NAVAL PERSONNEL RESEARCH AND DEVELOPMENT LABORATORY

WRM 71-47

June 1971

PERSONNEL AND TRAINING IMPLICATIONS FOR AQUADOG (U)

John M. Richardson, Jr.

SPECIAL HANDLING REQUIRED
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WASHINGTON, D.C. 20390

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June 1971

PERSONNEL AND TRAINING IMPLICATIONS FOR AQUADOG (U)

Work Unit No.
S27-05X

John M. Richardson, Jr.

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FOREWORD

(U) Appreciation is expressed for the close cooperation and support extended by the staffs of the Naval Ship Research and Development Laboratory, Panama City, Florida, and the Directorate of Security Police, Inspector General of the Air Force.

(U) This personnel research study was accomplished in support of the Improved Swimmer Defense System S27-05X, Subtask 2.

SUBMITTED BY

N. T. BURWELL

Director, Anti-Submarine Warfare Division

APPROVED BY

J. R. Curtin

Director, Man/Machine Systems Research Department

R. E. McCoy
Commander, U. S. Navy
Commanding Officer

E. M. Ramras
Technical Director

conferences, using a structured interview technique, were held with representatives of the following agencies:

(U) 1. Conferences were held with the NAVSHIPS Program Manager to obtain basic information about the system and the management of the development program, as well as to assure project coordination and control.

(U) 2. Conferences were held with CHNAVPERS representatives to obtain information about past and ongoing programs utilizing Navy dog handlers and military working dogs.

(U) 3. Conferences were held with the NSRDL/PC Project Engineer to gather background and test data, development plan milestones, proposed training programs, and other general information.

(U) 4. Conferences were held with representatives of the U. S. Air Force Directorate of Security Police to obtain information about the Military Working Dog Program such as personnel selection criteria, training requirements and curricula, logistic support requirements, and the like.

D. Conclusions

(U) 1. New enlisted billets will be required to meet AQUADOG personnel requirements.

(U) 2. No new enlisted ratings or NECs will be required to identify AQUADOG billets.

(U) 3. A mix of enlisted rates, ratings, and NECs will be required for AQUADOG.

(U) 4. A program of formal training, utilizing existing formal school courses, as well as implementing two new courses, will be required to provide dog handler, boat operation, boat maintenance, and dog handler supervisory training to AQUADOG personnel.

(U) 5. The U. S. Air Force is uniquely qualified to provide training support and/or trained animals, dog handlers, and dog handler supervisors to the AQUADOG Program.

(U) 6. Because of the unique conditions presented by anti-swimmer operations in the riverine and inshore environments, all AQUADOG personnel will require training in

counterinsurgency and survival, evasion, resistance to interrogation, and escape techniques.

E. Recommendations

(U) 1. That the utilization of Air Force personnel to fill AQUADOG dog handler and kennel master billets be seriously considered. (page 16)

(U) 2. That, provided the decision is made to use Air Force personnel, the following numbers of enlisted billets be established for each AQUADOG division: 6 USAF, 3 USN. (page 17)

(U) 3. That, if it is decided to use Navy personnel only, nine USN enlisted billets be established for each AQUADOG division. (page 17)

(U) 4. That personnel selected to be AQUADOG dog handlers receive the 12 week U. S. Air Force Patrol Dog Handlers Course as well as approximately three weeks training in AQUADOG dog handling techniques. (page 19)

(U) 5. That personnel selected to be AQUADOG boat repairmen and/or operators receive approximately one week training in outboard motor and 16 foot Boston Whaler operation and maintenance techniques and approximately one week training in AQUADOG Boat Patrol techniques. (page 21)

(U) 6. That personnel selected to be AQUADOG kennel masters receive all training required for AQUADOG dog handlers as well as the three week U. S. Air Force Patrol Dog Handler Supervisor Course. (page 21)

(U) 7. That all AQUADOG personnel receive the two week Navy training course; Counterinsurgency/Survival, Evasion, Resistance to Interrogation, Escape; prior to reporting to AQUADOG divisions. (page 22)

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I. INTRODUCTION

A. Problem

(C) The imposing threat to military assets in riverine and inshore environments from attack by trained surface and subsurface swimmers has been clearly demonstrated during the course of hostilities in Southeast Asia. This threat can be expected to continue in future limited wars throughout the world. A number of swimmer countermeasures have been developed which rely, for the most part, on the acoustic signatures created by swimmers as a means of detection. A need exists to develop swimmer detection systems which utilize visual or olfactory means in order to take advantage of the entire spectrum of swimmer signatures. To meet this problem, the Navy is exploring the feasibility of using trained military working dogs as swimmer detection devices.

B. Purpose

(U) The objective of this study is to identify and discuss the personnel and training implications inherent in introduction of the "AQUADOG" swimmer detection system.

C. Background

(C) In September 1968, Naval Ship Research and Development Laboratory, Panama City, Florida (NSRDL/PC) submitted a proposal to the East Coast Vietnam Laboratory Assistance Program (VLAP) Coordinator that a project be conducted to determine the effectiveness of utilizing military working dogs as underwater swimmer detectors. Chief, Navy Research and Development Unit - Vietnam (NRDU-V) concurred in the proposal and Project WATERDOG was established. Tests were conducted in S. Vietnam, using U. S. Air Force handlers-instructors and dogs. The tests proved that the concept was feasible, and a team of four handlers and dogs was operationally deployed. In November 1970, Commander, Naval Forces, Vietnam (COMNAVFORV) recommended that the operational deployment be discontinued and concluded that "Project WATERDOG has proven during SEA [Southeast Asia] evaluation and subsequent deployment to be an effective swimmer defense system."

(C) In December 1970, the Commander, Naval Ship Systems Command (NAVSHIPS) authorized NSRDL/PC to continue work under the code name Project AQUADOG, to develop a concept that

can be employed by the Navy when required. This additional work is being conducted under the auspices of Advanced Development Objective (ADO) S27-05X, "Defense Against Swimmer Attack".

D. Approach

(U) 1. In March 1971, NPRDL initiated a study to identify and analyze the personnel and training implications of introducing AQUADOG teams into the Navy inventory of swimmer defense systems. Liaison was established and maintained between NPRDL and key Department of Defense agencies to assure the mutual exchange of information pertinent to the development of the AQUADOG concept.

(U) 2. An initial conference was held with the NAVSHIPS Program Manager to acquire basic information about the system and a list of key contacts involved in development. Additional conferences were held as required to assure project coordination and control.

(U) 3. Conferences were held at frequent intervals with the NSRDL/PC Project Engineer to gather background data, development plan milestones, test results, proposed school curricula, and general information relative to management of the AQUADOG project.

(U) 4. Discussions were held with CHNAVPERS representatives and Naval personnel inventories were obtained from CHNAVPERS sources to determine the level of Navy participation in past and ongoing programs utilizing military working dogs and handlers.

(U) 5. Because of the Navy's relative inexperience in the use of military working dogs and because of the extensive Air Force participation in the AQUADOG project and related programs, frequent discussions were held with representatives of the U. S. Air Force Directorate of Security Police. Through their cooperation, a massive amount of data was acquired pertaining to personnel selection criteria, training requirements, logistic support requirements, and the like.

II. OPERATIONAL CONSIDERATIONS

(U) Included in this section are brief discussions of proposed delivery plans, AQUADOG system descriptions, operating concepts, and maintenance and support considerations. Much of the information presented in this section has been derived from the working papers of an unpublished CONFIDENTIAL report by Mr. Paul M. Eisenhauer of NSRDL/PC entitled, "Dogs for Swimmer Defense (U)".

A. Proposed Delivery Plans

(C) At the present time, there are no plans to procure dogs or handlers for general Navy use in the AQUADOG program. However, for purposes of conducting tests and determining the feasibility of using Navy personnel, five Navy enlisted personnel will be trained along with dogs in AQUADOG procedures. Upon the completion of tests in October 1971, the enlisted personnel will be returned to their parent command. The fate of the five dogs is undetermined. If, at some future date, a decision is made to implement AQUADOG, it has been estimated that (exclusive of administrative time required to procure untrained volunteers) initial AQUADOG teams could be on station within six weeks to six months of a procurement decision, dependent upon availability of trained dogs and handlers from the Navy or a sister service.

B. AQUADOG System Description

(U) The basic sensing device of the AQUADOG team is a German Shepherd or animal with the characteristics of a typical German Shepherd which has been trained to detect, both by sight and smell, persons in or very near the water. Normally, dogs selected for the AQUADOG program will be Military Working Dogs procured from the U. S. Air Force (the central procuring agency for all military working dogs used by DOD) which will have been trained to scout, track, search and observe from listening or observation posts.

(U) In addition to the dog, the team consists of the dog's handler, an outboard motor boat operator and, when military conditions warrant, a gunner. The team is transported aboard a patrol boat, normally a 16 foot Boston Whaler, equipped with twin 40 horsepower outboard engines. Figure 1 is a photograph of a typically configured AQUADOG team.

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Figure 1. AQUADOG TEAM ON PATROL

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(C) The AQUADOG team is capable of securing and protecting an area or a specific asset from surprise attacks by surface, snorkel or open-circuit SCUBA equipped swimmers. Scent provides the longest detection range (average detection ranges exceed 400 yards), while sight and sound detections complement the scent capability at much shorter ranges. The limiting factors on the size of the maximum area that can be secured are prevailing wind and water current conditions, configuration of the area, accessability to enemy swimmers, accessability of the area by the patrol craft, and the type of asset being protected. Due to the need to permit the dog to exercise and relieve himself, patrols are limited to no more than three hours duration.

C. Operating Concepts

(C) It is envisioned that properly trained AQUADOG teams could be used to protect almost any asset found in the riverine or inshore environment from attack by all swimmers except those using closed-circuit SCUBA equipment. The number of patrol teams required to defend a given site will be dependent on a number of factors unique to each site and may vary from day to day.

(C) A large asset such as a ship or barge anchorage is the easiest target to protect if moored or anchored at least 500 yards from land areas of indigenous traffic lanes that could serve as swimmer entry points. The presence of a one knot current or greater and a steady wind of from five to ten knots in the same direction as the current will aid in swimmer detection by carrying the scent of the swimmer for longer distance than would otherwise be the case. A patrol will generally commence by "clearing" the target or, in effect, ensuring that no swimmer is already in the water by making a pass around the target. This step will serve the additional purpose of permitting the dog to acclimate itself to the target area and to identify whatever distractions are present. After the target has been cleared, the patrol craft will move downwind and begin a quartering pattern in the swimmer approach sector. A patrol speed of from three to five knots will be maintained. However, both speed and pattern of movement should be changed periodically to deny the swimmer the advantage of computing patterns to gain surreptitious entry into the water and access to the protected asset. Additionally, prevailing wind and water current conditions must be constantly monitored in order that patrol tactics can be modified to take advantage of the immediate situation.

(C) Normal operating hours will probably be from dusk to dawn, or from about 1800 to 0600, when enemy swimmer activity can be expected to be most likely.

D. Maintenance and Support Considerations

(U) The United States Air Force is, at the present time, the largest user of military working dogs. Accordingly, the maintenance and support criteria used by that service are considered to be of value to Navy programs which utilize military working dogs. The following maintenance and support criteria are required by the Air Force in accordance with Air Force Regulation 125-9 entitled, "USAF Military Working Dog Program".

1. Veterinary Support

(U) The Air Force Veterinary Service provides medical care and treatment of military working dogs, professional review of plans for kennel construction, sanitary inspection of kennel areas and training of handlers in the care, feeding and first aid of military working dogs. Those activities that do not have a veterinarian assigned may use the services of the nearest assigned military veterinarian. Detailed guidance concerning veterinary support is contained in Air Force Regulation 163-1, "Veterinary Services".

2. Equipment and Rations

(U) Each trained military working dog procured from the Air Force is shipped with an initial issue of items, including a watering bucket, collar, leashes, and the like. The standard basic ration for USAF military working dogs is, "Feed, High Caloric, For Military Working Dogs, Steel Pail, 25 pounds net, FSN 8710 144 6834 (oversea pack) and FSN 8710 403 6545 (CONUS pack)", which is available through normal supply channels.

3. Kennel and Support Facilities

(U) Air Force regulations require that kennels be located where there will be the least distraction to the dogs and where dogs will not become a nuisance to personnel. In the AQUADOG program, temporary or permanent land based kennel facilities will be utilized whenever possible to provide adequate exercise space for the animals. However, in some cases a kennel-berthing ammi barge may be used to transport

teams to areas that would otherwise be inaccessible. Such a barge would be fitted out with both kennel facilities and berthing facilities for assigned personnel. It would carry its own water and power supplies and be as self-contained as possible.

4. Records

(U) Administrative and medical records must be maintained on all dogs for much the same reasons as for humans: to record a history of the dog's military service, to record the dog's daily training and employment, and to record a chronological history of the dog's health and vaccinations.

5. Boats, Small Arms, and Hardware

(U) In addition to maintenance and support specifically directed toward the animals, the craft, motors, small arms, radios and other ancillary equipment will have to be maintained. It is thought that, provided adequate tools and spares are available, most preventive and corrective maintenance can be performed on site by properly trained personnel from within the division.

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III. PERSONNEL REQUIREMENTS FOR AQUADOG

A. General

(U) Personnel manning requirements identify the types (qualitative) and numbers (quantitative) of billets necessary to permit an activity, unit, or ship to perform its assigned mission. This chapter contains an analysis of the personnel requirements to support one AQUADOG division. This analysis is based in part upon reports of test results of the WATERDOG program; assumed operating schedules and watchstanding requirements; supervisory, administrative, and maintenance support requirements; and the limitations imposed by demonstrated physiological characteristics of the animals.

(U) For purposes of this report an AQUADOG division consists of the AQUADOG teams (a team having previously been defined as a dog and his handler, a boat operator and a gunner), support personnel, and material required to defend a site from swimmer attack with one team on patrol and one team on standby for a period of twelve hours a day, seven days a week.

B. Quantitative Requirements

(C) The determination of quantitative requirements has been based on the following assumptions: (1) that at least one trained handler must be in attendance in the kennel facility at all times; (2) that swimmer defense patrols will be in effect for twelve hours a day (generally from about 1800 until 0600 the next day), and that the twelve hour period will be divided into four three hour patrols; (3) that only one team will be patrolling a given site at any time; however, an additional team will be on call available for deployment at a moment's notice;and (4) that the AQUADOG division will be operating under combat conditions.

(U) In addition to the foregoing assumptions, the following criteria were considered since they apply to any program utilizing military working dogs: (1) dogs must be grommed and exercised for at least an hour each day; (2) the duty hours of the kennel master will normally conform to those hours when the majority of the dogs are on duty; (3) a military working dog team consists of one handler permanently assigned with one dog.

(U) An assumed typical 24 hour period for an AQUADOG division was structured as follows:

0600-1200 - 1st day shift
1200-1800 - 2nd day shift
1800-2100 - 1st patrol
2100-2400 - 2nd patrol
2400-0300 - 3rd patrol
0300-0600 - 4th patrol

1. Dog Handlers

(U) During each of the day shifts one handler would be on duty in the kennel, and the balance of personnel would be in an off duty status. During each three hour patrol, one handler and dog would be on patrol; one handler and dog would be on call to deploy, if required; one hander would be using the period to groom and exercise his dog and clean his dog's kennel space, one handler would be available for emergency recall in the immediate area, and one handler would be in an off duty status.

(U) Under these conditions, five handlers appears to be the minimum requirement for combat conditions. With five handlers, each handler would be able to have a period of 30 uninterrupted hours off every five days. During a typical work week (total of 168 hours) as described herein each handler would be on duty a minimum of 63 hours and a maximum of 72 hours; he would be available for emergency recall in the immediate area a minimum of 15 hours and a maximum of 18 hours; he would be off duty a minimum of 78 hours and a maximum of 90 hours.

2. Boat Operators

(U) Except for time required to conduct preventive and corrective maintenance to outboard motors and boats, boat operators will be required only during patrol periods. It is estimated that preventive and corrective maintenance at the organizational level will require approximately one man-hour per day. As described above, one AQUADOG team will be on patrol and one team will be on standby during a twelve hour patrol period. Accordingly, two boat operators will be required throughout the twelve hour period. When consideration is given to providing time for maintenance actions and for relaxation and recreation, it is determined that three boat operators will be required for the AQUADOG division.

3. Gunners

(U) As is shown in the Qualitative Requirements section of this chapter, the position of gunner is the only position for which specialized training is not required beyond knowledge of operation and maintenance of whatever weapons are assigned for use. Additionally, the position of gunner is the one position that is not necessarily required by the AQUADOG team. With adequate cross-training, any off duty dog handlers or boat operators could be utilized as gunners in emergency conditions. In situations where regular gunner support is considered necessary, it is assumed that two gunners per night could be provided from local available armed forces personnel resources. Provided that the assumption is true, additional AQUADOG personnel to satisfy this position would not be required.

4. Kennel Master

(U) One qualified kennel master is considered necessary to oversee kennel operation, ensure that all military dogs assigned to his kennel are proficient in the performance of their duty, ensure that the health, safety, and well being of dogs are provided for, oversee the general administrative and supervisory responsibilities of the personnel in the AQUADOG division. His duty hours should, for the most part, conform to those hours when the dogs will be on duty.

5. Quantitative Requirements Summary

(U) A summary of the quantitative requirements for one AQUADOG Division is as follows:

Billet Title	Quantity
Kennel Master	1
Dog Handlers	5
Boat Operators	3

C. Qualitative Requirements

1. Dog Handlers and Kennel Master

(U) The basic criteria used by the Air Force when selecting personnel for training as dog handlers are that they should possess the traits of resourcefulness, patience, intelligence, a marked degree of dependability, and a desire

to work with animals. Because no military or professional skills beyond those required of all military personnel are necessary, very junior personnel may be trained to be dog handlers. The kennel master, because of the supervisory and administrative responsibilities of his billet, should be a senior petty officer or non-commissioned officer who has had experience as a dog handler.

(U) The Navy has no enlisted rating that encompasses the skills and knowledges required of a skilled dog handler. There are, however, two secondary Naval Enlisted Classification codes (SNECs) which identify Navy enlisted personnel who are qualified Sentry Dog Handlers (SNEC 9541) or Sentry Dog Handler Supervisors (SNEC 9542). The basic prerequisite for each of these SNECs is that the enlisted member be a graduate of the appropriate U. S. Air Force course at Lackland Air Force Base, Texas. As of 12 February 1971 there were eight Navy enlisted personnel on active duty assigned SNEC 9541 and four personnel assigned SNEC 9542. On that same date there were 31 billet requirements for personnel of these NECs; however, they were being phased out as part of the S. E. Asia troop withdrawal program. Discussions with personnel planners within the Bureau of Naval Personnel indicate that there are no plans at the present time to create additional billets for dog handlers. Therefore, for all practical purposes, Navy use of military working dogs and handlers will be extremely limited for the foreseeable future.

(U) The U. S. Air Force, due primarily to the requirement to guard many restricted areas of large acreage, has a military working dog program that at the present time employs approximately 2,000 dog handlers and kennel masters. Air Force enlisted personnel selected for dog handler training are drawn from authorized Security Police career field manpower resources or from graduating classes of the Air Force Basic Security Police courses. A viable career pattern exists and personnel selected for training are required to have a remaining active military obligation of no less than 24 months.

(U) It appears that there are three possible alternatives for manning AQUADOG divisions with handlers and kennel masters. They are: a. create a Navy enlisted rating for dog handlers; b. recruit dog handlers and kennel masters from existing enlisted ratings; c. negotiate an inter-service agreement with the Air Force to utilize Air Force

enlisted dog handlers and kennel masters. Because of the anticipated limited need for dog handlers in the foreseeable future and because present planning does not seem to indicate that the AQUADOG program would require dog handler and kennel master billets in sufficient numbers to justify establishment of a new enlisted rating, alternative a. is considered impracticable at this time and is not further discussed in this study. However, both alternatives b. and c. do appear to be worthy of further examination. Accordingly, the advantages and disadvantages of each are discussed below:

(U) a. Alternative b. The main advantages of alternative b. are: (1) entire program would remain "in-house" with inter-service cooperation limited to training support; (2) dog handlers would have a basic understanding of Navy methodology and orientation; (3) if desired, personnel could be cross-trained as boat operators with no potential "inter-service" repercussions; (4) trained personnel could be properly identified and, after their AQUADOG tour, they could form a reserve capability for use in a possible emergency situation. The disadvantages are: (1) as long as an individual was assigned as an AQUADOG handler or kennel master he would be performing duties completely outside of the scope of his rating, which could cause him excessive difficulty in preparing for advancement and a possible resultant decline in morale; (2) because the tour of duty in S. E. Asia is limited to 13 months (and is likely to be so in other possible future combat areas) and because there are likely to be very few, if any, AQUADOG billet requirements outside of a combat zone, there would be a relatively high turnover of personnel being lost from the program, and dogs would have to be frequently retrained to accept new masters; (3) AQUADOG handler training as described in Chapter IV below will be approximately 12 weeks in duration. According to present Navy policy as set forth in the Navy Enlisted Transfer Manual, NAVPERS 15909, personnel are required to have 22 months active obligated service remaining to go to such a school. Since Navy dog handlers would most likely only serve a 13 month AQUADOG tour after their training, a favorable "training versus practical use" ratio does not appear to exist. If this alternative is selected, recommended manning is: one kennel master, PO1 or above, with SNEC of 9542; and five dog handlers, SN/FN or below, with SNEC of 9541.

(U) b. Alternative c. The main advantages of alternative c. are: (1) handlers and kennel masters could be

obtained with little interruption of their career pattern; (2) the Navy would not have to concern itself nearly as deeply with the training and administration of the AQUADOG handlers; (3) the expertise of the Air Force in selection, training, and support of military working dogs and handlers could be taken advantage of to the maximum extent possible. The principal disadvantages are: (1) a brief Navy orientation course would be required to familiarize assigned Air Force personnel with the rates, ranks, and responsibilities of the Navy personnel with whom they would be attached; (2) close inter-service liaison would be required to assure the proper utilization and assignment of AQUADOG billets; (3) a formal inter-service agreement would be required to provide for the emergency mobilization and deployment of trained USAF AQUADOG teams within a specified period of time. If this alternative is selected, recommended manning should be in accordance with Air Force standards. However, it is probable that manning would be: one Kennel Master, Technical Sergeant (E6) or above, with Air Force Speciality Code (AFSC) of 811X0-A (Security Policeman/Dog Handler); and five Dog Handlers, Airman First Class (E3) or below, with AFSC of 811X0-A.

(U) An analysis of these two alternatives shows that, to some extent, the advantages and disadvantages of each alternative offset those of the other. It should be pointed out that inter-service cooperation in the use of personnel resources is not a novel concept. Indeed, it is an axiom of effective management that the strengths of an organization be taken advantage of insofar as is feasible. Accordingly, unless the AQUADOG program expands far beyond expectations, the utilization of Air Force personnel to fill dog handler and kennel master billets should be seriously considered. However, recommended manning for both alternatives is shown in the summary at the end of this chapter.

2. Boat Operators

(U) The skills and knowledges required of boat operators will consist of operation and organizational level maintenance of two 16 foot Boston Whalers and four 40-HP outboard motors. These skills and knowledges fall primarily within the Engineman (EN) and Boatswain's Mate (BM) ratings. The Engineman rating is not trained in the operation of small craft; however, because of the simplicity of operating outboard motorboats, it is thought that an assigned EN can be easily cross-trained in boat operation. Conversely,

preventive maintenance of outboard motors does not normally fall within the BM rating; however, provided that the services of an EN are available when required, it is thought that BMs can be adequately cross-trained to conduct routine PM on the outboard motors assigned. Accordingly, the recommended manning for AQUADOG boat operators is as follows: one EN3/ENFN and two BM3/BMSN.

3. Qualitative Requirements Summary

(U) A summary of the qualitative personnel requirements for one AQUADOG division is as follows:

a. Using Navy dog handlers and kennel master:

Recommended Billets	Billet Title
1 PO1 (SNEC 9542)	Kennel Master
5 SN/FN (SNEC 9541)	Dog Handlers
1 EN3/ENFN	Outboard Motor Repairman/ Boat Operator
2 BM3/BMSN	Boat Operator
TOTAL: 9	

b. Using U. S. Air Force dog handlers and kennel master:

Recommended Billets	Billet Title
1 TSGT (AFSC 811X0-A)	Kennel Master
5 A1C (AFSC 811X0-A)	Dog Handler
1 EN3/ENFN	Outboard Motor Repairman/ Boat Operator
2 BM3/BMSN	Boat Operator
TOTAL: 6 USAF, 3 USN	

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IV. TRAINING REQUIREMENTS FOR AQUADOG

A. Dog Handlers

(U) The Military Dog Training Branch of the Department of Security Police Training, Air Training Command, Lackland Air Force Base, Texas, has worked with NSRDL/PC in the development of specialized training courses for training dogs and handlers for Project WATERDOG, which was the program that led to the establishment of Project AQUADOG. In addition, the Branch has developed an eight week AQUADOG training course for the pilot test program which is a modification of the existing eight week Sentry Dog Handler Course (Number 3ALR81130A). In essence, this course reduces the amount of aggression training given the dog and replaces it with water familiarization. In addition to the eight week course, the dogs and handlers will receive three weeks of intensive AQUADOG training on water at NSRDL/PC.

(U) Although this training may be adequate for a test program, the use of a 12 week Patrol Dog Handlers course curriculum (Course Number 2ALR81130A) versus a sentry dog handler curriculum is recommended for the following reasons: (1) a patrol dog is specifically trained to work in close proximity with other persons besides the dog's handler (in a small boat this is an extremely desirable characteristic); (2) the patrol dog is generally more adaptable, composed, discriminating, controllable, and observant that is the sentry dog; (3) the Air Force is gradually replacing all sentry dogs with patrol dogs; therefore, if the decision is made to utilize Air Force personnel in the AQUADOG program, less administrative difficulties would be encountered by using Patrol Dogs from the outset of the program. Table 1 shows the subjects taught and hours of training in each subject for the 12 week Patrol Dog Handler Course. Table 2 shows the subjects and hours of training in each subject for the proposed AQUADOG Handler Course, for which the Patrol Dog Handler Course would be a prerequisite.

B. Boat Operators

(U) Boat Operators will require training in three basic areas: 40 horsepower outboard motor operation and preventive maintenance, and AQUADOG boat patrol techniques. Since enginemen receive training in troubleshooting techniques on internal combustion gasoline engines as part of their Class

TABLE 1

USAF PATROL DOG HANDLER COURSE (COURSE NO. 3ALR81130A-1)

SUBJECT	TOTAL HOURS
Introduction	3
First Aid and Health Checks	3
Capabilities and Limitations	2
Dog Training Principles	1
Dog, Kennel and Equipment Care	87
Safe Dog Handling Procedures	2
Establishing Rapport	15
Basic Obedience	20
On and Off Leash Obedience	15
Controlled Aggressiveness	42
Building Search	38
Tracking	45
Detecting and Alerting	28
Vehicle Patrol	10
Off-Leash Obedience	16
Measurement	27
Critique	4
Graduation	2
TOTAL:	360 (12 wks)

TABLE 2

PROPOSED AQUADOG HANDLER COURSE

SUBJECT	TOTAL HOURS
Introduction	7
Water and Boat Familiarization	14
Detection Training (Boat, Scent)	60
Detection Training (Boat, Sound, Sight)	15
TOTAL:	90 (3 wks)

"A" School training, it is not considered necessary that they receive corrective or preventive maintenance training on the outboard motors. However, Boatswain's Mates will require a degree of outboard motor preventive maintenance training. Accordingly, provision is made for this in the proposed Boat Operator's course. In addition to basic operation and maintenance of the boat and engines an AQUADOG boat operator will require a basic understanding of the following subjects:

- the scent of a human and factors affecting it
- typical swimmer approach patterns
- proper AQUADOG patrol speed
- dog's alerting action and follow-up
- how to patrol and clear a swimmer defense area
- patrolling patterns to relocate a lost alert

These subjects will best be learned through a combination of classroom and practical training using a trained AQUADOG handler and dog and swimmers. It is possible that NSRDL, Panama City, could train initial cadres of boat operators on an emergency basis; however, specific course content as well as the permanent location of such a course should be the subject of further study.

(U) Table 3 presents an outline of a proposed two week AQUADOG Boat Operator course of instruction.

C. Kennel Masters

(U) AQUADOG Kennel Masters should be selected from senior enlisted personnel who are experienced military working dog handlers, preferably from within the AQUADOG program. In addition to that training required for AQUADOG dog handlers, kennel masters should attend the three week Patrol Dog Handler Supervisor course of instruction (Course Number 3AZR81170A-1). Roughly half of the course is devoted to the administrative and supervisory needs of the Patrol Dog Supervisor, and the other half is spent in the field gaining knowledge in conducting patrol dog training.

TABLE 3

PROPOSED AQUADOG BOAT OPERATOR COURSE

SUBJECT	DAYS
Introduction	1/2
40 HP Outboard Motor Operation	1/2
16 ft. Boston Whaler Operation (classroom)	1
16 ft. Boston Whaler Operation (practical)	1
40 HP Outboard Motor Preventive Maintenance	1
16 ft. Boston Whaler Preventive Maintenance	1
AQUADOG Boat Patrol Techniques (classroom)	1
AQUADOG Boat Patrol Techniques (practical)	4
TOTAL:	10 days

D. All Personnel

(U) Anti-swimmer operations in riverine and inshore environments present problems and conditions that are outside of the range of experience of many military personnel. Specialized training such as that given in the two week Counter-insurgency/Survival, Evasion, Resistance to Interrogation, Escape Course of Instruction taught at Warner Springs, Calif., Detachment, Fleet Airborne Electronics Training Unit, Pacific, is therefore considered essential for all AQUADOG personnel prior to their assignment to a deployed unit.

V. CONCLUSIONS

(U) 1. To meet the personnel requirements to support fleet introduction of one or more AQUADOG Divisions, new enlisted billets will be required.

(U) 2. No new enlisted ratings or NECs will be required to identify AQUADOG billets.

(U) 3. A mix of enlisted rates, ratings, and NECs will be required for AQUADOG.

(U) 4. A program of formal training, utilizing existing formal school courses, as well as implementing two new courses, will be required to provide dog handler, boat operation, boat maintenance, and dog handler supervisory training to AQUADOG personnel.

(U) 5. Because of its broad background in administration, training, and utilization of animals and handlers for the Military Working Dog Program, the U. S. Air Force is uniquely qualified to provide, as a minimum, training support to the AQUADOG Program, and as a maximum, trained animals, dog handlers, and dog handler supervisors to the AQUADOG Program.

(U) 6. Because of the unique conditions presented by anti-swimmer operations in the riverine and inshore environments, all AQUADOG personnel will require training in counterinsurgency and survival, evasion, resistance to interrogation, and escape techniques.

(U) 7. Existing training should be utilized to provide AQUADOG personnel with training in counterinsurgency and survival, evasion, resistance to interrogation, and escape techniques.

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VI. RECOMMENDATIONS

(U) Based on the foregoing conclusions, the following recommendations are made to support the personnel and training requirements for AQUADOG:

(U) 1. That, unless the AQUADOG program expands far beyond expectations, the utilization of Air Force personnel to fill dog handler and kennel master billets be seriously considered.

(U) 2. That, provided the decision is made to use Air Force personnel, the following billets be established for each AQUADOG division:

Recommended Billets	Billet Title
1 TSGT (E6) (AFSC811X0-A)	Kennel Master
5 A1C (E3) (AFSC811X0-A)	Dog Handler
1 EN3/ENFN (EN-0000)	Outboard Motor Repairman/ Operator
2 BM3/BMSN (BM-0000)	Boat Operator

TOTAL: 6 USAF, 3 USN

(U) 3. That, if it is decided to use Navy personnel only, the following billets be established for each AQUADOG division:

Recommended Billets	Billet Title
1 PO1 (SNEC 9542)	Kennel Master
5 SN/FN (SNEC 9541)	Dog Handler
1 EN/ENFN (EN-0000)	Outboard Motor Repairman/ Operator
2 BM3/BMSN (BM-0000)	Boat Operator

TOTAL: 9 USN

(U) 4. That personnel selected to be AQUADOG dog handlers receive the 12 week U. S. Air Force Patrol Dog Handlers Course (Course Number 2ALR81130A-1) at Lackland Air Force Base, Texas, as well as approximately three weeks training in AQUADOG dog handling techniques.

(U) 5. That personnel selected to be AQUADOG boat repairmen and/or operators receive approximately one week training

in outboard motor and 16 foot Boston Whaler operation and preventive maintenance techniques and approximately one week training in AQUADOG Boat Patrol techniques.

(U) 6. That personnel selected to be AQUADOG kennel masters receive all training required for AQUADOG dog handlers as well as the three week U. S. Air Force Patrol Dog Handler Supervisor Course (Course Number 3AZR1170A-1) at Lackland Air Force Base, Texas.

(U) 7. That all AQUADOG personnel receive the two week training course; Counterinsurgency/Survival, Evasion, Resistance to Interrogation, Excape; taught at Warner Springs, Calif., Detachment, Fleet Airborne Electronics Training Unit, Pacific, as part of their training prior to reporting to AQUADOG divisions.

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13. ABSTRACT

The personnel and training implications inherent in fleet introduction of the "AQUADOG" swimmer detection system are discussed. Brief descriptions of the concept being developed, maintenance and support philosophy, and operating concepts are also presented.

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14. KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
AQUADOG						
Military Working Dog						
WATERDOG						
Patrol Dog						
Swimmer Defense						

Special Handling Required
Not Releasable
To Foreign Nationals