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PROJECT MANAGEMENT PLAN/SCHEDULE

REMEDIAL INVESTIGATION / FEASIBILITY STUDY
NAVAL AIR STATION ALAMEDA
ALAMEDA, CALIFORNIA

VOLUME 5

DEPARTMENT OF THE NAVY
WESTERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
SAN BRUNO, CALIFORNIA 94066-0727

PROJECT MANAGEMENT PLAN/SCHEDULE
REMEDIAL INVESTIGATION/FEASIBILITY STUDY

NAVAL AIR STATION ALAMEDA
ALAMEDA, CALIFORNIA

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Transmittal
Final Project Management Plan/Schedule
Remedial Investigation/Feasibility Study
Naval Air Station Alameda
Alameda, California

Dear Ms. Dizon:

Enclosed are 18 additional copies of the final Project Management Plan/Schedule, Volume 5 of the Remedial Investigation/Feasibility Study Work Plan at the Naval Air Station Alameda. This revision incorporates our responses to the comments made by the California Department of Health Services.

This report completes a portion of the work authorized under contract N62474-85-D-5620 Delivery Order 005.

If you have any questions, please call us.

Respectfully submitted,



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CCW/JWB/dt

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FINAL PROJECT MANAGEMENT PLAN/SCHEDULE
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
(RI/FS)
VOLUME 5 OF 8

DATED 01 FEBRUARY 1989

THIS RECORD CONTAINS MULTIPLE VOLUMES
WHICH HAVE BEEN ENTERED SEPARATELY

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VOLUME 6 OF 8 – DATA MANAGEMENT PLAN,
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PROJECT MANAGEMENT PLAN/SCHEDULE
REMEDIAL INVESTIGATION/FEASIBILITY STUDY

NAVAL AIR STATION ALAMEDA
ALAMEDA, CALIFORNIA

1.0 INTRODUCTION

The Work Plan for the Remedial Investigation/Feasibility Study (RI/FS) at Naval Air Station (NAS) Alameda consists of the following planning documents:

- Volume 1 Sampling Plan
- Volume 1A Sampling Plan: Solid Waste Assessment Test (SWAT) Proposal Addendum
- Volume 1B Air Sampling Plan
- Volume 2 Health and Safety Plan
- Volume 3 Quality Assurance Project Plan (QAPP), Quality Assurance/Quality Control Plan (QA/QC)
- Volume 4 Community Relations Plan
- Volume 5 Project Management Plan/Schedule
- Volume 6 Data Management Plan
- Volume 7 Public Health and Environmental Evaluation Plan
- Volume 8 Feasibility Study Plan

This Project Management Plan/Schedule is Volume 5 of the Work Plan and outlines the project management procedures for the Remedial Investigation/Feasibility Study (RI/FS) for the NAS Alameda at Alameda, California. The plan has been prepared to conform with the following guidance documents.

- o National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R., Part 300 (1986).

- o Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 1980 as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), 42 U.S.C. Sections 9601 et seq.
- o U.S. Environmental Protection Agency's (EPA) "Guidance for Conducting Remedial Investigations/Feasibility Studies (RI/FS) under CERCLA (Draft, March 1988).

The plan is based on existing information regarding the site and upon past experience at other sites.

1.1 Site Description

The NAS Alameda is located in Alameda, California (Figure 1-1). The station occupies the western tip of the island of Alameda along the eastern shore of San Francisco Bay. Most of the eastern half of the station is developed with office and industrial facilities. Runways and support facilities occupy the western part of the station.

The specific sites within the station included in the RI/FS follow.

1. 1943-1956 Disposal Area;
2. West Beach Landfill;
3. Area 97;
4. Building 360 (Plating, Engine Cleaning, Paint Stripping, and Paint Shops);
5. Building 5 (Plating, Paint Stripping, Cleaning, and Paint Shops);
6. Building 41 (Aircraft Intermediate Maintenance Department);

7. Building 162, 459, and 547 (service stations);
8. Building 114 (Pest Control Area and Separator Pit);
9. Building 410;
10. Building 400 and 530 (Missile Rework Operations);
11. Building 14 (Engine Test Cell);
12. Building 10 (Power Plant);
13. Oil Refinery;
14. Fire Training Area.;
15. Buildings 301 and 389;
16. Cans C-2 Area;
17. Seaplane Lagoon;
18. Station Sewer System;
19. Yard D-13 (Hazardous Waste Solvents);
20. Estuary (Oakland Inner Harbor).

A map of the layout of the NAS Alameda which shows the specific sites of the feasibility study is included on Figure 1-2.

1.2 Objective

The objective of this Project Management Plan Schedule is to maintain a system that will address site conditions, scheduling constraints, budget limitations, and agency input while developing the RI/FS. This plan will also confirm that sufficient information has been provided for streamlined evaluation of remedial alternatives and that the selection of a final solution has been thoroughly considered. The following sections outline how these objectives will be accomplished and contain descriptions of project organization, development and implementation of the RI/FS, and project scheduling.

2.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

2.1 Organization

The Installation Restoration (IR) Program at NAS Alameda is coordinated by the NAS Alameda Environmental Officer (EO). The EO uses the Environmental Department staff at Western Division, Naval Facilities Engineering Command (WESTDIV) for technical and contract support for the implementation of the IR program. Canonie Environmental Services Corp. (Canonie), under contract to WESTDIV, provides personnel to accomplish the tasks required in the IR program.

Canonie operates under a matrix structure in which personnel belong to managerial departments and, at the same time, are assigned to special task forces to complete work related to particular projects. Managerial departments are responsible for the development of personnel in scientific training and for the review of work in relation to corporate policy. Project task forces are responsible for the completion of specific, project-related objectives within the context of directives set by either Canonie or the client.

This Work Plan addresses the project organization for the activities to be performed during the RI/FS. Those who are assigned to the project task force are responsible for utilizing effectively the resources of the various managerial departments within the Canonie corporate structure. Effective utilization of these resources will result in cost-efficient solutions to the problems encountered while the decision on the use of particular resources remains the administrative duty of the task force. The responsibility for the services rendered through the various departments lies with the task force management.

In order to consistently produce cost-effective and efficient solutions to a broad range of technical problems, quality assurance and control activities must occur at all levels of the organization; therefore a Quality Assurance Project Plan (QAPP) team will be established. The activities of the QAPP Team for the RI/FS project will remain independent of the activities of the task force in order to confirm that procedures and protocols outlined in the RI/FS Work Plan are carried out in a manner consistent with EPA and California Department of Health Services' (DHS) guidelines and the IR Program. Responsibility for quality assurance and quality control (QA/QC) depends upon the project organization assembled to execute the work and on the maintenance of the principal lines of communication between members of the organization.

2.2 Key Personnel, U.S. Navy

Because the project is located on the NAS Alameda, the Commanding Officer is responsible for project activities and overall project approval. This responsibility has been delegated to the NAS Alameda EO who is also in charge of on-site access for project related work.

The WESTDIV Office of Environmental Management will be supporting the NAS Alameda EO by providing services for contract administration and technical implementation through the Environmental Restoration Branch. The head of the Office of Environmental Management is responsible for providing these services to NAS Alameda. The daily management has been delegated to the Environmental Restoration Branch and will be the responsibility of the Remedial Project Manager (RPM).

The RPM's duties include implementation of program policy and procedural review. Additionally, the RPM will act as the interface between the Navy and Canonie with all work subject to approval of the NAS Alameda EO.

Figure 2-1 shows the proposed task force for the implementation of the RI/FS and the lines of communication between various key individuals. The responsibilities of the Canonie task force and related managerial departments are summarized in the following sections.

2.3 Key Personnel, Canonie

2.3.1 Project Manager

The Project Manager is responsible for maintaining a clear definition of and adherence to the scope, schedule, and budget of the project. He also has oversight of all aspects of the project including health and safety, quality assurance, and all on-site activities and serves as the alternate QA/QC officer. As a part of this responsibility, he will:

1. Serve as the communication link with the WESTDIV RPM, and if required, with the EPA and the DHS, on technical matters;
2. Support community relations efforts;
3. Provide immediate direction to staff involved in the completion of tasks outlined in the RI/FS Work Plan;
4. Supervise all work by Canonie and its subcontractors;
5. Maintain budgetary and schedule surveillance of the work and regularly advise the Project Technical Director of the progress of the RI/FS program.

2.3.2 Project Technical Director

The Project Technical Director is responsible for the staffing and overall administration of the project. As part of his responsibilities, he will:

1. Approve technical reports and material being released to the RPM;
2. Approve task plans and operating procedures related to the project.
3. Maintain the QAPP;
4. Indicate the types of QA/QC records to be retained as a permanent part of the project file;
5. Provide for QA/QC audits of the work of task force members;

2.3.3 Project Engineer/Project Scientist

The Project Engineer/Project Scientist is responsible for the implementation of RI/FS field activities, initial data acquisition, health and safety aspects of field activities, and the proper selection and execution of procedures which have been accepted for use in the RI/FS program. As part of his responsibilities, he will:

1. Provide personal supervision of technicians or subcontractors executing RI/FS data gathering tasks;
2. Review the effectiveness of procedures and suggest changes which will enhance or more efficiently accomplish the objectives of the RI/FS Work Plan;

3. Assist in the collection of samples so that sampling is representative of actual field conditions;
4. Assist in the maintenance of budgetary and scheduling surveillance;
5. Administer the regular maintenance of equipment utilized in the RI/FS program to prevent unnecessary equipment failures and project delays caused thereby;
6. Assist in the preparation of reports, submittals, and presentations to see that data and conclusions accurately reflect observed conditions in the field.

2.3.4 Task Leaders

The Task Leaders within the Project Task Force are responsible for specific engineering, scientific, and analytical operations required to accomplish identified project objectives. As part of this responsibility, Task Leaders will:

1. Initiate, develop, and check subtask plans, procedures, support services, and products;
2. Identify safety hazards and see that the associated risks are reduced to acceptable levels;
3. Supervise and participate in operations, analyses, data collection, and data reduction;
4. Maintain samples, sample identification, and analytical equipment;
5. Generate required QA/QC records and reports;

6. Implement corrective actions identified by QA/QC reports.

2.3.5 Quality Review Team

The Quality Review Team reports directly to the corporate officer in charge. The team is responsible for ongoing surveillance of project activities to verify conformance to this plan and to evaluate the effectiveness of its requirements. The team has access to any Canonic personnel or project subcontractors, as necessary, to resolve QA/QC problems. The team has authority to stop work which appears to jeopardize project quality. As part of this responsibility, the team will:

1. Monitor the correction of quality control problems and alert other Task Leaders to where similar problems may exist or might occur;
2. Report to the corporate office in charge concerning the quality of the work, the procedures utilized, and the services provided in relation to the stated objectives of the project;
3. Provide for retention of QA/QC records;
4. Participate in QA/QC audits;
5. Recommend changes, where appropriate, to improve the effectiveness of project procedures or the procedures identified in this plan;
6. Review proposed additions and/or changes to this plan.

The Quality Assurance Coordinator directs the Quality Review Team and is responsible for evaluating and approving this plan, and for scheduling and conducting QA/QC audits. In addition, he provides QA/QC reports to the corporate officer in charge, the Project Manager, and the Project Technical Director on the results of audits by the Quality Assurance Team. He also reports on and the necessity of preventive or corrective actions and works

on developing and initiating preventative and corrective actions, as required, in conjunction with the project manager and technical project director.

2.3.6 Support Departments

Canonie's environmental laboratory will provide analytical services related to the project. The laboratory is approved by the Navy and DHS, with a reciprocal approval by the EPA, to perform a variety of inorganic and organic analytical services. The laboratory will also be responsible for the performance of all services related to the analysis of air monitoring samples although actual analysis of samples will be completed by Clayton Environmental Consultants, Inc. (Clayton) of Novi, Michigan, if discrete air monitoring is required.

Canonie's accounting department will be responsible for the financial administration of subcontracts, the control of the payment of invoices, and for overall budgetary matters.

Canonie's technical support department will provide services in the areas of graphics, reproductions, word processing, data processing, and staffing.

3.0 DEVELOPMENT AND IMPLEMENTATION OF THE RI/FS

The guidance documents specified previously express a preference for remediation measures that result in reduction of volume, toxicity or mobility of hazardous substances. The various steps to be taken to arrive at a preferable solution are described in the following sections.

3.1 Development

3.1.1 Scoping

The initial phase of an RI/FS will generally address scoping. Scoping activities include collection and review of existing data. This data is used as a basis to delineate preliminary boundaries of the study area, to identify general response objectives, and to identify the necessity for interim remedial action. Scoping also indicates whether site remediation should be split into separate operational units. General response objectives do not necessarily address specific technologies. Examples of general response objectives are the following:

- o Source control;
- o Management of migration;
- o Removal.

Identification of the general response objectives will affect other objectives of the RI/FS such as site characterization and development of alternatives.

Much of the work to be done in the scoping phase has already been completed for this project.

3.1.2 Site Characterization

The site characterization is based upon field sampling and the results of laboratory analyses. Data from the initial analyses are used to review and, wherever appropriate, to revise the conceptual remedial measures developed in the scoping phase. Based upon this review, the subsequent sampling effort can focus upon the refined remedial response objectives. As the site becomes more fully and accurately characterized, the most feasible alternatives for the site conditions can be selected.

3.1.3 Development of Alternatives

Initial alternatives, based upon any existing information, are developed during the scoping phase. As additional data are obtained during the sampling program, these alternatives are refined to better address site conditions. In addition to site specific information, development of alternatives requires that the potential treatment technologies be identified and that each of these, in turn, be reviewed for performance, reliability, constructibility, and cost.

3.1.4 Detailed Analysis

The EPA has developed nine evaluation criteria to address the statutory requirements and preferences of CERCLA. With sufficient data available, the alternatives will be evaluated according to these criteria and the results summarized so that the appropriate remediation, consistent with CERCLA, can be selected.

3.2 Implementation

The steps to be taken to arrive at a preferred solution have been discussed in Section 3.1. The present section describes the process whereby these steps can be implemented.

3.2.1 Scoping

Much of the preliminary planning work for the scoping phase has already been done. Site remediation work has been divided into operational units and the preliminary boundaries of the study areas have been delineated. What remains is for the actual field work and laboratory analyses to be undertaken. The plan for implementing the site work is more fully described in the Sampling Plan (Volume 1).

3.2.2 Site Characterization

Following DHS review of the Sampling Plan and upon receipt of a notice to proceed, subsurface exploration operations will commence at the site.

Management of much of the daily on-site operational aspects will be the responsibility of the Assistant Project Engineer. Such duties include:

1. Scheduling daily work to avoid conflicts with other base operations;
2. Arranging for underground utility locations;
3. Directing the daily work of the drilling and sampling areas;
4. Interfacing with other on-site personnel;
5. Verifying that the program conforms to the Quality Assurance Project Plan (QAPP).

As laboratory results become available, they will be submitted to the Project Engineer for review. After the laboratory reports have been reviewed, the data will be entered into the project's computer database.

It will be the Project Engineer's responsibility to verify that the data entry is accurate and that the output is presented in a format that will be easily understood by other agencies.

The initial site exploration is intended to identify and characterize hot spots but will not necessarily fully characterize the extent of migration. The Project Technical Director will direct the development of subsequent site exploration programs necessary to fill the data gaps and fully characterize the site for evaluation of the relative feasibility of the remediation alternatives. The subsequent exploration programs will be approved by the Navy prior to implementation. The subsequent exploration programs will follow the same procedures as the initial program.

The results of laboratory analyses (including raw data) will be retained throughout the investigation.

3.2.4 Development of Alternatives

As results from each specific site become available, they will be assembled for review by the Project Manager. The Project Manager will review the site data with the Hydrologist and the Project Engineer. At this time the site characterization data should be sufficient to allow preliminary remedial alternatives to be developed by the Project Task Forces.

Under the direction of the Project Manager, the alternatives that are developed will be outlined and discussions will be coordinated with the Navy. Alternatives that appear to be the most feasible, based upon the current data, will be selected and any data gaps that prevent an acceptable analysis of these alternatives will be identified. Accumulation of additional data to fill these data gaps will be done in subsequent site exploration programs.

3.2.5 Detailed Analysis

Using data from the site characterization studies, the Project Task Force, which will include a toxicologist and hydrologist, will conduct a detailed evaluation of the remedial alternatives to select the most feasible alternative. Prior to conducting a detailed analysis, the list of alternatives will be screened to eliminate those considered less promising and those where data may not be complete enough to allow detailed analysis.

The development, screening, and selection will be done in coordination with interested regulatory agencies, and public review and comment as required by Federal and State law.

3.2.6 Reports

Periodically, interim technical reports may be prepared to summarize the progress of the RI/FS, present conclusions affecting the scope or direction of continuing RI/FS activities, and/or propose interim remedial measures to be implemented at the site. If appropriate, interim reports may be prepared in anticipation of community support activities.

At the conclusion of the RI portion of the RI/FS, a draft RI report will be prepared which succinctly reports all data, test results, and findings gathered during the investigatory phase and presents conclusions on the nature and extent of chemical sources and migration. Upon review and comment on the draft by the RPM and EO, a final RI report will be prepared and submitted to the RPM.

At the conclusion of the FS portion of the RI/FS, a draft FS will be prepared which reviews the technologies evaluated for implementation at the site, describes the remedial alternative(s) which best meet(s) the objectives for the study, and recommends implementation of a remedial action response for the site. Upon review and comment on the draft by the RPM and EO, a final FS report will be prepared and submitted to the RPM.

3.3 Organization for the RI/FS

Work for the RI/FS may be divided between two task forces: one for the RI, the other for the FS. Both of these task forces will operate under the direction of the Project Manager. Due to the iterative and interrelative nature of the RI/FS, regular communication between the task forces will be maintained. This will confirm that any redirection of one program is reflected in the efforts of the other.

The task leader of each group will be responsible for maintaining contact with the other task leader. The Project Manager will verify that both task forces are updated and understand the current form of project objectives.

4.0 COMPUTER-AIDED SCHEDULING

In order that the project may be implemented in the most effective and cost-efficient manner possible, a computer-aided project management schedule will be developed. (A tentative RI/FS project schedule is shown on Figure 4-1.) Utilization of computer-aided project management will maximize the ability to analyze options ahead of time. This will allow timely decisions to be made that will promote the efficient completion of the project.

Project schedules are dynamic and may change soon after the work has begun. To be at all useful as a management tool, the schedule must be continually updated to reflect changes. Because manual updating of a schedule can be a tedious and time-consuming task, it might be put off until some convenient time. This practice defeats the planning purposes of the schedule, because it no longer reflects conditions that may impact critical decisions. The use of a computerized schedule allows updates to be made easily, and therefore preserves the schedule's usefulness.

Once developed, the project schedule, and its updated versions, will function as a valuable tool for all levels of management to assist them in controlling the work effort and progress.

4.1 Schedule Development

Development of a project schedule involves several tasks:

1. Definition of goals and objectives;
2. Identification of activities;
3. Determination of interrelationship of tasks;

4. Allocation of resources;
5. Assigning milestones;
6. Schedule updating;
7. Progress evaluation;
8. Review of future work.

These tasks are briefly explained in the following subsections.

4.1.1 Project Goals and Objectives

Prior to proceeding with detailed scheduling, the project goals and objectives must be specifically defined and thoroughly understood. Definition of the goals and objectives will be based upon regulatory requirements and economic and technical constraints.

Once the goals and objectives have been agreed upon, it is the responsibility of the Project Manager to communicate them to the project task forces. The individual charged with preparing the project schedule will then use these as the schedule's target goals and objectives.

4.1.2 Identify Activities

The first step in designing a schedule is to identify and list the individual activities which will need to be accomplished to complete the project. The individual activities are then organized into groups of similar tasks, and the most efficient order of performing these tasks is determined. A tentative schedule of RI activities is shown on Figure 4-2, and a similar schedule of FS activities is shown on Figure 4-3.

Because this project will involve field, laboratory, and office activities; input from the Task Leaders for each of these phases will be necessary to prepare a workable schedule.

4.1.3 Determine the Interrelationship of the Activities

After listing the project activities, the next step is to determine their mutual interrelationship and dependency. Identification of the predecessor activities that must be completed prior to initiating a subsequent activity is especially important.

There will also be some overlap and parallel progress. This allows dependent activities to begin at some time prior to completion of earlier tasks, and also allows independent tasks to proceed concurrently. The experience of the Project Manager will be helpful in verifying that the most efficient order and network of activities is used in the schedule.

4.1.4 Allocation of Resources

Project resources include manpower, equipment, materials, and subcontractors. Some or all of these resources will be required on each activity. The allocation of these resources affects the duration and cost of each activity and thus, the overall project.

Because resource allocation has such a major effect on the project schedule, it will be up to the Project Manager and Project Technical Director to decide how these resources should be allocated to the various activities.

4.1.5 Assigning Milestones

Milestones are key points that allow the progress of the work to be quickly evaluated by comparing the actual date to the scheduled date of a particular event. Milestones are assigned to activities that represent the

start or completion of a major phase of work. The submission of deliverables can be used as milestones to gauge the project progress. Other milestones would be the completion of a particular phase of site explorations or construction activity, or the coming on line of an operational system. Although milestones will provide a snapshot look at how the work is progressing, they do not indicate the cause of any departure from the schedule.

4.1.6 Schedule Updating

As discussed previously, the original schedule, as initially planned, is likely to change as soon as work begins. Schedule changes may be a result of changed priorities, conflicts, or use of float time. The schedule may be rendered obsolete by a number of factors. Once this happens, the schedule no longer has any value as a management tool, and it must be updated in order to again be useful.

Whenever the schedule is to be updated, two aspects must be considered: an evaluation of the activities to date and a review of upcoming work. Based upon actual progress to date, the schedule can be amended to include a particular activity's actual start date and the actual finish date, or the remaining duration to complete the activity. As the project progresses, work that was once too far in the future to accurately detail will be better understood and described. This better understanding can be reflected in the updated schedule.

Updating the schedule will involve input from the Task Leaders, Project Engineer, Project Technical Director, and the Project Manager.

5.0 GLOSSARY OF ACRONYMS

<u>Acronym</u>	<u>Definition</u>
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
C.F.R.	Code of Federal Regulations
DHS	California Department of Health Services
EO	Environmental Officer
EPA	United States Environmental Protection Agency
FS	Feasibility Study
IR	Installation Restoration (Program)
NAS	Naval Air Station
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
QC	Quality Control
RA	Remedial Action
RD	Remedial Design
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
RPM	Remedial Project Manager
SARA	Superfund Amendments and Reauthorization Act
SWAT	Solid Waste Assessment Test
U.S.C.	United States Code
WESTDIV	Western Division, Naval Facilities Engineering Command

REFERENCES

REFERENCES

U.S. Environmental Protection Agency, 1985, "Guidance on Remedial Investigations under CERCLA," June.

_____, 1987, "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA," draft, OSWER-9355.3-01.

Wahler Associates, 1985, "Verification Step Confirmation Study, Naval Air Station, Alameda," draft report for Western Div., Naval Facilities Engineering Command, Contract N62474-83-C-3075, May.

FIGURES

DRAWING NUMBER 86-018-A1

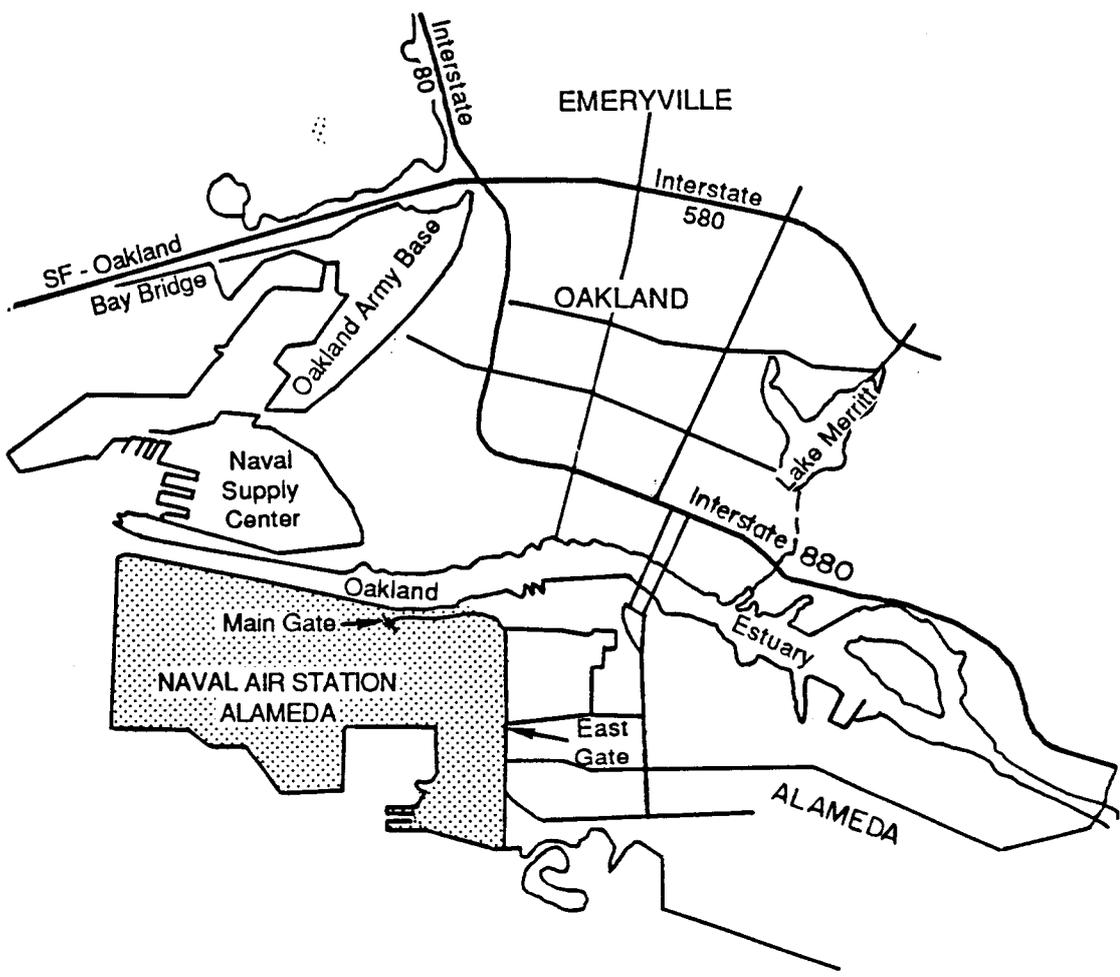
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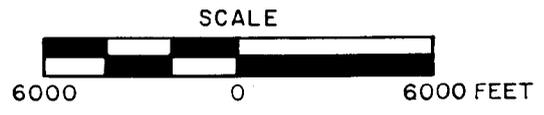
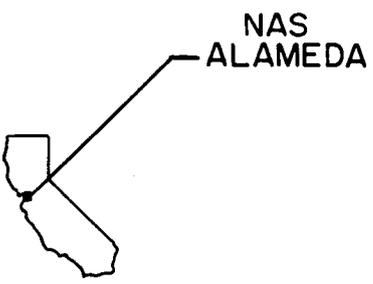
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DATE

REVISION NO. DATE



SITE LOCATION



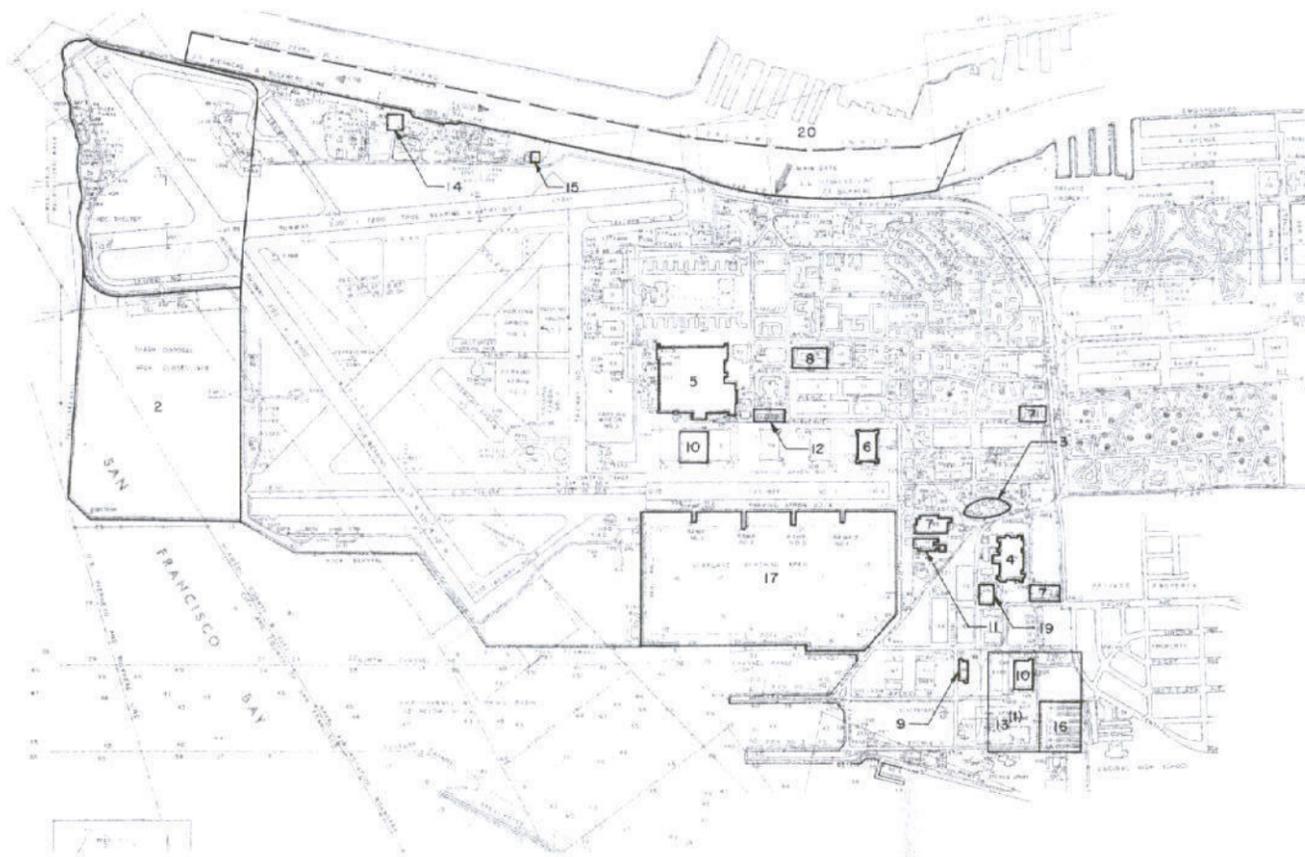
SITE LOCATION PLAN
NAVAL AIR STATION
ALAMEDA, CALIFORNIA

PREPARED FOR
WESTERN DIVISION
NAVAL FACILITIES ENGINEERING
COMMAND

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DATE: 5-4-88	FIGURE I-1	DRAWING NUMBER
SCALE: AS SHOWN		86-018-A1

86-018-E3
 DRAWING NUMBER
 86-018-E3
 CHECKED BY
 APPROVED BY
 LEA
 7-27-88
 DRAWN BY
 DATE
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NOTES:
 1. THE AREA OF SITE 13 INCLUDES THE AREAS OF SITES 10 AND 16.

LEGEND:

Site No.	Site Description
1	1943-1956 Disposal Site
2	West Beach Landfill
3	Area 97 (Aviation Gasoline Tanks)
4	Building 360 (Plating Shop, Engine Cleaning Shop, Paint Shop, and Paint Stripping Shop)
5	Building 5 (Plating Shop, Paint Stripping Shop, Cleaning Shop, and Paint Shop)
6	Building 41 (Aircraft Intermediate Maintenance Dept.)
7	Buildings 162, 458, and 547 (Service Stations)
8	Building 114 (Pest Control Area and Separator Pit)
9	Building 410 (Paint Stripping)
10	Buildings 400 and 530 (Missile Rework Operations)
11	Building 14 (Engine Test Cell)
12	Building 10 (Power Plant)
13	Oil Refinery
14	Fire Training Area
15	Buildings 301 and 389 (Storage Area)
16	Cars C-2 Area
17	Seaplane Lagoon
18	Station Sewer System (Not on Site)
19	Yard D-13 (Hazardous Waste Solvents)
20	Estuary (Oakland Inner Harbor)

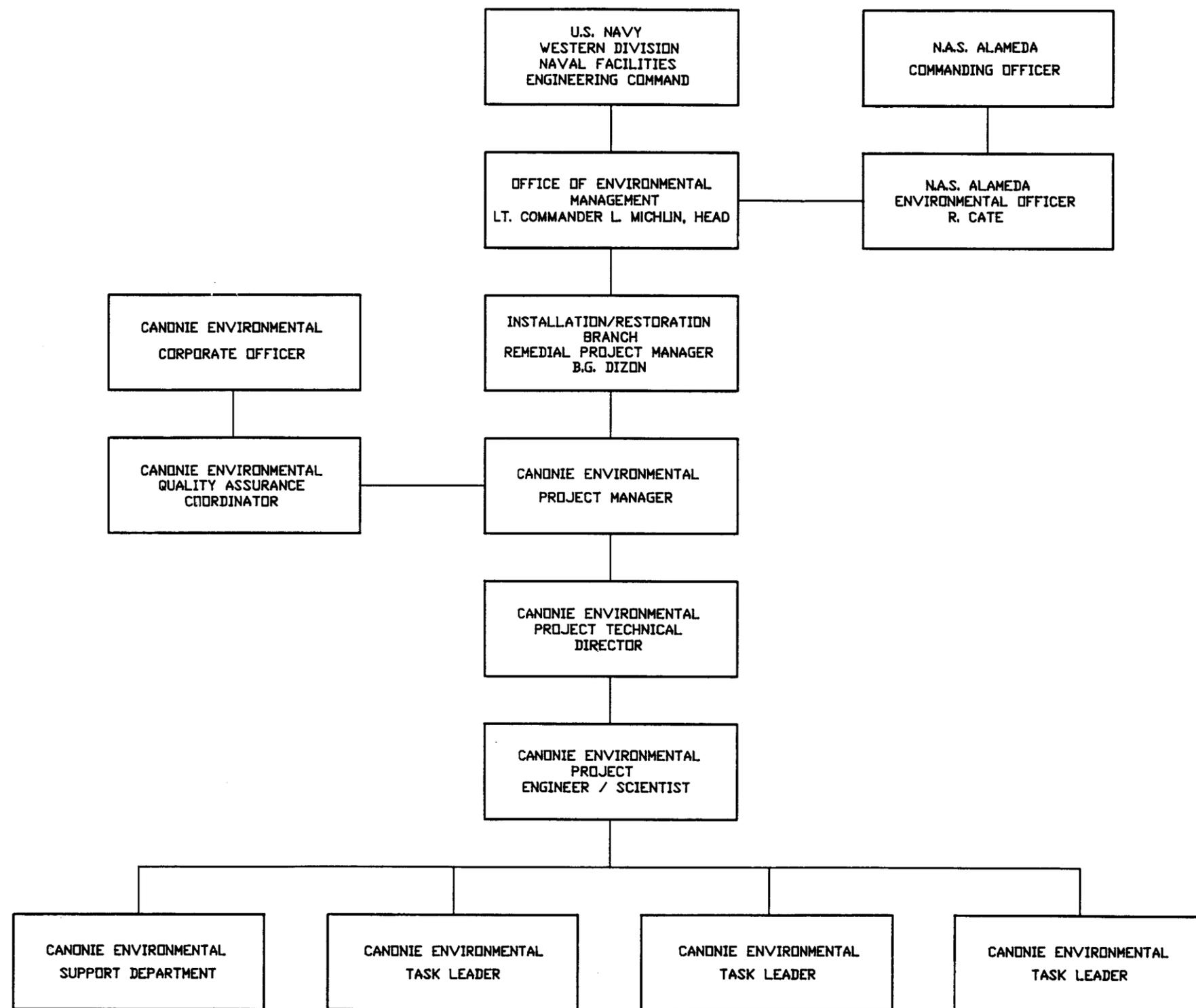


REMEDIAL INVESTIGATION/FEASIBILITY STUDY SITES
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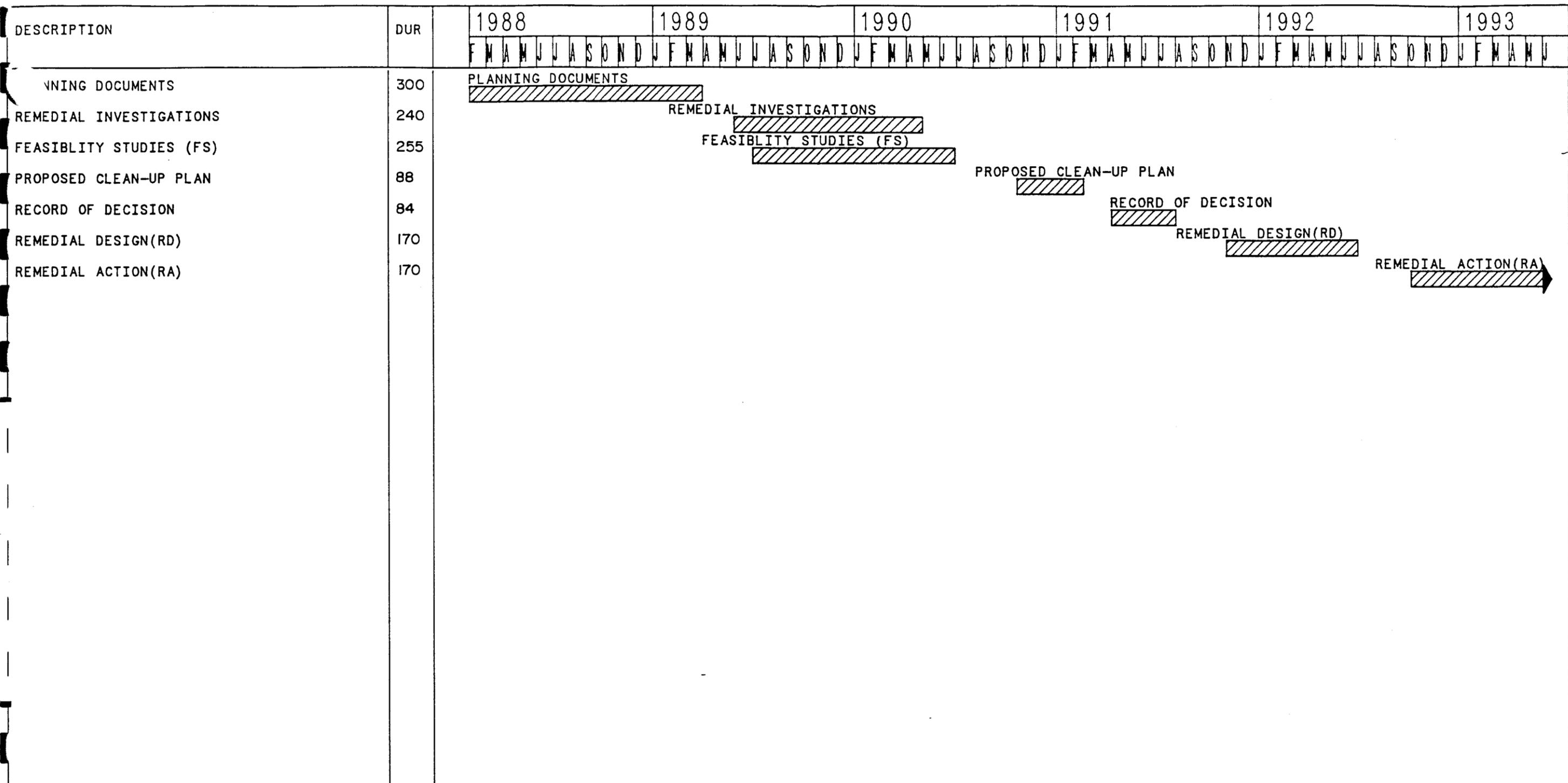
DATE: 7-27-88
 SCALE: FIGURE 1-2
 DRAWING NUMBER: 86-018-E3

REFERENCE
 U.S. NAVY MAP



PROPOSED TASK FORCE

FIGURE 2 -1



LEGEND

DESC PROGRESS LS FLOAT

△ MILESTONE

HIGHLIGHTED

DESC DESCRIPTION
LS LATE START

RUN DATE 30NOV88
 REVISION NO 1
 BASE DATE 01FEB88
 DATA DATE 01FEB88
 REVISED 21 FEB 89

86-018-B49

TENTATIVE RI/FS SCHEDULE
 NAVAL AIR STATION
 ALAMEDA, CALIFORNIA
 PREPARED FOR
 WESTERN DIVISION
 NAVAL FACILITIES ENGINEERING
 COMMAND
 FIGURE 4-1

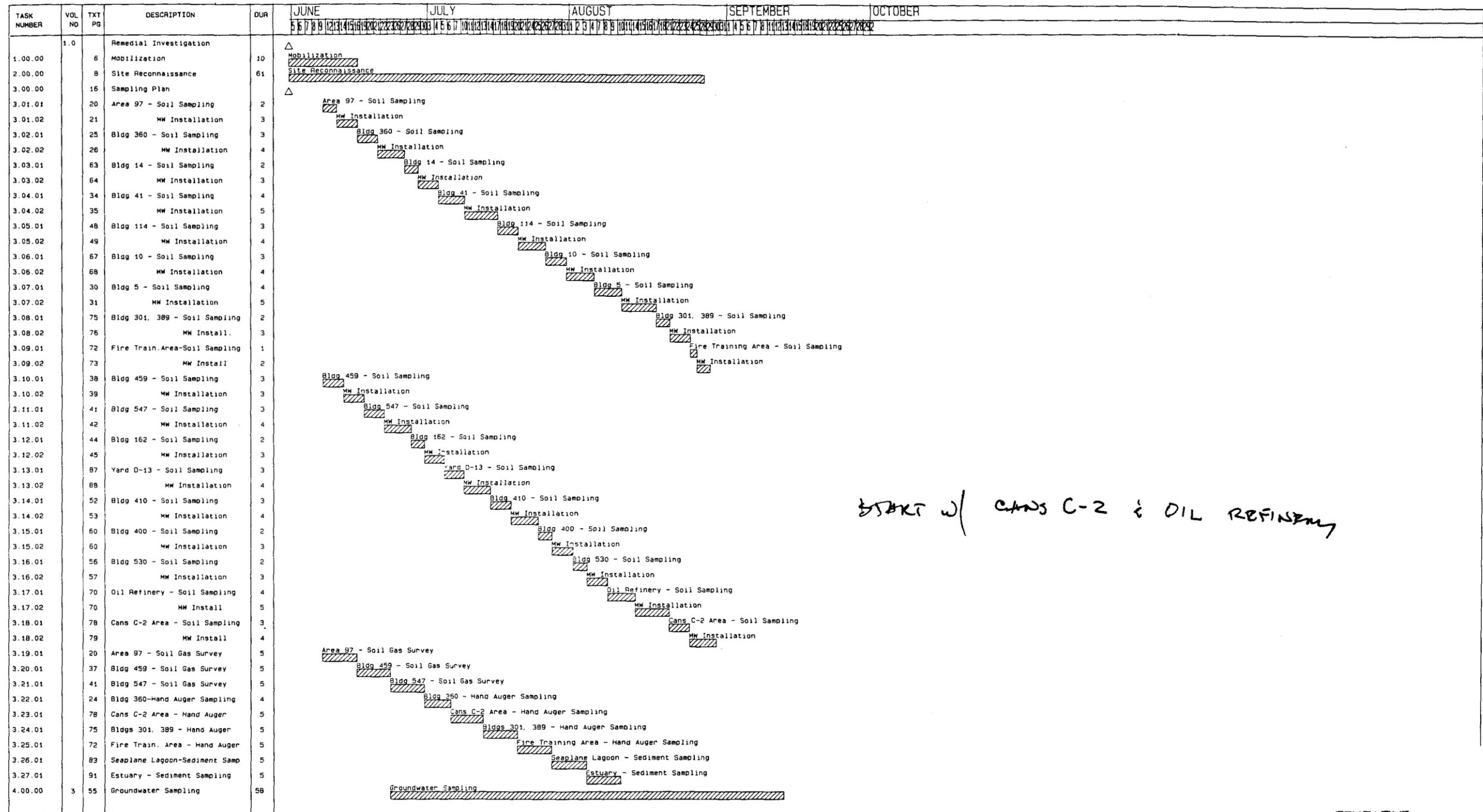
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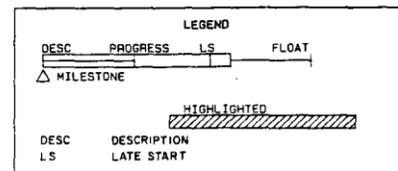
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LEA 2-24-89
DRAWN BY

NO. DATE
REVISIONS



START w/ CANS C-2 & OIL REFINERY



TENTATIVE
 RI SAMPLING SCHEDULE
 NAVAL AIR STATION
 ALAMEDA, CALIFORNIA

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 WESTERN DIVISION
 NAVAL FACILITIES ENGINEERING COMMAND
 SAN BRUNO, CALIFORNIA

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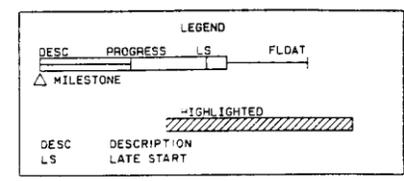
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LEA
2-24-89

DRAWN
BY

REVISIONS
NO. DATE

TASK NUMBER	VOL NO	TXT PG	DESCRIPTION	DUR	AUG		SEP			OCT			NOV			DEC			JAN			FEB			MAR			APR			MAY			JUN							
					28	4	11	18	25	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	5	12	19	26	5	12	19	26	2	9	16	23	30	7
5.00.00	5	15	DATA ANALYSES	86	Data Analyses																																				
6.00.00	5	16	RI REPORT EVALUATION	75	RI Report Evaluation																																				
7.00.00	5	16	DRAFT RI REPORT		Draft RI Report																																				
8.00.00	5	16	FINAL RI REPORT		Final RI Report																																				



NOTES:

- SCHEDULING OF TASK No. 8.00.00 FINAL RI REPORT WILL BE CONTINGENT ON COMPLETION OF AGENCY REVIEW.

TENTATIVE
RI DATA ANALYSES AND REPORT
SCHEDULE
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SAN BRUNO, CALIFORNIA

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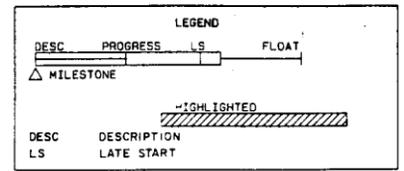
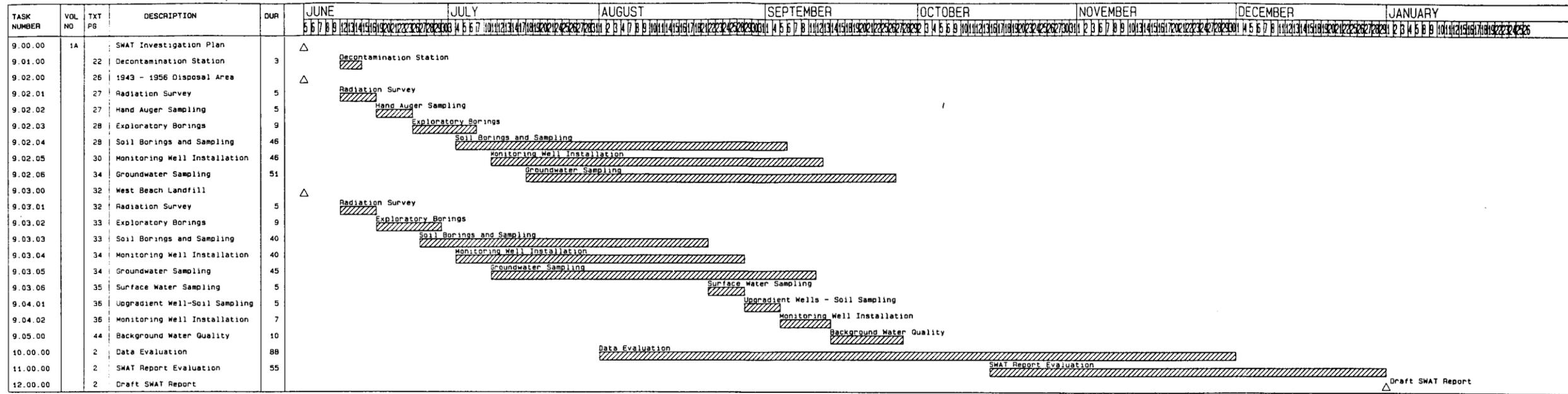
DATE: 2-24-89	FIGURE 4-2B	DRAWING NUMBER 86-018-E57
SCALE: NTS		

DRAWING 86-018-E58
NUMBER

CHECKED BY *AB 2-2-89*
APPROVED BY *2-24-89*

LEA
2-24-89
DRAWN BY

NO. DATE
REVISIONS



TENTATIVE
SWAT SCHEDULE
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ALAMEDA, CALIFORNIA

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DATE: 2-24-89	FIGURE 4-2C	DRAWING NUMBER 86-018-E58
SCALE: NTS		

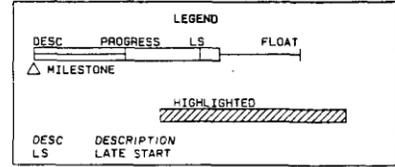
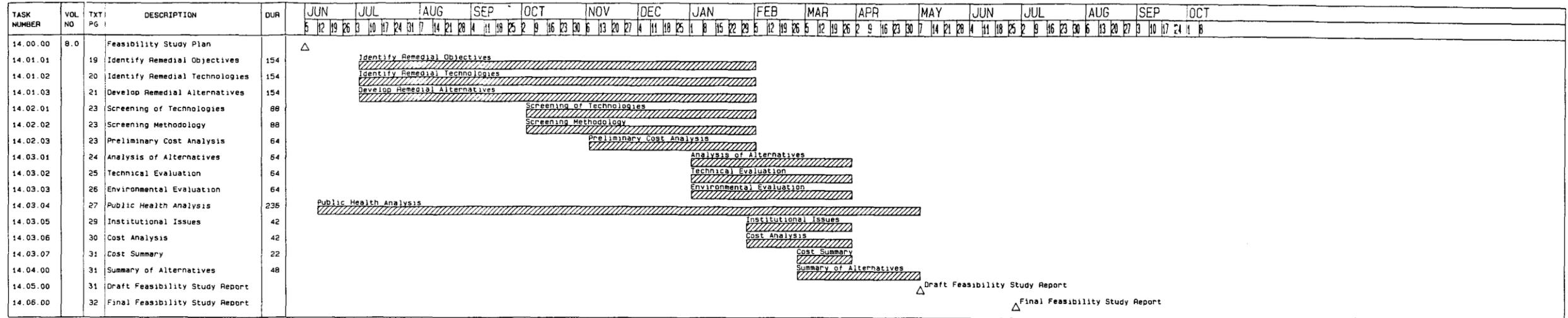
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NO. DATE
REVISIONS



NOTES:

1. SCHEDULING OF TASK No. 14.06.00
FINAL FEASIBILITY STUDY REPORT WILL
BE CONTINGENT ON COMPLETION OF AGENCY REVIEW.

TENTATIVE
FEASIBILITY STUDY PLAN SCHEDULE
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