	100.1	75.0	99.9			
OROFICE D.P."						
BURNER MM BTU/HR						
I.D. FAN						
% AMPS	40	40	40			
~~Bag house~~ **VENTURI**						
D.P. " w.g.	3.5	3.5	3.5			
STACK						
GAS TEMP.						
VEL. PRESS "w.g.						
GAS VELOCITY FPS						
GAS FLOW ACFM						
O2 %	13.6	13.6	16			
CO %	0	0	0			
CO2 %						
WATER SYSTEMS						
VENTURI FLOW						
ASH AUGER FLOW						
QUENCH FLOW						
BLOWDOWN TOTAL						
FRESH WATER						
PH						
CONDUCTIVITY						
OTHER						

COMMENTS

Soil Temp 864 870 690

Brent Galloway

Moisture Content 20%

2nd TEST
START: 2045
END: 2204

DAILY PROCESS DATA SHEET TIS UNIT

DATE: 5-21-91 OPERATOR: GALLOWAY SHIFT: 1ST

	2030	2100	2130	2200	2230	2300
PRIMARY						
TOTAL TONS	1077	1092	1102	1115	1127	1140
FEEDRATE TPH	26	26	28	32	28	30
PTU GAS TEMP	477	482	477	485	478	490
% BURNER VALVE	99	99	99	99	99	99
DRAFT " w.g.	.50	.50	.50	.50	.50	.50
~~OROFICE D.P."~~						
~~BURNER MM BTU~~/HR						
SCC						
GAS TEMP	1623	1621	1654	1619	1658	1636
% BURNER VALVE	99.5	100	100	100.0	74.6	99.9
~~OROFICE D.P."~~						
~~BURNER MM~~ BTU/HR						
I.D. FAN						
% AMPS	40	40	40	40	40	40
BAGHOUSE / ~~VENTURI~~						
D.P. " w.g.						
STACK						
~~GAS TEMP.~~						
~~VEL. PRESS~~ "w.g.						
~~GAS VELOCITY FPS~~						
~~GAS FLOW ACFM~~						
O2 %	13.5	13.5	14.5	13	13	14
CO %	0	0	0	0	0	0
~~CO2 %~~						
~~WATER SYSTEMS~~						
VENTURI FLOW						
ASH AUGER FLOW						
QUENCH FLOW						
BLOWDOWN TOTAL						
FRESH WATER						
PH						
CONDUCTIVITY						
OTHER						
COMMENTS						
Sol Temp	691	757	716	732	741	808

moisture content 20%

Brent Galloway

5 Test
START: 2305
STOP: 2407

DAILY PROCESS DATA SHEET TIS UNIT

DATE: 5-21-91 OPERATOR: Galloway SHIFT: 1

	2330	2400				
PRIMARY						
TOTAL TONS	1152	1163				
FEEDRATE TPH	27	27				
PTU GAS TEMP	489	486				
% BURNER VALVE	99	99				
DRAFT " w.g.	.50	.50				
OROFICE D.P."						
BURNER MM BTU/HR						
SCC						
GAS TEMP	1643	1648				
% BURNER VALVE	64.3	50.6				
OROFICE D.P."						
BURNER MM BTU/HR						
I.D. FAN						
% AMPS	40	40				
Bag House						
~~VENTURI~~						
D.P. " w.g.	4	4				
STACK						
~~GAS TEMP.~~						
VEL. PRESS "w.g.						
~~GAS VELOCITY FPS~~						
~~GAS FLOW ACFM~~						
O2 %	14	10.2				
CO %	0	0				
CO2 %						
WATER SYSTEMS						
VENTURI FLOW						
ASH AUGER FLOW						
QUENCH FLOW						
BLOWDOWN TOTAL						
FRESH WATER						
PH						
CONDUCTIVITY						
OTHER						

COMMENTS

Soil Temp

Moisture Content 20%

FEED ANALYSES

KOOGLER & ASSOCIATES

mental Conservation Laboratories
General Drive
o, Florida 32824
8-5314
/ 850-6945

CNC
Laboratories
DHRS Certification No 86310, 86182

: D.R.E. Environmental, Inc.
SS: P.O. Box 1386
Lake City, FL 32056-1386

REPORT # : 5276
DATE SUBMITTED: May 23, 1991
DATE REPORTED : May 28, 1991

TION: Chris Sleeper

SAMPLE IDENTIFICATION

Soil samples submitted and
identified by client as:

Malone, FL
Project #3002
5/21/91

#1 - Trial Burn #1	Waste Feed	21:30	#3002-01-0004
#2 - Trial Burn #2	Waste Feed	22:30	#3002-01-0005
#3 - Trial Burn #3	Waste Feed	24:00	#3002-01-0006
#4 - Trial Burn #1	Ash Composite	21:30	#3002-02-0013
#5 - Trial Burn #2	Ash Composite	22:30	#3002-02-0014
#6 - Trial Burn #3	Ash Composite	24:00	#3002-02-0015

ER, CLIENT SERVICES David J. Vesey
David J. Vesey

ENCO LABORATORIES
REPORT # : 5276
DATE REPORTED: May 28, 1991
REFERENCE : Project #3002

RESULTS OF ANALYSIS

METHOD 9073 - TOTAL PETROLEUM HYDROCARBONS	#3002-01-0004	#3002-02-0013	units
Total Petroleum Hydrocarbons	423	<5.0	mg/Kg

METHOD 9073 - TOTAL PETROLEUM HYDROCARBONS	#3002-01-0005	#3002-02-0014	units
Total Petroleum Hydrocarbons	156	<5.0	mg/Kg

METHOD 9073 - TOTAL PETROLEUM HYDROCARBONS	#3002-01-0006	#3002-02-0015	units
Total Petroleum Hydrocarbons	256	<5.0	mg/Kg

< = Less Than

ENCO LABORATORIES
REPORT # : 5276
DATE REPORTED: May 28, 1991
REFERENCE : Project #3002

RESULTS OF ANALYSIS

METALS	#3002-02-0013	#3002-02-0014	#3002-02-0015	units
ic, As	<0.400	<0.400	<0.400	mg/Kg
m, Ba	<12.0	<12.0	<12.0	mg/Kg
ium, Cd	<0.800	<0.800	<0.800	mg/Kg
ium, Cr	27.2	6.0	8.0	mg/Kg
, Pb	9.20	4.16	6.84	mg/Kg
ry, Hg	<0.050	<0.050	<0.050	mg/Kg
ium, Se	<0.400	<0.400	<0.400	mg/Kg
er, Ag	<1.60	<1.60	<1.60	mg/Kg

QUALITY CONTROL DATA

ameter	% Recovery	% Difference
METALS		
nic	108/105	3
ium	99/99	<1
lum	104/103	1
ium	92/91	1
d	100/103	3
ry	94/90	4
ium	103/102	1
ver	100/100	<1
418.1		
l Petroleum Hydrocarbons	96	7

Less Than

Environmental Conservation Laboratories
10207 General Drive
Orlando, Florida 32824
407 / 826-5314
Fax 407 / 850-6945

ECN Laboratories
DHRS Certification No 46018, E83102

LIENT : D.R.E. Environmental, Inc.
ADDRESS: P.O. Box 1386
Lake City, FL 32056-1386

REPORT # : 5275.1
DATE SUBMITTED: May 23, 1991
DATE REPORTED : May 30, 1991

TTENTION: Chris Sleeper

SAMPLE IDENTIFICATION

Soil samples submitted and identified by client as:

Project #3002
05/21/91

#1 - Trial Burn #1 Baghouse Screw 21:30

#2 - Trial Burn #2 Baghouse Screw 22:30

#3 - Trial Burn #3 Baghouse Screw 24:00

Note: Sample composited in house for analysis as per client request.

ANAGER, CLIENT SERVICES David J. Vesey

ENCO LABORATORIES
REPORT # : 5275.1
DATE REPORTED: May 30, 1991
REFERENCE : Project #3002

RESULTS OF ANALYSIS

TCLP METALS

ANALYSIS	Composite	units
Arsenic, As	<0.100	mg/L
Barium, Ba	<3.00	mg/L
Cadmium, Cd	<0.200	mg/L
Chromium, Cr	<1.00	mg/L
Lead, Pb	<1.00	mg/L
Mercury, Hg	<0.005	mg/L
Selenium, Se	<0.100	mg/L
Silver, Ag	<0.400	mg/L

QUALITY CONTROL DATA

Parameter	% Recovery	% Difference
TCLP METALS		
Arsenic	94/85	9
Barium	104/104	<1
Cadmium	101/102	1
Chromium	103/103	<1
Lead	100/100	<1
Mercury	94/90	4
Selenium	100/110	10
Silver	101/104	3

< = Less Than

STACK SAMPLES

METALS ANALYSES

KOOGLER & ASSOCIATES

TABLE 1

METALS DATA: CONTAINERS 1, 2 AND 3

Station ID:	5B, Run 1	5B, Run 2	5B, Run 3
PPB#:	50226,229,232	50217,230,233	50228,231,234
	(results in total micrograms)		
Arsenic	<5	<5	<5
Barium	14.0	22	15
Cadmium	<0.6	<0.6	<0.6
Chromium	5.6	9.9	6.4
Lead	<8	<8	<8
Mercury	12.2	9.4	3.1
Nickel	<6	<6	<6
Selenium	<60	<60	<60
Silver	<18	<18	<18

TABLE 2

METALS DATA: CONTAINERS 4 AND 5A

Station ID:	Run 1	Run 2	Run 3
PPB#:	50235	50236	50237
	(results in total micrograms)		
Arsenic	<7	<7	<7
Barium	3.4	3.6	69
Cadmium	<2	<2	<2
Chromium	<3	<3	<3
Lead	<16	<16	<16
Mercury	3.6	3.1	4.1
Nickel	<9	<9	<9
Selenium	<60	<60	<60
Silver	<34	<34	<34

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
904/377-5822 • FAX 377-7158

PARTICULATE LAB DATA SHEET

TEST DATE 5-21-91

PLANT NAME DRE

SOURCE SRU

	Run 1	Run 2	Run 3	Blank
Container No.	KA-42	KA-43	KA-204	KA-16
Total Volume (ml)	250	250	250	250
Aliquot Evaporated (ml)	"	"	"	"
Final Weight (g)	98.8297	98.4103	99.1563	101.1846
Tare Weight (g)	- 98.5687	- 98.2463	- 98.9563	- 101.1837
Gross Weight Gained (g)	0.2610	0.1640	0.200	0.0008
Average Blank (g)	-	-	-	-
Net Weight (g)				
Aliquot Factor	x	x	x	x
Total Net Weight (mg)	261	164	200	
Container No.	1F	2F	3F	
Filter No.	221	219	218	
Final Weight (g)	.4139	.4120	.4144	
Tare Weight (g)	- .4035	- .4102	- .4117	-
Gross Weight Gained (g)	.0104	.0018	.0027	
Average Blank (g)	-	-	-	-
Total Net Weight (mg)	10.4	1.8	2.7	

Tare Balance Check

0.0	✓	10.0	✓
1.0	✓	50.0	✓
5.0	✓	100.0	✓

T/H

By RMJ

Date 5-22-91

Final Balance Check

0.0	✓	10.0	✓
1.0	✓	50.0	✓
5.0	✓	100.0	✓

T/H

By RMJ

Date 5-23-91

CHAIN OF CUSTODY RECORD

Project Number: 501-91-01

Project Name: DRE ENVIRONMENTAL

Sample Location: MALONE, FL.

Sample Identification	Remarks			
CONTAINER 1, RUN 1 0.4035g	TOTAL WEIGHT + VOLUME, METALS			
" 1, RUN 2 0.4102g	"	"	"	
CONTAINER 1, RUN 3 0.4117g	"	"	"	
CONTAINER 2, RUN 1	TOTAL VOLUME + MASS (total mg for metals)		"	COMBINE 1 RUN META
" 2, RUN 2	"	"	"	
" 2, RUN 3	"	"	"	
CONTAINER 3, RUN 1	"	"	"	
" 3, RUN 2	"	"	"	
" 3, RUN 3	"	"	"	

Sampled By: (Signature) N. M. Joyce Date: 5-21-91 Time: See data sheets

Relinquished By: (Sign) N. M. Joyce Date: 5-23-91 Time: 1255

Received By: (Sign) _____ Date: _____ Time: _____

Relinquished By: (Sign) _____ Date: _____ Time: _____

Received By: (Sign) _____ Date: _____ Time: _____

Relinquished By: (Sign) _____ Date: _____ Time: _____

Received By Lab: (Sign) Paul Bern Date: 5/23/91 Time: 1255

Sample Shipped VIA: _____ UPS _____ Fed Express _____ Bus

Shipping Bill Number: _____

KOOGLER & ASSOCIATES

CHAIN OF CUSTODY RECORD

Project Number 501-91-01

Project Name DRE ENV.

Sample Location : MALONE, FL.

Cr, Cd, As, Ni, Mn, Be, Cu, Zn, Pb, Hg

Sample Identification	Remarks
CONTAINER 4, RUN 1	METALS
" 4, RUN 2	"
" 4, RUN 3	"
CONTAINER 5A, RUN 1	"
" 5A, RUN 2	"
" 5A, RUN 3	"
CONTAINER 5B, RUN 1	MERCURY (AMBER BOTTLES)
" , RUN 2	"
" , RUN 3	"

2 filtered

COMBINE TO RUN METALS

Sampled By: (Signature) N. M. Joye Date: 5-21-91 Time: See Data Sheets

Relinquished By: (Sign) N. M. Joye Date: 5-23-91 Time: 1255

Received By: (Sign) _____ Date: _____ Time: _____

Relinquished By: (Sign) _____ Date: _____ Time: _____

Received By: (Sign) _____ Date: _____ Time: _____

Relinquished By: (Sign) _____ Date: _____ Time: _____

Received By Lab: (Sign) Paul Berman Date: 5/23/91 Time: 1250

Sample Shipped VIA: _____ UPS _____ Fed Express _____ Bus

Shipping Bill Number: _____

KOOGLER & ASSOCIATES

VOC ANALYSES

KOOGLER & ASSOCIATES

RESEARCH TRIANGLE LABORATORIES

VOST GC/MS REPORT

prepared for

KOOGLER & ASSOCIATES

by

RESEARCH TRIANGLE LABORATORIES, INC.

J. Wayne Jones
Chemist

Thomas G. Conally
Laboratory Manager

RTL ID # 10528A

June 4, 1991

1612 Carpenter Fletcher Road • Durham, North Carolina 27713 • (919) 544-5775 • FAX: (919) 544-3770
A Member of the Andersen Technology Group

INTRODUCTION

Scope:

To analyze (VOST) Tenax/Charcoal cartridges for the target compound list (TCL) and tentatively identify the 10 greatest Non-TCL peaks by Desorb-Purge-Trap-Desorb Gas Chromatography Mass Spectrometry (DPTD GC/MS).

Method Summary:

Sample cartridges are analyzed by desorb-purge-trap-desorb gas chromatography/mass spectrometry (DPTD GC/MS). Daily analytical checks are performed on cartridge blanks and reagent water. The daily GC/MS performance test required for this method is described in SW 846, Method 8240. The key Abundance Criteria for 4-Bromofluorobenzene (BFB) must be met before any samples are analyzed. All standards, blanks and samples are spiked with a known amount of BFB to maintain a constant check of system performance.

Sample Desorption:

The DPTD GC/MS procedures are those described in SW 846 Method 5040. The spiked sample cartridge is placed in the thermal desorption apparatus (Nutech 8533) and desorbed in the VOST system by heat to 200 °C for 10 minutes. Consideration is given for individual analysis of cartridges. The desorbed components then pass into the bottom of the water column, are purged from the water and collected on the internal analytical sorbent trap. After the 10-minute desorption period, the compounds are desorbed from the analytical trap into the GC/MS system.

Calculations:

All compounds detected that coincide with those of the Target Compound List (TCL) are calculated using equation #1 and response factors derived from in-house standards. All tentatively identified compounds are calculated, using equation #2 and a standard TIC response factor of one (1.0). Compounds quantified by equation #2 are qualified as being estimates.

Eqn #1: $$[X] = \frac{A_X \cdot [IS]}{A_{IS} \cdot RF}$$

Eqn #2: $$[X] = \frac{A_X \cdot [IS]}{A_{IS} \cdot 1.0}$$

Where:
$[X]$ = amount of compound, ng
$[IS]$ = amount of internal standard, ng
A_X = response of compound
A_{IS} = response of internal standard
RF = response factor

ANALYTICAL CONDITIONS

Equipment:

HP 5970 GC/MSD tuned to BFB criteria

GC Conditions:

Temp 1	:	0 °C
Time 1	:	4.0 minutes
Ramp Rate	:	6.0 °C/minute
Temp 2	:	160 °C
Time 2	:	5.0 minutes

Column:

VOCOL (Supelco),
Length 60 m,
Film thickness 1.5 μm,
Internal diameter 0.75 mm,
Construction of Borosilicate glass
with fused silica ends

Mass Spectrometer Conditions:

Run Time	:	25 minutes
Scan Range	:	35 - 260 AMU
Scan Delay	:	1.25 minutes
Ion Source Temp	:	200 °C
Electron Multiplier	:	2000 ± 200 EV
Separator Temp	:	225 °C

Sample Chronicle:

Client	Koogler & Associates
RTL Project ID	10528A
Analysis Type	VOST Pairs
Date of Collection	05/21/91
Date Received	05/28/91
Date Authorized	05/28/91
Date Analyzed	05/29/91
Date Reported	06/04/91

Narrative:

Five VOST sample pairs were received for analysis. Several notable occurrences were observed and are listed below.

- Run 1 (RTL 10528A-1): The Tenax only cartridge was transferred to another clean cartridge due to a broken end by the chemist. Contamination is possible but not likely because the GC/MS lab is essentially solvent free. Recovery of RTL internal standards met all quality control measures.

- Generally, samples Run 1, 2, and 3 contained very high levels of petroleum hydrocarbons. To insure a clean recovery system extra Blanks and water cleanup were integrated to prevent a carry over residue to remaining samples.

RTL remains available to assist with questions concerning these reports or sampling procedures.

Footnotes:

a : Value recovered exceeds RTL's established calibration range of 20 to 1000 ng and is considered an estimate. However amounts extrapolated just greater than 1000 ng are considered to be very good estimates assuming no other interference.

b : Estimated result due to excessive sample interference and coelution from the total ion chromatogram with RTL's internal standard. Thus the corresponding response from RTL's Method Blank standard was used to calculate the results for the appropriate retention time range.

c : Data dropout occurs due to high sample levels causing detector saturation. Limited data is usually available for several scans, and the amount detected is considered an estimate. RTL's column saturation is considered to be at 10,000 ng per compound. No target compounds were observed to be effected.

REFERENCES

Federal Register, 44, 69464, December 3, 1979

Protocol for the Collection and Analysis of Volatile POHCs Using VOST, EPA-600/8-84-007 available from ORD Publications, Center for Environmental Research Information, Cincinnati, Ohio 45268

NIOSH Manual of Analytical Methods, HEW Publication No. (NIOSH) 75-121, available from Superintendent of Documents, U. S. Government Printing Office, Washington, D.C. 20402

Supelco Bulletin 769, "Determination of Organic Vapors in the Industrial Atmosphere", 1977: Supelco, Inc., Bellefonte, PA 16823

Test Methods for Evaluation of Solid Waste, SW 846 Methods 0030, 8240, 5040, 5030

Compendium of Methods for the Determination of Toxic Organic Compounds in Air, PB87-168688, Battelle Columbus Laboratories, Columbus, Ohio

SAMPLE RESULTS

RESEARCH TRIANGLE LABORATORIES, INC.

Client:	Koogler & Associates	Received:	05/28/91
RTL ID:	10528A-4	Analyzed:	05/29/91
File ID:	T8099	Reported:	06/04/91
Sample ID:	Field Blank	Description:	VOST Pair

Surrogate Percent Recovery	
1,2-Dichloroethane-d_4	81
Toluene-d_8	96
4-Bromofluorobenzene	79

CAS Number	Target Compound	Results (ng)
74-87-3	Chloromethane	BQL
75-01-4	Vinyl Chloride	BQL
74-83-9	Bromomethane	BQL
75-00-3	Chloroethane	BQL
75-69-4	Trichlorofluoromethane	BQL
75-35-4	1,1-Dichloroethene	BQL
67-64-1	Acetone	BQL
75-15-0	Carbon Disulfide	BQL
75-09-2	Methylene Chloride	BQL
540-59-0	1,2-Dichloroethene	BQL
75-34-3	1,1-Dichloroethane	BQL
78-93-3	2-Butanone	BQL
67-66-3	Chloroform	BQL
107-06-2	1,2-Dichloroethane	BQL
71-55-6	1,1,1-Trichloroethane	BQL
56-23-5	Carbon Tetrachloride	BQL
108-05-4	Vinyl Acetate	BQL
71-43-2	Benzene	BQL
79-01-6	Trichloroethene	BQL
78-87-5	1,2-Dichloropropane	BQL
75-27-4	Bromodichloromethane	BQL
10061-01-5	*cis*-1,3-Dichloropropene	BQL
10061-02-6	*trans*-1,3-Dichloropropene	BQL
79-00-5	1,1,2-Trichloroethane	BQL
124-48-1	Dibromochloromethane	BQL
75-25-2	Bromoform	BQL
108-10-1	4-Methyl-2-pentanone	BQL
110-75-8	2-Chloroethyl Vinyl Ether	BQL
108-88-3	Toluene	BQL
591-78-6	2-Hexanone	BQL
127-18-4	Tetrachloroethene	BQL
108-90-7	Chlorobenzene	BQL
100-41-4	Ethylbenzene	BQL
1330-20-7	Xylene (total)	BQL
100-42-5	Styrene	BQL
79-34-5	1,1,2,2-Tetrachloroethane	BQL

Quantitation Limit (ng): 20

BQL: Below Quantitation Limit

RESEARCH TRIANGLE LABORATORIES, INC.

Client:	Koogler & Associates	Received:	05/28/91
RTL ID:	10528A-4	Analyzed:	05/29/91
File ID:	T8099	Reported:	06/04/91
Sample ID:	Field Blank	Description:	VOST Pair

Tentatively Identified Compounds

Compound	Results (ng)	Retention Time (minutes)	Molecular Weight (AMU)
Carbon dioxide	2700	1.82	44

Comments:

RESEARCH TRIANGLE LABORATORIES, INC.

Client:	Koogler & Associates	Received:	05/28/91
RTL ID:	10528A-5	Analyzed:	05/29/91
File ID:	T8100	Reported:	06/04/91
Sample ID:	Trip Blank	Description:	VOST Pair

Surrogate Percent Recovery	
1,2-Dichloroethane-d_4	82
Toluene-d_8	97
4-Bromofluorobenzene	80

CAS Number	Target Compound	Results (ng)	
74-87-3	Chloromethane		BQL
75-01-4	Vinyl Chloride		BQL
74-83-9	Bromomethane		BQL
75-00-3	Chloroethane		BQL
75-69-4	Trichlorofluoromethane		BQL
75-35-4	1,1-Dichloroethene		BQL
67-64-1	Acetone	79	
75-15-0	Carbon Disulfide		BQL
75-09-2	Methylene Chloride		BQL
540-59-0	1,2-Dichloroethene		BQL
75-34-3	1,1-Dichloroethane		BQL
78-93-3	2-Butanone		BQL
67-66-3	Chloroform		BQL
107-06-2	1,2-Dichloroethane		BQL
71-55-6	1,1,1-Trichloroethane		BQL
56-23-5	Carbon Tetrachloride		BQL
108-05-4	Vinyl Acetate		BQL
71-43-2	Benzene		BQL
79-01-6	Trichloroethene		BQL
78-87-5	1,2-Dichloropropane		BQL
75-27-4	Bromodichloromethane		BQL
10061-01-5	*cis*-1,3-Dichloropropene		BQL
10061-02-6	*trans*-1,3-Dichloropropene		BQL
79-00-5	1,1,2-Trichloroethane		BQL
124-48-1	Dibromochloromethane		BQL
75-25-2	Bromoform		BQL
108-10-1	4-Methyl-2-pentanone		BQL
110-75-8	2-Chloroethyl Vinyl Ether		BQL
108-88-3	Toluene		BQL
591-78-6	2-Hexanone		BQL
127-18-4	Tetrachloroethene		BQL
108-90-7	Chlorobenzene		BQL
100-41-4	Ethylbenzene		BQL
1330-20-7	Xylene (total)		BQL
100-42-5	Styrene		BQL
79-34-5	1,1,2,2-Tetrachloroethane		BQL

Quantitation Limit (ng): 20

BQL: Below Quantitation Limit

RESEARCH TRIANGLE LABORATORIES, INC.

Client:	Koogler & Associates	Received:	05/28/91
RTL ID:	10528A-5	Analyzed:	05/29/91
File ID:	T8100	Reported:	06/04/91
Sample ID:	Trip Blank	Description:	VOST Pair

Tentatively Identified Compounds

Compound	Results (ng)	Retention Time (minutes)	Molecular Weight (AMU)
Carbon dioxide	990	1.66	44

Comments:

RESEARCH TRIANGLE LABORATORIES, INC.

Client:	Koogler & Associates	Received:	05/28/91
RTL ID:	10528A-1	Analyzed:	05/29/91
File ID:	T8103	Reported:	06/04/91
Sample ID:	Run 1	Description:	VOST Pair

Surrogate Percent Recovery	
1,2-Dichloroethane-d_4	78
Toluene-d_8	82
4-Bromofluorobenzene	103

CAS Number	Target Compound	Results (ng)	
74-87-3	Chloromethane	33	
75-01-4	Vinyl Chloride		BQL
74-83-9	Bromomethane		BQL
75-00-3	Chloroethane		BQL
75-69-4	Trichlorofluoromethane	57	
75-35-4	1,1-Dichloroethene		BQL
67-64-1	Acetone	98	
75-15-0	Carbon Disulfide	69000 ▲	
75-09-2	Methylene Chloride		BQL
540-59-0	1,2-Dichloroethene		BQL
75-34-3	1,1-Dichloroethane		BQL
78-93-3	2-Butanone		BQL
67-66-3	Chloroform		BQL
107-06-2	1,2-Dichloroethane		BQL
71-55-6	1,1,1-Trichloroethane	43	
56-23-5	Carbon Tetrachloride	26	
108-05-4	Vinyl Acetate		BQL
71-43-2	Benzene	68	
79-01-6	Trichloroethene		BQL
78-87-5	1,2-Dichloropropane		BQL
75-27-4	Bromodichloromethane		BQL
10061-01-5	*cis*-1,3-Dichloropropene		BQL
10061-02-6	*trans*-1,3-Dichloropropene		BQL
79-00-5	1,1,2-Trichloroethane		BQL
124-48-1	Dibromochloromethane		BQL
75-25-2	Bromoform		BQL
108-10-1	4-Methyl-2-pentanone		BQL
110-75-8	2-Chloroethyl Vinyl Ether		BQL
108-88-3	Toluene	220	
591-78-6	2-Hexanone		BQL
127-18-4	Tetrachloroethene	42	
108-90-7	Chlorobenzene		BQL
100-41-4	Ethylbenzene	36	
1330-20-7	Xylene (total)	120	
100-42-5	Styrene		BQL
79-34-5	1,1,2,2-Tetrachloroethane		BQL

Quantitation Limit (ng): 20

BQL: Below Quantitation Limit

▲: See Footnotes

RESEARCH TRIANGLE LABORATORIES, INC.

Client:	Koogler & Associates	Received:	05/28/91
RTL ID:	10528A-1	Analyzed:	05/29/91
File ID:	T8103	Reported:	06/04/91
Sample ID:	Run 1	Description:	VOST Pair

Tentatively Identified Compounds

Compound	Results [b] (ng)	Retention Time (minutes)	Molecular Weight (AMU)
3,6-Dimethyloctane	400	18.27	142
Unknown cyclic hydrocarbon	790	19.02	–
Unknown trisiloxane	11000	19.78	–
Unknown dimethyloctane	2100	20.95	–
Unknown nonane	1600	21.37	–
Unknown hexane isomer	1600	21.99	–
Unknown hexane isomer	1800	22.12	–
Unknown alkane	1600	22.61	–
Unknown cyclic hydrocarbon	1300	22.88	–
Unknown cyclic hydrocarbon	1600	23.16	–

Comments:

[b]: See Footnotes

RESEARCH TRIANGLE LABORATORIES, INC.

Client:	Koogler & Associates	Received:	05/28/91
RTL ID:	10528A-2	Analyzed:	05/29/91
File ID:	T8101	Reported:	06/04/91
Sample ID:	Run 2	Description:	VOST Pair

Surrogate Percent Recovery	
1,2-Dichloroethane-d_4	85
Toluene-d_8	80
4-Bromofluorobenzene	120

CAS Number	Target Compound	Results (ng)	
74-87-3	Chloromethane	26	
75-01-4	Vinyl Chloride		BQL
74-83-9	Bromomethane		BQL
75-00-3	Chloroethane		BQL
75-69-4	Trichlorofluoromethane	63	
75-35-4	1,1-Dichloroethene		BQL
67-64-1	Acetone		BQL
75-15-0	Carbon Disulfide	240	
75-09-2	Methylene Chloride		BQL
540-59-0	1,2-Dichloroethene		BQL
75-34-3	1,1-Dichloroethane		BQL
78-93-3	2-Butanone		BQL
67-66-3	Chloroform		BQL
107-06-2	1,2-Dichloroethane		BQL
71-55-6	1,1,1-Trichloroethane	30	
56-23-5	Carbon Tetrachloride	23	
108-05-4	Vinyl Acetate		BQL
71-43-2	Benzene	61	
79-01-6	Trichloroethene		BQL
78-87-5	1,2-Dichloropropane		BQL
75-27-4	Bromodichloromethane		BQL
10061-01-5	*cis*-1,3-Dichloropropene		BQL
10061-02-6	*trans*-1,3-Dichloropropene		BQL
79-00-5	1,1,2-Trichloroethane		BQL
124-48-1	Dibromochloromethane		BQL
75-25-2	Bromoform		BQL
108-10-1	4-Methyl-2-pentanone		BQL
110-75-8	2-Chloroethyl Vinyl Ether		BQL
108-88-3	Toluene	260	
591-78-6	2-Hexanone		BQL
127-18-4	Tetrachloroethene	34	
108-90-7	Chlorobenzene	29	
100-41-4	Ethylbenzene	190	
1330-20-7	Xylene (total)	1400	
100-42-5	Styrene	100	
79-34-5	1,1,2,2-Tetrachloroethane		BQL

Quantitation Limit (ng): 20

BQL: Below Quantitation Limit

RESEARCH TRIANGLE LABORATORIES, INC.

Client:	Koogler & Associates	Received:	05/28/91
RTL ID:	10528A-2	Analyzed:	05/29/91
File ID:	T8101	Reported:	06/04/91
Sample ID:	Run 2	Description:	VOST Pair

Tentatively Identified Compounds

Compound	Results [b] (ng)	Retention Time (minutes)	Molecular Weight (AMU)
Unknown trisiloxane	10000	19.72	–
Decane	4200	20.47	142
Ethylmethylbenzene isomer	1500	20.68	120
Unknown dimethyl alkane	3200	21.02	–
Unknown methyldecane	12000	22.20	–
Unknown dimethylnonane	4700	22.47	–
Decahydronaphthalene isomer	3500	23.02	138
Unknown decanedioic acid	[c] 14000	23.30	482
Unknown hydrocarbon	[c] 25000	23.71	–
Unknown cyclic hydrocarbon	5500	24.82	–

Comments:

[b,c] : **See Footnotes**

RESEARCH TRIANGLE LABORATORIES, INC.

Client:	Koogler & Associates	Received:	05/28/91
RTL ID:	10528A-3	Analyzed:	05/29/91
File ID:	T8104	Reported:	06/04/91
Sample ID:	Run 3	Description:	VOST Pair

Surrogate Percent Recovery	
1,2-Dichloroethane-d_4	74
Toluene-d_8	73
4-Bromofluorobenzene	101

CAS Number	Target Compound	Results (ng)	
74-87-3	Chloromethane	29	
75-01-4	Vinyl Chloride		BQL
74-83-9	Bromomethane		BQL
75-00-3	Chloroethane		BQL
75-69-4	Trichlorofluoromethane	57	
75-35-4	1,1-Dichloroethene		BQL
67-64-1	Acetone		BQL
75-15-0	Carbon Disulfide	890	
75-09-2	Methylene Chloride		BQL
540-59-0	1,2-Dichloroethene		BQL
75-34-3	1,1-Dichloroethane		BQL
78-93-3	2-Butanone		BQL
67-66-3	Chloroform		BQL
107-06-2	1,2-Dichloroethane		BQL
71-55-6	1,1,1-Trichloroethane	31	
56-23-5	Carbon Tetrachloride	23	
108-05-4	Vinyl Acetate		BQL
71-43-2	Benzene	42	
79-01-6	Trichloroethene		BQL
78-87-5	1,2-Dichloropropane		BQL
75-27-4	Bromodichloromethane		BQL
10061-01-5	*cis*-1,3-Dichloropropene		BQL
10061-02-6	*trans*-1,3-Dichloropropene		BQL
79-00-5	1,1,2-Trichloroethane		BQL
124-48-1	Dibromochloromethane		BQL
75-25-2	Bromoform		BQL
108-10-1	4-Methyl-2-pentanone		BQL
110-75-8	2-Chloroethyl Vinyl Ether		BQL
108-88-3	Toluene	130	
591-78-6	2-Hexanone		BQL
127-18-4	Tetrachloroethene	53	
108-90-7	Chlorobenzene		BQL
100-41-4	Ethylbenzene	65	
1330-20-7	Xylene (total)	440	
100-42-5	Styrene	32	
79-34-5	1,1,2,2-Tetrachloroethane		BQL

Quantitation Limit (ng): 20

BQL: Below Quantitation Limit

RESEARCH TRIANGLE LABORATORIES, INC.

Client:	Koogler & Associates	Received:	05/28/91
RTL ID:	10528A-3	Analyzed:	05/29/91
File ID:	T8104	Reported:	06/04/91
Sample ID:	Run 3	Description:	VOST Pair

Tentatively Identified Compounds

Compound	Results [b] (ng)	Retention Time (minutes)	Molecular Weight (AMU)
Unknown trimethylsilane	2100	5.42	–
Unknown trisiloxane	11000	19.68	–
Decane	1600	20.44	142
Unknown methyldecane isomer	6400	22.16	–
Unknown methyldecane isomer	3000	22.44	–
Unknown nonane isomer	[c] 16000	23.26	–
Unknown PNA	[c] 11000	23.61	–
Unknown hydrocarbon	[c] 6200	23.95	–
Unknown chlorinated hydrocarbon	1500	24.16	–
Unknown hydrocarbon	4400	24.71	–

Comments:

[b,c]: **See Footnotes**

CHAIN OF CUSTODY RECORD

Project Number: 501-91-01

Project Name: DRE ENVIRONMENTAL

Sample Location: MALONE, FL.

Sample Identification	Remarks
RUN 1	VOST ANALYSES
RUN 2	"
RUN 3	"
FIELD BLANK	"
LAB BLANK	"

Sampled By: (Signature) N.M. Joyce Date: 5-21-91 Time: See Data Sheets

Relinquished By: (Sign) N.M. Joyce Date: 5-24-91 Time: 1200 Hrs

Received By: (Sign) _____ Date: _____ Time: _____

Relinquished By: (Sign) _____ Date: _____ Time: _____

Received By: (Sign) _____ Date: _____ Time: _____

Relinquished By: (Sign) _____ Date: _____ Time: _____

Received By Lab: (Sign) [illegible] Date: 5-28-91 Time: 10:00 AM

Sample Shipped VIA: _____ UPS _____ Fed Express _____ Bus

Shipping Bill Number: _____

KOOGLER & ASSOCIATES

PROJECT PARTICIPANTS

KOOGLER & ASSOCIATES

PROJECT PARTICIPANTS

John B. Koogler, Ph.D., P.E.	Project Advisor
N. Mason Joye, Jr.	Project Supervisor
Stephen Bell	Field Test Crew
George Garcia	Field Test Crew

KOOGLER & ASSOCIATES

D. R. E.
ENVIRONMENTAL INC.
PH. (904) 758-3164 FAX (904) 755-5430
" Destruction Removal Efficiencies "

June 14, 1991

Leslie Dillingham
3644 Hederick Street
Jacksonville, Florida 32205

Attention: John Austin
Susan Trogden

Re: Baghouse Dust Testing, Malone Project

Dear Leslie,

Please find enclosed the data from the baghouse dust samples taken during our compliance tests on May 21, 1991.

Samples of the dust were obtained from the transfer auger after the baghouse, at thirty minute intervals, during the testing. A composite sample was made of all materials collected, and submitted to Enco Laboratory in Orlando, Florida for testing. (Please see enclosed lab data.)

The results of the TCLP metals testing indicate that this process system does not cause an increase in metal concentration which would cause the baghouse dust to be treated as a hazardous waste. This testing satisfies the requirement that was requested of us according to the permit conditions specified by John Austin and Susan Trogden.

During the testing period, the baghouse dust was returned to the quench screw where the soils are cooled just prior to exiting the unit. The total metals analysis of these samples also indicate no appreciable increase in metals to show any concern.

POST OFFICE BOX 1386, LAKE CITY, FLORIDA 32056-1386

I am still awaiting the final results of all other data during this test and will forward it to you if you desire. All tests were run with the afterburner at or above 1600°F.

If we can be of further assistance please call (904)758-3164.

Sincerely,

Chris K. Sleeper
D.R.E. ENVIRONMENTAL, INC.
President

CKS/jet
enclosures

cc Willard Harris (D.E.R.)

)nmental Conservation Laboratories
General Drive
o, Florida 32824
:26-5314
7 / 850-6945

CNE Laboratories
DHRS Certification No 86318, 83182

IT : D.R.E. Environmental, Inc.
:88: P.O. Box 1386
Lake City, FL 32056-1386

REPORT # : 5276
DATE SUBMITTED: May 23, 1991
DATE REPORTED : May 28, 1991

ITION: Chris Sleeper

SAMPLE IDENTIFICATION

Soil samples submitted and
identified by client as:

Malone, FL
Project #3002
5/21/91

#1 - Trial Burn #1	Waste Feed	21:30	#3002-01-0004
#2 - Trial Burn #2	Waste Feed	22:30	#3002-01-0005
#3 - Trial Burn #3	Waste Feed	24:00	#3002-01-0006
#4 - Trial Burn #1	Ash Composite	21:30	#3002-02-0013
#5 - Trial Burn #2	Ash Composite	22:30	#3002-02-0014
#6 - Trial Burn #3	Ash Composite	24:00	#3002-02-0015

GER, CLIENT SERVICES David J. Vesey
David J. Vesey

ENCO LABORATORIES
REPORT # : 5276
DATE REPORTED: May 28, 1991
REFERENCE : Project #3002

RESULTS OF ANALYSIS

A METHOD 9073 - TAL PETROLEUM HYDROCARBONS	#3002-01-0004	#3002-02-0013	units
tal Petroleum Hydrocarbons	423	<5.0	mg/Kg

A METHOD 9073 - TAL PETROLEUM HYDROCARBONS	#3002-01-0005	#3002-02-0014	units
tal Petroleum Hydrocarbons	156	<5.0	mg/Kg

A METHOD 9073 - TAL PETROLEUM HYDROCARBONS	#3002-01-0006	#3002-02-0015	units
tal Petroleum Hydrocarbons	256	<5.0	mg/Kg

< = Less Than

ENCO LABORATORIES
REPORT # : 5276
DATE REPORTED: May 23, 1991
REFERENCE : Project #3002

RESULTS OF ANALYSIS

AL METALS YSIS	#3002-02-0013	#3002-02-0014	#3002-02-0015	units
enic, As	<0.400	<0.400	<0.400	mg/Kg
ium, Ba	<12.0	<12.0	<12.0	mg/Kg
mium, Cd	<0.800	<0.800	<0.800	mg/Kg
omium, Cr	27.2	6.0	8.0	mg/Kg
d, Pb	9.20	4.16	6.84	mg/Kg
cury, Hg	<0.050	<0.050	<0.050	mg/Kg
enium, Se	<0.400	<0.400	<0.400	mg/Kg
ver, Ag	<1.60	<1.60	<1.60	mg/Kg

QUALITY CONTROL DATA

ameter	% Recovery	% Difference
AL METALS		
enic	108/105	3
ium	99/99	<1
mium	104/103	1
omium	92/91	1
d	100/103	3
cury	94/90	4
enium	103/102	1
ver	100/100	<1
418.1		
al Petroleum Hydrocarbons	96	7

< Less Than

Environmental Conservation Laboratories
10207 General Drive
Orlando, Florida 32824
407 / 826-5314
Fax 407 / 850-6945

ECO Laboratories
DHRS Certification No. 83018, E83102

CLIENT : D.R.E. Environmental, Inc.
ADDRESS: P.O. Box 1386
Lake City, FL 32056-1386

REPORT # : 5275.1
DATE SUBMITTED: May 23, 1991
DATE REPORTED : May 30, 1991

ATTENTION: Chris Sleeper

SAMPLE IDENTIFICATION

Soil samples submitted and identified by client as:

Project #3002
05/21/91

#1 - Trial Burn #1 Baghouse Screw 21:30

#2 - Trial Burn #2 Baghouse Screw 22:30

#3 - Trial Burn #3 Baghouse Screw 24:00

Note: Sample composited in house for analysis as per client request.

MANAGER, CLIENT SERVICES David J. Vesey

RESULTS OF ANALYSIS

TCLP METALS ANALYSIS	Composite	units
Arsenic, As	<0.100	mg/L
Barium, Ba	<3.00	mg/L
Cadmium, Cd	<0.200	mg/L
Chromium, Cr	<1.00	mg/L
Lead, Pb	<1.00	mg/L
Mercury, Hg	<0.005	mg/L
Selenium, Se	<0.100	mg/L
Silver, Ag	<0.400	mg/L

QUALITY CONTROL DATA

Parameter	% Recovery	% Difference
TCLP METALS		
Arsenic	94/85	9
Barium	104/104	<1
Cadmium	101/102	1
Chromium	103/103	<1
Lead	100/100	<1
Mercury	94/90	4
Selenium	100/110	10
Silver	101/104	3

< = Less Than

Environmental Conservation Laboratories
10207 General Drive
Orlando, Florida 32824
407 / 826-5314
Fax 407 / 850-6945

ENCO
Laboratories
DHRS Certification No. 88318, E83182

CLIENT : D.R.E. Environmental, Inc.
ADDRESS: P.O. Box 1386
Lake City, FL 32056-1386

REPORT # : 5243
DATE SUBMITTED: May 16, 1991
DATE REPORTED : May 22, 1991

ATTENTION: Chris Sleeper

SAMPLE IDENTIFICATION

Soil sample submitted and
identified by client as:

Baghouse Screw
Malone, FL
Project #3002

3002-03-0001 05/13/91 1400

MANAGER, CLIENT SERVICES

David J. Vesey

RESULTS OF ANALYSIS

EPA METHOD 9073 - TOTAL PETROLEUM HYDROCARBONS	3002-03-0001	units
Total Petroleum Hydrocarbons	5	mg/Kg

TOTAL METALS ANALYSIS	3002-03-0001	units
Arsenic, As	1.06	mg/Kg
Barium, Ba	18.0	mg/Kg
Cadmium, Cd	<0.800	mg/Kg
Chromium, Cr	13.6	mg/Kg
Lead, Pb	12.4	mg/Kg
Mercury, Hg	<0.050	mg/Kg
Selenium, Se	<0.800	mg/Kg
Silver, Ag	<1.60	mg/Kg

< = Less Than

QUALITY CONTROL DATA

Parameter	% Recovery	% Difference
Arsenic	92/94	2
Barium	94/95	1
Cadmium	99/105	6
Chromium	102/103	1
Lead	106/110	4
Mercury	100/103	3
Selenium	107/107	<1
Silver	102/103	1
Total Petroleum Hydrocarbons	86	1

< = Less Than

Environmental Conservation Laboratories
10207 General Drive
Orlando, Florida 32824
407 / 826-5314
Fax 407 / 850-6945

ENCO
Laboratories
DHRS Certification No. 88318, E83182

CLIENT : D.R.E. Environmental, Inc.
ADDRESS: P.O. Box 1386
Lake City, FL 32056-1386

DATE REPORTED : May 20, 1991

This report is not from the testing period but a reference of pre burn and post burn metals cpt

ATTENTION: Chris Sleeper
REFERENCE: Malone, FL

Comparison of Pre-burn and Post-burn Composite:

TOTAL METALS ANALYSIS	**Pre-burn***	**Post-burn Composite****	**units**
Arsenic, As	1.17	<0.400	mg/Kg
Barium, Ba	<12.0	<12.0	mg/Kg
Cadmium, Cd	<2.00	<0.800	mg/Kg
Chromium, Cr	7.60	8.00	mg/Kg
Lead, Pb	4.40	11.4	mg/Kg
Mercury, Hg	<0.050	<0.050	mg/Kg
Selenium, Se	0.546	<0.400	mg/Kg
Silver, Ag	<1.60	<1.60	mg/Kg

EPA METHOD 9073 - TOTAL PETROLEUM HYDROCARBONS	**Pre-burn**	**Post-burn Composite**	**units**
Total Petroleum Hydrocarbons	817	8	mg/Kg

* = Pre-burn: from ENCO report #5033
** = Post-burn: from ENCO report #5211
< = Less Than

RECEIVED
5-23-91

Florida Department of Environmental Regulation
Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400
Lawton Chiles, Governor
Carol M. Browner, Secretary

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMITS

Mr. Chris Sleeper
D.R.E. Environmental, Inc.
P. O. Box 1386
2 Guerdon Road
Lake City, Florida 32056

May 10, 1991

Enclosed are construction permits AC 16-187650 and -189522 for two 35 TPH mobile soil remediation units that will be operated throughout all of Florida, except Hernando and Okaloosa counties. These permits are issued pursuant to Section 403, Florida Statutes.

Any party to these permits has the right to seek judicial review of the permits 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.
Chief
Bureau of Air Regulation

Copy furnished to:

Don Ehlenbeck, BWC
District Air Program Administrators
County Air Program Administrators
Dale Kelley, P.E.
Bill Congdon, OGC
Leslie Dillingham, Petitioner Atty.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of buisness on 5-10-91.

FILING AND ACKNOWLEDGEMENT FILED, on this date, pursuant to §120.52(9), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk

5-10-91
Date

Final Determination

D.R.E. Environmental, Inc.
Lake City, Columbia County, Florida

35 TPH Mobile Soil Remediation Units
Statewide Operation (except Hernando & Okaloosa counties)

Permit No.	Unit
AC 16-187650	1
AC 16-189522	2

Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

May 8, 1991

Final Determination

The Technical Evaluation and Preliminary Determination for the permits to construct two 35 TPH mobile soil remediation units for D.R.E. Environmental, Inc. was distributed on January 4, 1991. The Notice of Intent to Issue was published in the following newspapers: Tallahassee Democrat, Panama City News Herald, Nassau Newsleader, Pensacola News Journal, Gainesville Sun, Fort Myers News Press, St. Augustine Record, Tampa Tribune, Orlando Sentinel, Baker County Press, Flagler News Tribune, and the Miami Herald. Copies of the evaluation were available for public inspection at all Department District offices and the following county air program offices: Broward, Dade, Duval, Hillsborough, Palm Beach, Pinellas, Sarasota, and Orange. The permittee intended to operate the units in all counties except Okaloosa.

The Department received comments from Bay County and two Petitions for Administrative Hearings in response to the Intent to Issue.

Bay County requested to be notified by certified mail before the proposed units were operated in that county. Specific Condition No. 24 of the permits requires that the permittee notify the county by certified mail prior to moving either unit into the county.

An agreement was reached on both petitions that resulted in the following changes to the permits:

1. The units cannot operate in Hernando County or within 1 mile of the County's boundaries (S.C. 9).

2. The dust captured by the baghouse will be analyzed for metals.

3. The units will be equipped with a belt scale to measure the soil fed to the dryer and instruments to measure and record the pressure drop across the baghouses and the temperature of the afterburners (S.C. 7 and 12).

4. Both units are not to be operated at the same site at the same time (S.C. 11).

5. The afterburner must operate at 1600°F unless compliance can be documented at a lower temperature (S.C. 3).

6. It was clarified that the units are authorized to treat virgin (non-recycled) petroleum products (gasoline, No. 2 diesel through No. 6 fuel oils, and motor oil) or "on-spec" oil unless Department approval is obtained to treat "off-spec" petroleum material (S.C. 14 and 15).

7. The production rate that the units are to be tested at was clarified (S.C. 19).

8. Required notification for relocation of the units was increased to 15 days for the Department and at least 12 days for the local government agencies (S.C. 24).

9. The permittee must notify the Department within 5 days of detecting excessive soil contamination (S.C. 27).

The final action of the Department will be to issue construction permits AC 16-187650 and -189522 as proposed in the Technical Evaluation and Preliminary Determination, except for the changes listed above.

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:
D.R.E. Environmental, Inc.
P. O. Box 1386, 2 Guerdon Road
Lake City, Florida 32056

Permit Number: AC 16-187650
Expiration Date: January 1, 1992
County: Mobile Operation
Project: 35 TPH Mobile Soil Remediation Unit No. 1

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

Authorization to construct a 35 TPH mobile soil remediation unit. The unit consists of a 15 ton bin to receive the contaminated soil, a 24" belt conveyor for transferring up to 35 TPH of wet soil to the kiln, a rotary kiln (5 feet diameter by 28 feet long), a Hauck BH390-8 baghouse, a 98.42% efficient (minimum) Hauck afterburner capable of operating above 1600°F with a 1 second residence time, two propane or natural gas burners (23 MMBtu/hr for kiln and 22 MMBtu/hr for afterburner), a 200 KW generator, instruments to measure and record the feed rate to the kiln, the pressure drop across the baghouse, the temperature of the afterburner, and associated controls. The unit is equipped with a stack (3 feet diameter by 30 feet high) that discharges approximately 36,077 acfm at 1600°F to the atmosphere.

The unit may be used throughout the State (all counties) after receiving Department authorization to operate at a new location, except that the unit shall not be operated in Okaloosa and Hernando counties or within one mile of the the boundry of Hernando County.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. Application received Oct. 9, 1990.
2. DER letter dated Oct. 24, 1990.
3. D.R.E. letter dated Oct. 5, 1990.
4. D.R.E. letter dated Nov. 28, 1990.
5. D.R.E. letter dated February 26, 1991.
6. Settlement Stipulation (Herb Shapiro, John H. Austin, and Hernando County).
7. Stipulation and Settlement Agreement Between John N. Austin, Susanne S. Trogdon, and D.R.E. Environmental, Inc.
8. D.R.E. letter dated March 19, 1991.
9. Bay County letter dated February 18, 1991.
10. Final Order (DOAH Case No. 91-0941 and 1020).

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor — Carol M. Browner, Secretary

PERMITTEE:
D.R.E. Environmental, Inc.
P. O. Box 1386, 2 Guerdon Road
Lake City, Florida 32056

Permit Number: AC 16-189522
Expiration Date: January 1, 1992
County: Mobile Operation
Project: 35 TPH Mobile Soil Remediation Unit No. 2

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

Authorization to construct a 35 TPH mobile soil remediation unit. The unit consists of a 15 ton bin to receive the contaminated soil, a 24" belt conveyor for transferring up to 35 TPH of wet soil to the kiln, a rotary kiln (5 feet diameter by 28 feet long), a Hauck BH390-8 baghouse, a 98.42% efficient (minimum) Hauck afterburner capable of operating above 1600°F with a 1 second residence time, two propane or natural gas burners (23 MMBtu/hr for kiln and 22 MMBtu/hr for afterburner), a 200 KW generator, instruments to measure and record the feed rate to the kiln, the pressure drop across the baghouse, the temperature of the afterburner, and associated controls. The unit is equipped with a stack (3 feet diameter by 30 feet high) that discharges approximately 36,077 acfm at 1600°F to the atmosphere.

The unit may be used throughout the State (all counties) after receiving Department authorization to operate at a new location, except that the unit shall not be operated in Okaloosa and Hernando counties or within one mile of the the boundry of Hernando County.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. Application received Oct. 9, 1990.
2. DER letter dated Oct. 24, 1990.
3. D.R.E. letter dated Oct. 5, 1990.
4. D.R.E. letter dated Nov. 28, 1990.
5. D.R.E. letter dated February 26, 1991.
6. Settlement Stipulation (Herb Shapiro, John H. Austin, and Hernando County).
7. Stipulation and Settlement Agreement Between John N. Austin, Susanne S. Trogdon, and D.R.E. Environmental, Inc.
8. D.R.E. letter dated March 19, 1991.
9. Bay County letter dated February 18, 1991.
10. Final Order (DOAH Case No. 91-0941 and 1020).

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 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. 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), Florida Statutes, 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 the permit.

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

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, 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 or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

GENERAL CONDITIONS:

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 a reasonable time, 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 the 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 non-compliance; and

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

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

GENERAL CONDITIONS:

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

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold 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) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained 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 dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

GENERAL CONDITIONS:

14. 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 corrected promptly.

SPECIFIC CONDITIONS:

Construction Requirements

1. The construction of this facility shall reasonably conform to the plans and schedule submitted in the application.

2. The stack sampling facilities must comply with F.A.C. Rule 17-2.700(4).

3. The afterburner shall operate above 1600°F with a 1 second retention time and have a minimum VOC destruction efficiency of 98.42% unless compliance with all standards can be documented at a lower temperature on a case-by-case basis.

Emission Restrictions

4. Particulate matter emissions from the afterburner stack shall neither exceed 0.08 grains/dscf corrected to 50% excess air nor 7.4 lbs/hr. Visible emissions from any part of the process shall not exceed 5% opacity.

5. Benzene emissions from the afterburner stack shall not exceed 8.6 lbs/hr. Total VOC emissions shall not exceed 22.1 lbs/hr. Compliance shall be determined from soil analysis, production rate, and the afterburner destruction efficiency.

6. The operation of this source shall not result in the emissions of air pollutants which cause or contribute to an objectionable odor pursuant to F.A.C. Rule 17-2.620(2).

Operation Requirements

7. The system shall be properly operated and maintained (F.A.C. Rule 17-2.210(2)). No person shall circumvent any pollution control

SPECIFIC CONDITIONS:

device or allow the emissions of air pollutants without the applicable air pollution control device operating properly (F.A.C. Rule 17-2.240). D.R.E.'s operation of its soil remediation units in the State of Florida is conditioned upon the baghouse, the cyclones, and the afterburner of each unit being fully operational, as demonstrated by continuous monitoring instrumentation on the baghouse and afterburner on each unit.

8. Reasonable precautions shall be used to minimize unconfined emissions of particulate matter generated by this operation (F.A.C. Rule 17-2.610(3)). Reasonable precautions shall be defined as keeping the work areas wet where the soil is being removed and treated.

9. The unit shall not be operated at a location or in a manner that may create a nuisance. The units shall not operate in Okaloosa or Hernando counties or within one mile of the boundaries of Hernando County.

10. Untreated soil removed from the ground shall be stored under waterproof covers to minimize unconfined emissions.

11. This unit shall be allowed to operate continuously, 8760 hours per year. The units must be operated independently and never at the same location.

12. Each soil remediation unit shall have a calibrated belt scale monitoring the maximum charging rate of 35 TPH. The soil entering the kiln cannot be larger than 2 inches in diameter. The permittee shall have means to determine the feed or production rate on site.

13. Only natural gas or propane shall be used as fuel for the kiln and afterburner. Maximum permitted fuel consumption is 45 MMBtu/hr (500 GPH propane).

14. Only soils contaminated with virgin (non-recycled) petroleum products (gasoline, No. 2 diesel through No. 6 fuel oil and motor oil) or "on-spec" oil shall be treated in this unit unless otherwise approved by the Bureau of Air Regulation.

Hazardous waste as defined in 40 CFR 261.3 shall not be processed by this unit.

SPECIFIC CONDITIONS:

Metals in the untreated soil shall not exceed the following:

Metals	Maximum Concentration TCLP(mg/L)	Total(mg/Kg)
Arsenic	5.0	55
Barium	100.0	2750
Cadmium	1.0	55
Chromium	5.0	275
Lead	5.0	77
Mercury	0.2	17
Selenium	1.0	165
Silver	5.0	165

Total Volatile Organic Aromatics (VOA) constituent in the soil shall not exceed the concentrations that have the potential to exceed the acceptable ambient air concentration or the VOC emission limit for this unit (see Specific Conditions Nos. 5, 17, and 27).

To show compliance with this condition, the permittee shall analyze composite samples of the contaminated soil (see Specific Condition No. 16) by the EPA SW 846 Methods, Test Method for Evaluating Solid Waste Physical/Chemical, for VOA (EPA Method 5030/8020), TRPH (EPA draft Method 9073), and Metals (EPA Method 1311, 3050, 6010, 7040, 7041, 7060, 7061, 7080, 7130, 7131, 7190, 7191, 7420, 7421, 7471, and 7760).

15. The permittee may request, in writing, to the Bureau of Air Regulation permission to treat "off-spec" petroleum material. The request shall include the history of the site to be treated, an analysis of the contaminants suspected to be in the soil, an estimate of the emissions from the unit while processing the soil, and calculations showing that the ambient air impact from the unit will not exceed the acceptable ambient air concentration for any toxic pollutant. The Department will approve or deny each request in writing on a case-by-case basis.

16. Sampling and analysis of the contaminated soil at each site, based on the procedures prescribed in SW-846, shall be conducted prior to remediation. The minimum number of composite samples for analysis at each site prior to remediation shall be as follows:

SPECIFIC CONDITIONS:

Soil Quantity ($yards^3$)	No. of Composite Samples
Less than 100	1
100 to 500	3
500 to 1000	5
Each additional 500 yds	1 additional sample

17. Unless the Department has determined other concentrations are required to protect public health and safety, predicted ambient air impact of any toxic pollutant, as determined by the PTPLU 6 model or other DARM approved models, shall not exceed the concentration calculated by the following formula:

$$AAC = \frac{40}{X} \cdot \frac{1}{\text{safety factor}} \cdot (OEL)$$

where,

AAC = acceptable ambient concentration

Safety Factor = 100 for category A substances and 50 for category B substances

X = 40 or the hours/week of actual operation, whichever is larger

OEL - Occupational exposure level such as the TWA-TLV published by the ACGIH, OSHA, and NIOSH published standards for toxic materials.

TWA-TLV is the threshold limit value (8 hrs/day, 40 hrs/wk) maximum exposure concentration considered safe for workers by the ACGIH.

Data in the application shows that, for continuous operation, an emission of 1 gram/sec will have a maximum ambient impact of 6.52×10^{-3} mg/m^3 (8 hr. avg). If the stack parameters are different than the values listed in the application, the permittee must determine and use the actual impact factor calculated by the EPA Approved Screen - 1.1 Model.

$$\text{Maximum Allowable Emissions (g/sec)} = \frac{AAC \quad mg/m^3}{6.52 \times 10^{-3}}$$

SPECIFIC CONDITIONS:

18. Pressure drop across the baghouse shall be recorded hourly and temperature of the afterburner shall be recorded continuously during operations. The instruments used to obtain these measurements shall be properly calibrated, maintained, and in operation any time the unit is in service.

Compliance Requirements

19. This unit must be tested at 90-100% of permitted capacity (31.5 to 35 TPH) or at the maximum process weight rate at which the permittee intends to operate, not to exceed 35 TPH. All compliance tests shall meet the requirements listed in F.A.C. Rule 17-2.700. The unit shall not operate above the maximum permitted rate of 35 TPH.

20. When the Department, after investigation, has good reason (such as complaints, increased visible emissions, or questionable maintenance of control equipment) to believe that any applicable emission standard contained in Chapter 17-2, F.A.C., or in this permit is being violated, it may require the owner or operator of the unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the source and to provide a report on the results of said tests to the Department.

21. The exhaust stack for this process must be tested concurrently for particulate matter and visible emissions by EPA Methods 5 and 9 pursuant to 40 CFR 60, Appendix A, revised as of July 1, 1990, within 5 days after placing the unit in commercial operation under this permit and annually thereafter. Operation at each subsequent site requires an EPA Method 9 test to be performed within 3 days of placing the unit in service. Within five (5) days of placing each unit in operation in Florida, D.R.E. shall test samples of each unit's baghouse dust in order to ascertain TCLP metal contaminant levels. Dust samples shall be collected at one-half (1/2) hour intervals during the compliance testing for the operating permit only. The incremental samples shall be composited and tested by TCLP methods for toxic metal contaminants. The above test results shall be provided to DER and Petitioners within five (5) days of receipt. If either sample regime shall indicate levels of TCLP contaminants in excess of those listed in 40 CFR 261, then a panel of DER and D.R.E. personnel shall discuss and determine appropriate operating and permitting procedures for the units. Petitioners shall be notified at least five (5) days prior to the meeting of such panel. Recommendations and directives of the panel shall be added to D.R.E.'s permits as a special condition, as required by DER.

SPECIFIC CONDITIONS:

22. The unit destruction efficiency, benzene, and VOC emissions shall be established by a material balance using a Method 18, or 25 test (40 CFR 60, Appendix A, revised as of July 1, 1990) and soil analysis before and after treatment or other methods as approved by the Department.

Administrative Requirements

23. The permittee shall furnish the available information listed in Specific Condition No. 24 prior to operating the portable rotary kiln/afterburner system at its initial site. This permit requires compliance with any applicable local (county) regulations.

24. This unit shall not be operated at any new site until the permittee has requested authorization to operate at the new site. The request shall be at least 15 days prior to operation at the new site. The permittee shall notify the BAR, local government (city and/or county), and Department District office by registered mail at least 12 days prior to moving to the new site. The notification shall provide the permit number of the unit, a copy of the last stack test results, the date of the proposed move, the new site for the unit, and the locations and contamination levels of the soils to be treated. The Department shall notify the permittee of any new air pollutant emission conditions the unit must meet after the receipt of the relocation notice. This may include requirements for county operation permits and additional restrictions on the operation of this unit.

25. The permittee shall maintain a log that shows the unit's operation time during the preceeding 12 months. All required records must be available for inspection at the job site for the unit within 3 working days of a request by the Department.

26. The BAR shall be notified in writing at least 15 days in advance of any annual compliance test to be conducted on this source.

27. Any analysis required by Specific Condition No. 16 which indicates a violation of any condition in this permit shall be reported within 5 days to BAR. An average concentration of benzene above 7,776 ppm in the soil or total hydrocarbons above 20,000 ppm indicate a violation of this permit. The soil may be decontaminated by operating at less than the 35 TPH production rate, or other means with prior approval of the Department. The permittee must propose the method of compliance with this permit.

SPECIFIC CONDITIONS:

28. Records shall be kept on the location, date, time, and number of samples taken for each composite sample. Soil analysis results shall be available for Department inspection during the clean up of the site and for 3 years thereafter. All soil samples taken at the remediation site and exiting the dryer shall be stored in a sealed glass container immediately upon sampling.

29. Stack test results for PM and VOC shall be submitted to the Department within 45 days of the test.

30. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the BAR prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

31. An application for an operation permit must be submitted to the BAR at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

Issued this 9 day
of May, 1991

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Carol M. Browner, Secretary

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

HERB SHAPIRO,
JOHN N. AUSTIN,
HERNANDO COUNTY, AND
SUSANNE TROGDON,

Petitioners,

vs.

D.R.E. ENVIRONMENTAL, INC.,
AND STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION,

Respondents.
_____/

DOAH CASE NO. 91-0941
91-1020
OGC CASE NOS. 91-0102
91-0103
91-0197
91-0199
91-0200
91-0201

FINAL ORDER

On January 16, 1991, the State of Florida Department of Environmental Regulation ("Department") received a letter that could be considered as a request for administrative hearing from Petitioner, Herb Shapiro ("Shapiro"). On January 28, 1991, the Department received a letter that could be considered as a request for administrative hearing from Petitioner, Susanne Trogdon ("Trogdon"). On January 29, 1991, the Department received a petition requesting an administrative hearing from Petitioner, Hernando County. On January 16, 1991, the Department received a letter that could be considered as a request for administrative hearing from Petitioner, John N. Austin ("Austin"). The Petitioners challenged the Department's intent to issue Permit Nos. AC16-187650 and AC16-189522 to D.R.E. Environmental, Inc., to construct two 35TPH mobile soil remediation units for operation throughout Florida.

On April 18, 1991, after receiving a Stipulation and Settlement Agreement between Austin, Trogdon, and D.R.E. Enviromental, a Notice of voluntary dismissal from Hernando County and a Settlement Stipulation signed by Shapiro the assigned Hearing Officer issued an Order which closed the Division of Administrative Hearings file and relinquished jurisdiction back to the Department. (Exhibit 1) There being no further matters to consider,

IT IS ORDERED:

The petitions are hereby dismissed and the Department's Northeast District Office is directed to issue Permit Nos. AC16-187650 and AC16-189522 as modified according to the attached Exhibit 2.

Any party to this 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 this Order is filed with the clerk of the Department.

DONE AND ORDERED this 1ST day of ~~April~~ May, 1991, in Tallahassee, Florida.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to S120.52 Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Kathy C. Carter 5-2-91
Clerk Date

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Carol M. Browner

CAROL M. BROWNER
Secretary

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished by U.S. Mail to:

Daniel D. Akel, Esq.
Blalock, Holbrook & Akel, P.A.
2301 Independent Sq
Jacksonville FL 32202

Herb Shapiro
Old Hunter Rd
Brooksville FL 34601

M. Christopher Bryant, Esq.
Segundo J. Fernandez, Esq.
Oertel, Hoffman,
Fernandez & Cole, P.A.
P O Box 6507
Tallahassee FL 32314-6507

Leslie Goller Dillingham
3644 Hedrick St
Jacksonville FL 32205

on this 2d day of ~~April~~ May, 1991.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

W.H. Congdon

WILLIAM H. CONGDON
Assistant General Counsel

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400
Telephone: (904) 488-9730

STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

HERB SHAPIRO, JOHN H. AUSTIN, and HERNANDO COUNTY, Petitioners, vs. D.R.E. ENVIRONMENTAL, INC., and STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL REGULATION, Respondents.	)	CASE NO. 91-0941
SUSANNE TROGDON, VICE-CHAIRMAN, SIERRA CLUB, Petitioner, vs. D.R.E. ENVIRONMENTAL, INC., and STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL REGULATION, Respondents.	)	CASE NO. 91-1020

ORDER CLOSING FILES

John N. Austin and Susanne Trogdon as Vice-Chairman for Sierra Club have entered into a stipulation and settlement with D.R.E. Environmental, Inc. to which the State of Florida, Department of Environmental Regulation consents and agrees. Effectively this resolves the dispute between those parties. In view of that stipulation those Petitioners have moved to withdraw their petitions. Hernando County has filed a voluntary dismissal of its case based upon a settlement stipulation reached with D.R.E. Environmental, Inc.

EXHIBIT 1

6. The language of Special Condition 14 shall be modified to read "virgin (non-recycled) petroleum products (gasoline #2 diesel through #6 fuel oil and motor oil) or 'on spec' oil" instead of petroleum products. Hazardous waste as defined in 40 CFR 261.3 shall not be processed by this unit.

7. Special Condition 15 shall be modified to read " 'off spec' petroleum material."

8. The language of Specific Condition 19 shall be modified to read "Each unit must be tested at 90 to 100 % of permitted capacity (31.5 to 35 TPH) or at the maximum process weight at which the permittee intends to operate and will then be permitted to operate, not to exceed 35 TPH. All compliance tests shall meet the requirements listed in F.A.C. Rule 17-2.700."

9. The language of Specific Condition 24 shall be modified to be stated in the imperative, "the request shall be at least 15 days prior to operation at the new site" and the timing of notice to the BAR local governments and DER District Office shall be increased to 12 days prior to moving to a new site.

10. The language of Specific Condition 27 shall be modified to read reporting of a violation to BAR "reported within 5 days."

Each party shall bear its own cost and attorney's fees incurred in this matter.

STIPULATED AND AGREED TO this 1st day of ~~March~~ APRIL, 1991.

D.R.E. ENVIRONMENTAL, INC.

Leslie Goller Dillingham

BY: Christopher K. Sleeper

LESLIE GOLLER DILLINGHAM
3644 Hedrick Street
Jacksonville, Florida 32205
904-388-8968
Florida Bar No.: 393932
Attorneys for Petitioners

CHRISTOPHER K. SLEEPER
P.O. Box 1386
Lake City, Florida 32056-1386
904-755-1196

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION HEREBY CONSENTS AND AGREES TO THE ABOVE.

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL REGULATION

DATED APRIL 8th, 1991

BY: W. H. Congdon

WILLIAM H. CONGDON, ESQ.
2600 Blairstone Road
Tallahassee, Florida 32399-2400
904-488-9730
Florida Bar No.: 283606
Assistant General Council
Attorney for State of Florida
Department of Environmental Reg.

On April 8, 1991, Herb Shapiro signed a settlement stipulation and agreed to voluntarily dismiss his petition for formal administrative proceedings. Counsel for D.R.E. Environmental, Inc. signed that stipulation in behalf of his client on April 15, 1991. The settlement between Shapiro and D.R.E. was consummated after an order was entered on April 9, 1991, granting the amended motion to dismiss the original petition of Herb Shapiro. That order allowed Shapiro to file an amended petition. Given the statements in the settlement stipulation between Shapiro and D.R.E. Environmental, Inc., it is concluded that Shapiro does not intend to avail himself of the opportunity to file an amended petition.

Having considered the various actions by the Petitioners in these cases, to include stipulations and dismissals, the Division of Administrative Hearings' files are closed and the cases returned to the referring agency for such disposition as would be necessary.

DONE and ORDERED this 18th day of April, 1991, at Tallahassee, Florida.

CHARLES C. ADAMS, Hearing Officer
Division of Administrative Hearings
The DeSoto Building
1230 Apalachee Parkway
Tallahassee, Florida 32399-1550
(904) 488-9675

Filed with the Clerk of the
Division of Administrative Hearings
this 18th day of April, 1991.

Copies furnished:

Leslie G. Dillingham, Esquire
3644 Hedrick Street
Jacksonville, FL 32205

William H. Congdon, Esquire
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

John H. Austin
6356 Sundown Drive
Jacksonville, FL 32244

Daniel D. Akel, Esquire
Blalock, Holbrook & Akel, P.A.
2301 Independent Square
Jacksonville, FL 32202

M. Christopher Bryant, Esquire
Segundo Fernandez, Esquire
Post Office Box 6507
Tallahassee, FL 32314-6507

Susanne Trodgon, Vice-Chairman
Sierra Club
2922 Amelia Island Parkway
Fernandina Beach, FL 32034

Herb Shapiro
Old Hunter Road
Brooksville, FL 34601

BEFORE THE STATE OF FLORIDA
DIVISION OF ADMINSTRATIVE HEARINGS

HERB SHAPIRO, JOHN N. AUSTIN,
and HERNANDO COUNTY,

Petitioners,

vs. CASE NO.: 91-0941

D.R.E. ENVIRONMENTAL, INC.,
and STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION,

Respondents.

SUSANNE TROGDON,

Petitioner,

vs. CASE NO.: 91-1020

D.R.E. ENVIRONMENTAL, INC.,
and STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION,

Respondents.

STIPULATION AND SETTLEMENT AGREEMENT BETWEEN
JOHN N. AUSTIN, SUSANNE S. TROGDON,
AND D.R.E. ENVIRONMENTAL, INC.

AGREEMENT made this 1ST day of APRIL, 1991 by and between petitioners, JOHN N. AUSTIN and SUSANNE S. TROGDON, (jointly hereinafter referred to as "Petitioners") and D.R.E. ENVIRONMENTAL, INC., (hereinafter referred to as "Respondent").

WHEREAS, the Department of Environmental Regulation has issued notice of its intent to issue two air construction permits, numbered AC16-187650 and AC16-189522, to D.R.E. Environmental for the construction of two 35 TPH mobile soil remediation units. Petitioners have filed Petitions for Formal Administrative Hearing Proceedings

Exhibit 2

challenging the permit issuance.

WHEREAS, in the interest of avoiding the time, expense and uncertainty of litigation, the Petitioners and Respondent desire to enter into this agreement.

NOW THEREFORE, in consideration of the above, the receipt and sufficiency of which is hereby acknowledged, the undersigned parties hereby agree as follows, and the following shall be included as additional specific conditions and/or modifications to the proposed specific conditions of the permits:

1. "Within five (5) days of placing each unit in operation in Florida, D.R.E. shall test samples of each unit's baghouse dust in order to ascertain TCLP metal contaminant levels. Dust samples shall be collected at one-half (1/2) hour intervals during the compliance testing for the operating permit only. The incremental samples shall be composited and tested by TCLP methods for toxic metal contaminants. The above test results shall be provided to DER and Petitioners within five (5) days of receipt. If either sample regime shall indicate levels of TCLP contaminants in excess of those listed in 40 CFR 261, then a panel of DER and D.R.E. shall discuss and determine appropriate operating and permitting procedures for the units. Petitioners shall be notified at least five (5) days prior to the meeting of such panel. Recommendations and directives of the panel shall be added to D.R.E.'s permits as a special condition, as required by DER."

2. "D.R.E.'s operation of its soil remediation units in the State of Florida is conditioned upon the baghouse, the cyclones, and the afterburner of each unit being fully operational, as demonstrated by continuous monitoring instrumentation on the baghouse and afterburner on each unit."

3. "The units must be operated independently and never at the same location."

4. The language of Specific Condition 3 shall be modified to read "the afterburner shall operate at or above the required minimum temperature of 1600 degrees F, or achieve 98.42 percent destruction efficiency, whichever is higher, unless compliance with all standards can be documented at a lower temperature on a case by case basis."

5. The language of Special Condition 12 shall be modified to read "Each soil remediation unit shall have a calibrated belt scale monitoring the maximum charging rate of 35 TPH."

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: Carol M. Browner

FROM: Steve Smallwood

DATE: May 8, 1991

SUBJ: Approval of Construction Permits AC 16-187650 and -189522
D.R.E. Environmental, Inc.

Attached for your approval and signature are permits prepared by the Bureau of Air Regulation for the above mentioned company to construct two 35 TPH mobile soil remediation units that will be operated throughout all of Florida, except Hernando and Okaloosa counties.

Comments were received during the public notice period.

I recommend your approval and signature.

CF/WH/plm

Attachments

D. R. E.

Environmental, Inc.

"Destruction Removal Efficiencies"

RECEIVED

APR 17 1991

DER - BAQM

April 15, 1991

Mr. Willard Hanks
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Notification of Operation of Soil Remediation Unit

Dear Sir:

Pursuant to Chapter 17-775.700(1) F.A.C., D. R. E. Environmental, Inc. (DRE) hereby submits the following notification letter to your office of its intent to operate at a site in your jurisdiction. DRE operates under statewide mobile air permit number AC 16-187650. Below is the site information requested concerning a site remediation project.

1. Location of Remediation Project: Former Herring's 71 Truck Stop, Highway 71, Malone, Florida.

2. Company Name/Owner: Jackson County Correctional Institution.

3. Address of Owner, Contact Person, Phone Number: William Bishop, Consulting Engineer, 650 Jenks Avenue, Panama City, Florida, 32402, (904)785-9855.

5. Amount of Soils to be Treated: 2000 Tons.

6. Soil Contaminant:

_____	Leaded Gasoline
_____	Unleaded Gasoline
X	Diesel
_____	Used Oil
_____	Mixed
_____	Other:

7. Anticipated Stack Testing Date: April 29, 1991.

Please review the above data concerning the referenced soil project. If there are any questions or major concerns that you may have please call (904)755-1196.

Sincerely,

D. R. E. Environmental, Inc.

Chris K. Sleeper, President

Others Notified: Mr. Robert V. Kriegel, Deputy Assistant Secretary, FDER
Mr. Ben D. Hall, President, City Council of Malone, Florida
Mayor Roy J. Edge, City of Malone, Florida

P.O. BOX 1386, LAKE CITY, FLORIDA 32056-1386
PHONE (904)755-1196 • FAX (904)755-5430

DRE ENVIRONMENTAL INC
P O BOX 1386
LAKE CITY FL 32056

LAKE CITY APR 16'91 FL

U.S.POSTAGE 0.29 METER H 2323957

To Patty Adams
Date 4/9 Time 4:57

WHILE YOU WERE OUT

M Janet Newhouse
of D.R.E. Environmental
Phone 904 - 755 - 1196
Area Code Number Extension

X	TELEPHONED		PLEASE CALL
	CALLED TO SEE YOU		WILL CALL AGAIN
	WANTS TO SEE YOU		URGENT
	RETURNED YOUR CALL		

Message FED EX
FOR PERMIT YOUR
SENDING
1410-1791-8

Operator

MR WILLARD HANKS
FDER
2600 BLAIR STONE ROAD
TALLAHASSEE FL 32399-2400

D. R. E. Environmental, Inc.

P.O. Box 1386
Lake City, FL 32056-1386
(904) 755-1196

FACSIMILE TRANSMITTAL

Date: 4/11/91

Message To: Willard Hanks

Message From: Chris Sleeper

Number Of Pages Including Cover: 5

Special Instructions: This is the agreement between Hernando County and DRE. Also, please confirm Item 16 of the permit regarding sampling and tonnage in chapter 17-775 from 250 to 750.

Please call (904) 755-1196 if you do not receive all pages of this fax.

RETURN FAX NO.: (904) 755-5430

BLALOCK, HOLBROOK & AKEL, P. A.
ATTORNEYS AT LAW
3301 INDEPENDENT SQUARE
JACKSONVILLE, FLORIDA 32202-5059

S. GORDON BLALOCK
H. LEON HOLBROOK
EDWARD C. AKEL
KATHLEEN HOLBROOK COLE
DANIEL D. AKEL
H. LEON HOLBROOK, III
JOHN R. STIEFEL, JR.

TELEPHONE
(904) 358-6311

TELECOPIER
(904) 358-7330

March 25, 1991

M. Christopher Bryant, Esquire
Oertel, Hoffman, Fernandez & Cole, P.A.
Post Office Box 6507
Tallahassee, Florida 32314-6507

Re: Hernando County, et al. v. DRE Environmental, Inc., et al.

Dear Mr. Bryant:

Enclosed is the original fully executed settlement stipulation. In accordance with our agreement, please hold this stipulation in escrow until you have received notification from me that Mr. Shapiro has executed a similar stipulation.

Thank you for your assistance in this matter.

Yours truly,

Daniel D. Akel

DDA/lld

Enclosure

3/27/91

BEFORE THE STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

HERB SHAPIRO, JOHN H. AUSTIN,
and HERNANDO COUNTY,

Petitioners,

vs. CASE NO.: 90-941

D.R.E. ENVIRONMENTAL, INC.,
and STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL
REGULATION,

Respondents.

SETTLEMENT STIPULATION

Petitioner, HERNANDO COUNTY and Respondent/Applicant, D.R.E. ENVIRONMENTAL, INC., hereby stipulate and agree as follows:

1. The Department of Environmental Regulation has issued notice of its intent to issue two air construction permits, numbered AC16-187650 and AC 16-189522, to D.R.E. Environmental for the construction of two 35 TPH mobile sail remediation units. Hernando County has filed a Verified Petition for Formal Administrative Proceedings challenging the permit issuance.

2. In the interest of avoiding the time, expense and uncertainty of litigation with Hernando County, D.R.E. agrees to not operate these units in Hernando County or within one mile of the County boundaries. D.R.E. agrees to a modification of the permits by the addition of a second sentence to Specific

Condition 9 of each of the permits, which sentence will read as follows:

> The unit shall not be operated in Hernando County or within one mile of the boundaries of Hernando County.

3. Further, page 1 of 11 of each of the draft permits shall be modified by changing the third paragraph of that page to read as follows:

> The unit may be used throughout the State (all counties) after receiving Department authorization to operate at a new location, except that the unit shall not be operated in Hernando County or within one mile of the boundaries of Hernando County.

4. In reliance on these modifications to the permits, Hernando County agrees to voluntarily dismiss its Verified Petition for Formal Administrative Proceedings filed in this matter.

5. This settlement does not bar D.R.E. from seeking a modification to these permits, or a new air construction permit, to operate in Hernando County and the one mile surrounding area. However, D.R.E. shall provide Hernando County with direct written notice at the time of any such application for permits or permit modifications, and shall provide Hernando County with direct written notice at the time of the Department of Environmental Regulation's issuance of a notice of intended agency action on the application. Notice shall be given by letter to the County Administrator and the County Environmental Officer. Hernando County may, at its option, petition for administrative hearing on the intended agency action and shall not be deemed to have waived

any relevant issues by dismissal of its Petition in the instant case.

6. Each party shall bear its own costs and attorney's fees incurred to date in this matter.

STIPULATED and AGREED to this _____ day of March, 1991.

FOR: HERNANDO COUNTY

M. Christopher Bryant

M. CHRISTOPHER BRYANT
Oertel, Hoffman, Fernandez &
Post Office Box 6507
Tallahassee, FL 32314-6507
(904) 877-0099

March 20, 1991
DATE

FOR: D.R.E. ENVIRONMENTAL, INC.

DANIEL D. AKEL
Blalock, Holbrook & Akel, P.A.
2301 Independent Square
Jacksonville, FL 32202
(904) 356-6311

March 25, 1991
DATE

sjf\1579\1759.ss

Willard's Copy

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

April 4, 1991

Mr. M. Christopher Bryant
Oertel, Hoffman, Fernandez & Cole, P.A.
P. O. Box 6507
Tallahassee, Florida 32314-6507

Dear Mr. Bryant:

Re: Hernando County, Soil Remediation Unit

In response to your March 8, 1991, letter on the referenced subject, I regret to inform you that the Department does not have a procedure for maintaining mailing lists on specific subjects to interested parties.

By policy, Hernando County will be notified of our receipt and Intent to Issue a permit for any mobile soil remediation unit that plans to operate in their County. We recommend that you make arrangements with your client to receive copies of these notices. We will be glad to schedule an appointment for you or your staff to review any of our files during normal business hours or, if you request in writing, mail a copy of the Notice of Intent to Issue for any specific application we are processing.

Sincerely,

Barry D. Andrews

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

CHF/WH/plm

Attach: Notice for Site Reclam.
Notice for International Petrol. Sp.
Notice for Dust Coating

c: William Congdon, OGC

State of Florida
Department of Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit (AC 48-176117) to Thermotech Systems, Inc., P. O. Box 609506, Orlando, Florida 32860, to construct a 40 TPH soil remediation unit with air pollution controlled by a baghouse and afterburner. Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) determinations were not required. The unit may emit 5.0 TPY particulate matter, 50 TPY VOC, and 29.1 TPY SO_2. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision 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 fourteen (14) days of publication of this notice. 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

Department of Environmental Regulation
Southeast District
1900 S. Congress Avenue, Suite A
West Palm Beach, Florida 33406

Broward County Environmental
Quality Control Board
621 South Andrews Avenue
Ft. Lauderdale, Florida 33310

Dade County Dept. of Environmental
Resources Management
Jose Marti Building
801 S.W. 3rd Avenue, 2nd Floor
Miami, Florida 33130

Duval County Dept. of Health, Welfare
& Bio-Environmental Services
421 West Church Street, Suite 41
Jacksonville, Florida 32202

Hillsborough County Environmental
Protection Commission
1410 North 21st Street
Tampa, Florida 33605

Palm Beach County Health Dept.
Division of Environmental Science
and Engineering
901 E. Evernia Street
West Palm Beach, Florida 33402

Pinellas County Department of
Environmental Management
315 Court Street
Clearwater, Florida 34616

Sarasota County Environmental
Services Department
1301 Cattleman Road
Sarasota, Florida 33582-9631

Orange County Environmental
Protection Department
2002 E. Michigan Avenue
Orlando, Florida 32806

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

Florida Department of Environmental Regulation
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400
Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary

December 21, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. E. J. Elliott, President
Thermotech Systems Corporation
5201 N. Orange Blossom Trail
Orlando, Florida 32810

Dear Mr. Elliott:

Re: AC 48-176117, 40 TPH Portable Rotary Kiln/Afterburner System, Serial No. SRU-1007

The Department is in receipt of your November 19, 1990, letter requesting the permit to construct the referenced air pollution source be transferred from Thermotech Systems Corporation to Dustcoating Incorporated. This request is acceptable and our records for construction permit No. AC 48-176117 have been changed to show that the new owner/operator is:

Mr. Fulton Denny, Vice President
Dustcoating Incorporated
6925 D'Chene Lane
Maple Plain, Minnesota 55349

Dustcoating Incorporated will be responsible for the operation of the referenced unit. A copy of this letter must be filed with the referenced construction permit and shall become a part of that permit.

Sincerely,

For Dale Twachtmann
Secretary

DT/plm

Attachment: Thermotech Nov. 19, 1990, letter

c: Don Ehlenbeck, BWC
District Air Program Administrators
County Air Program Administrators
Fulton Denny, Dustcoating

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permits by:

Site Reclamation Services, Inc.
9050 E.D. Robins Road
Howey-in-the-Hills, Florida 32737

DER File No. AC 35-186806
AC 35-186807

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue air construction permits (copies attached) for the proposed project as detailed in the applications specified above. The Department is issuing this Intent to Issue for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, Site Reclamation Services, Inc., applied on September 24, 1990, to the Department of Environmental Regulation for permits to construct two 25 TPH mobile soil remediation units for operation throughout Florida.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that air construction permits are required for the proposed work.

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permits. The notice shall be published one time only within 30 days, in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to the Department, at the address specified within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permits.

The Department will issue the permits with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.

A person whose substantial interests are affected by the Department's proposed permitting decision 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. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of receipt of this intent, whichever first occurs. 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 notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applications 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 publication of this notice in the Office in 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.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

Copies furnished to:

c: Don Ehlenbeck, BWC
District Air Program Administrators
County Air Program Administrators
John Koogler, P.E.

State of Florida
Department of Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit (AC 16-182508) to International Petroleum Specialties, Inc., 1859 East Adam Street, Jacksonville, Florida 32202, to construct an 87.5 TPH mobile soil remediation unit which will control air pollutant emissions with a baghouse and afterburner. The unit may operate in any county that this notice is published in. Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) determinations were not required. The unit may emit 7.6 lbs/hr (33.2 TPY) particulate matter, 18.9 lbs/hr (82.7 TPY) sulfur dioxide, 21.0 lbs/hr (91.7 TPY) volatile organic compounds, 11.9 lbs/hr (51.9 TPY) nitrogen oxides, and 3.0 lbs/hr (13.1 TPY) carbon monoxide. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment or create a health hazard. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision 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 fourteen (14) days of publication of this notice. 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 Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applications 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 publication 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.

The applications are available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department of Environmental Regulation offices located at:

2600 Blair Stone Road, Tallahassee, Florida 32399-2400
160 Governmental Center, Pensacola, Florida 32501-5794
4520 Oak Fair Boulevard, Tampa, Florida 33610-7347
2269 Bay Street, Ft. Myers, Florida 33901-2896
7825 Baymeadows Way, Suite B200, Jacksonville, FL 32256-7577
1900 S. Congress Avenue, Suite A, West Palm Beach, FL 33406

and County environmental offices located at:

621 South Andrews Avenue, Ft. Lauderdale, Florida 33310
801 S.W. 3rd Avenue, 2nd Floor, Miami, Florida 33130
421 West Church Street, Suite 412, Jacksonville, FL 32202
1410 North 21st Street, Tampa, Florida 33605
901 E. Evernia Street, West Palm Beach, Florida 33402
315 Court Street, Clearwater, Florida 34616
1301 Cattleman Road, Sarasota, Florida 33582-9631
2002 E. Michigan Avenue, Orlando, Florida 32806

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

BEFORE THE STATE OF FLORIDA
DIVISION OF ADMINSTRATIVE HEARINGS

HERB SHAPIRO, JOHN N. AUSTIN,
and HERNANDO COUNTY,

Petitioners,

vs. CASE NO.: 91-0941

D.R.E. ENVIRONMENTAL, INC.,
and STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION,

Respondents.

SUSANNE TROGDON,

Petitioner,

vs. CASE NO.: 91-1020

D.R.E. ENVIRONMENTAL, INC.,
and STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION,

Respondents.

STIPULATION AND SETTLEMENT AGREEMENT BETWEEN
JOHN N. AUSTIN, SUSANNE S. TROGDON,
AND D.R.E. ENVIRONMENTAL, INC.

AGREEMENT made this 1st day of APRIL, 1991 by and between petitioners, JOHN N. AUSTIN and SUSANNE S. TROGDON, (jointly hereinafter referred to as "Petitioners") and D.R.E. ENVIRONMENTAL, INC., (hereinafter referred to as "Respondent").

WHEREAS, the Department of Environmental Regulation has issued notice of its intent to issue two air construction permits, numbered AC16-187650 and AC16-189522, to D.R.E. Environmental for the construction of two 35 TPH mobile soil remediation units. Petitioners have filed Petitions for Formal Administrative Hearing Proceedings

challenging the permit issuance.

WHEREAS, in the interest of avoiding the time, expense and uncertainty of litigation, the Petitioners and Respondent desire to enter into this agreement.

NOW THEREFORE, in consideration of the above, the receipt and sufficiency of which is hereby acknowledged, the undersigned parties hereby agree as follows, and the following shall be included as additional specific conditions and/or modifications to the proposed specific conditions of the permits:

1. "Within five (5) days of placing each unit in operation in Florida, D.R.E. shall test samples of each unit's baghouse dust in order to ascertain TCLP metal contaminant levels. Dust samples shall be collected at one-half (1/2) hour intervals during the compliance testing for the operating permit only. The incremental samples shall be composited and tested by TCLP methods for toxic metal contaminants. The above test results shall be provided to DER and Petitioners within five (5) days of receipt. If either sample regime shall indicate levels of TCLP contaminants in excess of those listed in 40 CFR 261, then a panel of DER and D.R.E. shall discuss and determine appropriate operating and permitting procedures for the units. Petitioners shall be notified at least five (5) days prior to the meeting of such panel. Recommendations and directives of the panel shall be added to D.R.E.'s permits as a special condition, as required by DER."

2. "D.R.E.'s operation of its soil remediation units in the State of Florida is conditioned upon the baghouse, the cyclones, and the afterburner of each unit being fully operational, as demonstrated by continuous monitoring instrumentation on the baghouse and afterburner on each unit."

3. "The units must be operated independently and never at the same location."

4. The language of Specific Condition 3 shall be modified to read "the afterburner shall operate at or above the required minimum temperature of 1600 degrees F, or achieve 98.42 percent destruction efficiency, whichever is higher, unless compliance with all standards can be documented at a lower temperature on a case by case basis."

5. The language of Special Condition 12 shall be modified to read "Each soil remediation unit shall have a calibrated belt scale monitoring the maximum charging rate of 35 TPH."

6. The language of Special Condition 14 shall be modified to read "virgin (non-recycled) petroleum products (gasoline #2 diesel through #6 fuel oil and motor oil) or 'on spec' oil" instead of petroleum products. Hazardous waste as defined in 40 CFR 261.3 shall not be processed by this unit.

7. Special Condition 15 shall be modified to read " 'off spec' petroleum material."

8. The language of Specific Condition 19 shall be modified to read "Each unit must be tested at 90 to 100 % of permitted capacity (31.5 to 35 TPH) or at the maximum process weight at which the permittee intends to operate and will then be permitted to operate, not to exceed 35 TPH. All compliance tests shall meet the requirements listed in F.A.C. Rule 17-2.700."

9. The language of Specific Condition 24 shall be modified to be stated in the imperative, "the request shall be at least 15 days prior to operation at the new site" and the timing of notice to the BAR local governments and DER District Office shall be increased to 12 days prior to moving to a new site.

10. The language of Specific Condition 27 shall be modified to read reporting of a violation to BAR "reported within 5 days."

Each party shall bear its own cost and attorney's fees incurred in this matter.

STIPULATED AND AGREED TO this 1st day of ~~March~~ APRIL, 1991.

D.R.E. ENVIRONMENTAL, INC.

Leslie Goller Dillingham

BY: Christopher K. Sleeper

LESLIE GOLLER DILLINGHAM
3644 Hedrick Street
Jacksonville, Florida 32205
904-388-8968
Florida Bar No.: 393932
Attorneys for Petitioners

CHRISTOPHER K. SLEEPER
P.O. Box 1386
Lake City, Florida 32056-1386
904-755-1196

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION HEREBY CONSENTS AND AGREES TO THE ABOVE.

ANDERSON COLUMBIA ENVIRONMENTAL, INC.

P.O. Box 1386
Lake City, FL 32056-1386
(904) 755-1196

FACSIMILE TRANSMITTAL

Date: MARCH 27, 1991

Message To: Willard HANKS

Message From: CHRIS SLEBPER

Number Of Pages Including Cover: 4

Special Instructions:

Please call (904) 755-1196 if you do not receive all pages of this fax.

RETURN FAX NO.: (904) 755-5430

D. R. E.
ENVIRONMENTAL INC.
PH. (904)755-1196 FAX (904)755-5430
Destruction Removal Efficiencies

March 27, 1991

Mr. Willard Hanks
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SUBJECT: PROJECT START-UP, MOLENE, FLORIDA

Dear Mr. Hanks,

D.R.E. Environmental, Inc. is still finalizing our negotiated settlement for our Florida permit at this time. However, we expect all matters to be concluded by March 31, 1991, as far as the petitioners are concerned.

D.R.E. has been awarded a project in Molene, Florida to burn approximately 1,500 cu. yds. of diesel contaminated soils. Excavation by a separate contractor will begin next week. Thermal treatment is scheduled to begin on or about April 15, 1991.

It is my intention to mobilize my equipment the week of April 2-5, 1991, from Ft. Wayne, Indiana to Florida. I want to clarify this matter with you since our permit has not been issued at this time.

Once the equipment arrives on site, it will take several days to get all units set up (first time at the project.) When the unit is complete, I would like to start the unit up utilizing clean fill materials to test all material handling systems of the unit. It is my belief that once this is accomplished, my permit from the state should be very close, if not already completed. Only at that time will the burners be fired.

Please clarify the department's position on this matter so that I can move forward. At no time will contaminated soils enter the unit until our permit is issued.

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

Sincerely,

C.K. Sleeper

CKS/gds

enc.

BEFORE THE STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

HERB SHAPIRO, JOHN N. AUSTIN, and HERNANDO COUNTY, Petitioners, vs. D.R.E. ENVIRONMENTAL, INC., and STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION, Respondents.	CASE NO.: 91-0941
SUSANNE TROGDON, VICE-CHAIRMAN, SIERRA CLUB, Petitioner, vs. D.R.E. ENVIRONMENTAL, INC., and STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION, Respondents.	CASE NO.: 91-1020

STIPULATION AND SETTLEMENT AGREEMENT BETWEEN JOHN N. AUSTIN, SUSANNE S. TROGDON, VICE-CHAIRMAN, SIERRA CLUB AND D.R.E. ENVIRONMENTAL, INC.

AGREEMENT made this _____ day of _____, 1991, by and between petitioners, JOHN N. AUSTIN and SUSANNE S. TROGDON, Vice-Chairman, Sierra Club, (jointly hereinafter referred to as "Petitioners") and D.R.E. ENVIRONMENTAL, INC., (hereinafter referred to as "Respondent").

WHEREAS, the Department of Environmental Regulation has issued notice of its intent to issue two air construction permits,

numbered AC16-187650 and AC 16-189522, to D.R.E. Environmental for the construction of two 35 TPH mobile soil remediation units. Petitioners have filed Petition for Formal Administrative Hearing Proceedings challenging the permit issuance.

WHEREAS, in the interest of avoiding the time, expense and uncertainty of litigation, the petitioners and respondent desire to enter into this agreement.

NOW, THEREFORE in consideration of the above, the receipt and sufficiency of which is hereby acknowledged, the undersigned parties hereby agree as follows:

1. Within five (5) days of placing each unit in operation in Florida, D.R.E. shall test samples of each unit's baghouse dust in order to ascertain TCLP metal contaminant levels. Dust samples shall be collected at one-half (1/2) hour intervals during the initial compliance testing only. The incremental samples shall be composited and tested in the above-described manner. The above test results shall be provided to DER and petitioners within five (5) days of receipt. If either sample regime shall indicate levels of TCLP contaminants in excess of those listed in 40 CFR 261, then a panel of DER and D.R.E. shall discuss and determine appropriate operating procedures for the units. Petitioners shall be notified at least five (5) days prior to the meeting of such panel. Recommendations and directives of the panel shall be added to D.R.E.'s permits as a special condition, as required by DER.

2. The following shall be included as additional specific conditions and/or modifications to the proposed specific conditions of the permits:

a. D.R.E.'s operation of its soil remediation units in the State of Florida is conditioned upon the baghouse, the cyclones, and the afterburner of each unit being fully operational, as demonstrated by continuous monitoring instrumentation on the baghouse and afterburner on each unit.

b. The language of Specific Condition 3 shall be modified to read "the afterburner shall operate at or above the required minimum temperature of 1600 degrees F, unless compliance with all standards can be documented at a lower temperature".

c. The language of Special Condition 12 shall be modified to read "Each soil remediation unit shall have a mechanized means of monitoring the maximum charging rate of 35 TPH".

d. The language of Special Condition 14 shall be modified to read "virgin (non-recycled) petroleum products or 'on spec' oil" instead of petroleum products. Hazardous waste as defined in 40 CFR 261.3 shall not be processed by this unit.

e. Special Condition 15 shall be modified to read " 'off spec' petroleum material".

f. The language of Specific Condition 19 shall be modified to read "Each unit must be tested at the maximum process weight at which the permittee intends to operate and will then be

permitted to operate, not to exceed 35 TPH. All compliance tests shall meet the requirements listed in F.A.C. Rule 17-2.700".

g. The language of Specific Condition 24 shall be modified to be stated in the imperative, "the request shall be at least 15 days prior to operation at the new site" and the timing of notice to the BAR local governments and DER District Office shall be increased to 12 days prior to moving to a new site.

h. The language of Specific Condition 27 shall be modified to read reporting of a violation to BAR "reported within 5 days".

3. The units must be operated independently and never at the same location.

4. Each party shall bear its own cost and attorney's fees incurred in this matter.

STIPULATED AND AGREED TO this _____ day of March, 1991.

BLALOCK, HOLBROOK & AKEL, P.A.

By: _____

LESLIE GOLLER DILLINGHAM
3644 Hedrick Street
Jacksonville, Florida 32205
(904) 389-8968
Florida Bar No.: 393932
Attorneys for Petitioners

DANIEL D. AKEL
2301 Independent Square
Jacksonville, Florida 32202
(904) 356-6311
Florida Bar No.: 306541
Attorneys for Respondent

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PM
3-27-91
Lake City, FL

File Copy

D. R. E.
ENVIRONMENTAL INC.

PH. (904)755-1196 FAX (904)755-5430

- Destruction Removal Efficiencies -

RECEIVED
MAR 28 1991
DER - BAQM

March 27, 1991

Mr. Willard Hanks
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SUBJECT: PROJECT START-UP, MOLENE, FLORIDA

Dear Mr. Hanks,

D.R.E. Environmental, Inc. is still finalizing our negotiated settlement for our Florida permit at this time. However, we expect all matters to be concluded by March 31, 1991, as far as the petitioners are concerned.

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It is my intention to mobilize my equipment the week of April 2-5, 1991, from Ft. Wayne, Indiana to Florida. I want to clarify this matter with you since our permit has not been issued at this time.

Once the equipment arrives on site, it will take several days to get all units set up (first time at the project.) When the unit is complete, I would like to start the unit up utilizing clean fill materials to test all material handling systems of the unit. It is my belief that once this is accomplished, my permit from the state should be very close, if not already completed. Only at that time will the burners be fired.

P.O. BOX 1386, LAKE CITY, FLORIDA 32056-1386

Please clarify the department's position on this matter so that I can move forward. At no time will contaminated soils enter the unit until our permit is issued.

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

Sincerely,

C.K. Sleeper

CKS/gds

enc.

Willard Hanks
BA/CHE } 3-2x-91 RBR

BEFORE THE STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

HERB SHAPIRO, JOHN N. AUSTIN, and HERNANDO COUNTY, Petitioners, vs. D.R.E. ENVIRONMENTAL, INC., and STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION, Respondents.	)	CASE NO.: 91-0941
SUSANNE TROGDON, VICE-CHAIRMAN, SIERRA CLUB, Petitioner, vs. D.R.E. ENVIRONMENTAL, INC., and STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION, Respondents.	)	CASE NO.: 91-1020

STIPULATION AND SETTLEMENT AGREEMENT BETWEEN
JOHN N. AUSTIN, SUSANNE S. TROGDON, VICE-CHAIRMAN,
SIERRA CLUB AND D.R.E. ENVIRONMENTAL, INC.

AGREEMENT made this _____ day of _____, 1991, by and between petitioners, JOHN N. AUSTIN and SUSANNE S. TROGDON, Vice-Chairman, Sierra Club, (jointly hereinafter referred to as "Petitioners") and D.R.E. ENVIRONMENTAL, INC., (hereinafter referred to as "Respondent").

WHEREAS, the Department of Environmental Regulation has issued notice of its intent to issue two air construction permits,

numbered AC16-187650 and AC 16-189522, to D.R.E. Environmental for the construction of two 35 TPH mobile sail remediation units. Petitioners have filed Petition for Formal Administrative Hearing Proceedings challenging the permit issuance.

WHEREAS, in the interest of avoiding the time, expense and uncertainty of litigation, the petitioners and respondent desire to enter into this agreement.

NOW, THEREFORE in consideration of the above, the receipt and sufficiency of which is hereby acknowledged, the undersigned parties hereby agree as follows:

1. Within five (5) days of placing each unit in operation in Florida, D.R.E. shall test samples of each unit's baghouse dust in order to ascertain TCLP metal contaminant levels. Dust samples shall be collected at one-half (1/2) hour intervals during the initial compliance testing only. The incremental samples shall be composited and tested in the above-described manner. The above test results shall be provided to DER and petitioners within five (5) days of receipt. If either sample regime shall indicate levels of TCLP contaminants in excess of those listed in 40 CFR 261, then a panel of DER and D.R.E. shall discuss and determine appropriate operating procedures for the units. Petitioners shall be notified at least five (5) days prior to the meeting of such panel. Recommendations and directives of the panel shall be added to D.R.E.'s permits as a special condition, as required by DER.

2. The following shall be included as additional specific conditions and/or modifications to the proposed specific conditions of the permits:

a. D.R.E.'s operation of its soil remediation units in the State of Florida is conditioned upon the baghouse, the cyclones, and the afterburner of each unit being fully operational, as demonstrated by continuous monitoring instrumentation on the baghouse and afterburner on each unit.

b. The language of Specific Condition 3 shall be modified to read "the afterburner shall operate at or above the required minimum temperature of 1600 degrees F, unless compliance with all standards can be documented at a lower temperature".

c. The language of Special Condition 12 shall be modified to read "Each soil remediation unit shall have a mechanized means of monitoring the maximum charging rate of 35 TPH".

d. The language of Special Condition 14 shall be modified to read "virgin (non-recycled) petroleum products or 'on spec' oil" instead of petroleum products. Hazardous waste as defined in 40 CFR 261.3 shall not be processed by this unit.

e. Special Condition 15 shall be modified to read " 'off spec' petroleum material".

f. The language of Specific Condition 19 shall be modified to read "Each unit must be tested at the maximum process weight at which the permittee intends to operate and will then be

permitted to operate, not to exceed 35 TPH. All compliance tests shall meet the requirements listed in F.A.C. Rule 17-2.700".

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h. The language of Specific Condition 27 shall be modified to read reporting of a violation to BAR "reported within 5 days".

3. The units must be operated independently and never at the same location.

4. Each party shall bear its own cost and attorney's fees incurred in this matter.

STIPULATED AND AGREED TO this _____ day of March, 1991.

BLALOCK, HOLBROOK & AKEL, P.A.

By:_____

LESLIE GOLLER DILLINGHAM
3644 Hedrick Street
Jacksonville, Florida 32205
(904) 389-8968
Florida Bar No.: 393932
Attorneys for Petitioners

DANIEL D. AKEL
2301 Independent Square
Jacksonville, Florida 32202
(904) 356-6311
Florida Bar No.: 306541
Attorneys for Respondent

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FILE

D. R. E.
ENVIRONMENTAL INC.

PH. (904) 389-8682 FAX (904) 389-0430

" Destruction Removal Efficiencies "

RECEIVED
MAR 21 1991
DER - BAQM

March 19, 1991

Mr. Willard Hanks
Division of Air
Dept. of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Relocation of D. R. E. Environmental, Inc

Dear Mr. Hanks:

In the past week, D. R. E. Environmental, Inc has joined forces with Anderson Columbia Environmental, Inc., an overall environmental services company. Anderson Columbia Environmental specializes in soil treatment and operates a fixed soil treatment facility in Maxville, Florida. With the combined facilities of ACE's fixed base unit and DRE's mobile treatment unit, we will be better able to service our clients.

With DRE Environmental becoming a subsidiary of Anderson Columbia Environmental, DRE will be moving to the corporate headquarters in Lake City, Florida. Any future communication should be sent to the following address:

Mr. Chris Sleeper, President
D.R.E. Environmental, Inc.
P. O. Box 1386
2 Guerdon Rd.
Lake City,Florida 32056
(904)755-1196
(904)755-5430 - FAX

D. R. E. Environmental is confident that we can continue to serve you with all of your environmental needs and look forward to working with you in the future.

Sincerely,

Chris K. Sleeper
President

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 11, 1991

Mr. Chris K. Sleeper
DRE Environmental, Inc.
1644 Blanding Blvd., Suite #2
Jacksonville, FL 32210

Re: Notice of Intent - General Permit
Mobile Soil Thermal Treatment Facility
DRE Environmental, Inc.
General Permit No. SO 16-193066

Dear Mr. Sleeper:

This letter acknowledges receipt of your Notice of Intent to Use the General Permit to Construct/Operate a Mobile Soil Thermal Treatment Facility. We received your Notice on January 7, 1991, and have assigned General Permit No. SO 16-193066 to your facility.

You may continue to operate under this General Permit as long as you remain in compliance with all the requirements of Chapter 17-775, Florida Administrative Code, and other applicable Department regulations. If you have any questions regarding this information, please contact me at 904/488-0190.

Sincerely,

Donald R. Ehlenbeck, P.E.
Bureau of Waste Cleanup

DRE/wp

c: Janet Bowman - DER/Tallahassee
Clair Fancy - DER/Tallahassee

Department of Environmental Regulation

Routing and Transmittal Slip

To: (Name, Office, Location)

1. Clair Fancy

2.

3.

4.

RECEIVED

MAR 15 1991

DER BAQM

Remarks:

From	Date
	Phone

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 5, 1991

Mr. Larry Hawks
Bay County Board of County Commissioners
Post Office Box 1818
Panama City, Florida 32402

Dear Mr. Hawks:

Re: D.R.E. Environmental, Inc.

The Department is in receipt of your February 18, 1991, letter commenting on our proposed permits that would authorize the construction/operation of two 35 TPH mobile soil remediation units (Permit Nos. AC 16-187650 and 16-189522). The following is our response to your comments.

The notification requirements for permits are addressed in F.A.C. Rule 17-103.150. The legal ad placed by D.R.E. Environmental, Inc. in the News-Herald on January 15, 1991, met the requirements for the Notice of Intent to Issue in Bay County. This notice also described the procedure to petition for an administrative hearing.

The proposed units are also subject to F.A.C. Rule 17-775.700, Notice and Security, which requires the city and county governments to be notified prior to operating in their jurisdiction. These notifications are also a requirement of the proposed permits, see Specific Condition No. 24.

The proposed permits also contain the emission restrictions and compliance requirements. The Department will inspect and monitor these mobile sources in the same manner that we handle the stationary sources of air pollution in the state.

We have enclosed a copy of the proposed permits for your information. Please review these drafts at your convenience, and if you still have concerns about these operations, write to me or call Willard Hanks at 904-488-1344. We will be glad to address any of your written comments in the final determination on this proposal.

Sincerely,

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

CHF/WH/plm

Attachment:
Proposed Permits Nos. AC 16-187650 & -189522

Board of County Commissioners

Bay County

POST OFFICE BOX 1818
PANAMA CITY, FLORIDA 32402
PHONE: (904) 784-4000

February 18, 1991

Mr. Barry Andrews
Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Mr. Andrews:

This letter is regarding your agency's Notice of Intent to Issue a permit to construct and operate two (2) 35 TPH mobile soil remediation units; permit reference numbers are: AC 16-187650 and AC 16-189522.

Bay County takes exception to the proposal of only being notified by way of a publication in an unspecified newspaper for the above Environmental Remediation operation.

If there is an intent to operate these units in the Bay County area, I formally request that the County be notified by certified mail. This notification should include the approximate length of time (calendar days) the remediation operation will last, the exact location of the processing operation and the origin of the remediation soil.

Also another concern is how will your agency be responsible for the air pollutants that will be emitted into the atmosphere by these burn units? The Intent Notice describes numerous compounds emission limits, but what form of inspection/monitoring will be performed to assure air quality standards?

Please advise me if these requests and concerns should be expressed in a formal petition for an Administrative Hearing.

Thank you for your consideration regarding this matter.

Respectfully submitted,

Larry Hawks
Environmental Division Superintendent

LH/bm

C: Paul Van Buskirk, Public Works Director/County Engineer

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 5, 1991

Mr. Larry Hawks
Bay County Board of County Commissioners
Post Office Box 1818
Panama City, Florida 32402

Dear Mr. Hawks:

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The Department is in receipt of your February 18, 1991, letter commenting on our proposed permits that would authorize the construction/operation of two 35 TPH mobile soil remediation units (Permit Nos. AC 16-187650 and 16-189522). The following is our response to your comments.

The notification requirements for permits are addressed in F.A.C. Rule 17-103.150. The legal ad placed by D.R.E. Environmental, Inc. in the News-Herald on January 15, 1991, met the requirements for the Notice of Intent to Issue in Bay County. This notice also described the procedure to petition for an administrative hearing.

The proposed units are also subject to F.A.C. Rule 17-775.700, Notice and Security, which requires the city and county governments to be notified prior to operating in their jurisdiction. These notifications are also a requirement of the proposed permits, see Specific Condition No. 24.

The proposed permits also contain the emission restrictions and compliance requirements. The Department will inspect and monitor these mobile sources in the same manner that we handle the stationary sources of air pollution in the state.

We have enclosed a copy of the proposed permits for your information. Please review these drafts at your convenience, and if you still have concerns about these operations, write to me or call Willard Hanks at 904-488-1344. We will be glad to address any of your written comments in the final determination on this proposal.

Sincerely,

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

CHF/WH/plm

Attachment:
Proposed Permits Nos. AC 16-187650 & -189522

D. R. E.
ENVIRONMENTAL INC.

PH. (904) 389-8682 FAX (904) 389-0430

" Destruction Removal Efficiencies "

February 26, 1991

Mr. Willard Hanks
Dept. of Environmental Regulations
2600 Blairstone Rd.
Tallahassee, FL 32399-2400

Re: Notice of Intent Publication

Dear Mr. Hanks:

Pursuant to Section 403.815,F.S. and DER Rule 17-103.150 F.A.C., D.R.E. Environmental, Inc. has published it's Notice of Intent.

You will find enclosed a copy of the newspapers and the counties they cover, in which the Notice was advertised. All counties were covered except Okaloosa.

If you have any questions or need more information, please contact me at (904)389-8682.

Sincerely,

Chris K. Sleeper
President

cc HANKS

1644 BLANDING BOULEVARD, SUITE #2, JACKSONVILLE FL 32210

D. R. E.
ENVIRONMENTAL INC.

PH. (904) 389-8682 **FAX (904) 389-0430**

" Destruction Removal Efficiencies "

NOTICE OF INTENT ADVERTISING

NEWSPAPER	COUNTIES COVERED
Tallahassee Democrat	Calhoun Gadsen Franklinn Jefferson Jackson Gulf Madison Liberty Leon Taylor Wakulla Washington
Panama City News Herald	Holmes Bay
Nassau Newsleader	Nassau
Pensacola News Journal	Escambia Santa Rosa Walton
Gainesville Sun	Union Alachua Bradford Clay Columbia Dixie Gilchrist Levy Suwanee Hamilton Lafayette Leon Marion Putnam
Ft. Meyers News Press	Glades
St. Augustine Record	St. Johns
Tampa Tribune	Citrus, Hardee, Polk, Gerbaldi, Pasco, Pinellas, DeSoto, Dixie, Hernando, Manatee, Osceolo, Sarasota, Sumter

1644 BLANDING BOULEVARD, SUITE #2, JACKSONVILLE FL 32210

NEWSPAPER	CCUNTIES COVERED
Orlando Sentinel	Lake Seminole Volusia
Baker County Press	Baker
Flager News Tribune	Flagler
Miami Herald	Brevard orange Indian River Broward Dade Palm Beach Charlotte Collier Hillsborough Highlands Hendry Monroe Martin Marion Leon Lee St. Lucie pinellas Okeechobee Volusia Sarasota Duval

Board of County Commissioners
Bay County

POST OFFICE BOX 1818
PANAMA CITY, FLORIDA 32402
PHONE: (904) 784-4000

February 18, 1991

Mr. Barry Andrews
Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Mr. Andrews:

This letter is regarding your agency's Notice of Intent to Issue a permit to construct and operate two (2) 35 TPH mobile soil remediation units; permit reference numbers are: AC 16-187650 and AC 16-189522.

Bay County takes exception to the proposal of only being notified by way of a publication in an unspecified newspaper for the above Environmental Remediation operation.

If there is an intent to operate these units in the Bay County area, I formally request that the County be notified by certified mail. This notification should include the approximate length of time (calendar days) the remediation operation will last, the exact location of the processing operation and the origin of the remediation soil.

Also another concern is how will your agency be responsible for the air pollutants that will be emitted into the atmosphere by these burn units? The Intent Notice describes numerous compounds emission limits, but what form of inspection/monitoring will be performed to assure air quality standards?

Please advise me if these requests and concerns should be expressed in a formal petition for an Administrative Hearing.

Thank you for your consideration regarding this matter.

Respectfully submitted,

Larry Hawks
Environmental Division Superintendent

LH/bm

C: Paul Van Buskirk, Public Works Director/County Engineer

file

DRE ENVIRONMENTAL, INC.
1644 Blanding Blvd, Suite #2
Jacksonville, FL 32210

(904) 389-8682
(904) 389-0430 FAX

PLEASE DELIVER THE FOLLOWING PAGES TO:

NAME: Willard Hanks

COMPANY: DER

FAX #: 904-922-6979

FROM: Chris Sleeper

DATE: 2-7

TOTAL NUMBER OF PAGES (INCLUDING COVER): 10

SUBJECT: Petition Against Permit

COMMENTS:

This is a copy for you.

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

HERNANDO COUNTY,

Petitioner,

vs. Case No.:

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION and D.R.E. ENVIRONMENTAL, INC.,

Respondents.

_____/

VERIFIED PETITION FOR FORMAL ADMINISTRATIVE HEARING

Pursuant to Sections 120.57(1) and 403.412(5), Fla. Stat., and DER Rule 17-103.155, Fla. Admin. Code, Petitioner HERNANDO COUNTY hereby petitions for a formal administrative hearing on the proposed issuance of permits AC 16-187650 and AC 16-189522 to D.R.E. Environmental, Inc., for the construction of two mobile soil remediation units. Petitioner states as follows:

1. Petitioner HERNANDO COUNTY is a political subdivision of the State of Florida. Its collegial head is a Board of County Commissioners whose address is 20 N. Main Street, Brooksville, Florida 34601. For purposes of this proceeding, its address is that of its attorneys, Oertel, Hoffman, Fernandez & Cole, P.A., 2700 Blair Stone Road, Suite C, Tallahassee, Florida 32301.

2. The name and address of the permit applicant is D.R.E. Environmental, Inc. ("DRE"), 1644 Blanding Blvd., Suite 2, Jacksonville, Florida 32210. D.R.E. proposes to construct two 35 tons per hour (TPH) mobile soil remediation units for operation throughout Florida, including within Hernando County.

3. The Department's file numbers for the two permit applications are AC 16-187650 and AC 16-189522. By notice published in the Tampa Tribune on January 15, 1991, the Department gave notice of its intent to issue the permits to DRE. The Department has prepared a single draft permit for the two units.

4. Hernando County's substantial interests are affected because, as a political subdivision of the state of Florida, it has constitutional and statutory authority to exercise police powers to protect and preserve the public health, safety and welfare of the citizens of Hernando County, and to protect and preserve the natural resources of Hernando County, including its air and water. The County also owns property within its boundaries, including parks, recreation areas, and buildings and facilities for carrying out its governmental functions. The proposed permit would authorize DRE to burn soils contaminated with petroleum products, and can reasonably be expected to emit air pollutants, including particulates, carbon monoxide, nitrogen oxides, sulfur dioxide, and volatile organic compounds. The emission of these pollutants may have adverse effects on the citizens of Hernando County, natural resources in Hernando County, and property owned by Hernando County.

5. In addition, the activity proposed to be permitted will impair, pollute, or otherwise injure the air, water, or other natural resources of the state. As this petition

is verified pursuant to Section 403.412(5), Fla. Stat., Hernando County has standing pursuant to statute.

6. Hernando County has initially identified the following issues of material fact, which it reserves the right to supplement as additional facts become known to it:

a. The emissions limits contained in the draft permit are expressed in tons per year. However, since the soil burning units are mobile, the temporary operation of the unit at any given site may process soils and generate emissions at a rate that, if annualized, would exceed the tons per year emissions limitations. The enforcement of emissions limitations at a single location for a stationary source does not present the same problems as a mobile unit, because the emissions levels from permanent stationary sources can be more closely monitored and their impacts observed. Likewise, if one of the units is idle for any length of time and then placed in heavy operation at a temporary site for a few months, the emissions at the temporary site may be consistent with the permit's annual emission limitations, but may have a significant impact on ambient air quality at the temporary site. The applicant has thus failed to provide reasonable assurances that emissions will not exceed the permit limits, and the permit does not contain sufficient restrictions, such as expressing the emissions limitations in smaller increments (e.g., pounds per hour or pounds per day), to prevent the applicant from exceeding emissions limitations.

b. Because the proposed units are mobile, it is not possible to quantify the site specific impacts of operation of the units at any given site, which is typically done in the evaluation of a construction permit for a stationary source of air pollution. The potential location of the units adjacent to particular land uses, such as residential areas,

schools or hospitals, may result in the unit's operation constituting a nuisance. Although the draft permit contains a specific condition prohibiting operation of the unit "at a location or in a manner that may create a nuisance," the draft permit contains no standards restricting the location and operation of the unit so as to avoid creation of a nuisance.

c. Similar to the issue noted in subparagraph (b) above, the draft permit allows continuous operation of the unit, 8760 hours per year (24 hours/day x 365 days/year). Again, site specific conditions and adjacent land uses (e.g., residential, school and hospital) may render such mode of operation a nuisance and a safety hazard, and the draft permit contains inadequate restrictions to prevent this from occurring.

d. The draft permit is apparently for two mobile soil burners which operate independently. However, there is no restriction in the permit for both units operating at the same location at the same time. If both units operated at the same location, the combined emissions would be double the limits set forth in the permit, and would constitute a major source of air pollution; specifically, total emissions from the two units would exceed 100 tons per year for nitrogen oxides, for sulfur dioxide, and for volatile organic compounds. (Each unit is authorized to emit 71.0 TPY nitrogen oxides, 63.0 TPY sulfur dioxide, and 99.2 TPY VOC's.) The proposed units should thus be subject to pre-construction review requirements of Rules 17-2.500(5) and 17-2.510(4); absent pre-construction review, reasonable assurances have not been given that ambient air quality standards will not be violated.

e. Specific condition 21 of the draft permit requires stacks testing by EPA Methods 5 and 9 within 5 days after placing each unit in operation, and stack

testing by EPA Method 9 within 3 days of placing each unit in service at each site. However, if a unit stays operational at a site for an extended period of time, additional testing should be required as if the unit is a permanent, stationary source. Specifically, an additional EPA Method 5 test should be conducted no more than 90 days after the initial test at a given site, if the unit remains at that site more than 90 days. Absent this additional testing, the applicant has failed to give reasonable assurances that applicable air quality standards will not be violated.

f. The draft permit would authorize construction of the units with afterburners "capable of operating above 1600°F." Because the permit does not require a minimum operational temperature of 1600°F, reasonable assurances have not been given that the emissions from the afterburner will achieve the emissions limitations set forth in the permit. Further, the absence of strip chart temperature logs for inspection and verification means that reasonable assurances have not been given that applicable air quality standards will not be violated.

g. At Specific Condition 15, the permit authorizes the permittee to request permission to burn "off-specification" material; the permit indicates that the Department "will approve or deny each request in writing on a case-by-case basis." However, the permit does not require that persons (such as Hernando County and its citizens) whose substantial interests are potentially affected by the approval to burn off-specification material will receive notice of the request and an opportunity to participate in formulating agency action on any such request. Because the draft permit lacks any restriction on what such "off-spec" material may consist of, Hernando County is unable at

this time to evaluate the nature and extent of impacts from burning such materials. The applicant has failed to give reasonable assurance that the burning of "off-spec" material will not violate applicable air quality standards or constitute a nuisance.

h. In addition, while Specific Condition 15 requires the permittee to show that the treatment of "off-spec" material "will not exceed acceptable ambient air concentration for any toxic pollutant," the draft permit offers no other specifics on the basis on which the Department will approve or deny requests to burn off-spec material. There are currently no ambient air concentration limits established for "toxic pollutants". Even if "acceptable ambient air concentrations" for "toxic pollutants" are established and are not exceeded, the draft permit contains insufficient restrictions to insure that burning "off-spec" material will not constitute a nuisance or cause or contribute to objectionable odor.

i. There is no provision in the permit for ambient monitoring in the vicinity of the sites where the units will be operated. There is little or no ambient air quality background data established for Hernando County. In the absence of site specific ambient monitoring requirement, reasonable assurances have not been provided to show that the site specific air quality impacts due to the operation of these units with 30 feet stacks will not exceed the ambient air quality standards.

7. As its statement of ultimate facts, Hernando County asserts that, based on information available to it, the applicant has failed to provide reasonable assurance that applicable air quality standards will not be violated, and that the proposed units will not constitute a nuisance or cause or contribute to objectionable odor. Consequently, Hernando County believes the proposed permits should be denied, pursuant to Chapters 120 and 403,

Fla. Stat., including but not limited to Sections 120.57 and 403.087, and Rule Chapter 17-2, Fla. Admin. Code, including but not limited to Rules 17-2.600, 17-2.700 and 17-2.710.

WHEREFORE, Petitioner Hernando County requests that this Verified Petition be forwarded to the Division of Administrative Hearings for assignment of a hearing officer; and that after sufficient time for discovery, case preparation, and preparation of expert witnesses, a formal evidentiary hearing be convened; and that after consideration of post-hearing memoranda and proposed recommended orders, a recommended order be returned to the Department recommending denial of permit applications numbered AC 16-187650 and AC 16-189852; and that a Final Order be entered by the Department denying the permits. Petitioner also seeks such other just and proper relief as is available under the governing rules and statutes.

DATED this 29th day of January, 1991.

Respectfully submitted,

OERTEL, HOFFMAN, FERNANDEZ
& COLE, P.A.
2700 Blair Stone Road
Post Office Box 6507
Tallahassee, Florida 32314-6507
(904) 877-0099

M. Christopher Bryant

M. CHRISTOPHER BRYANT
SEGUNDO J. FERNANDEZ
ATTORNEYS FOR PETITIONER
HERNANDO COUNTY

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that an original and one copy has been furnished by HAND DELIVERY to Agency Clerk, Department of Environmental Regulation, Office of the General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399 and a true and correct copy furnished by U.S. MAIL to D.R.E. Environmental, Inc., 1644 Blanding Blvd., Suite 2, Jacksonville, Florida 32210, on this 29th day of January, 1991.

M. Christopher Bryant
ATTORNEY

vlh:bernando.pet

VERIFICATION

STATE OF FLORIDA
COUNTY OF HERNANDO

BEFORE ME, the undersigned authority, personally appeared HAROLD D. VARVEL, who, being by me first duly sworn, stated the following:

1. That he is the Chairman of the Board of County Commissioners of Hernando County, a political subdivision of the State of Florida, and is the authorized representative of Hernando County for purposes of this proceeding.

2. That he believes and asserts that the activity proposed for permitting by the Department of Environmental Regulation in this proceeding, file numbers AC 16-187650 and AC 16-189522, will have the effect of impairing, polluting, and otherwise injuring the air, waters or natural resources of the State and of Hernando County, Florida.

3. That the facts alleged in the foregoing Petition are true and correct to the best of his knowledge and belief.

FURTHER AFFIANT SAYETH NAUGHT.

Harold D. Varvel, Chairman
Hernando County Board of County Commissioners

Sworn to and subscribed before me this 28th day of January, 1991.

Notary Public
State of Florida

Commission Expires:

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. NOV 26 1991
BONDED THRU NOTARY PUBLIC UNDERWRITERS

D. R. E.
ENVIRONMENTAL INC.

PH. (904) 389-8682 FAX (904) 389-0430

" Destruction Removal Efficiencies "

February 1, 1991

Mr. Willard Hanks
Dept. of Environmental Regulations
Division of Air
2600 Blairstone Road
Tallahassee, FL 32399-2499

RE: Notice of Intent to Issue Publication Verifications

Dear Mr. Hanks:

You will find the originals of our Notice of Intent to Issue Permit affidavits enclosed. We have kept a copy in our files.

If you have any questions, please call me at (904)389-8682.

Thank you for your help.

Sincerely,

Chris K. Sleeper

Chris K. Sleeper
President

CKS:smm

Enclosures

RECEIVED
FEB 5 1991
DER - BAQM

1644 BLANDING BOULEVARD, SUITE #2, JACKSONVILLE FL 32210

STATE OF FLORIDA
Department of Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue permits (AC 16-187650 and AC 16-189522) to D.R.E. Environmental, Inc., 1644 Blanding Blvd., Suite 2, Jacksonville, Florida 32210, to construct two 35 TPH mobile soil remediation units with air pollution from each unit controlled by a baghouse and afterburner. The units may operate in any county that this notice is published in. Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) determinations were not required. Each unit may emit 7.8 lbs/hr (34.3 TPY) particulate, 3.8 lbs/hr (16.8 TPY) carbon monoxide, 16.2 lbs/hr (71.0 TPY) nitrogen oxides, 14.4 lbs/hr (63.0 TPY) sulfur dioxide, and 22.6 lbs/hr (99.2 TPY) volatile organic compounds. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment or create a health hazard. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision 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 fourteen (14) days of publication of this notice. 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 Notice. 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 publication 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, Florida Statutes, 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, Florida Administrative Code.

The applications are available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Department of Environmental Regulation
Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

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

Department of Environmental Regulation
South District
2269 Bay Street
Ft. Myers, Florida 33901-2896

Department of Environmental Regulation
Northeast District
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256-7577

Department of Environmental Regulation
Southeast District
1900 S. Congress Avenue, Suite A
West Palm Beach, Florida 33406

Broward County Environmental Quality Control Board
621 South Andrews Avenue
Ft. Lauderdale, Florida 33310

Dade County Dept. of Environmental Resources Management
Jose Marti Building
801 S.W. 3rd Avenue, 2nd Floor
Miami, Florida 33130

Duval County Dept. of Health, Welfare & Bio-Environmental Services
421 West Church Street, Suite 412
Jacksonville, Florida 32202

Hillsborough County Environmental Protection Commission
1410 North 21st Street
Tampa, Florida 33605

Palm Beach County Health Dept.
Division of Environmental Science and Engineering
901 E. Evernia Street
West Palm Beach, Florida 33402

Pinellas County Department of Environmental Management
315 Court Street
Clearwater, Florida 34616

Sarasota County Environmental Services Department
1301 Cattleman Road
Sarasota, Florida 33582-9631

Orange County Environmental Protection Department
2002 E. Michigan Avenue
Orlando, Florida 32806

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee, address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

D.R.E. Environmental Inc. is not requesting a construction permit to be issued in Duval, Clay or Okaloosa counties at this time.

1t 1-16-91
3439

News-Leader

511 Ash Street/P.O. Box 766 (904) 261-3696
Fernandina Beach, Florida 32034

Published Weekly

FERNANDINA BEACH, NASSAU COUNTY, FLORIDA

STATE OF FLORIDA
COUNTY OF NASSAU:

Before the undersigned authority personally appeared **Steve Hopper,** who on oath says that he is Business Manager of The Fernandina Beach News-Leader, a weekly newspaper published at Fernandina Beach in Nassau County, Florida: that the attached copy of advertisement, being a **Legal Notice** in the matter of

NOTICE OF INTENT
Department of Environmental Regulation

published in said newspaper in the issues of

1-16-91

N.L. Ref. # 3439

Affiant further says that the said Fernandina Beach News-Leader is a newspaper published at Fernandina Beach in said Nassau County, Florida and that the said newspaper has heretofore been continuously published in said Nassau County, Florida, each week and has been entered as second class mail matter at the post office in Fernandina Beach in said County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sworn to and subscribed before me

this 17th day of JANUARY, A.D. 1991.

Steve Hopper

Notary Public

(SEAL)

NOTARY PUBLIC, STATE OF FLORIDA
My commission expires April 28, 1992

Flagler/Palm Coast NEWS-TRIBUNE

Published Each Wednesday and Saturday
Flagler County, Florida

State of Florida,
County of Flagler:

Before the undersigned authority personally appeared C. Morgan Miller who, on oath says that he is Classified Manager of the Flagler/Palm Coast NEWS-TRIBUNE, a twice weekly newspaper published in Flagler County, Florida; that the attached copy of advertisement, being a Notice of Intent to Issue Permits

in the matter of Department of Environmental Regulation to DRE Environmental Inc.

in the Court, was published in said newspaper in the issues January 16, 1991

Affiant further says that said the Flagler/Palm Coast NEWS-TRIBUNE is a newspaper published in said Flagler County, Florida, and that the said newspaper has heretofore been continuously published in said Flagler County, Florida, each Wednesday and Saturday and has been entered as second-class mail matter at the post office in Flagler Beach, in said Flagler County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

C. Morgan Miller

Sworn to and subscribed before me this 16th day of January A.D. 19 91

Marsha G. Nichols

NOTARY PUBLIC, State of Florida at Large
My Commission Expires August 20, 1994
BONDED BY BROWN & BROWN, INC.

49c

LEGAL ADVERTISEMENT

State of Florida
Department of
Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue permits (AC 16-187650 and AC 16-189522) to D.R.E. Environmental, Inc., 1644 Blanding Blvd., Suite 2, Jacksonville, Florida 32210, to construct two 35 TPH mobile soil remediation units with air pollution from each unit controlled by a baghouse and afterburner. The units may operate in any county that this notice is published in. Best Available Central Technology (BACT) and Lowest Achievable Emission Rate (LAER) determinations were not required. Each unit may emit 7.8 lbs/hr (34.3 TPY) particulate, 3.8 lbs/hr (16.8 TPY) carbon monoxide, 16.2 lbs/hr (71.0 TPY) nitrogen oxides, 14.4 lbs/hr (63.0 TPY) sulfur dioxide, and 22.6 lbs/hr (99.2 TPY) volatile organic compounds. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment or create a health hazard. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision 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 fourteen (14) days of publication of this notice. 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 Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applications 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 publication 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.

The applications are available for

PROOF OF PUBLICATION

IN RE

Flagler/Palm Coast NEWS-TRIBUNE

public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:
Department of
Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Department of
Environmental Regulation
Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

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

Department of
Environmental Regulation
South District
2269 Bay Street
Ft. Myers, Florida 33901-2896

Department of
Environmental Regulation
Northwest District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7577

Department of
Environmental Regulation
Southeast District
1900 S. Congress Avenue, Suite A
West Palm Beach, Florida 33406

Broward County Environmental
Quality Control Board
621 South Andrews Avenue
Ft. Lauderdale, Florida 33310

Dade County Dept. of Enviromental
Resources Management
Jose Marti Building
801 S.W. 3rd Avenue, 2nd Floor
Miami, Florida 33130

Duval County Dept. of Health,
Welfare
& Bio-Environmental Services
421 West Church Street, Suite 412
Jacksonville, Florida 32202

Hillsborough County Environmental
Protection Commission
1410 North 21st Street
Tampa, Florida 33605

Palm Beach County Health Dept.
Division of Environmental Science
and Engineering
901 E. Evernia Street
West Palm Beach, Florida 33402

Pinellas County Department of
Environmental Management
315 Court Street
Clearwater, Florida 34616

Sarasota County Environmental
Services Department
1301 Cattleman Road
Sarasota, Florida 33582-9631

Orange County Environmental
Protection Department
2002 E. Michigan Avenue
Orlando, Florida 32806

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.
D.R.E. Environmental Inc. is not requesting a construction permit to be issued in Duval, Clay or Okaloosa counties at this time.
Legal NT 702, January 16, 1991, 1 t.

THE TAMPA TRIBUNE

Published Daily
Tampa, Hillsborough County, Florida

State of Florida
County of Hillsborough } ss.

Before the undersigned authority personally appeared R. Putney, who on oath says that he is Accounting Manager of The Tampa Tribune, a daily newspaper published at Tampa in Hillsborough County, Florida; that the attached copy of advertisement being a

LEGAL NOTICE

in the matter of

REGULATION NOTICE

was published in said newspaper in the issues of

January 15, 1991

Affiant further says that the said The Tampa Tribune is a newspaper published at Tampa, in said Hillsborough County, Florida, and that the said newspaper has heretofore been continuously published in said Hillsborough County, Florida, each day and has been entered as second class mail matter at the post office in Tampa, in said Hillsborough County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm, or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

R Putney

Notary Public, State of Florida
My Commission Expires Sept. 3, 1994
Bonded Thru Troy Fain - Insurance Inc.

Sworn to and subscribed before me, this 15 ***day of*** January ***A.D. 19*** 91

Scott D. Williams

SCOTT D. WILLIAMS NOTARY PUBLIC STATE OF FLORIDA

(SEAL)

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL
REGULATION NOTICE
OF INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue permits (AC 16-187650 and AC 16-189522) to D.R.E. Environmental, Inc., 1644 Blanding Blvd., Suite 2, Jacksonville, Florida 32210, to construct two 35 TPH mobile soil remediation units with air pollution from each unit controlled by a baghouse and afterburner. The units may operate in any county that this notice is published in. Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) determinations were not required. Each unit may emit 7.8 lbs/hr (34.3 TPY) particulate, 3.8 lbs/hr (16.8 TPY) carbon monoxide, 16.2 lbs/hr (71.0 TPY) nitrogen oxides, 14.4 lbs/hr (63.0 TPY) sulfur dioxide, and 22.6 lbs/hr (99.2 TPY) volatile organic compounds. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment or create a health hazard. The Department is issuing this intent to issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision 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 fourteen (14) days of publication of this notice. 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 Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applications 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 publication 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.

The applications are available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of
Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida
32399-2400

Department of
Environmental Regulation
Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

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

Department of
Environmental Regulation
South District
2269 Bay Street
Ft. Myers, Florida 33901-2896

Department of
Environmental Regulation
Northeast District
7825 Baymeadows Way,
Suite B200
Jacksonville, Florida
32256-7577

Department of
Environmental Regulation
Southeast District
1900 S. Congress Ave.
Suite A
West Palm Beach,
Florida 33406

Broward County
Environmental
Quality Control Board
621 South Andrews Avenue
Ft. Lauderdale, Florida 33310

Dade County Dept.
of Environmental
Resources Management
Jose Marti Building
801 S.W. 3rd Avenue,
2nd Floor
Miami, Florida 33130

Duval County Dept.
of Health, Welfare &
Bio-Environmental Services
421 West Church Street,
Suite 412
Jacksonville, Florida 32202

Hillsborough County
Environmental Protection
Commission
1410 North 21st Street
Tampa, Florida 33605

Palm Beach
County Health Dept.
Division of Environmental
Science and Engineering
901 E. Evernia Street
West Palm Beach,
Florida 33402

Pinellas County
Department of
Environmental Management
315 Court Street
Clearwater, Florida 34616

Sarasota County
Environmental Services
Department
1301 Cattleman Road
Sarasota, Florida 33582-9631

Orange County
Environmental
Protection Department
2002 E. Michigan Avenue
Orlando, Florida 32806

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

D.R.E. Environmental Inc. is not requesting a construction permit to be issued in Duval, Clay or Okaloosa counties at this time.

1109 1/15/91

FORT MYERS NEWS-PRESS

Published every morning — Daily and Sunday

Fort Myers, Florida

Affidavit of Publication

State of Florida

County of Lee

Before the undersigned authority, personally appeared .....

BRenda Leighton ....., who on oath says that he/she is the

Legal Coordinator of the Fort Myers News-Press, a daily newspaper published at Fort Myers, in Lee County, Florida;

that the attached copy of advertisement, being a .....

Notice of Intent To Issue Permit

in the matter of DER/Permit to construct mobile

soil remediation unit .....in the

.....Court, was published in

said newspaper in the issues of

Jan. 15, 1991

.....

Affiant further says that the said Fort Myers News-Press is a paper of general circulation daily in Lee, Charlotte, Collier, Glades and Hendry Counties and published at Fort Myers, in said Lee County, Florida and that said newspaper has heretofore been continuously published in said Lee County; Florida, each day, and has been entered as a second class mail matter at the post office in Fort Myers in said Lee County, Florida, for a period of one year next preceding the first publication of the attached copy of the advertisment; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Brenda Leighton

Sworn to and subscribed before me this 15th day

of January, A.D. 19 91

Sherry McDowell

Notary Public, State of Florida

My Commission Expires Jan. 3, 1994

Bonded Thru Troy Fain - Insurance Inc.

SHERRY McDOWELL NOTARY PUBLIC STATE OF FLORIDA

My commission Expires .....

CLASS-16

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION NOTICE OF INTENT TO ISSUE PERMIT

The Department of Environmental Regulation gives notice of its intent to issue a permits to (AC 16-187650 and AC 16-189522) to D.R.E. Environmental, Inc., 1644 Blanding Blvd., Suite 2, Jacksonville, Florida 32210, to construct two 35 TPH mobile soil remediation units with air pollution from each unit controlled by a baghouse and afterburner. The units may operate in any county that this notice is published in. Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) determinations were not required. Each unit may emit 7.8 lbs/hr (34.3 TPY) particulate, 3.8 lbs/hr (16.8 TPY) carbon monoxide, 16.2 lbs/hr (71.01 TPY) nitrogen oxides, 14.4 lbs/hr (63.0 TPY) sulfur dioxide, and 22.6 lbs/hr (99.2 TPY) volatile organic compounds. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment or create a health hazard. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision 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 publication of this notice. 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 Notice. 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 publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition with 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 proceedings. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.107, F.A.C.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at: Department of Environmental Regulation, Bureau of Air Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400
Department of Environmental Regulation, Northwest District 160 Governmental Center, Pensacola, Florida 32501-5794
Department of Environmental Regulation, Southwest District, 4520 Oak Fair Boulevard, Tampa, Florida 33610-7347
Department of Environmental Regulation, South District, 2269 Bay Street, Ft. Myers, Florida 33901-2896
Department of Environmental Regulation, Northeast District, 7825 Baymeadows Way, Suite B200, Jacksonville, Florida 32256-7577
Department of Environmental Regulation, Southeast District, 1900 S. Congress Avenue, Suite A, West Palm Beach, Florida 33406
Broward County Environmental Quality Control Board, 621 South Andrews Avenue, Ft. Lauderdale, Florida 33310
Dade County Dept. of Environmental Resources Management, Jose Marti Building, 801 S.W. 3rd Avenue, 2nd Floor, Miami, Florida 33130
Duval County Dept. of Health, Welfare & Bio-Environmental Services, 421 West Church Street, Suite 412, Jacksonville, Florida 32202
Hillsborough County Environmental Protection, 1410 North 21st Street, Tampa, Florida 33605
Palm Beach County Health Dept., Division of Environmental Science and Engineering, 901 E. Evernia Street, West Palm Beach, Florida 33402
Pinellas County Department of Environmental Management, 315 Court Street, Clearwater, Florida 34616
Sarasota County Environmental Services Department, 1301 Cattleman Road, Sarasota, Florida 33582-9631
Orange County Environmental Protection Department, 2002 E. Michigan Avenue, Orlando, Florida 32806

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

D.R.E. Environmental Inc. is not requesting a construction permit to be issued Duval, Clay or Okaloosa counties at this time.

Jan 15 No. 2204

Florida Freedom Newspapers, Inc.

PUBLISHERS OF THE NEWS · HERALD

Panama City, Bay County, Florida

Published Daily

State of Florida

County of Bay

Before the undersigned authority appeared _____

Scott Walker **, who on oath says that (s)he**

is Advertising Director **of the News-Herald, a daily**

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

of advertisement, being a Legal Advertisement

in the matter of Notice of Intent

DER-D.R.E. Environmental, Inc.

In the Bay COunty

Court, was published in said newspaper in the issues of January 15, 1991

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

Sworn to and subscribed before me this 15th **day of**

January **, A. D., 19** 91

LORRAINE B. GRIMES NOTARY PUBLIC STATE OF FLORIDA

Notary Public, State of Florida at Large

My Commission Expires Notary Public, State of Florida ~~My Commission Expires Aug.~~ 25, 1992

Bonded Thru Troy Fain - Insurance Inc.

0545

State of Florida
Department of
Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue permits (AC 16-187650 and AC 16-189522) to D.R.E. Environmental, Inc., 1644 Blanding Blvd., Suite 2, Jacksonville, Florida 32210, to construct two 35 TPH mobile soil remediation units with air pollution from each unit controlled by a baghouse and afterburner. The units may operate in any county that this notice is published in. Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) determinations were not required. Each unit may emit 7.8 lbs/hr (34.3 TPY) particulate, 3.8 lbs/hr (16.8 TPY) carbon monoxide, 16.2 lbs/hr (71.0 TPY) nitrogen oxides, 14.4 lbs/hr (63.0 TPY) sulfur dioxide, and 22.6 lbs/hr (99.2 TPY) volatile organic compounds. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment or create a health hazard. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision 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 fourteen (14) days of publication of this notice. 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 Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applications 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 publication 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.

The applications are available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of
Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida
32399-2400

Department of
Environmental Regulation
Northwest District
160 Governmental Center
Pensacola, Florida
32501-5794

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

Department of
Environmental Regulation
South District
2269 Bay Street
Ft. Myers, Florida
33901-2896

Department of
Environmental Regulation
Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida
32256-7577

Department of
Environmental Regulation
Southeast District
1900 S. Congress Avenue, Suite A
West Palm Beach, Florida
33406

Broward County Environmental
Quality Control Board
621 South Andrews Avenue
Ft. Lauderdale, Florida 33310

Dade County
Dept. of Environmental
Resources Management
Jose Marti Building
801 S.W. 3rd Avenue,
2nd Floor
Miami, Florida 33130

Duval County Dept.
of Health, Welfare
& Bio-Environmental Services
421 West Church Street
Suite 412
Jacksonville, Florida 32202

Hillsborough County
Environmental
Protection Commission
1410 North 21st Street
Tampa, Florida 33605

Palm Beach County
Health Dept.
Division of
Environmental Science
and Engineering
901 E. Evernia Street
West Palm Beach, Florida
33402

Pinellas County
Department of
Environmental Management
315 Court Street
Clearwater, Florida 34616

Sarasota County
Environmental
Services Department
1301 Cattleman Road
Sarasota, Florida
33582-9631

Orange County Environmental
Protection Department
2002 E. Michigan Avenue
Orlando, Florida 32806

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

D.R.E. Environmental Inc. is not requesting a construction permit to be issued in Duval, Clay or Okaloosa counties at this time.

January 15, 1991

№ 4505

STATE OF FLORIDA
COUNTY OF ALACHUA

THE GAINESVILLE SUN
Published Daily and Sunday
GAINESVILLE, FLORIDA

Before the undersigned authority personally appeared Dorothea Clark

who on oath says that he/she is Nat'l Advertising Manager of THE GAINESVILLE SUN, a daily newspaper published at Gainesville in Alachua County, Florida, that the attached copy of advertisement, being a

Notice Of Intent To Issue Permits

in the matter of D.R.E. ENVIRONMENTAL, INC.

in the ..... Court, was published in said newspaper in the issue of,

JANUARY 15, 1991

Affiant further says that the said THE GAINESVILLE SUN is a newspaper published at Gainesville, in said Alachua County, Florida, and that the said newspaper has heretofore been continuously published in said Alachua County, each day, and has been entered as second class mail matter at the post office in Gainesville, in said Alachua County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount for publication in the said newspaper.

Dorothea Clark

Sworn to and subscribed before me this 15th day of January, 1991.

NOTARY PUBLIC STATE OF FLORIDA
BONNIE W. GRAGG
My Commission Exp. 9-27-94
Bonded By Service Ins. Co.

Bonnie W. Gragg
(Seal) Notary Public

State of Florida - Department of Environmental Regulation
NOTICE OF INTENT TO ISSUE PERMITS

The Department of Environmental Regulation hereby gives notice of its intent to issue permits (AC 16-187650 and AC 16-189522) to D.R.E. Environmental, Inc., 1644 Blanding Blvd., Suite 2, Jacksonville, Florida 32210, to construct two 35 TPH mobile soil remediation units with air pollution from each unit controlled by a baghouse and afterburner. The units may operate in any county that this notice is published in. Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) determinations were not required. Each unit may emit 7.8 lbs/hr (34.3 TPY) particulate, 3.8 lbs/hr (16.8 TPY) carbon monoxide, 16.2 lbs/hr (71.0 TPY) nitrogen oxides, 14.4 lbs/hr (63.0 TPY) sulfur dioxide, and 22.6 lbs/hr (99.2 TPY) volatile organic compounds. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment or create a health hazard. The Department is issuing this intent to issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision 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 fourteen (14) days of publication of this notice. 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 Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applications 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 publication 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.

The applications are available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Regulation, Bureau of Air Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

Department of Environmental Regulation, Northwest District, 160 Governmental Center, Pensacola, Florida 32501-5794.

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

Department of Environmental Regulation, South District, 2269 Bay Street, Ft. Myers, Florida 33901-2896.

Department of Environmental Regulation, Northeast District, 7825 Baymeadows Way, Suite B200, Jacksonville, Florida 32256-7577.

Department of Environmental Regulation, Southeast District, 1900 S. Congress Avenue, Suite A, West Palm Beach, Florida 33406.

Broward County Environmental Quality Control Board, 621 South Andrews Avenue, Ft. Lauderdale, Florida 33310.

Dade County Dept. of Environmental Resources Management, Jose Marti Building, 801 S.W. 3rd Avenue, 2nd Floor, Miami, Florida 33130.

Duval County Dept. of Health, Welfare & Bio-Environmental Services, 421 West Church Street, Suite 412, Jacksonville, Florida 32202.

Hillsborough County Environmental Protection Commission, 1410 North 21st Street, Tampa, Florida 33605.

Palm Beach County Health Dept., Division of Environmental Science and Engineering, 901 E. Evernia Street, West Palm Beach, Florida 33402.

Pinellas County Department of Environmental Management, 315 Court Street, Clearwater, Florida 34616.

Sarasota County Environmental Services Department, 1301 Cattleman Road, Sarasota, Florida 33582-9631.

Orange County Environmental Protection Department, 2002 E. Michigan Avenue, Orlando, Florida 32806.

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

D.R.E. Environmental Inc. is not requesting a construction permit to be issued in Duval, Clay or Okaloosa counties at this time.

(4505) 1:15

BEST AVAILABLE COPY

PENSACOLA
News Journal

PUBLISHED DAILY
PENSACOLA, ESCAMBIA COUNTY, FLORIDA

State of Florida,
County of Escambia.

Before the undersigned authority personally appeared

Cindy Vance

who on oath says that she is Legal Advertising Supervisor of the Pensacola News Journal, a daily newspaper published at Pensacola in Escambia County, Florida; with general circulation in Escambia, Santa Rosa, Okaloosa and Walton Counties that the attached copy of advertisement, being a NOTICE in the matter of

Intent to Issue

_____ in the _____ Court,

was published in said newspaper in the issues of

January 15, 1991

Affiant further say that the said The Pensacola News Journal is a newspaper published at Pensacola, in said Escambia County, Florida, and that the said newspaper has heretofore been continuously published in said Escambia County, Florida, each day and has been entered as second class mail matter at the post office in Pensacola, in said Escambia County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Cindy Vance

Sworn to and subscribed before me this 18th day of January, A.D., 19 91

Shelby J. Hunter
NOTARY PUBLIC.

My Commission Expires October 28, 1991

LEGAL NOTICE LEGAL NOTIC

State of
Florida
Department of
Environmental Regulation
Notice of
Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue permits (AC 16-187650 and AC 16-189522) to D.R.E. Environmental, Inc., 1644 Blanding Blvd., Suite 2, Jacksonville, Florida 32210, to construct two 35 TPH mobile soil remediation units with air pollution from each unit controlled by a baghouse and afterburner. The units may operate in any county that this notice is published in. Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) determinations were not required. Each unit may emit 7.8 lbs/hr (34.3 TPY) particulate, 3.8 lbs/hr (16.8 TPY) carbon monoxide, 16.2 lbs/hr (71.0 TPY) nitrogen oxides, 14.4 lbs./hr (63.0 TPY) sulfur dioxide, and 22.6 lbs/hr (99.2 TPY) volatile organic compounds. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment or create a health hazard. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision 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 fourteen (14) days of publication of this notice. 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 Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applications 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 publication 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.

The applications are available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Department of Environmental Regulation
Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

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

Department of Environmental Regulation
South District
2269 Bay Street
Ft. Myers, Florida 33901-2896

Department of Environmental Regulation
Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7577

Department of Environmental Regulation
Southeast District
1900 S. Congress Avenue, Suite A
West Palm Beach, Florida 33406

Broward County Environmental
Quality Control Board
621 South Andrews Avenue
Ft. Lauderdale, Florida 33310

Dade County Dept. of Environmental
Resources Management
Jose Marti Building
801 S.W. 3rd Avenue, 2nd Floor
Miami, Florida 33130

Duval County Dept. of Health, Welfare
& Bio-Environmental Services
421 West Church Street, Suite 412
Jacksonville, Florida 32202

Hillsborough County Environmental
Protection Commission
1410 North 21st Street
Tampa, Florida 33605

Palm Beach County Health Dept.
Division of Environmental Science
and Engineering
901 E. Evernia Street
West Palm Beach, Florida 33402

Pinellas County Department of
Environmental Management
315 Court Street
Clearwater, Florida 34616

Sarasota County Environmental
Services Department
1301 Cattleman Road
Sarasota, Florida 33582-9631

Orange County Environmental
Protection Department
2002 E. Michigan Avenue
Orlando, Florida 32806

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

D.R.E. Environmental Inc. is not requesting a construction permit to be issued in Duval, Clay or Okaloosa counties at this time.

Legal no. 38884 1t
Jan. 15, 1991

The Miami Herald

PUBLISHED DAILY
MIAMI — DADE — FLORIDA

STATE OF FLORIDA
COUNTY OF DADE:

Before the undersigned authority personally appeared

OLGA L. ARCIA

who on oath says that he/she is

CUSTODIAN OF RECORDS

of The Miami Herald, a daily newspaper published at Miami in Dade County, Florida; that the attached copy of advertisement was published in said newspaper in the issues of

January 15, 1991

Affiant further says that the said The Miami Herald is a newspaper published at Miami, in the said Dade County, Florida and that the said newspaper has heretofore been continuously published in said Dade County, Florida, each day and has been entered as second class mail matter at the post office in Miami, in said Dade County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Olga L. Arcia

Sworn to and subscribed before me this 22

day of January A.D. 19 91

My commission expires

ELYSE BENSON
NOTARY PUBLIC STATE OF FLORIDA AT LARGE

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. MAR 15,1991
BONDED THRU GENERAL INS. UND.

(1)

State of Florida Department of Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue permits (AC 16-187650 and AC 16-189522) to D.R.E. Environmental, Inc., 1644 Blanding Blvd., Suite 2, Jacksonville, Florida 32210, to construct two 35 TPH mobile soil remediation units with air pollution from each unit controlled by a baghouse and afterburner. The units may operate in any county that this notice is published in. Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) determinations were not required. Each unit may emit 7.8 lbs/hr (34.3 TPY) particulate, 3.8 lbs/hr (16.8 TPY) carbon monoxide, 16.2 (71.0 TPY)) nitrogen oxides, 14.4 lbs/hr (63.0 TPY) sulfur dioxide, and 22.6 lbs/hr (99.2 TPY) volatile organic compounds. These emissions will not cause a violation of any ambient air quality standard or Prevention of Signficant Deterioration (PSD) increment or create a health hazard. The Department is issuing the Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision 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 fourteen (14) days of publication of this notice. 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.

(2)

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The applications are available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

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Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida
32399-2400

Department of Environmental Regulation
Northwest District
160 Governmental Center
Pensacola, Florida
32501-5794

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

Department of Environmental Regulation
South District
2269 Bay Street
Fort Myers, Florida
33901-2896

Department of Environmental Regulation
Northeast District
7825 Baymeadows Way
Suite B200
Jacksonville, Florida
32256-7577

Department of Environmental Regulation
Southeast District
1900 S. Congress Avenue,
Suite A
West Palm Beach, Florida
33406

Broward County Environmental Quality Control Board
621 South Andrews Avenue
Ft. Lauderdale, Florida
33310

Dade County Dept. of Environmental Resources Management
Jose Marti Building
801 S.W. 3rd Avenue,
2nd Floor
Miami, Florida 33130

Duval County Dept. of Health, Welfare & Bio-Environmental Services
421 West Church Street,
Suite 412
Jacksonville, Florida 32202

Hillsborough County Environmental Protection Commission
1410 North 21st Street
Tampa, Florida 33605

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

(3)

Pinellas County Department of Environmental Management
315 Court Street
Clearwater, Florida 33516

Sarasota County Environmental Services Department
1301 Cattleman Road
Sarasota, Florida
33582-9631

Orange County Environmental Protection Department
2002 E. Michigan Avenue
Orlando, Florida 32806

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

D.R.E. Environmental Inc. is not requesting a construction permit to be issued in Duval, Clay or Okaloosa counties at this time.

ATTACHMENT 3

Department of Environmental Regulation
Cental District
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803-3767
Department of Environmental Regulation
Southeast District
1900 S. Congress Avenue, Suite A
West Palm Beach, Florida 33406
Broward County Environmental Quality Control Board
621 South Andrews Avenue
Ft. Lauderdale, Florida 33310
Dade County Dept. of Environmental Resources Management
Jose Marti Building
801 S.W. 3rd Avenue, 2nd Floor
Miami, Florida 33130
Duval County Dept. of Health, Welfare & Bio-Environmental Services
421 West Church Street, Suite 412
Jacksonville, Florida 32202
Hillsborough County Environmental Protection Commission
1410 North 21st Street
Tampa, Florida 33605
Palm Beach County Health Dept. Division of Environmental Science and Engineering
901 E. Evernia Street
West Palm Beach, Florida 33402
Pinellas County Department of Environmental Management
315 Court Street
Clearwater, Florida 34616
Sarasota County Environmental Services Department
1301 Cattleman Road
Sarasota, Florida 33582-9631
Orange County Environmental Protection Department
2002 E. Michigan Avenue
Orlando, Florida 32806

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

CL-962 Jan.15,1991

The Orlando Sentinel

Published Daily
Orlando, Orange County, Florida

ADVERTISING CHARGE $256.18

State of Florida } SS.
COUNTY OF ORANGE }

Before the undersigned authority personally appeared Juanita Rosado, who on oath says that she is the Legal Advertising Representative of the Orlando Sentinel, a Daily newspaper published at Orlando, in Orange County, Florida; that the attached copy of advertisement, being a notice of intent to issue in the matter of Permits AC 16-187650 and AC 16-189522

in the _____ Court, was published in said newspaper in the issues of January 15, 1991

Affiant further says that the said Orlando Sentinel is a newspaper published at Orlando, in said Orange County, Florida, and that the said newspaper has heretofore been continuously published in said Orange County, Florida, each Week Day and has been entered as second-class mail matter at the post office in Orlando, in said Orange County, Florida for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Juanita Rosado

Sworn to and subscribed before me this 15th day of January A.D., 1991

JOAN R. LUCERO NOTARY PUBLIC STATE OF FLORIDA Seal

Joann R. Lucero
Notary Public, State of Florida at Large
My Commission Expires August 28, 1994
Bonded Thru Brown & Brown, Inc.

FORM NO. AD-262

State of Florida
Department of Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue permits (AC 16-187650 and AC 16-189522) to D.R.E. Environmental, Inc., 1644 Blanding Blvd., Suite 2, Jacksonville, Florida 32210, to construct two 35 TPH mobile soil remediation units with air pollution from each unit controlled by a baghouse and afterburner. The units may operate in any county that this notice is published in. Best Available Control Authority (BACT) and Lowest Achievable Emission Rate (LAER) determinations were not required. Each unit may emit 7.8 lbs/hr (34.3 TPY) particulate, 3.8 lbs/hr (16.8 TPY) carbon monoxide, 16.2 lbs/hr (71.0 TPY) nitrogen oxides, 14.4 lbs/hr (63.0 TPY) sulfur dioxide, and 22.6 lbs/hr (99.2 TPY) volatile organic compounds. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment or create a health hazard. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision 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 fourteen (14) days of publication of this notice. 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 postition taken by it in this Notice. 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 publication 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.

The application is available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:
Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Department of Environmental Regulation
Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794
Department of Environmental Regulation
Southwest District
4520 Oak Fair Boulevard
Tampa, Florida 33610-7347
Department of Environmental Regulation
South District
2269 Bay Street
Ft. Myers, Florida 33901-2896
Department of Environmental Regulation
Northeast District
3426 Bills Road
Jacksonville, Florida 32207

Tallahassee Democrat
PUBLISHED DAILY
TALLAHASSEE - LEON - FLORIDA

STATE OF FLORIDA
COUNTY OF LEON:

Before the undersigned authority personally appeared Carrie Coons who on oath says that she is Legal Advertising Representative of the Tallahassee Democrat, a daily newspaper published at Tallahassee in Leon County, Florida; that the attached copy of advertising being a Legal Ad in the matter of

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

in the NOTICE OF INTENT TO ISSUE PERMIT

Court, was published in said newspaper in the issues of:

JANUARY 15, 1991

Affiant further says that the said Tallahassee Democrat is a newspaper published at Tallahassee, in the said Leon County, Florida, and that the said newspaper has heretofore been continuously published in said Leon County, Florida, each day and has been entered as second class mail matter at the post office in Tallahassee, in said Leon County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this publication in the said newspaper.

Carrie Coons

Carrie Coons,
Legal Advertising Representative

Sworn To And Subscribed Before Me This

23 **Day of** January

A.D. 1991

Lee Pierce

Notary Public

Notary Public, State of Florida
My Commission Expires April 27, 1991
Bonded Thru Troy Fain - Insurance Inc.

(SEAL) LEE PIERCE NOTARY PUBLIC STATE OF FLORIDA

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NOTICE OF INTENT TO ISSUE PERMIT

The Department of Environmental Regulation gives notice of its intent to issue permits (AC 16-187650 and AC 16-189522) to D.R.E. Environmental, Inc., 1644 Blanding Blvd., Suite 2, Jacksonville, Florida 32310, to construct two 35 TPH mobile soil remediation units with air pollution from each unit controlled by a baghouse and afterburner. The units may operate in any county that this notice is published in. Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) determinations were not required. each unit may emit 7.8 lbs/hr (34.3 TPY) particulate, 3.8 lbs/hr (16.8 TPY) carbon monoxide, 16.2 lbs/hr (71.0 TPY) nitrogen oxides, 14.4 lbs/hr (63.0 TPY) sulfur dioxide, and 22.6 lbs/hr (99.2 TPY) volatile organic compounds. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment or create a health hazard. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision 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 publication of this notice. 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 Notice. 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 publication 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 part 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.

The application is available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400.

Department of Environmental Regulation
Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

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

Department of Environmental Regulation
South District
2269 Bay Street
Ft. Myers, Florida 33901-2896

Department of Environmental Regulation
Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7577

Department of Environmental Regulation
Southeast District
1900 S. Congress Avenue, Suite A
West Palm Beach, Florida 33406

Broward County Environmental
Quality Control Board
621 South Andrews Avenue
Ft. Lauderdale, Florida 32310

Dade County Dept. of Environmental
Resources Management
Jose Marti Building
801 S.W. 3rd Avenue, 2nd Floor
Miami, Florida 33130

Duval County Dept. of Health, Welfare
& Bio-Environmental Services
421 West Church Street, Suite 412
Jacksonville, Florida 32202

Hillsborough County Environmental
Protection Commission
1410 North 21st Street
Tampa, Florida 33605

Palm Beach County Health Dept.
Division of Environmental Science
and Engineering
901 E. Evernia Street
West Palm Beach, Florida 33402

Pinellas County Department of
Environmental Management
315 Court Street
Clearwater, Florida 34616

Sarasota County Environmental
Services Department
1301 Cattleman Road
Sarasota, Florida 33582-9631

Orange County Environmental
Protection Department
2002 E. Michigan Avenue
Orlando, Florida 32806

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

D.R.E. Environmental Inc., is not requesting a construction permit to be issued in Duval, Clay or Okaloosa counties at this time.

JANUARY 15, 1991 AD NO. 1A640020

The St. Augustine Record

PUBLISHED EVERY AFTERNOON MONDAY THROUGH FRIDAY, SATURDAY AND SUNDAY MORNING
ST. AUGUSTINE AND ST. JOHNS COUNTY, FLORIDA

STATE OF FLORIDA,
COUNTY OF ST. JOHNS

Before the undersigned authority personally appeared _____

SHERRY L. RAUCH who on oath says that she is

ACCOUNTING CLERK of the St. Augustine Record, a

daily newspaper published at St. Augustine in St. Johns County, Florida: that

the attached copy of advertisement, being a _____

Notice of Intent

_____ in the matter of _____

AC 16-187650 and AC 16-189522

_____ in the _____ Court,

was published in said newspaper in the issues of _____

January 15, 1991

Affiant further says that the St. Augustine Record is a newspaper published at St. Augustine, in said St. Johns County, Florida, and that the said newspaper has heretofore been continuously published in said St. Johns County, Florida, each day and has been entered as second class mail matter at the post office in the City of St. Augustine, in said St. Johns County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing the advertisement for publication in the said newspaper.

Sherry L. Rauch

Sworn to and subscribed before me Zoe Ann Johns

this 30th day of January

A.D. 19 91

ZOE ANN JOHNS NOTARY PUBLIC STATE OF FLORIDA

Zoe Ann Johns

(SEAL) Notary Public

8/22/93

COPY OF ADVERTISEMENT

State Of Florida
Department of
Environmental
Regulation
Notice Of Intent
To Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue permits (AC 16-187650 and AC 16-189522) to D.R.E. Environmental, Inc., 1644 Blanding Blvd., Suite 2, Jacksonville, Florida 32210, to construct two 35 TPH mobile soil remediation units with air pollution from each unit controlled by a baghouse and afterburner. The units may operate in any county that this notice is published in. Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) determinations were not required. Each unit may emit 7.8 lbs/hr (34.3 TPY) particulate, 3.8 lbs/hr (16.8 TPY) carbon monoxide, 16.2 lbs/hr (71.0 TPY) nitrogen oxides, 14.4 lbs/hr (63.0 TPY) sulfur dioxide, and 22.6 lbs/hr (99.2 TPY) volatile organic compounds. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment or create a health hazard. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision 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 fourteen (14) days of publication of this notice. 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;

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(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.

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2600 Blair Stone Road
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Pensacola, Florida 32501-5794
Department of Environmental Regulation
Southwest District
4520 Oak Fair Boulevard
Tampa, Florida 33610-7347
Department of Environmental Regulation
South District
2269 Bay Street
Ft. Myers, Florida 33901-2896
Department of Environmental Regulation
Northeast District
7825 Baymeadows Way,
Suite B200
Jacksonville, Florida 32256-7577
Department of Environmental Regulation Southeast District
1900 S. Congress Avenue, Suite A
West Palm Beach, Florida 33406
Broward County Environmental Quality Control Board
621 South Andrews Avenue
Ft. Lauderdale, Florida 33310
Dade County Dept. of Environmental Resources Management
Jose Marti Building
801 S.W. 3rd Avenue, 2nd Floor
Miami, Florida 33130
Duval County Dept. of Health, Welfare & Bio-Environmental Services
421 West Church Street, Suite 412
Jacksonville, Florida 32202
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Palm Beach County Health Dept.
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901 E. Evernia Street
West Palm Beach, Florida 33402
Pinellas County Department of Environmental Management
315 Court Street
Clearwater, Florida 34616
Sarasota County Environmental Services Department
1301 Cattleman Road
Sarasota, Florida 33582-9631
Orange County Environmental Protection Department
2002 E. Michigan Avenue
Orlando Florida 32806

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

D.R.E. Environmental Inc. is not requesting a construction permit to be issued in Duval, Clay or Okaloosa counties at this time.

L315 Jan. 15, 1991

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue permits (AC 16-187850 and AC 18-189522) to D.R.E. Environmental, Inc., 1644 Blanding Blvd., Suite 2, Jacksonville, Florida 32210, to construct two 35 TPH mobile soil remediation units with air pollution from each unit controlled by a baghouse and afterburner. The units may operate in any county that this notice is published in. Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) determinations were not required. Each unit may emit 7.8 lbs./hr. (34.3 TPY) particulate, 3.8 lbs./hr. (16.8 TPY) carbon monoxide, 16.2 lbs./hr. (71.0 TPY) nitrogen oxides, 14.4 lbs./hr. (63.0 TPY) sulfur dioxide, and 22.6 lbs./hr. (99.2 TPY) volatile organic compounds. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment or create a health hazard. The Department is issuing this Intent to Issue for the reasons stated in the Technical, Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision 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 fourteen (14) days of publication of this notice. 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 Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applications 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 publication 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.

The applications are available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Regulation
Bureau of Air Regulation
2800 Blair Stone Road
Tallahassee, Florida 32399-2400

Department of Environmental Regulation
Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

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

Department of Environmental Regulation
South District
2269 Bay Street
Ft. Myers, Florida 33901-2896

Department of Environmental Regulation
Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7577

THE BAKER COUNTY PRESS, PUBLISHED WEEKLY IN THE CITY OF MACCLENNY, COUNTY OF BAKER AND STATE OF FLORIDA.

STATE OF FLORIDA

COUNTY OF BAKER

AFFIDAVIT OF PUBLICATION

Before me, the undersigned authority personally appeared Anita Patterson, who on oath says that he is one of the firm of the BAKER COUNTY PRESS, a weekly newspaper published in Macclenny, Baker County, Florida; that the attached copy of advertisement being a notice to appear in re:

Notice of Intent to Issue

Was published in said newspaper in the issues of:

1/17/91

Affidavit says further that the said BAKER COUNTY PRESS is a newspaper published at Macclenny, in said Baker County, Florida, and that the said newspaper has heretofore been continuously published in said Baker County, Florida, each week; has been entered as second class mail matter at the Post Office in Macclenny, Florida, in said Baker County, Florida, for a period of one year next preceeding the first publication of the attached copy of notice; and affiant further states that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in said newspaper.

/s/ Anita Patterson

Sworn to and subscribed before me

this 30th day of January

19 91.

Karin S. Thomas

NOTARY PUBLIC, STATE OF FLORIDA.
MY COMMISSION EXPIRES: Jan. 25, 1995.
BONDED THRU NOTARY PUBLIC UNDERWRITERS.

KARIN G THOMAS NOTARY PUBLIC STATE OF FLORIDA

Department of Environmental Regulation
Southeast District
1900 S. Congress Avenue, Suite A
West Palm Beach, Florida 33406

Broward County Environmental
Quality Control Board
621 South Andrews Avenue
Ft. Lauderdale, Florida 33310

Dade County Dept. of Environmental
Resources Management
Jose Marti Building
801 S.W. 3rd Avenue, 2nd Floor
Miami, Florida 33130

Duval County Dept. of Health, Welfare
& Bio-Environmental Services
421 West Church Street, Suite 412
Jacksonville, Florida 32202

Hillsborough County Environmental
Protection Commission
1410 North 21st Street
Tampa, Florida 33605

Palm Beach County Health Dept.
Division of Environmental Science
and Engineering
901 East Evernia Street
West Palm Beach, Florida 33402

Pinellas County Department of
Environmental Management
315 Court Street
Clearwater, Florida 34616

Sarasota County Environmental
Services Department
1301 Cattleman Road
Sarasota, Florida 33582-9631

Orange County Environmental
Protection Department
2002 E. Michigan Avenue
Orlando, Florida 32806

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

D.R.E Environmental Inc. is not requesting a construction permit to be issued in Duval, Clay or Okaloosa counties at this time.

1/17c

John N. Austin
6356 Sundown Drive
Jacksonville, Florida 32244
(904) 771-3098

Dept. of Environmental Regulation
Office of General Counsel
2600 Blair Stone Road
Twin Towers Office Building
Tallahassee, Florida 32399-2400

Jan. 28, 1991

Dear Sirs:

Pursuant to Section 120.57, Florida Statutes, I hereby petition for an administrative proceeding on the permit application to construct two mobile soil remediation units by D.R.E. Environmental, Inc. ("D.R.E."), 1644 Blanding Blvd., Suite 2, Jacksonville, Fl. 32210, Permit Nos. AC 16-187650 and AC 16-189522. These projects are for mobile units with statewide application, excepting Duval, Clay, and Okaloosa counties.

Petitioner received notice of the Dept. of Environmental Regulation's ("DER") proposed intent to issue by publication in the News Leader on January 16, 1991.

Petitioner states that he resides within and is a user of the natural resources which will be affected by the air, water, and ground pollution produced by D.R.E. As

stated by the DER, D.R.E.'s soil remediation incinerators will be a source of air pollution, polluting the air the air Petitioner breathes, and thereby injuring the health of Petitioner. Petitioner is a certified asbestos lung disease victim and has a particularly susceptible and damaged pulmonary system, above that of the average citizen, which will suffer greater damage by D.R.E.'s increased air pollution.

But D.R.E.'s incinerators will also be a source of water and ground pollution, as the ground and eventually the ground water and the drinking water of Petitioner, which he ingests, will be contaminated with hazardous pollutants from the air emissions and the baghouse dust of the proposed incinerators, thereby injuring the fragile health of Petitioner.

Petitioner alleges that D.R.E.'s proposed incinerators will substantially, materially, and adversely affect, i.e. injur, the air quality, the water quality, and the quality of the natural environment of all counties in Florida, and thus interfere with Petitioner's reasonable use and enjoyment of his property and larger environment.

Petitioner alleges that the polluted emissions produced by D.R.E.'s proposed incinerators

will detrimentally affect, i.e. injur, the economic value of his property by reducing its value due to its exposure to the increased hazardous pollutants produced by D.R.E.'s proposed soil incinerators.

Petitioner alleges that the proposed construction permit must be denied because the standards for issuing the permit under Rule 17-4.070, Florida Administrative Code ("FAC") have not been met. Under this rule, D.R.E. must provide reasonable assurance based on plans, test results, installation of tested pollution control equipment, or other information that the project will not contravene DER standards or rules. D.R.E. has failed to proviide reasonable assurance that a maximum of 1,400 lbs./hr. of VOC will enter afterburner other than ~~their~~ mere estimate. There is no substantiating data.

Further, there has been no accounting of (1) the actual organic compounds within the soil itself (including but not limited to: radioactive components and heavy metals), (2) the uncombusted fuel, and (3) the emissions from the increased amount of fuel (propane) actually necessary to achieve the required 1600°F temperature. These unaccounted sources will increase the calculated 99.2

TPY VOC emissions for each of these soil incinerators to over 100 TPY VOC emissions, and thus these pollution sources must be subject to the requirements of Rule 17-2.500(5), F.A.C. and Rule 17-2.510(4), F.A.C. and are not minor sources subject to Rule 17-2.100, F.A.C.

Petitioner has failed to provide reasonable assurance, based on actual test results or data that the afterburner maintains a 98.36% efficiency rate for destruction of VOC's when operating at the required 1600° F temperature, other than their mere statement.

Petitioner has failed to provide reasonable assurance, as required by Rule 17-4.070, FAC., based on actual test results or data, that the baghouse maintains a 99.7% efficiency rate for particulate matter emissions.

Petitioner objects to the issuance of the proposed permit in that there is no testing requirement of the dust or ash from the baghouse that is generated during the incineration process. This dust will contain toxic contaminants and according to the permit application this contaminated dust will be added back into the finished product. At a minimum, and similar to Specific Condition 16, the dust must be sampled on an

hourly basis and an analysis of a daily composite sample made up of the hourly samples using the EPA Toxic Characteristic Leaching Procedure ("TCLP") analysis for hazardous metals, pesticides, and other contaminants. The results of this testing will show that this dust must be treated as and disposed of as hazardous waste.

Petitioner objects to the proposed permit because of the indefinite language contained in Specific Condition 3. The indefinite language as proposed "the afterburner shall be capable of operating above 1600°F" must be stated in the imperative, "the afterburner must be operated at or above the required minimum temperature of 1600°F." This definite wording is necessary to insure compliance with applicable emissions level.

Petitioner objects to the proposed permit because Specific Condition 12 fails to specify the means which D.R.E. must continuously employ to insure non-exceedance of the maximum 35 T.P.H charging rate.

Petitioner objects to the proposed permit because Specific Condition 14 fails to specifically limit the definition of petroleum products to virgin petroleum products (fuels and lubricants and "on-spec" used oils (motor oils).

Petitioner objects to the proposed permit because of Specific Condition 15. As written, Specific Condition 15 would allow D.R.E. to treat "off-spec" material without allowing public notice or comment. D.R.E.'s permit must be limited to only virgin petroleum products and "on-spec" oil.

Petitioner objects to the proposed permit because of the language of Specific Condition 19. The unit must be tested at the maximum process weight rate of 35 TPH to show compliance.

Petitioner objects to the proposed permit because Specific Condition 21 only requires testing for particulate matter and visible emissions compliance to occur annually. Petitioner asserts that given the variable nature of the contaminated soil to be incinerated, the compliance testing for particulate matter and visible emissions must be required on a per site basis.

Petitioner objects to the proposed permit because of the indefinite language and timing contained in Specific Condition 24. The phrase "whenever the permittee decides it is feasible" must be eliminated. The second sentence of Specific Condition 24 must be stated in the imperative "The

request shall be at least 15 days prior to operation at the new site." Further, the timing of notice to the BAR, local government, and DER District Office must be increased from 3 days to 12 days prior to moving to the new site, in order to allow these agencies to have sufficient time to respond or take action.

Petitioner objects to the propored permit because of the indefinite language of Specific Condition 27, "as soon as feasible." Petitioner asserts that a definite time period for reporting violations must be established and suggests 5 days.

Petitioner objects to the issuance of this propored permit in that there is no requirement that the two propored incinerators must be operated independently and never at the same site, as a Specific Condition of this permit. Otherwise the net effect at each site would be a doubling of the emissions, including producing VOC emissions over 100 TPY, and thus a major source of pollutants.

Under Rule 17-4.070(3), F.A.C., DER may issue any permit with specific conditions necessary to provide reasonable assurance that department rules can be met.

Wherefore, I request that DER

incorporate the above objections into the proposed permit and require D.R.E. to establish reasonable assurance, and if not, I request an administrative proceeding on the D.R.E's soil remediation incinerator permit applications.

Sincerely,

John N. Austin

John N. Austin

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

HERNANDO COUNTY,

Petitioner,

vs. Case No.:

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION and D.R.E. ENVIRONMENTAL, INC.,

Respondents.

_____/

VERIFIED PETITION FOR FORMAL ADMINISTRATIVE HEARING

Pursuant to Sections 120.57(1) and 403.412(5), Fla. Stat., and DER Rule 17-103.155, Fla. Admin. Code, Petitioner HERNANDO COUNTY hereby petitions for a formal administrative hearing on the proposed issuance of permits AC 16-187650 and AC 16-189522 to D.R.E. Environmental, Inc., for the construction of two mobile soil remediation units. Petitioner states as follows:

1. Petitioner HERNANDO COUNTY is a political subdivision of the State of Florida. Its collegial head is a Board of County Commissioners whose address is 20 N. Main Street, Brooksville, Florida 34601. For purposes of this proceeding, its address is that of its attorneys, Oertel, Hoffman, Fernandez & Cole, P.A., 2700 Blair Stone Road, Suite C, Tallahassee, Florida 32301.

2. The name and address of the permit applicant is D.R.E. Environmental, Inc. ("DRE"), 1644 Blanding Blvd., Suite 2, Jacksonville, Florida 32210. D.R.E. proposes to construct two 35 tons per hour (TPH) mobile soil remediation units for operation throughout Florida, including within Hernando County.

3. The Department's file numbers for the two permit applications are AC 16-187650 and AC 16-189522. By notice published in the Tampa Tribune on January 15, 1991, the Department gave notice of its intent to issue the permits to DRE. The Department has prepared a single draft permit for the two units.

4. Hernando County's substantial interests are affected because, as a political subdivision of the state of Florida, it has constitutional and statutory authority to exercise police powers to protect and preserve the public health, safety and welfare of the citizens of Hernando County, and to protect and preserve the natural resources of Hernando County, including its air and water. The County also owns property within its boundaries, including parks, recreation areas, and buildings and facilities for carrying out its governmental functions. The proposed permit would authorize DRE to burn soils contaminated with petroleum products, and can reasonably be expected to emit air pollutants, including particulates, carbon monoxide, nitrogen oxides, sulfur dioxide, and volatile organic compounds. The emission of these pollutants may have adverse effects on the citizens of Hernando County, natural resources in Hernando County, and property owned by Hernando County.

5. In addition, the activity proposed to be permitted will impair, pollute, or otherwise injure the air, water, or other natural resources of the state. As this petition

is verified pursuant to Section 403.412(5), Fla. Stat., Hernando County has standing pursuant to statute.

6. Hernando County has initially identified the following issues of material fact, which it reserves the right to supplement as additional facts become known to it:

a. The emissions limits contained in the draft permit are expressed in tons per year. However, since the soil burning units are mobile, the temporary operation of the unit at any given site may process soils and generate emissions at a rate that, if annualized, would exceed the tons per year emissions limitations. The enforcement of emissions limitations at a single location for a stationary source does not present the same problems as a mobile unit, because the emissions levels from permanent stationary sources can be more closely monitored and their impacts observed. Likewise, if one of the units is idle for any length of time and then placed in heavy operation at a temporary site for a few months, the emissions at the temporary site may be consistent with the permit's annual emission limitations, but may have a significant impact on ambient air quality at the temporary site. The applicant has thus failed to provide reasonable assurances that emissions will not exceed the permit limits, and the permit does not contain sufficient restrictions, such as expressing the emissions limitations in smaller increments (e.g., pounds per hour or pounds per day), to prevent the applicant from exceeding emissions limitations.

b. Because the proposed units are mobile, it is not possible to quantify the site specific impacts of operation of the units at any given site, which is typically done in the evaluation of a construction permit for a stationary source of air pollution. The potential location of the units adjacent to particular land uses, such as residential areas,

schools or hospitals, may result in the unit's operation constituting a nuisance. Although the draft permit contains a specific condition prohibiting operation of the unit "at a location or in a manner that may create a nuisance," the draft permit contains no standards restricting the location and operation of the unit so as to avoid creation of a nuisance.

c. Similar to the issue noted in subparagraph (b) above, the draft permit allows continuous operation of the unit, 8760 hours per year (24 hours/day x 365 days/year). Again, site specific conditions and adjacent land uses (e.g., residential, school and hospital) may render such mode of operation a nuisance and a safety hazard, and the draft permit contains inadequate restrictions to prevent this from occurring.

d. The draft permit is apparently for two mobile soil burners which operate independently. However, there is no restriction in the permit for both units operating at the same location at the same time. If both units operated at the same location, the combined emissions would be double the limits set forth in the permit, and would constitute a major source of air pollution; specifically, total emissions from the two units would exceed 100 tons per year for nitrogen oxides, for sulfur dioxide, and for volatile organic compounds. (Each unit is authorized to emit 71.0 TPY nitrogen oxides, 63.0 TPY sulfur dioxide, and 99.2 TPY VOC's.) The proposed units should thus be subject to pre-construction review requirements of Rules 17-2.500(5) and 17-2.510(4); absent pre-construction review, reasonable assurances have not been given that ambient air quality standards will not be violated.

e. Specific condition 21 of the draft permit requires stacks testing by EPA Methods 5 and 9 within 5 days after placing each unit in operation, and stack

testing by EPA Method 9 within 3 days of placing each unit in service at each site. However, if a unit stays operational at a site for an extended period of time, additional testing should be required as if the unit is a permanent, stationary source. Specifically, an additional EPA Method 5 test should be conducted no more than 90 days after the initial test at a given site, if the unit remains at that site more than 90 days. Absent this additional testing, the applicant has failed to give reasonable assurances that applicable air quality standards will not be violated.

f. The draft permit would authorize construction of the units with afterburners "capable of operating above 1600°F." Because the permit does not require a minimum operational temperature of 1600°F, reasonable assurances have not been given that the emissions from the afterburner will achieve the emissions limitations set forth in the permit. Further, the absence of strip chart temperature logs for inspection and verification means that reasonable assurances have not been given that applicable air quality standards will not be violated.

g. At Specific Condition 15, the permit authorizes the permittee to request permission to burn "off-specification" material; the permit indicates that the Department "will approve or deny each request in writing on a case-by-case basis." However, the permit does not require that persons (such as Hernando County and its citizens) whose substantial interests are potentially affected by the approval to burn off-specification material will receive notice of the request and an opportunity to participate in formulating agency action on any such request. Because the draft permit lacks any restriction on what such "off-spec" material may consist of, Hernando County is unable at

this time to evaluate the nature and extent of impacts from burning such materials. The applicant has failed to give reasonable assurance that the burning of "off-spec" material will not violate applicable air quality standards or constitute a nuisance.

h. In addition, while Specific Condition 15 requires the permittee to show that the treatment of "off-spec" material "will not exceed acceptable ambient air concentration for any toxic pollutant," the draft permit offers no other specifics on the basis on which the Department will approve or deny requests to burn off-spec material. There are currently no ambient air concentration limits established for "toxic pollutants". Even if "acceptable ambient air concentrations" for "toxic pollutants" are established and are not exceeded, the draft permit contains insufficient restrictions to insure that burning "off-spec" material will not constitute a nuisance or cause or contribute to objectionable odor.

i. There is no provision in the permit for ambient monitoring in the vicinity of the sites where the units will be operated. There is little or no ambient air quality background data established for Hernando County. In the absence of site specific ambient monitoring requirement, reasonable assurances have not been provided to show that the site specific air quality impacts due to the operation of these units with 30 feet stacks will not exceed the ambient air quality standards.

7. As its statement of ultimate facts, Hernando County asserts that, based on information available to it, the applicant has failed to provide reasonable assurance that applicable air quality standards will not be violated, and that the proposed units will not constitute a nuisance or cause or contribute to objectionable odor. Consequently, Hernando County believes the proposed permits should be denied, pursuant to Chapters 120 and 403,

Fla. Stat., including but not limited to Sections 120.57 and 403.087, and Rule Chapter 17-2, Fla. Admin. Code, including but not limited to Rules 17-2.600, 17-2.700 and 17-2.710.

WHEREFORE, Petitioner Hernando County requests that this Verified Petition be forwarded to the Division of Administrative Hearings for assignment of a hearing officer; and that after sufficient time for discovery, case preparation, and preparation of expert witnesses, a formal evidentiary hearing be convened; and that after consideration of post-hearing memoranda and proposed recommended orders, a recommended order be returned to the Department recommending denial of permit applications numbered AC 16-187650 and AC 16-189852; and that a Final Order be entered by the Department denying the permits. Petitioner also seeks such other just and proper relief as is available under the governing rules and statutes.

DATED this **29th** day of **January, 1991.**

Respectfully submitted,

OERTEL, HOFFMAN, FERNANDEZ & COLE, P.A.
2700 Blair Stone Road
Post Office Box 6507
Tallahassee, Florida 32314-6507
(904) 877-0099

M. Christopher Bryant
M. CHRISTOPHER BRYANT
SEGUNDO J. FERNANDEZ
ATTORNEYS FOR PETITIONER
HERNANDO COUNTY

CERTIFICATE OF SERVICE

I **HEREBY CERTIFY** that an original and one copy has been furnished by **HAND DELIVERY** to Agency Clerk, Department of Environmental Regulation, Office of the General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399 and a true and correct copy furnished by **U.S. MAIL** to D.R.E. Environmental, Inc., 1644 Blanding Blvd., Suite 2, Jacksonville, Florida 32310, on this **29th** day of **January, 1991.**

M. Christopher Bryant
ATTORNEY

vlh:hernando.pet

VERIFICATION

STATE OF FLORIDA
COUNTY OF HERNANDO

BEFORE ME, the undersigned authority, personally appeared HAROLD D. VARVEL, who, being by me first duly sworn, stated the following:

1. That he is the Chairman of the Board of County Commissioners of Hernando County, a political subdivision of the State of Florida, and is the authorized representative of Hernando County for purposes of this proceeding.

2. That he believes and asserts that the activity proposed for permitting by the Department of Environmental Regulation in this proceeding, file numbers AC 16-187650 and AC 16-189522, will have the effect of impairing, polluting, and otherwise injuring the air, waters or natural resources of the State and of Hernando County, Florida.

3. That the facts alleged in the foregoing Petition are true and correct to the best of his knowledge and belief.

FURTHER AFFIANT SAYETH NAUGHT.

Harold D. Varvel, Chairman
Hernando County Board of County Commissioners

Sworn to and subscribed before me this 28th day of January, 1991.

Notary Public
State of Florida

Commission Expires:

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. NOV 18,1991
BONDED THRU GENERAL INS. UND.

January 24, 1991

Mr. William Congdon
Office of General Council
Dept. of Environmental Regulation
2600 BlairStone Road
Tallahassee, Fl 32399-2400

Dear Mr. Congdon,

I wish to request an extention of the 14 day ffling period for petition for administrative hearing for case # 91-0102, D.R.E. Environmental, Inc., mobile soil remediation units for proposed use in Nassau County. The company's applications have not been available for inspection as of 1/16/91 when the legal noticed appeared in our local paper.

Sincerely,

Susanne Trogdon

Susanne Trogdon, Citizen and
Vice-Chairman, Sierra Club,
Nassau Group
2922 Amelia Island Parkway
Fernandina Beach, FL 32034

STATE OF FLORIDA
DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES
DISTRICT IX

ESE - PBCPHU

Date: 1-14-91

C. H. Fancy
Chief, Bureau of Air Quality Management
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32301-8241

Re: AC16-187650 & AC16-189522, D.R.E. ENVIRONMENTAL, INC.
MOBILE SOIL REMEDIATION UNITS #1 & #2

Dear Mr. Fancy:

The Palm Beach County Public Health Unit received the above referenced applications on 1-8-91, and has no comments.

Sincerely,

For the Divisional Director
Environmental Science and Engineering

Jeffery F. Koerner
Engineer II, PBCPHU

FJG/JFK

DRE ENVIRONMENTAL, INC.
1644 Blanding Blvd, Suite #2
Jacksonville, FL 32218

(904) 389-8682
(904) 389-0430 FAX

PLEASE DELIVER THE FOLLOWING PAGES TO:

NAME: Willard Hanks

COMPANY: DEP

FAX #: 904-922-6979

FROM: Chris Sleeper

DATE: 1-2-91

TOTAL NUMBER OF PAGES (INCLUDING COVER): 3

SUBJECT: Newspaper Article

COMMENTS:

Westsiders opposing incinerator

Catherine Williams Cooper
Staff writer

A Westside resident and several members of an environmental group are opposing an incinerator proposed for the Mandarin area.

Leslie Goller Dillingham, an attorney representing Westsider John Austin and several other environmentalists, met Dec. 19 with officials from DRE Environmental Inc. of Jacksonville, which wants to put an incinerator in the Mandarin area.

Austin was instrumental in getting a proposed incinerator on the Northside defeated last year and has been active in environmental issues since.

DRE has applied for a state permit to operate two mobile units that would travel around the state and burn soil contaminated with petroleum products. But the company has also proposed that a stationary unit be located in an industrial park off Shad Road near Phillips Highway. It has not yet applied for that permit.

"We're definitely opposed to a stationary one," Ms. Dillingham said. "It would be a constant source of exposure. It could pollute the air and water. It would affect us and the animals we eat. We just think it's a very poor way to clean up soil."

Carlton Dixon, chairman of the board of DRE, confirmed that he has considered the possibility of locating a stationary unit on property owned by Industrial South Partnership off Shad Road. But he said he won't know if and when he will apply for a permit for the unit until a feasibility study has been completed.

"I feel that would be an excellent site for it," he said. "It's in an industrial park."

Dixon said he feels people are misinformed about the units. He said that the term "incinerator" is defined differently by various people, and the permit he is seeking is for a soil decontamination unit — not an incinerator.

"We're involved in the decontamination process — not the contamination process of air, water or any other part of the environment," he said. "The soils we would be decontaminating are considered non-hazardous."

For Roberson, an associate air pollution engineer with the city, said an incinerator and a soil decontamination unit both use the incineration process, but the devices are different.

An incinerator, he said, burns all the matter put into it and reduces it to ash. It is not typically used for soil. But a decontamination unit, he said, heats the contaminated soil placed into it so that petroleum products are separated from the soil and burned. The soil can then be reused.

Roberson compared the effects of a decontamination unit to that of burning fuel in a home heater. It releases carbon dioxide, carbon monoxide and sulphur dioxide

(See INCINERATOR, Page 2)

Incinerator

(From Page 1)

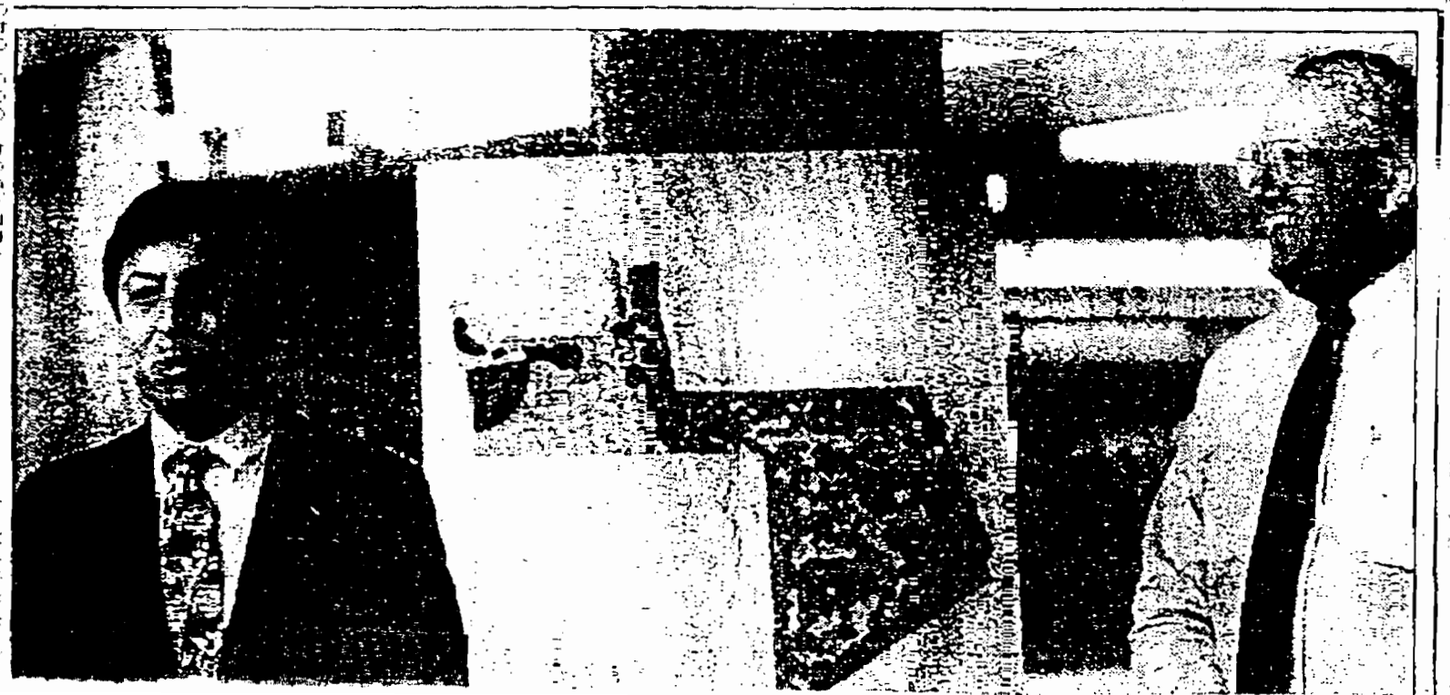
into the air, whereas an incinerator can release a multitude of emissions into the air.

But Ms. Dillingham argued that placing a unit in Mandarin or any other part of the city could be a constant source of air pollution and groundwater contamination that could adversely affect people in the long run.

"This is a new thing," she said. "It's cheap and easy to do. But we see the health consequences. And down the road, I think we would see that it was a mistake. Anything within a 50-mile radius it affects very strongly."

Roberson said he could not concur with Ms. Dillingham's fears.

"There's some truth in it," he said. "Some pollutants are released, but how far the pollutants travel varies. But if the unit meets the specifications of the state, then groundwater contamination is unlikely."



New leader wants to give to community

Club president loves Mandarin

By Catherine Williams Cooper
Staff writer

George Koury believes in giving something back to the community he lives in, not taking away from it.

And that's what Koury plans to do as the incoming president for 1991 of the Mandarin Community Club.

"You don't just take away, you try to improve," Koury said. "You

Westsider, others opposing incinerator proposed for Mandarin

By Catherine Williams Cooper
Staff writer

A Westside resident and several members of an environmental group are opposing an incinerator proposed for the Mandarin area.

Leslie Goller Dillingham, an attorney representing Westsider John Austin and several other environmentalists met Dec. 15 with officials from DRE Environmental Inc. of Jacksonville, which wants to put an incinerator in the Mandarin area.

Austin was instrumental in getting a proposed incinerator on the Northside defeated last year, and he has been active in environmental issues since then.

DRE has applied for a state permit to operate two mobile units that would travel around the state and burn soil contaminated with petroleum products. However, the company has also proposed that a stationary unit be located in an industrial park off Shad Road near Phillips Highway. It has not yet applied for that permit.

"We're definitely opposed to a stationary unit," Ms. Dillingham said. "It would be a constant source of exposure. It could pollute the air and water. It would affect us and the animals we eat. We just think it's a very poor way to clean up soil."

Quilton Dixon, chairman of the board of DRE, confirmed that he has considered the possibility of locating a stationary unit on property owned by Industrial South Partnership off Shad Road. However, he said he won't know if and when he will apply for a permit for the unit until a feasibility study has been completed.

"I feel that would be an excellent site for it," he said. "It's in an industrial park."

Dixon said he thinks people are misinformed about the units. He said that the term "incinerator" is defined differently by various people, and the permit that he is seeking is for a soil decontamination unit — not an incinerator.

"We're involved in the decontamination process — not the contamination process of air, water or any other part of the environment," he said. "The soils we would be decontaminating are considered nonhazardous."

Ron Roberson, an associate air pollution engineer with the city, said an incinerator and a soil decontamination unit both use the incineration process, but the devices are different.

An incinerator, he said, burns all the matter put into it and reduces it to ash. It is not typically used for soil. However, a decontamination unit, he said, heats the contaminated soil placed into it so that petroleum products are separated from the soil and burned. The soil can then be reused.

Roberson compared the effects of a decontamination unit to that of burning fuel in a home heater. The unit releases carbon dioxide, carbon monoxide and sulfur dioxide into the air, whereas an incineration can release a multitude of emissions into the air.

However, Ms. Dillingham argued that placing a unit in Mandarin or any other part of the city could be a constant source of air pollution and groundwater contamination that could adversely affect people in the long run.

"This is a new thing," she said. "It's cheap and easy to do, but we see the health consequences. And down the road, I think we would see that it was a mistake. Anything within a 50-mile radius, it affects very strongly."

Roberson said he could not concur with Ms. Dillingham's fears.

"There's some truth in it," he said. "Some pollutants are released, but how far the pollutants travel varies. But if the unit meets the specifications of the state, then groundwater contamination is unlikely."

Christmas tree pick-up for scouts erosion project set for weekend

From staff

Your Christmas tree can help the Boy Scouts prevent erosion of beaches in Duval and Nassau counties. Drop your tree at the curb Friday and it will disappear over the weekend, city officials said. The Jacksonville Waste Reduction, Reuse and Recycling Division has coordinated curbside service for all Garbage haulers will pick up trees Saturday and Sunday. Apartment dwellers and other residents without curbside trash pickup service can take their trees to any Duval County public school until Jan. 11. The Scouts will partially bury trees on the beach at Huguenot Park on Fort George Island, Kathryn Abbey

of pipes to carry the process water from the field to a holding area. From there, the process water is recirculated to the plant. And a 16,000-foot-long slurry cut-off wall surrounds the entire perimeter of the new field for added groundwater protection.

"We've had people from around the country —including companies and regulatory agencies—come to look at our system," Gordon says.

compliance at all – but there are exceptions, say DER inspectors

Zamani now classifies Gardinier as a proactive rather than reactive company. In fact, DER recently nominated the company for a statewide environmental award.

Currently Gardinier is the only company in Florida to line its cooling ponds. Now, DER is developing a rule to make that a requirement.

"Gardinier has done more than what some of the other companies are willing to do, but—again—I think that's because of attention focused on them," Reese says. "Gardinier's location is more visible than (that of) other industries because it's on Tampa Bay in Hillsborough County—not (on some farmland in) Polk County...It's only when companies receive bad publicity that things get done."

But good things are happening. Reese says Cargill has put a lot of money into the firm, and "as the owner of Gardinier, Cargill has done a good job."

Peter Rosendahl, Vice President of Environmental Affairs at the Florida Phosphate Council, agrees. "In the phosphate industry, if one company looks real bad, that gives everybody a black eye—even though they're all competitors," Rosendahl says. "So there's some peer pressure to get up to speed, and Gardinier has actually taken the lead on some of the environmental aspects."

Often, only large companies like Gardinier can afford an engineer or employee who can concentrate on environmental issues, explains Snyder of DER. That's where trade associations like the Printing Industries of Florida are beginning to play a major role by employing technical advisors who can explain complex regulations.

"As a general rule, any business that discharges air or water pollutants – or has the potential of doing that—could be regulated," says David Thulman, Assistant General Counsel for DER in Tallahassee.

While DER offers frequent seminars, newsletters, pamphlets and other pertinent information, inspectors encourage companies to call their local DER office if they have any questions. That's becoming more critical as enforcement of environmental crimes toughens, particularly at the federal level.

"As time passes, the regulations get tighter," Snyder emphasizes. "For instance, it's getting more difficult to not manage hazardous waste properly, but it also encourages crime as the cost of proper disposal goes up, thereby creating a market for illegal disposal."

Companies are in business to make money, and the work required to come into compliance can be costly. While that tends to have a negative cash flow impact on a company, Zamani says some industries, like Gardinier, are viewing the environmental expenses as assets.

"For companies to survive in the '90s and beyond, industry is going to play a major part in a lot of the environmental issues," Rosendahl says.

"Survival is going to require cooperation between companies and environmentalists—not polarization." ■

Safety Kleen found dirty

WEST PALM BEACH

DER staff report

SAFETY KLEEN Corporation, Miami, has agreed to pay the Florida Department of Environmental Regulation a $17,450 settlement to resolve alleged violations of hazardous waste management rules.

The company owns and operates a solvent distribution and waste storage facility. In 1989, the Department conducted a routine inspection at the facility and found the following violations:

• The company is storing wastes that are not included in its operating permit or application, and the company is storing ignitable waste in containers outside the storage building in its parking yard.

The company was issued a Notice of Violation and Orders for Corrective Action by the Department in 1990. The company and the Department met to discuss the alleged violations and the company has agreed to the conditions of the Consent Order. ■

78-year-old Jacksonville activist stalls mobile-burner permit with DER challenge

by Michael McClelland, Chief,
FE Tallahassee News Bureau

TALLAHASSEE

AN ATTEMPT BY DRE ENVIronmental Inc., Jacksonville, to permit a mobile soil burner has run into an increasingly familiar roadblock in John Austin, a 78-year-old retiree from the same city who has successfully challenged at least two other soil burners and vows to continue doing so in the future.

Austin, along with Brooksville resident Herb Shapiro, the Nassau County Sierra Club and Hernando County, has challenged the Department of Environmental Regulation's notice of intent to permit two DRE mobile soil burners. DRE actually plans to run only one burner, a 73-foot long facility that would treat up to 35 tons of soil each hour.

The challenge means the DER permit will be held up in administrative hearings for at least a month, and probably much longer. Austin filed similar challenges against Mobile Reclaim in the past, and dropped his opposition only after they agreed to toughen their emissions standards.

He has kept another permit request, by Envirotech, tied up for more than seven months; that suit is due for yet another hearing within the next two weeks.

Austin has also successfully fought against stationary soil burners, hazardous wastes on military bases and other potential sources of pollution. He readily admits that part of his approach is to tie up applicants in lengthy and often costly administrative hearings, and says he will continue challenging mobile burners whenever they seek DER permits.

"I'm concerned that we in the human race are doing a wonderful job of destroying ourselves," Austin explained. "Besides, it keeps me young."

> Austin readily admits that part of his approach is to tie up applicants in lengthy and often costly administrative hearings

Austin, who suffers from asbestos-related lung disease, believes DRE's burner would emit unacceptable amounts of pollutants into the air. He also questions the term "mobile," charging that the costs of moving the unit will actually force DRE to set up

see CHALLENGE on p. 28

CHALLENGE — from page 21

the burner as a stationary facility.

In hearing requests filed with DER, Shapiro and the Sierra Club expressed general concerns about the burner's effect on air quality, while Hernando County was more concerned about the specifics of the permit. The county charges the permit would not require the burner to run at a high enough temperature (it gives DRE permission to build an incinerator capable of a minimum temperature of 1600 degrees, but doesn't require that minimum be reached).

County officials fear the possible cumulative effects of two mobile incinerators working in the area at the same time, and charge the permit would allow DRE to burn off-specification, unspecified material with DER approval.

The county's challenge also objects to DER setting the burner's allowable pollutants limits by ton per year, charging a burner could circumvent the intent of those standards by releasing higher levels over a shorter period of time.

An exact date has not yet been set for DRE's hearing, but state statutes mandate it be held no later than late May. ■

P 407 852 910

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Chris Sleeper	
Street and No. D.R.E. Env., Inc	
P.O., State and ZIP Code Jax, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date 1-4-91	

AC 16-187650
189522

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

● **SENDER:** Complete items 1 and 2 when additional services are requested, 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. Chris Sleeper,
D.R.E. Environmental, Inc.
1644 Blanding Blvd., Suite 2
Jacksonville, Fl 32210

4. Article Number
P 407 852 910

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

6. Signature — Agent
X Wendy Cardoza

7. Date of Delivery

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

JACKSONVILLE, FL LAKE SHORE STATION JAN

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

Florida Department of Environmental Regulation

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

Bob Martinez, Governor | Dale Twachtmann, Secretary | John Shearer, Assistant Secretary

December 21, 1990

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Chris Sleeper
D.R.E. Environmental, Inc.
1644 Blanding Blvd., Suite 2
Jacksonville, Florida 32210

Dear Mr. Sleeper:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permits to construct two 35 TPH mobile soil remediation units.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. Barry Andrews of the Bureau of Air Regulation.

Sincerely,

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

CHF/WH/plm

Attachments

c: Don Ehlenbeck, BWC
District Air Program Administrators
County Air Programs
Dale Kelley, P.E.

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permits by:

D.R.E. Environmental, Inc.
1644 Blanding Blvd., Suite 2
Jacksonville, Florida 32210

DER File No. AC 16-187650
AC 16-189522

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue air construction permits (copies attached) for the proposed projects as detailed in the applications specified above. The Department is issuing this Intent to Issue for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, D.R.E. Environmental, Inc., applied on October 9, 1990, to the Department of Environmental Regulation for permits to construct two 35 TPH mobile soil remediation units for operation throughout Florida.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that air construction permits are required for the proposed work.

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permits. The notice shall be published one time only within 30 days, in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to the Department, at the address specified within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permits.

The Department will issue the permits with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.

A person whose substantial interests are affected by the Department's proposed permitting decision 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. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of receipt of this intent, whichever first occurs. 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 notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applications 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 publication of this notice in the Office in 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.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

Copies furnished to:

c: Don Ehlenbeck, BWC
District Air Program Administrators
County Air Programs
Dale Kelley, P.E.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on 1-4-91.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to §120.52(9), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Kyri Joben
Clerk

1-4-91
Date

State of Florida
Department of Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue permits (AC 16-187650 and AC 16-189522) to D.R.E. Environmental, Inc., 1644 Blanding Blvd., Suite 2, Jacksonville, Florida 32210, to construct two 35 TPH mobile soil remediation units with air pollution from each unit controlled by a baghouse and afterburner. The units may operate in any county that this notice is published in. Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) determinations were not required. Each unit may emit 7.8 lbs/hr (34.3 TPY) particulate, 3.8 lbs/hr (16.8 TPY) carbon monoxide, 16.2 lbs/hr (71.0 TPY) nitrogen oxides, 14.4 lbs/hr (63.0 TPY) sulfur dioxide, and 22.6 lbs/hr (99.2 TPY) volatile organic compounds. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment or create a health hazard. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision 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 fourteen (14) days of publication of this notice. 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 Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applications 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 publication 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.

The applications are available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Department of Environmental Regulation
Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

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

Department of Environmental Regulation
South District
2269 Bay Street
Ft. Myers, Florida 33901-2896

Department of Environmental Regulation
Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7577

Department of Environmental Regulation
Southeast District
1900 S. Congress Avenue, Suite A
West Palm Beach, Florida 33406

Broward County Environmental
Quality Control Board
621 South Andrews Avenue
Ft. Lauderdale, Florida 33310

Dade County Dept. of Environmental
Resources Management
Jose Marti Building
801 S.W. 3rd Avenue, 2nd Floor
Miami, Florida 33130

Duval County Dept. of Health, Welfare
& Bio-Environmental Services
421 West Church Street, Suite 412
Jacksonville, Florida 32202

Hillsborough County Environmental
Protection Commission
1410 North 21st Street
Tampa, Florida 33605

Palm Beach County Health Dept.
Division of Environmental Science
and Engineering
901 E. Evernia Street
West Palm Beach, Florida 33402

Pinellas County Department of
Environmental Management
315 Court Street
Clearwater, Florida 34616

Sarasota County Environmental
Services Department
1301 Cattleman Road
Sarasota, Florida 33582-9631

Orange County Environmental
Protection Department
2002 E. Michigan Avenue
Orlando, Florida 32806

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

Technical Evaluation
and
Preliminary Determination

D.R.E. Environmental, Inc.
Jacksonville, Duval County, Florida

35 TPH Mobile Soil Remediation Units
Statewide Operation

File No.	Unit
AC 16-187650	1
AC 16-189522	2

Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

December 21, 1990

I. General Information

A. Applicant

D.R.E. Environmental, Inc.
1644 Blanding Blvd. Suite 2
Jacksonville, Florida 32210

B. Request

On October 10, 1990, D.R.E. Environmental, Inc. submitted incomplete applications for permits to construct two 35 TPH mobile soil remediation units (rotary kiln with a baghouse and afterburner) which would be operated throughout the state. The applications were considered complete on receipt of D.R.E. Environmental, Inc.'s November 28, 1990 letter (November 30, 1990).

C. Project

The applicant is requesting permission to construct two 35 TPH mobile soil remediation units (SIC 1629) for operation throughout the state. Each unit contains a soil hopper, 23 MMBtu/hr rotary kiln, baghouse, 22 MMBtu/hr afterburner, propane/natural gas fuel system, a diesel electric generator, and associated equipment. The units are to be used to decontaminate soils containing virgin petroleum products (fuels and lubricants) and "on-spec" used oil (motor oils).

D. Emissions

The units will emit particulate matter (PM), including lead compounds, volatile organic compounds (VOC), and the products of combustion (SO_2, NO_x, and CO).

A 99.7% efficient Hauck BH390-8 baghouse will be used to control PM emissions. The baghouse has been designed to meet the particulate matter emissions standard of 0.08 grain/dscf corrected to 50% excess air (F.A.C. Rule 17-2.600(1)(c)1.) that the Department will impose on these units. Approximately 10,775 dscfm @ 50% EA flow through the baghouse and afterburner resulting in an estimated PM emission of up to 7.4 lbs/hr. As each unit may operate continuously, the maximum PM emissions per unit from the afterburner stack will be 32.4 TPY.

The VOC evaporates from the contaminated soil in the kiln and passes through the baghouse to the afterburner. The applicant estimates that up to 1400 lbs/hr of VOC will enter the afterburner and, after 98.42% destruction, 22.1 lbs/hr of VOC will be discharged to the atmosphere. Based on continuous operation, this is equivalent to 97.0 TPY VOC emissions from the afterburner stack.

Propane gas is the primary fuel. Natural gas is the alternate fuel. The maximum heat input to the rotary kiln/afterburner system is 45 MMBtu/hr (500 GPH). Maximum emissions from this fuel and the hydrocarbons destroyed in the afterburner are estimated to be 14.0 lbs/hr (61.2 TPY) SO_2, 10.0 lbs/hr (43.7 TPY) NO_x, and 2.5 lbs/hr (10.9 TPY) CO.

The system also includes a 240 kw diesel electric generator. The generator will emit some air pollutants, the products of combustion of the fuel.

Reasonable precautions will be required to control the unconfined emissions from the decontaminated soil. This will involve wetting the dried material, covering storage piles, and hauling of the material in covered trucks.

At the low emission rates proposed, there should be no visible emissions from this source.

A summary of the emissions from this facility is shown below:

Pollutant		PM	CO	NO_x	SO_2	VOC
Afterburner Stack	lbs/hr	7.4	2.5	10.0	14.0	22.1
	TPY	32.4	10.9	43.7	61.21	97.0
Diesel Electric Generator	lbs/hr	0.4	1.3	6.2	0.4	0.5
	TPY	1.9	5.9	27.3	1.8	2.2
Total Emissions	**lbs/hr**	**7.8**	**3.8**	**16.2**	**14.4**	**22.6**
	TPY	**34.3**	**16.8**	**71.0**	**63.0**	**99.2**

II. Rule Applicability

The proposed project, construction and operation of two 35 TPH portable rotary kiln/afterburner systems, is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2, Florida Administrative Code.

The sources may be operated in areas designated nonattainment for particulate matter, ozone, and sulfur dioxide (F.A.C. Rule 17-2.410), unclassifiable for particulate matter and sulfur dioxide (F.A.C. Rule 17-2.430), attainment for all criteria pollutants (F.A.C. Rule 17-2.420), and maintenance for ozone (F.A.C. Rule 17-2.460).

The units are a minor source (F.A.C Rule 17-2.100) because emissions of any single pollutant are less than 100 TPY. The proposed sources are not subject to the preconstruction review requirements of F.A.C. Rule 17-2.500(5) and F.A.C. Rule

17-2.510(4) because permit restrictions will prohibit each unit from emitting 100 TPY of any pollutant. Should the unit violate this restriction, it could become retroactively subject to other regulations.

The sources are subject to F.A.C. Rule 17-2.520, which pertains to sources not subject to PSD or nonattainment review. The unit is classified as an incinerator. Allowable particulate matter emissions are limited to 0.08 grains/dscf corrected to 50% excess air (F.A.C. Rule 17-2.600(1)(c)1.) and the emissions cannot cause objectionable odors (F.A.C. Rule 17-2.600(1)(c)2.). Chapter 17-2, F.A.C., does not have an applicable RACT standard for particulate matter, sulfur dioxide or volatile organic compounds (VOC) that would apply to this source. Organic (VOC) emissions will be regulated under F.A.C. Rule 17-2.620, General Pollutant Emission Limiting Standards, which restricts emissions to control by systems deemed necessary by the Department. The Department deems 95% destruction of the VOC air pollutants is a minimum standard for these units. The discharge of pollutants shall not cause an objectionable odor or an exceedance of an acceptable ambient air concentration (AAC) or risk for toxic pollutants.

Prior to issuance of the proposed construction permit, the applicant must provide the Department's Bureau of Air Regulation with a list of all counties that the soil dryer will be operated in and certified proof of publication of the Notice of Intent from a newspaper of general circulation in each county on the list (F.A.C. Rule 17-2.220).

III. Technical Evaluation

These units are restricted to processing soils contaminated with only virgin petroleum products (fuels and lubricants) and "on-spec" used oils (motor oils) unless prior approval is obtained to treat other material. They cannot be authorized to treat hazardous material as defined in 40 CFR 261.3 (revised as of July 1, 1988) nor materials that are corrosive, reactive, EP toxic or ignitable.

Chapter 17-775, F.A.C., Soil Thermal Treatment Facilities, regulates some aspects pertaining to the operation of these sources. Some of these requirements are incorporated in the air permit. They include soil sampling specifications and pretreatment soil analysis. Also, requirements that the soil be stored on an impermeable surface or liner (to prevent contamination of other soils or water) and covered with a secured plastic cover until treatment (to minimize fugitive emissions) is included in the proposed permits.

Up to 35 TPH contaminated soil must be reduced to clumps that are a maximum of 2 inches in diameter prior to being fed into the kiln. The soil is heated to 700°F in the kiln to evaporate the petroleum products. These vapors flow through a 99+% efficient baghouse, which removes the particulate matter, and into proposed 98.42% (minimum) destruction efficiency afterburner to burn the petroleum vapors. The afterburner has a minimum temperature of 1600°F and a minimum residence time of 1 seconds. Higher temperatures and/or residence time may be needed to achieve this destruction efficiency. The minimum allowable afterburner temperature will be based on the compliance test results and included in any permit to operate issued for these sources.

At an allowable particulate matter standard of 0.08 gr/dscf corrected to 50% excess air (EA), each unit is allowed to emit 7.4 lbs/hr. The proposed permits will limit particulate matter emissions to this value.

With 35 TPH of soil containing 2% hydrocarbons being processed, the VOC emissions from the 98.42% efficient afterburner are estimated to be 22.1 lbs/hr. At 95% destruction efficiency (BAR policy) this unit would be a major source of VOC.

The guidance used by the Department to determine acceptable ambient concentrations (AAC) of hazardous pollutants is based on the following formula:

$$\text{acceptable ambient concentration (AAC)} = \frac{40}{\text{(hrs per week operation)}} \times \frac{1 \times \text{(OEL)}}{\text{Safety factor}}$$

The safety factors are 100 for category A substances and 50 for category B substances.

OEL - Occupational Exposure Level such as ACGIH, OSHA, and NIOSH published standards for toxic materials.

TWA-TLV values are published by the American Conference of Governmental Industrial Hygienists (ACGIH). The values for the pollutants expected to be encountered in the proposed operation are as follows:

Pollutant	OEL mg/m^3	AAC (24 hr/day operation) mg/m^3
Benzene	3	0.0071
Toluene	375	1.786
Ethyl Benzene	435	1.036
Xylene	435	1.036

Calculations, using the EPA approved Screen - 1.1 Model (updated PTPLU6 Model) and the stack parameters listed in the

application, show that an emission rate of 1 gram/sec will have maximum ambient air impacts of 6.52 x 10^{-3} mg/m^3 (8 hr. avg.).

If the stack parameters change from 30 feet stack height, 3 feet stack diameter, 85 feet/second stack gas velocity, and 1600°F stack gas temperature, the impact of the emission will change. The model would need to be rerun with the correct parameters and the following calculations repeated.

The maximum emissions that can occur without exceeding the AAC can be determined by the following relationship:

AAC = Impact of Unit x Emissions.

With this relationship and data, the Department can estimate the maximum emissions of a pollutant from the proposed units that can occur without exceeding the AAC. Also, by knowing the process weight for each unit (35 TPH), assuming all VOC in the contaminated soil is evaporated in the kiln, and that 98.42% of this VOC is destroyed by the afterburner, the maximum content of the pollutants in the soil that can exist without the potential to exceed the AAC can be determined. The Department has made these calculations for the benzene. The emissions of the other BTEX compounds could be higher without exceeding the AAC. The results are summarized in the following table:

Pollutant	Maximum Emissions grams/second	lbs/hr	Maximum Soil Concentration PPM
Benzene	1.09	8.6	7,776

Using a similar procedure, it can be shown that the maximum VOC content of the untreated soil cannot exceed 20,000 PPM when the emissions from the afterburner are 22.1 lbs/hr VOC.

The Department has chosen to regulate benzene and total VOC only for soils contaminated with virgin petroleum products and "on-spec" used oil. For soil contaminated with other petroleum product components and derivatives, the applicant will be required to submit calculations showing the AAC or other concentrations required to protect public health and safety will not be exceeded before the soil can be treated in this unit.

IV. Air Quality Analysis

By restricting the benzene and VOC content of the soil, the Department has reasonable assurance that the operation of the portable rotary kiln/afterburner system will not create a health hazard or cause/contribute to an ambient air quality violation.

V. Conclusion

Based on the information provided by D.R.E. Environmental, Inc., the Department has reasonable assurance that the proposed construction/operation of the two 35 TPH mobile rotary kiln/afterburner systems, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code.

Barry D. Andrews
36024
12-24-90

V. Conclusion

Based on the information provided by D.R.E. Environmental, Inc., the Department has reasonable assurance that the proposed construction/operation of the two 35 TPH mobile rotary kiln/afterburner systems, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code.

Florida Department of Environmental Regulation

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

Bob Martinez, Governor | Dale Twachtmann, Secretary | John Shearer, Assistant Secretary

PERMITTEE:
D.R.E. Environmental, Inc.
1644 Blanding Blvd., Suite 2
Jacksonville, Florida 32210

Permit Number: AC 16-187650
Expiration Date: January 1, 1992
County: Mobile Operation
Project: 35 TPH Mobile Soil Remediation Unit No. 1

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

Authorization to construct a 35 TPH mobile soil remediation unit. The unit consists of a 15 ton bin to receive the contaminated soil, a 24" belt conveyor for transferring up to 35 TPH of wet soil to the kiln, a rotary kiln (5 feet diameter by 28 feet long), a Hauck BH390-8 baghouse, a 98.42% efficient (minimum) Hauck afterburner capable of operating above 1600°F with a 1 second residence time, two propane or natural gas burners (23 MMBtu/hr for kiln and 22 MMBtu/hr for afterburner), a 200 KW generator, and associated controls. The unit is equipped with a stack (3 feet diameter by 30 feet high) that discharges approximately 36,077 acfm at 1600°F to the atmosphere.

The unit may be used throughout the State (all counties) after receiving Department authorization to operate at a new location.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. Application received Oct. 9, 1990.
2. DER letter dated Oct. 24, 1990.
3. D.R.E. letter dated Oct. 5, 1990.
4. D.R.E. letter dated Nov. 28, 1990.

Florida Department of Environmental Regulation

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

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary

PERMITTEE:
D.R.E. Environmental, Inc.
1644 Blanding Blvd., Suite 2
Jacksonville, Florida 32210

Permit Number: AC 16-189522
Expiration Date: January 1, 1992
County: Mobile Operation
Project: 35 TPH Mobile Soil Remediation Unit No. 2

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

Authorization to construct a 35 TPH mobile soil remediation unit. The unit consists of a 15 ton bin to receive the contaminated soil, a 24" belt conveyor for transferring up to 35 TPH of wet soil to the kiln, a rotary kiln (5 feet diameter by 28 feet long), a Hauck BH390-8 baghouse, a 98.42% efficient (minimum) Hauck afterburner capable of operating above 1600°F with a 1 second residence time, two propane or natural gas burners (23 MMBtu/hr for kiln and 22 MMBtu/hr for afterburner), a 200 KW generator, and associated controls. The unit is equipped with a stack (3 feet diameter by 30 feet high) that discharges approximately 36,077 acfm at 1600°F to the atmosphere.

The unit may be used throughout the State (all counties) after receiving Department authorization to operate at a new location.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. Application received Oct. 9, 1990.
2. DER letter dated Oct. 24, 1990.
3. D.R.E. letter dated Oct. 5, 1990.
4. D.R.E. letter dated Nov. 28, 1990.

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 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. 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), Florida Statutes, 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 the permit.

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

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, 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.

GENERAL CONDITIONS:

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

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, 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 the 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 non-compliance; and

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

GENERAL CONDITIONS:

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

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

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

GENERAL CONDITIONS:

b. The permittee shall hold 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) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained 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 dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

14. 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 corrected promptly.

SPECIFIC CONDITIONS:

Construction Requirements

1. The construction of this facility shall reasonably conform to the plans and schedule submitted in the application.

2. The stack sampling facilities must comply with F.A.C. Rule 17-2.700(4).

3. The afterburner shall be capable of operating above 1600°F with a 1 second retention time and have a minimum VOC destruction efficiency of 98.42%.

SPECIFIC CONDITIONS:

Emission Restrictions

4. Particulate matter emissions from the afterburner stack shall neither exceed 0.08 grains/dscf corrected to 50% excess air nor 7.4 lbs/hr. Visible emissions from any part of the process shall not exceed 5% opacity.

5. Benzene emissions from the afterburner stack shall not exceed 8.6 lbs/hr. Total VOC emissions shall not exceed 22.1 lbs/hr. Compliance shall be determined from soil analysis, production rate, and the afterburner destruction efficiency.

6. The operation of this source shall not result in the emissions of air pollutants which cause or contribute to an objectionable odor pursuant to F.A.C. Rule 17-2.600(c)2.

Operation Requirements

7. The system shall be properly operated and maintained (F.A.C. Rule 17-2.210(2)). No person shall circumvent any pollution control device or allow the emissions of air pollutants without the applicable air pollution control device operating properly (F.A.C. Rule 17-2.240).

8. Reasonable precautions shall be used to minimize unconfined emissions of particulate matter generated by this operation (F.A.C. Rule 17-2.610(3)). This includes keeping the work areas wet where the soil is being removed and treated.

9. The unit shall not be operated at a location or in a manner that may create a nuisance.

10. Untreated soil removed from the ground shall be stored under waterproof covers and on an impermeable surface.

11. This unit shall be allowed to operate continuously, 8760 hours per year.

12. Maximum soil charging rate to the unit shall not exceed 35 TPH. The soil entering the kiln cannot be larger than 2 inches in diameter. The permittee shall have means to determine the feed or production rate on site.

SPECIFIC CONDITIONS:

13. Only natural gas or propane shall be used as fuel for the kiln and afterburner. Maximum permitted fuel consumption is 45 MMBtu/hr (500 GPH propane).

14. Only soils contaminated with petroleum products (fuels and lubricants) shall be treated in this unit unless otherwise approved by the Bureau of Air Regulation.

Hazardous waste as defined in 40 CFR 261.3 shall not be processed by this unit.

Metals in the untreated soil shall not exceed the following:

Metals	Maximum Concentration TCLP(mg/L)	Total(mg/Kg)
Arsenic	5.0	55
Barium	100.0	2750
Cadmium	1.0	55
Chromium	5.0	275
Lead	5.0	77
Mercury	0.2	17
Selenium	1.0	165
Silver	5.0	165

Total Volatile Organic Aromatics (VOA) constituent in the soil shall not exceed the concentrations that have the potential to exceed the acceptable ambient air concentration or the VOC emission limit for this unit (see Specific Conditions Nos. 5, 17, and 27).

To show compliance with this condition, the permittee shall analyze composite samples of the contaminated soil (see Specific Condition No. 16) by the EPA SW 846 Methods, Test Method for Evaluating Solid Waste Physical/Chemical, for VOA (EPA Method 5030/8020), TRPH (EPA draft Method 9073), and Metals (EPA Method 1311, 3050, 6010, 7040, 7041, 7060, 7061, 7080, 7130, 7131, 7190, 7191, 7420, 7421, 7471, and 7760).

15. The permittee may request, in writing, permission to treat "off-spec" material. The request shall include the history of the site to be treated, an analysis of the contaminants suspected to be in the soil, an estimate of the emissions from the unit while processing the soil, and calculations showing that the ambient air

SPECIFIC CONDITIONS:

impact from the unit will not exceed the acceptable ambient air concentration for any toxic pollutant. The Department will approve or deny each request in writing on a case-by-case basis.

16. Sampling and analysis of the contaminated soil at each site, based on the procedures prescribed in SW-846, shall be conducted prior to remediation. Minimum number of composite samples for analysis at each site prior to remediation shall be as follows:

Soil Quantity ($yards^3$)	No. of Composite Samples
Less than 100	1
100 to 500	3
500 to 1000	5
Each additional 250 yds	1 additional sample

17. Unless the Department has determined other concentrations are required to protect public health and safety, predicted ambient air impact of any toxic pollutant, as determined by the PTPLU 6 model or other DARM approved models, shall not exceed the concentration calculated by the following formula:

$$AAC = \frac{40}{X} \cdot \frac{1}{\text{safety factor}} \cdot (OEL)$$

where,

AAC = acceptable ambient concentration

Safety Factor = 100 for category A substances and
50 for category B substances

X = 40 or the hours/week of actual operation, whichever is larger

OEL - Occupational exposure level such as the TWA-TLV published by the ACGIH, OSHA, and NIOSH published standards for toxic materials.

TWA-TLV is the threshold limit value (8 hrs/day, 40 hrs/wk) maximum exposure concentration considered safe for workers by the ACGIH.
Data in the application shows that, for continuous operation, an emission of 1 gram/sec will have a maximum ambient impact of 6.52×10^{-3} mg/m^3 (8 hr. avg). If the

SPECIFIC CONDITIONS:

stack parameters are different than the values listed in the application, the permittee must determine and use the actual impact factor calculated by the EPA Approved Screen - 1.1 Model.

$$\text{Maximum Allowable Emissions (g/sec)} = \frac{\text{AAC} \quad \text{mg/m}^3}{6.52 \times 10^{-3}}$$

18. Pressure drop across the baghouse shall be recorded hourly and temperature of the afterburner shall be recorded continuously during operations. The instruments used to obtain these measurements shall be properly calibrated, maintained, and in operation any time the unit is in service.

Compliance Requirements

19. This unit must be tested at the maximum process weight rate at which the permittee intends to operate. All compliance tests shall meet the requirements listed in F.A.C. Rule 17-2.700. The unit shall not operate above the maximum permitted rate of 35 TPH.

20. When the Department, after investigation, has good reason (such as complaints, increased visible emissions, or questionable maintenance of control equipment) to believe that any applicable emission standard contained in Chapter 17-2, F.A.C., or in this permit is being violated, it may require the owner or operator of the unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the source and to provide a report on the results of said tests to the Department.

21. The exhaust stack for this process must be tested concurrently for particulate matter and visible emissions by EPA Methods 5 and 9 pursuant to 40 CFR 60, Appendix A, revised as of July 1, 1988, within 5 days after placing the unit in commercial operation under this permit and annually thereafter. Operation at each subsequent site requires an EPA Method 9 test to be performed within 3 days of placing the unit in service.

22. The unit destruction efficiency, benzene, and VOC emissions shall be established by a material balance using a Method 18, or 25 test (40 CFR 60, Appendix A, revised as of July 1, 1988) and soil analysis before and after treatment or other methods as approved by the Department.

SPECIFIC CONDITIONS:

Administrative Requirements

23. The permittee shall furnish the available information listed in Specific Condition No. 24 prior to operating the portable rotary kiln/afterburner system at its initial site. This permit requires compliance with any applicable local (county) regulations.

24. This unit shall not be operated at any new site until the permittee has requested authorization to operate at the new site. Whenever the permittee decides it is feasible, the request shall be at least 15 days prior to operation at the new site. The permittee shall notify the BAR, local government (city and/or county), and Department District office by registered mail at least 3 days prior to moving to the new site. The notification shall provide the permit number of the unit, a copy of the last stack test results, the date of the proposed move, the new site for the unit, and the locations and contamination levels of the soils to be treated. The Department shall notify the permittee of any new air pollutant emission conditions the unit must meet within 3 days of the receipt of the relocation notice. This may include requirements for county operation permits and additional restrictions on the operation of this unit.

25. The permittee shall maintain a log that shows the unit's operation time during the preceeding 12 months. All required records must be available for inspection at the job site for the unit within 3 working days of a request by the Department.

26. The BAR shall be notified in writing at least 15 days in advance of any annual compliance test to be conducted on this source.

27. Any analysis required by Specific Condition No. 16 which indicates a violation of any condition in this permit shall be reported as soon as feasible to BAR. An average concentration of benzene above 7,776 ppm in the soil or total hydrocarbons above 20,000 ppm indicate a violation of this permit. The soil may be decontaminated by operating at less than the 35 TPH production rate, or other means with prior approval of the Department. The permittee must propose the method of compliance with this permit.

28. Records shall be kept on the location, date, time, and number of samples taken for each composite sample. Soil analysis results shall be available for Department inspection during the clean up of the site and for 3 years thereafter. All soil samples taken at the remediation site and exiting the dryer shall be stored in a sealed glass container immediately upon sampling.

SPECIFIC CONDITIONS:

29. Stack test results from PM and VOC shall be submitted to the Department within 45 days of the test.

30. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the BAR prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

31. An application for an operation permit must be submitted to the BAR at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

Issued this _____ day
of _____, 1990

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

_____
Dale Twachtmann, Secretary

DRE ENVIRONMENTAL INC.

1644 Blanding Blvd. Suite #2 • Jacksonville, FL 32210 • 904-389-8682

November 28, 1990

Attn: Willard Hanks
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Hanks:

Here are revised calculations and revised page 4 of our application to comply with your request that we include VOC emissions from both the soil treatment unit and from the diesel powered electric generator in our total VOCs and keep it under 100 TPY.

Hopefully this information will allow you to complete processing our application for permit.

Sincerely,

Chris Sleeper,
President

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Petroleum contaminated soil	Particulates	100%	70,000	A
	VOC	varies		

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

1. Total Process Input Rate (lbs/hr): 70,000

2. Product Weight (lbs/hr): 70,000 depending on moisture content

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Controlled Emission[1] Estimate		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr Uncontrolled	T/yr	
Particulates	7.38	32.24	.08 gr/dscf 17-2.600 (1)(c)	7.38	199.88	873.1	B
CO	2.50	10.93			2.50	10.93	B
NO_x	10.01	43.73			10.01	43.73	B
SO_2	14.02	61.23			14.02	61.23	B
VOC	22.627	99.17			1400.26	6116.3	B

[1]See Section V, Item 2.

[2]Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard.

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

CALCULATIONS

All calculations are based upon the expected worst case soil conditions and maximum expected operating hours per year.

I. Soil Conditions (for the purpose of this application we have set the soil conditions to be worse than those we encountered in previous work we've done)

* Feed rate = 35 tons per hour
* Ambient temperature = 60
* Moisture content = 8.0% by wt.
* Hydrocarbon content = 2.0% by wt.
* Bulk density = 100 Lb/cu ft

II. Plant Operating Hours

* 24 Hr/Day * 365.25 Days/Yr *8,766 Hr/Yr

III. Fuel Consumption

* Propane gas having 91,500 BTU's/gal, 2523 BTU/ft3
* Rotary Drier Burner
  - Maximum capacity = 23 MM BTU/HR
  - Drier rated capacity = 35 TPH heated to 700°F soil temperature
  - Energy req'd at rated cap = 23.578450 MM BTU/HR
  - Fuel consumption = 9345 cfh or 257.69 gal/hr
* Afterburner Burner
  - Maximum rated capacity = 22.0 MM BTU/HR
  - Fuel consumption = 8719 cfh or 240.43 gal/hr
* Total Fuel Consumption
  (Drier @ 35 TPH) + (Afterburner @ MAX) = 18,064 cfh or 157.81 MM cfy
  = 498.12 gal/hr or 4,366,520 gal/yr propane

IV Emissions Factors

A. Rotary Drier
* Contaminated soil = raw material
* Emissions factor = 40 LB oil/ton of soil based on 2.0% oil by wt.
* Emissions factor = 5.7 lbs particulate will emerge from the drier per ton of soil processed ref. AP-42 8.18-1
* or alternatively 15.0 lbs particulate per ton of soil processed ref. AP42 8.1-1

B. Soil Contaminate Is No. 2 Fuel Oil (Density 7.3 lbs per gallon which when burned has the following emissions)

* Particulates uncontrolled = 2.0 lb/1,000 gal
* Sulfur content of fuel = 0.5% by wt.
* Sulfur dioxide = 2.0 lb per 1%/100 lbs oil
* Nitrogen oxide = 20 lb/1,000 gal
* Carbon monoxide = 5 lb/1,000 gal

C. Total Uncontrolled Emissions from Rotary Drier Due to Soil and Oil Contaminate

Assumption: The raw material with 8% moisture and 2.0% HC's is processed at 35 tph. All HC's in the soil are treated like additional fuel in the afterburner.

1. Particulate emissions from Rotary Drier from soil:
(AP-42 says approximately 5.7 lb/ton)
5.7 lb/ton x 35 TPH = 199.5 lb/hr
Alternative method (AP.42 says 15 lb/ton)
15.0 lb/ton x 35 TAH = 525 lb/hr

2. Hydrocarbon (VOC) emissions from oil in soil:
* VOC = (2.0%) x (35 TPH) x (2,000 lb/ton) = 1400 lb/hr
* VOC fuel conversion
= (1400 lb/hr)/(7.3 lb/gal) = 191.78 gal/hr
* Particulates = (2 lb/1000 gal) x (191.78 gal/hr)
due to fuel oil = .3836 lb/hr
* Sulfur Dioxide = 2.0 x .5 x 1400/100 = 14 lb/hr
* Nitrogen Oxide = (191.78 gal/hr) x 20 lb/1000 gal) = 3.835 lb/hr
* Carbon Monoxide = (191.78 gal/hr) x (5.0 lb/1000 gal) = 0.958 lb/hr

3. Total Solid Uncontrolled Emissions (Particulates) from Rotary Drier
(Soil Emissions) + (HC Emissions) = Total
199.5 lb/hr + 0.3836 lb/hr = 199.8836 (plus .1134 lbs/hr from combustion of propane gas in Rotary Drier)
Alternate Method
52.5 lb/hr + 0.3836 lb/hr = 525.3836 (plus .1134 lbs/hr from combustion of propane gas in Rotary Drier

4. Uncontrolled Emissions from combustion of Propane Gas (AP-42 Table 1.5-1) Natural gas is considered the same except for SO_2 which is slightly lower (.0114 lbs.hr)

Rotary Drier = 257.69 gal/hr
Afterburner = 240.43 gal/hr
TOTAL = 498.12 gal/hr

Particulate	.09 to .44 lbs per 1000 gal	= .0447 lbs/hr to .2191 lbs/hr
SO2	.0378 lbs per 1000 gal	= .0188 lbs/hr
NOx	12.4 lbs per 1000 gal	= 6.1766 lbs/hr
CO	3.1 lbs per 1000 gal	= 1.5440 lbs/hr
VOC	.52 lbs per 1000 gal	= .2589 lbs/hr

5. Total Uncontrolled Emissions (Non-Particulate) due to combustion of propane and soil contaminent oil.

SO2	14.0 lbs/hr + .0188 lbs/hr	= 14.0188 lbs/hr
NOx	3.835 lbs/hr + 6.1766 lbs/hr	= 10.0116 lbs/hr
CO	0.958 lbs/hr + 1.5440 lbs/hr	= 2.5020 lbs/hr
VOC	1400 lbs/hr + .2589 lbs/hr	= 1400.2589 lbs/hr

D. Total Controlled Emissions of Solids

1. Exhaust gas conversion to SCFM
Baghouse capacity = 15,073 acfm @ 400°F

* Temperature correction factor $= \frac{(70 + 460)}{(400 + 460)} = \frac{530}{860} = 0.616$

* SCFM = (0.616) X (15,073 acfm) = 9,284 scfm

2. Baghouse Efficiency

* The following calculations show what the baghouse efficiency would have to be to meet the state regulations allowing maximum particulate emissions from incinerators to be .08 grains per dscf corrected to 50% excess air.
* Air required for combustion
* Total Fuel Consumption (from III above) = 18,064 cfh propane gas
* 23.86 ft 3 air required to burn 1 ft3 propane gas (from propane handbook)
* Air required with 50% excess air

$$150\% \times 23.86 \frac{ft^3 \text{ air}}{ft^3 \text{ propane gas}} \times 18{,}064 \frac{ft^3 \text{ propane gas}}{\text{hour}} = 646{,}510 \frac{ft^3 \text{ air}}{\text{hour}}$$

* Maximum allowable particulate emissions for incinerators is given by the state as .08 grains per dscf corrected to 50% excess air.

$$646{,}510 \frac{ft^3 \text{ air}}{\text{hour}} \times .08 \frac{\text{grains}}{\text{ft air}} \times \frac{1 \text{ pound}}{7000 \text{ grs}} = 7.3887 \text{ lbs/hr}$$

* The baghouse dust collector efficiency must be as shown below to achieve regulatory compliance of 7.3887 lbs/hr maximum particulate emission
* Total uncontrolled particulate emissions from IV C3 above = 199.997 or 525.497 lbs/hr
* Inlet conditions at the baghouse will be controlled by twin cyclones which have approximately 70% efficiency
* 199.997 lbs/hr x 30% passes through = 60.00 lbs/hr escaping the twin cyclones and entering the baghouse

or alternatively

525.497 lbs/hr x 30% passes through = 157.649 lbs/hr escaping the twin cyclones and entering the baghouse

$$\text{Efficiency} = \frac{\text{(Total Uncontrolled) - (Total Controlled)}}{\text{Total Uncontrolled}}$$

$$\frac{\text{(60.00 lb/hr) - (7.3887 lb/hr)}}{\text{60.00 lb/hr}}$$

Required % efficiency = 87.69%

or alternatively

$$\frac{\text{157.649 lb/hr - 7.3887 lb/hr}}{\text{157.649 lb/hr}} =$$

Alternate Required % Efficiency = 95.31%

* This is the efficiency required to meet .08 gr/dscf corrected to 50% excess air. Actual baghouse efficiency is estimated at 99.7%, so we should have no problem meeting this efficiency requirement.
* Air required for combustion $\frac{\text{23.86 ft3}}{\text{ft3 propane}}$ x 18.064 ft3 propane = 431,007 scfh

* Design airflow is 9284 scfm or 557,040 scfh
  29% excess air for combustion when drier and afterburner are at 35 tph (Max design capacity)

E. Exhaust Gas Volume From Afterburner

Assumption: Afterburner set @ 1600°F

* Stack gas flow rate = 9284 SCFM (from D-1 above)

$$\text{Correction factor} = \frac{(1600 + 460)}{(70 + 460)} = 3.886$$

(3.886) x (9284 SCFM) = 36,077 acfm @ 1600° F

* Stack gas velocity
  Size of exhaust stack = 3.0 ft diameter
  Cross sectional area = 7.07 sq ft
  Exhaust gas velocity = $\frac{36{,}077 \text{ acfm}}{7.07 \text{ sq ft}} \times \frac{1 \text{ min}}{60 \text{ sec}} = 85.06 \text{fps}$

* Stack height above grade = 30.0 ft

F. Total Controlled Emissions of VOC's

* Afterburner operates at 1,200 to 1,600° F and field tests of similar units indicate it has a 99.00% destruction efficiency for all VOC's entering unit. However we will only claim a 98.42% efficiency since that will be good enough to keep controlled VOC effluent below 97 ton/year as shown below

* Uncontrolled VOC's = 1400.2589 lb/hr (from C-5 above)
* Target VOC effluent = 97 ton/year x $\frac{2000 \text{ lbs}}{\text{ton}} \div \frac{8766 \text{ hrs}}{\text{year}} = 22.131 \frac{\text{lbs}}{\text{Hr}}$

$$\text{Efficiency} = \frac{\text{(Total Uncontrolled) - (Total Controlled)}}{\text{Total Uncontrolled}}$$

$$\frac{1400.2589 \text{ lbs/hr} - 22.131 \text{ lbs/hr}}{1400.2589 \text{ lbs/hr}} = \%\text{ eff} = 98.42\%$$

* Controlled VOC's = 22.131 lb/hr based on 98.42% efficiency
* When added to the VOC emissions of the diesel powered electric generator (page 6).
  Total VOC's will be 22.131 lbs/hr + .496 lbs/hr = 22.627 lbs/hr
  22.627 lbs/hr x 8766 hrs/yr ÷ 2000 lbs/ton = 99.17 TPY VOCs
* Exhaust gases in the afterburner are calculated to be 36,077 acfm @ 1600° F
* Afterburner I.D. = 5.0 ft
* Cross sectional area = 19.634 sq. ft
* STU air velocity = 30.62 fps
* Length of afterburner combustion chamber = 32 ft
* Required retention time of gases = 0.5 sec
* Actual retention time of gases = 1.04 sec

G. Controlled Emissions other than Particulates and VOC's (from C-5 above)
* CO < 2.5020 lbs/hr or 10.93 tpy
* NOx < 10.0116 lbs/hr or 43.73 tpy
* SO2 < 14.0188 lbs/hr or 61.23 tpy

New or used oil contaminating the soil may not contain more than the specified amount of the following. Therefore, the stack discharge may have similar traces.

5 ppm	Arsenic	100 ppm	Lead
2 ppm	Cadmium	1000 ppm	Total Halogens
10 ppm	Chromium	< 2 ppm	PCB

Diesel Powered Electricity Generator Emissions Calculations

Max capacity	240 Kilowatts
Design Load	150 Kilowatts
Operating Hours	8766 hours per year

Based on AP42 Table 3.3-1

Carbon Monoxide

$$4.06 \text{ g/kwh} \times 8766 \frac{\text{Hrs}}{\text{yr}} \times 240 \text{ kilowatts} \times \frac{150 \text{ kilowatts used}}{240 \text{ kilowatts available}} = 5{,}338{,}494 \frac{\text{grams}}{\text{year}}$$

$$5{,}338.494 \frac{\text{kg}}{\text{yr}} \times 2.2046 \frac{\text{pounds}}{\text{kg}} = 11{,}769.243 \frac{\text{lbs}}{\text{yr}} = 5.88 \text{ TPY carbon monoxide}$$

Exhaust Hydrocarbons (VOC)

$$1.50 \text{ g/kwh} \times 1{,}314{,}900 \text{ kwh} = 1{,}972{,}350 \text{ grams/yr}$$

$$1{,}972.350 \frac{\text{kg}}{\text{yr}} \times 2.2046 \frac{\text{pounds}}{\text{kg}} = 4348.24 \frac{\text{lbs}}{\text{yr}} = 2.17 \text{ TPY VOC}$$

$$2.17 \text{ TPY} \div 8766 \text{ Hrs/yr} \times 2000 \text{ lbs/ton} = .496 \text{ lbs/hr}$$

Nitrogen Oxides

$$18.8 \text{ g/kwh} \times 1{,}314{,}900 \text{ kwh} = 24{,}720{,}120 \text{ grams/yr}$$

$$24{,}720.120 \frac{\text{kg}}{\text{yr}} \times 2.2046 \frac{\text{pounds}}{\text{kg}} = 54{,}497.98 \frac{\text{lbs}}{\text{yr}} = 27.25 \text{ TPY nitrogen oxide}$$

Sulfur Oxides

$$1.25 \text{ g/kwh} \times 1{,}314{,}900 \text{ kwh} = 1{,}643{,}625 \text{ grams/yr}$$

$$1{,}643.625 \frac{\text{kg}}{\text{yr}} \times 2.2046 \frac{\text{pounds}}{\text{kg}} = 3623.53 \frac{\text{lbs}}{\text{yr}} = 1.81 \text{ TPY sulfur oxides}$$

Particulate

$$1.34 \text{ g/kwh} \times 1{,}314{,}900 \text{ kwh} = 1{,}761{,}966 \text{ grams/yr}$$

$$1{,}716.966 \frac{\text{kg}}{\text{yr}} \times 2.2046 \frac{\text{pounds}}{\text{kg}} = 3{,}884.43 \frac{\text{lbs}}{\text{yr}} = 1.94 \text{ TPY particulates}$$

DRE ENVIRONMENTAL INC.

1644 Blanding Blvd. Suite #2 • Jacksonville, FL 32210 • 904-389-8682

NOV,
October 5, 1990

RECEIVED
NOV 6 1990
DER - BAQM

Attn: Willard Hanks
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Hanks:

Here are the answers to the questions posed in your letter of October 24, 1990:

1. **The Department needs an additional application fee of $1,000.**
Our check for an additional $1,000.00 permit application fee has been mailed to you.

2. **Please supply the information required by Rule 17-2.510, New Source Review for Nonattainment Areas, or lower the allowable VOC emissions being requested for these units.**
Our calculations have been revised to show 365.25 days per year. This changes our required efficiency and our allowable VOC emissions so the annual output will be under 100 tons.

3. **Will both units operate at the same site? at the same time?**
Both units will not operate at the same site at the same time.

4. **Why do you believe the uncontrolled particulate matter emissions from these units will be similar to that of a phosphate rock dryer?**
Uncontrolled particulate matter emissions were equated to that of a phosphate rock dryer because we could not find any data in AP42 which more closely resembled our conditions. If we were to use Table 8.1-1 from AP42 which shows emissions from a conventional asphalt plant it would be most appropriate to use the values shown for emissions from the precleaner because our dryer has a large knock-out box or settling chamber between the dryer and the cyclones. This value is 15.0 pounds of emissions per ton which is almost three times as high as the 5.7 pounds per ton we used. In either case we are really just estimating because the actual soil conditions we will encounter vary at each clean up sites. To demonstrate compliance at this higher loading we have redone the calculations and the results are still well with-in the required emissions levels. See calculation sheet entries title "alternate method."

D R E ENVIRONMENTAL INC.

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5. **What will be the type fuel, maximum fuel consumption, and emissions of criteria pollutants from the genetator that is operated with this unit?**
The electrical power generator used to provide electricity will be driven by a diesel engine. It is a 240 KW generator. New calculation sheets are attached showing its predicted emissions. Since this is a seperate source it should not affect the allowable emissions from the soil cleaning operation. This generator is roughly equivalent to one more truck on the highways of our state.

6. **What instruments will be installed to monitor/record the baghouse pressure drop and afterburner temperature?**
The baghouse pressure drop will be indicated by a magnahelic gage and recorded hourly in the operators log. The afterburner temperature will be recorded on a datalogger strip chart.

7. **How will the untreated and treated soils be handled, stored, and disposed of?**
Untreated soils will be stockpiled on visqueen and covered prior to treatment. Treated soils will be stockpiled and covered in per-shift batches until the post-burn soil analysis is complete and show the material to be in compliance with clean-up requirements. Clean soil will be returned to excavated areas subject to DER approval.

I hope these answers will allow you to resume processing our application as soon as possible.

Sincerely,

Chris Sleeper,
President

CALCULATIONS

Diesel Powered Electricity Generator

Max capacity	240 Kilowatts
Design Load	150 Kilowatts
Operating Hours	8766 hours per year

Based on AP42 Table 3.3-1

Carbon Monoxide

$$4.06 \text{ g/kwh} \times .8766 \frac{\text{Hrs}}{\text{yr}} \times 240 \text{ kilowatts} \times \frac{150 \text{ kilowatts used}}{240 \text{ kilowatts available}} = 5{,}338.494 \frac{\text{grams}}{\text{year}}$$

$$5{,}338.494 \frac{\text{kg}}{\text{yr}} \times 2.2046 \frac{\text{pounds}}{\text{kg}} = 11{,}769.243 \frac{\text{lbs}}{\text{yr}} = 5.88 \text{ TPY carbon monoxide}$$

Exhaust Hydrocarbons (VOC)

$$1.50 \text{ g/kwh} \times 1{,}314{,}900 \text{ kwh} = 1{,}972{,}350 \text{ grams/yr}$$

$$1{,}972.350 \frac{\text{kg}}{\text{yr}} \times 2.2046 \frac{\text{pounds}}{\text{kg}} = 4348.24 \frac{\text{lbs}}{\text{yr}} = 2.17 \text{ TPY VOC}$$

Nitrogen Oxides

$$18.8 \text{ g/kwh} \times 1{,}314{,}900 \text{ kwh} = 24{,}720{,}120 \text{ grams/yr}$$

$$24{,}720.120 \frac{\text{kg}}{\text{yr}} \times 2.2046 \frac{\text{pounds}}{\text{kg}} = 54{,}497.98 \frac{\text{lbs}}{\text{yr}} = 27.25 \text{ TPY nitrogen oxide}$$

Sulfur Oxides

$$1.25 \text{ g/kwh} \times 1{,}314{,}900 \text{ kwh} = 1{,}643{,}625 \text{ grams/yr}$$

$$1{,}643.625 \frac{\text{kg}}{\text{yr}} \times 2.2046 \frac{\text{pounds}}{\text{kg}} = 3623.53 \frac{\text{lbs}}{\text{yr}} = 1.81 \text{ TPY sulfur oxides}$$

Particulate

$$1.34 \text{ g/kwh} \times 1{,}314{,}900 \text{ kwh} = 1{,}761{,}966 \text{ grams/yr}$$

$$1{,}716.966 \frac{\text{kg}}{\text{yr}} \times 2.2046 \frac{\text{pounds}}{\text{kg}} = 3{,}884.43 \frac{\text{lbs}}{\text{yr}} = 1.94 \text{ TPYparticulates}$$

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;

if power plant, hrs/yr 8766 if seasonal, describe: _____

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

1. Is this source in a non-attainment area for a particular pollutant? YES

   a. If yes, has "offset" been applied? NO

   b. If yes, has "Lowest Achievable Emission Rate" been applied? NO

   c. If yes, list non-attainment pollutants. SO_2, Ozone, Particulate

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. NO

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. NO

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? NO

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? NO

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? YES

   a. If yes, for what pollutants? Particulate

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

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

The particulate matter RACT Standard for incinerators of .08 grains/dscf corrected to 50% excess air will be met. (17-2.600 (1) (C) 1.)

No applicable VOC standards exist

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Petroleum contaminated soil	Particulates	100%	70,000	A
	VOC	varies		

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

1. Total Process Input Rate (lbs/hr): 70,000

2. Product Weight (lbs/hr): 70,000 depending on moisture content

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Controlled Emission Estimate[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr Uncontrolled	T/yr	
Particulates	7.38	32.24	.08 gr/dscf 17-2.600 (1)(c)	7.38	199.88	873.1	B
CO	2.50	10.93			2.50	10.93	B
NO_x	10.01	43.73			10.01	43.73	B
SO_2	14.02	61.23			14.02	61.23	B
VOC	22.81	99.98			1400.26	6116.3	B

[1] See Section V, Item 2.

[2] Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3] Calculated from operating rate and applicable standard.

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

CALCULATIONS

All calculations are based upon the expected worst case soil conditions and maximum expected operating hours per year.

I. Soil Conditions (for the purpose of this application we have set the soil conditions to be worse than those we encountered in previous work we've done)

* Feed rate = 35 tons per hour
* Ambient temperature = 60
* Moisture content = 8.0% by wt.
* Hydrocarbon content = 2.0% by wt.
* Bulk density = 100 Lb/cu ft

II. Plant Operating Hours

* 24 Hr/Day * 365.25 Days/Yr *8,766 Hr/Yr

III. Fuel Consumption

* Propane gas having 91,500 BTU's/gal, 2523 BTU/ft3
* Rotary Drier Burner
  - Maximum capacity = 23 MM BTU/HR
  - Drier rated capacity = 35 TPH heated to 700°F soil temperature
  - Energy req'd at rated cap = 23.578450 MM BTU/HR
  - Fuel consumption = 9345 cfh or 257.69 gal/hr
* Afterburner Burner
  - Maximum rated capacity = 22.0 MM BTU/HR
  - Fuel consumption = 8719 cfh or 240.43 gal/hr
* Total Fuel Consumption
  (Drier @ 35 TPH) + (Afterburner @ MAX) = 18,064 cfh or 157.81 MM cfy
  = 498.12 gal/hr or 4,366,520 gal/yr propane

IV Emissions Factors

A. Rotary Drier
* Contaminated soil = raw material
* Emissions factor = 40 LB oil/ton of soil based on 2.0% oil by wt.
* Emissions factor = 5.7 lbs particulate will emerge from the drier per ton of soil processed ref. AP-42 8.18-1
* or alternatively 15.0 lbs particulate per ton of soil processed ref. AP42 8.1-1

B. Soil Contaminate Is No. 2 Fuel Oil (Density 7.3 lbs per gallon which when burned has the following emissions)

* Particulates uncontrolled = 2.0 lb/1,000 gal
* Sulfur content of fuel = 0.5% by wt.
* Sulfur dioxide = 2.0 lb per 1%/100 lbs oil
* Nitrogen oxide = 20 lb/1,000 gal
* Carbon monoxide = 5 lb/1,000 gal

C. Total Uncontrolled Emissions from Rotary Drier Due to Soil and Oil Contaminate

Assumption: The raw material with 8% moisture and 2.0% HC's is processed at 35 tph. All HC's in the soil are treated like additional fuel in the afterburner.

1. Particulate emissions from Rotary Drier from soil:
(AP-42 says approximately 5.7 lb/ton)
5.7 lb/ton x 35 TPH = 199.5 lb/hr
Alternative method (AP.42 says 15 lb/ton)
15.0 lb/ton x 35 TAH = 525 lb/hr

2. Hydrocarbon (VOC) emissions from oil in soil:
* VOC = (2.0%) x (35 TPH) x (2,000 lb/ton) = 1400 lb/hr
* VOC fuel conversion
= (1400 lb/hr)/(7.3 lb/gal) = 191.78 gal/hr
* Particulates = (2 lb/1000 gal) x (191.78 gal/hr)
due to fuel oil = .3836 lb/hr
* Sulfur Dioxide = 2.0 x .5 x 1400/100 = 14 lb/hr
* Nitrogen Oxide = (191.78 gal/hr) x 20 lb/1000 gal) = 3.835 lb/hr
* Carbon Monoxide = (191.78 gal/hr) x (5.0 lb/1000 gal) = 0.958 lb/hr

3. Total Solid Uncontrolled Emissions (Particulates) from Rotary Drier
(Soil Emissions) + (HC Emissions) = Total
199.5 lb/hr + 0.3836 lb/hr = 199.8836 (plus .1134 lbs/hr from combustion of propane gas in Rotary Drier)
Alternate Method
52.5 lb/hr + 0.3836 lb/hr = 525.3836 (plus .1134 lbs/hr from combustion of propane gas in Rotary Drier

4. Uncontrolled Emissions from combustion of Propane Gas (AP-42 Table 1.5-1) Natural gas is considered the same except for SO_2 which is slightly lower (.0114 lbs.hr)

Rotary Drier = 257.69 gal/hr
Afterburner = 240.43 gal/hr
TOTAL = 498.12 gal/hr

Particulate	.09 to .44 lbs per 1000 gal	= .0447 lbs/hr to .2191 lbs/hr
SO2	.0378 lbs per 1000 gal	= .0188 lbs/hr
NOx	12.4 lbs per 1000 gal	= 6.1766 lbs/hr
CO	3.1 lbs per 1000 gal	= 1.5440 lbs/hr
VOC	.52 lbs per 1000 gal	= .2589 lbs/hr

5. Total Uncontrolled Emissions (Non-Particulate) due to combustion of propane and soil contaminent oil.

SO2	14.0 lbs/hr + .0188 lbs/hr	= 14.0188 lbs/hr
NOx	3.835 lbs/hr + 6.1766 lbs/hr	= 10.0116 lbs/hr
CO	0.958 lbs/hr + 1.5440 lbs/hr	= 2.5020 lbs/hr
VOC	1400 lbs/hr + .2589 lbs/hr	= 1400.2589 lbs/hr

D. Total Controlled Emissions of Solids

1. Exhaust gas conversion to SCFM
Baghouse capacity = 15,073 acfm @ 400°F

* Temperature correction factor $= \frac{(70 + 460)}{(400 + 460)} = \frac{530}{860} = 0.616$

* SCFM = (0.616) X (15,073 acfm) = 9,284 scfm

2. Baghouse Efficiency

* The following calculations show what the baghouse efficiency would have to be to meet the state regulations allowing maximum particulate emissions from incinerators to be .08 grains per dscf corrected to 50% excess air.
* Air required for combustion
* Total Fuel Consumption (from III above) = 18,064 cfh propane gas
* 23.86 ft 3 air required to burn 1 ft3 propane gas (from propane handbook)
* Air required with 50% excess air

$$150\% \times 23.86 \frac{ft^3 \text{ air}}{ft^3 \text{ propane gas}} \times 18{,}064 \frac{ft^3 \text{ propane gas}}{\text{hour}} = 646{,}510 \frac{ft^3 \text{ air}}{\text{hour}}$$

* Maximum allowable particulate emissions for incinerators is given by the state as .08 grains per dscf corrected to 50% excess air.

$$646{,}510 \frac{ft^3 \text{ air}}{\text{hour}} \times .08 \frac{\text{grains}}{\text{ft air}} \times \frac{1 \text{ pound}}{7000 \text{ grs}} = 7.3887 \text{ lbs/hr}$$

* The baghouse dust collector efficiency must be as shown below to achieve regulatory compliance of 7.3887 lbs/hr maximum particulate emission
* Total uncontrolled particulate emissions from IV C3 above = 199.997 or 525.497 lbs/hr
* Inlet conditions at the baghouse will be controlled by twin cyclones which have approximately 70% efficiency
* 199.997 lbs/hr x 30% passes through = 60.00 lbs/hr escaping the twin cyclones and entering the baghouse

or alternatively

525.497 lbs/hr x 30% passes through = 157.649 lbs/hr escaping the twin cyclones and entering the baghouse

$$\text{Efficiency} = \frac{\text{(Total Uncontrolled) - (Total Controlled)}}{\text{Total Uncontrolled}}$$

$$\frac{\text{(60.00 lb/hr) - (7.3887 lb/hr)}}{\text{60.00 lb/hr}}$$

Required % efficiency = 87.69%

or alternatively

$$\frac{\text{157.649 lb/hr - 7.3887 lb/hr}}{\text{157.649 lb/hr}} =$$

Alternate Required % Efficiency = 95.31%

* This is the efficiency required to meet .08 gr/dscf corrected to 50% excess air. Actual baghouse efficiency is estimated at 99.7%, so we should have no problem meeting this efficiency requirement.
* Air required for combustion $\frac{\text{23.86 ft3}}{\text{ft3 propane}}$ x 18.064 ft3 propane = 431,007 scfh

* Design airflow is 9284 scfm or 557,040 scfh
  29% excess air for combustion when drier and afterburner are at 35 tph (Max design capacity)

E. Exhaust Gas Volume From Afterburner

Assumption: Afterburner set @ 1600°F

* Stack gas flow rate = 9284 SCFM (from D-1 above)

$$\text{Correction factor} = \frac{(1600 + 460)}{(70 + 460)} = 3.886$$

(3.886) x (9284 SCFM) = 36,077 acfm @ 1600° F

* Stack gas velocity
  Size of exhaust stack = 3.0 ft diameter
  Cross sectional area = 7.07 sq ft
  Exhaust gas velocity = $\frac{36{,}077 \text{ acfm}}{7.07 \text{ sq ft}} \times \frac{1 \text{ min}}{60 \text{ sec}} = 85.06 \text{fps}$

* Stack height above grade = 30.0 ft

F. Total Controlled Emissions of VOC's

* Afterburner operates at 1,200 to 1,600° F and field tests of similar units indicate it has a 99.00% destruction efficiency for all VOC's entering unit. However we will only claim a 98.37% efficiency since that will be good enough to keep controlled VOC effluent below 100 ton/year as shown below

* Uncontrolled VOC's = 1400.2589 lb/hr (from C-5 above)
* Permissable VOC effluent = 100 ton/year $\times \frac{2000 \text{ lbs}}{\text{ton}} \div \frac{8766 \text{ hrs}}{\text{year}} = 22.815 \frac{\text{lbs}}{\text{Hr}}$

$$\text{Efficiency} = \frac{\text{(Total Uncontrolled) - (Total Controlled)}}{\text{Total Uncontrolled}}$$

$$\frac{1400.2589 \text{ lbs/hr} - 22.815 \text{ lbs/hr}}{1400.2589 \text{ lbs/hr}} = \% \text{ eff} = 98.37\%$$

* Controlled VOC's = 22.81 lb/hr based on 98.37% efficiency
* Exhaust gases in the afterburner are calculated to be 36,077 acfm @ 1600° F
* Afterburner I.D. = 5.0 ft
* Cross sectional area = 19.634 sq. ft
* STU air velocity = 30.62 fps
* Length of afterburner combustion chamber = 32 ft
* Required retention time of gases = 0.5 sec
* Actual retention time of gases = 1.04 sec

G. Controlled Emissions other than Particulates and VOC's (from C-5 above)
* CO < 2.5020 lbs/hr or 10.93 tpy
* NOx < 10.0116 lbs/hr or 43.73 tpy
* SO2 < 14.0188 lbs/hr or 61.23 tpy

New or used oil contaminating the soil may not contain more than the specified amount of the following. Therefore, the stack discharge may have similar traces.

5 ppm	Arsenic	100 ppm	Lead
2 ppm	Cadmium	1000 ppm	Total Halogens
10 ppm	Chromium	< 2 ppm	PCB

P 256 396 219

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. Chris Sleeper, DER Env.	
Street and No. 1644 Blanding Blvd., Ste. 2	
P.O., State and ZIP Code Jacksonville, FL 32210	
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 Mailed: 10-25-90 Permit: AC 16-187650	

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

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. Chris Sleeper, President
DRE Environmental, Inc.
1644 Blanding Blvd., Suite 2
Jacksonville, FL 32210

4. Article Number
P 256 396 219

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

6. Signature — Agent
X Christy M. Brew

7. Date of Delivery OCT 29 1990

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

Florida Department of Environmental Regulation

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

Bob Martinez, Governor | Dale Twachtmann, Secretary | John Shearer, Assistant Secretary

October 24, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Chris Sleeper, President
DRE Environmental, Inc.
1644 Blanding Boulevard, Suite 2
Jacksonville, Florida 32210

Dear Mr. Sleeper:

Re: File No. AC 16-187650, Two 35 TPH SRU

The Department has made a preliminary review of your application for a permit to construct two 35 TPH soil remediation units. Before this application can be processed, we need the following:

1. The application fee is $1,000 per unit. The Department needs an additional application fee of $1,000.

2. As there are 365.25 days/year, the VOC emissions from each unit has the potential to exceed 100 TPY. Please supply the information required by Rule 17-2.510, New Source Review for Nonattainment Areas, or lower the allowable VOC emissions being requested for these units.

3. Will both units operate at the same site? at the same time?

4. Why do you believe the uncontrolled particulate matter emissions from these units will be similar to that of a phosphate rock dryer?

5. What will be the type fuel, maximum fuel consumption, and emissions of criteria pollutants from the generator that is operated with this unit?

6. What instruments will be installed to monitor/record the baghouse pressure drop and afterburner temperature?

7. How will the untreated and treated soils be handled, stored, and disposed of?

We will resume processing the application after we receive your reply to this request. If you have any questions on this matter, please write to me or call Willard Hanks at 904-488-1344.

Sincerely,

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

CHF/WH/plm

c: Dole Kelley, P.E.

10-14-90
16:01:42

*** SCREEN-1.1 MODEL RUN ***
*** DRAFT VERSION XXXXX ***

dre environmental inc

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	1.000
STACK HEIGHT (M)	=	9.14
STK INSIDE DIAM (M)	=	.91
STK EXIT VELOCITY (M/S)	=	25.93
STK GAS EXIT TEMP (K)	=	1144.00
AMBIENT AIR TEMP (K)	=	293.00
RECEPTOR HEIGHT (M)	=	.00
IOPT (1=URB,2=RUR)	=	2
BUILDING HEIGHT (M)	=	.00
MIN HORIZ BLDG DIM (M)	=	.00
MAX HORIZ BLDG DIM (M)	=	.00

BUOY. FLUX = 39.54 M**4/S**3; MOM. FLUX = 36.00 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	0	.0	.0	.0	.0	.0	.0	
100.	.3118	6	1.0	1.0	5000.0	93.2	24.3	24.1	NO
200.	1.783	4	20.0	20.0	5000.0	25.7	15.8	8.9	NO
300.	6.915	4	20.0	20.0	5000.0	25.7	22.9	12.6	NO
400.	9.093	4	20.0	20.0	5000.0	25.7	29.8	15.8	NO
500.	9.195	4	20.0	20.0	5000.0	25.7	36.5	18.9	NO
600.	8.487	4	20.0	20.0	5000.0	25.7	43.0	21.8	NO
700.	7.650	4	15.0	15.0	4800.0	31.7	49.6	24.9	NO
800.	7.112	4	15.0	15.0	4800.0	31.7	55.9	27.5	NO
900.	6.517	4	15.0	15.0	4800.0	31.7	62.2	30.2	NO
1000.	6.078	4	10.0	10.0	3200.0	42.9	68.8	33.5	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

454.	9.311	4	20.0	20.0	5000.0	25.7	33.5	17.6	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

$9.311 \times 10^{-3} \frac{mg}{m^3}$ (1 hr)

6.52×10^{-3} (8 hr)

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	9.311	454.	0.

D R E ENVIRONMENTAL INC.

1644 Blanding Blvd. Suite #2 • Jacksonville, FL 32210 • 904-389-8682

October 12, 1990

Mr. Willard Hanks
Department of Environmental Regulations
Division of Air
2600 Blairstone Road
Tallahassee,FL 32399-2400

RE: Additional Source fee, File# AC16-187650

Dear Sir:

Pursuant to our conversation on 10/12/90 regarding file #AC16-187650, I am submitting an additional $1,000.00 application fee for the second unit. Our original application fee was submitted under the similar source rule and therefore I didn't believe that an additional fee was applicable. If the fee is warranted for your review of this application, please find the check enclosed. However, if the fee is not necessary, please return to D.R.E. Environmental, Inc.

If there are any questions concerning the permit application, please call (904) 737-0331.

Sincerely,

Chris K. Sleeper

C. K. Sleeper
President

001031

AIRBILL

FEDERAL EXPRESS

USE THIS AIRBILL FOR DOMESTIC SHIPMENTS WITHIN THE CONTINENTAL U.S.A., ALASKA AND HAWAII.
USE THE INTERNATIONAL AIR WAYBILL FOR SHIPMENTS TO PUERTO RICO.
QUESTIONS? CALL 800-238-5355 TOLL FREE.

PACKAGE TRACKING NUMBER 766210783 2

G074M 766210783 2

RECIPIENT'S COPY

Date: 10-12-90

From (Your Name) Please Print: CHRIS SHEPPER, P.E.
Your Phone Number (Very Important): (904 389-8682
Company: WARREN BROS CONSTRUCTION
Department/Floor No.:
Street Address: 9 STEPP AVE
City: JACKSONVILLE **State:** FL **ZIP Required:** 3 2 2 1 6

To (Recipient's Name) Please Print: Mr. Willard Hanks
Recipient's Phone Number (Very Important): ( )
Company: Dept. of Envir. Reg/ Division of Air
Department/Floor No.:
Exact Street Address *(We Cannot Deliver to P.O. Boxes or P.O. ® Zip Codes.)*: 2600 Blairstone Road
City: Tallahassee, Florida **State:** **ZIP Required:** 32399-2400

3 YOUR BILLING REFERENCE INFORMATION (FIRST 24 CHARACTERS WILL APPEAR ON INVOICE.)

PAYMENT ☒ Bill Sender ☐ Bill Recipient's FedEx Acct. No. ☐ Bill 3rd Party FedEx Acct. No. ☐ Bill Credit Card ☐ Cash

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

4 SERVICES

1 ☐ PRIORITY 1 Overnight Delivery
2 ☐ COURIER-PAK OVERNIGHT ENVELOPE*
3 ☐ OVERNIGHT BOX
4 ☐ OVERNIGHT TUBE
5 ☐ STANDARD AIR Delivery not later than second business day
6 ☒ OVERNIGHT LETTER*
7 ☐
8 ☐
9 ☐
10 ☐
*Declared Value Limit $100.

DELIVERY AND SPECIAL HANDLING

1 ☐ HOLD FOR PICK-UP (Fill in Box H)
2 ☒ DELIVER WEEKDAY
3 DELIVER SATURDAY (Extra charge) ☐
4 ☐ DANGEROUS GOODS (Extra charge)
5 ☐ CONSTANT SURVEILLANCE SERVICE (CSS) (Extra charge) (Release Signature Not Applicable)
6 ☐ DRY ICE _____ Lbs.
7 ☐ OTHER SPECIAL SERVICE _____
8 ☐
9 ☐ SATURDAY PICK-UP (Extra charge)
10 ☐
11 ☐
12 ☐ HOLIDAY DELIVERY (If offered) (Extra charge)

PACKAGES	WEIGHT	YOUR DECLARED VALUE	OVER SIZE
	LBS		
	LBS		
	LBS		
	LBS		
Total	Total	Total	

Received At: 1 ☐ Regular Stop 2 ☐ On-Call Stop 3 ☐ Drop Box 4 ☐ B.S.C. 5 ☐ Station
FEDEX Corp. Employee No.: 3527
Date/Time for FEDEX Use: 1112

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

5 Sender authorizes Federal Express to deliver this shipment without obtaining a delivery signature and shall indemnify and hold harmless Federal Express from any claims resulting therefrom.
Release Signature: _____

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

PART #111800 REVISION DATE 1/88 PRINTED IN U.S.A. SRCEF 009

D.R.E. Environmental, Inc.
1644 Blanding Blvd., Suite #2
Jacksonville, FL 32210

Best Available Copy

094

[redacted] 630

October 12, 19 90

PAY TO THE ORDER OF Department of Environmental Regulations $ 1,000.00

One thousand and oo/100 ---------- DOLLARS

Sun Bank/North Florida, N.A.
Main Office
550 Water Street
Jacksonville, Florida 32202

FOR Fee for permit application

H. F. Sleeper III

[redacted]

Division of Air
2600 Blairstone Road
Tallahassee,FL 32399-2400

RE: Additional Source fee, File# AC16-187650

Dear Sir:

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If there are any questions concerning the permit application, please call (904) 737-0331.

Sincerely,

Chris K. Sleeper

C. K. Sleeper
President

001031

RECEIVED
DER - MAIL ROOM
90 OCT 15 AM 10:41

DRE ENVIRONMENTAL INC.

1644 Blanding Blvd. Suite #2 • Jacksonville, FL 32210 • 904-389-8682

October 5, 1990

Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Attn: Mr. Willard Hanks

Dear Mr. Hanks;

Enclosed are four (4) copies of our application for a statewide permit to construct two (2) portable soil remediation units. Also enclosed is our check for the permit fee of $1,000. Additional technical information follows:

1. The afterburner will have sampling ports and a work platform.
2. Contaminated soil will be moved from the stockpile to the feed hopper by a front end loader.
3. Fugitive emissions will be controlled by daily wet down of roads and stockpiles. Dust suppression sprays will be used as needed at the feed hopper, processed material transfer conveyors and the processed material stockpile.
4. We are claiming VOC destruction efficiency of 98.36% based on the manufacturer's experience in other states. Please note the temperature of 1600° F and the retention time of 1.04 seconds should assure destruction efficiency above our estimate of 98.36%.
5. Although our airflow will only provide 29% excess air at 100% capacity we are providing you with the following calculation of stack velocity and afterburner retention time based on 50% excess air.

Stack velocity = 646,510 dscfh ÷ 60 $\frac{\text{min}}{\text{hr}}$ ÷60 $\frac{\text{sec}}{\text{min}}$ ÷7.07 ft^2 stack area x 3.886 temp factor = 98.71 fps

Afterburner chamber is 5' dia. x 32 feet long.

Afterburner velocity = 646,510 dscfh ÷ 60 $\frac{\text{min}}{\text{hr}}$ ÷60 $\frac{\text{sec}}{\text{min}}$ ÷19.634 ft^2 stack area x 3.886 temp factor = 35.54 fps

Retention Time = $\frac{32}{35.54}$ = .90 second*

*NOTE: This retention time is based on a theoretical 50% excess air at maximum output. Our actual retention time will be 1.04 second based on our airflow.

If you need additional technical information, please contact C. Lee Daniel (904)731-7760 or me.

Sincerely,

Chris Sleeper

Chris Sleeper

0010381

D.R.E. Environmental, Inc.
1644 Blanding Blvd., Suite #2
Jacksonville, Florida 32210

Best Available Copy

093

October 3 19 90 [redacted] 630

PAY TO THE ORDER OF Department of Environmental Regulations $ 1,000.00

One Thousand ---------- 00/100 DOLLARS

Sun Bank/North Florida, N.A.
Main Office
550 Water Street
Jacksonville, Florida 32202

FOR Fee for permit application [redacted]

Enclosed are four (4) copies of our application for a statewide permit to construct two (2) portable soil remediation units. Also enclosed is our check for the permit fee of $1,000. Additional technical information follows:

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$$\text{Retention Time} = \frac{32}{35.54} = .90 \text{ second}^*$$

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If you need additional technical information, please contact C. Lee Daniel (904)731-7760 or me.

Sincerely,

Chris Sleeper

Chris Sleeper

0010381

Destruction Removal Efficiencies

$1,000 pd.
10-9-90
Rcpt # 151145

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT
3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207

AC 16-187650

BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY
G. DOUG DUTTON
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: _____ [x] New[1] [ ] Existing[1]

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

COMPANY NAME: DRE Environmental, Inc. COUNTY: Portable

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Two (2) separate Soil Remediation Incinerat

SOURCE LOCATION: Street Portable City _____

UTM: East _____ North _____

Latitude ____° ____' ____"N Longitude ____° ____' ____"W

APPLICANT NAME AND TITLE: Chris Sleeper - Owner

APPLICANT ADDRESS: 1644 Blanding Boulevard, Suite 2, Jacksonville, Florida 32210

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of DRE Environmental, Inc.

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

*Attach letter of authorization

Signed: Chris A. Sleeper

Chris Sleeper-President
Name and Title (Please Type)

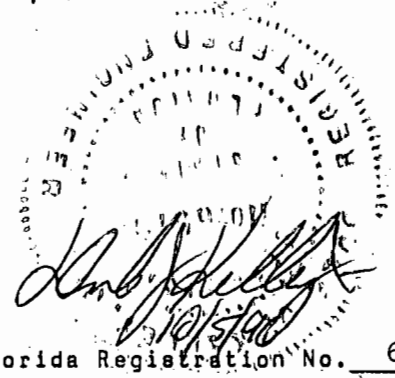
Date: 10-1-90 Telephone No. (904) 389-9090

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

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

[1] See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.



Signed _____

Dole J. Kelley, P.E.
Name (Please Type)

Dole J. Kelley, Consulting engineer
Company Name (Please Type)

1646 Rogero Road, Jacksonville, Florida 32211
Mailing Address (Please Type)

Florida Registration No. 6519 Date: 10-1-90 Telephone No. (904) 743-4700

SECTION II: GENERAL PROJECT INFORMATION

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

These two plants are for the decontamination of soil which contains virgin and non-virgin (used) oil which is within specifications. Treatment shall be in a rotary drier 500-700 F followed by twin cyclones, a baghouse, and an afterburner. This portable system will normally operate 2-3- months at each site. Highly efficient ~~pollution control equipment will result in total compliance with air pollution~~ regulations.

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

Start of Construction November 15, 1990 Completion of Construction December 30, 1990

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

Afterburner	$150,000.00
Baghouse	$200,000.00

Costs are per system. There are two separate systems

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

NONE

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;

if power plant, hrs/yr 8,736 if seasonal, describe: _____

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

1. Is this source in a non-attainment area for a particular pollutant? YES

   a. If yes, has "offset" been applied? NO

   b. If yes, has "Lowest Achievable Emission Rate" been applied? NO

   c. If yes, list non-attainment pollutants. SO_2, Ozone, Particulate

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. NO

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. NO

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? NO

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? NO

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? YES

   a. If yes, for what pollutants? Particulate

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

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

The particulate matter RACT Standard for incinerators of .08 grains/dscf corrected to 50% excess air will be met. (17-2.600 (1) (C) 1.)

No applicable VOC standards exist

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Petroleum contaminated soil	Particulates	100%	70,000	A
	VOC	varies		

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

1. Total Process Input Rate (lbs/hr): 70,000

2. Product Weight (lbs/hr): 70,000 depending on moisture content

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Particulates	7.38	32.24	.08 gr/dscf 17-2.600 (1)(c)	7.38	199.88	873.1	B
CO	2.50	10.93			2.50	10.93	B
NO_x	10.01	43.73			10.01	43.73	B
SO_2	14.02	61.23			14.02	61.23	B
VOC	22.89	99.98			1400.26	6116.3	B

[1]See Section V, Item 2.

[2]Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard.

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

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency Predicted	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Hauck BH390-8 Baghouse	Particulate	99.7%	0-1000 microns	manufacturer
Hauck Afterburner	VOC	99.0%	N.A.	manufacturer
Natural Gas will be our alternate fuel				
* 15,073 ACFM (inlet)	@ 400° F ÷ 3840	sq ft cloth filter = 3.92 :1 air to cloth ratio		

E. Fuels

Type (Be Specific)	Consumption* avg/hr	Consumption* 35 tph max./hr	Maximum Heat Input (MMBTU/hr)
Propane Gas (drier)		257.69 gal/hr	23.0 MMBTU/hr Req'd @ 35 tph
Propane gas (afterburner)		240.43 gal/hr	22.0 MMBTU/hr
Natural Gas will be our alternate fuel			

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr

Fuel Analysis:

Percent Sulfur: <.5% Percent Ash: 0

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: 91500 BTU/gal BTU/lb _____ BTU/gal
Propane 2523 BTU/ft3

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

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average NA Maximum _____

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

Dust from the twin cyclones and baghouse is added to the finished product

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

Stack Height: 30' ft. Stack Diameter: 3'-0" ft.

Gas Flow Rate: 36.077 ACFM _____ DSCFM Gas Exit Temperature: 1600 °F.

Water Vapor Content: varies % Velocity: 85.06 FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq.& Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Houre of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diamter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

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

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner

[ ] Other (specify) _____

Brief description of operating characteristics of control devices: _____

_____

_____

_____

_____

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

_____

_____

_____

_____

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid wastes exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emisaions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.

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

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[ ] Yes [ ] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[ ] Yes [ ] No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration

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

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

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

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

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

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

[1]Explain method of determining efficiency.
[2]Energy to be reported in unite of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

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

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

1. _____no. sites _____ TSP _____( ) SO^2* _____ Wind spd/dir

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

Other data recorded _____

Attach all data or statistical summaries to this application.

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

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? [ ] Yes [ ] No

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

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

2. Surface data obtained from (location)_____

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

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

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

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

D. Applicants Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

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

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

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

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

CALCULATIONS

All calculations are based upon the expected worst case soil conditions and maximum expected operating hours per year.

I. Soil Conditions (for the purpose of this application we have set the soil conditions to be worse than those we encountered in previous work we've done)

* Feed rate = 35 tons per hour
* Ambient temperature = 60
* Moisture content = 8.0% by wt.
* Hydrocarbon content = 2.0% by wt.
* Bulk density = 100 Lb/cu ft

II. Plant Operating Hours

* 24 Hr/Day
* 7 Days/Wk
* 52 Wk/Yr
* 8,736 Hr/Yr

III. Fuel Consumption

* Propane gas having 91,500 BTU's/gal, 2523 BTU/ft3
* Rotary Drier Burner
  - Maximum capacity = 23 MM BTU/HR
  - Drier rated capacity = 35 TPH heated to 700°F soil temperature
  - Energy req'd at rated cap = 23.578450 MM BTU/HR
  - Fuel consumption = 9345 cfh or 257.69 gal/hr
* Afterburner Burner
  - Maximum rated capacity = 22.0 MM BTU/HR
  - Fuel consumption = 8719 cfh or 240.43 gal/hr
* Total Fuel Consumption
  (Drier @ 35 TPH) + (Afterburner @ MAX) = 18,064 cfh or 157.81 MM cfy
  = 498.12 gal/hr or 4,351,576 gal/yr propane

IV Emissions Factors

A. Rotary Drier
* Contaminated soil = raw material
* Emissions factor = 40 LB oil/ton of soil based on 2.0% oil by wt.
* Emissions factor = 5.7 lbs particulate will emerge from the drier per ton of soil processed

ref. AP-42 8.18-1

B. Soil Contaminate Is No. 2 Fuel Oil (Density 7.3 lbs per gallon which when burned has the following emissions)

* Particulates uncontrolled = 2.0 lb/1,000 gal
* Sulfur content of fuel = 0.5% by wt.
* Sulfur dioxide = 2.0 lb per 1%/100 lbs oil
* Nitrogen oxide = 20 lb/1,000 gal
* Carbon monoxide = 5 lb/1,000 gal

C. Total Uncontrolled Emissions from Rotary Drier Due to Soil and Oil Contaminate

Assumption: The raw material with 8% moisture and 2.0% HC's is processed at 35 tph. All HC's in the soil are treated like additional fuel in the afterburner.

1. Particulate emissions from Rotary Drier from soil:
(AP-42 says approximately 5.7 lb/ton)
(5.7 lb/ton) x (35 TPH) = 199.5 lb/hr

2. Hydrocarbon (VOC) emissions from oil in soil:
* VOC = (2.0%) x (35 TPH) x (2,000 lb/ton) = 1400 lb/hr
* VOC fuel conversion
= (1400 lb/hr)/(7.3 lb/gal) = 191.78 gal/hr
* Particulates = (2 lb/1000 gal) x (191.78 gal/hr)
due to fuel oil = .3836 lb/hr
* Sulfur Dioxide = 2.0 x .5 x 1400/100 = 14 lb/hr
* Nitrogen Oxide = (191.78 gal/hr) x 20 lb/1000 gal) = 3.835 lb/hr
* Carbon Monoxide = (191.78 gal/hr) x (5.0 lb/1000 gal) = 0.958 lb/hr

3. Total Solid Uncontrolled Emissions (Particulates) from Rotary Drier
(Soil Emissions) + (HC Emissions) = Total
199.5 lb/hr + 0.3836 lb/hr = 199.8836 (plus .0168 lbs/hr from combustion of propane gas in PTU)

4. Uncontrolled Emissions from combustion of Propane Gas (AP-42 Table 1.5-1)
Natural gas is considered the same except for SO_2 which is slightly lower (.0114 lbs.hr)

Rotary Drier = 257.69 gal/hr
Afterburner = 240.43 gal/hr
TOTAL = 498.12 gal/hr

Particulate	.09 to .44 lbs per 1000 gal	= .0447 lbs/hr to .2191 lbs/hr
SO2	.0378 lbs per 1000 gal	= .0188 lbs/hr
NOx	12.4 lbs per 1000 gal	= 6.1766 lbs/hr
CO	3.1 lbs per 1000 gal	= 1.5440 lbs/hr
VOC	.52 lbs per 1000 gal	= .2589 bs/hr

5. Total Uncontrolled Emissions (Non-Particulate) due to combustion of propane and soil contaminent oil.

SO2	14.0 lbs/hr + .0188 lbs/hr	= 14.0188 lbs/hr
NOx	3.835 lbs/hr + 6.1766 lbs/hr	= 10.0116 lbs/hr
CO	0.958 lbs/hr + 1.5440 lbs/hr	= 2.5020 lbs/hr
VOC	1400 lbs/hr + .2589 lbs/hr	= 1400.2589 lbs/hr

D. Total Controlled Emissions of Solids

1. Exhaust gas conversion to SCFM
   Baghouse capacity = 15,073 acfm @ 400°F

* Temperature correction factor $= \frac{(70 + 460)}{(400 + 460)} = \frac{530}{860} = 0.616$

* SCFM = (0.616) X (15,073 acfm) = 9,284 scfm

2. Baghouse Efficiency

* The following calculations show what the baghouse efficiency would have to be to meet the state regulations allowing maximum particulate emissions from incinerators to be .08 grains per dscf corrected to 50% excess air.
* Air required for combustion
* Total Fuel Consumption (from III above) = 18,064 cfh propane gas
* 23.86 ft 3 air required to burn 1 ft3 propane gas (from propane handbook)
* Air required with 50% excess air

$$150\% \times 23.86 \frac{ft^3 \text{ air}}{ft^3 \text{ propane gas}} \times 18{,}064 \frac{ft^3 \text{ propane gas}}{\text{hour}} = 646{,}510 \frac{ft^3 \text{ air}}{\text{hour}}$$

* Maximum allowable particulate emissions for incinerators is given by the state as .08.grains per dscf corrected to 50% excess air.

$$646{,}510 \frac{ft^3 \text{ air}}{\text{hour}} \times .08 \frac{\text{grains}}{\text{ft air}} \times \frac{1 \text{ pound}}{7000 \text{ grs}} = 7.3887 \text{ lbs/hr}$$

* The baghouse dust collector efficiency must be as shown below to achieve regulatory compliance of 7.3887 lbs/hr maximum particulate emission
* Total uncontrolled particulate emissions from IV C3 above = 199.8836
* Inlet conditions at the baghouse will be controlled by twin cyclones which have approximately 70% efficiency
* 199.8836 lbs/hr x 30% passes through = 59.97 lbs/hr escaping the twin cyclones and entering the baghouse

$$\text{Efficiency} = \frac{\text{(Total Uncontrolled) - (Total Controlled)}}{\text{Total Uncontrolled}}$$

$$\frac{\text{(59.97 lb/hr) - (7.3887 lb/hr)}}{\text{59.97 lb/hr}}$$

Required % efficiency = 87.68%

* This is the efficiency required to meet .08 gr/dscf corrected to 50% excess air. Actual baghouse efficiency is estimated at 99.7%, so we should have no problem meeting this efficiency requirement.

* Air required for combustion $\frac{23.86 \text{ ft3}}{\text{ft3 propane}}$ x 18.064 ft3 propane = 431,007 scfh

* Design airflow is 9284 scfm or 557,040 scfh
  29% excess air for combustion when drier and afterburner are at 35 tph (Max design capacity)

E. Exhaust Gas Volume From Afterburner

Assumption: Afterburner set @ 1600°F

* Stack gas flow rate = 9284 SCFM (from D-1 above)

$$\text{Correction factor} = \frac{(1600 + 460)}{(70 + 460)} = 3.886$$

(3.886) x (9284 SCFM) = 36,077 acfm @ 1600° F

* Stack gas velocity
  Size of exhaust stack = 3.0 ft diameter
  Cross sectional area = 7.07 sq ft
  Exhaust gas velocity = $\frac{36{,}077 \text{ acfm}}{7.07 \text{ sq ft}}$ x $\frac{1 \text{ min}}{60 \text{ sec}}$ = 85.06fps

* Stack height above grade = 30.0 ft

F. Total Controlled Emissions of VOC's

* Afterburner operates at 1,200 to 1,600° F and field tests of similar units indicate it has a 99.00% destruction efficiency for all VOC's entering unit. However we will only claim a 98.36% efficiency since that will be good enough to keep controlled VOC effluent below 100 ton/year as shown below

* Uncontrolled VOC's = 1400.2589 lb/hr (from C-5 above)
* Permissable VOC effluent = 100 ton/year x $\frac{2000 \text{ lbs}}{\text{ton}} \div \frac{8736 \text{ hrs}}{\text{year}} = 22.894 \frac{\text{lbs}}{\text{Hr}}$

$$\text{Efficiency} = \frac{\text{(Total Uncontrolled) - (Total Controlled)}}{\text{Total Uncontrolled}}$$

$$\frac{1400.2589 \text{ lbs/hr} - 22.894 \text{ lbs/hr}}{1400.2589 \text{ lbs/hr}} = \% \text{ eff} = 98.36\%$$

* Controlled VOC's = 22.89 lb/hr based on 98.36% efficiency
* Exhaust gases in the afterburner are calculated to be 36,077 acfm @ 1600° F
* Afterburner I.D. = 5.0 ft
* Cross sectional area = 19.634 sq. ft
* STU air velocity = 30.62 fps
* Length of afterburner combustion chamber = 32 ft
* Required retention time of gases = 0.5 sec
* Actual retention time of gases = 1.04 sec

G. Controlled Emissions other than Particulates and VOC's (from C-5 above)
* CO < 2.5020 lbs/hr or 10.93 tpy
* NOx < 10.0116 lbs/hr or 43.73 tpy
* SO2 < 14.0188 lbs/hr or 61.23 tpy

New or used oil contaminating the soil may not contain more than the specified amount of the following. Therefore, the stack discharge may have similar traces.

5 ppm	Arsenic	100 ppm	Lead
2 ppm	Cadmium	1000 ppm	Total Halogens
10 ppm	Chromium	< 2 ppm	PCB

EQUIPMENT SPECIFICATIONS

SOIL UNIT

DRIER STANDARD EQUIPMENT (CS6028 DRIER)

A. 515 Steel drum: diameter 60 inches, length 28 feet
B. Chain drive, 60 HP motor
C. Hauck powerstar LP burner, 23 million BTU
D. Burner blower 24 oz, 15 HP
E. Tertiary Fan, 10 HP
F. Burner control, ADM manual, ADM auto
G. LP pump to be furnished by customer
H. Motor control center
I. Take-away screw conveyor: 18" diameter, 3 HP
J. Inlet screw conveyor, 3 HP
K. Adjustable drum frame with hydraulic system
L. Insulated drum - 2" duall

COLD FEED STANDARD EQUIPMENT

A. (1) 15 ton bin, 1/4" plate 8' x 10' top opening
B. 24" belt feeder lagged head pulley
C. Radial type gate with positive locks
D. 4" idlers, CEMA B throughout
E. Belt guards on feeders
F. Belts, 1/8" x 1/16": covers, 2 ply aggregate belt
G. Material detector
H. Urethane liner

CONTROL ROOM STANDARD EQUIPMENT

A. 7'-7" x 15'-6" dimensions
B. Interior lighting
C. Heating and air conditioning
D. Control panel with manual and automatic systems for remote operation
E. Monitoring equipment

TRAILER STANDARD EQUIPMENT

A. 5th wheel gooseneck
B. Tandem axel with suspensions
C. 10:00 x 20 tires
D. Air brakes and lighting
E. Heavy duty frame to support above items
F. Leg assemblies

EQUIPMENT SPECIFICATIONS

CONTROL LIST

AFTERBURNER STANDARD EQUIPMENT

A. Hauck LP burner, 22 million BTU
B. Burner blower 16 oz, 25 HP
C. Burner control, ADM manual, ADM auto
D. Ceramic-refractory lined chamber
E. Hydraulic raised stack
F. Stack temperature readout with probe
G. Electrical controls
H. LP pump furnished by customer

BAGHOUSE STANDARD EQUIPMENT (MODEL BH390-8)

A. 3,840 sq ft of filter
B. 4.16:1 air to cloth ratio
C. Dust removal conveyors
D. 390 bags: 4.5" diameter, 96" long, P-84 material, 14 oz
E. Venturi orifice and injectors
F. Bag removal from top thru clean air section
G. Adjustable timer for cleaning and interval
H. Bags shipped mounted on cages
I. Outlet duct from exhaust fan to afterburner
J. 16,000 CFM exhaust fan: 40 HP @ 10" SP
K. Damper control
L. 20 HP air compressor: 84 CFM @ 100 PSI
M. Cyclones with connecting ductwork to drier

GENERATOR

A. 200 KW generator
B. Fuel tank-60 gallons
C. Manual start
D. Battery rack and cables
E. Air cleaner
F. Main breaker

TRAILER STANDARD EQUIPMENT

A. 5th wheel gooseneck
B. Tandem axle with suspensions
C. 10:00 x 20 tires
D. Air brakes and lighting
E. Heavy duty frame to support above items
F. Leg assemblies

SOURCE CODE LEGEND

PTU - Primary Treatment Unit

PBH - Primary Baghouse

TC - Twin Cyclones

STU - Secondary Treatment Unit

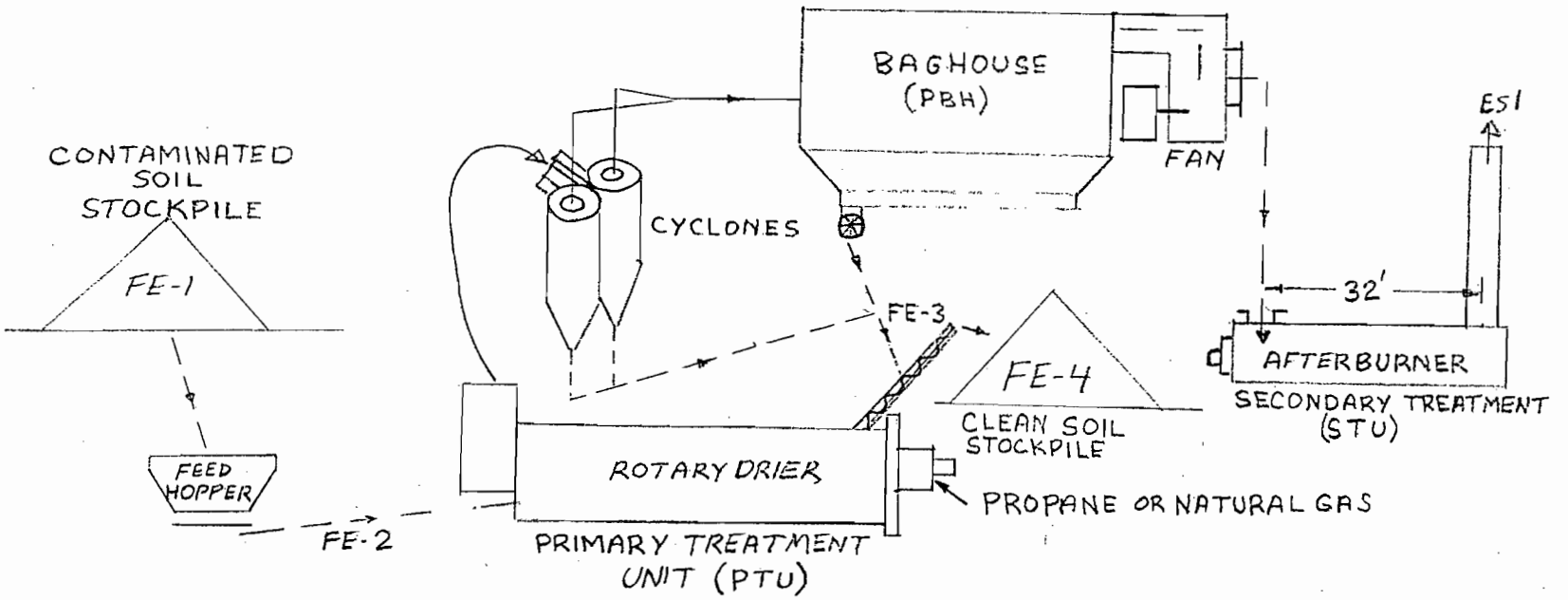
ES1 - Emissions source for entire plant

FE1 - Contaminated soil stockpile

FE2 - Feed hopper to plant

FE3 - Processed material transfer system

FE4 - Clean soil stockpile


CONTAMINATED SOIL STOCKPILE
FE-1
FEED HOPPER
FE-2
ROTARY DRIER
PRIMARY TREATMENT UNIT (PTU)
PROPANE OR NATURAL GAS
CYCLONES
BAGHOUSE (PBH)
FAN
FE-3
FE-4
CLEAN SOIL STOCKPILE
ES1
32'
AFTERBURNER
SECONDARY TREATMENT (STU)