

UNITED STATES MARINE CORPS
Electronics Maintenance Company
2d Maintenance Battalion
2d Force Service Support Group (Rein)
Fleet Marine Force, Atlantic
Camp Lejeune, North Carolina 28542-5704

CAPT AUSTON
DID NOT CONCUR
WITH ANY CHANGES!
SEE MARKED 35%
PRINTS

1100
EAS:bj
7 Apr 87

From: Commanding Officer, Electronics Maintenance Company
To: Public Works Officer
Via: Commanding Officer, 2d Maintenance Battalion (ATTN: S-4)

Subj: FIELD MAINTENANCE COMPLEX P-803

ENCL: (1) Copy of Drawing with changes Highlighted

1. Upon completion of reviewing the 35% Milestone Blueprints of the subject complex, it has been determined that several changes are required due to safety and accountability of equipment.

2. All changes required are listed as minor construction. The changes with justification are listed below.

- OK*
- A. RM 117- The class III security room must be built in conformance with OPNAVINST 5530.13. This is a required change.
 - B. RM 119- The vent path for Trichloroethene is a required safety change. The Trichloroethene is utilized for cleaning of all compound and reflex bourdon tube gauges.
 - C. RM 119/116- Construction of bottle storage rooms is a required safety change. These nitrogen bottles must be rack mounted and the racks bolted to the walls in accordance with applicable safety regulations.
 - D. RM 119/121- Construction of half solid walls and half glass walls are for proper supervision and safety of technicians as they work. Without this change the ability of the Shop Officer/Chief to effectively monitor his subordinates will be significantly impaired.
 - E. RM 122B- Deletion of the vestibule is requested due to traffic flow and workspace restriction requirements. Limited access to the facility is a prime consideration.
 - F. RM 116- Delete windows and doors for security and controlled access to workspace. This is in conformance with OPNAVINST 5530.13.
 - G. RM 125/127- It is requested that shelving be included for proper storage and accountability of equipment. This is in accordance with safety requirements on equipment storage.
 - H. RM 122- Flushmount central alternating current outlets are needed to power up benches. These benches are required IAW NAVAIR 17-20 metal.



I. Coiled shutters are requested for equipment movement between shipping and receiving and the work spaces. These shutters would allow better control of equipment workflow.

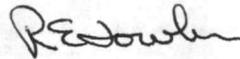
J. Fire extinguisher system must be of the dry chemical type due to the equipment being repaired. IAW safety regulations.

K. Air hoses must terminate in "T" outlets for maximum utilization. This would allow saving in manhours for PM of equipment.

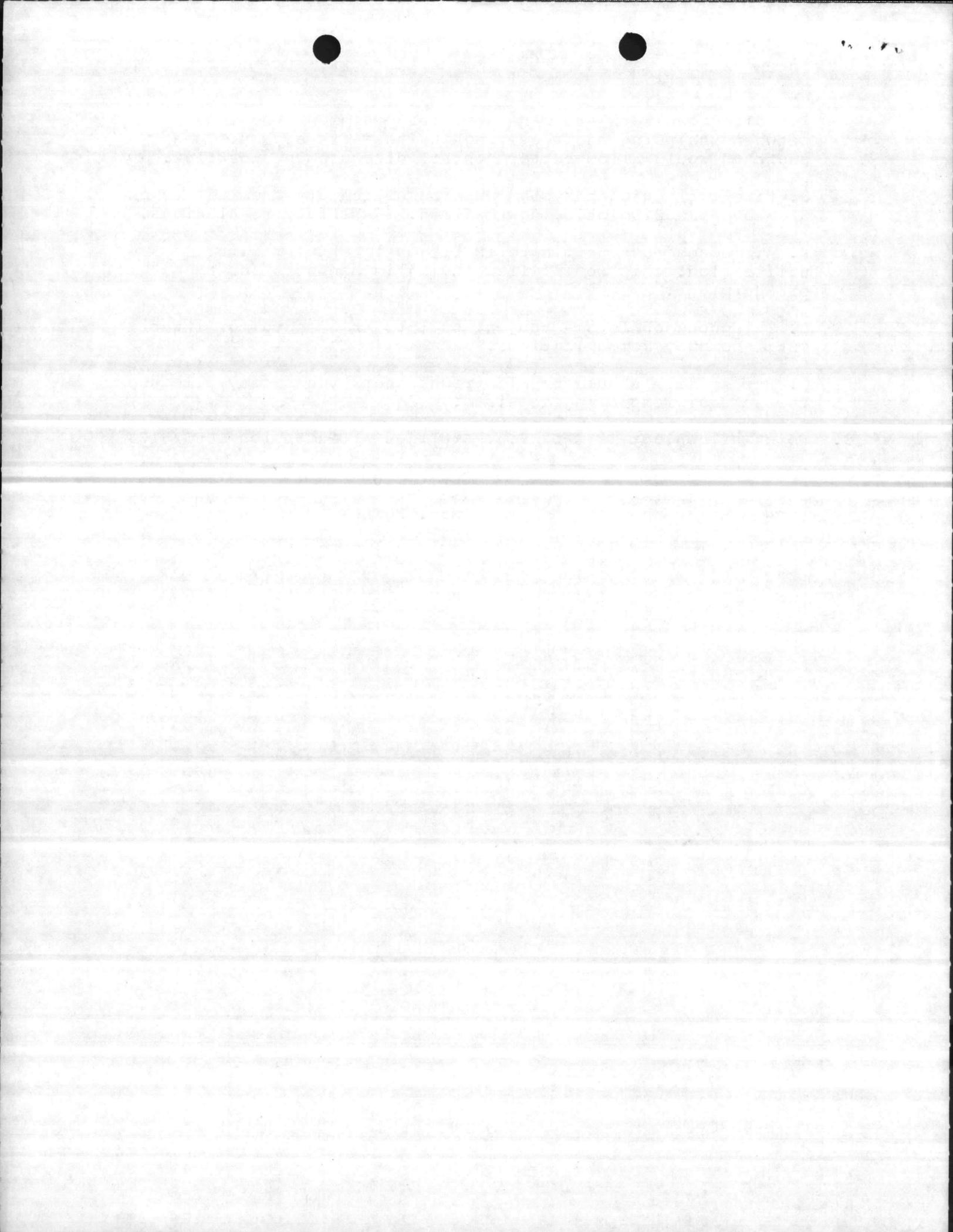
L. Telephone outlets - subject outlets are needed for inter/intra company communications.

M. Safety tile should be electrical shop type safety tile due to the equipment being repaired.

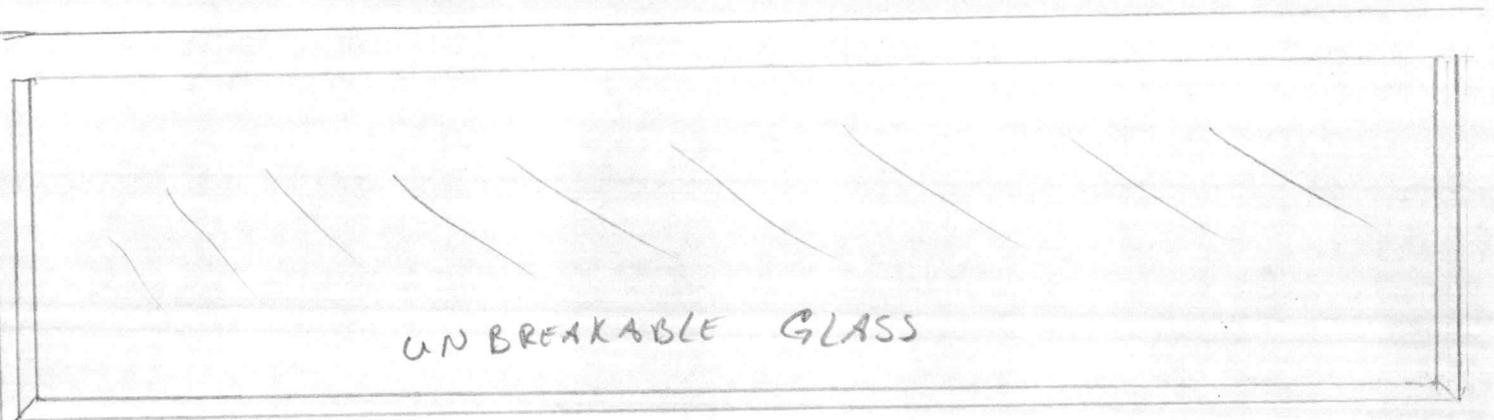
3. Point of contact is CW02 E.A. Stelljes at extension 1985/5123



R.E. FOWLER



CEILING

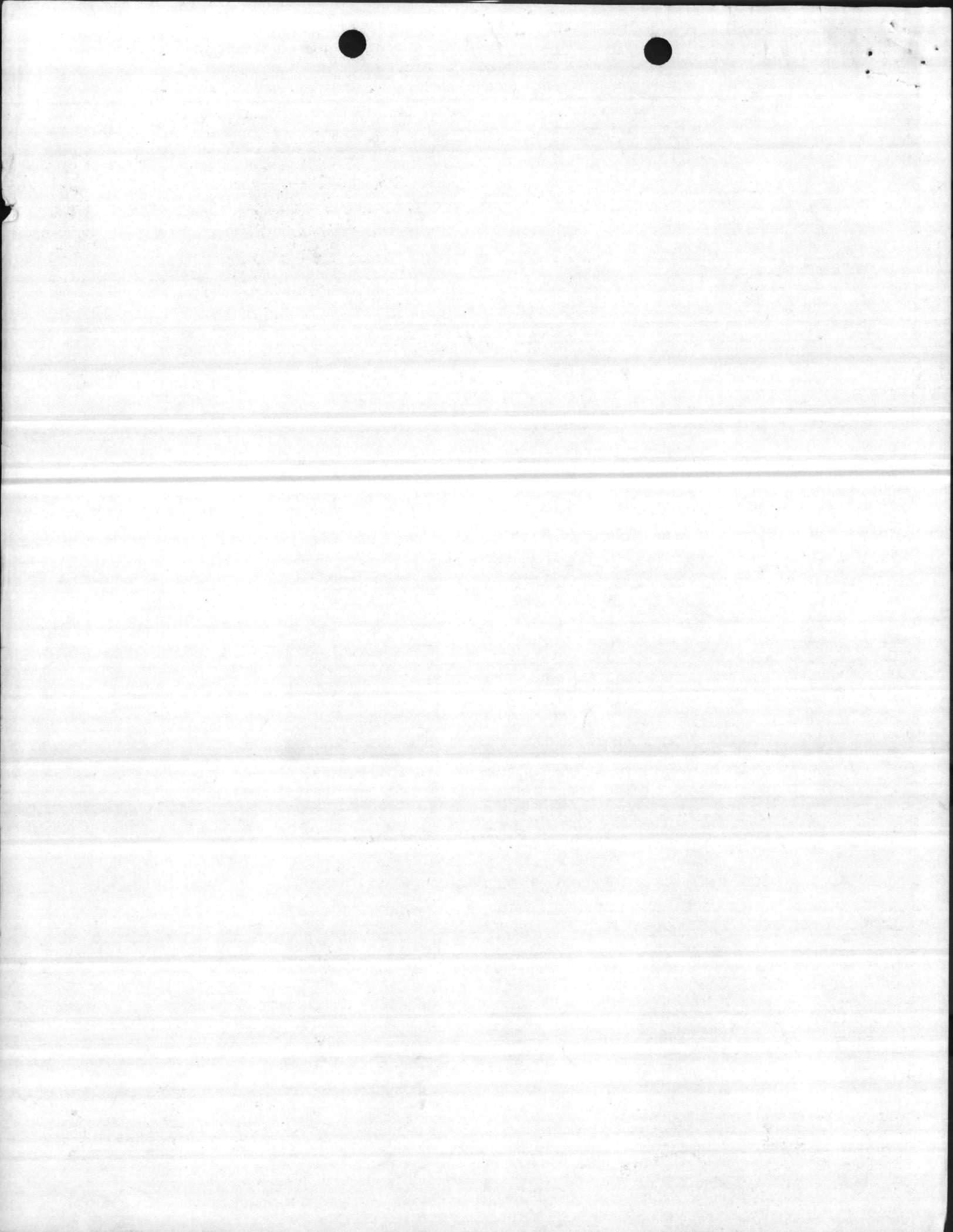


UNBREAKABLE GLASS

SOLID

FLOOR

$\frac{1}{2}$ GLASS $\frac{1}{2}$ SOLID WALL



V
S
M
F
VSMF X

**CONTRACTOR'S CATALOG AND PRICE LIST
CORRECTION NOTICE**

J C M INDUSTRIES INC/ ADVANCE ENGINEERING CO
CONTRACTOR

PLEASE NOTE THE FOLLOWING CHANGES/ADDITIONS TO THE
CONTRACTOR'S CATALOG AND PRICE LIST. THIS INFORMATION HAS
BEEN OBTAINED FROM THE CONTRACTOR AND/OR GSA
PROCUREMENT OFFICE.

FEDERAL SUPPLY SCHEDULE _____

CONTRACT NUMBER _____

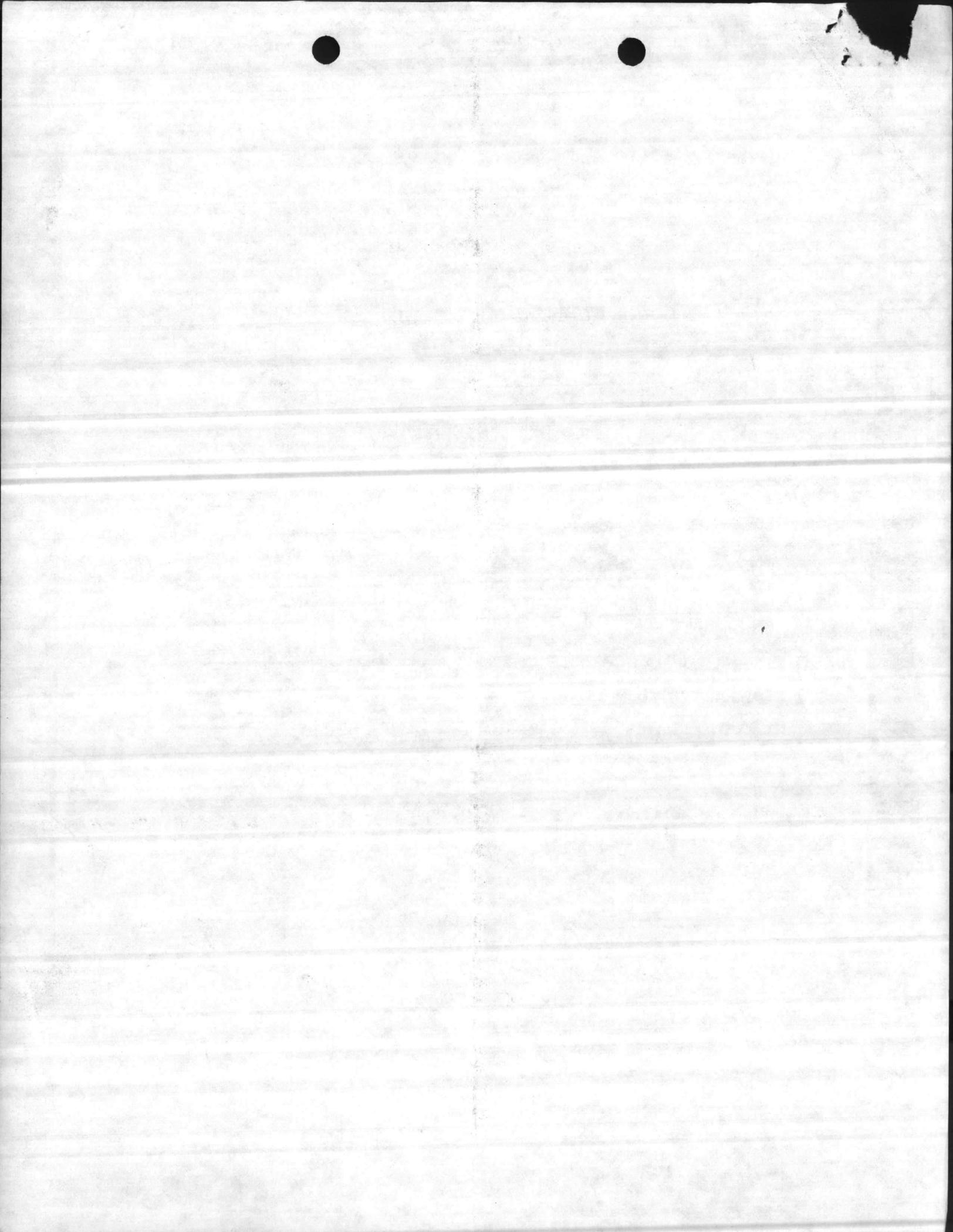
EXPIRATION DATES 1-31-86 _____

8-75 60320 C (rev. 7/62)

2706

ENCLOSURE (3)

2007



Price List

General Services Administration
Federal Supply Service

Authorized Federal Supply Schedule
Catalog Price List

FSC Group 66, Part II, Section P
Contract Number: GS-00F-70592

Contractor: Advance Engineering Company
Div. of J.C.M. Industries, Inc.
18255 S. Hoover Street
Cardena, California 90248
Telephone: (213) 321-3100

Business Size: small

Contract Period: September 6, 1984 through May 31, 1985

Information for Ordering Activities:

Special Item	Catalog Page	Description
66-127	1-4, 8, 12, 15, 16	Laboratory Furniture, Benches & Tables
66-128	5	Cabinets
66-130	5-14	Accessories to Laboratory Furniture
66-294	16	Tops
66-295	5-14	Accessories to Pharmacy Furniture

Maximum Order Limitation: \$100,000 for each special item.

Minimum Order Limitation: \$50

Delivery Area: The 48 Contiguous States & District of Columbia or Point of Export for shipments outside these areas.

Discount from List Prices: 17%

Prompt Payment Discount: 1/2% 20 days, Net 30 days.

Delivery Time: Within 90 day period after receipt of order.

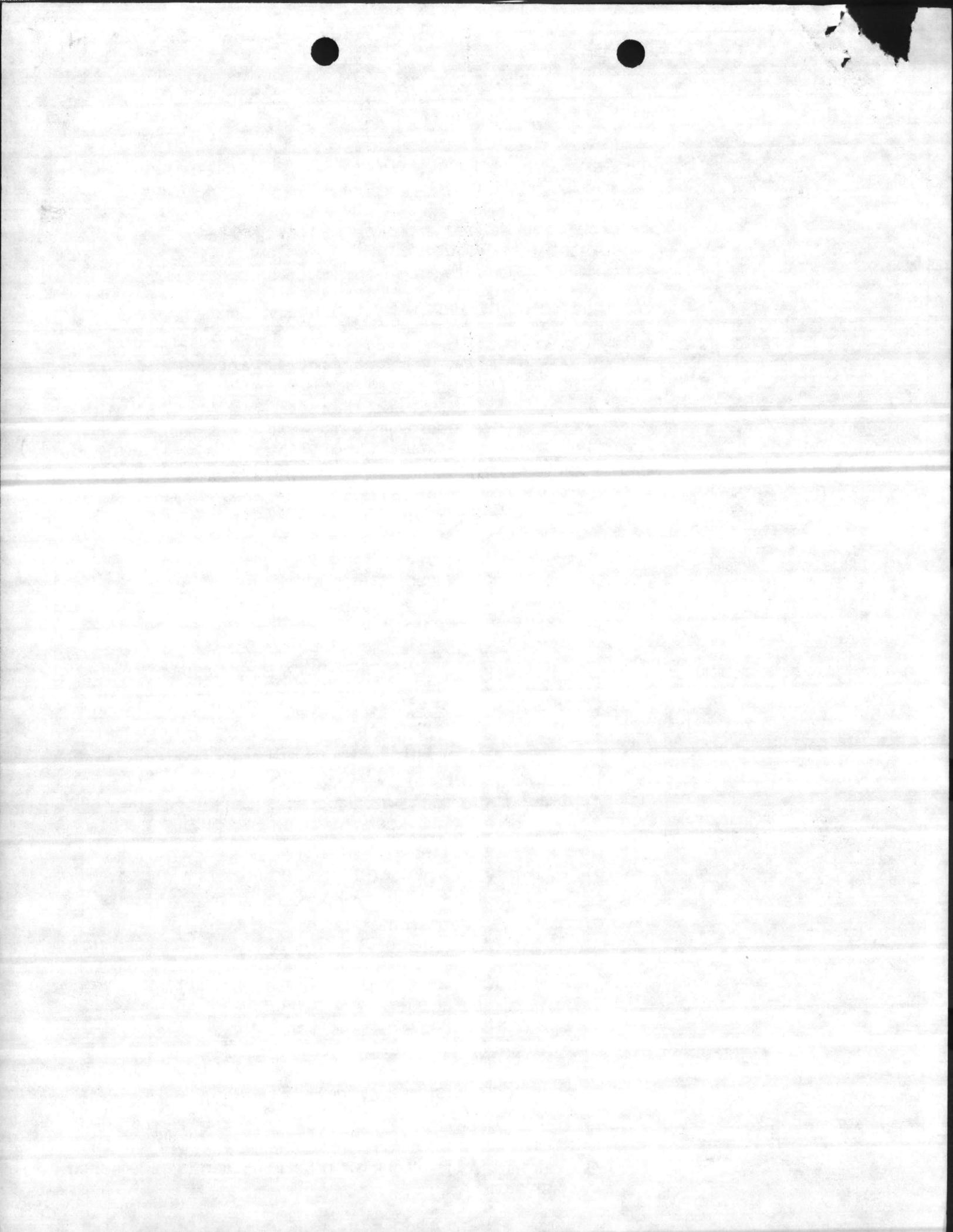
F.O.B. Point: F.O.B. Destination within the 48 contiguous States and the District of Columbia. Outside these areas shipment is F.O.B. Point of Export. (Benches are shipped "knocked down", packaged to ensure safe arrival. Components including electrical connections, are easily assembled by customer personnel; pictorial instructions are included.)

Ordering & Payment Address: See List of Authorized Dealers.

Warranty Provisions: As they appear on inside back cover of Catalog.

Assistance in layouts, planning & proper function to be furnished by contractor.

ENCLOSURE (3)

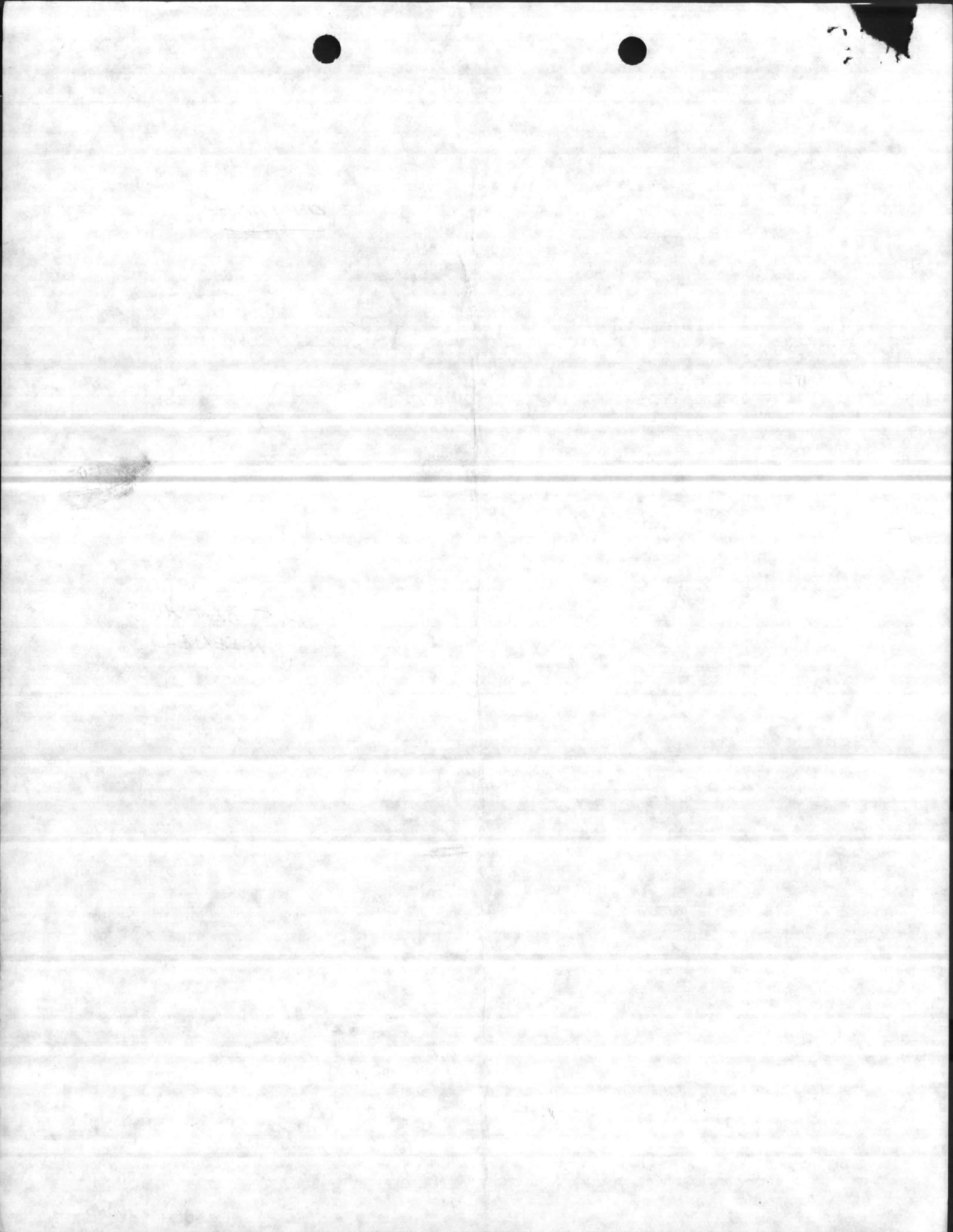


ADVANCE 2000 SERIES BENCHES - *CAL/MSLS*
Proposal No. 90-2022-85 - *C.E. SHOP*

- 24 #800 Benches
60"L x 36"D x 36"H
1. 1820 Instrument Shelf sloped 20 degrees
 2. EC11 Instrument Shelf Electrical Circuit with interconnect
 3. NEC AC Electrical Circuit w/cord at position 6
 4. 28 VDC Electricals with twist lock connections at position 1
 5. B Back Panel Upper
 6. LIS Undershelf Light
 7. GFI Protection for AC Circuit
 8. Micastat Static Dissipative Laminate ~~on~~ Worksurface and Instrument Shelf
 9. 2 Cabinets with locks for 8" x 16" x 20" tool boxes
 10. GBBP Grounding System

PRICE EACH.....\$1,853.00

*35 BENCHES
NEEDED*



OLSEN ASSOCIATES, INC.

ENGINEERS • ARCHITECTS • SURVEYORS

WM. H. SIGMON, A.I.A.
L. C. CHEEK, JR., P.E.
J. C. BROWN, P.E.



P. O. BOX 10666
TELEPHONE 919/834-0781
1330 ST. MARY'S STREET
RALEIGH, N. C. 27605

ASSOCIATES:

J. H. MAYNARD, JR., P.E.
K. L. HARROD
R. E. HILDEBRAN, P.E.
D. N. LEE, P.E.
W. M. PEERY, A.I.A.
J. W. JOHNSON, P.E.
J. S. PORTER, P.E.
T. B. DAMERON, P.E.

March 25, 1987

Mr. Larry Brant
Planning Division
Public Works Office
Building 1005
Marine Corps Base
Camp Lejeune, NC 28542

Subject: Field Maintenance Complex - Increment I
FY87 Project P-257

Dear Mr. Brant:

We were telephoned by Mr. S. Mitro of LANTDIV concerning the Air Permit Application for the water wash paint spray booth in the subject project. He stated that several items such as pollutants and emission rates before and after control are needed in order to complete this application. I have included a copy of this permit application form with yellow highlighting to indicate the items for which we need input from the user or from the Base Environmental Officer. Please have the user or the environmental officer complete these areas of the application and return it to us as soon as possible.

Please do not hesitate to contact me if you have questions concerning this application. Thank you for your help.

Yours very truly,

OLSEN ASSOCIATES, INC.

A handwritten signature in dark ink, appearing to read 'Dale N. Lee'.

Dale N. Lee, P.E.

DNL:agm
Enclosure

cc: Mr. S. Mitro (Code 1141)
Ms. S. M. Gale, P.E. (Code 09A21B3)



WORLD OF

WORLD OF

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.): Field Maintenance Complex P-257	Date 3-6-87	FOR DEM USE ONLY DATE RECEIVED: _____ PERMIT NUMBER: _____ DATE ISSUED: _____		
2. Site Location (St./Rd./Hwy.): Marine Corps Base, Camp Lejeune,	City Camp Lejeune,		Zip Code 28542	County Onslow
Latitude	Longitude		SIC Code	
3. Mailing Address (P. O. Box/St./Rd./Hwy.): Commanding General, Marine Corps Base				
City Camp Lejeune,	State N.C.		Zip Code 28542	Phone with Area Code
4. Applicant Technical Contact: T. Barker Dameron,	Title Mechanical Engineer,	Phone with Area Code 919-834-0781		

5. Description of operation conducted at above facility:

6. 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.
Painting of engine components	1	Waterwash paint spray booth	1

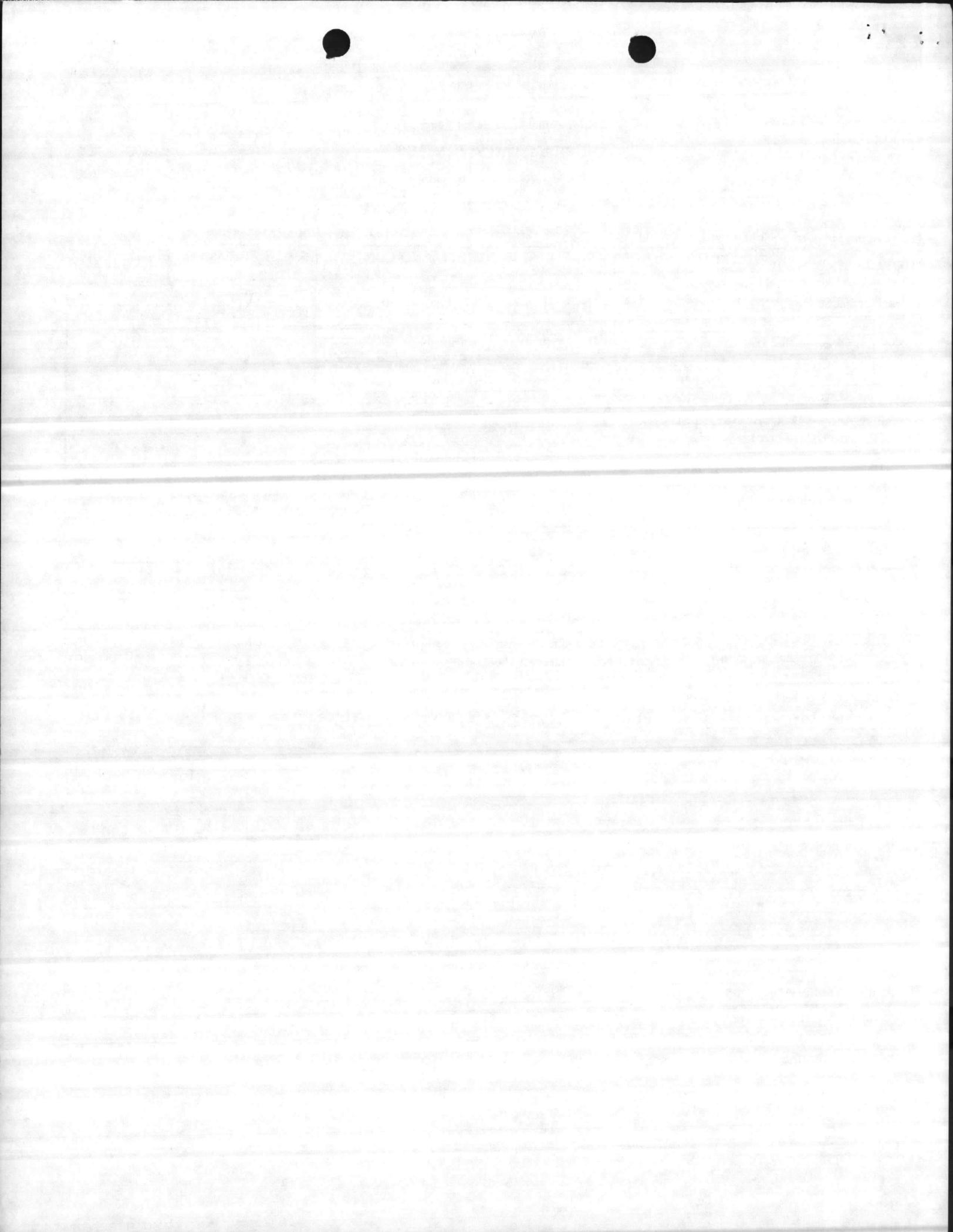
USE SEPARATE SHEET(S) IF NEEDED

7. Maximum facility operation: 8 Hours/Day 5 Days/Week 52 Weeks/Year

8. Name and address of engineering firm that prepared application or plans:
Olsen Associates, Inc., P. O. Box 10666, Raleigh, N. C. 27605

9. Signature of responsible person or company official:

Signer's Name (TYPE OR PRINT) Title Date _____
Phone with Area Code



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)
Waterwash paint spray booth - #1
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:
Painting of engine components
4. Narrative Description of Control Device(s):
Paint solids are trapped in the water curtain. The surface particles are recirculated through a baffle system to break down the paint solids.

Manufacturer <u>DeVilbiss</u>	Model Name <u>Turboclean-Low Changer</u>	Model Number <u>TL-L</u>
5. Estimated Cost of Control Device \$ <u>6595</u>	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 _____, 19____ Operation Date _____, 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):

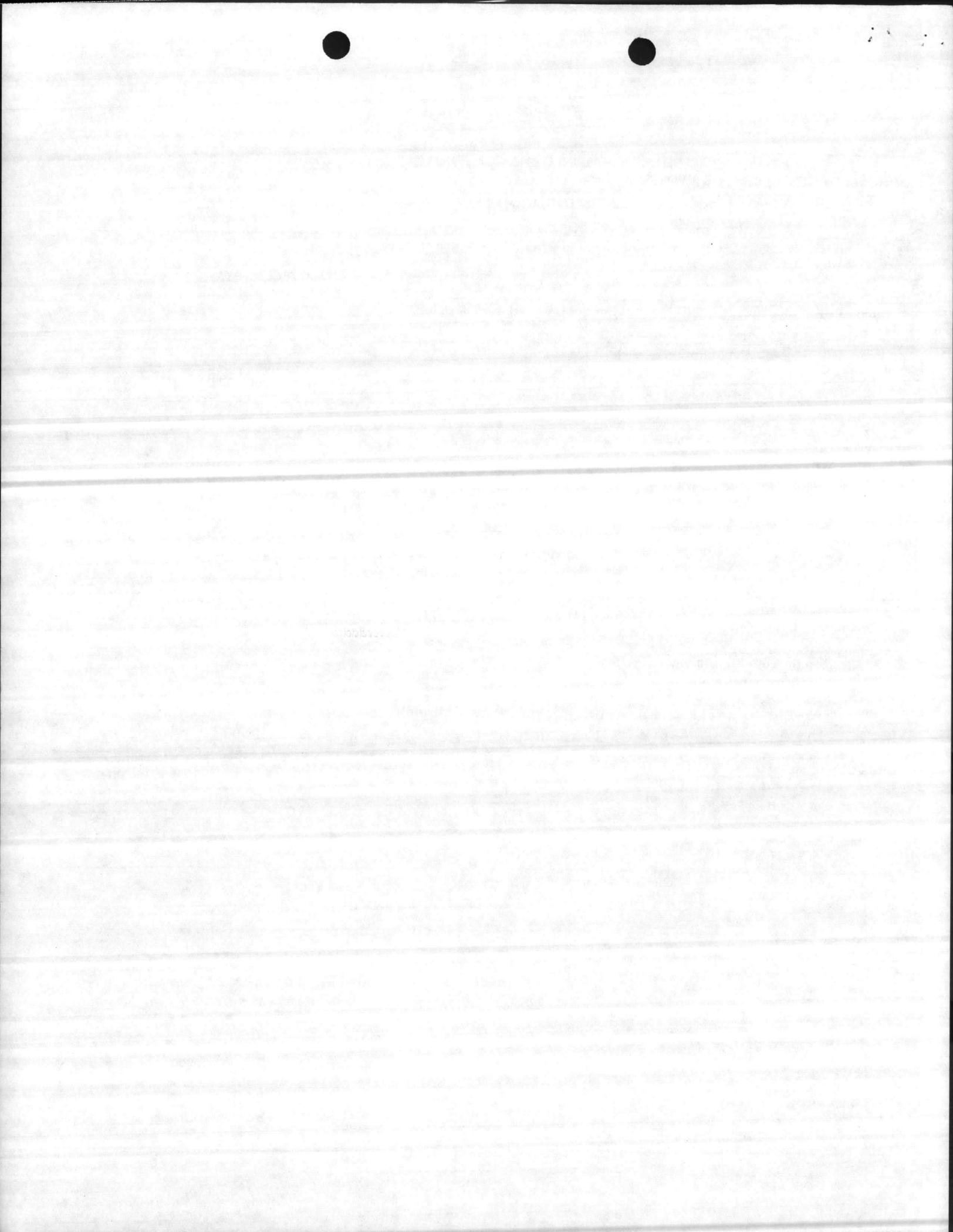
_____ 0-1	_____ 1-10	_____ 10-25	_____ 25-50	_____ 50-100	_____ Over 100
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8. Gas Conditions at Control Device:	INLET	INTERMEDIATE LOCATIONS	OUTLET
Flow Rate (ACFM) =	_____	_____	_____
Temperature (Deg. F) =	_____	_____	_____
Velocity (ft./sec.) =	_____	_____	_____
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.) <u>3.14 ft²</u>	Direction of Exit (up, down, or horizontal) <u>Up</u>	Are there obstructions over the stack? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes, (specify)
Is scaffolding available for sources testing? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		Are sampling ports available? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	

11. Comments:



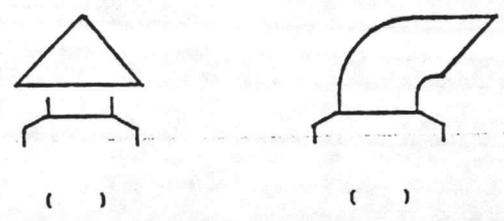
SUPPLEMENTAL DATA FOR AIR CONTROL DEVICES

12. ***** "CYCLONE" (MECHANICAL SEPARATORS) *****

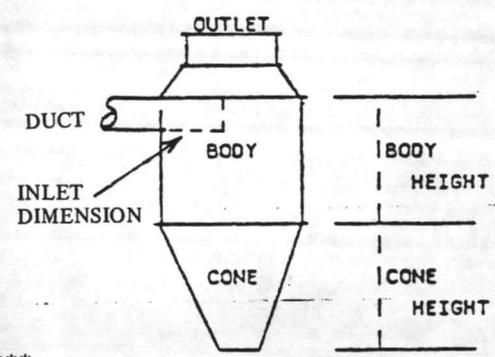
Efficiency (%)	Volumetric Flow Rate (ACFM)	Pressure Drop (in. H ₂ O)	Baffles or Louvers (specify)	Position in Series # _____ of _____ Units	
Cyclone Dimensions (inches) Inlet Outlet		Cyclone Body Diameter (inches)	Cyclone Body Height (ft.)	Cyclone Cone Height (ft.)	
Wet Spray () No () Yes	No. of Nozzles	Liquid Used (specify)	Flow Rate (GPM)	Makeup Rate (GPM)	% Recirculated

A process flow diagram must be attached. If cyclone is routed to another cyclone or other equipment, show sketch of entire system.

CYCLONE DIAGRAM
CHECK APPROPRIATE OUTLET CONFIGURATION BELOW



SKETCH OTHER CONFIGURATION ON DIAGRAM Below



13. ***** "MULTICYCLONE" *****

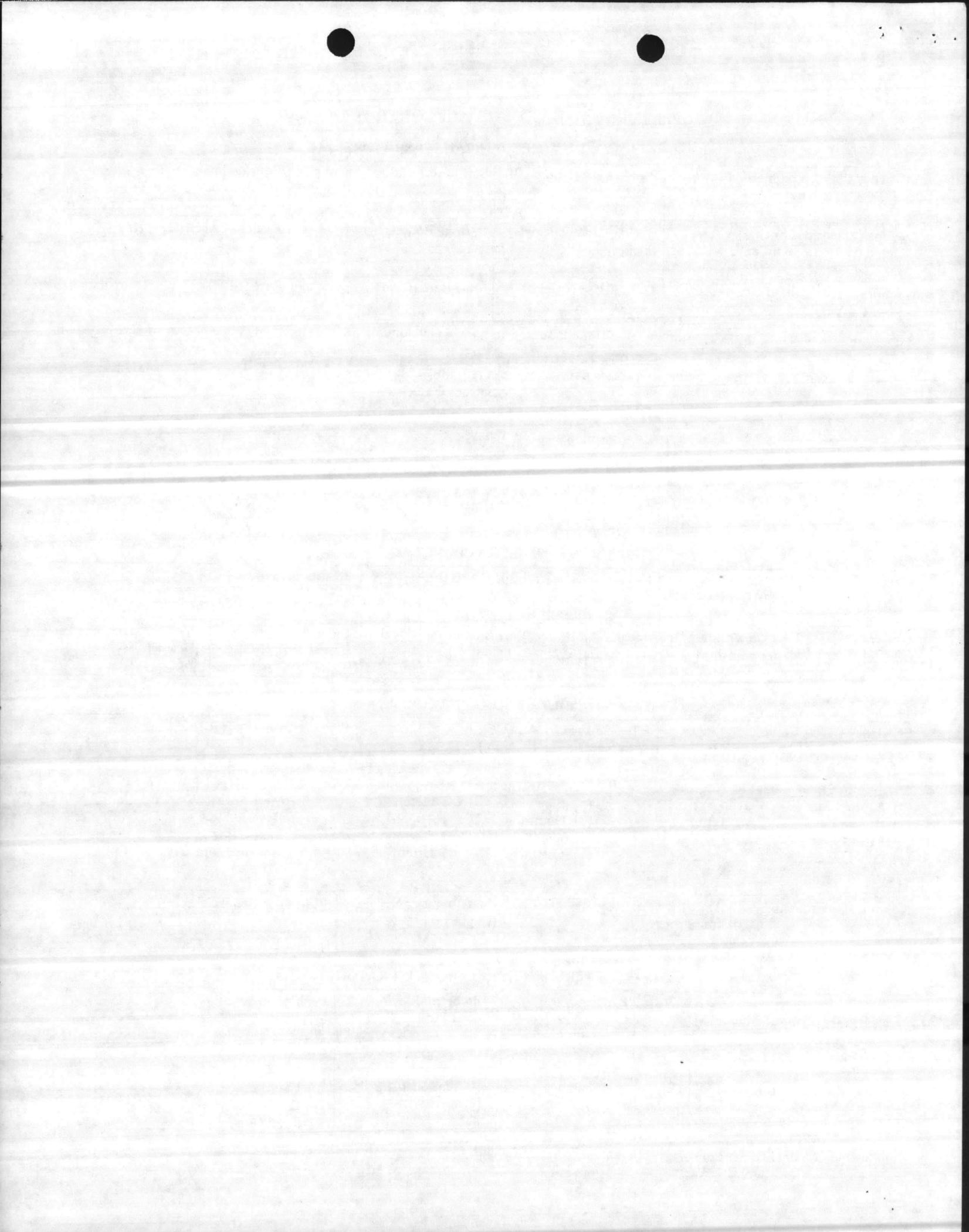
Efficiency (%)	Volumetric Flow Rate (ACFM)	No. of Cones	Pressure Drop (In. H ₂ O)	Position in Series # _____ of _____ Units	
Louvers () No () Yes	Inlet Dimension of Individual Cyclone (inches)	Outlet Dimension of Individual Cyclone (inches)	Individual Cyclone Diameter (inches)	Inlet Temperature (Deg. F)	

14. ***** "FILTRATION" (BAGHOUSE) *****

Efficiency (%)	Volumetric Flow Rate (ACFM)	Filter Surface Area (sq. ft.)	Air-to-Filter Area Ratio (ft./min.)	Pressure Drop (in. H ₂ O)
TYPE OF FILTER <input type="checkbox"/> Fabric Filter (BAGHOUSE) <input type="checkbox"/> Packed Bed <input type="checkbox"/> Mat Filter <input type="checkbox"/> Panel Filter <input type="checkbox"/> Other _____		FILTER MATERIAL <input type="checkbox"/> Fiberglass <input type="checkbox"/> Nylon <input type="checkbox"/> Nomex <input type="checkbox"/> Teflon <input type="checkbox"/> Wool <input type="checkbox"/> Dacron <input type="checkbox"/> Cotton <input type="checkbox"/> Orlon <input type="checkbox"/> Other _____		BAG CLEANING <input type="checkbox"/> Mechanical <input type="checkbox"/> Sonic <input type="checkbox"/> Reverse Flow <input type="checkbox"/> Air Pulse <input type="checkbox"/> Simple Bag Collapse <input type="checkbox"/> Ringed Bag Collapse <input type="checkbox"/> Other _____
No. of Compartments	Time Between Cleaning (mins./hr.)	Inlet Temperature (Deg. F)	Position in Series # _____ of _____ Units	

15. ***** "AFTERBURNER" (FUME INCINERATOR) *****

Type of Afterburner: <input type="checkbox"/> Direct Flame <input type="checkbox"/> Catalytic <input type="checkbox"/> Other _____	Efficiency (%)	Volumetric Flow Rate (CFM)	Position in Series # _____ of _____ Units
Maximum Burner Rating (Million BTU/hr)	Combustion Chamber Temp. (Deg. F)	Retention Time (sec.)	Fuel Type _____ Usage _____
Combustion Chamber Dimensions (ft.): _____ Length _____ Diameter			



SUPPLEMENTAL DATA FOR AIR CONTROL DEVICES — continued

16. * "SCRUBBER" *****

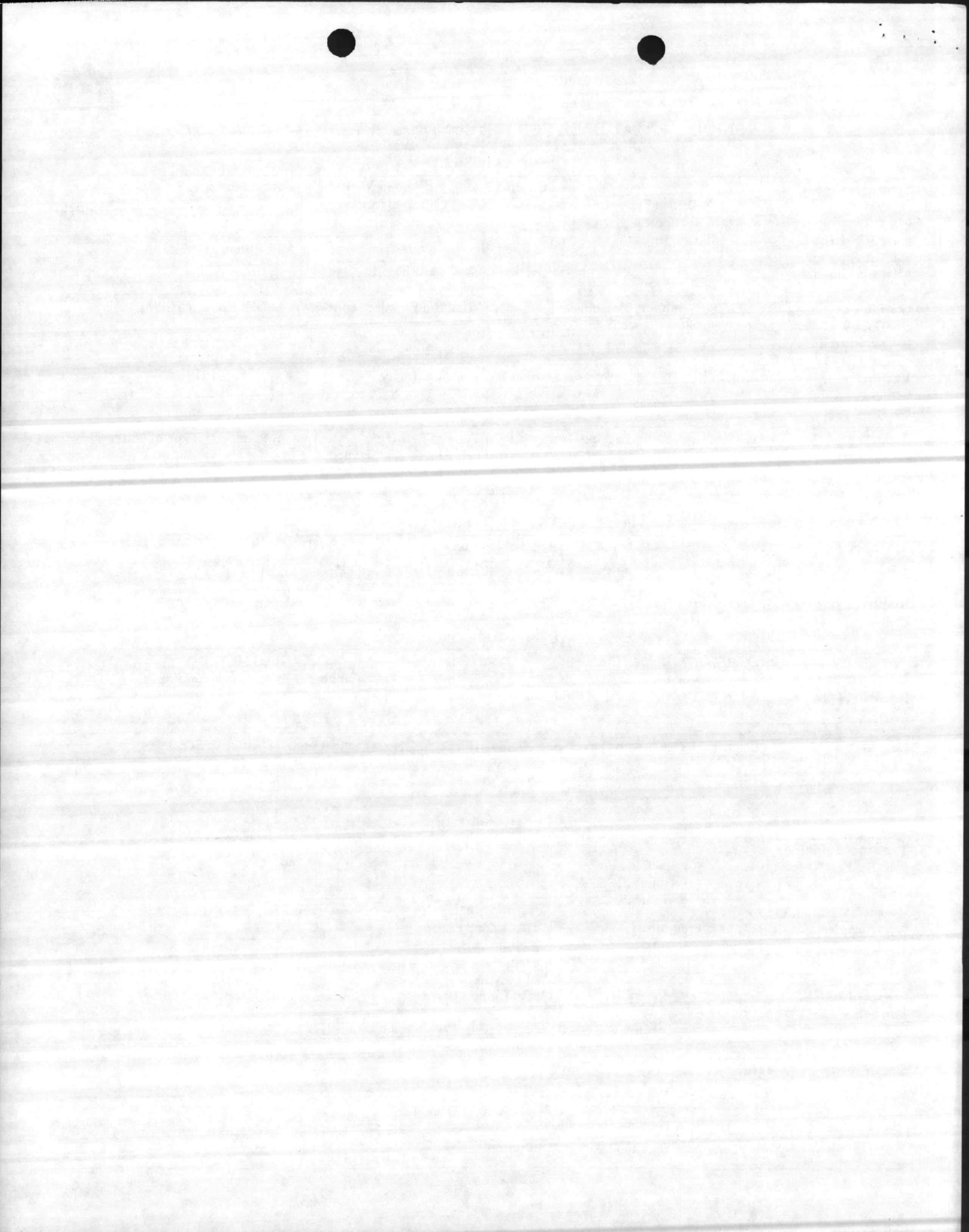
Type of Scrubber: <input type="checkbox"/> Venturi <input type="checkbox"/> Orifice Type <input type="checkbox"/> Impingement Plate <input type="checkbox"/> Cyclonic <input type="checkbox"/> Packed Tower <input type="checkbox"/> Condenser <input type="checkbox"/> Gravity Tower <input type="checkbox"/> Other _____ <input type="checkbox"/> Mist Eliminator		Efficiency (%)	Volumetric Flow Rate (ACFM)	Position in Series # _____ of _____ Units	
		Pressure Drop (in. H ₂ O)	Inlet Temperature (Deg. F)	Mist Eliminator Filter Area (sq. ft.)	
Gas Flow <input type="checkbox"/> Countercurrent <input type="checkbox"/> Concurrent	Liquid Scrubbing Medium and Additives (specify)	Total Liquid Injection (GPM)		Make Up Rate (GPM)	
Venturi Scrubber Data:	Inlet Area (sq. in.)	Throat Area (sq. in.)	Throat Velocity (ft./sec.)	<input type="checkbox"/> Fixed Throat <input type="checkbox"/> Variable Throat	
Packed or Plate Tower Data:	Surface Area (sq. ft.)	Packing Depth (ft.)	Type of Packing: <input type="checkbox"/> Rings <input type="checkbox"/> Saddles <input type="checkbox"/> Other _____	No. of Plates	Type of Plates

17. * "ELECTROSTATIC PRECIPITATOR" *****

Efficiency (%)	Volumetric Flow Rate (CFM)	Total Collection Plate Area (sq. ft.)	Pressure Drop (in H ₂ O)	Inlet Temperature (Deg. F)	
Resistivity of Pollutant (OHM-CM)	Gas Viscosity (poise)	Charging Field Strength (volts)		Collecting Field Strength (volts)	
PRECIPITATOR TYPE			CLEANING METHOD		
<input type="checkbox"/> Single Stage	<input type="checkbox"/> Low Voltage	<input type="checkbox"/> Hot Side	<input type="checkbox"/> Plate Rapping	<input type="checkbox"/> Washing	
<input type="checkbox"/> Two Stage	<input type="checkbox"/> High Voltage	<input type="checkbox"/> Cold Side	<input type="checkbox"/> Plate Vibrating	<input type="checkbox"/> None	
<input type="checkbox"/> Other _____			<input type="checkbox"/> Other _____		
Corona Power (Watts/1000 cfm)	Electrical Usage (kw./hr.)	No. of Compartments	No. of Cells/Comp.	Position in Series # _____ of _____ Units	

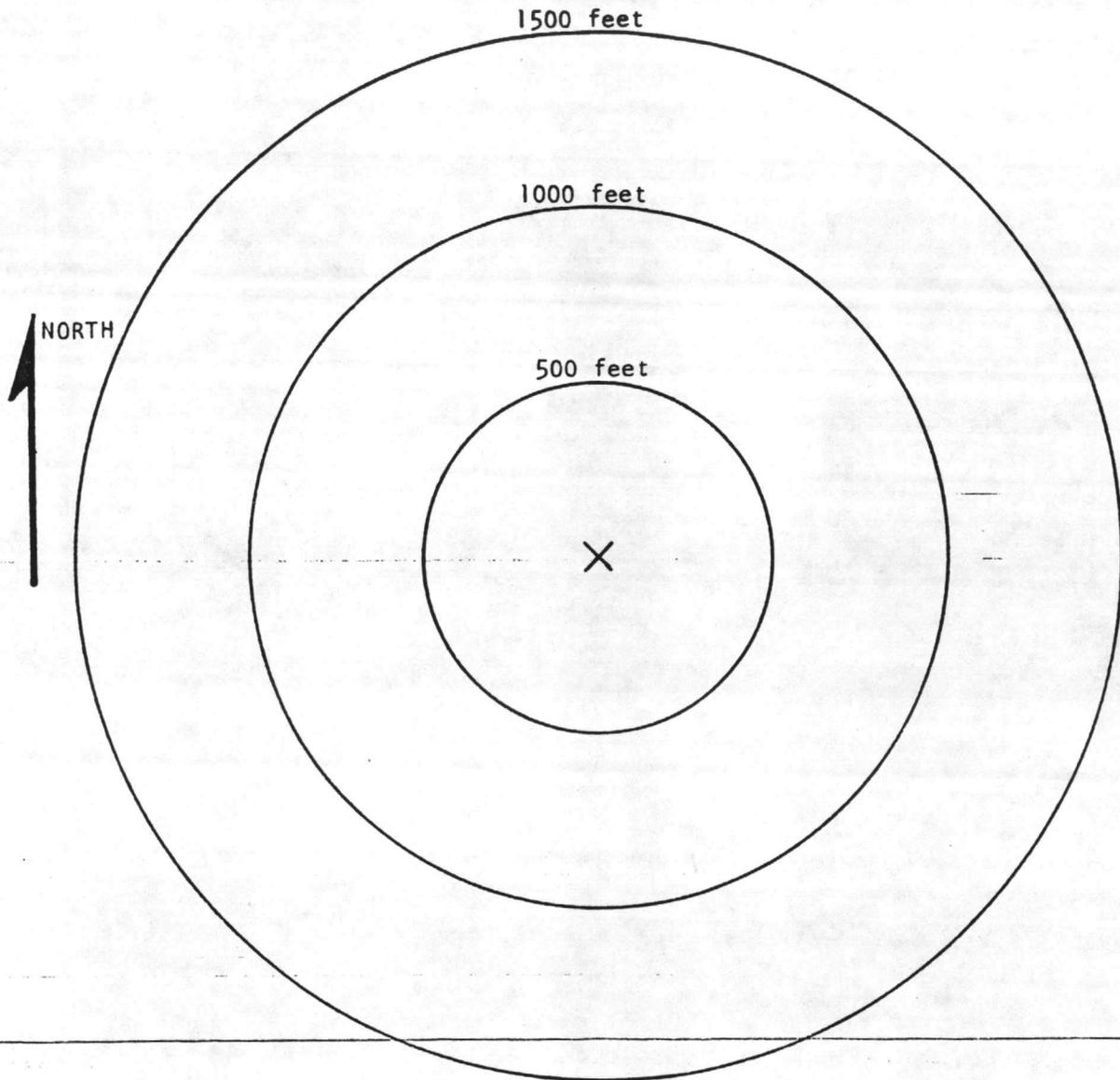
18. * "ADSORPTION" *****

Type of Adsorption: <input type="checkbox"/> One-Pass Regenerative <input type="checkbox"/> Recirculating <input type="checkbox"/> One-Pass Nonregenerative <input type="checkbox"/> Other _____		Efficiency (%)	Volumetric Flow Rate (ACFM)		
Regenerative Method: <input type="checkbox"/> Discarded <input type="checkbox"/> Thermal (dry heat) <input type="checkbox"/> Chemical <input type="checkbox"/> Thermal (steam) <input type="checkbox"/> Other _____		Adsorption Material: <input type="checkbox"/> Activated Carbon <input type="checkbox"/> Hydrous Silicated <input type="checkbox"/> Other _____		Position in Series # _____ of _____ Units	
Pressure Drop (in H ₂ O)	Inlet Temperature (Deg. F)	No. of Compartments	How are emissions controlled during regeneration? _____		
Size of Adsorbent Bed (ft.)					
Length _____, Width _____, Height _____, Diameter _____					
Regenerative Schedule: Maximum Time for Desorption _____					
Length of Time to Maximum Saturation _____					

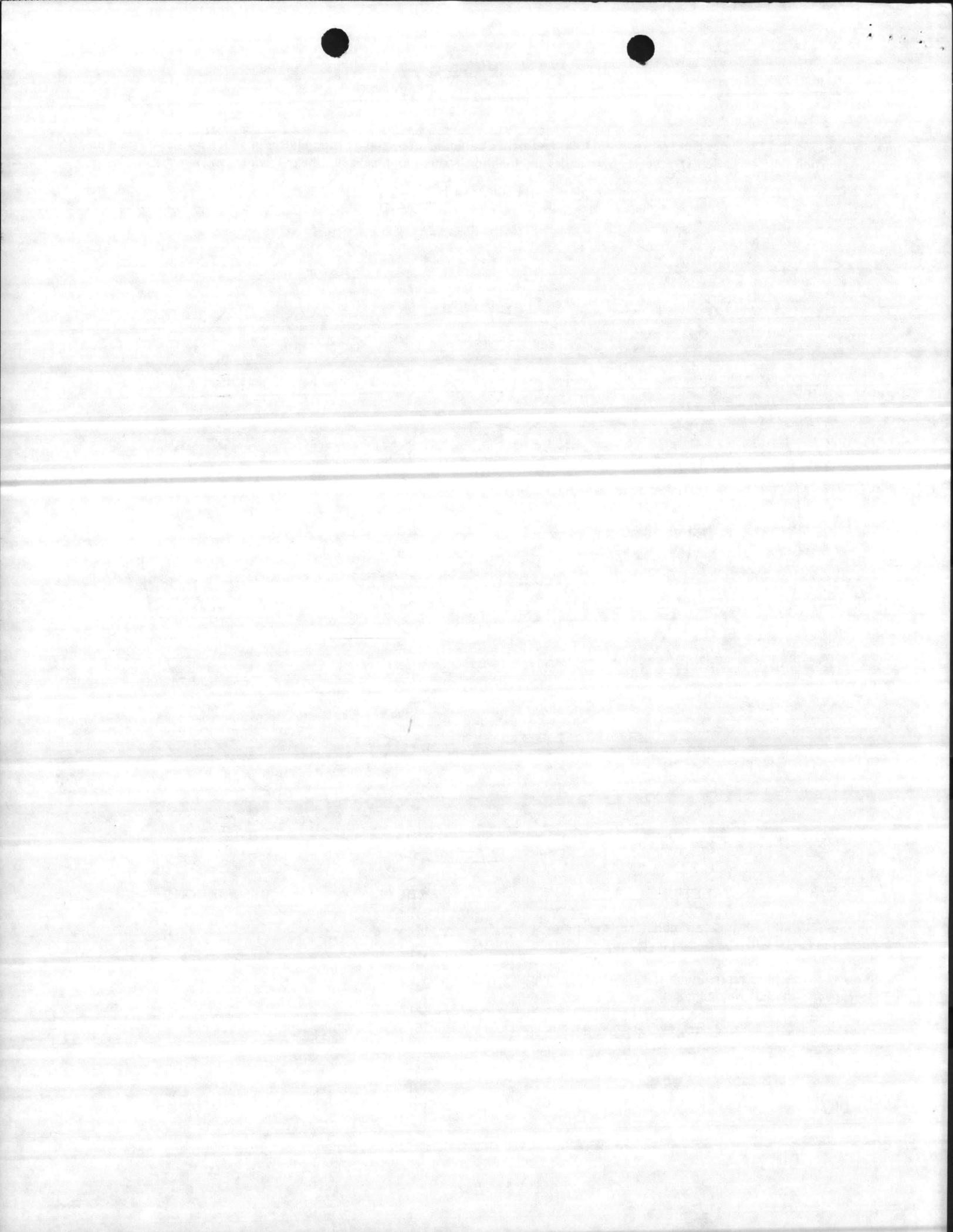


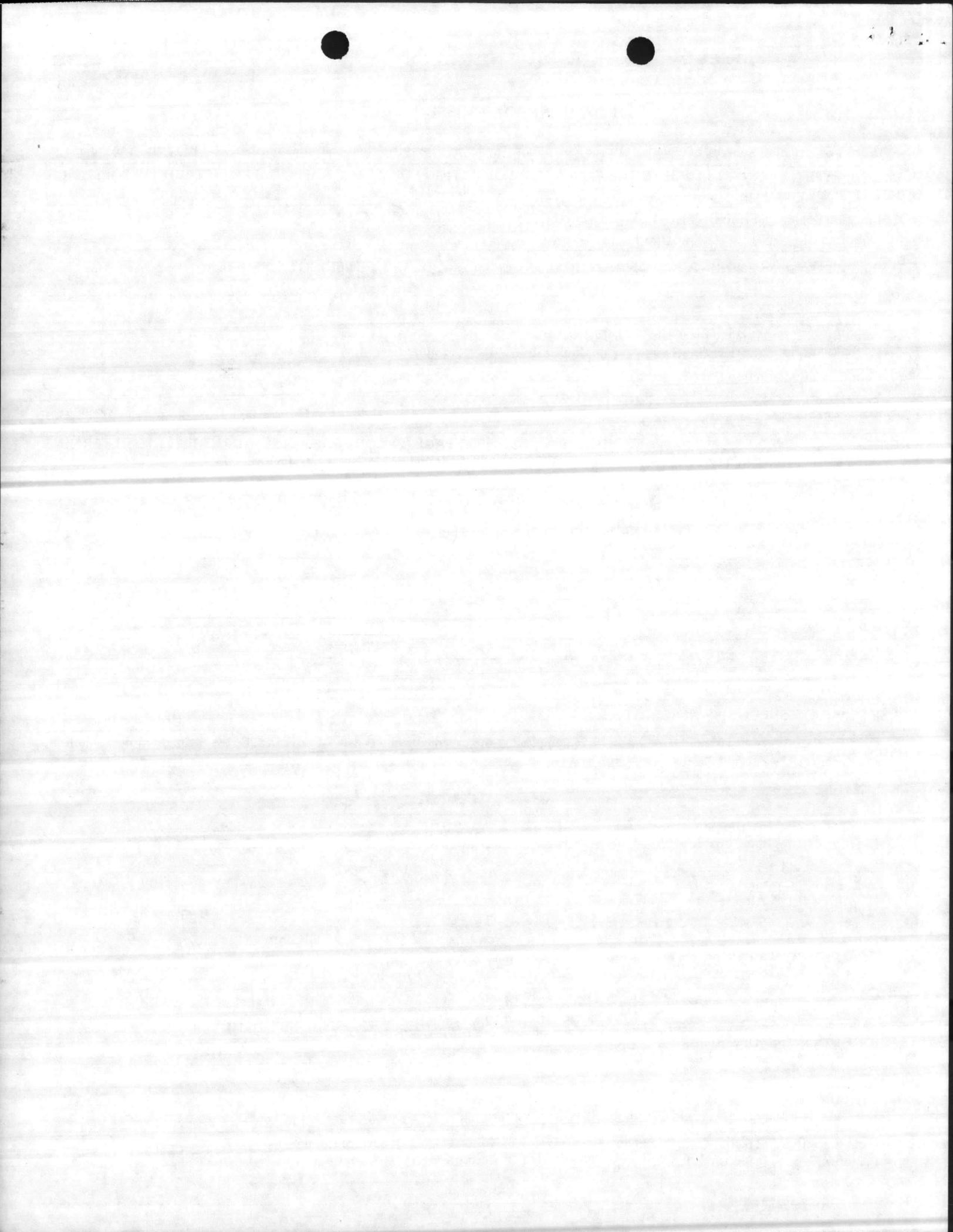
AREA DIAGRAM

Show all surrounding buildings and roads within 1500 feet of the equipment covered by this application. Attach a site diagram identifying each emission source location(s), property boundaries and building (structure) dimensions (height, width, and length).



INSTRUCTIONS	CODE	DESCRIPTION
1. Indicate location and type of building by the use of small numbered circles with the description below.	(1)	
	(2)	
2. Show roads as lines representing the road edges. Indicate street names and highway numbers.	(3)	
	(4)	
	(5)	
3. Show wooded or cleared area by approximate boundary lines and the words "woods", "cleared", "cornfield", etc.	(6)	
	(7)	
	(8)	
	(9)	
	(10)	
	Example:	
	(1)	Church
	(2)	Residence





PRODUCT ANALYSIS WORKSHEET
(SOLVENTS, PAINTS, FINISHING MATERIALS, ETC.)

INSTRUCTIONS: COMPLETE ONE SHEET FOR EACH TYPE OF PRODUCT. GIVE CHEMICAL NAMES, NOT BRAND NAMES OR ABBREVIATIONS. FOLLOW THESE PROCEDURES IN DETERMINING WHETHER OR NOT A PRODUCT OF VARIOUS SOLVENTS IS REACTIVE (R) OR NONREACTIVE (NR).

- A) GROUP THE CONSTITUENTS ACCORDING TO WHETHER OR NOT THEY FIT THE DESCRIPTION IN CLASS (1), (2), (3) OR NONE OF THE ABOVE CLASSES. IF A CONSTITUENT COULD FALL IN TWO GROUPS, IT IS PLACED IN THE MORE LIMITED GROUP.
- B) DETERMINE THE VOLUME PERCENT OF ALL LIQUID CONSTITUENTS OF THE PRODUCT AS APPLIED. (THIS SHOULD TOTAL 100%.)
- C) TOTAL THE VOLUME PERCENT FOR EACH CLASS (1, 2, AND 3). IF THE VOLUME PERCENT FOR ANY CLASS EXCEEDS THE PERCENT LIMIT FOR THAT CLASS OR IF THE TOTAL FOR CLASSES (1), (2), (3) EXCEEDS 20 PERCENT, THEN THE PRODUCT IS REACTIVE. IF NONE OF THESE LIMITS ARE EXCEEDED, THE PRODUCT IS NONREACTIVE.

Product Name _____	Product No. _____	This Product is Classified as: () Reactive (R) () Nonreactive (NR)
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PRODUCT COMPOSITION

ORGANIC CLASS	DESCRIPTION OF ORGANIC CLASS	NAME OF CONSTITUENTS	% BY VOLUME OF THE TOTAL VOLATILES	
			ACTUAL	% LIMIT
(1)	A COMBINATION OF HYDROCARBONS, ALCOHOLS, ALDEHYDES, ESTERS, OR KETONES HAVING AN OLEFINIC OR CYCLOOLEFINIC TYPE OF UNSATURATION EXCEPT PERCHLOROETHYLENE - 5 PERCENT	_____ _____ _____ _____ SUB-TOTAL = _____	_____ _____ _____ _____ _____	5%
(2)	A COMBINATION OF AROMATIC HYDROCARBONS WITH EIGHT OR MORE CARBON ATOMS TO THE MOLECULE EXCEPT ETHYLBENZENE - 8 PERCENT	_____ _____ _____ _____ SUB-TOTAL = _____	_____ _____ _____ _____ _____	8%
(3)	A COMBINATION OF ETHYLBENZENE, KETONES HAVING BRANCHED HYDROCARBON STRUCTURE, TRICHLOROETHYLENE, OR TOLUENE - 20 PERCENT	_____ _____ _____ _____ SUB-TOTAL = _____	_____ _____ _____ _____ _____	20%
	ALL SOLVENTS NOT LISTED ABOVE	_____ _____ _____ _____	_____ _____ _____ _____	
Product Usage (gal/hr) _____			TOTAL = _____	
Product Weight (lb/gal) _____			100%	
Weight of volatiles in product (lb/gal) _____				
Total % volatiles by volume in product _____%				

IF THE TOTAL REACTIVE PRODUCT EMISSIONS EXCEED 40 POUNDS/DAY FROM YOUR FACILITY, DESCRIBE THE CONTROL METHODS EMPLOYED FOR MEETING COMPLIANCE WITH DEM REGULATION 15 NCAC 2D .0518:

