

0102 Perm H 1986 Batch No. -

1986 01-02

Alamance County

01021986

62

Therms - Graham

For complete application:

- ① Drawings showing location within building of incinerator and waste storage area.
- ② What are the volume/day of waste to be processed and their type.
- ③ How long will waste be stored prior to incineration.
- ④ letter of approval from local zoning authority.
- ⑤ letter of approval from landlords receiving the ash residue.
- ⑥ Clean Air permit for incinerator moved from Hillsborough U Burn
Model # 6024 unit



THERMAL
REDUCTION
SYSTEMS
INCORPORATED

Post Office Box 2070
Chapel Hill, North Carolina 27515
919/942-5179

AFFIDAVIT

I certify that no radioactive and/or hazardous chemical waste as defined by the Resource Conservation and Recovery Act of 1976 (Public Law 94-580) will be delivered to Thermal Reduction Systems, Inc., Post Office Box 2070, Chapel Hill, North Carolina 27514.

Signature

Date

Name

Title



North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

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2
Ala
Permits

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

October 30, 1986

Mr. H. E. Archer, President
Thermal Reduction Systems, Inc.
P.O. Box 2070
Chapel Hill, North Carolina 27514

RE: Thermal Reduction Systems, Inc. Permit #01-02-I
Alamance County

Dear Mr. Archer:

The enclosed permit is issued in accordance with G.S. 130A-294.

If you have any questions, please advise.

Sincerely,

A handwritten signature in cursive script, appearing to read "J. Gordon Layton".

J. Gordon Layton, Environmental Engineer
Solid & Hazardous Waste Management Branch
Environmental Health Section

JGL/nlp

cc: Mr. Julian Foscue
Mr. Ernest C. Perry

Enclosure

PERMIT NO. 01-02-I

DATE ISSUED 10-30-86

STATE OF NORTH CAROLINA

DEPARTMENT OF HUMAN RESOURCES

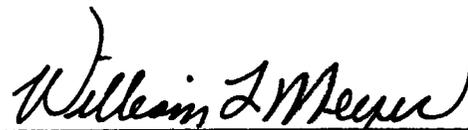
DIVISION OF HEALTH SERVICES

P.O. Box 2091 Raleigh 27602

SOLID WASTE PERMIT

Thermal Reduction Systems is hereby issued a permit to
operate a Infectious Waste Incinerator
located in Porter Industrial Park, Graham, N.C. in Alamance County,
in accordance with Article 9, Chapter 130A, of the General Statutes of North
Carolina and all rules promulgated thereunder and subject to the conditions set
forth in this permit. The facility is located on the below described property.

(Not Applicable)



William L. Meyer, Head
Solid & Hazardous Waste Management Branch
Environmental Health Section

PERMIT NO. 01-02-I
DATE ISSUED 10/30/86

S O L I D W A S T E P E R M I T

Conditions of Permit:

1. This permit may be subject to review at an administrative hearing upon petition of anyone whose legal rights, privileges and duties may have been affected by the issuance thereof.
2. This facility shall conform to operating procedures in Rule .0509 of the Solid Waste Management Rules.
3. This facility is permitted to receive and treat the following infectious wastes:
 - A. Microbiological wastes
 - B. Sharps
 - C. Pathological wastes
 - D. Blood Products
 - E. Other non-hazardous, non-liquid wastes from health-care facilities that desire to incinerate their wastes.
4. Storage of waste shall be confined to inside the secured building as shown on floor plan.
5. Storage time shall not exceed 48 hours.
6. Ash from the incinerators shall be disposed of in the Alamance County Landfill.
7. Storage for ash shall be in waterproof containers.
8. Thermal Reductions Systems, Inc. shall maintain records to indicate the following:
 1. Name and address of generator of waste
 2. Date and amount of waste received
 3. Date and amount of waste incinerated
9. This permit may be modified based on changes in the Solid Waste Management Rules or conditions that occur and have not been addressed in the permit, as determined by the Division.



Post Office Box 2070
Chapel Hill, North Carolina 27515
919/942-5179
October 28, 1986

Mr. Gordon Layton
Solid and Hazardous Waste Management Branch
Division of Health Services
N.C. Department of Human Resources
Bath Building
Raleigh, NC 27602

Dear Mr. Layton:

We are enclosing the final consolidate for the three incinerators at our Graham facility. In our earlier application we had included our application for the 6024 incinerator. The enclosed consolidate incinerator covers all three incinerators.

Sincerely,

H. E. Archer, F.A.C.H.E.
President

Enclosures



RECEIVED OCT 27 1986

3

State of North Carolina
Department of Natural Resources and Community Development

Division of Environmental Management

512 North Salisbury Street • Raleigh, North Carolina 27611

James G. Martin, Governor
S. Thomas Rhodes, Secretary

October 24, 1986

R. Paul Wilms
Director

Mr. Harvey E. Archer
Thermal Reduction Systems, Inc.
Post Office Box 2070
Chapel Hill, North Carolina 27514

Dear Mr. Archer:

Subject: Air Permit No. 5896R
Thermal Reduction Systems,
Inc.
Graham, North Carolina
Alamance County

In accordance with your application received October 13, 1986, we are forwarding herewith Permit No. 5896R to Thermal Reduction Systems, Inc., Graham, North Carolina for the construction and operation of air pollution abatement facilities or emission sources.

If any parts, requirements, or limitations contained in this permit are unacceptable to you, you have the right to an adjudicatory hearing within thirty (30) days following receipt of this permit, identifying the specific issues to be contended. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, Post Office Drawer 11666, Raleigh, North Carolina 27604. Unless such demand is made, this permit shall be final and binding.

If you wish to have the hearing before a Hearing Officer with this Department, you must indicate in the petition that you waive the right to have the contested case conducted by a Hearing Officer in the Office of Administrative Hearings, and wish to have the matter conducted in the Department of Natural Resources and Community Development.

This permit supersedes Permit No. 5896. This permit shall be effective from October 24, 1986, until July 1, 1991, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Pollution Prevention Pays

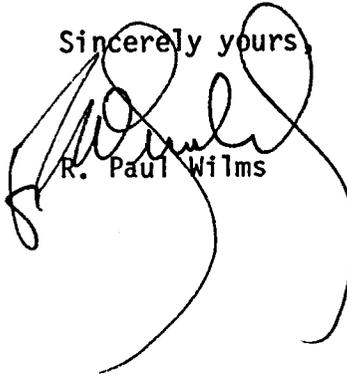
P.O. Box 27687, Raleigh, North Carolina 27611-7687 Telephone 919-733-7015

An Equal Opportunity Affirmative Action Employer

Mr. Harvey Archer
page 2
October 24, 1986

For PSD increment tracking purposes particulate emissions are increased 2.4 pounds per hour.

Sincerely yours,



R. Paul Wilms

Enclosures

cc: Mr. Larry Coble

3

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION
DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

A I R P E R M I T

To Construct and Operate, and For the Discharge of Air
Contaminants Into the Atmosphere

In accordance with the provisions of Article 21B of Chapter 143,
General Statutes of North Carolina as amended, and other applicable
Laws, Rules and Regulations,

PERMISSION IS HEREBY GRANTED TO

Thermal Reduction Systems, Inc.
Graham, North Carolina

FOR THE

operation of:

- a. two natural gas-fired, 600 pounds per hour Type 1, 2, 3 and 4 waste, multiple chamber incinerators with a 700,000 BTU per hour (minimum) primary burner and a 500,000 BTU per hour (minimum) secondary burner each and appurtenances installed to remove particulate, visible and odorous emissions, and
- b. one natural gas-fired, 150 pounds per hour, type I, II, III, and IV waste multiple chamber incinerator with a 500,000 BTU per hour (minimum) primary burner and a 350,000 BTU per hour (minimum) secondary burner and appurtenances installed to remove particulate, visible and odorous emissions, and

for the discharge of the associated stack gases into the outdoor atmosphere at its facility located on Porter Avenue, Graham, North Carolina, Alamance County,

in accordance with the application received October 13, 1986, and in conformity with the plans, specifications, and other supporting data, all of which are filed with the Department of Natural Resources and Community Development and are incorporated as part of this Permit.

This permit supersedes Permit No. 5896. This Permit shall be effective from October 24, 1986, until July 1, 1991, is nontransferable to future owners and operators, and shall be subject to the following specified conditions and limitations:

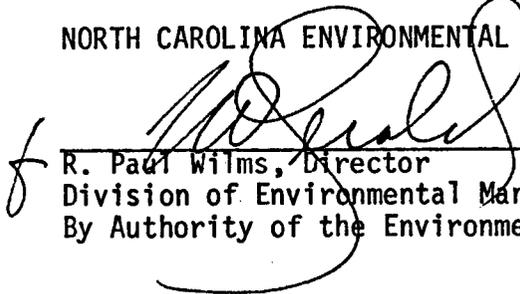
1. The facility shall be properly operated and maintained at all times in such a manner as to effect an overall reduction in air pollution in keeping with the application and otherwise to reduce air contamination to the extent necessary to comply with applicable Environmental Management Regulations, including 15 NCAC 2D .0505, .0521(d), .0522 and .0535(f).
2. Reports on the operation and maintenance of the facility shall be submitted by the Permittee to the Division of Environmental Management at such intervals and in such form and detail as may be required by the Division. Information required in such reports may include, but is not limited to, process weight rates, firing rates, hours of operation, and preventive maintenance schedules.

3. Under the provisions of North Carolina General Statutes 143-215.108 the 12050-S incinerator shall be tested for particulates at maximum waste incineration capacity and the results submitted in accordance with the approved procedures of the Environmental Management Commission within 90 days after the initial operation date. This Permit shall become voidable, with proper notice to the Permittee, if the results of the test(s) indicate that the incinerator emissions do not meet applicable limitations. The Method 1 requirements of 40 CFR 60, Appendix A, "Sample and Velocity Traverses for Stationary Sources", should be considered during any construction and be met for emissions testing purposes. All associated testing costs are the responsibility of the Permittee. The Permittee shall provide written notice within fifteen days of start-up of the new facilities to the Air Quality Section, Winston-Salem Regional Office, Suite 100, North Point Boulevard, Winston-Salem, NC 27106.
4. As required by 15 NCAC 2D .0535(f), when particulate, visible or odorous emissions exceed Environmental Management Regulations for more than four hours the Regional Supervisor, Winston-Salem Region, (919)761-2351, of the Division of Environmental Management shall be notified as promptly as possible but in no case later than 24 hours of becoming aware of the occurrence. Such notice shall specify the facility name and location, the nature and cause of the excess emissions, the time when first observed, the expected duration, and the estimated rate of emissions. This reporting requirement does not allow the operation of the facility in excess of Environmental Management Regulations.
5. The Permittee at least ninety (90) days prior to the expiration of this Permit shall request its extension by letter. The letter should include the permit number and a description of modifications, if any, that have been made.
6. This Permit is subject to revocation or modification upon a determination that information contained in the application or presented in support thereof is incorrect, conditions under which this Permit was granted have changed, or violations of conditions contained in this Permit have occurred.
7. A violation of any term or condition of this Permit shall subject the Permittee to enforcement procedures contained in North Carolina General Statutes 143-215.114, including assessment of civil penalties.
8. This Permit does not relieve the Permittee of the responsibility of complying with any Federal, State, or local requirements governing the handling, disposal, or incineration of hazardous wastes, including the Resource Conservation and Recovery Act (RCRA) administered by the North Carolina Department of Human Resources.

Permit No. 5896R
page 3

Permit issued this the 24th day of October, 1986.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION



R. Paul Wilms, Director
Division of Environmental Management
By Authority of the Environmental Management Commission

Air Permit No. 5896R



October 11, 1986

Mr. Gordon Layton
Solid and Hazardous Waste Management Branch
Division of Health Services
N.C. Department of Human Resources
P.O. Box 2091
Raleigh, N.C. 27602

Re: Permit for Solid Waste Management Facility
Alamance County, Graham, N.C.

Dear Mr. Layton:

Please refer to our letter to Mr. Terry Dover dated July 14, 1986 (Application for Solid Waste Permit). At Mr. Dover's request we are submitting the following additional information in support of this application:

1. LOCATION OF INCINERATORS IN BUILDING: Schematic drawing enclosed.
2. WASTE STORAGE AREA: Shown on schematic drawing.
3. STORAGE TIME: Maximum of 48 hours over weekends.
4. DAILY VOLUME OF WASTE: Maximum of 8,000 pounds per day.
5. TYPE OF WASTE: Potentially infectious solid waste, types 1,2,3 and 4.
6. AUTHORIZATION FOR USE OF LANDFILL FOR INCINERATOR ASH: Letter enclosed signed by Ernest C. Perry, Environmental Health Director, Alamance County Health Department.
7. CITY OF GRAHAM ZONING, CODES AND REGULATIONS: Certificate of Occupancy signed by Mr. Davy Mitchell, Building Inspector, City of Graham. Mr. Mitchell informs us that this certificate signifies conformance with all zoning, codes, and regulations.

8. AIR QUALITY PERMIT:

- a. Air Permit No. 5896 is enclosed. This permit approves the operation of two (2) natural gas fired, 600 pounds per hour, multiple chamber incinerators.
- b. Request to DEM for air permit for one (1) natural gas fired, 150 pounds per hour, multiple chamber incinerator. This incinerator was originally permitted at our Hillsborough facility (Air Permit No. 2558R6). It has been moved to our Graham Solid Waste Management Facility. Our request to the Air Quality Section for an air permit is enclosed.

9. TRANSPORT OF WASTE: All waste is transported in enclosed, liquid-tight trucks which are cleaned daily.

If you require additional information, please call me at (919) 942-5179.

Sincerely,


H.E. Archer
President

Enclosures

THERMAL
REDUCTION
SYSTEMS
INCORPORATED

Post Office Box 2070
Chapel Hill, North Carolina 27515
919/942-5179

October 11, 1986

Mr. Mike Sewell, Supervisor
Air Quality Section
Environmental Management Division
Department of Natural Resources and Community Development
Archdale Building
512 N. Salisbury Street
Raleigh, N.C. 27611

Re: Air Permit Application
Incineration
(Current Permit No. 5896 at Graham, N.C.)

Dear Mr. Sewell:

We are enclosing an air permit application and processing fee of \$50.00 for a U-Burn, Model 6024, incinerator located in our new solid waste management facility on Porter Avenue, Graham, N.C., Alamance County (Porter Industrial Park).

This incinerator was originally permitted at our Hillsborough, N.C. facility (Air Permit No. 2558R6). It has been moved to Graham, N.C. This incinerator will be one of three units in the Graham facility.

Sincerely,


H.E. Archer
President

Enclosures

Environmental Management Commission

AIR PERMIT APPLICATION*

GENERAL INFORMATION

INSTRUCTIONS ON BACK

*To construct and operate Air Emission Sources and Control Devices in accordance with N. C. General Statutes Chapter 143, Article 21.

PLEASE TYPE OR PRINT. ATTACH APPROPRIATE EMISSION SOURCE AND CONTROL DEVICE FORMS FOR EACH SOURCE LISTED IN ITEM 6 BELOW.

1. Facility Name (Company, Establishment, Town, Etc.): Thermal Reduction Systems, Inc.				Date 10/11/86	FOR DEM USE ONLY DATE RECEIVED: _____ PERMIT NUMBER: _____ DATE ISSUED: _____
2. Site Location (St./Rd./Hwy.): Porter Avenue		City Graham	Zip Code 27253	County Alamance	
Latitude 36° 08'	Longitude 79° 30'	SIC Code			
3. Mailing Address (P. O. Box/St./Rd./Hwy.): P.O. Box 2070					
City Chapel Hill	State N.C.	Zip Code 27514	Phone with Area Code (919) 942-5179		
4. Applicant Technical Contact: Harvey Archer		Title President	Phone with Area Code (919) 942-5179		
5. Description of operation conducted at above facility: Incineration of solid waste					

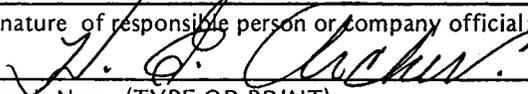
List each EMISSION SOURCE and CONTROL DEVICE for which application is made. Assign an ID NUMBER to each emission source and control device which uniquely identifies that source. Attach appropriate emission source and control device forms for each.

EMISSION SOURCE	ID NO.	CONTROL DEVICE	ID NO.
U-Burn Incinerator Model 6024		None	

USE SEPARATE SHEET(S) IF NEEDED

7. Maximum facility operation: 16 Hours/Day 6 Days/Week 52 Weeks/Year

8. Name and address of engineering firm that prepared application or plans:
Jackson Builders, Inc. P.O. Box 148 Goldsboro, N.C. 27533

9. Signature of responsible person or company official:

 Signer's Name (TYPE OR PRINT) H.E. Archer Title President Date Oct 11, 1986
 Phone with Area Code (919) 942-5179

AIR POLLUTION CONTROL DEVICE

PLEASE TYPE OR PRINT. ATTACH TO GENERAL INFORMATION FORM "A". SUPPLY DESIGN DATA, SPECIFICATIONS, AND AVAILABLE ENGINEERING DRAWINGS.

1. Air Control Device and ID No. (FROM GENERAL INFORMATION FORM "A", ITEM 6)
NONE

2. If there are several devices in series, list each unit in series starting at the emission source.

(1) _____ (2) _____ (3) _____ TOTAL UNITS _____

3. Indicate Emission Source and ID No. that Control Device(s) is installed on:

4. Narrative Description of Control Device(s):

Manufacturer	Model Name	Model Number
--------------	------------	--------------

5. Estimated Cost of Control Device \$ _____	Period of Time Control Device is Estimated to be Adequate: _____ Years
---	---

6. Permit Application is made for (CHECK ONE ONLY):
 New Source Existing Source Modification – Last Permit No. _____
 Commence Construction Date March 6, 1986 Operation Date 10/15/86, 19

7. Emission Parameters: Pollutant(s) Controlled	PART.	SO ₂	NO _x	CO	VOC	LEAD	OTHER	OTHER
	()	()	()	()	()	()	_____	_____
Emission Rate Before Control (lb/hr) =	_____	_____	_____	_____	_____	_____	_____	_____
Emission Rate After Control (lb/hr) =	_____	_____	_____	_____	_____	_____	_____	_____
Removal Efficiency Percent (%) =	_____	_____	_____	_____	_____	_____	_____	_____

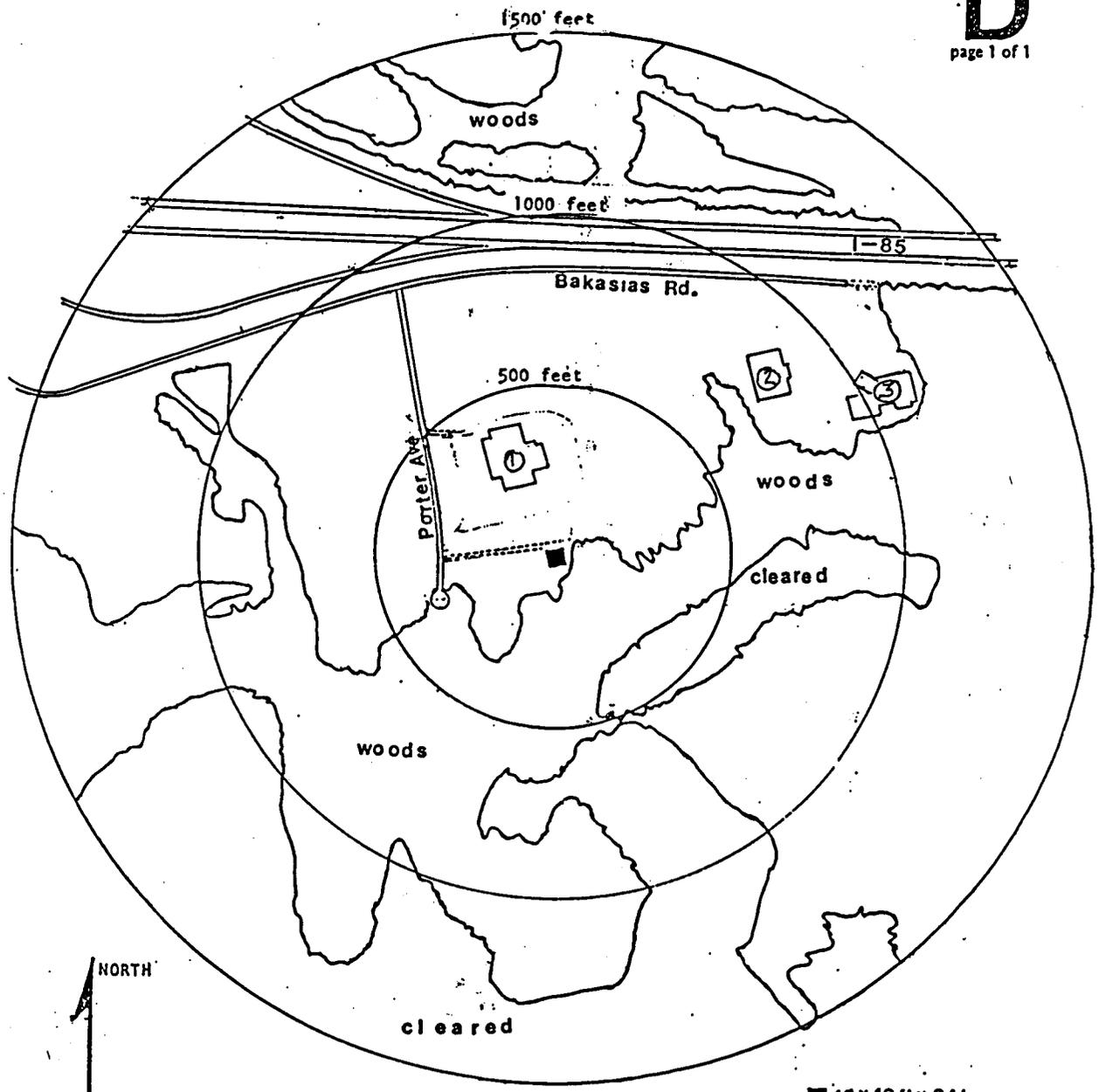
Particle Size Distribution of Particulates Entering Control Device (% Micron):
 _____ 0-1 _____ 1-10 _____ 10-25 _____ 25-50 _____ 50-100 _____ Over 100

8. Gas Conditions at Control Device:	INLET	INTERMEDIATE LOCATIONS	OUTLET
Flow Rate (ACFM) =	_____	_____	_____
Temperature (Deg. F) =	_____	_____	_____
Velocity (ft./sec.) =	_____	_____	_____
Pressure Drop (in. H ₂ O) =	_____	_____	_____
Moisture (%) =	_____	_____	_____

9. Describe Ultimate Disposal of Collected Materials:

10. Stack or Emission Point Data:			
Height Above Ground (ft.)	Inside Area (sq. ft.)	Direction of Exit (up, down, or horizontal)	Are there obstructions over the stack? () No <input checked="" type="checkbox"/> Yes, (specify) <u>Stainless steel spark arrester</u>
23' 5"	1.07	Up	
Is scaffolding available for sources testing? (<input checked="" type="checkbox"/>) No () Yes <u>Will be provided</u>		Are sampling ports available? () No (<input checked="" type="checkbox"/>) Yes	

11. Comments: Gas temperature 1400^oF Volumetric flow rate 517 ACFM
Velocity 14.32 ft/sec



- 40x40 ft x 24h
- (1) Service Company
- (2) Manufacturing Comp.
- (3) Restaurant and Lounge

INCINERATOR — continued

F

12. Describe any liquid or solid wastes generated and method of disposal:
 Unburned ash residues(solid). Ash will be disposed of in
 Alamance County Sanitary Landfill.

13. Stack or Emission Point Data:			
Height Above Ground (ft.)	Inside Area (sq. ft.)	Gas Temperature (Deg. F)	Direction of Exit (up, down, or horizontal)
23' 5"	1.07	1400	Up
Volumetric Flow Rate (ACFM)	Velocity (ft./sec.)	Are sampling ports available? () No (x) Yes	Is rain cap or other obstruction over stack? () No (x) Yes, (specify)
517	14.32		Stainless steel spark arrester

14. Is a RCRA permit required by the N. C. Department of Human Resources? (X) No () Yes
 If yes, has a RCRA permit application been submitted? _____ Date _____, 19____

15. List ALL incinerated HAZARDOUS WASTE specified in the RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) (40 CFR 261) in the comments section below:
 NONE

16. Comments:

*** TYPE OF WASTE BURNED CODE TABLE ***

CODE	Principal components, usual source, and typical moisture content
0	Highly combustible waste, paper, wood, cardboard cartons, (including up to 10% treated papers, plastic or rubber scraps); from commercial and industrial sources; 10% moisture.
1	Combustible waste, paper, cartons, rags, wood scraps, combustible floor sweepings; from domestic, commercial, and industrial sources; 25% moisture.
2	Rubbish and garbage; from residential sources; 50% moisture.
3	Predominantly animal and vegetable waste; from restaurants, hotels, markets, institutional, commercial and club sources; 70% moisture.
4	Carcasses, organs, solid organic wastes; from hospitals, laboratories, slaughterhouses, animal pounds, and similar sources; 85% moisture.
5	Gaseous and semi-liquid industrial process waste; variable moisture. Describe in detail under comments.
6	Solid and semi-solid by-product waste, such as rubber, plastics, wood waste, etc., from industrial operations; variable moisture. Describe in detail under comments.

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ALAMANCE COUNTY HEALTH DEPARTMENT

Graham-Hopedale Road
Burlington, North Carolina 27215-2971
Phone Number 227-0101

October 10, 1986

Tim Green, M.P.A.
Health Director

BOARD OF HEALTH

Leonard Alcon, County Commissioner
Anna Bass, M.A.
Rebecca Clemmons, R.N., Vice Chairman
Donald B. Covert, O.D. F.A.A.O.
Jerry B. Kennedy, R. Ph.
M. Elmo McCorkle, R. Ph.
David Patterson, D.D.S.
Charles K. Scott, M.D., Chairman
Carl M. Sellars, D.V.M.
Kenneth Teague
Grace Whitted

Mr. H. E. Archer, President
Thermal Reduction Systems, Inc.
P. O. Box 2070
Chapel Hill, N. C. 27515

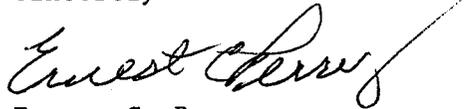
Dear Mr. Archer:

Reference is made to your letter of October 10, 1986 requesting permission to dispose of incinerator ask from the burning of infectious waste. Permission is hereby granted to dispose of the ask under the following conditions:

- 1) All waste must be thoroughly burned
- 2) No live ashes
- 3) Containers must be covered while transporting the waste to the landfill
- 4) All other permits are required as necessary.

If you have any questions, please let me know.

Sincerely

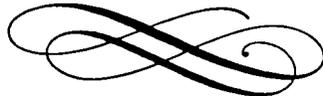


Ernest C. Perry
Environmental Health Director

ECP:js

CC: Landfill
Mr. Mace

City of Graham
Certificate of Occupancy



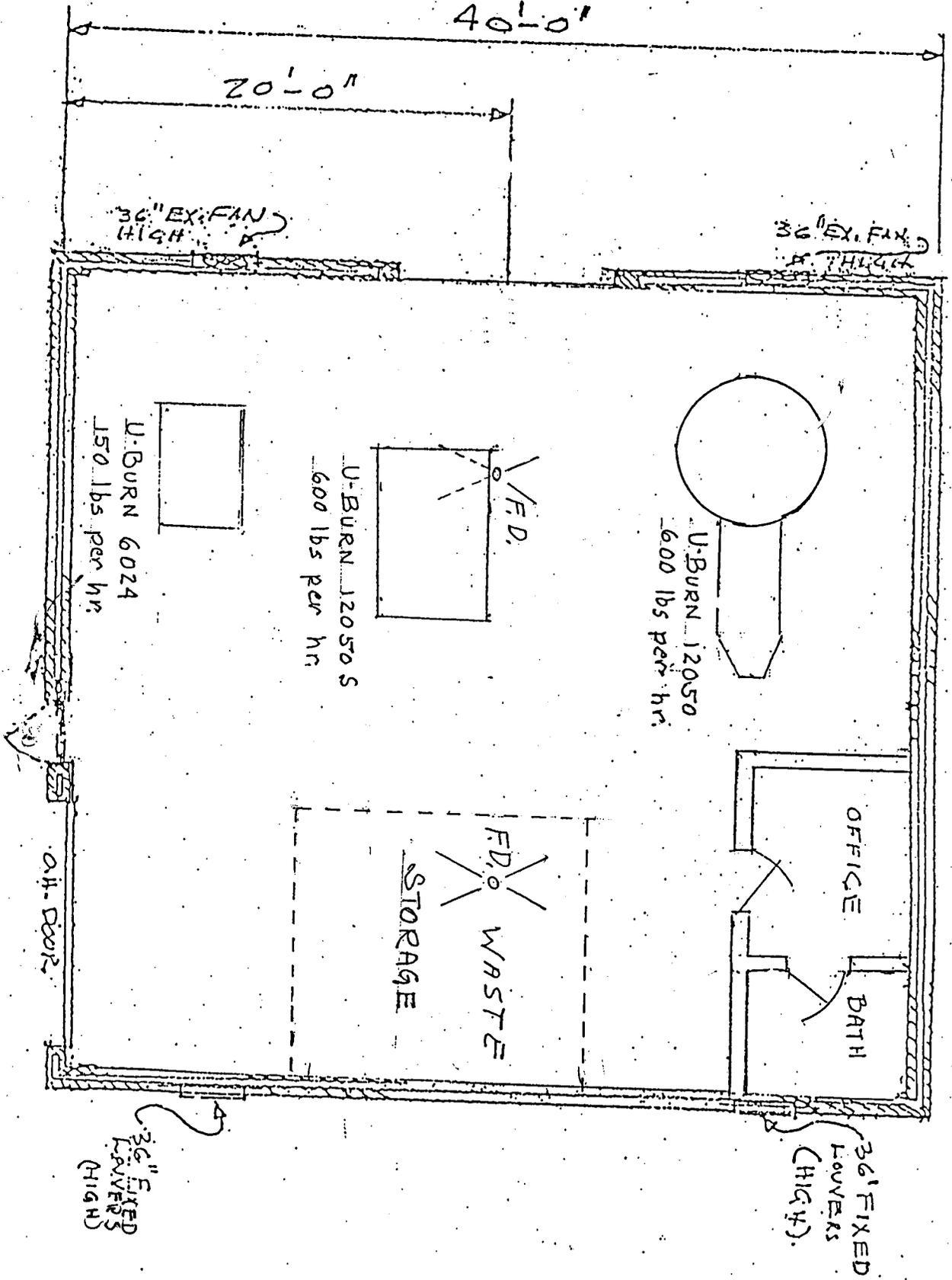
This certificate is issued to THERMAL REDUCTION SYSTEMS who has complied with all provisions set forth with the issue of Building Permit No. 5040 to erect-alter said building at PORTER AVE to be used as a INCINERATORS FOR INFECTIOUS WASTE.

10-9-86

Date of Issue

Doug Mitchell
Building Inspector

Thermal Reduction Systems, Inc.
Solid Waste Management Incinerator Facility
Porter Avenue (Porter Industrial Park)
Graham, N.C.
Alamance County





Orange
7

North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

August 26, 1986

Mr. H. E. Archer, President
Thermo Reduction Systems, Inc.
P.O. Box 2070
Chapel Hill, North Carolina 27515

Dear Mr. Archer:

Reference your letter of August 8, 1986 in which you requested guidance on the collection, transportation, and incineration of chemotherapy waste under your solid waste permits. Thermo Reduction Systems, Inc. must be cautious in this area as some chemotherapy chemicals are considered hazardous waste.

We must reference you to 40 CFR Subpart C - Characteristics of Hazardous Waste, 261.20-261.24, codified at 10 NCAC 10F .0030 and 40 CFR Subpart D - Lists of Hazardous Waste, 261.30-261.33, codified at 10 NCAC 10F .0030. Any waste generated by a health care facility classified as a hazardous waste cannot be managed by your company.

The generator of any waste classified as hazardous waste must dispose of that waste only at a facility which has an EPA identification number and has a permit issued under the authority of the Resource Conservation and Recovery Act and the rules 40 CFR promulgated thereto.

If you have further questions, do not hesitate to contact us.

Sincerely,

Handwritten signature of Terry F. Dover in cursive.

Terry F. Dover
Eastern Area Supervisor
Solid & Hazardous Waste Management Branch
Environmental Health Section

TFD/nlp

cc: Mr. Julian Foscue
Mr. Joe Deakins
Mr. Will Service



8

Post Office Box 2070
Chapel Hill, North Carolina 27515
919/942-5179

August 11, 1986

Mr. Terry Dover
Eastern Area Supervisor
Solid and Hazardous Waste Management Branch
Department of Human Resources
P.O. Box 2091
Raleigh, N.C. 27602



Dear Mr. Dover:

As a followup to my letter, dated August 8, concerning a ruling on Chemotherapy waste, I am enclosing a label which hospitals and clinics use to identify this waste.

Sincerely,

H.E. Archer
H.E. Archer
President

Scan Material



CAUTION



CHEMOTHERAPY MATERIAL

**HANDLE WITH CARE
DISPOSE OF PROPERLY**



CAUTION



CHEMOTHERAPY MATERIAL

After container is full, place label over opening.
TRI-STATE HOSPITAL SUPPLY CORP.



10

Post Office Box 2070
Chapel Hill, North Carolina 27515
919/942-5179

August 8, 1986

Mr. Terry Dover
Eastern Area Supervisor
Solid and Hazardous Waste Management Branch
Department of Human Resources
P.O. Box 2091
Raleigh, N.C. 27602



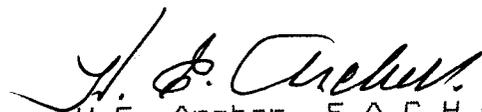
Dear Mr. Dover:

We would like to have a Branch ruling on the following matter. Some of our clients such as hospitals and clinics produce small amounts of chemotherapy waste (nonradioactive chemicals used to treat cancer) which they would like for us to incinerate at our solid waste treatment facility. This waste includes residues of the toxic chemical in small concentrations as well as apparatus (IV tubing, bottles, alcohol sponges) used in patient treatment.

Until now we have been refusing to accept this waste for incineration. Is it permissible under our solid waste permit for us to collect, transport, and incinerate this chemotherapy waste?

We would appreciate an early ruling on this request.

Sincerely,


H.E. Archer, F.A.C.H.A.
President



Orange
11

North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

August 26, 1986

Mr. H. E. Archer, President
Thermal Reduction Systems, Inc.
P.O. Box 2070
Chapel Hill, North Carolina 27515

Dear Mr. Archer:

Thank you for your letter of explanation appraising this office of Thermal Reductions Systems plans for closing the Durham Sterilization Facility, Hillsborough Incinerator, and opening the Graham Incineration Facility.

In direct response to questions raised in your letter, the following advice is given:

1. We would recommend that you keep an active permit on the Durham site if you feel the facility is needed for back-up to Graham. By permit conditions, you would be required to notify us when it would be placed in operation.
2. The pet incinerator located at Hillsborough will not require a solid waste permit so long as the service is provided to individuals only. If in the future the service is extended to commercial facilities, i.e., veterinarians, etc., it would require a permit.

Please remember to request closure inspection of the Durham and Hillsborough sites and a start up inspection of the Graham Facility as specified in your letter.

Sincerely,

Terry F. Dover
Eastern Area Supervisor
Solid & Hazardous Waste Management Branch
Environmental Health Section

cc: Mr. Julian Foscue
Mr. Joe Deakins
Mr. Will Service

11

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION
DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

A I R P E R M I T

To Construct and Operate, and For the Discharge of Air
Contaminants Into the Atmosphere

In accordance with the provisions of Article 21B of Chapter 143,
General Statutes of North Carolina as amended, and other applicable
Laws, Rules and Regulations,

PERMISSION IS HEREBY GRANTED TO

Thermal Reduction Systems, Inc.
Graham, North Carolina

FOR THE

operation of:

two natural gas-fired, 600 pounds per hour Type 1, 2, 3 and 4
waste, multiple chamber incinerators with a 700,000 BTU per
hour (minimum) primary burner and a 500,000 BTU per hour
(minimum) secondary burner each and appurtenances installed
to remove particulate, visible and odorous emissions, and

for the discharge of the associated stack gases into the outdoor
atmosphere at its facility located on Porter Avenue, Graham, North
Carolina, Alamance County,

in accordance with the application received May 1, 1986, and in
conformity with the plans, specifications, and other supporting data,
all of which are filed with the Department of Natural Resources and
Community Development and are incorporated as part of this Permit.

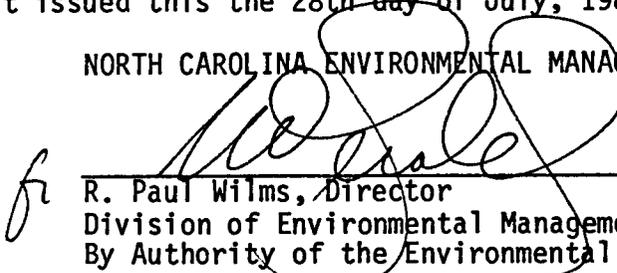
This Permit shall be effective from July 28, 1986, until
July 1, 1991, is nontransferable to future owners and operators, and
shall be subject to the following specified conditions and limitations:

1. The facility shall be properly operated and maintained at all
times in such a manner as to effect an overall reduction in
air pollution in keeping with the application and otherwise to
reduce air contamination to the extent necessary to comply
with applicable Environmental Management Regulations,
including 15 NCAC 2D .0505, .0521(d), .0522 and .0535(f).
2. Reports on the operation and maintenance of the facility shall
be submitted by the Permittee to the Division of Environmental
Management at such intervals and in such form and detail as
may be required by the Division. Information required in such
reports may include, but is not limited to, process weight
rates, firing rates, hours of operation, and preventive
maintenance schedules.

3. Under the provisions of North Carolina General Statutes 143-215.108 the 12050-S incinerator shall be tested for particulates at maximum waste incineration capacity and the results submitted in accordance with the approved procedures of the Environmental Management Commission within 90 days after the initial operation date. This Permit shall become voidable, with proper notice to the Permittee, if the results of the test(s) indicate that the incinerator emissions do not meet applicable limitations. The Method 1 requirements of 40 CFR 60, Appendix B, "Sample and Velocity Traverses for Stationary Sources", should be considered during any construction and be met for emissions testing purposes. All associated testing costs are the responsibility of the Permittee. The Permittee shall provide written notice within fifteen days of start-up of the new facilities to the Air Quality Section, Winston-Salem Regional Office, Suite 100, North Point Boulevard, Winston-Salem, NC 27106.
4. As required by 15 NCAC 2D .0535(f), when particulate, visible or odorous emissions exceed Environmental Management Regulations for more than four hours the Regional Supervisor, Winston-Salem Region, (919)761-2351, of the Division of Environmental Management shall be notified as promptly as possible but in no case later than 24 hours of becoming aware of the occurrence. Such notice shall specify the facility name and location, the nature and cause of the excess emissions, the time when first observed, the expected duration, and the estimated rate of emissions. This reporting requirement does not allow the operation of the facility in excess of Environmental Management Regulations.
5. The Permittee at least ninety (90) days prior to the expiration of this Permit shall request its extension by letter. The letter should include the permit number and a description of modifications, if any, that have been made.
6. This Permit is subject to revocation or modification upon a determination that information contained in the application or presented in support thereof is incorrect, conditions under which this Permit was granted have changed, or violations of conditions contained in this Permit have occurred.
7. A violation of any term or condition of this Permit shall subject the Permittee to enforcement procedures contained in North Carolina General Statutes 143-215.114, including assessment of civil penalties.

Permit issued this the 28th day of July, 1986.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION



R. Paul Wilms, Director
Division of Environmental Management
By Authority of the Environmental Management Commission



THERMAL
REDUCTION
SYSTEMS
INCORPORATED



Post Office Box 2070
Chapel Hill, North Carolina 27515
919/942-5179

August 8, 1986

Mr. Terry Dover
Eastern Area Supervisor
Solid and Hazardous Waste Management Branch
Department of Human Resources
P.O. Box 2091
Raleigh, N.C. 27602

Dear Mr. Dover:

As you requested at our meeting in Durham on August 5, we are providing the following information concerning our solid (infectious) waste facilities and operations:

Incineration Facility: Porter Avenue, Porter Industrial Park, exit
----- 150 off I-85, Graham, North Carolina, Alamance
County

This is a new treatment facility now under construction. It is expected to be operational on or about September 8, 1986. TRS has applied to your office for a solid waste permit.

This facility will contain the following equipment when it is fully operational:

- One U-Burn, model 12050, incinerator with automatic loader which has a capacity of 280 pounds/hour of type 4 (pathological) waste. This unit is on site, however, controls, burners, electric and gas connections must still be installed.
- One U-Burn, model 12050S (same capacity but slightly different configuration than model 12050), incinerator with automatic loader which has a capacity of 280 pounds/hour of type 4 waste. This unit is on site, however, the automatic loader, controls, burners, electric and gas service must still be installed.
- One U-Burn, model 6024, incinerator which has a capacity of 150 pounds/hour of type 4 waste. This unit is currently located at our Hillsborough facility and is operational. This unit will be moved to the Graham facility (see schedule page #2).

The model 12050 and model 12050S incinerators have been conditionally permitted by the N.C. Air Quality Division provided that we stack-test these units within 90 days after they become operational. Stack testing of model 6024 is not required since we tested a similar unit at Randolph Hospital in Asheboro during the past year.

We had projected a startup date of July 1, 1986 for this facility, however, Duke Power Company has not been able to secure an easement to run the power line across adjacent property. This easement is expected in the next few days and Duke Power has estimated that power will be available to our facility within three weeks after receiving the necessary documents. Once power is available, we will need one week to make the incinerators operational. Our schedule, assuming that the easement is received this week, is:

- August 11 through August 29: Installation of overhead power line and underground cable to our building by Duke Power Company. Complete water and sewer connections.
- September 1 through September 7: Install equipment on incinerators, operationally test each unit, and move incinerator, model 6024, from Hillsborough to Graham.
- September 8: Begin operations at the Graham facility.
- September 8 through December 5: Stack test incinerators, models 12050 and 12050S.
- September 8 through December 31: Install automatic loader on model 12050S.

Incineration Facility: Oakdale Drive, Hillsborough, North Carolina,
----- Orange County

This facility contains one U-Burn, model 6024, incinerator which is used to burn sharps, pathological waste and blood and blood products. TRS has applied to your office for a solid waste permit. This unit will be moved to our Graham facility during the week of September 1-7 and we will no longer store, process or treat any solid waste at this facility.

Upon removal of the incinerator from this facility, TRS will transfer all untreated solid waste to the Graham facility and thoroughly clean the facility and the surrounding area.

Sterilization Facility: 817 East Trinity Street, Durham, North
----- Carolina, Durham County

This facility contains a steam sterilizer, boiler, sharps grinder, and equipment for washing and disinfecting empty sharps containers. It is currently used to sterilize general (red bag) infectious solid waste. No sharps, pathological waste, or blood/blood products are intentionally treated at this facility.

When our Graham facility is operational, we will no longer store, treat or process any solid waste at this facility. TRS will remove all untreated waste to the Graham facility, thoroughly clean the interior of the building and areas outside the building, remove the dumpster outside the building, and close this facility (see schedule page #2).

When our Graham facility is operational, Thermal Reductions Systems will do the following:

1. Treat all potentially infectious solid waste by incineration at this facility. We do not accept, transport, or treat any RCRA waste. We require all of our clients to sign an affidavit that they will not deliver any chemical and/or radioactive waste to us for treatment.

2. Notify Mr. Service when we have closed the Hillsborough and Durham facilities and request a closure inspection with our representative to insure that these facilities have been properly cleaned.

We would like to have your advice and suggestions on the following matters:

1. Our intent is to close the Durham facility permanently, however, in the future if some unpredictable event, such as a power outage, loss of gas service, or fire would make it impossible to use the Graham incinerator facility, we may need to use the Durham sterilization facility as a backup on a very temporary basis. Would you recommend that we request an extension of our permit to operate this facility? In any case, we would notify your office before using this facility.

2. TRS operates human and pet cremation services on our Hillsborough site. We have a small incinerator, currently not operational, to cremate pets. Do we need a solid waste permit to cremate pets (solid waste?) at this site? We intend to put this incinerator into operational condition when we move the model 6024 to Graham. We cremate pets commercially and return the ashes to each owner. All pets will be delivered to the facility and ashes picked up by their owners. We do not provide this service for municipalities or any other clients except pet owners.

If you require further information or clarification of this information, please call me. We would appreciate an early decision on our permit for the Graham facility.

Sincerely,

A handwritten signature in cursive script, appearing to read "H. E. Archer".

H.E. Archer, F.A.C.H.A.
President

Enclosures

cc: Mr. William Service



THERMAL
REDUCTION
SYSTEMS
INCORPORATED

Compliance with the State's New Rules on Infectious Waste Disposal NEED NOT BE DIFFICULT.

**TO: Administrators of Health Care Facilities
Managers of Waste Disposal Operations
Practitioners of Infection Control**

The options available to handle the new responsibilities for infectious waste disposal can be as troublesome as the rules themselves. The three brochures preceding this one were intended to foster understanding of the implications of the new requirements and possible solutions.

Thermal Reduction Systems has over ten years of professional experience in solving waste disposal problems. The owners and staff of TRS have seen or heard of virtually every type situation concerning infectious waste disposal. If you have not decided on a long-term solution for disposing of infectious waste or are concerned whether you have the most economical solution in place, call us to discuss options suitable for your situation.

TRS can provide experienced, professional consultation; provide a pick-up for infectious waste removal, treatment and disposal; sell, install and service an incinerator; discuss other options; and analyze cost factors.

A call to TRS and a preliminary conference incur no obligations or fee. TRS has professional consultants in hospital administration, infection control, waste management systems, materials handling, and incinerator technology, to advise and serve your facility. These consultants review each client proposal developed by TRS for off-site or on-site disposal waste.

Whether our prescription to reduce the pain of compliance and to control the swelling problem of infectious waste will work for you is for you to decide.



Sincerely,

H.E. Archer, F.A.C.H.A.

President

Thermal Reduction Systems, Inc.

Thermal Reduction Systems, Inc.

- is a North Carolina corporation owned and managed by professionals in health care
- has ten years experience in waste disposal and incineration
- absolves clients of liability for infectious waste treatment
- adheres to high standards of integrity and responsible service
- holds all necessary state and local permits
- has treatment facilities in Durham and Hillsborough
- can provide references

The Purpose of TRS is to Help the Health Care Industry Meet Waste Disposal Regulations, Protect the Environment, Reduce Landfill Requirements



THERMAL
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SYSTEMS
INCORPORATED

Post Office Box 2070
Chapel Hill, North Carolina 27515
919/942-5179
Professional Management of Infectious Waste

TRS can also advise on alternative solutions. Purchase of a new incinerator or expansion of existing capacity are two options. TRS can sell or lease, install and service incinerators designed with adequate capacity to treat infectious waste. Incinerators which are used to treat most waste are often inadequate to handle infectious waste, especially sharps and pathological waste.



A timely call to TRS can achieve cost savings. Coordination of pick-up services through TRS's fleet of trucks on various routes can save mileage costs and improve scheduling efficiency. Call TRS now while routes are being either expanded or developed.

This is the third in a series of four brochures concerning the new rules all generators of infectious waste in North Carolina must be aware of and cope with. The brochures also explain the services of TRS which can help solve your problems concerning treatment of infectious waste: consultation, pick-up service, treatment, disposal, sale of sharps containers, sale of incinerators, service of incinerators installed, and training operations personnel. Call Thermal Reductions Systems for a temporary or permanent solution to whatever problem you have concerning treatment or disposition of infectious waste.

Thermal Reduction Systems, Inc.:

- **is a North Carolina corporation owned and managed by professionals in health care.**
- **has ten years of experience in waste disposal and incineration.**
- **absolves clients of liability for infectious waste treatment.**
- **adheres to high standards of integrity and responsible service.**
- **holds all necessary state and local permits.**
- **has treatment facilities in Durham and Hillsborough.**
- **can provide references.**

The purpose of TRS is to help the health care industry meet waste disposal regulations, protect the environment, reduce landfill requirements.

Thermal Reductions Systems, Inc.
Post Office Box 2070
Chapel Hill, North Carolina 27515



919/942-5179

Professional Management of Infectious Waste

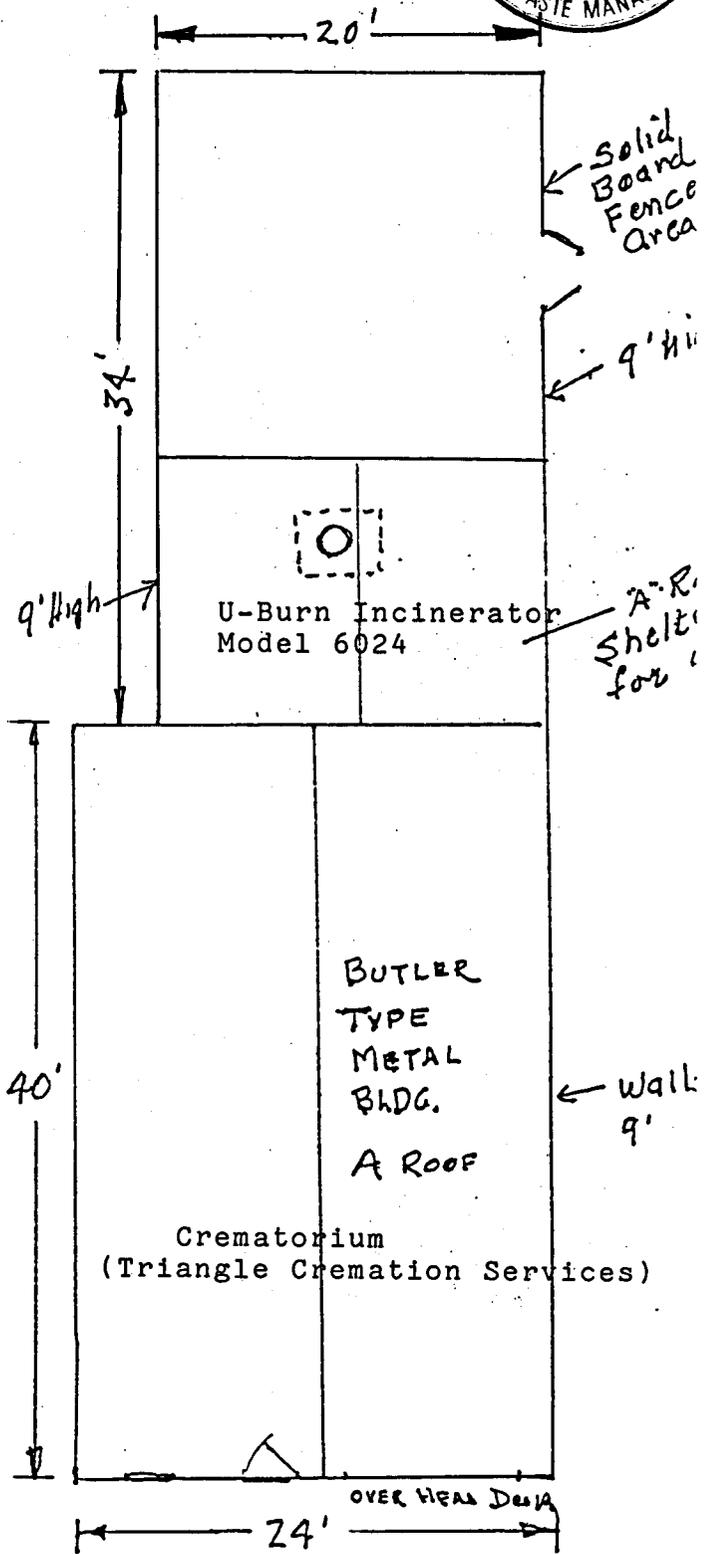
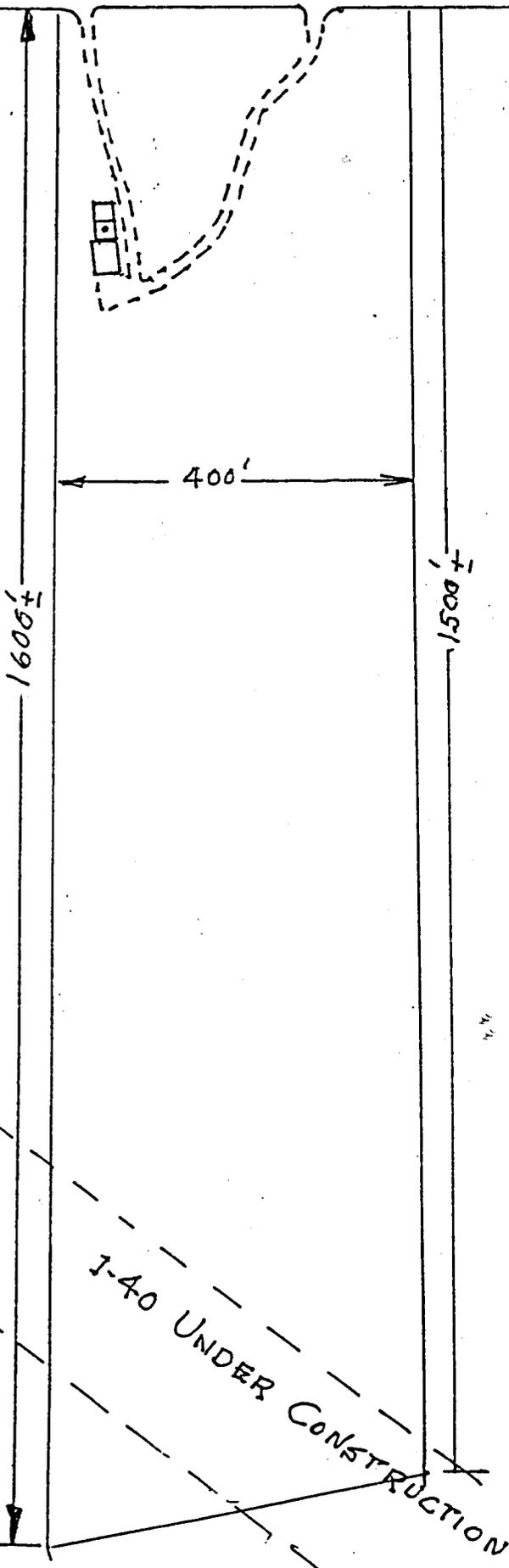


THERMAL
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SYSTEMS
INCORPORATED

Infectious waste must now be treated before being returned to the main waste stream or disposed of. **Thermal Reduction Systems** can provide service to pick-up, treat and dispose of your infectious waste for a fee that will represent a substantial savings over other alternatives for most waste-generating facilities.

(over please)

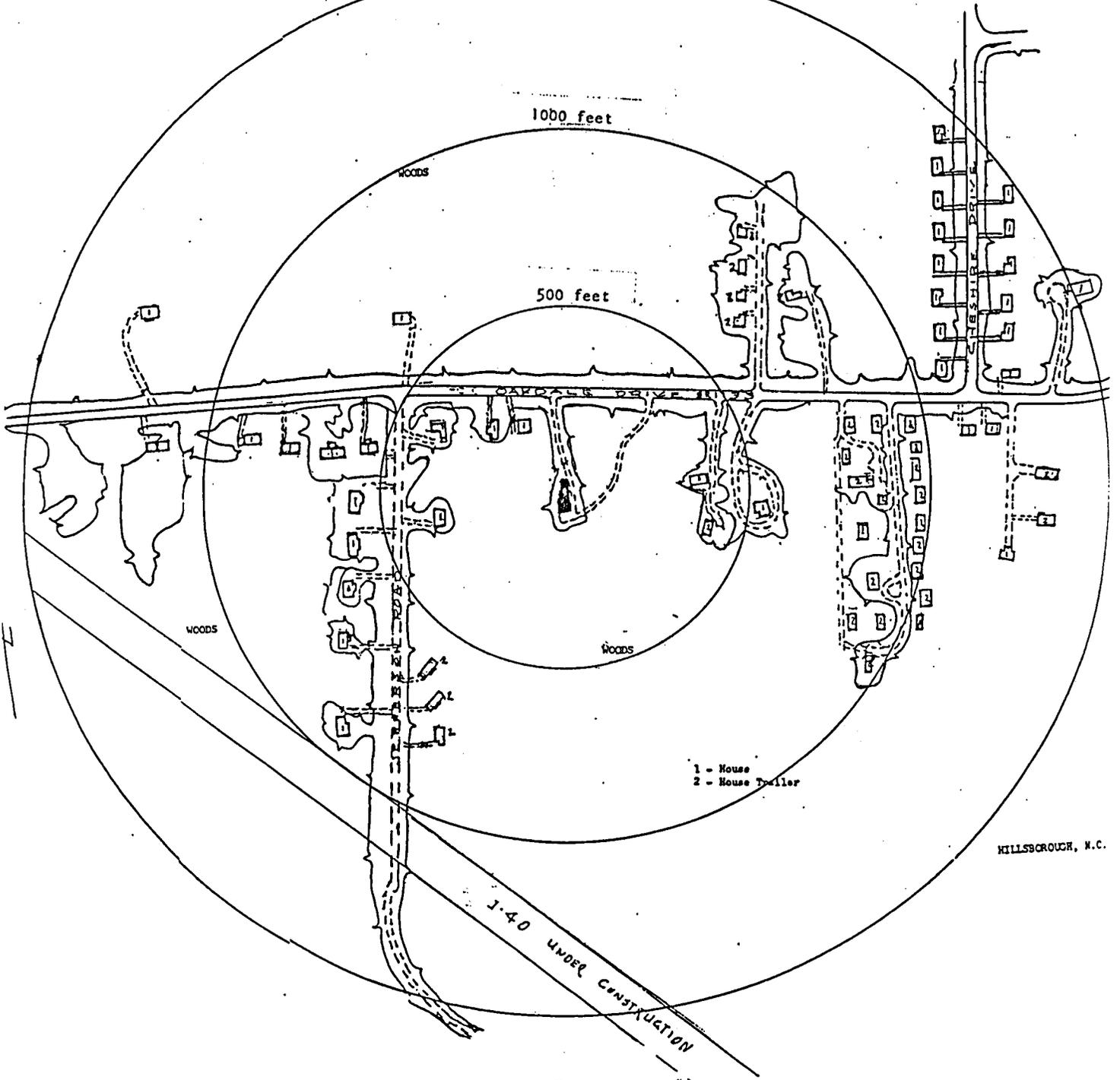
Hillsborough, N.C.
Orange County



1500 feet

1000 feet

500 feet



- 1 - House
- 2 - House Trailer

HILLSBOROUGH, N.C.



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Post Office Box 2070
Chapel Hill, North Carolina 27515
919/942-5179

U-BURN INCINERATOR
MODEL #6024

CAPACITY

The capacity of the Model 6024 incinerator, and any other incinerator, depends upon the type of waste burned. Waste is classified as type 0 through type 6. See list of waste types provided. For example, rubbish is type 1 and pathological waste is type 4. The burning rate of the Model 6024 for different types of waste in pounds per hour is:

WASTE TYPE	BURN RATE (LBS./HOUR)
0	225
1	300
2	325
3	250
4	150

INSTALLATION
REQUIREMENTS

The total weight of the incinerator is 6,500 pounds.

Unit Pad

Model 6024 requires a reinforced concrete pad at least 4" thick with external dimensions of 4'3" wide x 6'6" deep. The reinforcing may be welded wire mesh covering 50% of the cross-sectional area or 3/8" rods spaced 6" on center.

Electrical

Electrical service requirements are those of the typical new building: 115 VAC, single-phase, 40 amps.

Gas

Gas service may either be natural gas or LP gas. The gas feed line in either case should be able to deliver 500 cubic feet per hour at 6" W.C. for natural gas and 11" W.C. for LP gas to the incinerator during operation. A gas flow rate 25% higher than the quoted above will provide more efficient operation.

LOWER CHAMBER

The lower chamber is constructed of 12 gauge steel lined with 1" of mono-block insulation and 4" of cast refractory capable of withstanding temperature of 2600°F. The refractory is anchored with stainless steel hangers placed 12" on center.

Dimensions Inside dimenions of the lower chamber are:

 3' 0" wide
 4' 0" high
 5' 0" deep

Volume The volume of the lower chamber is approximately
60 cubic feet.

Burners The Model 6024 has two 250,000 BTU/hour burners
located on opposite sides of the lower chamber.

Charging
Door The charging door is 2'0" high by 2'0" wide and is
free swinging. This door is hinged on the left side
as the operator faces the incinerator. The door is
lined with the same material as the lower chamber and
it has a non-flammable gasket at the sealing surface.
If the incinerator is provided with a hydraulic
loader, the charging door is replaced with a guillo-
tine door.

UPPER CHAMBER The upper chamber is constructed of 12 gauge steel
lined with 1" of mono-block insulation and 3" of cast
refractory capable of withstanding 2600°F. The
refractory is anchored with stainless steel hangers
placed 12" on center.

Volume The volume of the upper chamber is approximately
24 cubic feet.

Burners There is one 350,000 BTU/hour burner in the upper
chamber, located at the rear of the incinerator.

Stack The stack is 20" O.D. and comes in 4'0" long sections.
The stack is constructed of 12 gauge steel lined with
3" of cast refractory material. The stack is topped
by a 20" stainless steel #2 mesh spark arrestor/fly
ash screen.

CONTROLS

Burner
Controls One Honeywell Flame Safety Relay Burner Control, U.L.
approved, in each chamber and burn-down timers, with
settings from 0 to 6 hours, are provided.

Wiring All wiring meets NEMA standards.

Gas Valves Gas valves are 3/4" ASCO type valves and a manual gas
cock is provided.

Forced air supply Each burner is equipped with a Dayton blower (2C820) delivering approximately 500 CFM at 1" W.C. Each blower is driven by a 1/2 HP General Electric motor, operating at 3,450 RPM. The motor is 115/220 VAC, 60 Hz, 1P, TEFC, NEMA 48 Frame.

F.I.A./F.M. Controls F.I.A./F.M. controls, meeting insurance specifications, are standard in the Model 6024.

FINISH The incinerator is painted with heat resistant silicon alkyd paint manufactured by Rust-Oleum.

LOADER A ram hydraulic loader is available for the Model 6024. The weight of the loader is approximately 2000 pounds.



Permits *Good a*
14
RECEIVED
AUG 5 1986
DIVISION OF HAZARDOUS WASTE MANAGEMENT

State of North Carolina
Department of Natural Resources and Community Development
Division of Environmental Management
512 North Salisbury Street • Raleigh, North Carolina 27611

James G. Martin, Governor
S. Thomas Rhodes, Secretary

July 28, 1986

R. Paul Wilms
Director

Mr. Harvey E. Archer
Thermal Reduction Systems, Inc.
Post Office Box 2070
Chapel Hill, North Carolina 27514

Dear Mr. Archer:

Subject: Air Permit No. 5896
Thermal Reduction Systems,
Inc.
Graham, North Carolina
Alamance County

In accordance with your application received May 1, 1986, we are forwarding herewith Permit No. 5896 to Thermal Reduction Systems, Inc., Graham, North Carolina for the construction and operation of air pollution abatement facilities or emission sources.

If any parts, requirements, or limitations contained in this permit are unacceptable to you, you have the right to an adjudicatory hearing within thirty (30) days following receipt of this permit, identifying the specific issues to be contended. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, Post Office Drawer 11666, Raleigh, North Carolina 27604. Unless such demand is made, this permit shall be final and binding.

If you wish to have the hearing before a Hearing Officer with this Department, you must indicate in the petition that you waive the right to have the contested case conducted by a Hearing Officer in the Office of Administrative Hearings, and wish to have the matter conducted in the Department of Natural Resources and Community Development.

This permit shall be effective from July 28, 1986, until July 1, 1991, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Pollution Prevention Pays

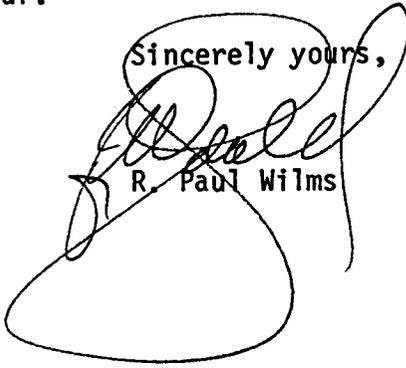
P.O. Box 27687, Raleigh, North Carolina 27611-7687 Telephone 919-733-7015

An Equal Opportunity Affirmative Action Employer

Mr. Harvey Archer
page 2
July 28, 1986

For PSD increment tracking purposes particulate emissions are increased 2.4 pounds per hour.

Sincerely yours,



R. Paul Wilms

Enclosures

cc: Mr. Larry Coble



THERMAL
REDUCTION
SYSTEMS
INCORPORATED

15
Post Office Box 2070
Chapel Hill, North Carolina 27515
919/942-5179

July 14, 1986

Mr. Terry Dover
Solid and Hazardous Waste Management Branch
Division of Health Services
N.C. Department of Human Resources
Bath Building
Raleigh, N.C. 27602



Re: Permit for Solid Waste Management Facilities

Dear Mr. Dover:

We are constructing an infectious waste incineration facility in Porter Industrial Park, Graham, N.C., Alamance County. In accordance with the N.C. Solid Waste Management Rules, Section .0202, we are applying for a permit for this facility.

We are enclosing three copies of each of the following documents in support of this request:

1. Building plans with certification
2. Request for air permit application
3. Permit to build an infectious waste incineration facility, city of Graham Inspection Department.
4. Site plan

Three incinerators, U-Burn Models 12050, 12050S, and 6024, will be installed in this facility. The 12050 and 12050S have been placed in the building but are not yet operational. The 6024 will be moved from Hillsborough to Graham at a future date.

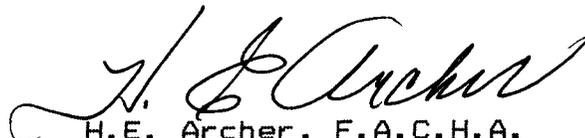
This facility will be used to incinerate potentially infectious solid waste (pathological, microbiological, blood and blood products, sharps and miscellaneous) from hospitals, clinics, laboratories, dialysis units, plasma units, and county health departments. TRS requires each of its clients to file an affidavit that no hazardous waste will be included in their wastestream.

The only water which might come in contact with solid waste in this facility will be that used for cleanup of the floor and equipment. The floor drains, carrying this wastewater, will be connected to the building sewer line. Water and sewer services will be provided by the City of Graham.

Fire hydrants are provided in the industrial park and fire extinguishers will be installed in the incinerator building.

If you require further information, please call me.

Sincerely,

A handwritten signature in cursive script, appearing to read "H. E. Archer". The signature is written in black ink and is positioned above the typed name and title.

H.E. Archer, F.A.C.H.A.
President

Enclosures

01-02

Scan Document (Butler Manufacturing Company)

July 3, 1986

Note. See 1985 Maps for Map in Reference
to this document



Butler Manufacturing Company
BMA Tower, Penn Valley Park,
Kansas City, Missouri 64141-0917
Phone (816) 968-3000

July 3, 1986

Mr. Gary Burdick
Jackson Builders, Inc.
P.O. Box 148
Goldboro, NC. 27533

40' X 40' X 20' WBF 1/2;12
Thermal Reduction Systems
Chapel Hill, NC.
BMC Order No. 09-034113-1
Builder Order No. 861

TO WHOM IT MAY CONCERN:

Please accept this letter as our certification that the Butler components of the subject building are designed in accordance with the 1978 edition of the American Institute of Steel Construction (AISC) and the 1980 edition of the American Iron and Steel Institute (AISI) design specifications.

The building will be design to carry a basic roof live load of 20.0 p.s.f.

The building will be designed for a basic wind load of 13.0 p.s.f. applied in accordance with the 78 edition of the North Carolina.

Load combinations are dead load plus live load, dead load plus wind load, and dead load, plus load plus live load plus wind load. These standard Butler components, when properly erected on an adequate foundation in accordance with the erection drawings as supplied and using the components as furnished, will meet the above loading requirements without exceeding the allowable working stress.

This certification does not cover field modifications or design of material not furnished by BUTLER MANUFACTURING COMPANY.

Cordially yours,

Warren L. Roepke
Warren L. Roepke
Project Engineer
Buildings Division

WLR:lh
cc: D. M. Journey
C. M. Hughes
Order File



THERMAL
REDUCTION
SYSTEMS
INCORPORATED

*This facility is closed
per T.D.*

Orange

16

Post Office Box 2070
Chapel Hill, North Carolina 27515
919/942-5179
July 02, 1986

Mr. Terry Dover
Solid and Hazardous Waste Management Branch
Division of Health Services
N.C. Department of Human Resources
Bath Building
Raleigh, N.C. 27602



Re: Permit for Solid Waste Management Facilities

Dear Mr. Terry Dover:

In accordance with the N.C. Solid Waste Management Rules, Section .0202, we are applying for a permit for our solid waste management facility on Oakdale Drive in Hillsborough, N.C., Orange County. This facility consists of one U-Burn incinerator, model 6024. We are enclosing site and building diagrams, an approval letter from the Orange County Planning Department, and the Air Quality Permit (2558R6) for the incinerator.

The incinerator at this facility is used to burn pathological waste, microbiological waste, blood and blood products, sharps, and general infectious waste from hospitals, clinics, laboratories, dialysis units, and county health departments.

All water coming in contact with solid waste is disposed of in an approved septic tank system. Fire extinguishers are installed at the facility and water is supplied by the Hillsborough water system.

This facility is temporary. We are constructing a new incineration facility in Alamance County and the incinerator from the Hillsborough site will be moved to the new facility.

We will be applying for a permit for the Alamance facility in the next few days.

I will be happy to supply any other information which you require.

Sincerely,

H.E. Archer

H.E. Archer, F.A.C.H.A.
President

Enclosures



17

State of North Carolina
Department of Natural Resources and Community Development
Division of Environmental Management
512 North Salisbury Street • Raleigh, North Carolina 27611

James G. Martin, Governor
S. Thomas Rhodes, Secretary

May 7, 1986

R. Paul Wilms
Director

Mr. Harvey E. Archer
Thermal Reduction Systems, Inc.
Post Office Box 2070
Chapel Hill, North Carolina 27514

Dear Mr. Archer:

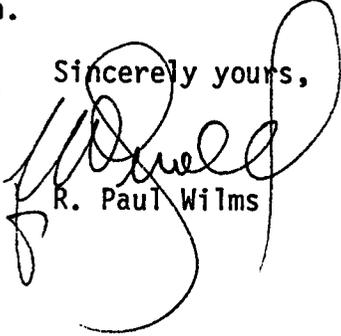
Subject: Air Permit No. 2558R6
Thermal Reduction Systems,
Inc.
Hillsborough, N. C.
Orange County

In accordance with your application received April 16, 1986, we are forwarding herewith Permit No. 2558R6 to Thermal Reduction Systems, Inc., Hillsborough, North Carolina for the construction and operation of air pollution abatement facilities or emission sources.

If any parts, requirements, or limitations contained in this permit are unacceptable to you, you have the right to an adjudicatory hearing before a hearing officer upon written demand to the Director within thirty (30) days following receipt of this permit, identifying the specific issues to be contended. Unless such demand is made, this permit shall be final and binding.

This Permit supersedes Permit No. 2558R5. This permit shall be effective from May 7, 1986, until January 1, 1990, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Sincerely yours,


R. Paul Wilms

Enclosures

cc: Mr. Robert Van Tilburg

Pollution Prevention Pays

P.O. Box 27687, Raleigh, North Carolina 27611-7687 Telephone 919-733-7015

An Equal Opportunity Affirmative Action Employer

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION
DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

A I R P E R M I T

To Construct and Operate, and For the Discharge of Air
Contaminants Into the Atmosphere

In accordance with the provisions of Article 21B of Chapter 143,
General Statutes of North Carolina as amended, and other applicable
Laws, Rules and Regulations,

PERMISSION IS HEREBY GRANTED TO

Thermal Reduction Systems, Inc.
Hillsborough, North Carolina

FOR THE

operation of:

- a. one LP gas-fired, 150 pounds per hour, type I, II, III, and IV waste multiple chamber incinerator with a 500,000 BTU per hour (minimum) primary burner and a 350,000 BTU per hour (minimum) secondary burner and appurtenances installed to remove particulate, visible, and odorous emissions, and
- b. one natural gas fired, 50 pounds per hour, types 0, I, and VI wastes, multiple chamber incinerator with a 125,000 BTU per hour (minimum) primary burner and a 125,000 BTU per hour (minimum) secondary burner and appurtenances installed to remove particulate, visible, and odorous emissions, and

for the discharge of the associated stack gases into the outdoor atmosphere at its facility located at Oakdale Drive, Hillsborough, North Carolina, Orange County,

in accordance with the application received April 16, 1986, and in conformity with the plans, specifications, and other supporting data, all of which are filed with the Department of Natural Resources and Community Development and are incorporated as part of this Permit.

This permit supersedes Permit No. 2558R5. This Permit shall be effective from May 7, 1986, until January 1, 1991, is nontransferable to future owners and operators, and shall be subject to the following specified conditions and limitations:

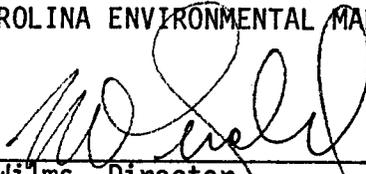
1. The facility shall be properly operated and maintained at all times in such a manner as to effect an overall reduction in air pollution in keeping with the application and otherwise to reduce air contamination to the extent necessary to comply with applicable Environmental Management Regulations, including 15 NCAC 2D .0505, .0521, .0522, and .0535(f).

2. Reports on the operation and maintenance of the facility shall be submitted by the Permittee to the Division of Environmental Management at such intervals and in such form and detail as may be required by the Division. Information required in such reports may include, but is not limited to, process weight rates, firing rates, hours of operation, and preventive maintenance schedules.
3. As required by 15 NCAC 2D .0535(f), when particulate, visible, or odorous emissions exceed Environmental Management Regulations for more than four hours the Regional Supervisor, Raleigh Region, (919)733-2314, of the Division of Environmental Management shall be notified as promptly as possible but in no case later than 24 hours of becoming aware of the occurrence. Such notice shall specify the facility name and location, the nature and cause of the excess emissions, the time when first observed, the expected duration, and the estimated rate of emissions. This reporting requirement does not allow the operation of the facility in excess of Environmental Management Regulations.
4. The 150 lbs/hr incinerator shall be evaluated for compliance with Environmental Management Commission Regulations(s) 15 NCAC 2D .0521(d) by the Division of Environmental Management within 90 days of the operational date. This Permit shall become voidable, with proper notice to the Permittee if the results of the evaluation indicate that the emissions not meet applicable laws, rules, and regulations.
5. This Permit does not relieve the Permittee of the responsibility of complying with any Federal, State, or local requirements governing the handling, disposal, or incineration of hazardous wastes, including the Resource Conservation and Recovery Act (RCRA) administered by the North Carolina Department of Human Resources.
6. The Permittee at least ninety (90) days prior to the expiration of this Permit shall request its extension by letter. The letter should include the permit number and a description of modifications, if any, that have been made.
7. This Permit is subject to revocation or modification upon a determination that information contained in the application or presented in support thereof is incorrect, conditions under which this Permit was granted have changed, or violations of conditions contained in this Permit have occurred.
8. A violation of any term or condition of this Permit shall subject the Permittee to enforcement procedures contained in North Carolina General Statutes 143-215.114, including assessment of civil penalties.

Permit No.2558R6
page 3

Permit issued this the 7th day of May, 1986.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION



R. Paul Wilms, Director
Division of Environmental Management
By Authority of the Environmental Management Commission

Air Permit No. 2558R6



18

State of North Carolina
Department of Natural Resources and Community Development
Division of Environmental Management
512 North Salisbury Street • Raleigh, North Carolina 27611

James G. Martin, Governor
S. Thomas Rhodes, Secretary

Air Quality Section

R. Paul Wilms
Director

May 2, 1986

Mr. Harvey E. Archer
Thermal Reduction Systems, Inc.
Post Office Box 2070
Chapel Hill, North Carolina 27514

Dear Mr. Archer:

This is to acknowledge receipt of an Air Permit application and processing fee of \$50.00 on May 1, 1986, for Thermal Reduction Systems, Inc., Graham, North Carolina, Alamance County.

This application is being processed and reviewed by this office. If you have any questions concerning this matter, please contact Mr. Jerry Clayton at (919)733-7015.

Sincerely,

Mike Sewell/la

Mike Sewell, Supervisor
Air Permit Unit

MS/1a

cc: Mr. Larry Coble

RECEIVED MAY 05 1986

Pollution Prevention Pays

P.O. Box 27687, Raleigh, North Carolina 27611-7687 Telephone 919-733-7015

An Equal Opportunity Affirmative Action Employer

THERMAL
REDUCTION
SYSTEMS
INCORPORATED

19
Post Office Box 2070
Chapel Hill, North Carolina 27515
919/942-5179

April 29, 1986

Mr. Jerry Clayton
Air Quality Section
Environmental Management Division
Department of Natural Resources and Community Development
Archdale Building
512 N. Salisbury Street
Raleigh, N.C. 27611

RE: Air Permit Application
Incineration
(current Permit No. 2558R5)

Dear Mr. Clayton:

We are enclosing an air permit application and processing fee of \$50.00 for two incinerators to be located in our new facility on Porter Avenue, Graham, N.C., Alamance County (Porter Industrial Park).

If you have any questions, please contact me at (919) 942-5179.

Sincerely,


H.E. Archer, F.A.C.H.A.
President

Enclosures

Environmental Management Commission

AIR PERMIT APPLICATION*

GENERAL INFORMATION

INSTRUCTIONS ON BACK

*To construct and operate Air Emission Sources and Control Devices in accordance with N. C. General Statutes Chapter 143, Article 21.

PLEASE TYPE OR PRINT. ATTACH APPROPRIATE EMISSION SOURCE AND CONTROL DEVICE FORMS FOR EACH SOURCE LISTED IN ITEM 6 BELOW.

1. Facility Name (Company, Establishment, Town, Etc.): Thermal Reduction Systems, Inc.				Date	FOR DEM USE ONLY DATE RECEIVED: _____ PERMIT NUMBER: _____ DATE ISSUED: _____
2. Site Location (St./Rd./Hwy.): Porter Avenue		City Graham	Zip Code 27258	County Alamance	
Latitude	Longitude		SIC Code		
3. Mailing Address (P. O. Box/St./Rd./Hwy.): P. O. Box 2070					
City Chapel Hill,	State NC	Zip Code 27514	Phone with Area Code (919) 942-5179		
4. Applicant Technical Contact: Harvey Archer		Title President	Phone with Area Code (919) 942-5179		
5. Description of operation conducted at above facility: Infectious waste incineration					

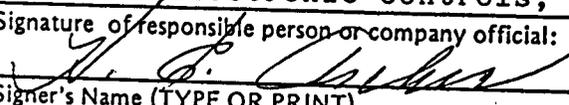
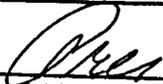
List each EMISSION SOURCE and CONTROL DEVICE for which application is made. Assign an ID NUMBER to each emission source and control device which uniquely identifies that source. Attach appropriate emission source and control device forms for each.

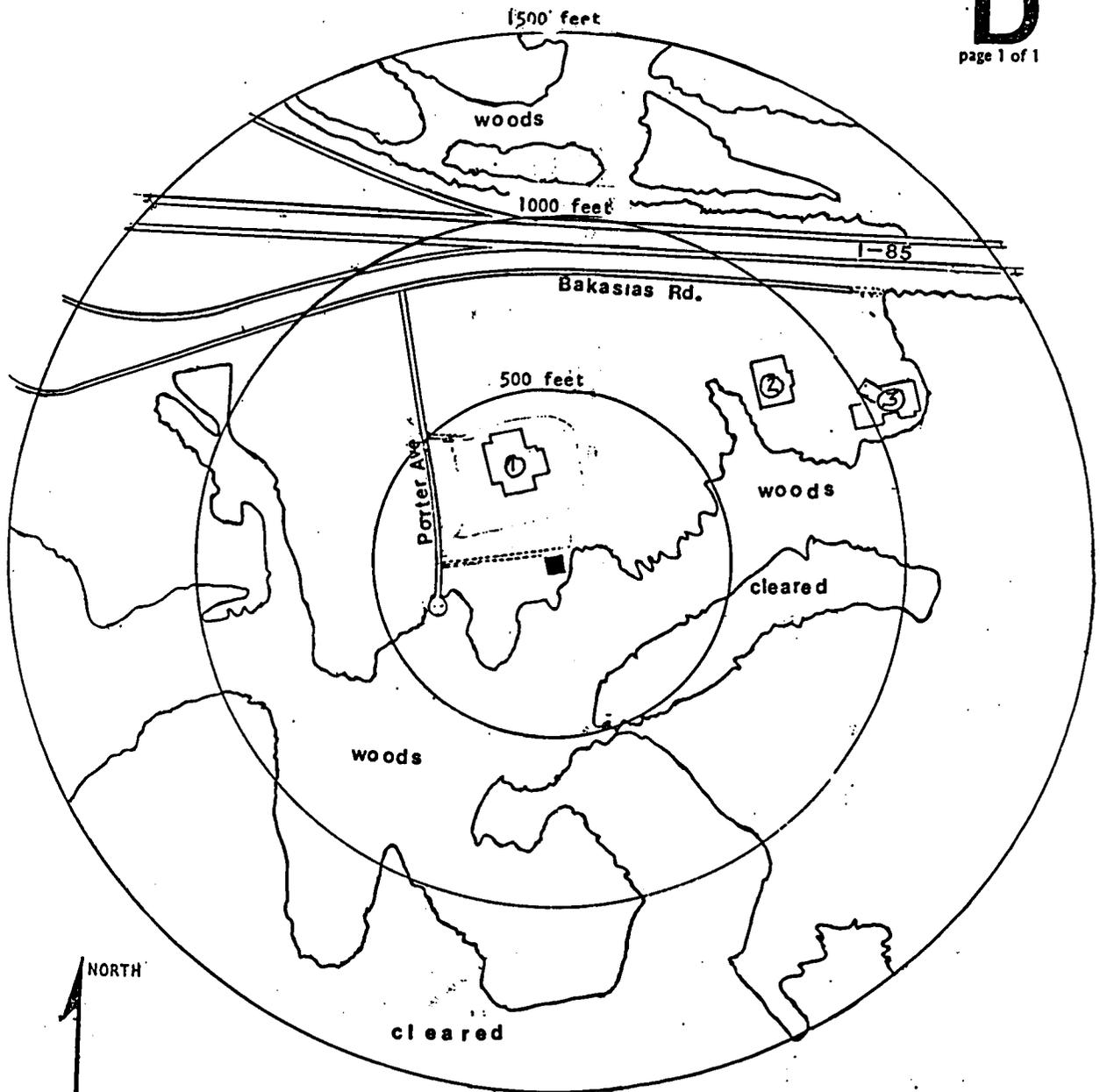
EMISSION SOURCE	ID NO.	CONTROL DEVICE	ID NO.
U-Burn Incinerator	12050	None	
U-Burn Incinerator	12050S	None	

USE SEPARATE SHEET(S) IF NEEDED

7. Maximum facility operation: 16 Hours/Day 7 Days/Week 52 Weeks/Year

8. Name and address of engineering firm that prepared application or plans:
Southern Electronic Controls, Inc.

9. Signature of responsible person or company official:


 Signer's Name (TYPE OR PRINT) Title Date 4/29/86
 Harvey E. Archer President Phone with Area Code _____



- 40x40ft x 24h
- (1) Service Company
- (2) Manufacturing Comp.
- (3) Restaurant and Lounge

INCINERATOR

F

page 1 of 2

PLEASE TYPE OR PRINT. ATTACH TO THE GENERAL INFORMATION FORM "A". IF APPLICABLE, ATTACH AIR POLLUTION CONTROL DEVICE FORM "C".

1. Emission Source and ID NO. (FROM GENERAL INFORMATION FORM "A", ITEM 6):

U-Burn Incinerator Model 12050-S

2. Incinerator Description:

Dual Chamber

Manufacturer

Model Name

Model Number

Southern Electronic Controls, Inc. U-Burn

12050-S

3. Permit Application is made for (CHECK ONE ONLY):

New Source Existing Source Modification - Last Permit No. _____

Commence Construction Date May 1, 19 86 Operation Date June 15, 19 86

4. Maximum Source Operation: 8 Hours/Day 6 Days/Week 52 Weeks/Year

5. Type of Waste Burned: (See codes on next page)	Maximum Charging Rate (lb/hr)		Tons/Year Burned	Total Waste Generated (lb/day)
	Design	Actual		
1, 2, 3, 4	600	450	824,000	162

6. Combustible 99% Noncombustible 1% Moisture 15% Heat Value 450 (BTU/lb)

7. Primary Chamber:	Secondary Chamber:	Secondary Chamber Retention Time:	Type of Feed
Volume <u>120</u> cu. ft. Temperature <u>1400</u> °F	Volume <u>50</u> cu. ft. Temperature <u>1700</u> °F	Seconds <u>0.7</u>	<input type="checkbox"/> Manual <input checked="" type="checkbox"/> Automatic

8. Burner Data:	BURNER RATING (BTU/HR)		AIR FLOW (CFM)		Excess Air (%)
	Primary	Secondary	Overfire	Underfire	
	700,000	500,000	0	300	0

9. Is there a preheat timer? No Yes, Preheating Time _____ Min.

10. Auxiliary Fuel Data: Primary Fuel Type(s) Natural gas
Secondary Fuel Type(s) None

FUEL TYPE	FUEL USAGE			Max. % Sulfur	Max. % Ash	BTU Value
	Max. Design	Max. Actual	Annual			
Natural Gas	(SCF) 1,200	(SCF) 720	(SCF/yr) 224,640	0	0	(BTU/SCF) 1000
#2 Fuel Oil	(gal/hr)	(gal/hr)	(gal/yr)			(BTU/gal)
Other						

11. Air Contaminants Emitted:	Maximum Actual Emissions		Emission Estimate Method*	Control Device**	Control Efficiency %
	Before Control (lbs/hr)	After Control (lbs/hr)			
Particulates		Not Applicable	1	None	n/a
Sulfur Dioxide					
Nitrogen Dioxide					
Carbon Monoxide					
Hydrocarbons (VOC)					
Lead					
Other ()					
Other ()					

*REFER TO BACK OF GENERAL INFORMATION FORM "A" FOR EMISSION ESTIMATION CODE
**ATTACH APPROPRIATE AIR CONTROL DEVICE FORM "C"

INCINERATOR - continued

F

2. Describe any liquid or solid wastes generated and method of disposal:
Solid infectious wastes are collected from hospitals and incinerated.
Ash is transported to the Alamance County landfill.

13. Stack or Emission Point Data:

Height Above Ground (ft.)	Inside Area (sq. ft.)	Gas Temperature (Deg. F)	Direction of Exit (up, down, or horizontal)
21	2.26	1,400	up
Volumetric Flow Rate (ACFM)	Velocity (ft./sec.)	Are sampling ports available? () No (x) Yes	Is rain cap or other obstruction over stack? (x) No () Yes, (specify)
508	12.9		

14. Is a RCRA permit required by the N. C. Department of Human Resources? No Yes
 If yes, has a RCRA permit application been submitted? _____ Date _____, 19____

15. List ALL incinerated HAZARDOUS WASTE specified in the RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) (40 CFR 261) in the comments section below:

16. Comments:

*** TYPE OF WASTE BURNED CODE TABLE ***

CODE	Principal components, usual source, and typical moisture content
0	Highly combustible waste, paper, wood, cardboard cartons, (including up to 10% treated papers, plastic or rubber scraps); from commercial and industrial sources; 10% moisture.
1	Combustible waste, paper, cartons, rags, wood scraps, combustible floor sweepings; from domestic, commercial, and industrial sources; 25% moisture.
2	Rubbish and garbage; from residential sources; 50% moisture.
3	Predominantly animal and vegetable waste; from restaurants, hotels, markets, institutional, commercial and club sources; 70% moisture.
4	Carcasses, organs, solid organic wastes; from hospitals, laboratories, slaughterhouses, animal pounds, and similar sources; 85% moisture.
5	Gaseous and semi-liquid industrial process waste; variable moisture. Describe in detail under comments. Solid and semi-solid by-product waste, such as rubber, plastics, wood waste, etc., from industrial operations; variable moisture. Describe in detail under comments.

CITY OF GRAHAM, N. C.
OFFICE OF BUILDING INSPECTOR

No 5040

PERMIT TO BUILD

GRAHAM, N. C., 3-6, 1986

UPON APPLICATION NO. 5040 PERMISSION HAS BEEN GRANTED TO

MR. THELMA REDUCTAY SYSTEMS INC. AS OWNER, TO ALTER, ERECT, MOVE A 1 STORY

ROOF BUILDING ON DOCK DR. STREET, BETWEEN _____ AND CONTAINS 1 ROOMS

AND _____ STREET: TO BE USED AS _____ AND CONTAINS _____ ROOMS

AND AT AN ESTIMATED COST OF \$ 33,387.00

This building is to be altered, erected or moved in accordance with the ordinances of the CITY OF GRAHAM, N. C., and the general building laws of the STATE OF NORTH CAROLINA, as they relate to construction, health and safety.

SIZE OF BUILDING: Frontage 40 Ft.; Depth 40 Ft. SIZE OF LOT: Frontage _____ Ft.; Depth _____ Ft.
REQUIRED YARD SIZES MEASURED FROM PROPERTY LINE TO BUILDING

Front Yard _____ Ft. Rear Yard _____ Ft. Two Side Yards _____ Ft. Each.

Name of Contractor JACKSON BUILDERS, INC

REMARKS: SEE ATTACHED DOCUMENTS.

Wired With _____

No. of Plumbing Fixtures _____

Heated by _____

Chimneys _____ Flues _____

FEE COLLECTED _____

Building _____

Driveways _____

Floor Furnaces _____

Tanks _____

Signs _____

TOTAL \$ 71.00

Douglas M. H. Kelly
City Inspector of Buildings

No CO will be issued until
road quarter have been installed,
and final approval has been
obtained by Alamance
County

Graham, N.C.

NAME OF OWNER Thermal Reduction Systems, Inc TYPE OF CONSTRUCTION - BRIEF DESCRIPTION -
 LOCATION Porter Avenue Pre-Engineered Steel Building
 ZONE _____ Cement Floor
 USE OF BUILDING Infectious Waste Incineration BASEMENT YES NO
 ESTIMATED COST OF CONSTRUCTION \$35,000 No. OF ROOMS 1
 NAME OF SUBDIVISION Porter Industrial Park No. OF STORIES 1
 WATER YES NO
 SEWER YES NO
 SEPTIC TANK YES NO
 SEPTIC TANK PERMIT No. _____

GENERAL CONTRACTOR Jackson Builders, Inc. HEATING/AIR COND. CONTRACTOR Not Selected
 ADDRESS P.O. Box 148 _____
Goldsboro, NC 27533 ADDRESS _____

ELECTRICAL CONTRACTOR Not Selected TYPE OF HEATING Space
 ADDRESS _____ FUEL Gas

PLUMBING CONTRACTOR Not Selected
 ADDRESS _____

The undersigned hereby makes application to: Build Repair Remodel Extend Move
 Demolish other J. B. Archer, President
 a Building or structure at the location shown, in accordance with approved plans (if any)
 and agrees to occupy the premises only in accordance with a valid certificate of occupancy.

I, the undersigned, make application as designated above, and agree to conform to all applicable laws and ordinances of the City of Graham and the State of North Carolina. The undersigned further states that all statements made herein are true.

NOTE: CERTIFICATE OF OCCUPANCY REQUIRED PRIOR TO OCCUPYING PREMISES.

SIGNATURE OF APPLICANT J. B. Archer, President OWNER CONTRACTOR AGENT OTHER _____

DATE Feb 14, 1986 REMARKS: _____

Approval

Building yes no

Zoning _____

Fee \$ _____

APPLICATION ACCEPTED BY _____

OFFICE USE ONLY.

PERMIT No. _____

ERECT

ALTER

CITY LIMITS

ONE MILE

TAX MAP _____

BLOCK _____

LOT _____

HOUSE No. _____

FLOODWAY DISTRICT

FLOODWAY FRINGE DISTRICT

Remarks: _____

Plot Plan on Reverse Side



Post Office Box 2070
Chapel Hill, North Carolina 27515
919/942-5179

January 28, 1986

Mr. Marvin Collins, Director
Orange County Planning Department
Hillsborough, N.C. 27278

Dear Mr. Collins:

This is a request to make an equipment change on our property located on Oakdale Drive (non-conforming use). This request includes the following changes:

1. Remove consumat 32 Incinerator behind crematory (North end of property away from I-40).
2. Install a U-Burn Model 6024 Incinerator on the same site from which consumat was removed.
3. The U-Burn Model 6024 is approximately the same size as the consumat 32 except that the stack is one foot higher.
4. The replacement site is enclosed by an 8' solid fence with a roof over the incinerator. The incinerator is not visible from outside the fence.
5. All waste will be stored inside the fence prior to treatment.
6. There will be no extensions, alterations or modifications of existing buildings or structures.
7. This equipment replacement is temporary. The U-Burn Model 6024 will be moved to a new facility site on or before July 31, 1986.
8. The existing consumat 120 incinerator on the south end of the property, proximate to I-40, is no longer operational and is being dismantled.

We would appreciate an early decision on this request.

Sincerely,

H. E. Archer
H.E. Archer, F.A.C.H.E.
President

ORANGE COUNTY PLANNING DEPARTMENT
HILLSBOROUGH
NORTH CAROLINA
27278



January 29, 1986

H. E. Archer
President
Thermal Reduction Systems Incorporated
PO Box 2070
Chapel Hill, NC 27514

Dear Mr. Archer:

This is to confirm that the replacement of the incinerator on the property known as Hillsborough Township Tax Map 43 Block B Lot 14 and owned by Triangle Cremation Services, Inc., is permitted provided that the replacement unit is (i) equal to or smaller than the existing unit and (ii) is placed on the concrete pad and within the structure which currently encloses the unit to be replaced.

It is the staff's opinion that the replacement of the incinerator unit in the above referenced manner does not violate Section II.9a) of the Orange County Zoning Ordinance (attached for your reference).

Please contact me if you have any questions on this matter.

Sincerely,

Susan J. Smith
Planner

cc: Marvin Collins