15713

Bard Medical Division
C. R. Bard, Inc.
8195 Industrial Blvd.
Covington, GA 30209-2695

RECEIVED
OCT 1 9 2004
AIR PROTECTION BRANCH

BARD

October 14, 2004

Michelle Keith
Environmental Engineer
Georgia Department of Natural Resources
Environmental Protection Division
Air Protection Branch
4244 International Parkway, Suite 120
Atlanta, Georgia 30354-3908

Dear Ms. Keith:

Enclosed are two copies of our permit application for our new Sterilization Facility to be located in Madison GA.

If you have any questions regarding this information, please contact me at (770) 784-6186.

Sincerely,

John LaMontagne
Manger, Facility Engineering
Bard Medical Division

cc: B. Bruette

State of Georgia
Department of Natural Resources
Environmental Protection Division
Air Protection Branch

RECEIVED
OCT 1 9 2004
AIR PROTECTION BRANCH

Atlanta Tradeport, Suite 120
4244 International Parkway
Atlanta, Georgia 30354
404/363-7000
Fax: 404/363-7100

Application for Permit to Construct, Modify or Operate Process Equipment, Fuel Burning Equipment And/Or Air Pollution Control Devices

SECTION 1 – GENERAL INFORMATION

For Use by EPD Only

Application No.:
Permit No.:
Date Approved:
AIRS # Assigned:
Reviewer:

AIRS No. (if known): 04-13-~~217-00021~~ 211-0002
Facility Name: C.R.Bard, Inc. Madison GA
Facility Location: 2000 Lions Club Road (street address)
City, State Zip: Madison (city) Morgan (county) GA 30650 (zip)
Mailing Address: 8195 Industrial Blvd.
City, State Zip: Covington (city) GA (state) 30014 (zip)

15713

Parent/Holding Company: C.R.Bard, Inc.
Contact for Application: John LaMontagne **Title:** Manager, Facility Engineering
Tel No.: (770) 784-6186 **Ext:** 6186 **Fax No.:** (770) 788-5519
Email address: john.lamontagne@crbard.com

Instructions for each section of this application are found within that section. Please review and follow all instructions carefully to avoid the necessity for resubmission. Feel free to submit additional details as needed. All supplemental and supporting data or information hereafter submitted and all representations hereafter made to EPD with respect to the proposed facility will be construed as part of this application. If there are specific questions or sections that are not understood, please call (404) 363-7000 for assistance. If an operating permit has already been received or applied for, it is only necessary to complete Section 1 and any other section of the application associated with the modification or construction for which authorization is being requested. **Two (2) copies of the application, both bearing original signatures, must be submitted to the Air Protection Branch.**

A. This application is for:

☒ A permit to operate ☒ A permit to construct ☐ A permit to modify existing equipment
☐ A revision of data submitted in an earlier application

Date and Application Number of previously submitted application: _____

B. Type of Equipment for which Application is being Submitted:

☒ An entire facility ☒ Process equipment
☒ Fuel burning equipment ☒ Air pollution control equipment
☐ An incinerator only ☐ Other → Specify: _____

C. Has this operation/equipment been previously permitted? ☐ - Yes ☒ - No

If above response is "Yes," provide the related permit number: _____ Date issued: _____

D. If this application is for new construction or modification, give best estimates of the following dates:

Starting Date: 1/05 Completion Date: 1/06

If this is a major modification or construction project, attach details of intermediate dates for completion of projects.

Section 1 Questions Continued On Next Page

This application is submitted in accordance with the provisions of the Georgia Rules for Air Quality Control and, to the best of my knowledge, is complete and correct. The following sections of the application are applicable and are included:

☒ 2A ☒ 2B ☒ 3A ☒ 3B ☒ 4A ☒ 4B ☐ 5 ☐ 6 ☒ 7 ☐ 8 ☒ 9 ☒ 10A ☒ 10B
☒ 11A ☒ 11B ☐ 11C ☐ 11D ☐ 11E

Name of Owner or Authorized Official: Mary S. Mayo **Title:** Staff Vice President, Quality Assurance

Signature: Mary S. Mayo **Date:** 10-14-04

Continues on next page

SECTION 1 – GENERAL INFORMATION (continued)

E. Is any information in this application considered Confidential Information? ☐ - Yes ☒ - No

If your response to this question is "yes", please refer to the latest version of EPD's *Procedures for Requesting that Submitted Information be treated as Confidential* for the necessary steps to be taken and for more information.

If yes, follow instructions provided in the attachment titled "Confidential Business Information."

F. Has a consultant been employed or will a consultant be employed for any part of this project, modification or construction? ☐ - Yes ☒ - No

If yes, provide the following information pertaining to the consultant employed:

Name of Consultant or Consulting Company: _____

Name of Contact: (if Consulting Company Used) _____

Mailing Address: _____

City, State Zip: _____ (City) (State) (Zip)

Telephone and Fax Number: _____ (Telephone & ext) (Fax)

In what areas will the consultant be involved in the project, modification or construction?

G. Facility Location:

Latitude: 33° 33' 53" **NORTH** Longitude: 83° 28' 29" **WEST**

UTM Coordinates: 270256.3 **EAST** 3716455 **NORTH**

INSTRUCTION: The SOURCE CODE of an emission unit or air pollution control device is an alphanumeric code with a maximum of four characters (e.g. 27, D1, AA, BLR2, 953). The source code is used to relate information given in different sections of the application. Source codes are unique to each piece of equipment at a facility; emission units, air pollution control devices, and stacks cannot share the same source code. The second columns in the tables in Sections 4A and 6 of the application refer back to the source codes used in Sections 2 and 3. Use the same source code throughout the application whenever giving data on the same piece of equipment. For example, B4 may refer to number 4 boiler, C4A and C4B may be control devices on number 4 boiler, and S4 might be the stack on the boiler and control devices. The actual selection of source codes is up to the applicant.

Unless previously submitted, the following three items must be included with all applications. If in doubt, resubmit. Place the number of attachments or date of original submittal in the spaces provided.

H. 2 Attach a plot plan showing the location of the facility and points of discharge, identified by source code used in the application, in relation to the surrounding area. Plot plans should show roadways, residences and other permanent structures, the scale used and at least one set of longitude lines or UTM coordinates. In practice, many applicants find it convenient to show a sketch of the plant area on one plot and to locate the general plant site on a separate county or city map.

I. 2 Attach a flow diagram identifying process and control equipment, where raw material enters processes, where waste exits, where emissions air emissions are generated and where finished products are handled. Each point should be identified according to the source codes used in the application in addition to its normal description.

J. 0 In the space provided below, give a description of the general production process and the specific operation for which a permit is being requested. If necessary, attach additional sheets to give an adequate description. Include layout drawings, as necessary, to describe each process. Reference should be made to source codes used in the application.

K. Description of general production process and operation for which a permit is being requested:

Medical Device Sterilization

Facility Name: C.R. Bard, Inc. **Date of Application:** 10/6/04

SECTION 2A – PROCESS DESCRIPTION AND OPERATIONAL DATA

Normal Operating Schedule: 24 hours/day 7 days/week 52 weeks/yr

Additional Data Attached? ☐ - Yes ☒ - No

Seasonal and/or Peak Operating Periods: n/a

Dates of Annually Occurring Shutdowns: Four days per year, dates TBD

PRODUCTION INPUT FACTORS

Source Code	Process/ Operation e.g. Chemical mix tank, Grain dryer, Conveyor	Date of Equipment installation	Type of Raw Material	Annual Input Tons/year	Hourly Process Input Rate (Give units: e.g. lb/hr, ton/hr)		
					Design	Normal	Maximum
SV1	Sterilization Chamber 1	2005	EO	16.4	3.8 lb/h	TBD	3.8 lb/h
SV2	Sterilization Chamber 2	2005	EO	16.4	3.8 lb/h	TBD	3.8 lb/h
SV3	Sterilization Chamber 3	2005	EO	61.0	14.1 lb/h	TBD	14.1 lb/h
SV4	Sterilization Chamber 4	2005	EO	61.0	14.1 lb/h	TBD	14.1 lb/h
SV5	Sterilization Chamber 5	2005	EO	61.0	14.1 lb/h	TBD	14.1 lb/h
SV6	Sterilization Chamber 6	2005	EO	8.5	2 lb/hr	TBD	2 lb/hr

PRODUCTS OF PRODUCTION

Source Code	Description of Product	SIC* Code of Product	Production Schedule		Hourly Production Rate (Give units: e.g. lb/hr, ton/hr)			
			Ton/yr	Hr/yr	Design	Normal	Maximum	Units
PROD1	PALLETS MEDICAL DEVICES	3841	33414	8664	9.6	TBD	9.6	Pallet/hr

* SIC: Standard Industrial Classification

Facility Name: C.R. Bard, Madison GA **Date of Application:** 10/6/04

SECTION 2B – LIST OF RAW MATERIALS AND CHEMICALS

List all raw materials, products, process and non-process chemicals, intermediates and toxic materials found at the facility. IUPAC or commonly known chemical names are preferred. If only a trade name is known, indicate manufacturer. Toxicity information should consist of IRIS unit risk factors, inhalation reference concentrations (RFC), OSHA PEL's, ACGIH TLV's, NIOSH REL's, etc. Submit additional data on usages, if appropriate. It is not necessary to list products that are simple mixtures, blends or solutions of chemicals already listed.

Raw Material / Chemical	Used for	Toxicity	EPD Use Only
Ethylene Oxide (EO)	Sterilizing Agent		
Nitrogen	Inerting EO		
Deisel Fuel	Emergency Power		

Facility Name: C.R. Bard Madison GA **Date of Application:** 10/6/04

SECTION 3A – BOILERS AND FUEL BURNING EQUIPMENT

Source Code	Emission Unit Type (e.g. Dryer, Boiler, Burner)	Name or Designation of Emission Unit (Give Mfg and Model No.)	Type of Burner* (e.g. Spreader stoker, Pulverized coal)	Type of Draft[1] (e.g. Natural, Induced, Balanced)	Capacity of Unit 10^6 Btu/hr Input		Percent Fuel for Space Heat	Percent Excess Air	Date of Construction & Installation[2] e.g. C: 11/5/89 I: 2/24/90	Fuel Type(s)
					Design	Max				
BLR1	Boiler	TBD	n/a	Forced Draft	6.3	6.3	10	20	C: TBD I: 2005	Nat. Gas
BLR1	Boiler	TBD	n/a	Forced Draft	6.3	6.3	10	20	C: TBD I: 2005	Nat. Gas
RTO1	Thermal Oxidizer	TBD	n/a	Forced Draft	15	15	0	20	C: TBD I: 2005	Nat. Gas
GEN1	Emergency Generator	TBD	n/a	n/a	2520 hp.	2520 hp.	n/a	n/a	C: TBD I: 2005	Diesel
FIR1	Fire Pump	TBD	n/a	n/a	175 hp	175 hp	n/a	n/a	C: TBD I: 2005	Diesel

[1] This section does not have to be completed for natural gas fired equipment. [2] If construction and installation dates are the same, enter only one date.

Facility Name: C.R.Bard, Inc. Madison GA **Date of Application:** 10/6/04

SECTION 3B – FUEL DATA*

Source Code	Fuel Type e.g. coal, natural gas, wood bark	Annual Consumption						Hourly Consumption e.g. lb/hr		Heat Content**		Percent Sulfur**		Percent Ash in Solid Fuel	
		Total Quantity		Percent Use by Season											
		Amount	Unit e.g. Tons, Gal, cf	Mar ↓ May	June ↓ Aug	Sept ↓ Nov	Dec ↓ Feb	Max	Avg.	Min	Avg.	Max.	Avg.	Max.	Avg.
RTO1	Nat. Gas	63395	MCF	25	25	25	25	14.6 MCF	7.3	n/a	n/a	n/a	n/a	n/a	n/a
BLR1	Nat. Gas	13313	MCF	30	20	20	30	6.1 MCF	1.5	n/a	n/a	n/a	n/a	n/a	n/a
BLR2	Nat. Gas	13313	MCF	30	20	20	30	6.1 MCF	1.5	n/a	n/a	n/a	n/a	n/a	n/a
GEN1	Diesel	68500	Gal	25	25	25	25	125 GPH	7.2	n/a	n/a	n/a	n/a	n/a	n/a
FIR1	Diesel	40	Gal	25	25	25	25	22 GPH	.04	n/a	n/a	n/a	n/a	n/a	n/a

Fuel Supplier Information**

Fuel Type (Coal, Natural Gas, Fuel Oil)	Name of Supplier	Address	City	State	Zip
Diesel	TBD	TBD	TBD	TBD	TBD

* Waste fuel, such as saw dust or trash, generated or used at this facility should be described on a separate sheet.
** This section does not need to be completed for natural gas fired units.

Facility Name: C.R.Bard, Inc. Madison GA **Date of Application:** 10/6/04

SECTION 4A – STORAGE VESSEL PHYSICAL DATA

NOTE: Section **4B** must also be completed

Tank Source Code	Tank No.	Capacity (Gal)	Tank Color	Type of Tank (e.g. Fixed Roof, Floating Roof)	Tank Diameter (ft.)	Construction Date	Type of Roof Seals (Primary & Secondary)	Description of Equipment & Procedures to Control Emissions (e.g. Carbon Filtration, Conservation Vent)	Description of Equipment & Procedures to Control Spills (e.g. Concrete Dikes)
AST1	n/a	3600	white	fixed roof	note1	2005	**n/a**	none	Secondary Contaiment w/ Sensor

Comments/Additional Information:

note1: tank dimentions 384" L X 128" W X 25" H

Facility Name: C.R. Bard, Madison GA **Date of Application:** 10/6/04

SECTION 4B – STORAGE VESSEL MATERIAL & OTHER DATA

Tank Source Code or Tank No.[1]	Material Stored	Material Molecular Weight	True Vapor Pressure (psi)	Storage Temp. °F	Average Throughput (Gal/day)	Height of Vent Above Ground (ft.)	Maximum Filling Rate (Gal/hr)	Average Height of Vapor Space (ft.)	Pressure at Which Vent Opens (psi)
AST1	Diesel Fuel	230 g/mol	<.5	Ambient	TBD	TBD	TBD	.25	TBD

[1] Complete this column with tank source codes only or with tank numbers only, not both.

Comments:

Facility Name: C.R.Bard, Inc. Madison GA **Date of Application:** 10/6/04

SECTION 7 – FUGITIVE EMISSIONS

Describe all precautions to be used for control of fugitive emissions from sources listed below. Use additional sheets if necessary. Show all source codes on plot plan.

Examples of fugitive emission sources to include on this form:

1. On-site roads
2. Bulk loading processes
3. Railroad cars and truck clean out
4. Bagging machines
5. Open hoppers
6. Conveying, handling and transportation systems
7. Accumulation of material on yards and property
8. Gas leaks or vapor vents
9. Other sources of fugitive emissions

Fugitive Emission Source Code	Description of Source	Emission Reduction Precautions (e.g. Storage Pile Cover, Vent Filters, Special Seals, Water Spray)
XFER1	Transfer from Vessel to Aeration	Process removal cycle, Automation
STOR1	Sterilized Product Storage	Process removal cycle, Aeration

Facility Name: C.R.Bard, Inc. Madison GA **Date of Application:** 10/6/04

SECTION 9 – EMISSION DATA Page 1 of 2

Stack Source Code	Control Device Source Code	Emission Unit Source Code (Boiler or Other Process)	Pollutant Emitted[1]	Emission Rates				
				Average lb/hr	Maximum lb/hr	lb/million Btu Input[2]	Method of Determination[3] (e.g. Stack Test, AP-42, Material Balance)	Tons per Year Emitted
RTOA	RTO1	SV1-SV6, A1A-A5B	EO	TBD	5.2	N/A	Calculation Worst Case	2.24
BLRA	n/a	BLR1	NOX	TBD	.61	.1	AP-42	2.66
BLRA	n/a	BLR1	SO2	TBD	.005	.0008	AP-42	.02
BLRA	n/a	BLR1	PM	TBD	.046	.007	AP-42	.20
BLRA	n/a	BLR1	CO	TBD	.52	.08	AP-42	2.24
BLRA	n/a	BLR1	VOC	TBD	.034	.005	AP-42	.15
BLRB	n/a	BLR2	NOX	TBD	.61	.1	AP-42	2.66
BLRB	n/a	BLR2	SO2	TBD	.005	.0008	AP-42	.02
BLRB	n/a	BLR2	PM	TBD	.046	.007	AP-42	.20
BLRB	n/a	BLR2	CO	TBD	.52	.08	AP-42	2.24
BLRB	n/a	BLR2	VOC	TBD	.034	.005	AP-42	.15
GENA	n/a	GEN1	NOX	TBD	70.30	n/a	Mfg. Info	17.56
GENA	n/a	GEN1	CO	TBD	14.08	n/a	Mfg. Info	3.52
GENA	n/a	GEN1	PM	TBD	.60	n/a	Mfg. Info	.15
GENA	n/a	GEN1	VOC	TBD	1.12	n/a	Mfg. Info	.28

[1] Use a separate line for each pollutant emitted from a stack.
[2] Complete this column only for boilers and other fuel burning equipment.
[3] If emission rates determined by source test, submit the test report indicating the method used.

Facility Name: C.R.Bard, Inc. Madison GA **Date of Application:** 10/6/04

SECTION 9 – EMISSION DATA Page 2 of 2

Stack Source Code	Control Device Source Code	Emission Unit Source Code (Boiler or Other Process)	Pollutant Emitted[1]	Emission Rates				
				Average lb/hr	Maximum lb/hr	lb/million Btu Input[2]	Method of Determination[3] (e.g. Stack Test, AP-42, Material Balance)	Tons per Year Emitted
RTOA	RTO1	SV1-SV6, A1A-A5B	NOX	TBD	1.45	N/A	AP-42	6.3
			SO2	TBD	.009	.04	AP-42	.04
			PM	TBD	.11		AP-42	.48
			CO	TBD	1.23		AP-42	5.33
			VOC	TBD	.08		AP-42	.35

[1] Use a separate line for each pollutant emitted from a stack.
[2] Complete this column only for boilers and other fuel burning equipment.
[3] If emission rates determined by source test, submit the test report indicating the method used.

Facility Name: C.R. Bard, Inc. Madison GA **Date of Application:** 10/6/04

SECTION 10A – STACK DATA

Stack Source Code	Emission Unit Source Code (boiler or other process)	Stack Dimensions		Dimensions of largest Structure Near Stack[1]		Exit Gas Conditions at Maximum Emission Rate			
		Height Above Grade, ft.	Inside Diameter, ft.	Height, ft.	Longest Side, ft.	Velocity ft/sec	Temperature °F	Flow Rate (acfm) Average	Flow Rate (acfm) Maximum
RTOA	RTO1	50	4	n/a	n/a	17170	400	TBD	26000
RTOB	RTO1	50	TBD	n/a	n/a	TBD	TBD	TBD	TBD

[1] These two columns are required only if the height of a stack is greater than 90 feet. A structure is considered near a stack if the distance between the stack and the structure is less than 5 times the height or width of the structure. The structure that the stack is coming from is also considered "near" the stack.

NOTE: If emissions are not vented through a stack, describe point of discharge below and, if necessary, on a separate sheet of paper.

Facility Name: C.R.Bard, Inc. Madison GA **Date of Application:** 10/6/04

SECTION 10B – STACK MONITORING DATA

Stack Source Code	Stack Parameter Monitored (e.g. opacity, CO, flow rate)	Monitor Installation Date	Monitor Manufacturer	Name of Monitor and/or Model Number
RTOA	Temperature	2005	TBD	TBD
RTOB	n/a	n/a	n/a	n/a

Comments:

Facility Name: C.R.Bard, Inc. Madison GA **Date of Application:** 10/6/04

SECTION 11A – AIR POLLUTION CONTROL DEVICES (APCD)

APCD Source Code	Process Equipment Source Code	APCD Type (Baghouse, ESP, Scrubber etc)	Date Installed	Make & Model Number (Attach Mfg. Specifications & Literature)	Unit Modified from Mfg Specifications?	Percent Control Efficiency		Inlet Gas Flow Rate (acfm)
						Design	Actual	
RTO1	SV1-SV6, A1A - A6A	Regenerative Thermal Oxidizer	2005	TBD	No	99	TBD	23000

Facility Name: C.R. Bard, Inc Madison GA **Date of Application:** 10/6/04

SECTION 11B – AIR POLLUTION CONTROL DEVICES – EMISSION INFORMATION

APCD Source Code	Pollutants Controlled	Inlet Loading To Collector		Inlet gas Temp. °F	Exit Loading From Collector		Exit gas Temp. °F	Pressure Drop Across Unit (Inches of water)
		lb/hr	Method of Determination		lb/hr	Method of Determination		
RTO1	Ethylne Oxide	51.9	Mass Balance	130	<.519	Source Test, Simular equipment	400	4

Note: Methods of determining inlet and exit loading include stack testing, material balance, emission factors or calculations based on manufacturer's specifications.

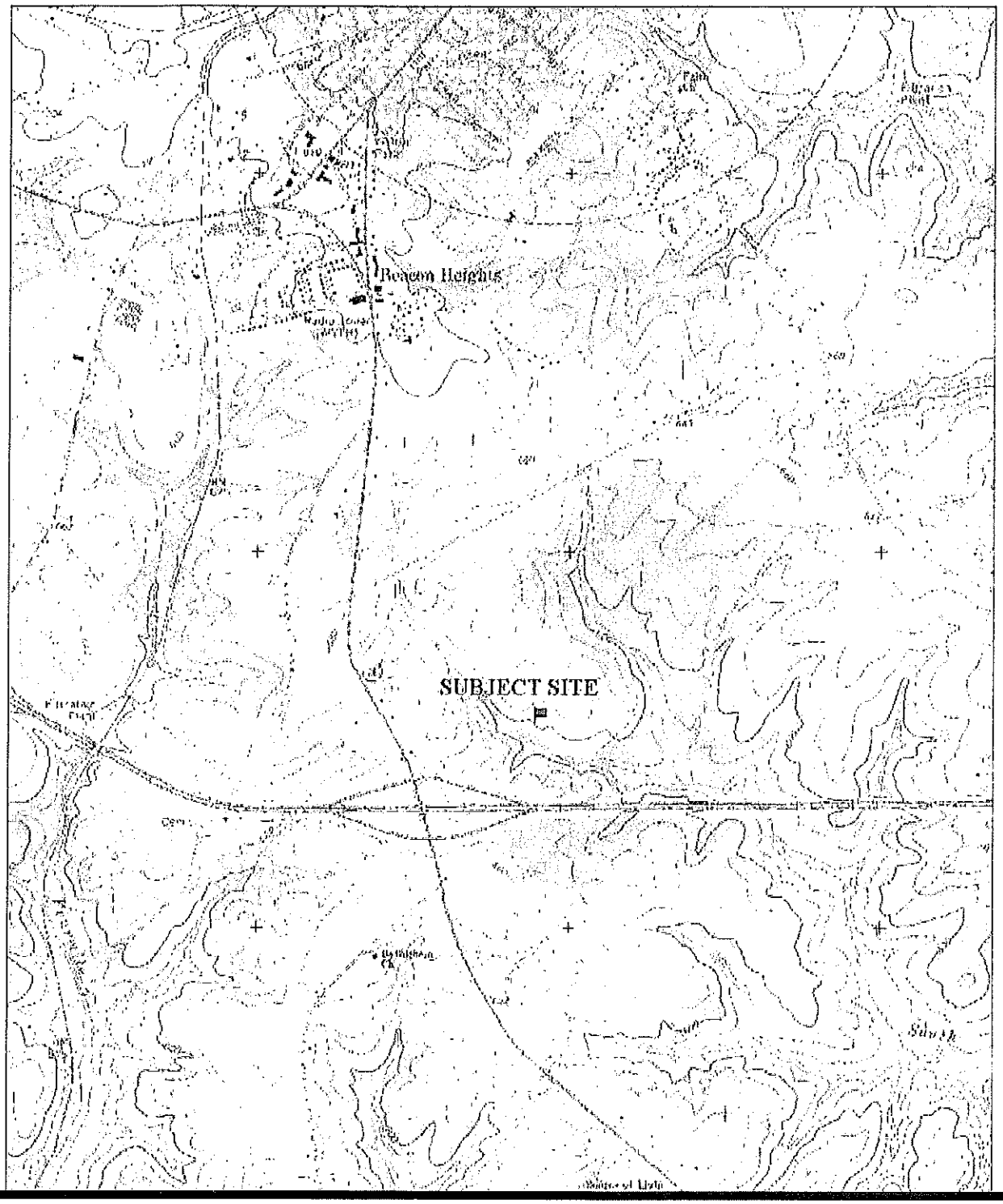


FIGURE 1: SITE LOCATION MAP

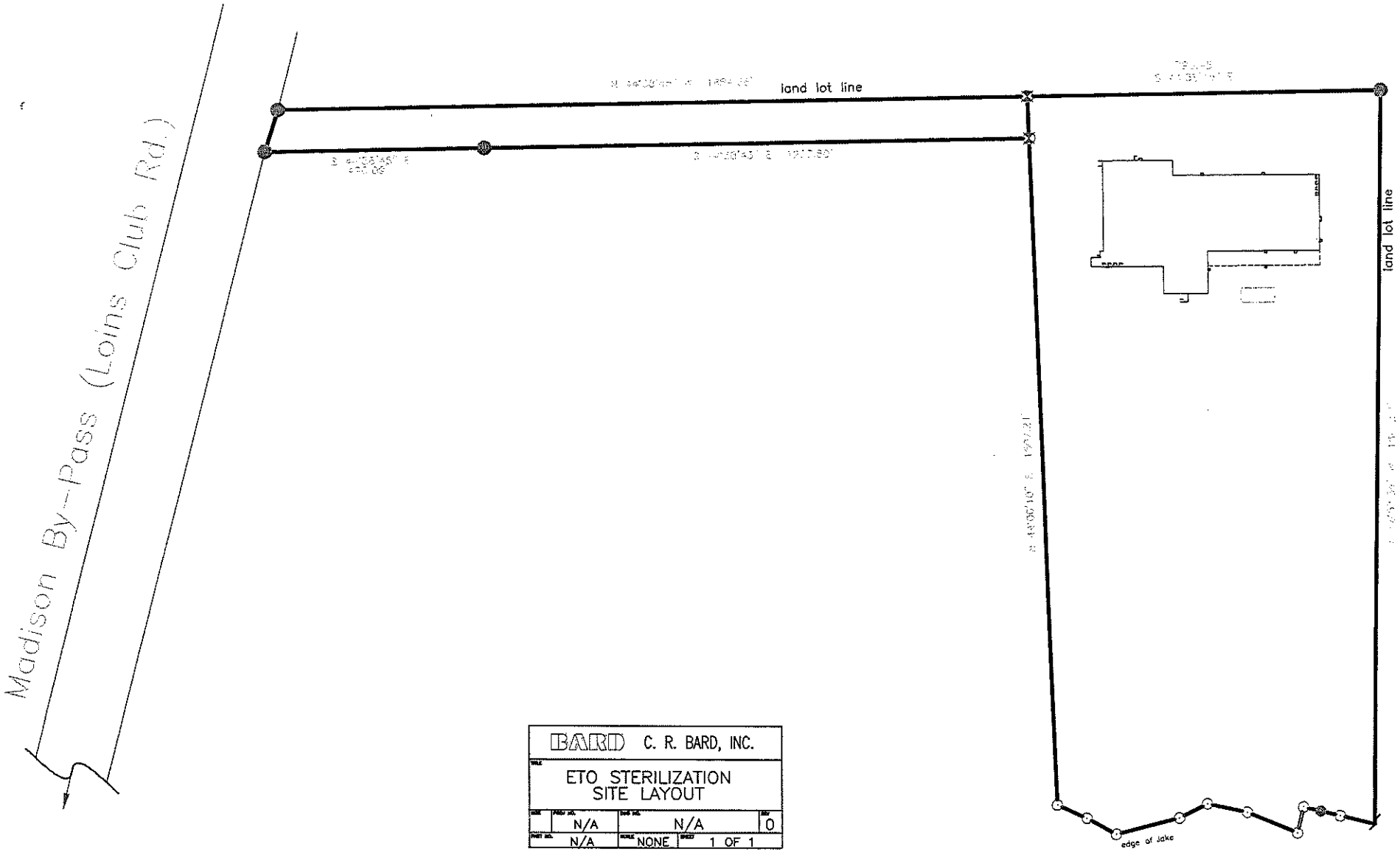
N
W E
S

Gallet
& ASSOCIATES

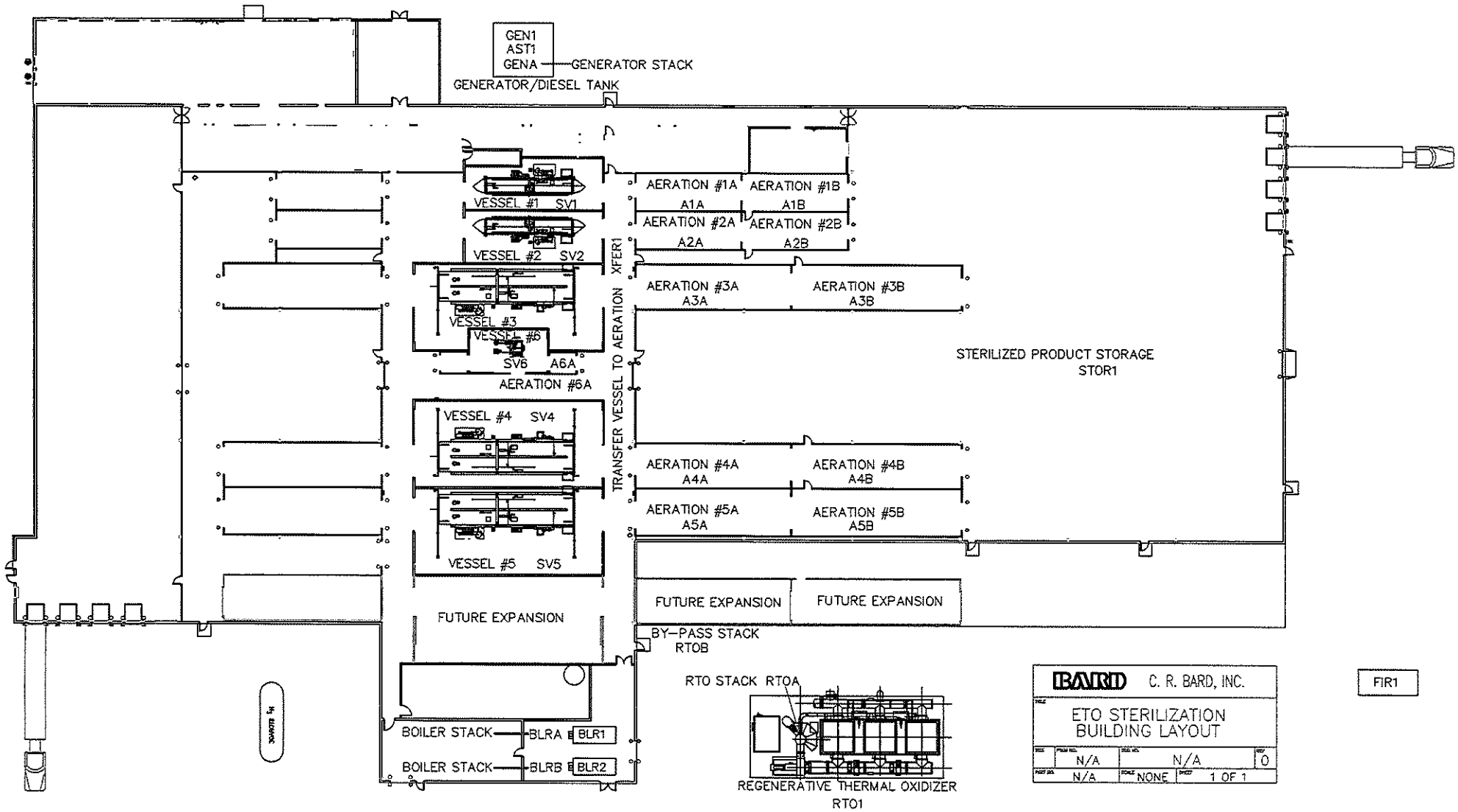
LEGEND
USGS Topographic Map
Madison, GA
Dated: 1985
Scale = 1:24,000

© 1999 DeLorme

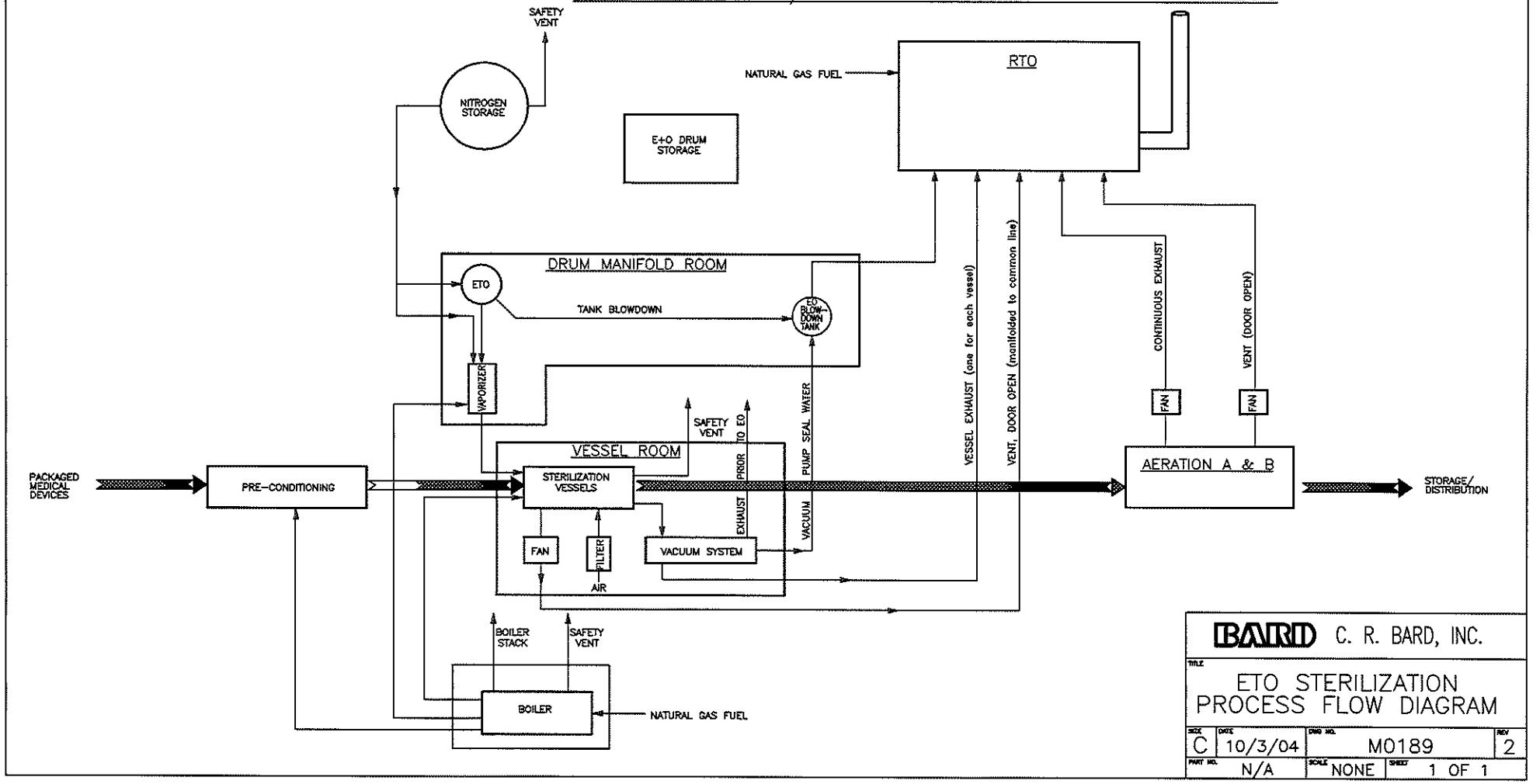
PROJECT
New Sterilization Plant Property
U.S. Highway 129 Bypass
Madison, Morgan County, Georgia
Gallet Project No.: 04ATCRB0101E



BARD C. R. BARD, INC.			
TITLE: ETO STERILIZATION SITE LAYOUT			
N/A	N/A		0
N/A	NONE	1 OF 1	


GEN1
AST1
GENA
GENERATOR STACK
GENERATOR/DIESEL TANK
VESSEL #1 SV1
VESSEL #2 SV2
VESSEL #3
VESSEL #6
SV6 A6A
AERATION #6A
VESSEL #4 SV4
VESSEL #5 SV5
FUTURE EXPANSION
AERATION #1A
AERATION #1B
A1A
A1B
AERATION #2A
AERATION #2B
A2A
A2B
AERATION #3A
AERATION #3B
A3A
A3B
TRANSFER VESSEL TO AERATION XFER1
STERILIZED PRODUCT STORAGE
STOR1
AERATION #4A
AERATION #4B
A4A
A4B
AERATION #5A
AERATION #5B
A5A
A5B
FUTURE EXPANSION
FUTURE EXPANSION
BY-PASS STACK
RTOB
RTO STACK RTOA
BOILER STACK
BLRA
BLR1
BOILER STACK
BLRB
BLR2
REGENERATIVE THERMAL OXIDIZER
RTO1
BARD C. R. BARD, INC.
ETO STERILIZATION
BUILDING LAYOUT
N/A
N/A
0
N/A
NONE
1 OF 1
FIR1

BARD 100% EO/NITROGEN STERILIZATION PROCESS



BARD C. R. BARD, INC.

TITLE: ETO STERILIZATION PROCESS FLOW DIAGRAM

SIZE	DATE	DWG NO.	REV
C	10/3/04	M0189	2
PART NO. N/A	SCALE NONE	SHEET 1 OF 1	