

EQUIPMENT FACILITY REQUIREMENTS (EFR)

FOR

FACILITY, INSTALLATION AND TRANSFER

OF

CHEMICAL AGENT POINT DETECTOR SYSTEM

AT

NAVAL DAMAGE CONTROL TRAINING CENTER  
PHILADELPHIA, PA

8507290388 850712  
NMSS LIC30  
37-05293-01 PDR

APRIL 1984  
REVISED MARCH 1985



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PHILADELPHIA, PA

APRIL 1984  
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EQUIPMENT FACILITY REQUIREMENTS  
PHASE I  
FACILITY REQUIREMENTS IDENTIFICATION  
(PRELIMINARY SITE SURVEY)  
FOR  
CHEMICAL AGENT POINT DETECTOR SYSTEM  
AT  
NAVAL DAMAGE CONTROL TRAINING CENTER  
PHILADELPHIA, PA



EQUIPMENT FACILITY REQUIREMENTS  
PHASE I AGREEMENT  
FACILITY REQUIREMENTS IDENTIFICATION  
(PRELIMINARY SITE SURVEY)  
FOR  
CHEMICAL AGENT POINT DETECTOR SYSTEM  
NTP S-30-8207

The EFR Phase I documentation (preliminary site survey) for facility requirements identification for the above training program is provided in accordance with NAVMATINST 11102.1 and NAVSEAINST 1543.XX.

FACILITY REQUIREMENT SUMMARY

<u>REQUIREMENT</u> (check appropriate line)	<u>RESPONSIBILITY</u>
*Military Construction Required _____	CNET
*Special Project Required _____	CNET
Installation Only Required <u>  X  </u>	NAVSEASYS COM

\*See attached preliminary site survey

Comments/Remarks:

3/25/85

DATE

R. F. Long LCM 56412  
NAVSEASYS COM REPRESENTATIVE  
BY NAME/TITLE/CODE

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The attached EFR Phase I documentation (preliminary site survey) is accepted as the identification of facility requirements.

\_\_\_\_\_  
DATE

\_\_\_\_\_  
TRAINING ACTIVITY REPRESENTATIVE  
BY NAME/TITLE/CODE

Copy to:  
CNET  
CNTECHTRA/COMTRAPAC/COMTRALANT (as applicable)



PRELIMINARY SITE SURVEY DATA  
FOR  
CHEMICAL AGENT POINT DETECTOR SYSTEM (CAPDS)

A. GENERAL PROGRAM DATA

1. Date Preliminary Site Survey Conducted (Day/Month/Year): August 1983
2. Date of Last Phase I Data Update (Day/Month/Year): March 1985
3. Operational Use Summary: (UNCLASSIFIED)

The CAPDS provides automatic indication of the presence of chemical agents. Warning is provided so that shipboard personnel can take protective measures to minimize the adverse impact of the chemical agent attack.

4. Training Concept Summary:

Formal shore-based training for organizational maintenance of the Chemical Agent Point Detector System is not required. System characteristics, capabilities, and limitations will be included in the Basic CBR-D course and in the Senior Enlisted Damage Control course.

5. Functional Description:

The CAPDS is a local sampling detection device that detects the presence of airborne chemical agents; the sensor unit operates on the principle of gas ionization. Ambient air is drawn into the sensor cell at 4 liters/minute and is heated to 212°F. The heated air sample is ionized by passing it over a tritium foil, and then through a series of electrically charged baffles to an ion collector. Normal air ions tend to lose their charge rapidly and produce a minimum current flow in the ion collector; air samples containing chemical agents produce large clusters of ions which pass through the baffles and produce a detectable current flow in the ion collector which triggers the alarm circuit. Remote control units associated with each sensor unit provide the means to control, monitor, and test the system. System tests (activated by a switch) check the entire electronics associated with each sensor unit. The remote status unit provides system summary and alarm indicators (audio/visual) to command on the bridge.

6. Equipment Manufacturer:

Honeywell, Inc.  
Clearwater, Florida

7. Procurement Contract Number:

N60921-82-C-A122



8. Listing of Training Equipment and Components To Be Installed:

One (1) CHEMICAL AGENT POINT DETECTOR SYSTEM (NIPIMS No. 0343-01-001)  
consisting of the following:

<u>NOMENCLATURE</u>	<u>DESIGNATION</u>
Sensor Unit:	
Alarm Module	A/E23D-3
Power Supply NSN6665-01-039-7418	ECK-951/E23D-3
Through the Bulkhead Unit (TBU)	ESD-250
CAPDS Remote Control Unit (RCU)	27501540
CAPDS Remote Status Unit (RSU)	27501550
Mounting Bracket	245-11-1

9. Interface/Impacts on Other Training Equipment:

None. Equipment will be mounted on a mobile platform.

10. Training Equipment To Be Replaced:

None

11. Training Activity (Command/Location):

Naval Damage Control Training Center (NAVDAMCONTRACEN)  
Philadelphia, PA  
UIC: 63159

12. Points of Contact (Command/Code/Name/Title/Telephone No.):

a. OPNAV Sponsor:

CNO (OP-03C)  
CAPT B. Barr  
(202) 697-6275

b. PDA(s):

NAVSEA (56Y12)  
R. Furlong  
(202) 692-5487

c. TSA:

NAVSEA (56Y12)  
R. Furlong  
(202) 692-5487



d. TA:

CNET (N-321)  
CDR Rickman  
(904) 452-4402

CINCLANTFLT/CINCPACFLT

e. Training Activity:

Code N7  
CWO Willey  
Facility Manager  
443/(215)897-5652

Code N5  
HTC Hull  
Instructor  
443/(215)897-5677/8

f. NAVSEA-05L1 Training Administrator:

NAVSEA-05L162  
R.W. Nelson  
(202) 433-2086

g. NAVSEACENLANT Philadelphia Project Engineer:

NAVSEACENLANT (410)  
J. Collis  
(215) 897-6620/21

13. SEAMIS Project Number:

4280-065-01

B. FACILITY DATA

1. Training Equipment Location at Training Activity:

a. Building No.:

740

b. Room No.:

205

c. Other:

2. Basic Facility Requirements of Training Equipment:

a. Air Conditioning and Heating:

N/A

b. Water:

N/A

c. Electrical Power:

115V, 60 Hz, 15 amps, single phase

d. Physical Requirements (Weight, Dimensions, Locations, etc.):

Alarm Module: 7" long, 7" wide, 7" high

Power Supply: 7" long, 7" wide, 9.5" high

CAPDS RCU: 13.4" long, 6.4" wide, 6.2" high

CAPDS RSU: 13" long, 6" wide, 5" high

CAPDS TBU: 20.2" long, 8.1" wide, 11.9" high

Mounting Bracket: 25.5" long, 12.4" wide, 11" high

e. Other:

N/A

3. Description of Military Construction (MILCON)/Special Project Requirements:

N/A

C. MAJOR MILESTONES

1. Ready-For-Training (RFT):

July 1986

2. System/Equipment/Item (S/E/I) Fleet Introduction Schedule (Totals per Fiscal Year (FY)):

FY86 - 124

FY87 - 70

FY88 - 104

FY89 - 43

FY90 - 41

3. Phase I Scheduled Updates (Minimum):

Update required (month/year) N/A for MILCON programming

Update required (month/year) N/A for special project programming

4. Phase II Engineering Site Survey Scheduled Date (Month/Year):

Not required.





EQUIPMENT FACILITY REQUIREMENTS

PHASE II

INSTALLATION AND TRANSFER REQUIREMENTS DETERMINATION  
(ENGINEERING SITE SURVEY AND TRAINING SUPPORT PACKAGE ELEMENTS)

FOR

CHEMICAL AGENT POINT DETECTOR SYSTEM

AT

NAVAL DAMAGE CONTROL TRAINING CENTER  
PHILADELPHIA, PA



EQUIPMENT FACILITY REQUIREMENTS  
PHASE II AGREEMENT  
INSTALLATION AND TRANSFER REQUIREMENTS DETERMINATION  
(ENGINEERING SITE SURVEY AND TRAINING SUPPORT PACKAGE ELEMENTS)  
FOR  
CHEMICAL AGENT POINT DETECTOR SYSTEM  
NTP S-30-8207

The EFR Phase II installation (engineering site survey) and transfer requirements (training support package elements) required for transfer of training responsibility for the above training program are provided in accordance with NAVMATINST 11102.1 and NAVSEAINST 1543.XX. The list of training support package elements is certified as complete unless otherwise indicated.

Comments/Remarks:

3/25/85

DATE

ReFurlong LCM 56Y12  
NAVSEASYS COM REPRESENTATIVE  
BY NAME/TITLE/CODE

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The attached EFR Phase II documentation (engineering site survey and listing of training support package elements) is accepted as the determination of installation and transfer requirements and as the basis for transfer of training responsibility.

\_\_\_\_\_  
DATE

\_\_\_\_\_  
TRAINING AGENT REPRESENTATIVE  
BY NAME/TITLE/CODE



ENGINEERING SITE SURVEY AND  
TRAINING SUPPORT PACKAGE ELEMENTS  
FOR  
CHEMICAL AGENT POINT DETECTOR SYSTEM

A. GENERAL INFORMATION

1. Date of Last Phase II Data Update (Day/Month/Year): March 1985
2. Training Support Agency:  
NAVSEA-56Y12
3. Training Agent:  
CNET
4. SEAMIS Project Number:  
4280-065-01
5. Navy Training Plan (NTP) Reference or Establishing Authority:  
Chemical Agent Point Detector System; NTP S-30-8207, dated 8 December 1982
6. Training Facility Location:  
Naval Damage Control Training Center (NAVDAMCONTRACEN)  
Philadelphia, PA  
UIC: 63159
7. Training Course Identification:  
A-495-2055; Senior Enlisted Damage Control course  
A-495-0421; Basic CBR-D Course
8. Planned Date of Transfer:  
July 1986
9. List of Equipment:  
One (1) CHEMICAL AGENT POINT DETECTOR SYSTEM (NIPIMS No. 0343-03-001)  
consisting of the following:
  - a. Technical Training Equipment (TTE):

NOMENCLATURE

DESIGNATION

Sensor Unit:

Alarm Module

Power Supply NSN6665-01-039-7418

A/E23D-3

ECK-951/E23D-3



NOMENCLATURE

DESIGNATION

Through the Bulkhead Unit (TBU)	ESD-250
CAPDS Remote Control Unit (RCU)	27501540
CAPDS Remote Status Unit (RSU)	27501550
Mounting Bracket	245-11-1

b. Support Equipment:

N/A

10. System Interface With Other Installed/Future Systems or Equipment:

N/A

11. Major Milestones:

See EFR Schedule.

B. SITE SURVEY DATA

1. Security and Safety Factors:

a. Security Classification of Equipment, Course, etc.:

UNCLASSIFIED

b. Environmental Safety:

N/A

c. Pressurized Equipment Safety:

N/A

d. Nuclear Safety:

Low energy beta radiation, scandium tritide (tritium H<sup>3</sup>) is present in the sensor and flow compensation cells of the device. An NRC license is required of the training activity.

e. Electromagnetic Radiation Safety:

N/A

f. Eye and Ear Hazards:

N/A



# EFR SCHEDULE

CHEMICAL AGENT POINT DETECTOR  
SYSTEM

TNG AGENCY CNET  
TNG CMD NAVDAMCONTRACEN PHILA, PA  
AC POC HTC HULL  
FAC MGR. CWO WILLEY

DATE MARCH 1985  
PRJ. NO. 4280-065-01  
REQ. EST. S-30-8207  
EFR MGR. J. COLLIS  
PGM MGR. R. FURLONG  
TNG ADM. R. W. NELSON  
PRJ. MGR. J. COLLIS

CY	85												86																
FY	85												86																
MONTH	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M		
φ 1 PRELIMINARY SITE SURVEY AUG 83																													
φ 2 SITE SURVEY																													
TRAINER ARRANGEMENT DWG.																													
DESIGN																													
FABRICATION (TRAINING HARDWARE)																	0												
SITE PREP/INSTALLATION PREP																	0												
TTE DELIVERY																			0										
TRAINING HARDWARE DELIVERY																			0										
INSTALLATION																			0										
CERTIFICATION																			0										
CURRICULUM	NOT REQUIRED																												
APL PACKAGE																		0											
GPETE	NOT REQUIRED																												
SPTE	NOT REQUIRED																												
GENERAL PURPOSE TOOLS	NOT REQUIRED																												
SPECIAL PURPOSE TOOLS	NOT REQUIRED																												
SOFTWARE	NOT REQUIRED																												
MANUALS *						0																							
RFT																			0										
φ 2 AS BUILTS																				0									
φ 3 TRANSFER																				0									

LEGEND: O CURRENT SCHEDULE φ ORIGINAL SCHEDULE ● ACTUAL ACCOMPLISHMENT  
\* Preliminary Technical Manuals released September 1982; final delivery date JUNE 1985



g. Fire Extinguishment Requirements:

- (1) Type of extinguishing agent(s) recommended:

Extinguishing agents for class "B" fires are recommended.

- (2) Special precautions to be observed:

See II.B.1.d.

2. Utilities:

a. Air Conditioning and Heating:

- (1) Temperature parameters of the equipment:

-10°F to 125°F, 85 percent relative humidity

- (2) Heating requirements:

N/A

- (3) Air conditioning/cooling requirements:

N/A

- (4) Ventilation requirements:

N/A

b. Plumbing:

N/A

c. Electrical Power:

- (1) Electrical power requirements:

115V, 60 Hz, 15 amps, single phase

- (2) Grounding requirements:

N/A

- (3) Requirements for generators, transformers, converters, etc.:

N/A

- (4) Lighting requirements:

N/A



d. Hydraulics, Compressed Gases, Steam, POL, and Other Fluids:

N/A

e. Exhaust Requirements:

N/A

f. Noise Abatement Requirements:

N/A

3. Physical Factors and Requirements:

a. Limitations:

(1) Space:

(a) Minimum physical cube requirements into which the equipment will fit:

Alarm Module: 7" long, 7" wide, 7" high  
Power Supply: 7" long, 7" wide, 9.5" high  
CAPDS RCU: 13.4" long, 6.4" wide, 6.2" high  
CAPDS RSU: 13" long, 6" wide, 5" high  
CAPDS TBU: 20.2" long, 8.1" wide, 11.9" high  
Mounting Bracket: 25.5" long, 12.4" wide, 11" high

(b) Space for foreseeable growth requirements:

N/A

(2) Floor loading, false flooring, false overhead, and cable runs/waveguide requirements:

N/A

(3) Windows and/or special access requirements:

N/A

(4) Overhead hoist requirements:

N/A

(5) Storage area requirements:

N/A



(6) Security/safety limitation requirements:

Will require NRC storage license for storage of radioactive material

b. Site Selection:

(1) MILCON requirements:

None

(2) Building number:

740

(3) Room number:

205.

(4) Site/room modification requirements:

As required for electrical hook-up.

(5) Equipment room/storage area requirements:

N/A

c. Ancillary Site Requirements:

N/A

d. Interface Requirements of Equipments:

N/A

e. Site Drawing Requirements:

(1) Trainer configuration depiction:

To be provided by manufacturer within 60 days after completion of OPEVAL.

(2) Estimated completion date for installation design plans:

To be provided by manufacturer within 60 days after completion of OPEVAL.

(3) As-built/installed equipment drawings are to be submitted with the final EFR Plan to the Training Agent within 60 days following installation, checkout, and final acceptance.





C. INSTALLATION AND TRANSFER DATA

1. Training Support Package:

a. TTE:

<u>NOMENCLATURE</u>	<u>DESIGNATION</u>	<u>QTY</u>	<u>PROCURING ACTIVITY</u>	<u>STATUS</u>
CAPDS (NIPIMS NO. 0343-01-001)			NAVSEA-56Y	Delivery 07/86

Sensor Unit:

Alarm Module	A/E23D-3	2		
Power Supply NSN6665-01-039-7418	ECK-951/E23D-3	2		
Through the Bulkhead Unit (TBU)	ESD-250	2		
CAPDS Remote Control Unit (RCU)	27501540	2		
CAPDS Remote Status Unit (RSU)	27501550	1		
Mounting Bracket	245-11-1			

b. Parts (Spare/Repair):

Manufacturer is developing a recommended Spare/Repair parts list which will be inserted into the Navy APL System.

c. Test Equipment:

No general or special purpose test equipment is required.

d. Tools and Support Equipment:

None

e. Technical Manuals:

<u>IDENTIFIER</u>	<u>QTY</u>	<u>PROCURING ACTIVITY</u>	<u>STATUS</u>
Chemical Agent Point Detection System Operation and Maintenance Instructions with Illustrated Parts Breakdown	30	NAVSEA-56Y	Delivery 06/85



- f. Curriculum Material:  
None Required
- g. Software (if applicable):  
N/A
- h. Other Equipment Documentation:  
N/A
- 2. Instructor/Support Personnel Training Requirements and Status:  
None required from NAVSEA
- 3. Crew Training Requirements and Status:  
None required from NAVSEA
- 4. Site Preparation/MILCON Funding Requirements:
  - a. Site Preparation:  
Electrical power to support the unit.
  - b. MILCON:  
None
- 5. Equipment Installation Requirements and Status:  
Equipment will be mounted on a mobile platform.



D. ACTIONS AND/OR DECISIONS REQUIRED

ACTIONS REQUIRED

<u>ACTION ITEM</u>	<u>COMMAND ACTION</u>	<u>DUE DATE</u>	<u>STATUS</u>
NDCTC must apply for and receive NRC License	TA	Prior to July 1986	In process

EQUIPMENT FACILITY REQUIREMENTS

PHASE III

DOCUMENT FOR TRANSFER OF TRAINING RESPONSIBILITY

FOR

CHEMICAL AGENT POINT DETECTOR SYSTEM

AT

NAVAL DAMAGE CONTROL TRAINING CENTER

PHILADELPHIA, PA

DECISION REQUIRED

<u>QUESTION</u>	<u>COMMAND DECISION</u>	<u>DUE DATE</u>
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NAME \_\_\_\_\_

[illegible]

\*Def

NAVSEASYS.COM REPRESENTATIVE BY NAME/TITLE/CODE/DATE

TRAINING AGENT REPRESENTATIVE BY NAME/TITLE/CODE/DATE

FINAL

DANCE-STEP REPRESENTATIVE BY NAME (LIFE GOOD DAY)

II-11

[illegible]

EQUIPMENT FACILITY REQUIREMENTS  
PHASE III  
DOCUMENT FOR TRANSFER OF TRAINING RESPONSIBILITY  
FOR  
CHEMICAL AGENT POINT DETECTOR SYSTEM  
AT  
NAVAL DAMAGE CONTROL TRAINING CENTER  
PHILADELPHIA, PA



EQUIPMENT FACILITY REQUIREMENTS  
PHASE III  
DOCUMENT FOR TRANSFER OF TRAINING RESPONSIBILITY

Acceptance of the Chemical Agent Point Detector System (NTP S-30-8207) installed at NAVDAMCONTRACEN Philadelphia, PA is:

\*CONDITIONAL

\*Deficiency:

Command and Code  
Responsible To Correct

Date Correction  
Will Be Accomplished

Responsibility for the above training program (including maintenance responsibility for the system/equipment), with the exception of those items listed as deficiencies, is hereby transferred and CONDITIONALLY accepted by the Training Agent in accordance with the EFR Phase II Agreement for Installation and Transfer Requirements.

\_\_\_\_\_  
NAVSEASYS COM REPRESENTATIVE BY NAME/TITLE/CODE/DATE

\_\_\_\_\_  
TRAINING AGENT REPRESENTATIVE BY NAME/TITLE/CODE/DATE

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FINAL

Responsibility for the above training program (including maintenance responsibility for the system/equipment) is hereby transferred and accepted by the Training Agent in accordance with the EFR Phase II Agreement for Installation and Transfer Requirements.

\_\_\_\_\_  
NAVSEASYS COM REPRESENTATIVE BY NAME/TITLE/CODE/DATE

\_\_\_\_\_  
TRAINING AGENT REPRESENTATIVE BY NAME/TITLE/CODE/DATE

