

Check Sheet

Company Name: Naval Training Center
Permit Number: AC 48 - ~~181529~~ 181529
PSD Number: _____
Permit Engineer: _____

Application:

- Initial Application
- Incompleteness Letters
- Responses
- Waiver of Department Action
- Department Response
- Other

Cross References:

-
-
-

Intent:

- Intent to Issue
- Notice of Intent to Issue
- Technical Evaluation
- BACT or LAER Determination
- Unsigned Permit

Correspondence with:

- EPA
- Park Services
- Other
- Proof of Publication
 - Petitions - (Related to extensions, hearings, etc.)
 - Waiver of Department Action
 - Other

Final

Determination:

- Final Determination
- Signed Permit
- BACT or LAER Determination
- Other

Post-Permit Correspondence:

- Extensions/Amendments/Modifications
- Other

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

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

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

3. Article Addressed to: Capt. W.C. Davis, USN Dept. of Navy U.S. Naval Training Ctr. Public Works Office Bldg. 2025 Orlando, FL 32813-5010		4. Article Number P 256 396 237
5. Signature Addressee X <i>[Signature]</i>		Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
6. Signature - Agent		Always obtain signature of addressee or agent and DATE DELIVERED.
Date of Delivery 11-27-90		8. Addressee's Address (ONLY if requested and fee paid)

P 256 396 237
RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

U.S.G.P.O. 1989-234-555

Sent to	Capt W.C. Davis	
Street and No.	Dept of Navy	
P.O., State and ZIP Code	Orlando, FL	
Postage		\$
Certified Fee		
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt showing to whom and Date Delivered		
Return Receipt showing to whom, Date, and Address of Delivery		
TOTAL Postage and Fees		\$
Postmark or Date	11-15-90	
	AC 48-181529	

PS Form 3800, June 1985



Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

Captain N. C. Davis, USN
Department of Navy
U.S. Naval Training Center
Public Works Office, Bldg. 2025
Orlando, Florida 32813-5010

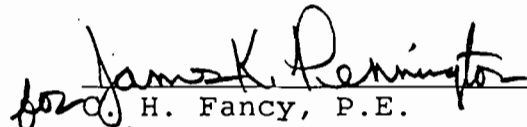
November 14, 1990

Enclosed is construction permit No. AC 48-181529 to construct a Fire Fighting/Chemical Warfare Countermeasures Training Facility in Orlando, Orange County, Florida. This permit is issued pursuant to Section 403, Florida Statutes.

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



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

Copy furnished to:

Charles Collins, Central District
Gary Wingfield, P.E.
Dennis Nester, Orange County EPD

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of buisness on 11-15-90.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to
§120.52(9), Florida Statutes, with
the designated Department Clerk,
receipt of which is hereby
acknowledged.

Ken Jaker
Clerk

11-15-90
Date

Final Determination

U.S. Naval Training Center
Orlando, Florida
Orange County

Fire Fighting/Chemical Warfare Countermeasures
Training Facility

Permit Number:
AC 48-181529

Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

November 9, 1990

Final Determination

The Technical Evaluation and Preliminary Determination for the permit to construct a Fire Fighting/Chemical Warfare Countermeasures Training Facility at the U.S. Naval Training Center in Orlando, Orange County, Florida, was distributed on June 29, 1990. The Notice of Intent to Issue was published in the Orlando Sentinel on September 19, 1990. Copies of the evaluation were available for public inspection at the Department's offices in Orlando and Tallahassee and the Orange County Environmental Protection Department in Orlando.

No public comments were submitted on the Department's Intent to Issue the permit. In response to comments within the Department, Specific Conditions Nos. 3, 4, and 5 were modified to be consistent with the general visible emissions regulations. The final action of the Department will be to issue construction permit No. AC 48-181529 as proposed in the Technical Evaluation and Preliminary Determination except for the changes discussed.



Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

PERMITTEE:
U.S. Naval Training Center
Public Works Office, Bldg. 2025
Orlando, Florida 32813-5010

Permit Number: AC 48-181529
Expiration Date: August 1, 1992
County: Orange
Latitude/Longitude: 28°34'05"N
81°20'14"W
Project: Fire Fighting/Chemical
Warfare Countermeasures Facility

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction of a fire fighting/chemical warfare countermeasures training facility to include trash, bilge, and electrical panel fire simulator structures, propane/triaryl-phosphate smoke simulator equipment, water, sodium bicarbonate (PKP), Ultrawet K (AFFF), and carbon dioxide fire extinguisher systems, and a gas chamber. Fans will be used to ventilate the fire simulator and gas chamber structures. The UTM coordinates of the site are Zone 17, 467.8 km East and 3160.0 km North.

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

Attachments are listed below:

1. Application

PERMITTEE:
U.S. Naval Training Center

Permit Number: AC 48-181529
Expiration Date: August 1, 1992

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

PERMITTEE:
U.S. Naval Training Center

Permit Number: AC 48-181529
Expiration Date: August 1, 1992

GENERAL CONDITIONS:

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

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

PERMITTEE:
U.S. Naval Training Center

Permit Number: AC 48-181529
Expiration Date: August 1, 1992

GENERAL CONDITIONS:

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

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

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

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

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

13. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and

PERMITTEE:
U.S. Naval Training Center

Permit Number: AC 48-181529
Expiration Date: August 1, 1992

GENERAL CONDITIONS:

records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

14. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

1. The fire fighting/chemical warfare countermeasures training facility operation is limited to daylight hours only, unless prior approval is obtained from the Department's Central District.

2. The 8 and 24-hour concentration of any chemicals used to simulate smoke, at ground level outside the fire fighting training facility, shall not exceed two percent (2%) of the threshold limit values published by the American Conference of Governmental Industrial Hygienists. Tests will be by methods acceptable to the Department when there are reasons to believe this specific condition is being violated.

3. Visible emissions from the facility as determined by EPA Method 9, which is described in 40 CFR 60, Appendix A (July 1, 1988 version), shall not exceed 20 percent opacity, six (6) minute average. These readings shall be used to determine the compliance status of the source.

PERMITTEE:
U.S. Naval Training Center

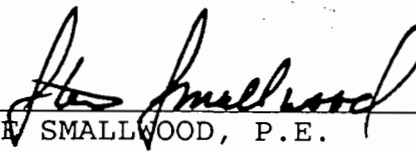
Permit Number: AC 48-181529
Expiration Date: August 1, 1992

SPECIFIC CONDITIONS:

4. Operation of the facility shall cease anytime the visible emissions on a road open to traffic exceeds 20% opacity.
5. No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.
6. Upon obtaining a permit to operate, the permittee will be required to submit annual operation reports which shall include, as a minimum, the type and amount of chemicals used at the facility during the preceding calendar year.
7. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).
8. An application for an operation permit must be submitted to the Department's Central District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

Issued this 13th day
of November, 1990

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



STEVE SMALLWOOD, P.E.
Director
Division of Air Resources
Management



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

Interoffice Memorandum

TO: Steve Smallwood
 FROM: Clair Fancy *ctf*
 DATE: November 9, 1990
 SUBJ: Approval of Construction Permit No. AC 48-181529
 Department of Navy
 U.S. Naval Training Center

Attached for your approval and signature is a permit prepared by the Bureau of Air Regulation for the above mentioned company to construct a Fire Fighting/Chemical Warfare Countermeasures Training Facility in Orlando, Orange County, Florida.

No public comments were received during the notice period.

Day 90, after which this permit will be issued by default, is January 2, 1991.

I recommend your approval and signature.

CF/WH/plm

Attachments

Pat 11-9-90

*Please make
changes shown*

(12)

under

*Stues changes
make*

BA



DEPARTMENT OF THE NAVY

SOUTHERN DIVISION

NAVAL FACILITIES ENGINEERING COMMAND

2155 EAGLE DR., P. O. BOX 10068

CHARLESTON, S. C. 29411-0068

PLEASE ADDRESS REPLY TO THE
COMMANDING OFFICER, NOT TO
THE SIGNER OF THIS LETTER.
REFER TO:

5090/P3
Code 18132

17 OCT 1990

RECEIVED
OCT 22 1990
DER-BAQM

Mr. C. H. Fancy
Chief, Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Bldg.
2600 Blair Stone Road
Tallahassee, FL 32399-2400

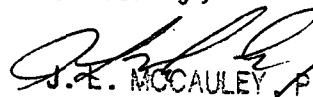
Subj: FIREFIGHTING TRAINING FACILITY, NAVAL TRAINING CENTER, ORLANDO

Dear Mr. Fancy:

The Proof of Publication for the subject project is forwarded for your information and use. Please issue the necessary permit at your earliest convenience.

Should you have any questions, please contact Mr. Chandra Sheth, Code 18132, at (803) 743-0553.

Sincerely,


J. E. MCCAULEY, P.E.
HEAD, ENVIRONMENTAL ENGINEERING
BRANCH

Encl:

(1) Proof of Publication,
Notice of Intent to Issue Permit

Copy to:

NTC Orlando (Bill Raspert, PW) (w/encl)

cc: W. Hanks
C. Collins

The Orlando Sentinel

Published Daily
Orlando, Orange County, Florida

ADVERTISING CHARGE \$183.35

State of Florida) ss.
COUNTY OF ORANGE

Before the undersigned authority personally appeared _____
Noemi R. Lucero _____, who on oath says that
she is the Legal Advertising Representative of the Orlando Sentinel, a Daily newspaper
published at Orlando, in Orange County, Florida; that the attached copy of ad-
vertisement, being a Notice of Intent to Issue in the matter of
Department of Navy, U.S. Naval Training Center
in the _____ Court,
was published in said newspaper in the issues of _____
September 19, 1990

Affiant further says that the said Orlando Sentinel is a newspaper published at Orlando, in
said Orange County, Florida, and that the said newspaper has heretofore been continuously
published in said Orange County, Florida, each Week Day and has been entered as second-
class mail matter at the post office in Orlando, in said Orange County, Florida for a period of
one year next preceding the first publication of the attached copy of advertisement; and af-
fiant further says that he/she has neither paid nor promised any person, firm or corporation
any discount, rebate, commission or refund for the purpose of securing this advertisement for
publication in the said newspaper.

Sworn to and subscribed before me this 20th day
of September A.D. 19 90

Maquita Rosado
Notary Public
State of Florida at Large
My Commission Expires:
June 18, 1994

Notary Public

FORM NO. AD-262

State of Florida
Department of Environmental
Regulation

Notice of Intent to Issue

The Department of Environ-
mental Regulation hereby gives
notice of its intent to issue a per-
mit to the Department of Navy,
U.S. Naval Training Center, Pub-
lic Works Office, Bldg. 2025, Or-
lando, Florida 32813-5010, for
the construction of a fire fight-
ing/Chemical Warfare Counter-
measure training facility at the
U.S. Naval Training Center on
Corrine Drive in Orlando, Or-
ange County, Florida. The new
facility will replace the existing
practice used for this training at
this center. The facility will emit 2
TPY particulate matter, trace
amounts of the products of com-
bustion, and 0.023 TPY tear gas.
A determination of Best Avail-
able Control Technology (BACT)
was not required. These emis-
sions will not cause a violation of
any ambient air quality standard
or Prevention of Significant De-
terioration (PSD) increment. The
Department is issuing this Intent
to Issue for the reasons stated in
the Technical Evaluation and
Preliminary Determination.

A person whose substantial
interests are affected by the De-
partment's proposed permitting
decision may petition for an ad-
ministrative proceedings (hear-
ing) in accordance with Section
120.57, Florida Statutes. The pe-
tition must contain the informa-
tion set forth below and must be
filed (received) in the Office of
General Counsel of the Depart-
ment at 2600 Blair Stone Road,
Tallahassee, Florida 32399-2400,
within fourteen (14) days of pub-
lication of this notice. Petitioner
shall mail a copy of the petition
to the applicant at the address
indicated above at the time of fil-
ing. Failure to file a petition with-
in this time period shall consti-
tute a waiver of any right such
person may have to request an
administrative determination
(hearing) under Section 120.57,
Florida Statutes.

The Petition shall contain the
following information:

- (a) The name, address, and
telephone number of each peti-
tioner, the applicant's name and
address, the Department Permit
File Number and the county in
which the project is proposed;
- (b) A statement of how and
when each petitioner received
notice of the Department's ac-
tion or proposed action;
- (c) A statement of how each
petitioner's substantial interests
are affected by the Department's
action or proposed action;
- (d) A statement of the material
facts disputed by Petitioner, if
any;
- (e) A statement of facts which
petitioner contends warrant re-
versal or modification of the De-
partment's action or proposed
action;

(f) A statement of which rules
or statutes petitioner contends
require reversal or modifications
of the Department's action or
proposed action; and

(g) A statement of the relief
sought by petitioner, stating pre-
cisely the action petitioner wants
the Department to take with re-
spect to the Department's action
or proposed action.

If a petition is filed, the admin-
istrative hearing process is de-
signed to formulate agency ac-
tion. Accordingly, the Depart-
ment's final action may be differ-
ent from the position taken by it
in this Notice. Persons whose
substantial interests will be af-
fected by any decision of the
Department with regard to the
application have the right to pe-
tition to become a party to the
proceeding. The petition must
conform to the requirements
specified above and be filed (re-
ceived) within 14 days of publi-
cation of this notice in the Office
of General Counsel at the above
address of the Department. Fail-
ure to petition within the allowed
time frame constitutes a waiver
of any right such person has to
request a hearing under Section
120.57, F.S., and to participate
as a party to this proceeding.
Any subsequent intervention will
only be at the approval of the
presiding officer upon motion
filed pursuant to Rule 28-5.207,
F.A.C.

The application is available for
public inspection during busi-
ness hours, 8:00 a.m. to 5:00
p.m., Monday through Friday,
except legal holidays, at:
Department of Environmental
Regulation

Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Department of Environmental
Regulation
Central District
3319 Maquire Blvd., Suite 232
Orlando, Florida 32803-2767
Orange County Environmental
Protection Department
2002 E. Michigan Avenue
Orlando, Florida 32806

Any person may send written
comments on the proposed ac-
tion to Mr. Barry Andrews at the
Department's Tallahassee ad-
dress. All comments mailed
within 14 days of the publication
of this notice will be considered in
the Department's final
determination.

Sept. 19, 1990

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
 Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

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

3. Article Addressed to: Capt. NC Davis, USN Dept. of Navy U.S. Naval Training Gr. Public Works Office Bg. 2025 Orlando, FL 32813-5010	4. Article Number P 256 396 134
5. Signature - Address X	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
6. Signature - Agent X <i>Y.N.R. Holm</i>	Always obtain signature of addressee or agent and DATE DELIVERED.
7. Date of Delivery JUL 10 1990	8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

P 256 396 134

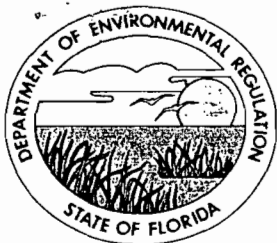
RECEIPT FOR CERTIFIED MAIL

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

U.S.G.P.O. 1989-234-555

PS Form 3800, June 1985

Sent to	Capt. NC Davis
Street and No.	Dept. of Navy
P.O., State and ZIP Code	U.S. Naval Train Gr Orlando, FL
Postage	
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	6-29-90
	AC 48-181529



Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

June 29, 1990

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Captain N. C. Davis, USN
Department of Navy
U.S. Naval Training Center
Public Works Office, Bldg. 2025
Orlando, Florida 32813-5010

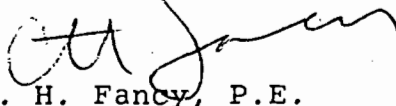
Dear Captain Davis:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit to construct a training facility at the Naval Station in Orlando, Orange County, Florida.

Before final action can be taken on your draft permit, you are required by Florida Administrative Code Rule 17-103.150 to publish the attached Notice of Proposed Agency Action in the legal advertising section of a newspaper of general circulation in Orange County no later than thirty days after receipt of this letter. The Department must be provided with proof of publication within seven days of the date the notice is published. Failure to publish the notice may be grounds for denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. Barry Andrews of the Bureau of Air Regulation.

Sincerely,


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

CHF/WH/plm

Attachments

c: Charles Collins, Central District
Gary Wingfield, P.E.
Dennis Nester, Orange County EPD

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

Department of Navy
U.S. Naval Training Center
Public Works Office, Bldg. 2025
Orlando, Florida 32813-5010

DER File No. AC 48-181529

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit (copy attached) for the proposed project as detailed in the application specified above. The Department is issuing this Intent to Issue for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, the Department of Navy, applied on February 26, 1990, to the Department of Environmental Regulation for a permit to construct a training facility at the Naval Station in Orlando, Orange County, Florida.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that an air construction permit is required for the proposed work.

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit. The notice shall be published one time only within 30 days, in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to the Department, at the address specified within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

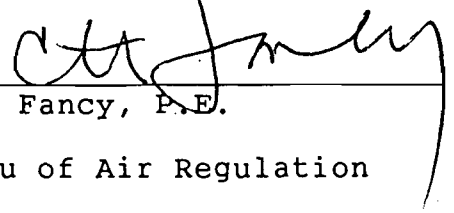
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application(s) have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office in General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such

person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



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

Copies furnished to:

Charles Collins, Central District
Gary Wingfield, P.E.
Dennis Nester, Orange County EPD

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on 6-29-90.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to
§120.52(9), Florida Statutes, with
the designated Department Clerk,
receipt of which is hereby
acknowledged.

Henry Jober
Clerk

6-29-90
Date

State of Florida
Department of Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to the Department of Navy, U.S. Naval Training Center, Public Works Office, Bldg. 2025, Orlando, Florida 32813-5010, for the construction of a fire fighting/Chemical Warfare Countermeasure training facility at the U.S. Naval Training Center on Corrine Drive in Orlando, Orange County, Florida. The new facility will replace the existing practice used for this training at this center. The facility will emit 2 TPY particulate matter, trace amounts of the products of combustion, and 0.023 TPY tear gas. A determination of Best Available Control Technology (BACT) was not required. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by Petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

The application is available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

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

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

Orange County Environmental
Protection Department
2002 E. Michigan Avenue
Orlando, Florida 32806

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

Technical Evaluation
and
Preliminary Determination

U.S. Naval Training Center
Orlando, Florida
Orange County

Fire Fighting/Chemical Warfare Countermeasures
Training Facility

Permit Number:
AC 48-181529

Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

June 29, 1990

I. General Information

A. Applicant

Department of Navy
 U. S. Naval Training Center
 Public Works Office, Building 2025
 Orlando, Florida 32813-5010

B. Project and Location

The Department of Navy applied for a permit to construct a fire fighting/chemical warfare countermeasures training facility (SIC 9224) at the U.S. Naval Training Center on Corrine Drive in Orlando, Orange County, Florida on May 30, 1990. The new facility will replace the existing structures used for this training at the Center. The application was considered complete on May 30, 1990, when the permit application fee was submitted. The UTM coordinates of the Center are Zone 17, 467.8 km East and 3160.0 km North.

The proposed two story training facility will have: two 865,000 Btu/hr propane fired boilers (one boiler generally on stand-by) to provide heating for the facility; six propane fired fireplaces in which triphenylphosphate is added to the flames to simulate trash, bilge, and electrical panel fires; a smoke (propylene glycol) filled heated emergency egress chamber; and a chemical (tear gas) gas chamber. The simulated fires will be extinguished with water, "Utrawet K," sodium bicarbonate, and carbon dioxide. Fans will exhaust the fumes from the structure. Training classes will be held 8 hrs/day, 5 days/wk, and 50 wks/yr.

Training in the proposed structure will replace the existing practices which use a 280 gallon waste oil tank, a 10,000 gallon fuel oil tank, oil fired burners, and the existing chemical warfare countermeasures training room in another building.

C. Emissions

The primary emissions from the training facility will be the products of combustion of 3,892 CFH of propane (8.865 MMBtu/hr) and the chemicals used in the training programs. The following table summarizes the emissions from the proposed source.

Pollutant*	PM		SO ₂		NO _x		CO		VOC		Tear Gas	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
<u>Sources</u>												
Fireplaces	2.0	2.0	0	0	1.1	1.1	0.27	0.27	0.046	0.046		
Boiler No. 1	0.0042	0.0044	0	0	0.12	0.12	0.030	0.031	0.0050	0.0051		
Boiler No. 2	0.0042	0.0044	0	0	0.12	0.12	0.030	0.031	0.0050	0.0051		
Gas Chamber											0.043	0.023
TOTAL	2.0084	2.0084	0	0	1.34	1.34	0.330	0.332	0.0560	0.056	0.043	0.023

*Visible emissions from sources are comprised of artificial smoke (a white colored hot air/aerosol mixture) and water vapor. Both evaporate to a colorless gas with no particulate matter resulting from the artificial smoke.

The fumes from the training facility are exhausted to the atmosphere by 17 fans. Flow varies from 80 to 15,000 ACFM.

Most of the sodium bicarbonate, Ultrawet K extinguisher, and other liquid waste generated at this facility will be collected on site and pumped to the existing base wastewater collection system.

II. Rule Applicability

The proposed project, construction of a fire fighting/chemical warfare countermeasures training facility, is subject to preconstruction review under the provisions of F.A.C. Chapter 403, FS, and Chapters 17-2, 17-4, and 17-5.

The proposed source will be located in an area designated maintenance for ozone (F.A.C. Rule 17-2.460) and attainment for the other criteria pollutants (F.A.C. Rule 17-2.420).

As the proposed facility will only emit traces of any criteria pollutant, it is exempt from review under prevention of significant deterioration (PSD) regulations (17-2.500). It will be permitted under Rule 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements. Emissions standards shall be based on Rule 17-2.620, General Pollutant Emission Standards, and Chapter 17-5, F.A.C., Open Burning and Frost Protection Fires.

III. Technical Evaluation

Presently, the Navy conducts instruction and training of organized fire fighters by setting and extinguishing fossil fuel fires. The emissions from these operations are the products of combustion of the fossil fuels mixed with the agents used to extinguish the fires.

To more realistically simulate fires on ships, the Navy proposes to construct a training facility that can simulate trash, bilge, and electrical panel fires. These fires will be simulated by adding triarylphosphate at a rate of 55 lbs/hr to propane fires (3,200 CFH). The fire will be extinguished with sodium bicarbonate (200 lbs/hr use rate), Ultrawet K foam extinguisher (490 lbs/hr use rate), or CO₂ (100 lbs/hr use rate). Wastewater generated will be sent to an existing base collection system.

Visible emissions in the immediate vicinity of the fires are exempt from Department regulations under F.A.C. Rule 17-5.090(5). After the moisture dissipates, the emissions will be required to comply with F.A.C. Rule 17-2.610, General Particulate Emission Limiting Standards, which limits visible emissions to 20 percent opacity. The Navy has estimated that, at a similiar facility, the plume travels 25 to 50 feet before the moisture is dissipated.

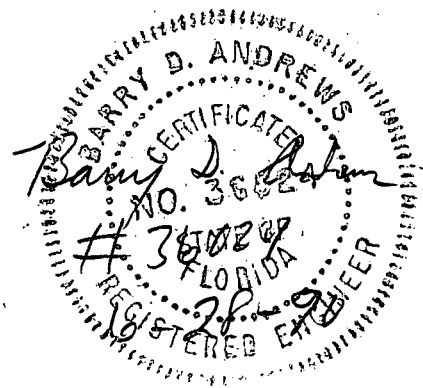
Chemical warfare countermeasures training involves evaporating 0.043 lbs/hr of tear gas, exposing the Navy personnel to the gas with and without gas masks, then exhausting the gas from the room. This training, which is currently being done elsewhere on the base, will be conducted in the new facility in the future.

IV. Air Quality Analysis

It is the judgement of the Department that the estimated emissions from the training facility will not cause a violation of any ambient air quality standard.

V. Conclusion

Based on the information provided by the Department of Navy, the Department has reasonable assurance that the proposed construction/operation of the fire fighting/chemical warfare countermeasures training facility, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code.





Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

PERMITTEE:

U.S. Naval Training Center
Public Works Office, Bldg. 2025
Orlando, Florida 32813-5010

Permit Number: AC 48-181529

Expiration Date: August 1, 1992

County: Orange

Latitude/Longitude: 28°34'05"N
81°20'14"W

Project: Fire Fighting/Chemical
Warefare Countermeasures Facility

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction of a fire fighting/chemical warfare countermeasures training facility to include trash, bilge, and electrical panel fire simulator structures, propane/triaryl-phosphate smoke simulator equipment, water, sodium bicarbonate (PKP), Ultrawet K (AFFF), and carbon dioxide fire extinguisher systems, and a gas chamber. Fans will be used to ventilate the fire simulator and gas chamber structures. The UTM coordinates of the site are Zone 17, 467.8 km East and 3160.0 km North.

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

Attachments are listed below:

1. Application

PERMITTEE:
U.S. Naval Training Center

Permit Number: AC 48-181529
Expiration Date: August 1, 1992

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

PERMITTEE:
U.S. Naval Training Center

Permit Number: AC 48-181529
Expiration Date: August 1, 1992

GENERAL CONDITIONS:

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

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

PERMITTEE:
U.S. Naval Training Center

Permit Number: AC 48-181529
Expiration Date: August 1, 1992

GENERAL CONDITIONS:

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

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

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

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

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

13. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and

PERMITTEE:
U.S. Naval Training Center

Permit Number: AC 48-181529
Expiration Date: August 1, 1992

GENERAL CONDITIONS:

records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

14. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

1. The fire fighting/chemical warefare countermeasures training facility operation is limited to daylight hours only, unless prior approval is obtained from the Department's Central District.

2. The 8 and 24-hour concentration of any chemicals used to simulate smoke, at ground level outside the fire fighting training facility, shall not exceed two percent (2%) of the threshold limit values published by the American Conference of Governmental Industrial Hygienists. Tests will be by methods acceptable to the Department when there are reasons to believe this specific condition is being violated.

3. Visible emissions from the facility as determined by EPA Method 9, which is described in 40 CFR 60, Appendix A (July 1, 1988 version), shall not exceed 20 percent opacity, six (6) minute average, after the moisture in the exhaust gases has dissipated. To assure the moisture has dissipated, the visible emission readings of the exhaust gases will be taken when the gas is 50 feet from the facility. These readings shall be used to determine the compliance status of the source.

PERMITTEE:
U.S. Naval Training Center

Permit Number: AC 48-181529
Expiration Date: August 1, 1992

SPECIFIC CONDITIONS:

4. Operation of the facility shall cease anytime the exhaust gases obstruct visibility on roads to less than 500 feet.
5. No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor or other conditions to such a degree as to cause a nuisance.
6. Upon obtaining a permit to operate, the permittee will be required to submit annual operation reports which shall include, as a minimum, the type and amount of chemicals used at the facility during the preceding calendar year.
7. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).
8. An application for an operation permit must be submitted to the Department's Central District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

Issued this _____ day
of _____, 1990

**STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION**

STEVE SMALLWOOD, P.E.
Director
Division of Air Resources
Management



RECEIVED DEPARTMENT OF THE NAVY
 DER - MAIL ROOM
 1990 MAY 29 PM 1:58
 SOUTHERN DIVISION
 NAVAL FACILITIES ENGINEERING COMMAND
 2755 EAGLE DR., P. O. BOX 10068
 CHARLESTON, S. C. 29411-0068

PLEASE ADDRESS REPLY TO THE
 COMMANDING OFFICER, NOT TO
 THE SIGNER OF THIS LETTER.
 REFER TO:

5090
 11416/P1
 23 MAY 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Clair Fancy
 Bureau of Air Quality Management
 Central Air Permitting
 Florida Department of Environmental Regulation
 2600 Blair Stone Road
 Tallahassee, FL 32301-8241

Subj: CONTRACT N62467-87-C-0038, FIREFIGHTING TRAINING FACILITY, NTC
 ORLANDO, FL

Dear Mr. Fancy:

Enclosed is the permit application fee for the above subject project as
 submitted by NTC letter of 22 February 1990. This has been discussed with
 Ms. Patty Adams of your staff. The original check was lost in transmittal
 between NTC, Orlando and your office.

Should you have any questions, please contact Mr. James Santarone at (803)
 743-0691.

Sincerely,

J. L. McCadley
 J. L. MCCADLEY, P. E.
 HEAD, ENVIRONMENTAL ENGINEERING
 BRANCH

Encl:
 (1) Check No. 8352 03016257

Copy to:
 NTC Orlando (Attn: Mr. William Raspet)

001031

RECEIVED
 DER - MAIL ROOM
 1990 MAY 30 PM 12:22



DEPARTMENT OF THE NAVY

NAVAL TRAINING CENTER
ORLANDO, FLORIDA 32813-5005

22 FEB 1990

RECEIVED
FEB 26 1990
DER-BAQM

Mr. Clair Fancy
Bureau of Air Quality Management
Central Air Permitting
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32301-8241

Dear Mr. Fancy:

Submitted for your review and issuance of a construction permit is an application with fee for a propane fueled fire fighting training facility, to be located at the Naval Training Center, Orlando.

Mr. William Raspet is available at (407) 646-5837 to respond to any inquiries.

Sincerely,

N. C. Davis
Captain, U. S. Navy

Encl:

(1) Permit Application (3 copies)
w/Application Check

cc: C. Collins, C. Dist.

3-13
Called Mr. Raspet
Is sending
\$300 check today



5A7441

NTC
Orlando

File P/1

11000
Ser NTS526/ 000336
22 FEB 1990

Mr. Clair Fancy
Bureau of Air Quality Management
Central Air Permitting
Florida Department of Environmental Regulation
2500 Blair Stone Road
Tallahassee, FL 32301-8241

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Sincerely,

N. C. Davis
Captain, U. S. Navy

Encl:
(1) Permit Application (3 copies)
w/Application Check

Blind copy to: (w/o encl)
DER, Central District
Orange County Pollution Control
SOUTHNAVFACENGCOM (Code 11416)

BEST AVAILABLE COPY

United States Treasury ¹⁵⁻⁵¹/₀₀₀

NAVY

8352-03016257

Check No.

PORT HUENEME, CALIFORNIA

18 MAY 90

LY TO THE
R. NOT TO
TTER.

Pay to
the order of

FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION

\$200.00*

1990

VOID AFTER ONE YEAR

200DOLLARSAND00CENTS

J. McCauley
DISBURSING OFFICER, USN

⑈83523⑈

⑆000000518⑆ 030162572⑈

Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32301-8241

Subj: CONTRACT N62467-87-C-0038, FIREFIGHTING TRAINING FACILITY, NTC
ORLANDO, FL

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Sincerely,

J. L. McCauley
J. L. MCCAULEY, P. E.
HEAD, ENVIRONMENTAL ENGINEERING
BRANCH

Encl:

(1) Check No. 8352 03016257

Copy to:

NTC Orlando (Attn: Mr. William Raspet)

1990 MAY 30 PM 12: 22

RECEIVED
OPER - MAIL ROOM

001031

1. DISB. COLLECT 2. Date 14 MAY 90 3. Reference Document No. N62467-90-MD-00053 4. Bill Number 5. Voucher No. D 4583

6. FROM: Commanding Officer, Southern Division
 Naval Facilities Engineering Command
 2155 Eagle Drive, P. O. Box 10068
 Charleston, SC 29411-0068

7. PAID BY: CHECK NO. 3,016,257
 Q.N.
 5/18/90

8. TO: Florida Department of Environmental Regulation
 C/O Commanding Officer, Southern Division
 Naval Facilities Engineering Command
 2155 Eagle Drive, P. O. Box 10068
 Charleston, SC 29411-0068
 Attn: Code 0142

9. ARTICLES, SERVICES OR ITEMS						
A. INVOICE OR ORDER NO.	B. DATE OF DELIVERY/SERVICE	C. DESCRIPTION (REMITTER, EXPLANATION, DETAILS, ETC.)	D. QUANTITY	E. UNIT PRICE COST PER		F. AMOUNT
1	05/14/90	To provide funds for an Environmental Construction Permit for Air Source for Contract N62467-87-C-0038 Firefighting Training Fac., NTC, Orlando, FL (Original Check 2818385 Lost in Mail)				\$200.00

G. DISCOUNT TERMS H. TOTAL \$200.00

10. TYPE OF PAYMENT OR BILL: COMPLETE PARTIAL FINAL PROGRESS ADVANCE

11. ACCOUNTING CLASSIFICATION TO BE CREDITED (COLLECTION)

A. ACRN	B. APPROPRIATION	C. SUB-HEAD	D. OBJ. CLASS	E. BUREAU CONTROL	F. SA	G. AAA	H. TT	I. PAA	J. COST CODE	K. AMOUNT (U.S. CURRENCY ONLY)

12. DEDUCTIONS

A. ACRN	B. TRANSPORTATION	C. DISCOUNT	D. TAX	E. RESERVE	F. MISCELLANEOUS	G. TOTAL FOR ACRN (U.S. CURRENCY ONLY)

H. CURRENCY: EXCHANGE RATE -\$1.00 I. TOTAL DEDUCTIONS

13. ACCOUNTING CLASSIFICATION TO BE CHARGED (DISBURSEMENT)

A. ACRN	B. APPROPRIATION	C. SUB-HEAD	D. OBJ. CLASS	E. BUREAU CONTROL	F. SA	G. AAA	H. TT	I. PAA	J. COST CODE	K. AMOUNT (U.S. CURRENCY ONLY)
AA	1701205	2503	025	06206	0	062467	2A	N65928	0177F9048206	\$200.00

L. TOTAL NET AMOUNT TO BE PAID (BLOCK 9-H MINUS BLOCK 12-I)

14. INSPECTION REPORT NOS: 15. GOV'T B/L NOS:

16. APPROVED BY: _____ TITLE: _____ (DATE): _____

17. CERTIFIED BY: R. B. FELTS, DIRECTOR TITLE: FINANCIAL ACCOUNTING DIVISION (DATE): 14 MAY 90

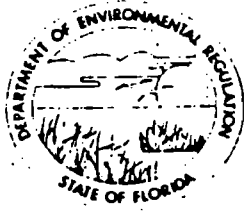
18. PAYMENT RECEIVED: PAYEE- _____



DEPARTMENT OF ENVIRONMENTAL REGULATION

\$200pd
5-30-90
Recpt. #151131
BOB GRAHAM
GOVERNOR

SOUTH FLORIDA
DISTRICT
2269 BAY STREET
FORT MYERS, FLORIDA 33901



AC 48-181529

VICTORIA J. TSCHINKEL
SECRETARY
PHILIP R. EDWARDS
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES
FIRE FIGHTING

SOURCE TYPE: TRAINING FACILITY New¹ Existing¹

APPLICATION TYPE: Construction Operation Modification

COMPANY NAME: U. S. Naval Training Center COUNTY: _____

Identify the specific emission point source(s) addressed in this application (i.e. Lime
Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) See Attached

SOURCE LOCATION: Street Corrine Drive, NTC City Orlando

UTM: East _____ North _____

Latitude 28 ° 34 ' 05 "N Longitude 81 ° 20 ' 14 "W

APPLICANT NAME AND TITLE: Naval Training Center

APPLICANT ADDRESS: Public Works Officer, Bldg. 2025, Orlando, FL 32813-5010

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Naval Training Center
Orlando, Florida

I certify that the statements made in this application for a Construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: N. C. Davis
N. C. Davis
Captain, U. S. Navy
Name and Title (Please Type)

Date: 22 FEB 1990 Telephone No. _____

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

¹ See Florida Administrative Code Rule 17-2.100(57) and (104)



the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, proper pollution sources.

Signed Gary L. Wingfield
Gary L. Wingfield, P.E.
Name (Please Type)

Liebttag, Robinson & Wingfield, Inc.
Company Name (Please Type)
4811 Beach Boulevard, Suite 400
Jacksonville, Florida 32207
Mailing Address (Please Type)

Florida Registration No. 14924 Date: 9/14/89 Telephone No. (904) 396-4600

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

See Attached

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction _____ Completion of Construction _____

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Not Applicable

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

E. Requested permitted equipment operating time: hrs/day 8 ; days/wk 5 ; wks/yr 50 ;
if power plant, hrs/yr _____ ; if seasonal, describe: _____

F. If this is a new source or major modification, answer the following questions.
(Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? No
a. If yes, has "offset" been applied? _____
b. If yes, has "Lowest Achievable Emission Rate" been applied? _____
c. If yes, list non-attainment pollutants. _____

2. Does best available control technology (BACT) apply to this source?
If yes, see Section VI. No

3. Does the State "Prevention of Significant Deterioration" (PSD)
requirement apply to this source? If yes, see Sections VI and VII. No

4. Do "Standards of Performance for New Stationary Sources" (NSPS)
apply to this source? No

5. Do "National Emission Standards for Hazardous Air Pollutants"
(NESHAP) apply to this source? No

H. Do "Reasonably Available Control Technology" (RACT) requirements apply
to this source? No

a. If yes, for what pollutants? _____

b. If yes, in addition to the information required in this form,
any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justifi-
cation for any answer of "No" that might be considered questionable.



SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Triphenylphosphate	smoke	100	55	E-1 through E-4
propylene Glycol	smoke			E-9
Tear gas		100	.043	E-16
Sodium bicarbonate	extinguisher	93.4	200	E-1 through E-4
AFFF-Ultrawet K	extinguisher	40	490	E-1 through E-4
CO2	" "	100	100	E-1 through E-4

B. Process Rate, if applicable: (See Section V, Item 1)

- Total Process Input Rate (lbs/hr): N/A
- Product Weight (lbs/hr): N/A

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

See Attached Sheets

Name of Contaminant	Emission ¹		Allowed ² Emission Rate per Rule 17-2	Allowable ³ Emission lbs/hr	Potential ⁴ Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual I/yr			lbs/yr	I/yr	

¹See Section V, Item 2.

²Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

³Calculated from operating rate and applicable standard.

⁴Emission, if source operated without control (See Section V, Item 3).

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
N/A				

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Propane Boiler	346 CFH	692 CFH	.865
Propane Fireplaces	3,200 CFH	3,200 CFH	8.0

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: 0.0 Percent Ash: 0.0

Density: 4.24 lbs/gal Typical Percent Nitrogen: 0.0

Heat Capacity: 21,344 BTU/lb 90,500 BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

NONE

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average 10.8% Maximum 21.6%

G. Indicate liquid or solid wastes generated and method of disposal.

All liquid wastes generated from this facility will be collected on site and pumped to the wexisting base wastewater collection system.



H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 12'-8" ft. Stack Diameter: 8" ft.
 Gas Flow Rate: 5.76 ACFM DSCFM Gas Exit Temperature: * °F.
 Water Vapor Content: * % Velocity: 15.8 FPS

* Not available at this time. Dependent on manufacturer used.

SECTION IV: INCINERATOR INFORMATION N/A

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq. & Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume (ft) ³	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diameter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: Cyclone Wet Scrubber Afterburner
 Other (specify) _____

Brief description of operating characteristics of control devices: _____

N/A

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

N/A

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.1DD(127)]
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).
6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY N/A

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

Yes No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

Yes No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

- | | |
|---------------------------|--------------------------|
| 1. Control Device/System: | 2. Operating Principles: |
| 3. Efficiency:* | 4. Capital Costs: |

*Explain method of determining

- 5. Useful Life:
- 7. Energy:
- 9. Emissions:

- 6. Operating Costs:
- 8. Maintenance Cost:

Contaminant	Rate or Concentration

10. Stack Parameters

- a. Height: ft.
- b. Diameter: ft.
- c. Flow Rate: ACFM
- d. Temperature: °F.
- e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency:¹
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:²
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency:¹
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:²
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:

¹Explain method of determining efficiency.

²Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:¹

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:²

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

¹Explain method of determining efficiency.

²Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant

Rate or Concentration

(8) Process Rate:¹

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant

Rate or Concentration

(8) Process Rate:¹

10. Reason for selection and description of systems:

¹Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION N/A

A. Company Monitored Data

1. _____ no. sites _____ TSP _____ () SO₂* _____ Wind spd/dir

Period of Monitoring _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).



2. Instrumentation, Field and Laboratory

- a. Was instrumentation EPA referenced or its equivalent? [] Yes [] No
b. Was instrumentation calibrated in accordance with Department procedures? [] Yes [] No [] Unknown

B. Meteorological Data Used for Air Quality Modeling

- 1. Year(s) of data from / / to / /
2. Surface data obtained from (location)
3. Upper air (mixing height) data obtained from (location)
4. Stability wind rose (STAR) data obtained from (location)

C. Computer Models Used

- 1. Modified? If yes, attach description.
2. Modified? If yes, attach description.
3. Modified? If yes, attach description.
4. Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Table with 2 columns: Pollutant, Emission Rate. Rows for TSP and SO2 with units grams/sec.

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

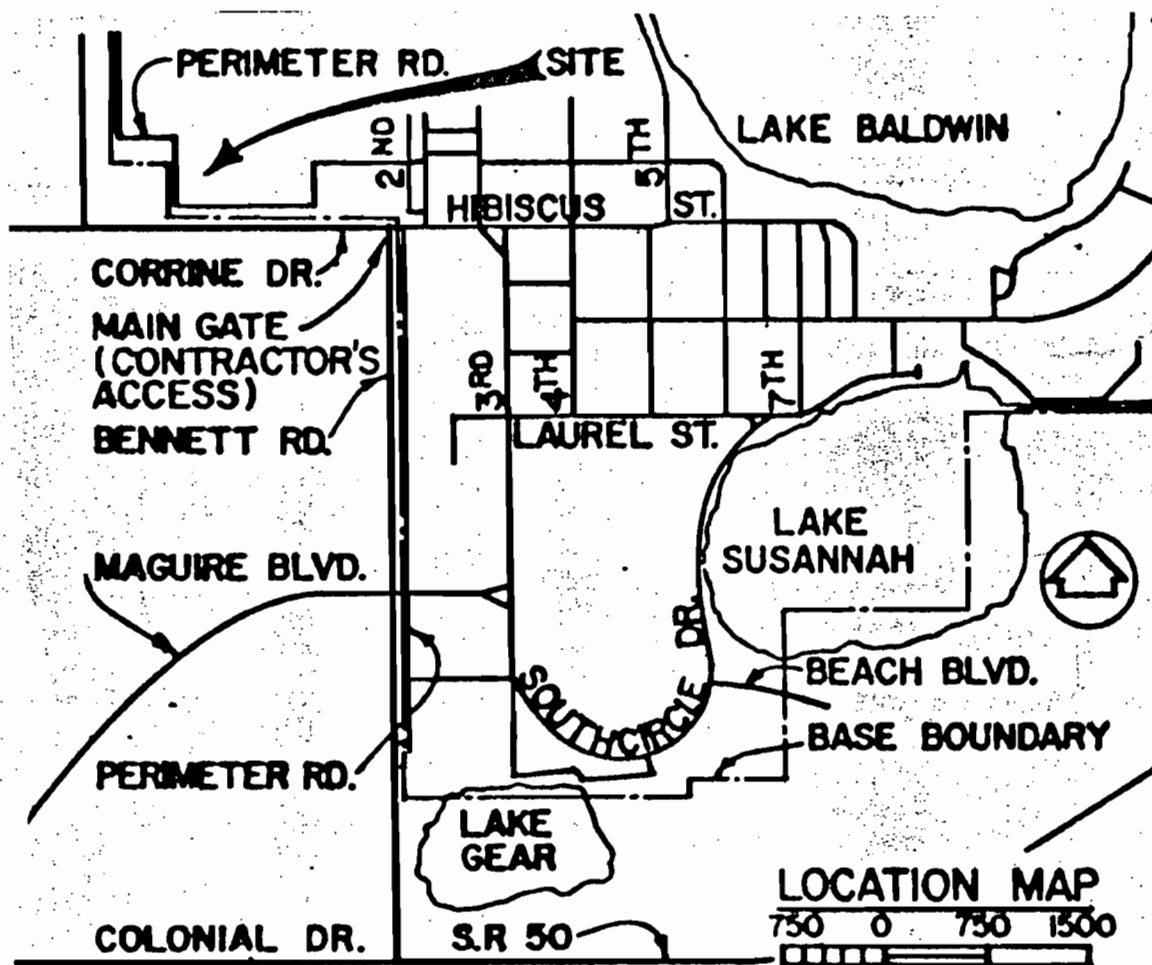
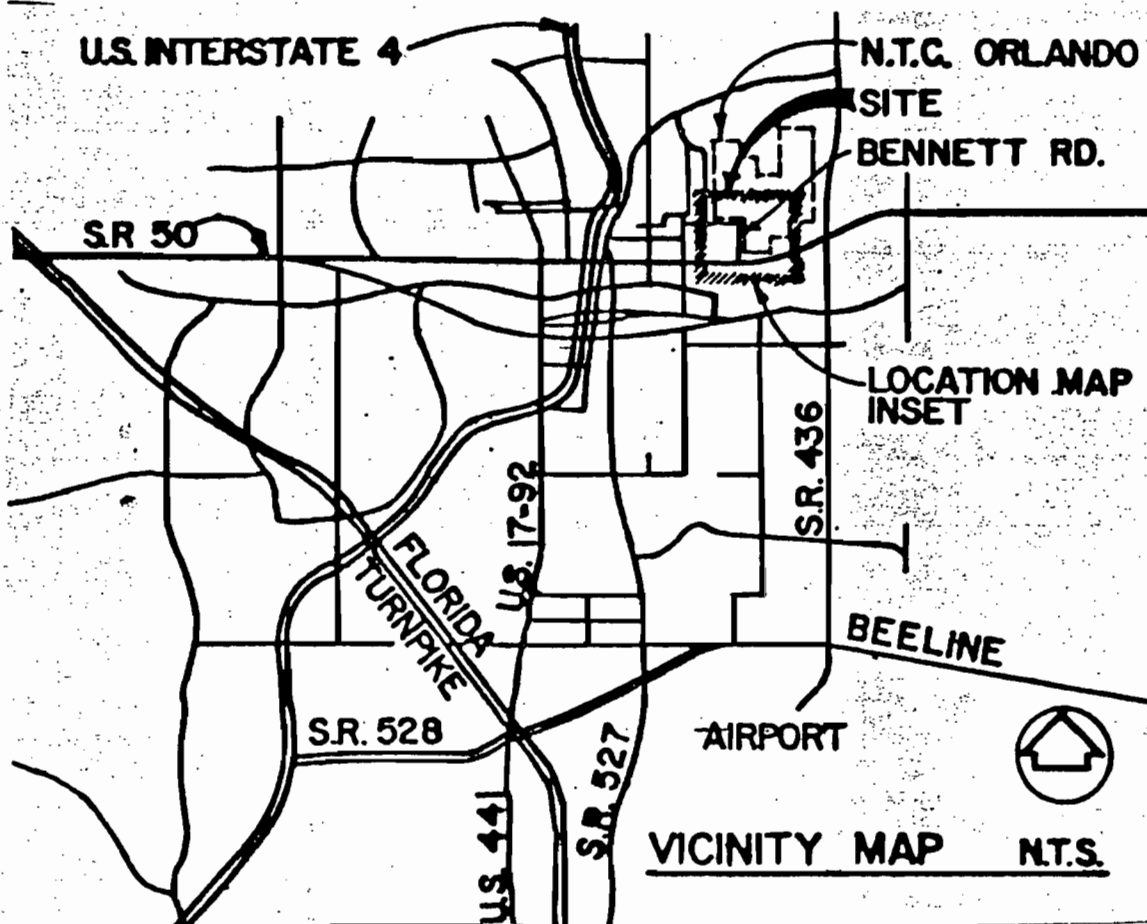
H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

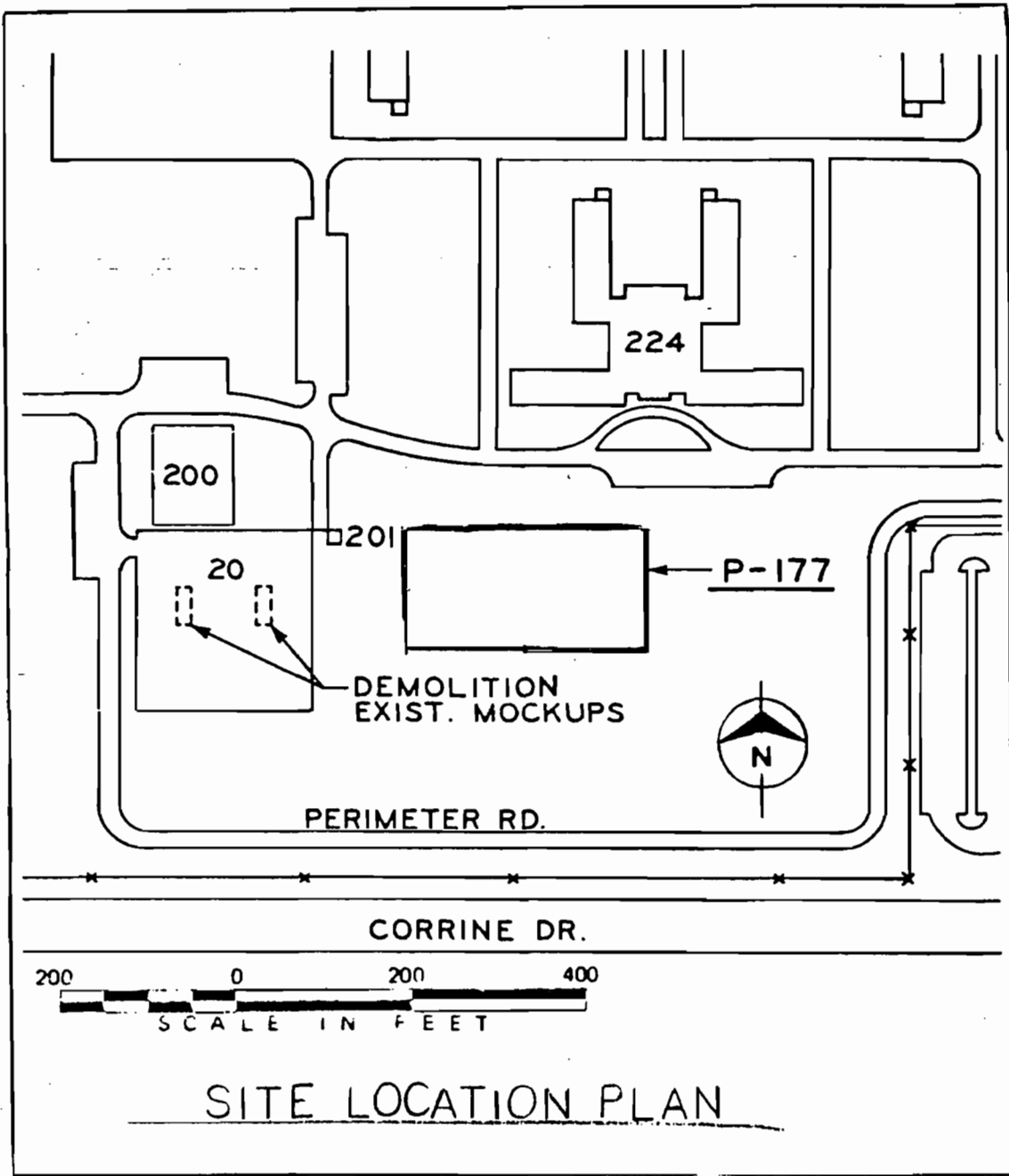
NAVAL TRAINING CENTER
FIREFIGHTING

BEST AVAILABLE COPY

TRNG.

ORLANDO, FLORIDA
FACILITY

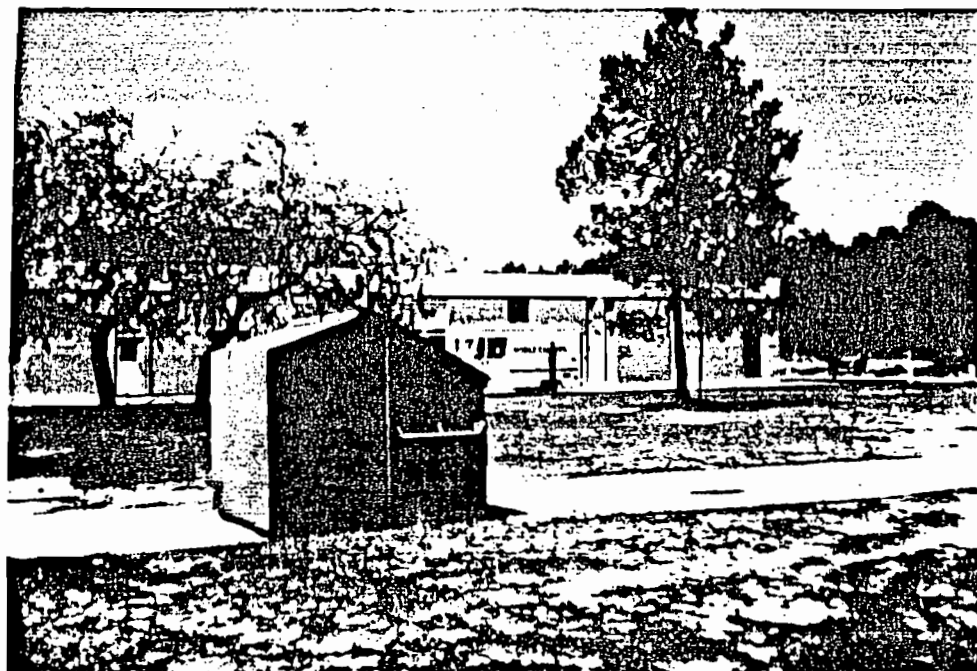




P-177 RECRUIT FIREFIGHTING TRAINING FACILITY
NAVAL TRAINING CENTER, ORLANDO, FLORIDA.



DORMITORY NORTH OF SITE FOR NEW FACILITY



CLASSROOM BUILDING NORTHWEST OF SITE FOR NEW FACILITY



SITE OF NEW FACILITY LOOKING EAST



SITE OF NEW FACILITY LOOKING SOUTH

DESCRIPTION OF FACILITY

This facility will be located at the southwest corner of the Naval Training Center in the vicinity of the existing fire fighting school. Construction of this facility will allow demolition of the existing school, which includes oil fired burners, a 280 gallon waste oil tank, and a 10,000 gallon fuel oil tank, thereby improving the overall air quality. The existing chemical warfare countermeasures training at this same site will be relocated to the new facility.

The facility will be used for an initial exposure and indoctrination of Navy personnel to fire fighting training, as well as chemical warfare countermeasures training. The fire fighting structure is designed to train one (1) class of 160 students per day, and will train five (5) classes each week operating on a single 8 hour shift. The structure will consist of training in the escape of smoke filled areas, and training in the fighting of trash, bilge, and electrical panel type fires. The chemical warfare countermeasures structure will train a class of 100 personnel at a time, two to three classes per day, and 20 classes per week. The structure will consist of a tear gas chamber.

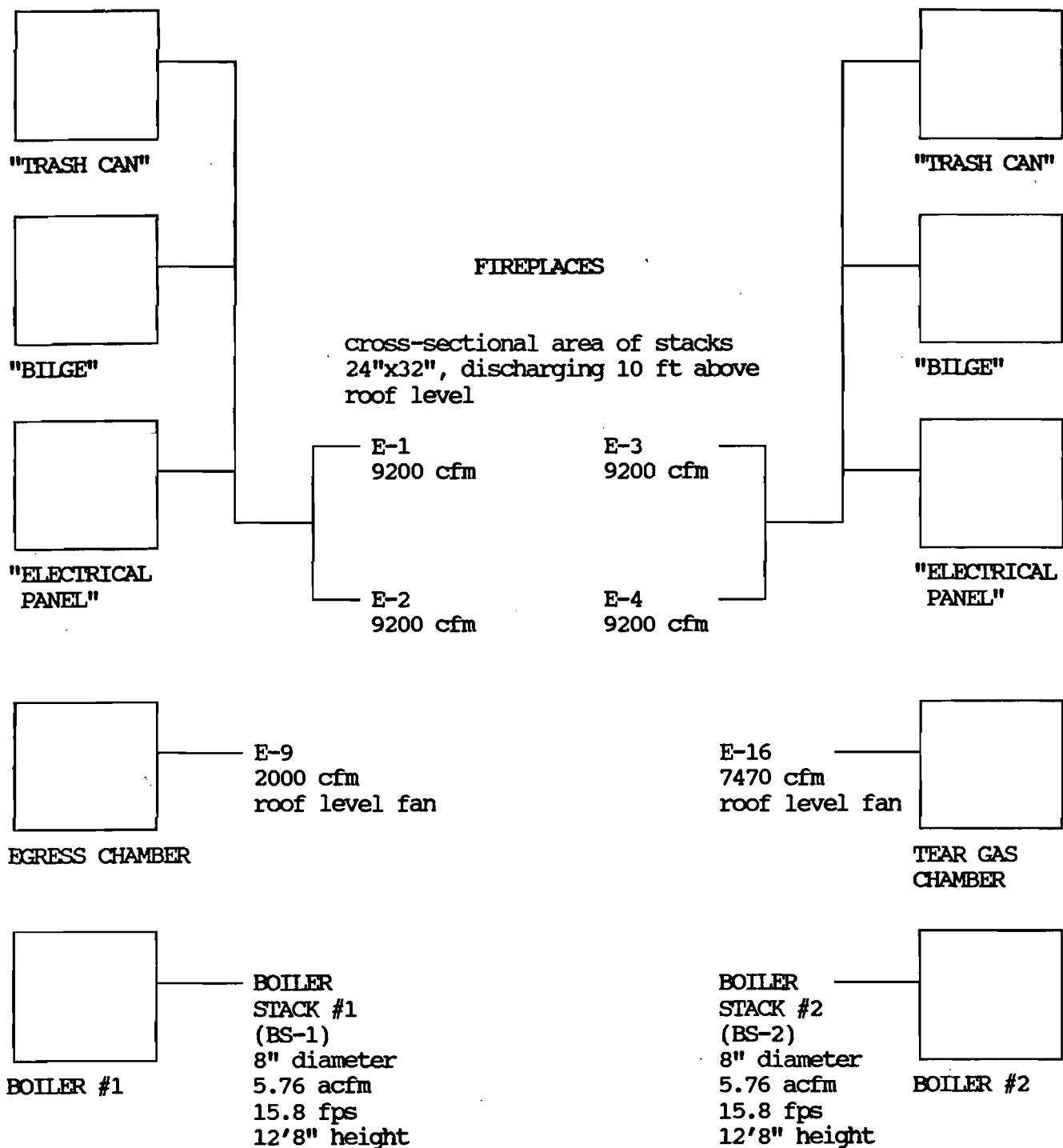
Trash, Bilge, and Electrical Panel Fire Fighting Training: Six LP gas fired fireplace compartments, three (3) on either side of a large staging area, will be used to simulate trash, bilge, and electrical panel fires. The students will line up in the staging area in front of each compartment and fight the fire through the doorway. All fireplaces will run simultaneously. Triphenylphosphate (butylated triphenylphosphate) will be used as an artificial smoke in the fireplaces. The LP gas fires will be extinguished using water, sodium dodecylbenzine sulfonate "Ultrawet K" (an AFFF substitute), sodium bicarbonate (a potassium bicarbonate (PKP) substitute), and carbon dioxide.

Smoke Filled Area Training: An emergency egress chamber will be provided which will present the trainee with a loss of light and a high temperature, smoky environment. The trainee will enter and leave the chamber through smoke filled entry ways. These entry ways shall be designed to block light from entering the main chamber. Once inside the dark chamber, the trainee will follow a rope lanyard which will eventually lead him to the smoke filled exit. The main chamber will be heated to 110 degrees Fahrenheit during the training scenario. Propylene glycol will be used as an artificial smoke in the egress chamber.

Chemical Warfare Countermeasures Training: Personnel will enter the gas chamber wearing the MK-3 gas mask. Tear gas will be made in the chamber on a hot plate prior to the entering of the personnel. The personnel will remove their gas masks in the chamber and will be exposed to the tear gas. When the training is complete, the personnel will exit the chamber to an area outside where they can get fresh air. After completion of the gas training, the emergency exit and vent doors will be opened and the exhaust system will be energized to remove the tear gas from the chamber.

Utilities: The facility will have two LP gas fired hot water heating boilers, with a heat input capacity of 865,000 BTU/hr each. Normally only one boiler will be used at a time, and the second boiler will act as a backup.

FLOW DIAGRAM



FIREPLACE CALCULATIONS

The facility will consist of a total of six (6) LP gas fired fireplaces used to simulate trash can (class A), bilge (class B), and electrical panel (class C) fires. Water will be used to extinguish the "trash can" fires; water, Ultrawet K (an AFFF substitute), and sodium bicarbonate (a potassium bicarbonate (PKP) substitute) will be used to extinguish the "bilge" fires; and carbon dioxide will be used to extinguish the "electrical panel" fires. The sodium bicarbonate will contribute minor amounts of particulates to the air emissions from the fireplaces. The visible emissions from the fireplaces will be comprised of artificial smoke (triphenylphosphate), a white colored hot air/aerosol gas with no particulates.

fuel: propane (LP gas)
 sulfur content negligible
 density of 4.24 lb/gal (liquid)
 heat content of 2,500 BTU/cf (90,500 BTU/gal)

Facility will operate 8 hours/day, 5 days/week, 50 weeks/year for a total of 2000 hours/year, generating 60 fires/hours (with an average duration of 2 minutes/fire) for a total of 480 fires/day:

fire type	propane demand (cfm/fire)	number of fires per day	average fire duration (min)	total propane use (cf/day)
"trash can"	10	160	2	3,200
"bilge"	65	160	2	20,800
"electrical panel"	5	160	2	1,600
				25,600 (3,200 cf/hr)

$(25,600 \text{ cf propane/day})(\text{day}/8 \text{ hours}) = 3,200 \text{ cf propane/hour}$
 $(3,200 \text{ cf propane/hour})(2,500 \text{ BTU/cf propane})(1 \text{ gal propane}/90,500 \text{ BTU}) = 88.4 \text{ gal propane/hr}$

From EPA Publication AP-42, COMPILATION OF AIR EMISSION FACTORS, Third Edition, Table 1.5-1, "Emission Factors For LPG Combustion":

particulates	0.44	lb/1000 gal
SOX	0.09S	lb/1000 gal, where "S" is sulfur content
NOX	12.4	lb/1000 gal
CO	3.1	lb/1000 gal
VOC	0.52	lb/1000 gal

		lb/hr		tons/yr (based on 2000 hr/yr)
particulates:	(0.44 lb/1000 gal)(88.4 gal/hr)	= 0.039	=	0.039
SOX:	(0.09S lb/1000 gal)(88.4 gal/hr)(0)	= 0.00	=	0.00
NOX:	(12.4 lb/1000 gal)(88.4 gal/hr)	= 1.1	=	1.1
CO:	(3.1 lb/1000 gal)(88.4 gal/hr)	= 0.27	=	0.27
VOC:	(0.52 lb/1000 gal)(88.4 gal/hr)	= 0.046	=	0.046

Particulate emissions resulting from sodium bicarbonate usage:

10 lbs of sodium bicarbonate will be used per fire on the class B "bilge" fires. Particulate emissions resulting from sodium bicarbonate are 0.020 lb/fire for fires using portable extinguishers, and 0.005 lb/fire for fires using twin agent extinguishers.

80 fires/hr using portable extinguishers: $(0.020 \text{ lb/fire})(80 \text{ fires/hr}) = 1.6 \text{ lb/hr}$

80 fires/hr using twin agent extinguishers: $(0.005 \text{ lb/fire})(80 \text{ fires/hr}) = 0.4 \text{ lb/hr}$

160 fires/hr

2.0 lb/hr

(2.0 tons/yr)

Triphenylphosphate (butylated triphenylphosphate) will be used as an artificial smoke. 0.088 gal of triphenylphosphate will be used per fire (0.088 gal/fire = 5.3 gal/hr = 11,000 gal/yr). Although the triphenylphosphate will produce a visible emission (a white colored hot air/ aerosol mixture composed of the artificial smoke and water vapor) the emission will evaporate to a colorless gas with no particulates within 100 feet of the stack.

Total Emissions From the Fireplaces:

	<u>lb/hr</u>	<u>tons/yr</u>
particulates:	2.0	2.0
SOX:	—	—
NOX:	1.1	1.1
CO:	0.27	0.27
VOC:	0.046	0.046

Fireplaces (total emissions for 6 fireplaces):

Name of Contaminant	Emission		Allowed Emission Rate per Rule 17.2	Allowable Emission lbs/hr	Potential Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
particulates	2.0	2.0			4000	2.0	E-1 - E-4
SOX	---	---			---	---	"
NOX	1.1	1.1			2200	1.1	"
CO	0.27	0.27			540	0.27	"
VOC	0.046	0.046			92	0.046	"
							"

Note: Visible emissions from the fireplace exhausts will be comprised of artificial smoke, a white colored hot air/aerosol mixture, and water vapor, both of which will evaporate to a colorless gas with no particulates resulting from the artificial smoke. Triphenylphosphate (butylated triphenylphosphate) will be used for artificial smoke.

Egress Chamber:

Name of Contaminant	Emission		Allowed Emission Rate per Rule 17.2	Allowable Emission lbs/hr	Potential Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
NONE	*visible emissions						E-9

* Note: Visible emissions from the egress chamber will be comprised of artificial smoke, a white colored hot air/aerosol mixture, and water vapor, both of which will evaporate to a colorless gas with no particulates resulting from the artificial smoke. Propylend glycol will be used for artificial smoke.

BOILER CALCULATIONS

Two 865,000 BTU/hr (heat input) low water boilers will provide heating for the facility. Normally only one boiler will be used at a time, and the remaining boiler will be stand-by.

fuel: propane (LP gas)
 sulfur content negligible
 density of 4.24 lb/gal (liquid)
 heat content of 2,500 BTU/cf (90,500 BTU/gal)

$(865,000 \text{ BTU/hr}) / (\text{gal propane} / 90,500 \text{ BTU}) = 9.56 \text{ gal propane/hr}$

From EPA Publication AP-42, COMPILATION OF AIR EMISSION FACTORS, Third Edition, Table 1.5-1, "Emission Factors For LPG Combustion":

particulates	0.44	lb/1000 gal
SOX	0.09S	lb/1000 gal, where "S" is sulfur content
NOX	12.4	lb/1000 gal
CO	3.1	lb/1000 gal
VOC	0.52	lb/1000 gal

		<u>lb/hr</u>	<u>tons/yr</u> (based on 2080 hr/yr)
particulates:	(0.44 lb/1000 gal)(9.56 gal/hr)	= 0.0042 =	0.0044
SOX:	(0.09S lb/1000 gal)(9.56 gal/hr)(0)	= 0.00 =	0.00
NOX:	(12.4 lb/1000 gal)(9.56 gal/hr)	= 0.12 =	0.12
CO:	(3.1 lb/1000 gal)(9.56 gal/hr)	= 0.030 =	0.030
VOC:	(0.52 lb/1000 gal)(9.56 gal/hr)	= 0.0050 =	0.0052

Total Boiler Emissions (from each boiler):

	<u>lb/hr</u>	<u>tons/yr</u>
particulates:	0.0042	0.0044
SOX:	—	—
NOX:	0.12	0.12
CO:	0.030	0.031
VOC:	0.0050	0.0051

TEAR GAS CALCULATIONS

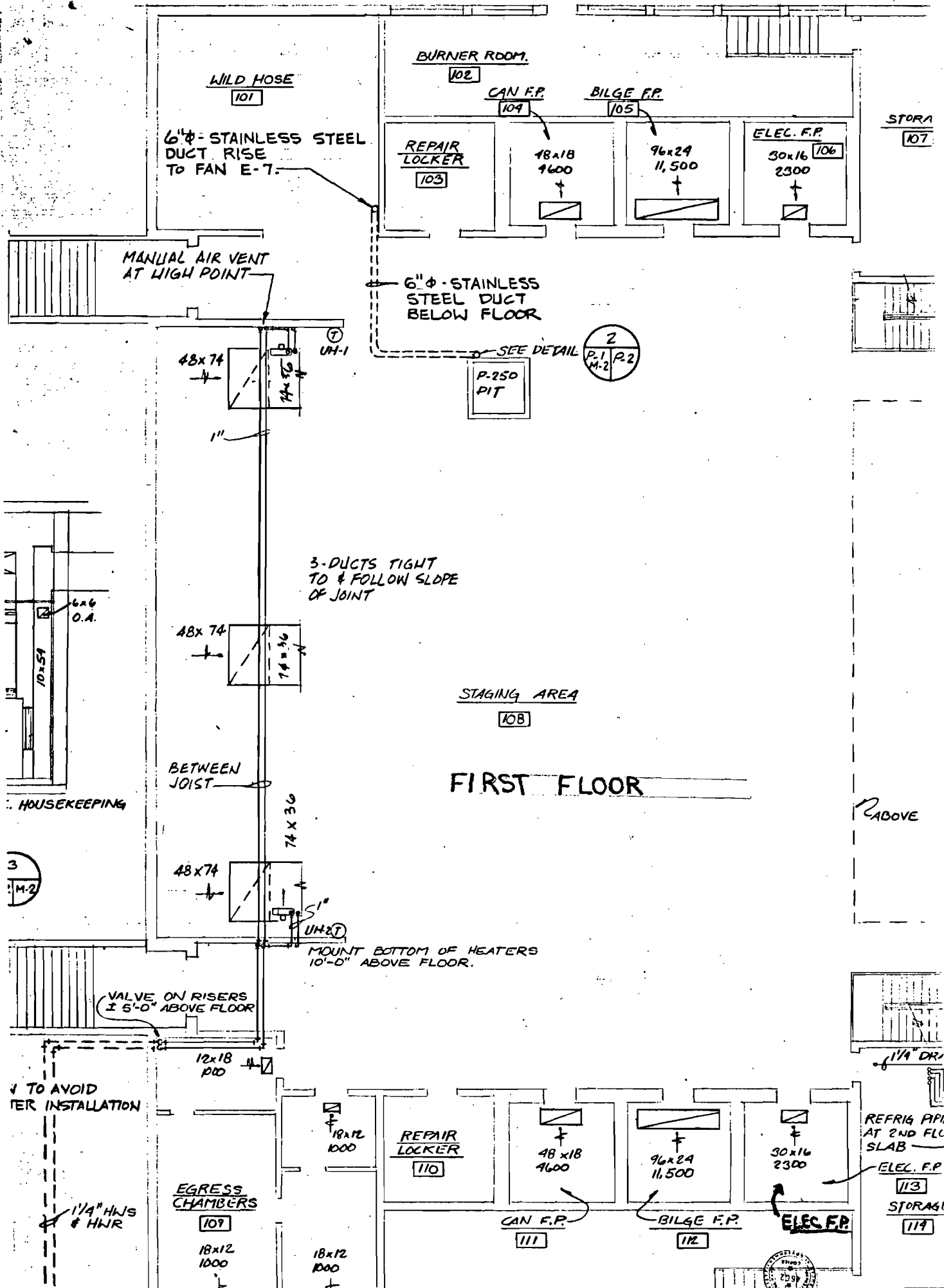
A tear gas (alpha-chloroacetophenone) chamber will be used to provide chemical warfare countermeasures training. The chamber will be used to train one class of 100 personnel at a time, two to three classes per day, and 20 classes per week.

Tear gas will be made in the chamber on a hot plate prior to the entering of the personnel. 0.043 pounds of tear gas will be used per class. The personnel receiving training will enter the chamber wearing the MK-3 gas mask. The personnel will then remove their gas masks in the chamber and will be exposed to the tear gas. When the training is complete, the personnel will exit the chamber where they can get fresh air.

After completion of the training, the exhaust system will be energized to exhaust the tear gas laden air from the chamber. The chamber will be located a sufficient distance away from nearby structures to prevent the migration of tear gas into other areas or buildings. A roof level exhaust fan will be provided to disperse the tear gas into the air above the building to prevent recirculation back into the chamber. The site is located with the prevailing winds from the south at 10 mph such that there will be no migration to other areas and buildings on or off the base.

Total Tear Gas Emissions:

.043 lb/hr .023 tons/yr



6" ϕ - STAINLESS STEEL DUCT RISE TO FAN E-7.

MANUAL AIR VENT AT HIGH POINT

6" ϕ - STAINLESS STEEL DUCT BELOW FLOOR

P-250 PIT

3-DUCTS TIGHT TO & FOLLOW SLOPE OF JOIST

STAGING AREA 108

FIRST FLOOR

HOUSEKEEPING

BETWEEN JOIST

VALVE ON RISERS 5'-0" ABOVE FLOOR

MOUNT BOTTOM OF HEATERS 10'-0" ABOVE FLOOR.

TO AVOID FER INSTALLATION

1/4" HWS & HWR

EGRESS CHAMBERS 109

REPAIR LOCKER 110

CAN F.P. 111

BILGE F.P. 112

ELEC. F.P. 113

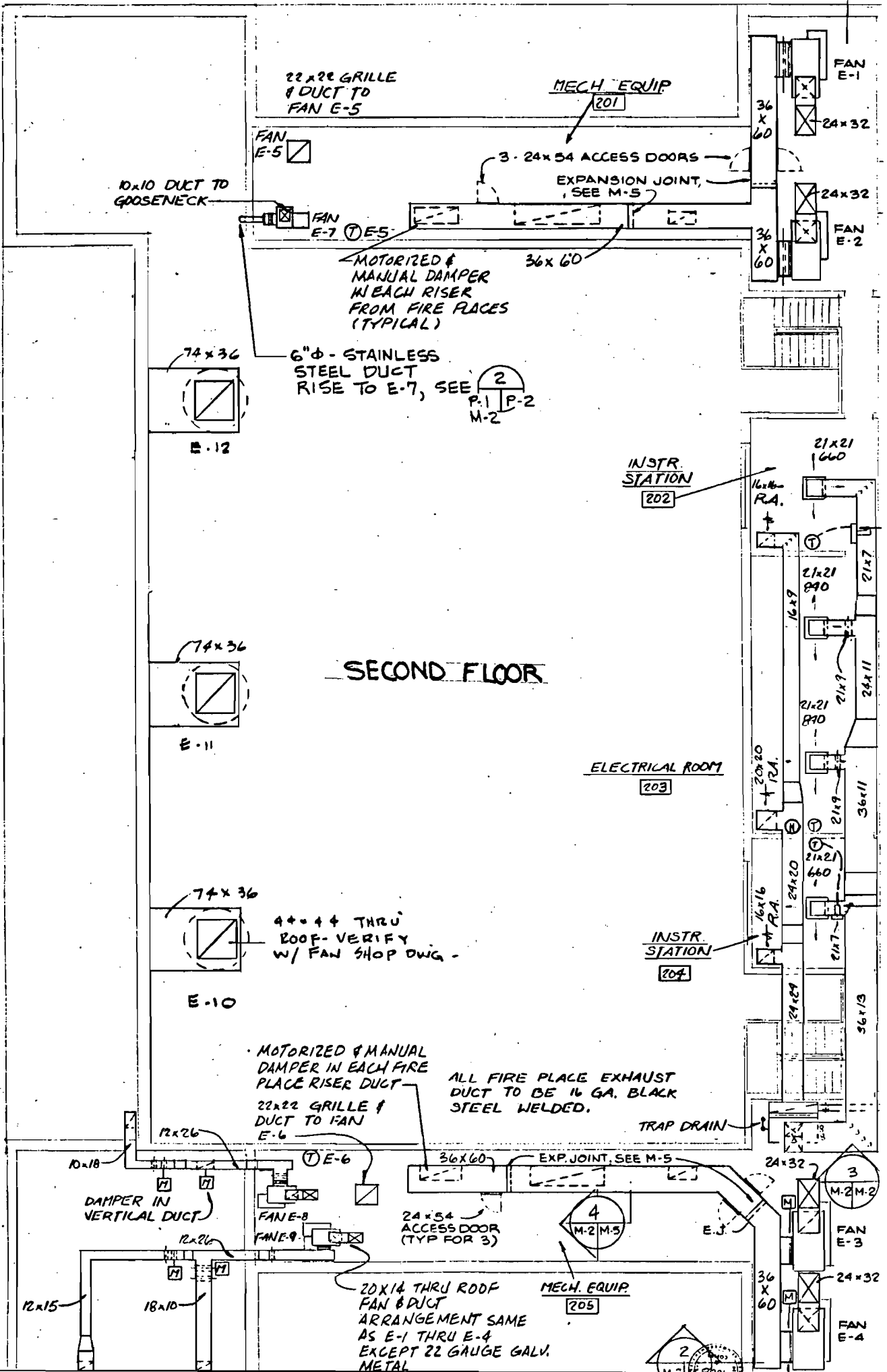
REFRIG PIPE AT 2ND FLL SLAB

STORAGE 114

2 ABOVE

1/4" DR





SECOND FLOOR

22x22 GRILLE & DUCT TO FAN E-5

MECH. EQUIP. 201

FAN E-1

FAN E-5

3 - 24x34 ACCESS DOORS EXPANSION JOINT, SEE M-5

10x10 DUCT TO GOOSENECK

MOTORIZED & MANUAL DAMPER IN EACH RISER FROM FIRE PLACES (TYPICAL)

6" φ - STAINLESS STEEL DUCT RISE TO E-7, SEE P.1 P.2 M-2

74x36

E-12

INSTR. STATION 202

21x21 660

74x36

E-11

SECOND FLOOR

ELECTRICAL ROOM 203

21x21 890

74x36

4x4 THRU ROOF - VERIFY W/ FAN SHOP DWG.

E-10

INSTR. STATION 204

21x21 890

MOTORIZED & MANUAL DAMPER IN EACH FIRE PLACE RISER DUCT

ALL FIRE PLACE EXHAUST DUCT TO BE 16 GA. BLACK STEEL WELDED.

22x22 GRILLE & DUCT TO FAN E-6

TRAP DRAIN

10x18

DAMPER IN VERTICAL DUCT

12x26

E-6

FAN E-8

FAN E-9

24x34 ACCESS DOOR (TYP FOR 3)

36x60

EXP. JOINT, SEE M-5

MECH. EQUIP. 205

3 M-2 M-2

FAN E-3

12x15

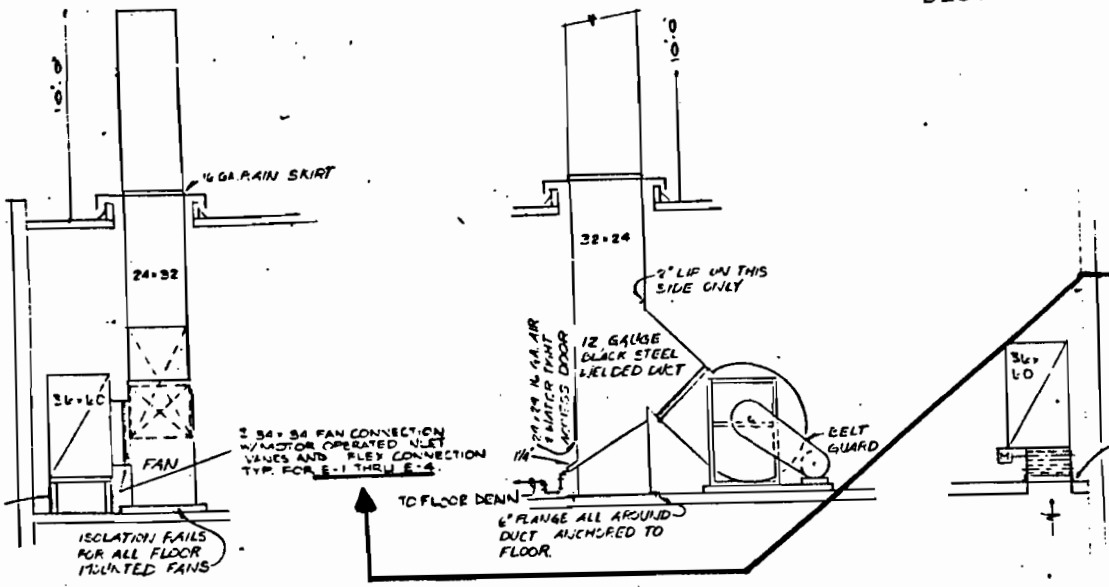
18x10

20x14 THRU ROOF FAN & DUCT ARRANGEMENT SAME AS E-1 THRU E-4 EXCEPT 22 GAUGE GALV. METAL

2

36x60

FAN E-4



SECTION 2
SCALE: 1/4" = 1'-0"

SECTION 4
SCALE: 1/4" = 1'-0"

SCALE: 1/4" = 1'-0"

FAN NO	CFM AIR	EAT. S.P.	MAX. RPM	VOLTAGE	MIN. H.P.	FAN TYPE	BLADE TYPE	ACCESSORIES REC'D	FAN LOCATION
E-12, 314	9200	.70"	1000	240/130-3-60	3	CENT. S.I.S.W	AIRFOIL	1, 2, 4 ID	19F5
E-516	3600	.20"	480	115-1-60	1/3	P.R.V.	CENT.	3, 4, 5 16	19F5
E-7	300	.32"	500	115-1-60	1/4	UTILITY SET	CENT.	1 12	19F5
E-8, 9	2000	.26"	500	115-1-60	1/2	UTILITY SET	CENT.	1 12	19F5
E-10, 11, 12	14, 915	.0"	525	240/130-3-60	3 #	P.R.V.	CENT.	3, 4, 5 16	19F5
E-13	4650	1/8"	480	115-1-60	1/3	P.R.V.	CENT.	3, 4, 5 16	UTILITY
E-14	4650	1/8"	550	115-1-60	1/3	P.R.V.	CENT.	3, 4, 5 16	UTILITY
E-15	80	1/8"	1750	115-1-60	1/20	WALL	PROP.	7	UTILITY
E-16	7470	0"	905	115-1-60	1/2	P.R.V.	CENT.	3, 4, 5 16	GAS CHAMBER
E-17	660	1/16"	705	115-1-60	1/2	P.R.V.	CENT.	3, 4, 6 19	DECON STATION

