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PROGRESS REPORTS FOR 1999 CNC CHARLESTON SC
1/1/1999
CNC CHARLESTON

**PROGRESS REPORTS
1999**

SCAN
RFI Progress Reports
1995-1999
(Administrative Record)

PROGRESS REPORTS
1999



DEPARTMENT OF THE NAVY

SOUTHERN DIVISION
 NAVAL FACILITIES ENGINEERING COMMAND
 P.O. BOX 190010
 2155 EAGLE DRIVE
 NORTH CHARLESTON, S.C. 29419-0010

5090
 Code 18710

Mr. John Litton, P.E.
 Director, Division of Hazardous and infectious waste management
 Bureau of Land and Waste Management
 South Carolina Department of Health and Environmental Control
 2600 Bull Street
 Columbia, SC 29201

Subj: SUBMITTAL OF THE QUARTERLY RCRA FACILITY INVESTIGATION
 PROGRESS REPORT

Dear Mr. Litton:

The purpose of this letter is to submit the Quarterly RCRA Facility Investigation (RFI) Progress Report for Naval Base Charleston. This report is submitted in order to comply with condition II.C.5 of the RCRA Part B permit issued to the Naval Base Complex by the Environmental Protection Agency and the South Carolina Department of Health and Environmental Control.

Enclosure (1) is the Quarterly Report, which contains the activity for the months of January to March 1999. If you have any questions, please contact Billy Drawdy or myself at (843) 743-9985 (Ext. 29) and (843) 820-5543, respectively.

Sincerely,

DAVID P. DODDS
 Environmental Engineer
 Installation Restoration III

Encl:

(1) Quarterly RFI Progress Report – 01 January 1999 to 31 March 1999

Copy to (w/encl):

SCDEHEC (Mr. Paul Bergstrand)

USEPA (1) (Mr. Dann Spariosu)

CSO Naval Base Charleston (Mr. Billy Drawdy)

**CHARLESTON NAVAL COMPLEX
RFI/CMS STATUS REPORT
PERIOD: SUMMARY OF
01 January 1999 To 31 March 1999**

I. INTRODUCTION

The following quarterly status report has been prepared to satisfy condition II.E.3.a of the Part B Permit Renewal dated 5 December 1994 for the Charleston Naval Complex (CNC). The requirements of this condition are in effect since the total elapsed time to complete the RCRA Facility Investigation (RFI) is projected to be greater than 180 calendar days from the approval date of the *Final Comprehensive RFI Work Plan* as indicated in the Corrective Action Management Plan (CAMP).

II. PORTION OF THE RFI COMPLETED

General

Monitoring wells in Zones A, B, C, and D were inspected in March 1999 as part of a maintenance and repair program implemented at the end of 1998. Attachment A is a spreadsheet which list the results of a comprehensive inspection performed in 1998, repairs needed, whether the action was complete, and the current status as of 31 March 1999.

Evaluation of data from the monitored natural attenuation study (MNA) performed at selected wells in Zones A, E, F, H, and K continued. An "interim report" discussing the preliminary findings at SWMU 166 in Zone K was issued to the Project Team on 15 March 1999. The intent of the interim report was to update Project Team members on the feasibility of MNA working at SWMU 166 and to solicit feedback on the graphical presentation of the data. The manner in which data from sites in the remaining zones will be presented will be determined by the Project Team in April.

Sampling for the "basewide groundwater study" of inorganics in groundwater was completed in January 1999. The analytical data was received in late February and early March. An evaluation of the data is currently underway with an approximate submittal date 21 May 1999 for a memo describing the results.

Task 2901 - Zone A

The *Zone A RFI Report* was conditionally approved by SCDHEC on 29 January 1999. The Navy, SCDHEC, and EnSafe met on 8 February 1999 at the CNC as a follow up to items pertaining to SWMU 43 and AOC 506 in the letter. SCDHEC subsequently issued another letter stating no further action is required at SWMU 43. At AOC 506 a study was performed to evaluate the leaching potential of benzo(a)pyrene. A memo discussing the study was issued on 19 March 1999. EPA has concurred with the no further action recommendation and a review by SCDHEC is pending.

Analytical data from the initial CMS field effort at SWMUs 1&2, SWMU 42/AOC 505, SWMU 38, and SWMU 39 were received. Based on those results, additional soil and/or groundwater sampling was required at SWMU 2, SWMU 39, and SWMU 42/AOC 505. At present, the only Zone A site with outstanding CMS data needs is SWMU 39. The Navy and SCDHEC have agreed on the need for offsite wells and approval of the permit for installation of those wells is pending. The CMS report is proceeding for SWMUs 1 and 2, SWMU 38, and SWMU 42/AOC 505 with an anticipated submittal date of the 30 April 1999. Also during this period the Navy decided to proceed with an interim removal action at SWMU 2.

Task 2902 - Zone B

All tasks for Zone B are 100 percent complete, and no further action is required.

Task 2903 - Zone C

Errata pages for the *Zone C CMS Work Plan* were sent to the members of the Project Team on 16 February 1999.

CMS field work began on 2 March 1999. All soil sampling proposed in the work plan was completed as was the first of two rounds of groundwater sampling proposed at several locations.

Task 2904 - Zone D

All tasks for Zone D are 100 percent complete, and no further action is required.

Task 2905 - Zone E

Soil sampling was completed at AOC 621, the former battery cracking pad, associated with SWMU 5 and AOC 605. As mentioned in the last quarterly status report this site was inadvertently placed in Zone G by the Project Team and ultimately got overlooked in the initial round of RFI sampling. Soil samples were collected from three locations and analyzed for the TCL/TAL suite of compounds.

Task 2906 - Zone F

Comments were received from SCDHEC on the *Draft Treatability Study Work Plan* for AOC 607 which was submitted in December 1998. A conference call was held between SCDHEC and EnSafe on 13 January 1999 to discuss the comments. Following the conference call the response to the comments was modified and resubmitted to reflect changes requested by SCDHEC. The revisions were submitted on 22 February 1999. SCDHEC provided an additional round of comments on 18 March 1999.

A pumping well and 4 observation wells were installed at AOC 607 in January in preparation for the pump test subsequently conducted in February as part of the treatability

study which was allowed to proceed while comments on the work plan were being resolved. Groundwater samples obtained during the pump test indicated the presence of chlorinated solvents in the deep aquifer which had not previously been identified. During March, additional groundwater samples were collected from the deep aquifer in the vicinity of the source area to define the vertical profile of the contamination.

SCDHEC provided comments on the *Draft Zone F RFI Report* on 16 March 1999. A preliminary set of responses to be used for discussion at the April Project Team meeting were prepared. On 26 March 1999 an addendum to the RFI report addressing AOCs 613 and 709 was submitted to the Project Team for review and comment.

Task 2907 - Zone G

On 26 March 1999 an addendum to the RFI report addressing SWMU 24 was submitted to the Project Team for review and comment.

Task 2908 - Zone H

Groundwater sample results were received for the new well at SWMU 14. The sample did not contain any COCs which is significant because this was the final data gap standing in the way of completion of the CMS report for SWMU 14.

At the end of March EnSafe had completed an internal draft of a technical memo containing justification to remove AOCs 655, 656, and 666 from the CMS process. The memo is scheduled for delivery to the project team the first week of April.

SCDHEC provided a letter on 13 March 1999 indicating that no further action is required at AOC 708.

Task 2909 - Zone I

The Zone I RFI Report was revised and sent to the Project Team on 8 March 1999. Preparation of an addendum for AOCs 678, 679, and 680 was also initiated in March.

Task 2910 - Zone J

The Naval Research Laboratory (NRL) completed an additional phase of sampling in the water bodies to obtain more information on sedimentation rates, particle size analysis and PAH correlation. The results will be presented at the April Project Team meeting.

Task 2911 - Zone K

Conference calls were held on the 5th and 6th of January 1999 between SCDHEC and EnSafe to discuss the *SWMU 166 Treatability Study Work Plan*. The final work plan was submitted on 23 March 1999.

Similar to AOC 607 in Zone F, a pump test was conducted as part of the treatability study at SWMU 166 while comments on the work plan were being resolved so the project could proceed without delay. The test was performed in January and the results used to begin preparation of a design document for the anaerobic-aerobic sequential treatment pilot study.

On 23 March 1999 an interim report discussing the findings of the monitored natural attenuation study at SWMU 166 was submitted to the Project Team.

Additional field work was performed in Zone K as part of the effort to resolve SCDHEC comments on the RFI report. The report is currently being revised and is anticipated to be ready for resubmittal in early June.

Task 2912 - Zone L

No significant action occurred in Zone L this period.

III. SUMMARIES OF FINDINGS

The latest findings to date are generally summarized and discussed in detail at the monthly project team meetings where handouts including data have been distributed in lieu of presenting the data quarterly in this report. Project team meeting minutes with the meeting handouts are maintained at the project team office located on Naval Base Charleston.

IV. DEVIATIONS FROM APPROVED WORK PLANS THIS REPORTING PERIOD

There were no known deviations from the approved RFI Work Plans for this reporting period.

V. SUMMARY OF CONTACTS WITH LOCAL COMMUNITY PUBLIC INTEREST GROUPS OR STATE GOVERNMENT

As of June 1997 the Restoration Advisory Board (RAB) agreed to meet on a bi-monthly basis. Minutes from the February 1999 meeting is enclosed as Attachment B.

VI. SUMMARY OF PROBLEMS OR POTENTIAL PROBLEMS AND ACTION TAKEN TO RECTIFY PROBLEMS

There were no problems or potential problems identified during this reporting period.

VII. KEY PROJECT PERSONNEL

SCDHEC added Susan Peterson, Mike Danielson, Eric Cathcart, and Susan Byrd to their team of personnel providing assistance to the CNC project. Johnny Tapia with SCDHEC changed assignments with the agency is no longer part of the Project Team.

VIII. PROJECTED WORK FOR THE NEXT REPORTING PERIOD

Document Preparation and Data Evaluation:

- Submit the CMS reports for SWMUs 1&2, SWMU 38, and SWMU 42/AOC 505 in Zone A.
- Submit the CMS reports for the sites in Zone C.
- Comments on the Zone E RFI Report are scheduled to be delivered by SCDHEC.
- Comments on the Zone G RFI Report are scheduled to be delivered by SCDHEC.
- Submit the CMS reports for SWMU 9, SWMU 14, SWMU 136.AOC 663, SWMU 159, and AOC 503 in Zone H.
- Submit the *Zone I RFI Report* addendum for review and comment.
- Submit the treatability study design documents for SWMU 166.
- Submit the revised *Zone K RFI Report*.
- Submit the "*Basewide*" *Inorganics in Groundwater Memo*.

Field Activities:

- Zone A CMS at SWMU 39.
- Soil and/or groundwater sampling to resolve RFI comments.
- Zone H CMS at SWMUs 17 and 20.
- SWMU 166 anaerobic-aerobic treatment system installation.

IX. COPIES OF DAILY REPORTS, INSPECTION REPORTS, LABORATORY DATA

Daily activities are recorded in accordance with the Data Management Plan included as Section 14 of the Final Comprehensive Sampling and Analysis Plan. Photocopies of these daily records have not been included with this status report; however, this information is available for review upon request.

Per agreement with SCDHEC and EPA, hard copies of the analytical data are not being submitted. A copy of the data is maintained at the EnSafe office in Charleston and is available for review.

X. CORRECTIVE ACTION MANAGEMENT PLAN (CAMP)

As agreed upon by the project team, the CAMP will normally be updated and submitted quarterly as part of the *Quarterly RFI Status Report*. The baseline schedule presented in the CAMP was revised in October 1997 and submitted as Appendix F-15 of the RCRA Part B permit renewal submitted to SCDHEC. The CAMP has been updated per discussions at the February 1999 Project Team meeting.

NAVBAS...ELL LISTING
As of April 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 12/99 | Completed | Action taken | Status as of 4/99 | Action taken | Completed |
|---------------|-----|-------------|----------|----------------------------|-----------|--------------|-------------------|--------------|-----------|
| ZONE A | | | | | | | | | y |
| 38 | 1 | NBCA\038001 | | abandoned | y | | ok | | y |
| 38 | 1D | NBCA\03801D | y | | y | | ok | | y |
| 38 | 2 | NBCA\038002 | y | needs new tag | n | tag ordered | ok | | y |
| 39 | 1 | NBCA\039001 | y | | y | | ok | | y |
| 39 | 2 | NBCA\039002 | y | | y | | ok | | y |
| 39 | 3 | NBCA\039003 | y | needs new pad | y | sub-contract | ok | | y |
| 39 | 4 | NBCA\039004 | y | | y | | needs tag | | n |
| 39 | 4I | NBCA\03904I | y | | y | | needs tag | | n |
| 39 | 4D | NBCA\03904D | y | | y | | ok | | y |
| 39 | 5 | NBCA\039005 | y | | y | | ok | | y |
| 39 | 6 | NBCA\039006 | y | | y | | ok | | y |
| 39 | 7 | NBCA\039007 | y | | y | | ok | | y |
| 39 | 8 | NBCA\039008 | y | | y | | ok | | y |
| 39 | 8D | NBCA\03908D | y | | y | | ok | | y |
| 39 | 9 | NBCA\039009 | y | | y | | ok | | y |
| 39 | 9I | NBCA\03909I | y | | y | | ok | | y |
| 39 | 9D | NBCA\03909D | y | | y | | ok | | y |
| 39 | 10 | NBCA\039010 | y | | y | | ok | | y |
| 39 | 10I | NBCA\03910I | y | | y | | ok | | y |
| 39 | 10D | NBCA\03910D | y | | y | | ok | | y |
| 39 | 11 | NBCA\039011 | y | | y | | ok | | y |
| 39 | 12 | NBCA\039012 | y | | y | | ok | | y |
| 39 | 12I | NBCA\03912I | y | needs new pad | y | sub-contract | ok | | y |
| 39 | 12D | NBCA\03912D | y | | y | | ok | | y |
| 39 | 13 | NBCA\039013 | y | | y | | ok | | y |
| 39 | 13I | NBCA\03913I | y | | y | | ok | | y |
| 39 | 13D | NBCA\03913D | y | | y | | ok | | y |
| 39 | 14 | NBCA\039014 | y | needs tag | n | tag ordered | ok | tag replaced | y |
| 39 | 14D | NBCA\03914D | y | needs tag | n | tag ordered | ok | tag replaced | y |
| 39 | 15 | NBCA\039015 | y | needs tag | n | tag ordered | ok | tag replaced | y |
| 39 | 15D | NBCA\03915D | y | needs tag | n | tag ordered | ok | tag replaced | y |
| 39 | 16 | NBCA\039016 | | | | | needs tag | tag ordered | n |
| 39 | 16I | NBCA\03916I | | | | | needs tag | tag ordered | n |
| 39 | 16D | NBCA\03916D | | | | | needs tag | tag ordered | n |
| 39 | 17 | NBCA\039017 | | | | | needs tag | tag ordered | n |
| 39 | 17I | NBCA\03917I | | | | | needs tag | tag ordered | n |
| 39 | 17D | NBCA\03917D | | | | | needs tag | tag ordered | n |
| 39 | 18 | NBCA\039018 | | | | | needs tag | tag ordered | n |
| 39 | 18I | NBCA\03918I | | | | | needs tag | tag ordered | n |
| 39 | 18D | NBCA\03918D | | | | | needs tag | tag ordered | n |
| 39 | 19 | NBCA\039019 | | | | | needs tag | tag ordered | n |
| 39 | 19I | NBCA\03919I | | | | | needs tag | tag ordered | n |
| 39 | 19D | NBCA\03919D | | | | | needs tag | tag ordered | n |
| 39 | 20 | NBCA\039020 | | | | | needs tag | tag ordered | n |
| 39 | 20I | NBCA\03920I | | | | | needs tag | tag ordered | n |

NAVBASE WELL LISTING

As of April 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 12/99 | Completed | Action taken | Status as of 4/99 | Action taken | Completed |
|---------------|-----|-------------|----------|----------------------------|-----------|----------------|-------------------|--------------|-----------|
| 39 | 20D | NBCA\03920D | | | | | needs tag | tag ordered | n |
| 39 | 21 | NBCA\039021 | | | | | needs tag | tag ordered | n |
| 39 | 21I | NBCA\03921I | | | | | needs tag | tag ordered | n |
| 39 | 21D | NBCA\03921D | | | | | needs tag | tag ordered | n |
| 42 | 1 | NBCA\042001 | y | | y | | ok | | y |
| 42 | 2 | NBCA\042002 | y | | y | | ok | | y |
| 42 | 3 | NBCA\042003 | y | needs tag | n | tag ordered | ok | tag replaced | y |
| 43 | 1 | NBCA\043001 | y | needs tag | n | tag ordered | ok | tag replaced | y |
| 505 | 1 | NBCA\505001 | y | | y | | ok | | y |
| 506 | 1 | NBCA\506001 | y | | y | | pad needs patched | | n |
| GRID | 1 | NBCA\GDA001 | y | | y | | ok | | y |
| GRID | 1D | NBCA\GDA01D | y | | y | | ok | | y |
| GRID | 2 | NBCA\GDA002 | y | cracked pad (serviceable) | y | sub-contract | ok | | y |
| GRID | 2D | NBCA\GDA02D | y | cracked pad (serviceable) | y | sub-contract | ok | | y |
| GRID | 3 | NBCA\GDA003 | y | | y | | ok | | y |
| GRID | 3D | NBCA\GDA03D | y | | y | | ok | | y |
| 2 | 1 | NBCA\002001 | y | needs new hinge | y | hinge replaced | ok | | y |
| 2 | 2 | NBCA\002002 | y | | y | | needs tag | tag ordered | n |
| 2 | 3 | NBCA\002003 | y | | y | | ok | | y |
| 2 | 4 | NBCA\002004 | y | | y | | needs tag | tag ordered | n |
| 2 | 5 | NBCA\002005 | | abandoned | y | | | | y |
| 2 | 6 | NBCA\002006 | y | needs new hinge | y | hinge replaced | ok | | y |
| 2 | 7 | NBCA\002007 | | | | | needs tag | tag ordered | n |
| 2 | 8 | NBCA\002008 | | | | | needs tag | tag ordered | n |
| ZONE B | | | | | | | | | |
| GDB | 1 | NBCB\GDB001 | y | | y | | ok | | y |
| GDB | 1 | NBCB\GDB01D | y | | y | | ok | | y |
| GDB | 2 | NBCB\GDB002 | y | | y | | ok | | y |
| GDB | 3 | NBCB\GDB003 | y | | y | | ok | | y |
| GDB | 4 | NBCB\GDB004 | y | | y | | ok | | y |
| GDB | 4 | NBCB\GDB04D | y | | y | | ok | | y |
| ZONE C | | | | | | | | | |
| 44 | 1 | NBCC\044001 | y | | y | | ok | | y |
| 44 | 2 | NBCC\044002 | y | | y | | ok | | y |
| 44 | 3 | NBCC\044003 | y | | y | | ok | | y |
| 44 | 4 | NBCC\044004 | y | | y | | ok | | y |
| 44 | 5 | NBCC\044005 | y | | y | | ok | | y |
| 44 | 6 | NBCC\044006 | y | | y | | ok | | y |
| 44 | 7 | NBCC\044007 | y | | y | | ok | | y |
| 44 | 8 | NBCC\044008 | y | | y | | needs hinge | | n |
| 47 | 1 | NBCC\047001 | y | | y | | ok | | y |
| 47 | 2 | NBCC\047002 | y | | y | | ok | | y |
| 47 | 3 | NBCC\047003 | y | | y | | ok | | y |
| 47 | 4 | NBCC\047004 | y | | y | | ok | | y |
| 47 | 5 | NBCC\047005 | y | | y | | ok | | y |
| 47 | 6 | NBCC\047006 | y | | y | | ok | | y |

NAVBASE LL LISTING
As of April 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 12/99 | Completed | Action taken | Status as of 4/99 | Action taken | Completed |
|---------------|-----|-------------|----------|-------------------------------|-----------|--------------|---------------------|--------------|-----------|
| 47 | 7 | NBCC\047007 | y | | y | | ok | | y |
| 47 | 8 | NBCC\047008 | | cannot locate, covered | n | | abandoned | | y |
| 47 | 9 | NBCC\047009 | y | needs new pad, cannot lock | n | | crushed/compromised | | n |
| 47 | 10 | NBCC\047010 | | covered by concrete pad | n | | covered by concrete | | n |
| 47 | 11 | NBCC\047011 | y | | y | | ok | | y |
| 47 | 12 | NBCC\047012 | y | | y | | ok | | y |
| 47 | 13 | NBCC\047013 | | cannot locate, in paint booth | n | | in paint booth | | n |
| 47 | 15 | NBCC\047015 | y | | y | | ok | | y |
| 510 | 1 | NBCC\510001 | y | | y | | ok | | y |
| 510 | 2 | NBCC\510002 | y | | y | | ok | | y |
| 523 | 1 | NBCC\523001 | y | cracked pad | y | sub-contract | ok | | y |
| 523 | 2 | NBCC\523002 | y | | y | | ok | | y |
| GDC | 1 | NBCC\GDC001 | y | | y | | ok | | y |
| GDC | 1D | NBCC\GDC01D | y | | y | | ok | | y |
| GDC | 2 | NBCC\GDC002 | y | | y | | ok | | y |
| GDC | 2D | NBCC\GDC02D | y | | y | | ok | | y |
| 511 | 2 | NBCC\511002 | y | | y | | ok | | y |
| 512 | 2 | NBCC\512002 | | abandoned | | | abandoned | | y |
| ZONE D | | | | | | | | | |
| GDD | 1 | NBCD\GDD001 | y | | y | | ok | | y |
| GDD | 1 | NBCD\GDD01D | y | | y | | ok | | y |
| ZONE E | | | | | | | | | |
| 18 | 1 | NBCE\018001 | y | | y | | | | |
| 18 | 2 | NBCE\018002 | y | | y | | | | |
| 21 | 3 | NBCE\021003 | y | destroyed/ compromised | y | | | | |
| 23 | 1 | NBCE\023001 | y | | y | | | | |
| 23 | 1D | NBCE\02301D | y | | y | | | | |
| 25 | 1 | NBCE\025001 | y | needs cut down | n | | | | |
| 25 | 2 | NBCE\025002 | y | needs cut down | n | | | | |
| 25 | 3 | NBCE\025003 | y | missing bolt | n | | | | |
| 25 | 4 | NBCE\025004 | y | needs new pad | y | | | | |
| 53 | 1 | NBCE\053001 | n | cannot locate | n | | | | |
| 54 | 2 | NBCE\054002 | y | | y | | | | |
| 63 | 1 | NBCE\063001 | y | | y | | | | |
| 63 | 2 | NBCE\063002 | y | needs tag | n | | | | |
| 65 | 1 | NBCE\065001 | y | needs tag | n | tag ordered | | | |
| 65 | 2 | NBCE\065002 | y | needs new pad | y | sub-contract | | | |
| 65 | 3 | NBCE\065003 | y | | y | | | | |
| 65 | 4 | NBCE\065004 | y | | y | | | | |
| 65 | 5 | NBCE\065005 | y | needs new pad | y | sub-contract | | | |
| 65 | 6 | NBCE\065006 | y | | y | | | | |
| 65 | 4D | NBCE\06504D | y | | y | | | | |
| 65 | 7 | NBCE\065007 | y | | y | | | | |
| 65 | 8 | NBCE\065008 | y | | y | | | | |
| 67 | 1 | NBCE\067001 | y | | y | | | | |
| 67 | 2 | NBCE\067002 | y | | y | | | | |

NAVBASE WELL LISTING
As of April 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 12/99 | Completed | Action taken | Status as of 4/99 | Action taken | Completed |
|----------|-----|-------------|----------|----------------------------|-----------|--------------|-------------------|--------------|-----------|
| 70 | 1 | NBCE\070001 | y | | y | | | | |
| 70 | 2 | NBCE\070002 | y | | y | | | | |
| 70 | 1D | NBCE\07001D | y | | y | | | | |
| 83 | 1 | NBCE\083001 | y | | y | | | | |
| 83 | 2 | NBCE\083002 | y | | y | | | | |
| 84 | 1 | NBCE\084001 | y | | y | | | | |
| 84 | 2 | NBCE\084002 | y | missing bolt | n | | | | |
| 97 | 1 | NBCE\097001 | y | needs tag | n | tag ordered | | | |
| 100 | 1 | NBCE\100001 | y | | y | | | | |
| 102 | 1 | NBCE\102001 | y | | y | | | | |
| 106 | 1 | NBCE\106001 | y | | y | | | | |
| 106 | 1D | NBCE\10601D | y | | y | | | | |
| 145 | 1 | NBCE\145001 | y | | y | | | | |
| 145 | 2 | NBCE\145002 | y | missing bolt | n | | | | |
| 145 | 3 | NBCE\145003 | y | | y | | | | |
| 145 | 1D | NBCE\14501D | y | | y | | | | |
| 172 | 1 | NBCE\172001 | y | | y | | | | |
| 172 | 2 | NBCE\172002 | y | | y | | | | |
| 172 | 2D | NBCE\17202D | y | | y | | | | |
| 525 | 1 | NBCE\525001 | y | needs new tag | n | | | | |
| 526 | 1 | NBCE\526001 | y | | y | | | | |
| 526 | 2 | NBCE\526002 | | cannot locate | n | | | | |
| 526 | 1D | NBCE\52601D | y | | y | | | | |
| 528 | 1 | NBCE\528001 | y | needs pad | y | | | | |
| 530 | 1 | NBCE\530001 | y | | y | | | | |
| 530 | 2 | NBCE\530002 | y | | y | | | | |
| 530 | 1D | NBCE\53001D | y | | y | | | | |
| 530 | 2D | NBCE\53002D | y | | y | | | | |
| 538 | 1 | NBCE\538001 | y | | y | | | | |
| 538 | 1D | NBCE\53801D | y | | y | | | | |
| 539 | 1 | NBCE\539001 | y | | y | | | | |
| 539 | 1D | NBCE\53901D | y | | y | | | | |
| 542 | 1 | NBCE\542001 | y | | y | | | | |
| 542 | 2 | NBCE\542002 | y | | y | | | | |
| 542 | 3 | NBCE\542003 | n | bolt stripped | n | | | | |
| 542 | 4 | NBCE\542004 | y | | y | | | | |
| 543 | 1 | NBCE\543001 | y | | y | | | | |
| 549 | 1 | NBCE\549001 | y | | y | | | | |
| 549 | 2 | NBCE\549002 | y | | y | | | | |
| 549 | 3 | NBCE\549003 | y | | y | | | | |
| 550 | 1 | NBCE\550001 | y | needs tag | n | tag ordered | | | |
| 551 | 1 | NBCE\551001 | y | | y | | | | |
| 551 | 2 | NBCE\551002 | y | | y | | | | |
| 551 | 2D | NBCE\55102D | y | | y | | | | |
| 559 | 1 | NBCE\559001 | y | | y | | | | |
| 559 | 2 | NBCE\559002 | y | | y | | | | |

NAVBASE ALL LISTING
As of April 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 12/99 | Completed | Action taken | Status as of 4/99 | Action taken | Completed |
|----------|-----|-------------|----------|----------------------------|-----------|--------------|-------------------|--------------|-----------|
| 559 | 3 | NBCE\559003 | y | | y | | | | |
| 559 | 4 | NBCE\559004 | y | | y | | | | |
| 559 | 5 | NBCE\559005 | y | | y | | | | |
| 559 | 2D | NBCE\55902D | y | | y | | | | |
| 559 | 3D | NBCE\55903D | y | | y | | | | |
| 559 | 4D | NBCE\55904D | y | | y | | | | |
| 563 | 1 | NBCE\563001 | y | no ears needs pad | y | sub-contract | | | |
| 563 | 2 | NBCE\563002 | y | tap&bolt | n | | | | |
| 563 | 3 | NBCE\563003 | y | cover missing | n | | | | |
| 563 | 1D | NBCE\56301D | y | | y | | | | |
| 566 | 1 | NBCE\566001 | y | missing two bolts | n | | | | |
| 566 | 1D | NBCE\56601D | y | bent bolt | n | | | | |
| 569 | 1 | NBCE\569001 | y | | y | | | | |
| 569 | 2 | NBCE\569002 | y | | y | | | | |
| 569 | 1D | NBCE\56901D | y | | y | | | | |
| 570 | 1 | NBCE\570001 | y | tag loose | n | | | | |
| 570 | 2 | NBCE\570002 | y | | y | | | | |
| 570 | 3 | NBCE\570003 | y | needs new bolts | n | | | | |
| 570 | 4 | NBCE\570004 | y | | y | | | | |
| 570 | 2D | NBCE\57002D | y | | y | | | | |
| 570 | 3D | NBCE\57003D | y | | y | | | | |
| 572 | 1 | NBCE\572001 | y | broken ear bent bolt | n | | | | |
| 572 | 2 | NBCE\572002 | y | bolt bent | n | | | | |
| 572 | 3 | NBCE\572003 | y | bad bolt | n | | | | |
| 573 | 1 | NBCE\573001 | y | new pad | y | new pad | | | |
| 573 | 1D | NBCE\57301D | y | | y | | | | |
| 574 | 1 | NBCE\574001 | y | | y | | | | |
| 574 | 2 | NBCE\574002 | y | | y | | | | |
| 574 | 3 | NBCE\574003 | y | | y | | | | |
| 574 | 1D | NBCE\57401D | y | | y | | | | |
| 576 | 1 | NBCE\576001 | y | | y | | | | |
| 576 | 2 | NBCE\576002 | y | | y | | | | |
| 576 | 2D | NBCE\57602D | y | | y | | | | |
| 580 | 1 | NBCE\580001 | y | missing bolt needs tag | n | | | | |
| 580 | 2 | NBCE\580002 | y | | y | | | | |
| 580 | 1D | NBCE\58001D | y | needs tag | n | | | | |
| 583 | 1 | NBCE\583001 | y | | y | | | | |
| 583 | 2 | NBCE\583002 | y | | y | | | | |
| 583 | 3 | NBCE\583003 | y | | y | | | | |
| 583 | 2D | NBCE\58302D | y | needs tag | n | tag ordered | | | |
| 586 | 1 | NBCE\586001 | y | | y | | | | |
| 590 | 1 | NBCE\590001 | y | | y | | | | |
| 590 | 1D | NBCE\59001D | y | | y | | | | |
| 596 | 1 | NBCE\596001 | y | | y | | | | |
| 596 | 2 | NBCE\596002 | y | | y | | | | |
| 596 | 3 | NBCE\596003 | y | | y | | | | |

NAVBASE WELL LISTING
As of April 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 12/99 | Completed | Action taken | Status as of 4/99 | Action taken | Completed |
|----------|-----|-------------|----------|----------------------------------|-----------|--------------|-------------------|--------------|-----------|
| 596 | 4 | NBCE\596004 | y | | y | | | | |
| 596 | 1D | NBCE\59601D | y | | y | | | | |
| 596 | 4D | NBCE\59604D | y | | y | | | | |
| 598 | 1 | NBCE\598001 | y | needs tag | n | tag ordered | | | |
| 599 | 1 | NBCE\599001 | y | | y | | | | |
| 605 | 1 | NBCE\605001 | y | | y | | | | |
| 605 | 2 | NBCE\605002 | | abandoned | y | | | | |
| 605 | 3 | NBCE\605003 | y | | y | | | | |
| GDE | 1 | NBCE\GDE001 | y | needs new pad | y | sub-contract | | | |
| GDE | 2 | NBCE\GDE002 | y | | y | | | | |
| GDE | 3 | NBCE\GDE003 | y | | y | | | | |
| GDE | 4 | NBCE\GDE004 | | | n | | | | |
| GDE | 5 | NBCE\GDE005 | y | | y | | | | |
| GDE | 6 | NBCE\GDE006 | y | | y | | | | |
| GDE | 7 | NBCE\GDE007 | y | | y | | | | |
| GDE | 8 | NBCE\GDE008 | y | | y | | | | |
| GDE | 9 | NBCE\GDE009 | y | | y | | | | |
| GDE | 10 | NBCE\GDE010 | y | | y | | | | |
| GDE | 11 | NBCE\GDE011 | y | | y | | | | |
| GDE | 12 | NBCE\GDE012 | y | missing tag & ear | n | tag ordered | | | |
| GDE | 13 | NBCE\GDE013 | y | needs new pad | y | sub-contract | | | |
| GDE | 14 | NBCE\GDE014 | y | pad cracked, tag loose | y | sub-contract | | | |
| GDE | 15 | NBCE\GDE015 | y | needs new bolts | n | | | | |
| GDE | 16 | NBCE\GDE016 | y | | y | | | | |
| GDE | 17 | NBCE\GDE017 | y | needs tag | n | tag ordered | | | |
| GDE | 18 | NBCE\GDE018 | y | | y | | | | |
| GDE | 19 | NBCE\GDE019 | n | covered | n | | | | |
| GDE | 20 | NBCE\GDE020 | y | | y | | | | |
| GDE | 21 | NBCE\GDE021 | y | needs cut down two sheared bolts | n | | | | |
| GDE | 22 | NBCE\GDE022 | y | | y | | | | |
| GDE | 23 | NBCE\GDE023 | y | | y | | | | |
| GDE | 24 | NBCE\GDE024 | y | | y | | | | |
| GDE | 25 | NBCE\GDE025 | y | | y | | | | |
| GDE | 26 | NBCE\GDE026 | y | | y | | | | |
| GDE | 27 | NBCE\GDE027 | y | | y | | | | |
| GDE | 28 | NBCE\GDE028 | y | needs tag | n | tag ordered | | | |
| GDE | 29 | NBCE\GDE029 | y | | y | | | | |
| GDE | 30 | NBCE\GDE030 | y | | y | | | | |
| GDE | 1D | NBCE\GDE01D | y | | y | | | | |
| GDE | 2D | NBCE\GDE02D | y | | y | | | | |
| GDE | 2D1 | NBCE\GDE2D1 | y | | y | | | | |
| GDE | 3D | NBCE\GDE03D | y | | y | | | | |
| GDE | 4D | NBCE\GDE04D | n | covered | n | | | | |
| GDE | 5D | NBCE\GDE05D | y | needs cut down missing bolt | n | | | | |
| GDE | 6D | NBCE\GDE06D | y | | y | | | | |
| GDE | 7D | NBCE\GDE07D | y | | y | | | | |

NAVBASE ALL LISTING

As of April 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 12/99 | Completed | Action taken | Status as of 4/99 | Action taken | Completed |
|---------------|-----|-------------|----------|--------------------------------------|-----------|-----------------------------|-------------------|--------------|-----------|
| GDE | 8D | NBCE\GDE08D | y | | y | | | | |
| GDE | 9D | NBCE\GDE09D | y | | y | | | | |
| GDE | 10D | NBCE\GDE10D | y | | y | | | | |
| GDE | 11D | NBCE\GDE11D | y | | y | | | | |
| GDE | 12D | NBCE\GDE12D | y | | y | | | | |
| GDE | 13D | NBCE\GDE13D | y | | y | | | | |
| GDE | 14D | NBCE\GDE14D | y | pad cracked | y | sub-contract | | | |
| GDE | 15D | NBCE\GDE15D | y | | y | | | | |
| GDE | 16D | NBCE\GDE16D | y | | y | | | | |
| GDE | 17D | NBCE\GDE17D | y | needs tag | n | tag ordered | | | |
| GDE | 18D | NBCE\GDE18D | y | | y | | | | |
| GDE | 19D | NBCE\GDE19D | n | covered | n | | | | |
| GDE | 20D | NBCE\GDE20D | y | | y | | | | |
| GDE | 21D | NBCE\GDE21D | y | | y | | | | |
| GDE | 22D | NBCE\GDE22D | y | | y | | | | |
| GDE | 23D | NBCE\GDE23D | y | | y | | | | |
| GDE | 24D | NBCE\GDE24D | y | | y | | | | |
| GDE | 25D | NBCE\GDE25D | y | | y | | | | |
| GDE | 26D | NBCE\GDE26D | y | | y | | | | |
| GDE | 27D | NBCE\GDE27D | y | | y | | | | |
| GDE | 28D | NBCE\GDE28D | y | needs tag | n | tag ordered | | | |
| GDE | 29D | NBCE\GDE29D | y | | y | | | | |
| GDE | 30D | NBCE\GDE30D | y | missing ear | y | | | | |
| ZONE F | | | | | | | | | |
| 109 | 1 | NBCF\109001 | y | | y | | | | |
| 607 | 1 | NBCF\607001 | y | | y | | | | |
| 607 | 2 | NBCF\607002 | y | | y | | | | |
| 607 | 3 | NBCF\607003 | y | | y | | | | |
| 607 | 4 | NBCF\607004 | y | | y | | | | |
| 607 | 6 | NBCF\607006 | y | | y | | | | |
| 607 | 7 | NBCF\607007 | y | | y | | | | |
| 607 | 1D | NBCF\60701D | y | | y | | | | |
| 607 | 1I | NBCF\60701I | y | | y | | | | |
| 607 | 2D | NBCF\60702D | y | | y | | | | |
| 607 | 2I | NBCF\60702I | y | | y | | | | |
| 607 | 3D | NBCF\60703D | y | cracked pad | y | sub-contract | | | |
| 607 | 3I | NBCF\60703I | y | | y | | | | |
| 607 | 4D | NBCF\60704D | y | | y | | | | |
| 607 | 4I | NBCF\60704I | y | | y | | | | |
| 607 | 5D | NBCF\60705D | y | | y | | | | |
| 607 | 6I | NBCF\60706I | y | no tag | n | tag ordered | | | |
| 607 | 6D | NBCF\60706D | y | no tag | n | tag ordered | | | |
| 607 | 8 | NBCF\607008 | y | no tag | n | tag ordered | | | |
| 607 | 9 | NBCF\607009 | y | no tag | n | tag ordered | | | |
| 613 | 1 | NBCF\613001 | y | recovered lid from 1" asphalt no tag | y | tag ordered | | | |
| 613 | 3 | NBCF\613003 | y | needs to be surveyed and recovered | y | recvered, manhole installed | | | |

NAVBASE WELL LISTING

As of April 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 12/99 | Completed | Action taken | Status as of 4/99 | Action taken | Completed |
|---------------|-----|-------------|----------|--------------------------------------|-----------|----------------|-------------------|--------------|-----------|
| 613 | 4 | NBCF\613004 | y | recovered lid from 1" asphalt no tag | y | tag ordered | | | |
| 613 | 5 | NBCF\613005 | y | | y | | | | |
| 613 | 2D | NBCF\61302D | y | recovered lid from 1" asphalt no tag | y | tag ordered | | | |
| 617 | 1 | NBCF\617001 | y | | y | | | | |
| 617 | 2 | NBCF\617002 | y | | y | | | | |
| 619 | 1 | NBCF\619001 | y | | y | | | | |
| 619 | 2 | NBCF\619002 | y | | y | | | | |
| 619 | 3 | NBCF\619003 | y | | y | | | | |
| 620 | 1 | NBCF\620001 | y | | y | | | | |
| 620 | 2 | NBCF\620002 | y | | y | | | | |
| 620 | 3 | NBCF\620003 | y | no tag | n | tag ordered | | | |
| 620 | 4 | NBCF\620004 | y | no tag | n | tag ordered | | | |
| GDF | 1 | NBCF\GDF001 | y | recovered lid from 1" asphalt no tag | n | tag ordered | | | |
| GDF | 1D | NBCF\GDF01D | y | recovered lid from 1" asphalt no tag | n | tag ordered | | | |
| ZONE G | | | | | | | | | |
| 3 | 1 | NBCG\003001 | y | needs new pad | y | sub-contract | | | |
| 3 | 2 | NBCG\003002 | y | | y | | | | |
| 3 | 3 | NBCG\003003 | | abandoned | y | | | | |
| 6 | 1 | NBCG\006001 | y | | y | | | | |
| 6 | 2 | NBCG\006002 | y | | y | | | | |
| 6 | 3 | NBCG\006003 | y | | y | | | | |
| 6 | 4 | NBCG\006004 | y | | y | | | | |
| 6 | 5 | NBCG\006005 | y | | y | | | | |
| 6 | 6 | NBCG\006006 | y | | y | | | | |
| 6 | 7 | NBCG\006007 | y | | y | | | | |
| 8 | 1 | NBCG\008001 | y | needs new hinge | y | hinge replaced | | | |
| 8 | 2 | NBCG\008002 | y | needs new hinge | y | hinge replaced | | | |
| 8 | 3 | NBCG\008003 | y | needs new hinge | y | hinge replaced | | | |
| 8 | 4 | NBCG\008004 | y | | y | | | | |
| 8 | 5 | NBCG\008005 | y | | y | | | | |
| 8 | 6 | NBCG\008006 | y | needs new pad | y | pad replaced | | | |
| 11 | 1 | NBCG\011001 | y | | y | | | | |
| 11 | 2 | NBCG\011002 | y | | y | | | | |
| 11 | 3 | NBCG\011003 | y | | y | | | | |
| 24 | 1 | NBCG\024001 | y | | y | | | | |
| 24 | 2 | NBCG\024002 | y | | y | | | | |
| 24 | 3 | NBCG\024003 | y | | y | | | | |
| 24 | 4 | NBCG\024004 | y | | y | | | | |
| 120 | 1 | NBCG\120001 | y | | y | | | | |
| 120 | 2 | NBCG\120002 | y | | y | | | | |
| 120 | 3 | NBCG\120003 | y | | y | | | | |
| 636 | 1 | NBCG\636001 | y | | y | | | | |
| 637 | 1 | NBCG\637001 | y | needs well tag | n | tag ordered | | | |
| 637 | 2 | NBCG\637002 | y | needs well tag | n | tag ordered | | | |
| 637 | 3 | NBCG\637003 | y | needs well tag | n | tag ordered | | | |
| 638 | 1 | NBCG\638001 | y | | y | | | | |

NAVBASE WELL LISTING
As of April 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 12/99 | Completed | Action taken | Status as of 4/99 | Action taken | Completed |
|-----------------|-----|-------------|----------|----------------------------|-----------|--------------|-------------------|--------------|-----------|
| 706 | 1 | NBCG\706001 | y | | y | | | | |
| GDG | 1 | NBCG\GDG001 | y | | y | | | | |
| GDG | 1D | NBCG\GDG01D | y | wire brushed and painted | n | | | | |
| GDG | 2 | NBCG\GDG002 | y | needs well tag | n | tag ordered | | | |
| GDG | 2D | NBCG\GDG02D | y | needs well tag | n | tag ordered | | | |
| DS WELLS | | | | | | | | | |
| FDS | 1A | NBCG\FDS01A | y | | y | | | | |
| FDS | 1B | NBCG\FDS01B | y | | y | | | | |
| FDS | 1C | NBCG\FDS01C | y | | y | | | | |
| FDS | 1D | NBCG\FDS01D | y | | y | | | | |
| FDS | 1E | NBCG\FDS01E | y | | y | | | | |
| FDS | 2A | NBCG\FDS02A | y | | y | | | | |
| FDS | 2B | NBCG\FDS02B | y | | y | | | | |
| FDS | 2C | NBCG\FDS02C | y | | y | | | | |
| FDS | 3A | NBCG\FDS03A | y | | y | | | | |
| FDS | 3B | NBCG\FDS03B | y | | y | | | | |
| FDS | 3C | NBCG\FDS03C | y | | y | | | | |
| FDS | 4A | NBCG\FDS04A | y | | y | | | | |
| FDS | 4B | NBCG\FDS04B | y | | y | | | | |
| FDS | 4C | NBCG\FDS04C | y | | y | | | | |
| FDS | 5A | NBCG\FDS05A | y | | y | | | | |
| FDS | 5B | NBCG\FDS05B | y | | y | | | | |
| FDS | 6A | NBCG\FDS06A | y | | y | | | | |
| FDS | 6B | NBCG\FDS06B | y | | y | | | | |
| FDS | 6C | NBCG\FDS06C | y | | y | | | | |
| FDS | 7A | NBCG\FDS07A | y | | y | | | | |
| FDS | 7B | NBCG\FDS07B | y | | y | | | | |
| FDS | 7C | NBCG\FDS07C | y | | y | | | | |
| FDS | 7D | NBCG\FDS07D | y | | y | | | | |
| FDS | 8A | NBCG\FDS08A | y | | y | | | | |
| FDS | 8B | NBCG\FDS08B | y | | y | | | | |
| FDS | 8C | NBCG\FDS08C | y | | y | | | | |
| FDS | 9A | NBCG\FDS09A | y | | y | | | | |
| FDS | 9B | NBCG\FDS09B | y | | y | | | | |
| FDS | 9C | NBCG\FDS09C | y | | y | | | | |
| FDS | 10A | NBCG\FDS10A | y | | y | | | | |
| FDS | 10B | NBCG\FDS10B | y | | y | | | | |
| FDS | 10C | NBCG\FDS10C | y | | y | | | | |
| FDS | 11A | NBCG\FDS11A | y | no tag | n | tag ordered | | | |
| FDS | 11B | NBCG\FDS11B | y | no tag | n | tag ordered | | | |
| FDS | 11C | NBCG\FDS11C | y | no tag | n | tag ordered | | | |
| FDS | 12A | NBCG\FDS12A | y | | y | | | | |
| FDS | 12B | NBCG\FDS12B | y | | y | | | | |
| FDS | 13A | NBCG\FDS13A | y | | y | | | | |
| FDS | 13B | NBCG\FDS13B | y | | y | | | | |
| FDS | 13C | NBCG\FDS13C | y | | y | | | | |

NAVBASE WELL LISTING
As of April 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 12/99 | Completed | Action taken | Status as of 4/99 | Action taken | Completed |
|---------------|-----|-------------|----------|----------------------------|-----------|-----------------|-------------------|--------------|-----------|
| FDS | 13D | NBCG\FDS13D | y | | y | | | | |
| FDS | 13E | NBCG\FDS13E | y | | y | | | | |
| FDS | 14A | NBCG\FDS14A | y | | y | | | | |
| FDS | 14B | NBCG\FDS14B | y | | y | | | | |
| FDS | 14C | NBCG\FDS14C | y | | y | | | | |
| FDS | 15A | NBCG\FDS15A | y | | y | | | | |
| FDS | 15B | NBCG\FDS15B | y | | y | | | | |
| FDS | 15C | NBCG\FDS15C | y | | y | | | | |
| FDS | 16A | NBCG\FDS16A | y | | y | | | | |
| FDS | 16B | NBCG\FDS16B | y | | y | | | | |
| FDS | 16C | NBCG\FDS16C | y | | y | | | | |
| FDS | 17A | NBCG\FDS17A | y | no tag | n | tag ordered | | | |
| FDS | 17B | NBCG\FDS17B | y | no tag | n | tag ordered | | | |
| FDS | 18A | NBCG\FDS18A | y | no tag | n | tag ordered | | | |
| ZONE H | | | | | | | | | |
| 9 | 1 | NBCH009001 | y | needs new hinge | y | hinge replaced | | | |
| 9 | 2 | NBCH009002 | y | | y | | | | |
| 9 | 3 | NBCH009003 | y | needs new hinge | y | hinge replaced | | | |
| 9 | 4 | NBCH009004 | y | | y | | | | |
| 9 | 5 | NBCH009005 | y | | y | | | | |
| 9 | 6 | NBCH009006 | y | | y | | | | |
| 9 | 7 | NBCH009007 | y | | y | | | | |
| 9 | 8 | NBCH009008 | y | | y | | | | |
| 9 | 9 | NBCH009009 | y | needs new hinge | y | hinge replaced | | | |
| 9 | 10 | NBCH009010 | y | | y | | | | |
| 9 | 11 | NBCH009011 | y | | y | | | | |
| 9 | 12 | NBCH009012 | y | | y | | | | |
| 9 | 13 | NBCH009013 | y | | y | | | | |
| 9 | 14 | NBCH009014 | y | | y | | | | |
| 9 | 15 | NBCH009015 | y | | y | | | | |
| 9 | 16 | NBCH009016 | y | | y | | | | |
| 9 | 17 | NBCH009017 | y | | y | | | | |
| 9 | 18 | NBCH009018 | y | | y | | | | |
| 9 | 19 | NBCH009019 | y | | y | | | | |
| 9 | 20 | NBCH009020 | y | | y | | | | |
| 9 | 21 | NBCH009021 | y | | y | | | | |
| 9 | 22 | NBCH009022 | y | | y | | | | |
| 9 | 23 | NBCH009023 | y | | y | | | | |
| 9 | 24 | NBCH009024 | y | | y | | | | |
| 9 | 25 | NBCH009025 | y | | y | | | | |
| 9 | 26 | NBCH009026 | y | | y | | | | |
| 9 | 121 | NBCH009121 | y | | y | | | | |
| 9 | 1D | NBCH00901D | y | | y | | | | |
| 9 | 2D | NBCH00902D | y | | y | | | | |
| 9 | 3D | NBCH00903D | y | needs new casing | y | casing replaced | | | |
| 9 | 4D | NBCH00904D | y | | y | | | | |

NAVBASE ALL LISTING
As of April 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 12/99 | Completed | Action taken | Status as of 4/99 | Action taken | Completed |
|----------|-----|------------|----------|----------------------------|-----------|-----------------|-------------------|--------------|-----------|
| 9 | 5D | NBCH00905D | y | | y | | | | |
| 9 | 6D | NBCH00906D | y | | y | | | | |
| 9 | 7D | NBCH00907D | y | | y | | | | |
| 9 | 8D | NBCH00908D | y | needs new casing | y | casing replaced | | | |
| 9 | 12D | NBCH00912D | y | needs new hinge | y | hinge replaced | | | |
| 9 | 23D | NBCH00923D | y | | y | | | | |
| 9 | 24D | NBCH00924D | y | | y | | | | |
| 9 | 25D | NBCH00925D | y | | y | | | | |
| 9 | 26D | NBCH00926D | y | | y | | | | |
| 9 | 27 | NBCH009027 | y | | y | | | | |
| 9 | 28 | NBCH009028 | y | | y | | | | |
| 9 | 29 | NBCH009029 | y | | y | | | | |
| 9 | 30 | NBCH009030 | y | | y | | | | |
| 13 | 1 | NBCH013001 | y | | y | | | | |
| 13 | 2 | NBCH013002 | y | | y | | | | |
| 13 | 3 | NBCH013003 | y | | y | | | | |
| 13 | 4 | NBCH013004 | y | | y | | | | |
| 13 | 5 | NBCH013005 | y | | y | | | | |
| 13 | 6 | NBCH013006 | y | | y | | | | |
| 13 | 7 | NBCH013007 | y | | y | | | | |
| 14 | 1 | NBCH014001 | y | | y | | | | |
| 14 | 2 | NBCH014002 | y | | y | | | | |
| 14 | 3 | NBCH014003 | y | | y | | | | |
| 14 | 4 | NBCH014004 | y | | y | | | | |
| 14 | 5 | NBCH014005 | y | | y | | | | |
| 14 | 6 | NBCH014006 | y | | y | | | | |
| 14 | 1D | NBCH01401D | y | needs cut down | y | cut down | | | |
| 14 | 2D | NBCH01402D | y | | y | | | | |
| 14 | 3D | NBCH01403D | y | | y | | | | |
| 14 | 4D | NBCH01404D | y | needs new hinge | y | hinge replaced | | | |
| 14 | 5D | NBCH01405D | y | | y | | | | |
| 14 | 6D | NBCH01406D | y | | y | | | | |
| 17 | 1 | NBCH017001 | y | | y | | | | |
| 17 | 2 | NBCH017002 | y | | y | | | | |
| 17 | 3 | NBCH017003 | y | flushmount will not seal | y | replaced cap | | | |
| 17 | 4 | NBCH017004 | y | | y | | | | |
| 17 | 5 | NBCH017005 | y | | y | | | | |
| 17 | 6 | NBCH017006 | y | | y | | | | |
| 17 | 7 | NBCH017007 | y | | y | | | | |
| 17 | 8 | NBCH017008 | y | | y | | | | |
| 17 | 9 | NBCH017009 | y | | y | | | | |
| 17 | 10 | NBCH017010 | y | | y | | | | |
| 17 | 2D | NBCH01702D | y | | y | | | | |
| 121 | 1 | NBCH121001 | y | | y | | | | |
| 136 | 1 | NBCH136001 | y | | y | | | | |
| 159 | 1 | NBCH159001 | y | | y | | | | |

NAVBASE WELL LISTING
As of April 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 12/99 | Completed | Action taken | Status as of 4/99 | Action taken | Completed |
|---------------|-----|------------|----------|----------------------------|-----------|-----------------|-------------------|--------------|-----------|
| 159 | 2 | NBCH159002 | y | | y | | | | |
| 178 | 1 | NBCH178001 | y | | y | | | | |
| 178 | 2 | NBCH178002 | y | | y | | | | |
| 653 | 1 | NBCH653001 | y | | y | | | | |
| 655 | 1 | NBCH655001 | y | | y | | | | |
| 655 | 2 | NBCH655002 | y | | y | | | | |
| 655 | 3 | NBCH655003 | y | | y | | | | |
| 656 | 1 | NBCH656001 | y | | y | | | | |
| 656 | 2 | NBCH656002 | y | | y | | | | |
| 656 | 3 | NBCH656003 | y | | y | | | | |
| 660 | 1 | NBCH660001 | y | | y | | | | |
| 660 | 2 | NBCH660002 | y | | y | | | | |
| 662 | 1 | NBCH662001 | y | | y | | | | |
| 662 | 2 | NBCH662002 | y | | y | | | | |
| 663 | 1 | NBCH663001 | y | | y | | | | |
| 663 | 2 | NBCH663002 | y | | y | | | | |
| 666 | 1 | NBCH666001 | y | | y | | | | |
| 666 | 2 | NBCH666002 | y | | y | | | | |
| 667 | 1 | NBCH667001 | y | | y | | | | |
| 667 | 2 | NBCH667002 | y | | y | | | | |
| GDH | 1 | NBCHGDH001 | y | | y | | | | |
| GDH | 2 | NBCHGDH002 | y | | y | | | | |
| GDH | 3 | NBCHGDH003 | y | | y | | | | |
| GDH | 4 | NBCHGDH004 | y | | y | | | | |
| GDH | 5 | NBCHGDH005 | y | | y | | | | |
| GDH | 6 | NBCHGDH006 | y | | y | | | | |
| GDH | 7 | NBCHGDH007 | y | | y | | | | |
| GDH | 8 | NBCHGDH008 | y | | y | | | | |
| GDH | 9 | NBCHGDH009 | y | | y | | | | |
| GDH | 10 | NBCHGDH010 | y | | y | | | | |
| GDH | 11 | NBCHGDH011 | y | | y | | | | |
| GDH | 12 | NBCHGDH012 | y | | y | | | | |
| GDH | 1D | NBCHGDH01D | y | | y | | | | |
| GDH | 2D | NBCHGDH02D | y | needs new casing | y | casing replaced | | | |
| GDH | 3D | NBCHGDH03D | y | | y | | | | |
| GDH | 4D | NBCHGDH04D | y | | y | | | | |
| GDH | 5D | NBCHGDH05D | y | needs cut down | y | cut down | | | |
| GDH | 6D | NBCHGDH06D | y | | y | | | | |
| GDH | 7D | NBCHGDH07D | y | | y | | | | |
| GDH | 8D | NBCHGDH08D | y | | y | | | | |
| GDH | 9D | NBCHGDH09D | y | | y | | | | |
| GDH | 10D | NBCHGDH10D | y | | y | | | | |
| GDH | 11D | NBCHGDH11D | y | needs new hinge | y | hinge replaced | | | |
| ZONE I | | | | | | | | | |
| 12 | 1 | NBCH012001 | y | | y | | | | |
| 12 | 2 | NBCH012002 | y | | y | | | | |

NAVBASE ALL LISTING
As of April 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 12/99 | Completed | Action taken | Status as of 4/99 | Action taken | Completed |
|----------|-----|------------|----------|----------------------------|-----------|----------------|-------------------|--------------|-----------|
| 12 | 3 | NBCI012003 | y | | y | | | | |
| 177 | 1 | NBCI177001 | y | | y | | | | |
| 177 | 2 | NBCI177002 | y | | y | | | | |
| 671 | 1 | NBCI671001 | y | | y | | | | |
| 671 | 2 | NBCI671002 | y | | y | | | | |
| 671 | 3 | NBCI671003 | y | | y | | | | |
| 674 | 4 | NBCI671004 | y | | y | | | | |
| 675 | 1 | NBCI675001 | y | | y | | | | |
| 675 | 2 | NBCI675002 | y | | y | | | | |
| 676 | 1 | NBCI676001 | y | | y | | | | |
| 677 | 2 | NBCI677002 | y | | y | | | | |
| 678 | 1 | NBCI678001 | y | | y | | | | |
| 678 | 2 | NBCI678002 | y | | y | | | | |
| 680 | 1 | NBCI680001 | y | | y | | | | |
| 680 | 2 | NBCI680002 | y | | y | | | | |
| 680 | 3 | NBCI680003 | y | | y | | | | |
| 687 | 1 | NBCI687001 | y | | y | | | | |
| 687 | 2 | NBCI687002 | y | | y | | | | |
| 687 | 3 | NBCI687003 | y | | y | | | | |
| 687 | 4 | NBCI687004 | y | | y | | | | |
| GDI | 1 | NBCIGDI001 | y | | y | | | | |
| GDI | 1D | NBCIGDI01D | y | | y | | | | |
| GDI | 2 | NBCIGDI002 | y | | y | | | | |
| GDI | 2D | NBCIGDI02D | y | | y | | | | |
| GDI | 3 | NBCIGDI003 | y | | y | | | | |
| GDI | 3D | NBCIGDI03D | y | | y | | | | |
| GDI | 4 | NBCIGDI004 | y | | y | | | | |
| GDI | 4D | NBCIGDI04D | y | needs new hinge | y | hinge replaced | | | |
| GDI | 5 | NBCIGDI005 | y | needs new casing | y | sub-contract | | | |
| GDI | 5D | NBCIGDI05D | y | needs new casing | y | sub-contract | | | |
| GDI | 6 | NBCIGDI006 | y | | y | | | | |
| GDI | 6D | NBCIGDI06D | y | | y | | | | |
| GDI | 7 | NBCIGDI007 | y | | y | | | | |
| GDI | 7D | NBCIGDI07D | y | | y | | | | |
| GDI | 8 | NBCIGDI008 | y | | y | | | | |
| GDI | 8D | NBCIGDI08D | y | | y | | | | |
| GDI | 9 | NBCIGDI009 | y | | y | | | | |
| GDI | 9D | NBCIGDI09D | y | needs new hinge | y | hinge replaced | | | |
| GDI | 10 | NBCIGDI010 | y | | y | | | | |
| GDI | 10D | NBCIGDI10D | y | needs new hinge | y | hinge replaced | | | |
| GDI | 11 | NBCIGDI011 | y | | y | | | | |
| GDI | 11D | NBCIGDI11D | y | needs new hinge | y | hinge replaced | | | |
| GDI | 12 | NBCIGDI012 | y | | y | | | | |
| GDI | 12D | NBCIGDI12D | y | needs new hinge | y | hinge replaced | | | |
| GDI | 13 | NBCIGDI013 | y | | y | | | | |
| GDI | 13D | NBCIGDI13D | y | | y | | | | |

NAVBASE WELL LISTING
As of April 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 12/99 | Completed | Action taken | Status as of 4/99 | Action taken | Completed |
|---------------|-----|-------------|----------|----------------------------|-----------|--------------|-------------------|--------------|-----------|
| GDI | 14 | NBCI\GDI014 | y | | y | | | | |
| GDI | 14D | NBCI\GDI14D | y | | y | | | | |
| GDI | 15 | NBCI\GDI015 | y | | y | | | | |
| GDI | 15D | NBCI\GDI15D | y | | y | | | | |
| GDI | 16 | NBCI\GDI016 | y | | y | | | | |
| GDI | 16D | NBCI\GDI16D | y | | y | | | | |
| GDI | 17 | NBCI\GDI017 | y | | y | | | | |
| GDI | 17D | NBCI\GDI17D | y | | y | | | | |
| GDI | 18 | NBCI\GDI018 | y | | y | | | | |
| GDI | 18D | NBCI\GDI18D | y | needs tap and die | n | | | | |
| GDI | 19 | NBCI\GDI019 | y | | y | | | | |
| GDI | 19D | NBCI\GDI19D | y | | y | | | | |
| ZONE K | | | | | | | | | |
| 161 | 1 | NBCK\161001 | y | | y | | | | |
| 162 | 1 | NBCK\162001 | y | | y | | | | |
| 162 | 2 | NBCK\162002 | y | | y | | | | |
| 163 | 1 | NBCK\163001 | y | | y | | | | |
| 166 | 1 | NBCK\166001 | y | | y | | | | |
| 166 | 2 | NBCK\166002 | y | | y | | | | |
| 166 | 2D | NBCK\16602D | y | | y | | | | |
| 166 | 3 | NBCK\166003 | y | | y | | | | |
| 166 | 3D | NBCK\16603D | y | | y | | | | |
| 166 | 4 | NBCK\166004 | y | | y | | | | |
| 166 | 4D | NBCK\16604D | y | | y | | | | |
| 166 | 5 | NBCK\166005 | y | | y | | | | |
| 166 | 5D | NBCK\16605D | y | | y | | | | |
| 166 | 6 | NBCK\166006 | y | | y | | | | |
| 166 | 6D | NBCK\16606D | y | | y | | | | |
| 166 | 7 | NBCK\166007 | y | | y | | | | |
| 166 | 7D | NBCK\16607D | y | | y | | | | |
| 166 | 8 | NBCK\166008 | y | | y | | | | |
| 166 | 8D | NBCK\16608D | y | | y | | | | |
| 166 | 9D | NBCK\16609D | y | | y | | | | |
| 166 | 10D | NBCK\16610D | y | | y | | | | |
| 166 | 11D | NBCK\16611D | y | | y | | | | |
| 166 | 12D | NBCK\16612D | y | | y | | | | |
| 166 | 13 | NBCK\166013 | y | | y | | | | |
| 166 | 13D | NBCK\16613D | y | | y | | | | |
| 166 | 14 | NBCK\166014 | y | | y | | | | |
| 166 | 14D | NBCK\16614D | y | | y | | | | |
| 166 | 15 | NBCK\166015 | y | | y | | | | |
| 166 | 15D | NBCK\16615D | y | | y | | | | |
| 166 | 16 | NBCK\166016 | y | | y | | | | |
| 166 | 16D | NBCK\16616D | y | | y | | | | |
| 166 | 17 | NBCK\166017 | y | | y | | | | |
| 166 | 17D | NBCK\16617D | y | | y | | | | |

NAVBASI WELL LISTING
As of April 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 12/99 | Completed | Action taken | Status as of 4/99 | Action taken | Completed |
|----------|-----|-------------|----------|----------------------------|-----------|--------------|-------------------|--------------|-----------|
| 166 | 18 | NBCK\166018 | y | | y | | | | |
| 166 | 18D | NBCK\16618D | y | | y | | | | |
| 166 | 19 | NBCK\166019 | y | | y | | | | |
| 166 | 19D | NBCK\16619D | y | | y | | | | |
| 166 | 20 | NBCK\166020 | y | | y | | | | |
| 166 | 20D | NBCK\16620D | y | | y | | | | |
| 166 | 21 | NBCK\166021 | y | | y | | | | |
| 166 | 21D | NBCK\16621D | y | | y | | | | |
| 698 | 1 | NBCK\698001 | y | | y | | | | |
| GDK | 1 | NBCK\GDK001 | y | | y | | | | |
| GDK | 2 | NBCK\GDK002 | y | | y | | | | |

NAVAL BASE CHARLESTON
RESTORATION ADVISORY BOARD (RAB) MEETING

Minutes of 9 February 1999
Live Oak Community Center
2012 Success Street
North Charleston, SC

RAB Members Attending

| | |
|-------------------|---|
| Tony Hunt | Southern Division Naval Facilities Engineering Command, Navy Co-Chair |
| Dann Spariosu | U.S. Environmental Protection Agency |
| Bob Veronese | SPAWAR |
| Henry Shepard II | Navy Caretaker Site Office |
| Ann Clark | SC Department of Health and Environmental Control |
| Lou Mintz | Community Co-Chair |
| Bobby Dearhart | Charleston Environmental Detachment |
| Arthur Pinckney | |
| Wannetta Mallette | |

Guests Attending

| | |
|------------------------|-------------------|
| Mr. Paul M. Bergstrand | SCDHEC |
| Mr. David Dodds | Southern Division |
| Mr. Eric Cathcart | SCDHEC |
| Mr. Keith Johns | EnSafe |
| Mr. J. Michael Reubish | Citizen |

Introduction of the RAB Members and Guests

Tony Hunt, Navy Co-Chair, brought the meeting to order at 6:00 p.m. Member and audience introductions were made.

Administrative Remarks and Discussion of Last Meeting Minutes

Mr. Hunt noted that the minutes from the December meeting were attached to the agenda for the night. He urged members to call him with any comments or changes to the minutes before he finalized and distributed them.

Mr. Hunt then encouraged visitors to ask questions and participate.

Subcommittee Reports

Community Relations Subcommittee

Lou Mintz said that the fact sheet on the radiological cleanup of the base had been completed and was to be distributed soon. Mr. Mintz then introduced the concept of a membership subcommittee to review attendance and participation requirements for RAB members. He mentioned that this may be a good method of increasing the involvement of community RAB members.

At this point, there was some discussion of the Chicora Tank Farm property cleanup and transfer. While the North Charleston Board of Education had expressed verbal interest in acquiring the property, nothing official had been received by the Navy at this point. Oliver Addison reported that while he had prompted the Board of Education to submit a letter of interest to the Navy, he would contact Mr. Cobb to follow up on this issue.

Mr. Mintz expressed the concern of the subcommittee that attendance, by community RAB members and the public, had reached a new low. Suggestions for increasing attendance included the following:

- calling all members prior to the next meeting.
- an "Open House" or other event,
- Navy personnel in uniform at RAB meetings to demonstrate the Navy's commitment to the project.

This last item was subject to some discussion. Henry Shepard noted that he occupies the position formerly held by the Navy's uniformed representative to the RAB, and that the Navy's commitment to the process was not altered by the reassignment of duties. Other concerns were that the additional person would not be as knowledgeable as the experts in attendance and that they would not be able to bring additional value to the meeting. Mr. Hunt agreed to bring this concern to the attention his Commanding Officer.

There were no other subcommittee reports.

Update from the Charleston Environmental Detachment

Arthur Pinckney inquired about the status of the Environmental Detachment. Mr. Dearhart reported that the Detachment is to lose its government funding on September 11, 1999. He said that they are working toward maintaining the Detachment as an entity beyond that date, however. In response to a question, Mr. Dearhart said that the Detachment is not used exclusively at the Charleston site, but wherever they are needed. They provide a cost-effective alternative for certain kinds of work. He also reported that approximately 70% of the people employed by the Detachment are North Charleston residents.

Environmental Cleanup Progress Report

Mr. Tony Hunt presented the progress of environmental cleanup at the Chicora Tank Farm since the last RAB meeting (December).

The Environmental Detachment is in the process of cleaning out the tanks. There had been a problem with disposing of the oil removed from the tanks, but that has been remedied. The Detachment is fully funded for demolishing the tanks, and there is a schedule in place for that to happen. Mr. Hunt reiterated the community's concern that the Board of Education or some other entity may not be interested in the property. Without interest from qualified agencies, the Navy would be overextending its authority in demolishing the tanks, and would be limited to cleaning and filling the tanks. This, he pointed out, is why it is important to the community that the Navy receive official letter(s) of interest from the Board of Education and other interested agencies.

In response to a question, Mr. Dearhart reported that, if a notice to proceed is delivered, the Detachment should be able to have all the tanks demolished by September 11, 1999 (when they cease to be a government entity). He added that it may be difficult to complete Tank O if the notice is not received soon.

In response to another question, Mr. Dearhart said that the demolition rubble was not enough to completely fill the empty tanks. Clean fill must be brought in from other locations.

Resource Conservation and Recovery Act Sites

Mr. David Dodds (Southern Division Naval Facilities Engineering Command) presented updates on several of the sites (solid waste management units – SWMUs, and Areas of Concern – AOCs) identified as part of the Resource Conservation and Recovery Act (RCRA) permit.

AOC 67 and SWMU 166: Treatability studies are under way at these sites to see how two technologies might work on the chlorinated solvents detected in the groundwater at the base. The pumping tests (which help determine the rate at which groundwater can reasonably be pumped out of the ground) are complete at these two sites. Different remedies are being proposed for each site:

- AOC 67: Soil-vapor extraction is being proposed for this site. This is the process of injecting steam into the ground at the perimeter of the contaminated soil, and drawing it up through a well located at the center of the site. The steam is intended to help volatilize the contaminants from the soil and carry it to the extraction well where it is removed and treated.
- SWMU 166: A combination aerobic/anaerobic remedy is being proposed. This combines several different techniques of altering the oxygen content in the groundwater either up or down by injecting different non-toxic materials into the water. The high (aerobic) or low (anaerobic) conditions are favorable for different types of microorganisms that break down these chlorinated solvents. The combination remedy is expected to hasten the breakdown of the contaminants.

Wells have been installed at both locations to monitor the progress of the remedies. In addition, piezometers (which measure groundwater flow) have been installed. These are needed for accuracy in measuring where the water is flowing, and how fast.

Other sites:

- Zone K – Mr. Dodds reported that the RCRA Facility Investigation (RFI) Report had been submitted to the regulators for additional comments.
- Zone I – Final RFI Report is to be submitted in the near future.
- Zones A, C, and H – Treatability studies are under way at these sites.
- Basewide – Groundwater studies are taking place throughout the base.

Mr. Mintz asked about six wells, placed very close together in one area, that he noticed at SWMU 166. Mr. Dodds responded that, as part of the treatability study, it was important to know how the groundwater is flowing in relation to the extraction well. Therefore six wells were placed in two sets of three wells, with each of the three at different depths (approximately 12, 25 and 70 feet below the surface) where groundwater flow information was needed. These wells will not be used as part of the “pump and treat” portion of the remedy, but may likely be used as part of the monitoring program in the future. Special wells are used for the soil-vapor extraction.

In response to a question about the length of time the wells will remain in place, Mr. Dodds replied that they will be “abandoned” (properly closed) before the property is transferred, if the site is considered environmentally suitable for transfer and the wells are no longer needed. Dann Spariosu added that the Partnering Team agreed to abandon a large number of wells that were no longer needed.

In response to a question about soil that is removed, Mr. Dodds said that soil is taken to a licensed landfill, based on sampling of the soil, and not left on the base.

Findings of Suitability to Transfer and Lease

Mr. Hunt then provided a briefing on Findings of Suitability to Transfer (FOST) and Findings of Suitability to Lease (FOSL).

The Redevelopment Authority had requested FOSTs for three parcels of land:

- Marina
- CU property
- Chicora Tank Farm

Mr. Hunt explained that all FOSTs are supported by site-specific studies of the current environmental condition of the site. This study is called an Environmental Baseline Survey for Transfer (EBST). EBST studies have been started for all parcels not contaminated by hazardous materials. This does not include asbestos or lead-based paint.

Mr. Mintz asked if the Navy had looked at a new technique, demonstrated in the past week in Charleston, for covering lead-based paint. Mr. Dearhart said that they were reviewing that technology, and would report on that technology, and lead-based paint in the housing at the next meeting.

Closing Remarks

Mr. Hunt asked for volunteers to serve on the new membership committee, whose task it will be to take on the issue of supplementing or replacing existing members. Lou Mintz, Bob Veronese, Tony Hunt and Bobby Dearhart volunteered. Mr. Spariosu suggested that the Community Relations coordinator from U.S. EPA, Tiki Whitfield, may want to participate.

In a brief general discussion, several points and suggestions were made regarding membership and attendance.

- Some new members could come from the applications received at the formation of the RAB. Mr. Hunt will try to locate those applications.
- Send letters to those members who have not attended meetings in the last six months. The letters should explain that their seat is to be replaced, as per the RAB Charter. The general agreement among those in attendance was that this was appropriate.

A discussion on meeting location and frequency followed.

- Rotate meeting locations, as was done in the past. Mr. Hunt suggested that the meetings continue to be at the Live Oak Community Center while the Chicora Tank Farm is still a significant issue to this community.
- More frequent meetings were suggested. Those present generally agreed that this may be appropriate for when studies are concluding and remedies are being reviewed.

After these discussions, it was agreed that the board would approach the issue of membership first, followed by meeting frequency.

A point was made that there has not been much controversy to cause interest independently. It was suggested that this was a result of the parties (Navy, SCDHEC, USEPA, and community) working well together. Other suggestions for increased visibility and local interest were made:

- the RAB may want to look at sponsoring school programs, or
- perhaps a tie-in between the Chicora Tank Farm and the nearby Magnet School.

Mr. Hunt encouraged members of the RAB or the general community to provide suggestions and specific questions to RAB. Mr. Pinckney suggested updating the board on status of the answers to the questions he submitted several years ago.

Agenda topics for the next meeting were discussed. The following were tentatively slated for the next RAB meeting, in April.

- Environmental Progress Report
- Report from the Environmental Detachment
- Membership
- Zone J

Comments and Questions

A question was asked about the status of two issues: the radar station and Hess. Mr. Dodds pointed out the radar station (trichloroethene in groundwater) is part of SWMU 166, which was covered earlier. Mr. Dodds also responded to the question on Hess Oil. Hess is almost through with their remediation of pure petroleum product in the soil, using a vapor extraction technique. They have not yet addressed the contamination in groundwater that has extended 300-400 feet onto Navy property, although some data has been taken from Navy property. Mr. Dodds reported that, while the issue is not yet resolved, Hess has been very cooperative so far.

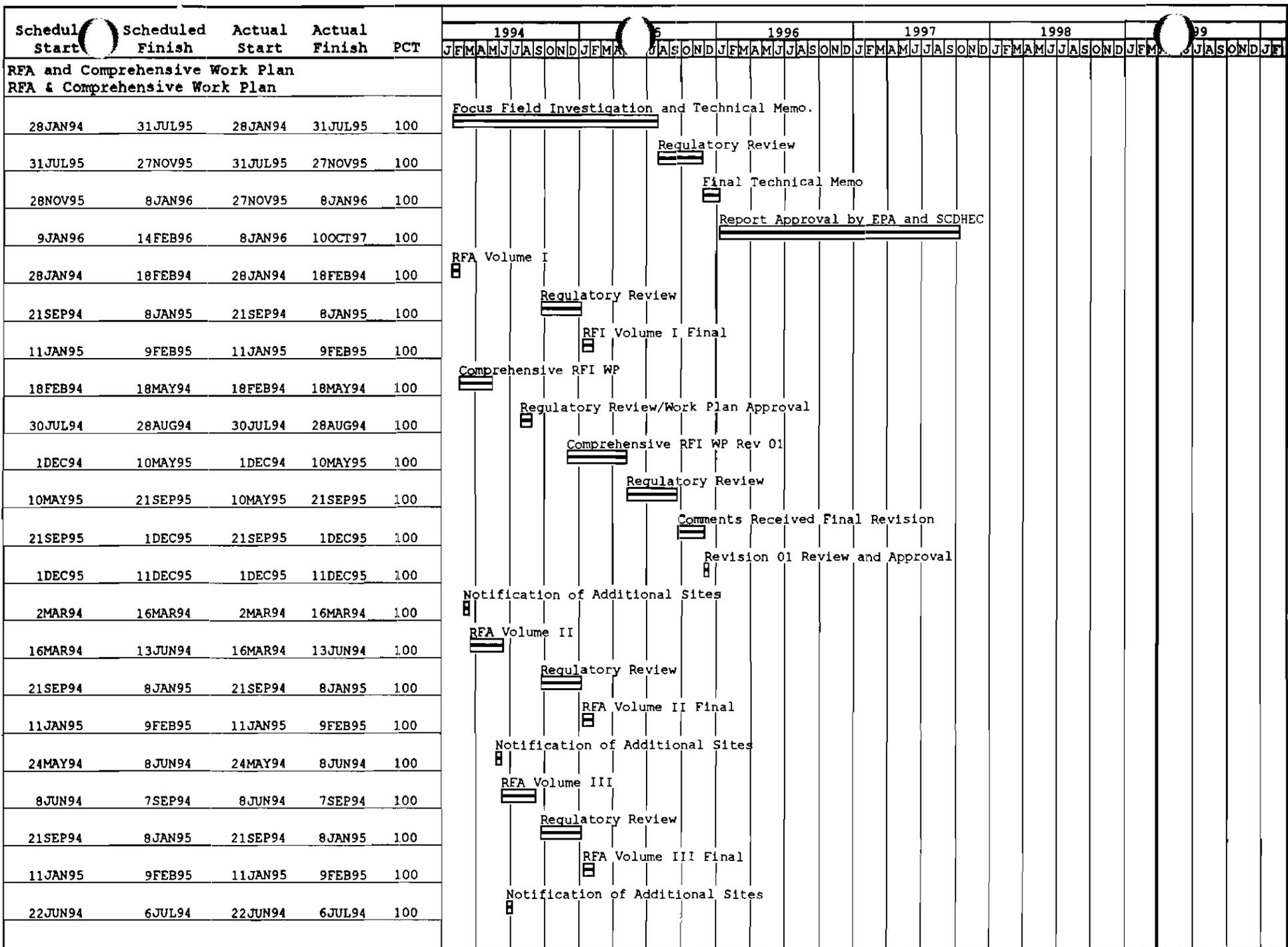
In response to a question about the involvement of SCDHEC in the Hess Oil issue, Ann Clark reported that their involvement has not been needed. Mr. Paul Bergstrand (SCDHEC) noted that he is in regular contact with the geologist working for Hess on this project, and they are working on approving a work plan.

Election of Community Co-Chair

This action was postponed until the April meeting

Meeting adjourned.

Editor's note: the next meeting of the RAB will be on Tuesday, April 13, 1999, at the Live Oak Community Center, North Charleston. The meeting will begin at 6 p.m.



Plot Date 22APR99
 Data Date 29MAR99
 Project Start 1JAN94
 Project Finish 14DEC99

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

2915

Sheet 1 of 19

NAVY CLEAN R62467-89-D-0318

Naval Base Charleston
 Corrective Action Management Plan

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 10 DEC 97 | Rev 0 | GWH | MMH |
| 15 Jan 98 | Rev 1 | GWH | MMH |
| 15 Apr 98 | Rev 2 | GWH | MMH |
| 15 Jul 98 | Rev 3 | GWH | MMH |
| 15 Oct 98 | Rev 4 | GWH | MMH |
| 30 Dec 98 | Rev 5 | GWH | MMH |

| Scheduled Start | Scheduled Finish | Actual Start | Actual Finish | PCT | 1994 | | | 1995 | | | 1996 | | | 1997 | | | 1998 | | | 1999 | | | | |
|--|------------------|--------------|---------------|-----|------|---|---|------|---|---|------|---|---|------|---|---|------|---|---|------|---|---|---|---|
| | | | | | J | F | M | J | F | M | J | F | M | J | F | M | J | F | M | J | F | M | J | F |
| RFA and Comprehensive Work Plan | | | | | | | | | | | | | | | | | | | | | | | | |
| RFA & Comprehensive Work Plan | | | | | | | | | | | | | | | | | | | | | | | | |
| 6JUL94 | 4OCT94 | 6JUL94 | 4OCT94 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 4OCT94 | 2NOV94 | 4OCT94 | 2NOV94 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 7NOV94 | 8JAN95 | 7NOV94 | 8JAN95 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 11JAN95 | 9FEB95 | 11JAN95 | 9FEB95 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 11OCT94 | 26OCT94 | 11OCT94 | 26OCT94 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 26OCT94 | 24JAN95 | 26OCT94 | 24JAN95 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 25JAN95 | 10MAR95 | 25JAN95 | 10MAR95 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 10MAR95 | 10APR95 | 10MAR95 | 10APR95 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 10APR95 | 10MAY95 | 10APR95 | 10MAY95 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 12JUL95 | 28JUL95 | 12JUL95 | 28JUL95 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 28JUL95 | 28SEP95 | 28JUL95 | 28SEP95 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 28SEP95 | 30OCT95 | 28SEP95 | 30OCT95 | 100 | | | | | | | | | | | | | | | | | | | | |
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| 30OCT95 | 30NOV95 | 30OCT95 | 30NOV95 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 1APR96 | 15APR96 | 1APR96 | 15APR96 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 16APR96 | 26APR96 | 16APR96 | 26APR96 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 27APR96 | 27MAY96 | 27APR96 | 17JUN96 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 17JUN96 | 17JUL96 | 17JUN96 | 21OCT96 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 1APR96 | 15APR96 | 1APR96 | 15APR96 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 16APR96 | 16JUL96 | 16APR96 | 28MAY96 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 29MAY96 | 29JUN96 | 29MAY96 | 17JUN96 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 17JUN96 | 17JUL96 | 17JUN96 | 21OCT96 | 100 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| 1FEB94 | 4DEC94 | 1FEB94 | 4DEC94 | 100 | | | | | | | | | | | | | | | | | | | | |
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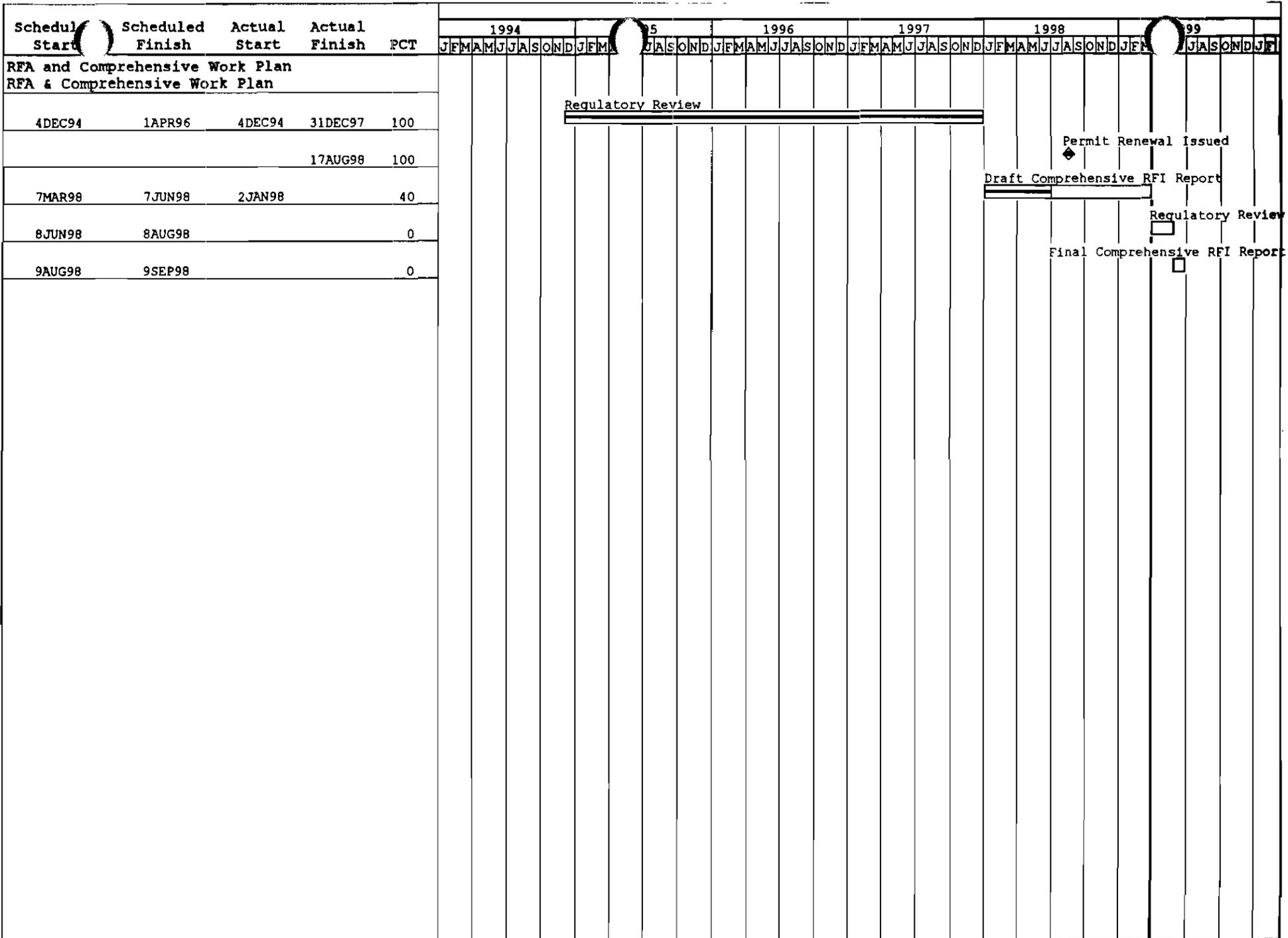
Plot Date 22APR99
 Data Date 29MAR99
 Project Start 1JAN94
 Project Finish 4DEC99

Activity Bar/Barly Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

2913

(c) Primavera, Inc.

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 10 DEC 97 | Rev 0 | DN | MM |
| 15 Jan 98 | Rev 1 | MM | MM |
| 15 Apr 98 | Rev 2 | MM | MM |
| 15 Jul 98 | Rev 3 | MM | MM |
| 15 Oct 98 | Rev 4 | MM | MM |
| 10 Nov 99 | Rev 5 | MM | MM |



Plot Date 22APR99
 Data Date 29MAR99
 Project Start 1JAN94
 Project Finish 14DEC99

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

2915 sheet 1 of 19

Naval Base Charleston
 Corrective Action Management Plan

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 18 Oct 97 | Rev 0 | CIN | KAN |
| 15 Jan 98 | Rev 1 | CIN | KAN |
| 15 Apr 98 | Rev 2 | CIN | KAN |
| 15 Oct 98 | Rev 3 | CIN | KAN |
| 15 Oct 98 | Rev 4 | CIN | KAN |
| 30 Apr 99 | Rev 5 | CIN | KAN |

| Scheduled Start | Scheduled Finish | Actual Start | Actual Finish | PCT | 1994 | | | 1995 | | | 1996 | | | 1997 | | | 1998 | | | 1999 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | 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 | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J |
| Zone Code A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RFI Work Plan/Investigation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13FEB95 | 4MAY95 | 13FEB95 | 4MAY95 | 100 | Draft Zone A RFI Work Plan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4MAY95 | 21JUN95 | 4MAY95 | 21JUN95 | 100 | Regulatory Review | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21JUN95 | 21JUL95 | 21JUN95 | 21JUL95 | 100 | Comments Received/Final Work Plan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10AUG95 | | 10AUG95 | 100 | Work Plan Approval by DHEC and EPA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11AUG95 | 29APR96 | 11AUG95 | 2JUL96 | 100 | Field Investigation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RFI Report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12JUN96 | 9SEP96 | 12JUN96 | 16SEP96 | 100 | Draft Zone A RFI Report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9SEP96 | 6DEC96 | 17SEP96 | 12MAR97 | 100 | EPA/SCDHEC Regulatory Review | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12MAR97 | 6AUG97 | 12MAR97 | 6AUG97 | 100 | Comments Received/Additional Field Work | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7APR97 | 21MAY97 | 7APR97 | 21MAY97 | 100 | SWMU 1 and 2 Field Investigation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22MAY97 | 26SEP97 | 22MAY97 | 26SEP97 | 100 | SWMU 1 and 2 Report Addendum | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27SEP97 | 14OCT97 | 27SEP97 | 5NOV97 | 100 | Regulatory Review | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7AUG97 | 14NOV97 | 5NOV97 | 29JAN99 | 100 | Comments Received/Document Approval | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15NOV97 | 29NOV97 | 18AUG98 | 18AUG98 | 100 | Final RFI Report Dist. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CMS Work Plan and Implementation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30NOV97 | 30NOV97 | | | 100 | CMS Begins | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 15JUN97 | 10JUN98 | 100 | Draft Zone A CMS Work Plan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11JUN98 | 10AUG98 | 11JUN98 | 13JUL98 | 100 | Regulatory Review | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11AUG98 | 25SEP98 | 14JUL98 | | 99 | Comments Received/Document Approval | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1SEP98 | 11SEP98 | 8SEP98 | | 99 | Final CMS Work Plan Dist | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13OCT98 | 28DEC98 | 13OCT98 | | 40 | CMS Field Work | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Plot Date 22APR99
 Data Date 29MAR99
 Project Start 1JAN94
 Project Finish 14DEC99

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Play Activity

2913

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 Sems, Inc.

Naval Base Charleston
 Corrective Action Management Plan

Sheet 4 of 19

NAVY CLEAR H62467-89-D-0318

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 18 Oct 97 | Rev 0 | CH | MM |
| 15 Jan 98 | Rev 1 | CH | MM |
| 15 Apr 98 | Rev 2 | MM | MM |
| 15 Jul 98 | Rev 3 | MM | MM |
| 15 Oct 98 | Rev 4 | MM | MM |
| 15 Dec 98 | Rev 5 | MM | MM |

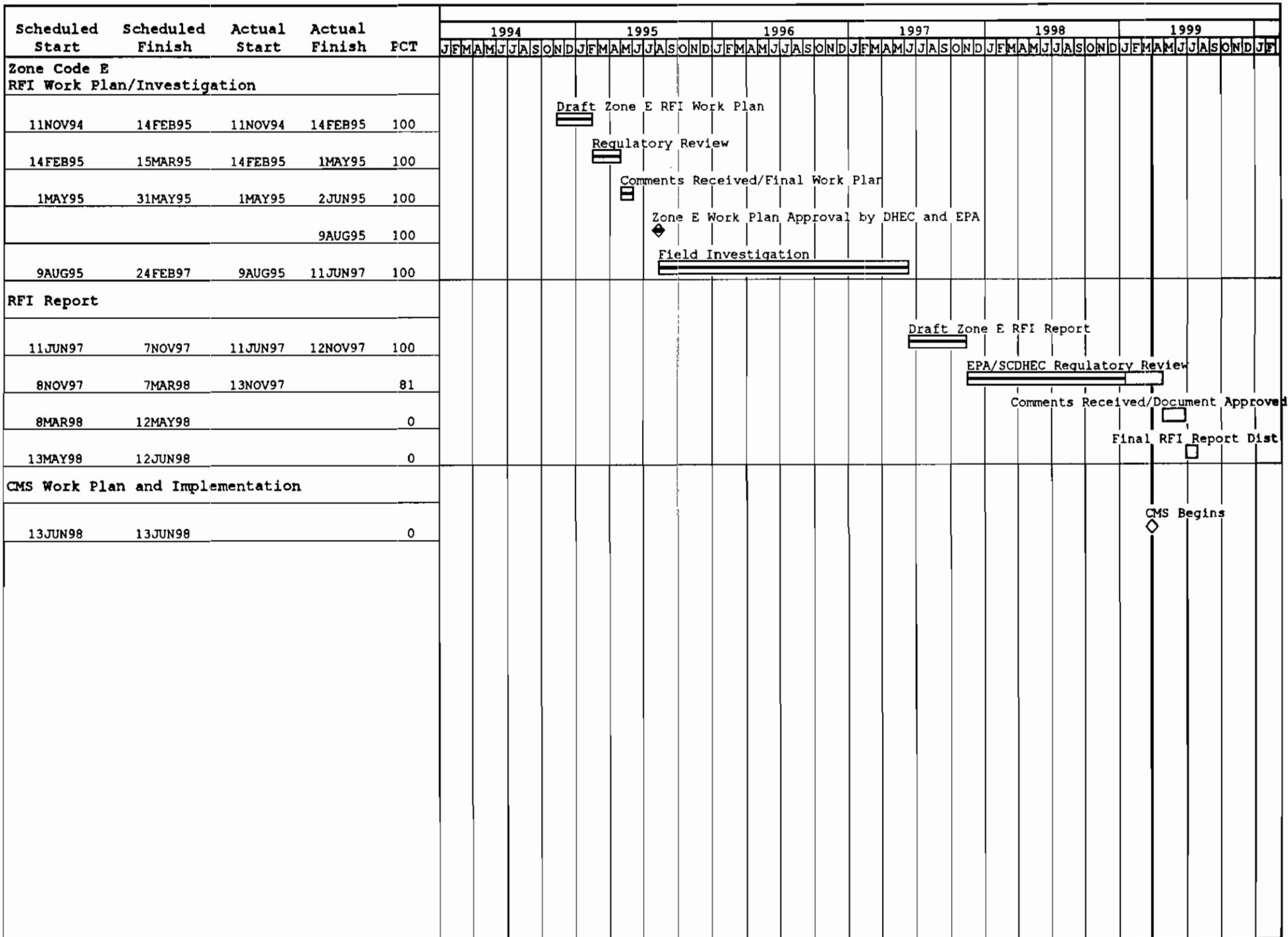
| Schedule Start | Scheduled Finish | Actual Start | Actual Finish | PCT | 1994 | | | | 1995 | | | | 1996 | | | | 1997 | | | | 1998 | | | | 1999 | | | | | | | | | | | | | | | | | | | | | | |
|---|------------------|--------------|---------------|-----|--|---|---|---|------|---|---|---|------|---|---|---|------|---|---|---|------|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 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 | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J |
| Zone Code C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RFI Work Plan/Investigation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8SEP94 | 21NOV94 | 8SEP94 | 21NOV94 | 100 | Draft Zone C RFI Work Plan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21NOV94 | 21DEC94 | 21NOV94 | 30JAN95 | 100 | Regulatory Review | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30JAN95 | 28FEB95 | 30JAN95 | 28FEB95 | 100 | Comments Received/Final Work Plan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 30JAN95 | 30JAN95 | 100 | Conditional Work Plan Approval by DHEC and EPA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30JAN95 | 28SEP95 | 30JAN95 | 25SEP95 | 100 | Field Investigation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RFI Report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13JUL95 | 18DEC95 | 25SEP95 | 26JAN96 | 100 | Draft Zone C RFI Report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 26JAN96 | 28FEB97 | 26JAN96 | 30MAY97 | 100 | EPA/SCDHEC Regulatory Review | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 31MAY97 | 9SEP97 | 31MAY97 | 9SEP97 | 100 | Comments Received/Additional Field Work | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10SEP97 | 14NOV97 | 10SEP97 | 12NOV97 | 100 | Final RFI Report Distributed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13NOV97 | 13DEC97 | 13NOV97 | 5MAY98 | 100 | Document Approval | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CMS Work Plan and Implementation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15NOV97 | 15NOV97 | 5MAY98 | 5MAY98 | 100 | CMS Begins | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5MAY98 | 5AUG98 | 10SEP97 | 1JUN98 | 100 | Draft Zone C CMS Work Plan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6AUG98 | 6OCT98 | 2JUL98 | 23OCT98 | 100 | Regulatory Review | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7OCT98 | 22NOV98 | 24OCT98 | | 70 | Comments Rec'd/Document Approved | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24OCT98 | 8NOV98 | 23DEC98 | | 70 | Final CMS Work Plan Dist | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9NOV98 | 7FEB99 | 4MAR99 | | 0 | CMS Field Work | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CMS Report - Major Sites | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1APR99 | 15JUN99 | 1APR99 | | 0 | Draft CMS Report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16JUN99 | 15AUG99 | | | 0 | Regulatory Review | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16AUG99 | 30SEP99 | | | 0 | Comments Received/Document Approval | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Plot Date 22APR99
 Data Date 29MAR99
 Project Start 1JAN94
 Project Finish 14DEC99

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

NAVY CLEAN #62467-89-D-0318

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 10 Oct 97 | Rev 0 | CH | MM |
| 15 Jan 98 | Rev 1 | CH | MM |
| 15 Apr 98 | Rev 2 | CH | MM |
| 15 Jul 98 | Rev 3 | CH | MM |
| 15 Oct 98 | Rev 4 | CH | MM |
| 18 Nov 98 | Rev 5 | CH | MM |



Plot Date 22APR99
 Data Date 29MAR99
 Project Start 1JAN94
 Project Finish 1DEC99

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

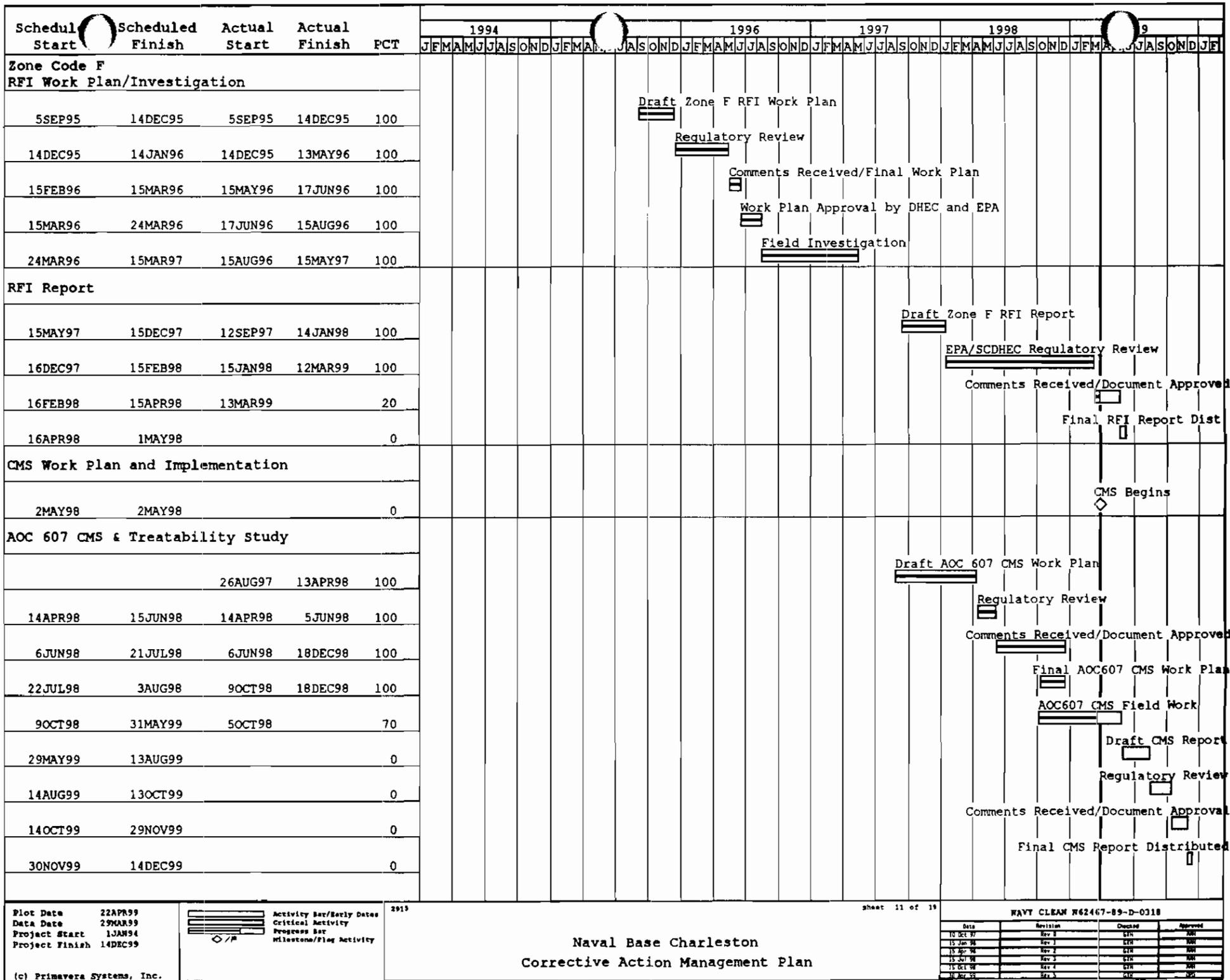
2915

Navy Base Charleston
 Corrective Action Management Plan

Sheet 10 of 19

NAVY CLEAN N62467-89-D-0318

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 18 Oct 97 | Rev 1 | ETH | RAH |
| 15 Jan 98 | Rev 1 | | RAH |
| 15 Apr 98 | Rev 2 | | RAH |
| 15 Oct 98 | Rev 3 | | RAH |
| 15 Oct 98 | Rev 4 | | RAH |
| 18 Nov 97 | Rev 5 | | RAH |



Naval Base Charleston
Corrective Action Management Plan

| Scheduled Start | Scheduled Finish | Actual Start | Actual Finish | PCT | 1994 | | | 1995 | | | 1996 | | | 1997 | | | 1998 | | | 1999 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | 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 | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J |
| Zone Code G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RFI Work Plan/Investigation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5SEP95 | 14DEC95 | 5SEP95 | 14DEC95 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14DEC95 | 14JAN96 | 14DEC95 | 15MAY96 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15FEB96 | 15MAR96 | 15MAY96 | 17JUN96 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15MAR96 | 24MAR96 | 17JUN96 | 15AUG96 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24MAR96 | 15MAR97 | 15AUG96 | 11JUN97 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RFI Report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12JUN97 | 15JAN98 | 12JUN97 | 4MAR98 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16JAN98 | 1APR98 | 5MAR98 | | 70 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2APR98 | 13MAY98 | | | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14MAY98 | 27MAY98 | | | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CMS Work Plan and Implementation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28MAY98 | 28MAY98 | | | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Draft Zone G RFI Work Plan

Regulatory Review

Comments Received/Final Work Plan

Work Plan Approval by DHEC and EPA

Field Investigation

Draft Zone G RFI Report

EPA/SCDHEC Regulatory Review

Comments Received/Document Approval

Final RFI Rpt Dist

CMS Begins

Plot Date 22APR99
 Data Date 29MAR99
 Project Start 1JAN94
 Project Finish 14DEC99

Activity Bar/Bar/Color Codes
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

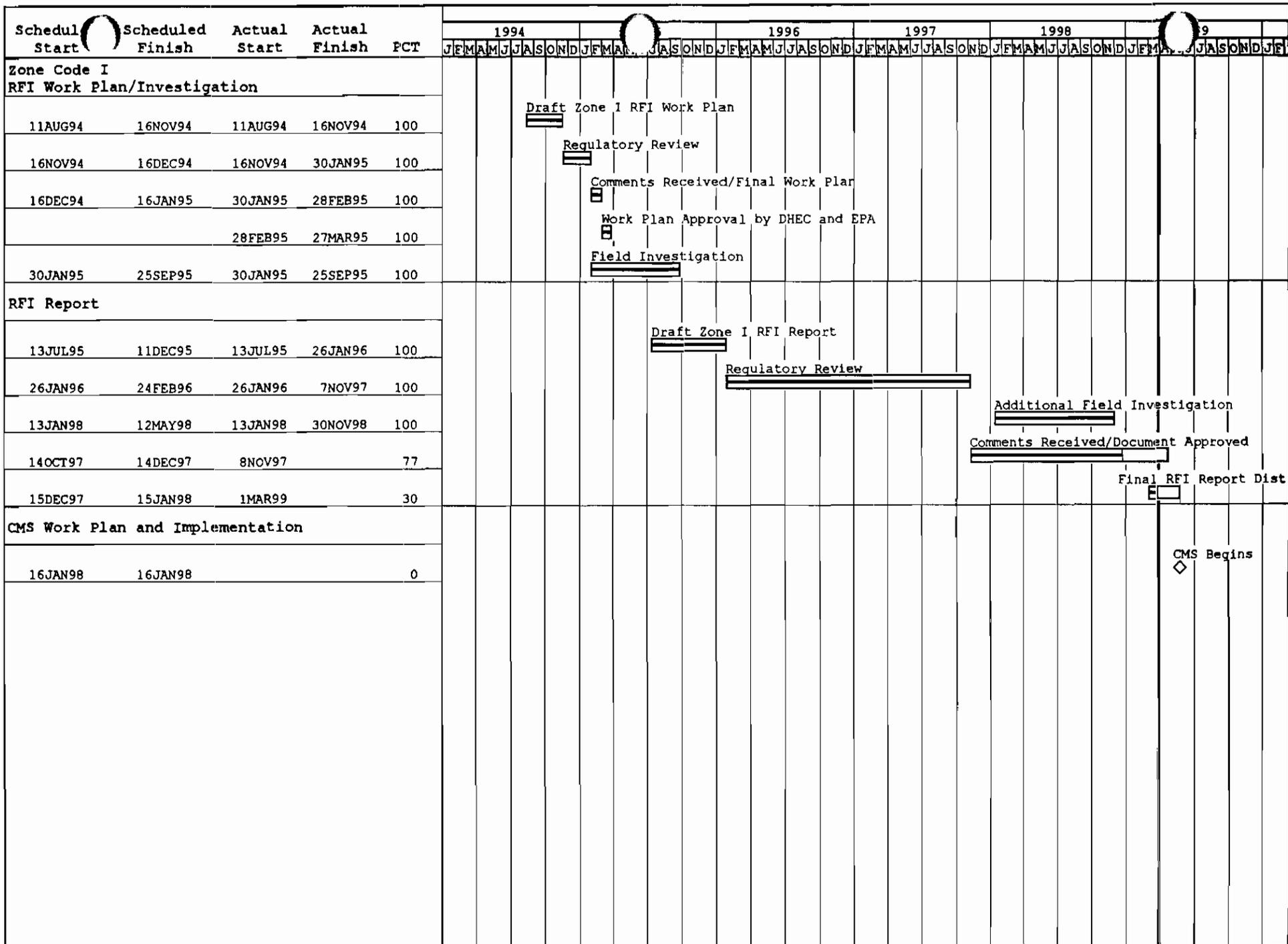
2913

Naval Base Charleston
 Corrective Action Management Plan

Sheet 12 of 19

NAVT CLEAN N62467-89-D-0318

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 19 Oct 97 | Rev 0 | GR | RM |
| 15 Jan 98 | Rev 1 | GR | RM |
| 15 Apr 98 | Rev 2 | GR | RM |
| 15 Jul 98 | Rev 3 | GR | RM |
| 15 Oct 98 | Rev 4 | GR | RM |
| 10 Apr 99 | Rev 5 | GR | RM |



Plot Date 22APR99
 Data Date 29MAR99
 Project Start 1JAN94
 Project Finish 14DEC99

Activity Bar/Early Dates
 Critical Activity
 Program Bar
 Milestone/Flag Activity

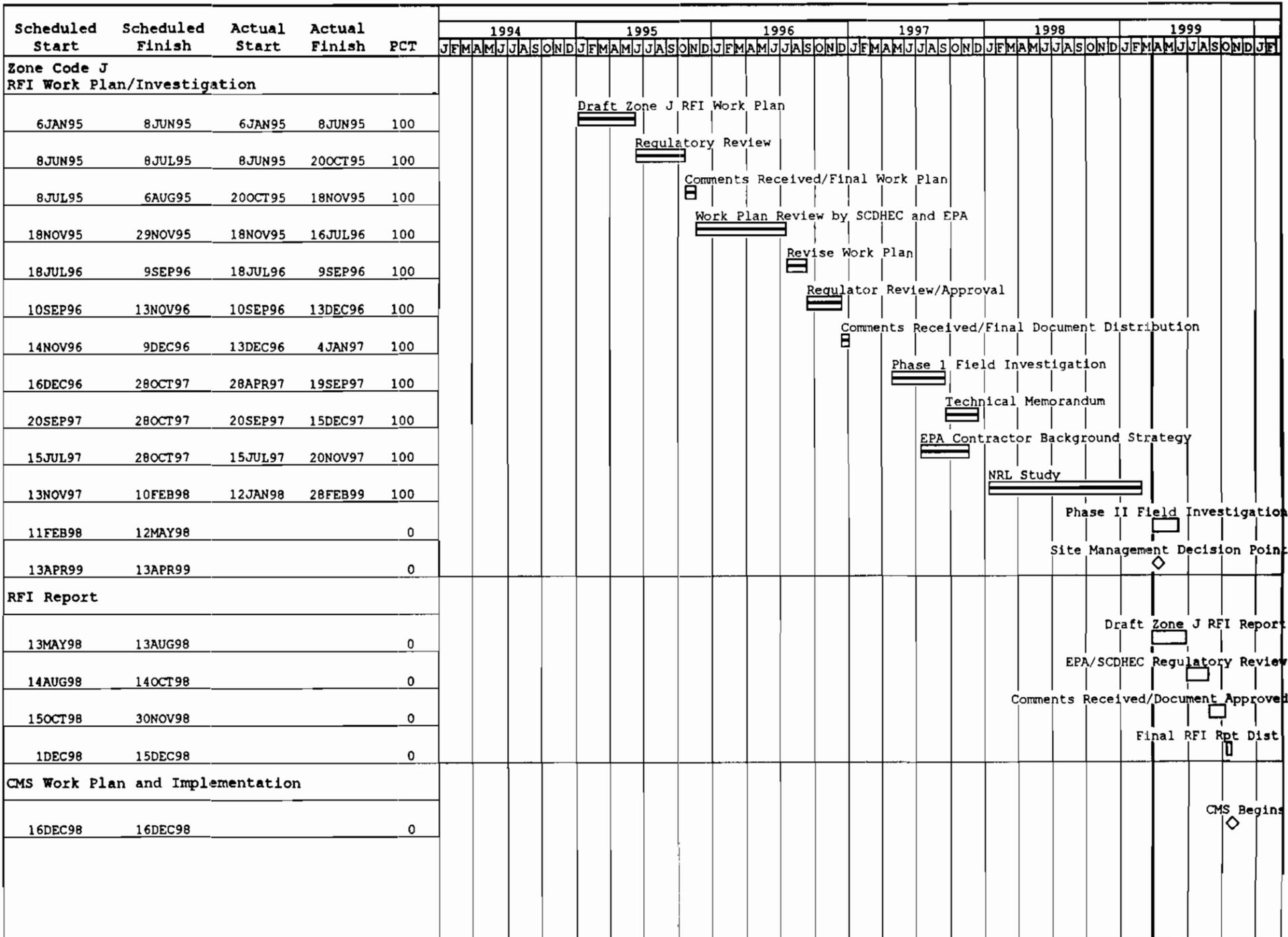
2915

sheet 13 of 19

NAVY CLEAN R62467-89-D-0318

Naval Base Charleston
 Corrective Action Management Plan

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 10 DEC 97 | Rev 0 | SIN | RRR |
| 15 JAN 98 | Rev 1 | SIN | RRR |
| 15 APR 98 | Rev 2 | SIN | RRR |
| 15 JUL 98 | Rev 3 | SIN | RRR |
| 15 OCT 98 | Rev 4 | SIN | RRR |
| 14 DEC 99 | Rev 5 | SIN | RRR |



Plot Date 22APR99
 Data Date 29MAR99
 Project Start 1JAN94
 Project Finish 16DEC99

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

2913

Naval Base Charleston
 Corrective Action Management Plan

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 18 Oct 97 | Rev 0 | SM | SM |
| 15 Jan 98 | Rev 1 | SM | SM |
| 15 Apr 98 | Rev 2 | SM | SM |
| 15 Jul 98 | Rev 3 | SM | SM |
| 15 Oct 98 | Rev 4 | SM | SM |
| 18 Dec 99 | Rev 5 | SM | SM |

| Schedule Start | Scheduled Finish | Actual Start | Actual Finish | PCT | 1994 | | | | | | | | | | | | 1995 | | | | | | | | | | | | 1996 | | | | | | | | | | | | 1997 | | | | | | | | | | | | 1998 | | | | | | | | | | | | 1999 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------------------|--------------|---------------|-----|--|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | 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 | A | M | J | J | A | S | O | N | D | 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 | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zone Code L RFI Work Plan/Investigation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6JAN95 | 26MAY95 | 6JAN95 | 26MAY95 | 100 | <div style="position: absolute; top: 50px; left: 450px;"> <u>Draft Zone L RFI Work Plan</u> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 26MAY95 | 18AUG95 | 26MAY95 | 18AUG95 | 100 | <div style="position: absolute; top: 150px; left: 490px;"> <u>Regulatory Review</u> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18AUG95 | 18SEP95 | 18AUG95 | 18OCT95 | 100 | <div style="position: absolute; top: 190px; left: 510px;"> <u>Comments Received/Final Work Plan</u> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18SEP95 | 27SEP95 | 18OCT95 | 22NOV96 | 100 | <div style="position: absolute; top: 220px; left: 530px;"> <u>Work Plan Review by SCDHEC and EPA</u> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23NOV96 | 13DEC96 | 23NOV96 | 13DEC96 | 100 | <div style="position: absolute; top: 250px; left: 630px;"> <u>Comments Rec'd/Document Approved</u> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2JAN97 | 24NOV97 | 28APR97 | 15MAY98 | 100 | <div style="position: absolute; top: 290px; left: 670px;"> <u>Field Investigation</u> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RFI Report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25NOV97 | 24FEB98 | 16MAY98 | 23DEC98 | 100 | <div style="position: absolute; top: 350px; left: 780px;"> <u>Draft Zone L RFI Report</u> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25FEB98 | 24APR98 | 24DEC98 | | 70 | <div style="position: absolute; top: 390px; left: 800px;"> <u>EPA/SCDHEC Regulatory Review</u> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25APR98 | 12JUN98 | | | 0 | <div style="position: absolute; top: 420px; left: 760px;"> <u>Comments Received/Document Approved</u> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13JUN98 | 26JUN98 | | | 0 | <div style="position: absolute; top: 450px; left: 800px;"> <u>Final RFI Report Distributed</u> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CMS Work Plan and Implementation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27JUN98 | 27JUN98 | | | 0 | <div style="position: absolute; top: 530px; left: 880px;"> <u>CMS Begins</u> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Plot Date 22APR99
 Data Date 29MAR99
 Project Start 1JAN94
 Project Finish 14DEC99



Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

2915

Sheet 19 of 19

NAVY CLEAN 662467-89-D-0318

Naval Base Charleston
 Corrective Action Management Plan

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 18 Oct 97 | Rev 0 | CH | MM |
| 15 Jan 98 | Rev 1 | CH | MM |
| 15 Apr 98 | Rev 2 | CH | MM |
| 15 Jul 98 | Rev 3 | CH | MM |
| 15 Oct 98 | Rev 4 | CH | MM |
| 16 Dec 99 | Rev 5 | CH | MM |

CHARLESTON NAVAL COMPLEX
RFI/CMS STATUS REPORT
PERIOD: SUMMARY OF
01 April 1999 To 30 June 1999

I. INTRODUCTION

The following quarterly status report has been prepared to satisfy condition II.E.3.a of the Part B Permit Renewal dated 5 December 1994 for the Charleston Naval Complex (CNC). The requirements of this condition are in effect since the total elapsed time to complete the RCRA Facility Investigation (RFI) is projected to be greater than 180 calendar days from the approval date of the *Final Comprehensive RFI Work Plan* as indicated in the Corrective Action Management Plan (CAMP).

II. PORTION OF THE RFI COMPLETED

General

Attachment A is a spreadsheet which list the results of a comprehensive inspection performed in 1998, repairs needed, whether the action was complete, and the current status as of 30 June 1999.

A presentation was made to the Project Team on 13 April 1999 on the monitored natural attenuation (MNA) data in the "interim report" for SWMU 166 at Zone K. Comments concerning the presentation of the data for SWMU 166 lead to a technical subcommittee meeting on 26 April 1999 to discuss MNA data for the remaining sites in Zones A, E, F, and H. Of primary concern was the appropriateness of continuing with MNA data collection and evaluation while an active treatability study was being planned and in some cases under way. It was agreed upon that MNA evaluation would not be continued except for SWMU 39 in Zone A until the treatability studies were completed. Subsequent to the meeting it was determined that sites with MNA data collected would be presented in the specific CMS report.

The "basewide groundwater study" of inorganics in groundwater memo was submitted in 27 May 1999. SCDHEC review and comments is pending.

Task 2901 - Zone A

SCDHEC has concurred with the EPA with the no further action recommendation for AOC 506 concerning the leaching potential of benzo(a)pyrene. The CMS reports for SWMUs 1 and 2, 38 and SWMU 42/AOC 505 were submitted to the Navy on 4 April 1999, 22 April 1999, and 18 May 1999 respectively. The reports for combined SWMU 2 and SWMU 38 were presented to the project team on 21 June 1999.

At present, the only Zone A site with outstanding CMS data needs is SWMU 39. A soil gas survey at SWMU 39 was completed on May 21, 1999 with soil samples taken using DPT to help delineate any extent of contamination in the soil based on soil gas readings. Analytical data from the soil samples was received in June.

Additional field work is being planned at SWMU 39 which will include diffusion sampling along the marsh by the DET, and installation of two well pairs off site and a deep well at SWMU 42. EnSafe submitted a letter of "right of entry" to Norfolk and Southern Railroad on April 30, 1999 for the two off site well pairs and received a letter in response on May 6, 1999 listing additional information needed from EnSafe before granting the "right of entry". EnSafe sent out a letter providing the additional information on June 3, 1999. Approval of the offsite wells has been received and installation of the wells at SWMU 39 is planned for the week of 19 July 1999. The sampling of these wells will be coordinated with an additional round of limited MNA data collected at the other SWMU 39 wells.

A vertical scale profiling study is planned for SWMU 39 the week of 19 July 1999.

Task 2902 - Zone B

All tasks for Zone B are 100 percent complete, and no further action is required.

Task 2903 - Zone C

SCDHEC submitted a second set of comments to the Zone C CMS work plan. EnSafe completed responses by mid June 1999 and forwarded to the Navy for review/approval. Work plan will not be revised because CMS reports for Zone C sites are approximately 75% complete. SCDHEC concerns were addressed in a formal response to responses in June 1999.

CMS soil sampling for lead at AOC 518 and subsequent data evaluation led to the recommendation to the Navy for excavating 118.5 cubic yards of soil.

Task 2904 - Zone D

All tasks for Zone D are 100 percent complete, and no further action is required.

Task 2905 - Zone E

Soil sampling was completed at AOC 621, the former battery cracking pad, associated with SWMU 5 and AOC 605. As mentioned in the last quarterly status report this site was inadvertently placed in Zone G by the Project Team and ultimately got overlooked in the initial round of RFI sampling. Soil samples were collected from three locations and analyzed for the TCL/TAL suite of compounds.

At the June Project team meeting it was agreed that the Navy would proceed with additional sampling at AOC 621 to further define the extent of lead contamination and consider the possibility of excavating additional soil at this site concurrently with the lead contaminated soil removal planned for SWMU 2 in Zone A.

Task 2906 - Zone F

SCDHEC provided comments on the addendum to Zone F RFI Report for AOCs 619 and 709. EnSafe responded to the comments and a comment resolution meeting is planned for 7 July 1999.

For the CMS treatability study at AOC 607 five vent wells, three deep wells and one soil vapor extraction well were installed in May 1999 as part of the dual phase extraction /dewatering system. Operation of the system is to begin in July 1999. In response to SCDHEC comments to the Zone F RFI report four shallow wells (109002, 609001, 609002, 617003) were installed and quarterly sampling begun.

Wells at AOC 607 have been sampled as part of the CMS treatability study and in preparation to the start up of the dewatering and soil vapor extraction systems.

The week of 19 July 1999 will have three deep wells installed as part of the treatability study at AOC 607.

Task 2907 - Zone G

In response to comments from SCDHEC additional groundwater sampling was conducted at SWMU 24.

EnSafe provided response to SCDHEC comments to the Zone G RFI Report and a 7 July 1999 comments resolution meeting is planned.

Task 2908 - Zone H

The SWMU 14 combined CMS report was submitted to the Navy on 18 May 1999.

On 5 April 1999 EnSafe submitted a CMS technical memo containing justification to remove AOCs 655, 656, and 666 from the CMS process. SCDHEC agreed to a no further action status for AOCs 655 and 656 in June 1999. SCDHEC has comments about the presence of chloromethane and vinyl chloride in the first round of sampling at AOC 666 therefore the status of AOC 666 is still pending.

A number of sites in Zone H had draft CMS reports submitted this quarter. SWMUs 159, 9, and 14 were submitted on 7 May 1999, 14 May 1999 and 18 May 1999 respectively and AOC 653 was submitted on 26 April 1999.

CMS technical memos were submitted for SWMU 136/AOC 663 and SWMU 159 /AOC 653 on 18 June 1999 and 21 June 1999.

As part of the CMS work at SWMU 20 (GEL 15 Area) direct push technology soil, monitoring well, and diffusion sampling took place to help define the extent of contamination at GEL 15.

Task 2909 - Zone I

The Zone I RFI addendum for AOCs 678, 679, 680 was submitted 17 June 1999.

SCDHEC issued a letter in 7 May 1999 agreeing to no further action on the Dredged Materials Area (DMA) and AOC 688 sites.

Groundwater sampling was conducted at SWMUs 12 and 177 at AOCs 679, 681, and 687 and the grid wells associated with these sites in response to SCDHEC comments on the Zone I RFI Report.

Task 2910 - Zone J

EnSafe is currently calculating the proposed ecological screening levels for submittal to SCDHEC and EPA review.

Task 2911 - Zone K

As part of the treatability study at SWMU 166 two documents were submitted. The Draft SWMU 166 Design Document for Anaerobic/Aerobic Sequential treatment was submitted on 16 April 1999 and the draft Six phase Soil treatment Work Plan was submitted on 26 April 1999.

For the CMS treatability study at SWMU 166 2 pumping wells, 4 injection wells and 2 air sparging wells were installed. Anticipated start up date of August 1999 is expected.

The Final Zone K RFI report was submitted on 15 June 1999. The comment resolution meeting with SCDHEC is planned for 7 July 1999.

SCDHEC comments were received for the addendum to the Zone K RFI Report containing SWMUs 166 and 185. The comment resolution meeting with SCDHEC is planned for 7 July 1999.

Task 2912 - Zone L

SCDHEC comments on the Draft Zone L RFI report were received on 28 June 1999. Responses to the comments are planned for 13 August 1999.

III. SUMMARIES OF FINDINGS

The latest findings to date are generally summarized and discussed in detail at the monthly project team meetings where handouts including data have been distributed in lieu of presenting the data quarterly in this report. Project team meeting minutes with the meeting handouts are maintained at the project team office located on Naval Base Charleston.

IV. DEVIATIONS FROM APPROVED WORK PLANS THIS REPORTING PERIOD

There were no known deviations from the approved RFI Work Plans for this reporting period.

V. SUMMARY OF CONTACTS WITH LOCAL COMMUNITY PUBLIC INTEREST GROUPS OR STATE GOVERNMENT

As of June 1997 the Restoration Advisory Board (RAB) agreed to meet on a bi-monthly basis. Minutes from the February 1999 meeting is enclosed as Attachment B.

VI. SUMMARY OF PROBLEMS OR POTENTIAL PROBLEMS AND ACTION TAKEN TO RECTIFY PROBLEMS

There were no problems or potential problems identified during this reporting period.

VII. KEY PROJECT PERSONNEL

SCDHEC named Mihir Meta as the SCDHEC project manager for the CNC project.

VIII. PROJECTED WORK FOR THE NEXT REPORTING PERIOD

Document Preparation and Data Evaluation:

- Submit the Statement of Basis for SWMU 2.
- Submit the Statement of Basis for SWMU 38.
- Resubmit the CMS report for SWMU 42/AOC 505 and submit the Statement of Basis.
- Submit response to responses for the Zone A CMS WP. SCDHEC concerns will be addressed in applicable CMS reports.
- Submit the Statement of Basis for SWMU 159/AOC 653.
- Submit the CMS report and Statement of Basis for SWMU 44 and Minor sites.

- Submit the CMS reports and Statement of Basis for SWMUs 9 and 14 and AOC 503.
- Submit the Sampling Summary and Recommendations technical memo.
- Submit technical memo on Zone I defining CMS sites and needs.
- Submit the CMS reports and Statement of Basis for AOCs 685, 689, and 690.
- Resubmittal of the Final Zone F and K RFI Reports.

Field Activities:

- Zone A CMS at SWMU 39.
- Zone C CMS at SWMU 44.
- Soil and/or groundwater sampling to resolve RFI comments for Zones E, F, G, I and K.
- Zone F AOC 607 CMS treatability study.
- Zone G CMS at SWMU 8.
- Zone H CMS at SWMUs 17 and 20 (Gel 15 Area).
- Zone I CMS at SWMU 685.
- Zone K SWMU 166 treatability study.

IX. COPIES OF DAILY REPORTS, INSPECTION REPORTS, LABORATORY DATA

Daily activities are recorded in accordance with the Data Management Plan included as Section 14 of the Final Comprehensive Sampling and Analysis Plan. Photocopies of these daily records have not been included with this status report; however, this information is available for review upon request.

Per agreement with SCDHEC and EPA, hard copies of the analytical data are not being submitted. A copy of the data is maintained at the EnSafe office in Charleston and is available for review.

X. CORRECTIVE ACTION MANAGEMENT PLAN (CAMP)

As agreed upon by the project team, the CAMP will normally be updated and submitted quarterly as part of the *Quarterly RFI Status Report*. The baseline schedule presented in the CAMP was revised in October 1997 and submitted as Appendix F-15 of the RCRA Part B permit renewal submitted to SCDHEC. The CAMP has been updated per discussions at the February 1999 Project Team meeting.

NAVBASE WELL LISTING

As of June 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 6/99 | Completed | Action taken | Status as of 6/99 | Action taken | Completed |
|---------------|-----|-------------|----------|---------------------------|-----------|--------------|-------------------|--------------|-----------|
| ZONE A | | | | | | | | | |
| 38 | 1 | NBCA\038001 | | abandoned | y | | ok | | y |
| 38 | 1D | NBCA\03801D | y | | y | | ok | | y |
| 38 | 2 | NBCA\038002 | y | needs new tag | n | tag ordered | ok | | y |
| 38 | 3 | NBCA\038003 | | needs tag | | | needs tag | | |
| 39 | 1 | NBCA\039001 | y | | y | | ok | | y |
| 39 | 2 | NBCA\039002 | y | | y | | ok | | y |
| 39 | 3 | NBCA\039003 | y | needs new pad | y | sub-contract | ok | | y |
| 39 | 4 | NBCA\039004 | y | | y | | needs tag | | n |
| 39 | 4I | NBCA\03904I | y | | y | | needs tag | | n |
| 39 | 4D | NBCA\03904D | y | | y | | ok | | y |
| 39 | 5 | NBCA\039005 | y | | y | | ok | | y |
| 39 | 6 | NBCA\039006 | y | | y | | ok | | y |
| 39 | 7 | NBCA\039007 | y | | y | | ok | | y |
| 39 | 8 | NBCA\039008 | y | | y | | ok | | y |
| 39 | 8D | NBCA\03908D | y | | y | | ok | | y |
| 39 | 9 | NBCA\039009 | y | | y | | ok | | y |
| 39 | 9I | NBCA\03909I | y | | y | | ok | | y |
| 39 | 9D | NBCA\03909D | y | | y | | ok | | y |
| 39 | 10 | NBCA\039010 | y | | y | | ok | | y |
| 39 | 10I | NBCA\03910I | y | | y | | ok | | y |
| 39 | 10D | NBCA\03910D | y | | y | | ok | | y |
| 39 | 11 | NBCA\039011 | y | | y | | ok | | y |
| 39 | 12 | NBCA\039012 | y | | y | | ok | | y |
| 39 | 12I | NBCA\03912I | y | needs new pad | y | sub-contract | ok | | y |
| 39 | 12D | NBCA\03912D | y | | y | | ok | | y |
| 39 | 13 | NBCA\039013 | y | | y | | ok | | y |
| 39 | 13I | NBCA\03913I | y | | y | | ok | | y |
| 39 | 13D | NBCA\03913D | y | | y | | ok | | y |
| 39 | 14 | NBCA\039014 | y | needs tag | n | tag ordered | ok | tag replaced | y |
| 39 | 14D | NBCA\03914D | y | needs tag | n | tag ordered | ok | tag replaced | y |
| 39 | 15 | NBCA\039015 | y | needs tag | n | tag ordered | ok | tag replaced | y |
| 39 | 15D | NBCA\03915D | y | needs tag | n | tag ordered | ok | tag replaced | y |
| 39 | 16 | NBCA\039016 | | | | | needs tag | tag ordered | n |
| 39 | 16I | NBCA\03916I | | | | | needs tag | tag ordered | n |
| 39 | 16D | NBCA\03916D | | | | | needs tag | tag ordered | n |
| 39 | 17 | NBCA\039017 | | | | | needs tag | tag ordered | n |
| 39 | 17I | NBCA\03917I | | | | | needs tag | tag ordered | n |
| 39 | 17D | NBCA\03917D | | | | | needs tag | tag ordered | n |
| 39 | 18 | NBCA\039018 | | | | | needs tag | tag ordered | n |
| 39 | 18I | NBCA\03918I | | | | | needs tag | tag ordered | n |
| 39 | 18D | NBCA\03918D | | | | | needs tag | tag ordered | n |
| 39 | 19 | NBCA\039019 | | | | | needs tag | tag ordered | n |
| 39 | 19I | NBCA\03919I | | | | | needs tag | tag ordered | n |
| 39 | 19D | NBCA\03919D | | | | | needs tag | tag ordered | n |
| 39 | 20 | NBCA\039020 | | | | | needs tag | tag ordered | n |
| 39 | 20I | NBCA\03920I | | | | | needs tag | tag ordered | n |
| 39 | 20D | NBCA\03920D | | | | | needs tag | tag ordered | n |
| 39 | 21 | NBCA\039021 | | | | | needs tag | tag ordered | n |
| 39 | 21I | NBCA\03921I | | | | | needs tag | tag ordered | n |
| 39 | 21D | NBCA\03921D | | | | | needs tag | tag ordered | n |
| 39 | PZ1 | NBCA\039PZ1 | | needs tag | | | needs tag | | |
| 39 | PZ2 | NBCA\039PZ2 | | needs tag | | | needs tag | | |
| 39 | PZ3 | NBCA\039PZ3 | | needs tag | | | needs tag | | |
| 39 | PZ4 | NBCA\039PZ4 | | needs tag | | | needs tag | | |
| 39 | PZ5 | NBCA\039PZ5 | | needs tag | | | needs tag | | |
| 42 | 1 | NBCA\042001 | y | | y | | ok | | y |
| 42 | 2 | NBCA\042002 | y | | y | | ok | | y |
| 42 | 3 | NBCA\042003 | y | needs tag | n | tag ordered | ok | tag replaced | y |
| 43 | 1 | NBCA\043001 | y | needs tag | n | tag ordered | ok | tag replaced | y |

NAVBASE WELL LISTING

As of June 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 6/99 | Completed | Action taken | Status as of 6/99 | Action taken | Completed |
|---------------|-----|-------------|----------|-------------------------------|-----------|----------------|---------------------|--------------|-----------|
| 505 | 1 | NBCA\505001 | y | | y | | ok | | y |
| 506 | 1 | NBCA\506001 | y | | y | | pad needs patched | | n |
| GRID | 1 | NBCA\GDA001 | y | | y | | ok | | y |
| GRID | 1D | NBCA\GDA01D | y | | y | | ok | | y |
| GRID | 2 | NBCA\GDA002 | y | cracked pad (serviceable) | y | sub-contract | ok | | y |
| GRID | 2D | NBCA\GDA02D | y | cracked pad (serviceable) | y | sub-contract | ok | | y |
| GRID | 3 | NBCA\GDA003 | y | | y | | ok | | y |
| GRID | 3D | NBCA\GDA03D | y | | y | | ok | | y |
| 2 | 1 | NBCA\002001 | y | needs new hinge | y | hinge replaced | ok | | y |
| 2 | 2 | NBCA\002002 | y | | y | | needs tag | tag ordered | n |
| 2 | 3 | NBCA\002003 | y | | y | | ok | | y |
| 2 | 4 | NBCA\002004 | y | | y | | needs tag | tag ordered | n |
| 2 | 5 | NBCA\002005 | | abandoned | y | | | | y |
| 2 | 6 | NBCA\002006 | y | needs new hinge | y | hinge replaced | ok | | y |
| 2 | 7 | NBCA\002007 | | | | | needs tag | tag ordered | n |
| 2 | 8 | NBCA\002008 | | | | | needs tag | tag ordered | n |
| ZONE B | | | | | | | | | |
| GDB | 1 | NBCB\GDB001 | y | | y | | ok | | y |
| GDB | 1 | NBCB\GDB01D | y | | y | | ok | | y |
| GDB | 2 | NBCB\GDB002 | y | | y | | ok | | y |
| GDB | 3 | NBCB\GDB003 | y | | y | | ok | | y |
| GDB | 4 | NBCB\GDB004 | y | | y | | ok | | y |
| GDB | 4 | NBCB\GDB04D | y | | y | | ok | | y |
| ZONE C | | | | | | | | | |
| 44 | 1 | NBCC\044001 | y | | y | | ok | | y |
| 44 | 2 | NBCC\044002 | y | | y | | ok | | y |
| 44 | 3 | NBCC\044003 | y | | y | | ok | | y |
| 44 | 4 | NBCC\044004 | y | | y | | ok | | y |
| 44 | 5 | NBCC\044005 | y | | y | | ok | | y |
| 44 | 6 | NBCC\044006 | y | | y | | ok | | y |
| 44 | 7 | NBCC\044007 | y | | y | | ok | | y |
| 44 | 8 | NBCC\044008 | y | | y | | needs hinge | | n |
| 47 | 1 | NBCC\047001 | y | | y | | ok | | y |
| 47 | 2 | NBCC\047002 | y | | y | | ok | | y |
| 47 | 3 | NBCC\047003 | y | | y | | ok | | y |
| 47 | 4 | NBCC\047004 | y | | y | | ok | | y |
| 47 | 5 | NBCC\047005 | y | | y | | ok | | y |
| 47 | 6 | NBCC\047006 | y | | y | | ok | | y |
| 47 | 7 | NBCC\047007 | y | | y | | ok | | y |
| 47 | 8 | NBCC\047008 | | cannot locate, covered | n | | abandoned | | y |
| 47 | 9 | NBCC\047009 | y | needs new pad, cannot lock | n | | crushed/compromised | | n |
| 47 | 10 | NBCC\047010 | | covered by concrete pad | n | | covered by concrete | | n |
| 47 | 11 | NBCC\047011 | y | | y | | ok | | y |
| 47 | 12 | NBCC\047012 | y | | y | | ok | | y |
| 47 | 13 | NBCC\047013 | | cannot locate, in paint booth | n | | in paint booth | | n |
| 47 | 15 | NBCC\047015 | y | | y | | ok | | y |
| 510 | 1 | NBCC\510001 | y | | y | | ok | | y |
| 510 | 2 | NBCC\510002 | y | | y | | ok | | y |
| 523 | 1 | NBCC\523001 | y | cracked pad | y | sub-contract | ok | | y |
| 523 | 2 | NBCC\523002 | y | | y | | ok | | y |
| GDC | 1 | NBCC\GDC001 | y | | y | | ok | | y |
| GDC | 1D | NBCC\GDC01D | y | | y | | ok | | y |
| GDC | 2 | NBCC\GDC002 | y | | y | | ok | | y |
| GDC | 2D | NBCC\GDC02D | y | | y | | ok | | y |
| 508 | 1 | NBCC\508003 | | needs tag | | | needs tag | | |
| 511 | 2 | NBCC\511002 | y | | y | | ok | | y |
| 512 | 2 | NBCC\512002 | | abandoned | | | abandoned | | y |
| 512 | 3 | NBCC\512003 | | needs tag | | | needs tag | | |
| 700 | 1 | NBCC\700001 | | needs tag | | | needs tag | | |
| ZONE D | | | | | | | | | |

NAVBASE WELL LISTING

As of June 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 6/99 | Completed | Action taken | Status as of 6/99 | Action taken | Completed |
|---------------|-----|-------------|----------|---------------------------|-----------|--------------|-------------------|--------------|-----------|
| GDD | 1 | NBCDVGDD001 | y | | y | | ok | | y |
| GDD | 1 | NBCDVGDD01D | y | | y | | ok | | y |
| ZONE E | | | | | | | | | |
| 18 | 1 | NBCE\018001 | y | | y | | | | |
| 18 | 2 | NBCE\018002 | y | | y | | | | |
| 21 | 1 | NBCE\021001 | | needs tag | | | needs tag | | |
| 21 | 2 | NBCE\021002 | | needs tag | | | needs tag | | |
| 21 | 3 | NBCE\021003 | y | destroyed/ compromised | y | | | | |
| 23 | 1 | NBCE\023001 | y | | y | | | | |
| 23 | 1D | NBCE\02301D | y | | y | | | | |
| 25 | 1 | NBCE\025001 | y | needs cut down | n | | | | |
| 25 | 2 | NBCE\025002 | y | needs cut down | n | | | | |
| 25 | 3 | NBCE\025003 | y | missing bolt | n | | | | |
| 25 | 4 | NBCE\025004 | y | needs new pad | y | | | | |
| 53 | 1 | NBCE\053001 | n | cannot locate | n | | | | |
| 54 | 2 | NBCE\054002 | y | | y | | | | |
| 63 | 1 | NBCE\063001 | y | | y | | | | |
| 63 | 2 | NBCE\063002 | y | needs tag | n | | | | |
| 65 | 1 | NBCE\065001 | y | needs tag | n | tag ordered | | | |
| 65 | 2 | NBCE\065002 | y | needs new pad | y | sub-contract | | | |
| 65 | 3 | NBCE\065003 | y | | y | | | | |
| 65 | 4 | NBCE\065004 | y | | y | | | | |
| 65 | 5 | NBCE\065005 | y | needs new pad | y | sub-contract | | | |
| 65 | 6 | NBCE\065006 | y | | y | | | | |
| 65 | 4D | NBCE\06504D | y | | y | | | | |
| 65 | 7 | NBCE\065007 | y | | y | | | | |
| 65 | 8 | NBCE\065008 | y | | y | | | | |
| 67 | 1 | NBCE\067001 | y | | y | | | | |
| 67 | 2 | NBCE\067002 | y | | y | | | | |
| 70 | 1 | NBCE\070001 | y | | y | | | | |
| 70 | 2 | NBCE\070002 | y | | y | | | | |
| 70 | 1D | NBCE\07001D | y | | y | | | | |
| 83 | 1 | NBCE\083001 | y | | y | | | | |
| 83 | 2 | NBCE\083002 | y | | y | | | | |
| 84 | 1 | NBCE\084001 | y | | y | | | | |
| 84 | 2 | NBCE\084002 | y | missing bolt | n | | | | |
| 97 | 1 | NBCE\097001 | y | needs tag | n | tag ordered | | | |
| 100 | 1 | NBCE\100001 | y | | y | | | | |
| 102 | 1 | NBCE\102001 | y | | y | | | | |
| 106 | 1 | NBCE\106001 | y | | y | | | | |
| 106 | 1D | NBCE\10601D | y | | y | | | | |
| 145 | 1 | NBCE\145001 | y | | y | | | | |
| 145 | 2 | NBCE\145002 | y | missing bolt | n | | | | |
| 145 | 3 | NBCE\145003 | y | | y | | | | |
| 145 | 1D | NBCE\14501D | y | | y | | | | |
| 172 | 1 | NBCE\172001 | y | | y | | | | |
| 172 | 2 | NBCE\172002 | y | | y | | | | |
| 172 | 2D | NBCE\17202D | y | | y | | | | |
| 525 | 1 | NBCE\525001 | y | needs new tag | n | | | | |
| 526 | 1 | NBCE\526001 | y | | y | | | | |
| 526 | 2 | NBCE\526002 | | cannot locate | n | | | | |
| 526 | 1D | NBCE\52601D | y | | y | | | | |
| 528 | 1 | NBCE\528001 | y | needs pad | y | | | | |
| 530 | 1 | NBCE\530001 | y | | y | | | | |
| 530 | 2 | NBCE\530002 | y | | y | | | | |
| 530 | 1D | NBCE\53001D | y | | y | | | | |
| 530 | 2D | NBCE\53002D | y | | y | | | | |
| 538 | 1 | NBCE\538001 | y | | y | | | | |
| 538 | 1D | NBCE\53801D | y | | y | | | | |
| 539 | 1 | NBCE\539001 | y | | y | | | | |

NAVBASE WELL LISTING

As of June 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 6/99 | Completed | Action taken | Status as of 6/99 | Action taken | Completed |
|----------|-----|-------------|----------|---------------------------|-----------|--------------|-------------------|--------------|-----------|
| 539 | 1D | NBCE\53901D | y | | y | | | | |
| 542 | 1 | NBCE\542001 | y | | y | | | | |
| 542 | 2 | NBCE\542002 | y | | y | | | | |
| 542 | 3 | NBCE\542003 | n | bolt stripped | n | | | | |
| 542 | 4 | NBCE\542004 | y | | y | | | | |
| 543 | 1 | NBCE\543001 | y | | y | | | | |
| 549 | 1 | NBCE\549001 | y | | y | | | | |
| 549 | 2 | NBCE\549002 | y | | y | | | | |
| 549 | 3 | NBCE\549003 | y | | y | | | | |
| 550 | 1 | NBCE\550001 | y | needs tag | n | tag ordered | | | |
| 551 | 1 | NBCE\551001 | y | | y | | | | |
| 551 | 2 | NBCE\551002 | y | | y | | | | |
| 551 | 2D | NBCE\55102D | y | | y | | | | |
| 559 | 1 | NBCE\559001 | y | | y | | | | |
| 559 | 2 | NBCE\559002 | y | | y | | | | |
| 559 | 3 | NBCE\559003 | y | | y | | | | |
| 559 | 4 | NBCE\559004 | y | | y | | | | |
| 559 | 5 | NBCE\559005 | y | | y | | | | |
| 559 | 2D | NBCE\55902D | y | | y | | | | |
| 559 | 3D | NBCE\55903D | y | | y | | | | |
| 559 | 4D | NBCE\55904D | y | | y | | | | |
| 563 | 1 | NBCE\563001 | y | no ears needs pad | y | sub-contract | | | |
| 563 | 2 | NBCE\563002 | y | tap&bolt | n | | | | |
| 563 | 3 | NBCE\563003 | y | cover missing | n | | | | |
| 563 | 1D | NBCE\56301D | y | | y | | | | |
| 566 | 1 | NBCE\566001 | y | missing two bolts | n | | | | |
| 566 | 1D | NBCE\56601D | y | bent bolt | n | | | | |
| 569 | 1 | NBCE\569001 | y | | y | | | | |
| 569 | 2 | NBCE\569002 | y | | y | | | | |
| 569 | 1D | NBCE\56901D | y | | y | | | | |
| 570 | 1 | NBCE\570001 | y | tag loose | n | | | | |
| 570 | 2 | NBCE\570002 | y | | y | | | | |
| 570 | 3 | NBCE\570003 | y | needs new bolts | n | | | | |
| 570 | 4 | NBCE\570004 | y | | y | | | | |
| 570 | 2D | NBCE\57002D | y | | y | | | | |
| 570 | 3D | NBCE\57003D | y | | y | | | | |
| 572 | 1 | NBCE\572001 | y | broken ear bent bolt | n | | | | |
| 572 | 2 | NBCE\572002 | y | bolt bent | n | | | | |
| 572 | 3 | NBCE\572003 | y | bad bolt | n | | | | |
| 573 | 1 | NBCE\573001 | y | new pad | y | new pad | | | |
| 573 | 1D | NBCE\57301D | y | | y | | | | |
| 574 | 1 | NBCE\574001 | y | | y | | | | |
| 574 | 2 | NBCE\574002 | y | | y | | | | |
| 574 | 3 | NBCE\574003 | y | | y | | | | |
| 574 | 1D | NBCE\57401D | y | | y | | | | |
| 576 | 1 | NBCE\576001 | y | | y | | | | |
| 576 | 2 | NBCE\576002 | y | | y | | | | |
| 576 | 2D | NBCE\57602D | y | | y | | | | |
| 580 | 1 | NBCE\580001 | y | missing bolt needs tag | n | | | | |
| 580 | 2 | NBCE\580002 | y | | y | | | | |
| 580 | 1D | NBCE\58001D | y | needs tag | n | | | | |
| 583 | 1 | NBCE\583001 | y | | y | | | | |
| 583 | 2 | NBCE\583002 | y | | y | | | | |
| 583 | 3 | NBCE\583003 | y | | y | | | | |
| 583 | 2D | NBCE\58302D | y | needs tag | n | tag ordered | | | |
| 586 | 1 | NBCE\586001 | y | | y | | | | |
| 590 | 1 | NBCE\590001 | y | | y | | | | |
| 590 | 1D | NBCE\59001D | y | | y | | | | |
| 596 | 1 | NBCE\596001 | y | | y | | | | |
| 596 | 2 | NBCE\596002 | y | | y | | | | |

NAVBASE WELL LISTING

As of June 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 6/99 | Completed | Action taken | Status as of 6/99 | Action taken | Completed |
|----------|-----|-------------|----------|----------------------------------|-----------|--------------|-------------------|--------------|-----------|
| 596 | 3 | NBCE\596003 | y | | y | | | | |
| 596 | 4 | NBCE\596004 | y | | y | | | | |
| 596 | 1D | NBCE\59601D | y | | y | | | | |
| 596 | 4D | NBCE\59604D | y | | y | | | | |
| 598 | 1 | NBCE\598001 | y | needs tag | n | tag ordered | | | |
| 599 | 1 | NBCE\599001 | y | | y | | | | |
| 605 | 1 | NBCE\605001 | y | | y | | | | |
| 605 | 2 | NBCE\605002 | | abandoned | y | | | | |
| 605 | 3 | NBCE\605003 | y | | y | | | | |
| GDE | 1 | NBCE\GDE001 | y | needs new pad | y | sub-contract | | | |
| GDE | 2 | NBCE\GDE002 | y | | y | | | | |
| GDE | 3 | NBCE\GDE003 | y | | y | | | | |
| GDE | 4 | NBCE\GDE004 | | | n | | | | |
| GDE | 5 | NBCE\GDE005 | y | | y | | | | |
| GDE | 6 | NBCE\GDE006 | y | | y | | | | |
| GDE | 7 | NBCE\GDE007 | y | | y | | | | |
| GDE | 8 | NBCE\GDE008 | y | | y | | | | |
| GDE | 9 | NBCE\GDE009 | y | | y | | | | |
| GDE | 10 | NBCE\GDE010 | y | | y | | | | |
| GDE | 11 | NBCE\GDE011 | y | | y | | | | |
| GDE | 12 | NBCE\GDE012 | y | missing tag & ear | n | tag ordered | | | |
| GDE | 13 | NBCE\GDE013 | y | needs new pad | y | sub-contract | | | |
| GDE | 14 | NBCE\GDE014 | y | pad cracked, tag loose | y | sub-contract | | | |
| GDE | 15 | NBCE\GDE015 | y | needs new bolts | n | | | | |
| GDE | 16 | NBCE\GDE016 | y | | y | | | | |
| GDE | 17 | NBCE\GDE017 | y | needs tag | n | tag ordered | | | |
| GDE | 18 | NBCE\GDE018 | y | | y | | | | |
| GDE | 19 | NBCE\GDE019 | n | covered | n | | | | |
| GDE | 20 | NBCE\GDE020 | y | | y | | | | |
| GDE | 21 | NBCE\GDE021 | y | needs cut down two sheared bolts | n | | | | |
| GDE | 22 | NBCE\GDE022 | y | | y | | | | |
| GDE | 23 | NBCE\GDE023 | y | | y | | | | |
| GDE | 24 | NBCE\GDE024 | y | | y | | | | |
| GDE | 25 | NBCE\GDE025 | y | | y | | | | |
| GDE | 26 | NBCE\GDE026 | y | | y | | | | |
| GDE | 27 | NBCE\GDE027 | y | | y | | | | |
| GDE | 28 | NBCE\GDE028 | y | needs tag | n | tag ordered | | | |
| GDE | 29 | NBCE\GDE029 | y | | y | | | | |
| GDE | 30 | NBCE\GDE030 | y | | y | | | | |
| GDE | 1D | NBCE\GDE01D | y | | y | | | | |
| GDE | 2D | NBCE\GDE02D | y | | y | | | | |
| GDE | 2D1 | NBCE\GDE2D1 | y | | y | | | | |
| GDE | 3D | NBCE\GDE03D | y | | y | | | | |
| GDE | 4D | NBCE\GDE04D | n | covered | n | | | | |
| GDE | 5D | NBCE\GDE05D | y | needs cut down missing bolt | n | | | | |
| GDE | 6D | NBCE\GDE06D | y | | y | | | | |
| GDE | 7D | NBCE\GDE07D | y | | y | | | | |
| GDE | 8D | NBCE\GDE08D | y | | y | | | | |
| GDE | 9D | NBCE\GDE09D | y | | y | | | | |
| GDE | 10D | NBCE\GDE10D | y | | y | | | | |
| GDE | 11D | NBCE\GDE11D | y | | y | | | | |
| GDE | 12D | NBCE\GDE12D | y | | y | | | | |
| GDE | 13D | NBCE\GDE13D | y | | y | | | | |
| GDE | 14D | NBCE\GDE14D | y | pad cracked | y | sub-contract | | | |
| GDE | 15D | NBCE\GDE15D | y | | y | | | | |
| GDE | 16D | NBCE\GDE16D | y | | y | | | | |
| GDE | 17D | NBCE\GDE17D | y | needs tag | n | tag ordered | | | |
| GDE | 18D | NBCE\GDE18D | y | | y | | | | |
| GDE | 19D | NBCE\GDE19D | n | covered | n | | | | |
| GDE | 20D | NBCE\GDE20D | y | | y | | | | |

NAVBASE WELL LISTING

As of June 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 6/99 | Completed | Action taken | Status as of 6/99 | Action taken | Completed |
|---------------|-----|-------------|----------|--------------------------------------|-----------|------------------------------|-------------------|--------------|-----------|
| GDE | 21D | NBCEVGDE21D | y | | y | | | | |
| GDE | 22D | NBCEVGDE22D | y | | y | | | | |
| GDE | 23D | NBCEVGDE23D | y | | y | | | | |
| GDE | 24D | NBCEVGDE24D | y | | y | | | | |
| GDE | 25D | NBCEVGDE25D | y | | y | | | | |
| GDE | 26D | NBCEVGDE26D | y | | y | | | | |
| GDE | 27D | NBCEVGDE27D | y | | y | | | | |
| GDE | 28D | NBCEVGDE28D | y | needs tag | n | tag ordered | | | |
| GDE | 29D | NBCEVGDE29D | y | | y | | | | |
| GDE | 30D | NBCEVGDE30D | y | missing ear | y | | | | |
| ZONE F | | | | | | | | | |
| 109 | 1 | NBCF\109001 | y | | y | | | | |
| 109 | 2 | NBCF\109002 | | needs tag | | | needs tag | | |
| 607 | 1 | NBCF\607001 | y | | y | | | | |
| 607 | 2 | NBCF\607002 | y | | y | | | | |
| 607 | 3 | NBCF\607003 | y | | y | | | | |
| 607 | 4 | NBCF\607004 | y | | y | | | | |
| 607 | 6 | NBCF\607006 | y | | y | | | | |
| 607 | 7 | NBCF\607007 | y | | y | | | | |
| 607 | 1D | NBCF\60701D | y | | y | | | | |
| 607 | 1I | NBCF\60701I | y | | y | | | | |
| 607 | 2D | NBCF\60702D | y | | y | | | | |
| 607 | 2I | NBCF\60702I | y | | y | | | | |
| 607 | 3D | NBCF\60703D | y | cracked pad | y | sub-contract | | | |
| 607 | 3I | NBCF\60703I | y | | y | | | | |
| 607 | 4D | NBCF\60704D | y | | y | | | | |
| 607 | 4I | NBCF\60704I | y | | y | | | | |
| 607 | 5D | NBCF\60705D | y | | y | | | | |
| 607 | 6I | NBCF\60706I | y | no tag | n | tag ordered | | | |
| 607 | 6D | NBCF\60706D | y | no tag | n | tag ordered | | | |
| 607 | 8 | NBCF\607008 | y | no tag | n | tag ordered | | | |
| 607 | 9 | NBCF\607009 | y | no tag | n | tag ordered | | | |
| 607 | 10 | NBCF\607010 | | needs tag | | | needs tag | | |
| 607 | 11 | NBCF\607011 | | needs tag | | | needs tag | | |
| 607 | 12 | NBCF\607012 | | needs tag | | | needs tag | | |
| 607 | 13 | NBCF\607013 | | needs tag | | | needs tag | | |
| 607 | 14 | NBCF\607014 | | needs tag | | | needs tag | | |
| 607 | 15 | NBCF\607015 | | needs tag | | | needs tag | | |
| 607 | 16 | NBCF\607016 | | needs tag | | | needs tag | | |
| 607 | 17 | NBCF\607017 | | needs tag | | | needs tag | | |
| 607 | PW1 | NBCF\607PW1 | | needs tag | | | needs tag | | |
| 607 | P01 | NBCF\607P01 | | needs tag | | | needs tag | | |
| 607 | P1D | NBCF\607P1D | | needs tag | | | needs tag | | |
| 607 | P02 | NBCF\607P02 | | needs tag | | | needs tag | | |
| 607 | P2D | NBCF\607P2D | | needs tag | | | needs tag | | |
| 609 | 1 | NBCF\609001 | | needs tag | | | needs tag | | |
| 609 | 2 | NBCF\609002 | | needs tag | | | needs tag | | |
| 613 | 1 | NBCF\613001 | y | recovered lid from 1" asphalt no tag | y | tag ordered | | | |
| 613 | 3 | NBCF\613003 | y | needs to be surveyed and recovered | y | recovered, manhole installed | | | |
| 613 | 4 | NBCF\613004 | y | recovered lid from 1" asphalt no tag | y | tag ordered | | | |
| 613 | 5 | NBCF\613005 | y | | y | | | | |
| 613 | 2D | NBCF\61302D | y | recovered lid from 1" asphalt no tag | y | tag ordered | | | |
| 613 | 6 | NBCF\613006 | | needs tag | | | needs tag | | |
| 613 | 7 | NBCF\613007 | | needs tag | | | needs tag | | |
| 617 | 1 | NBCF\617001 | y | | y | | | | |
| 617 | 2 | NBCF\617002 | y | | y | | | | |
| 617 | 3 | NBCF\617003 | | needs tag | | | needs tag | | |
| 619 | 1 | NBCF\619001 | y | | y | | | | |
| 619 | 2 | NBCF\619002 | y | | y | | | | |
| 619 | 3 | NBCF\619003 | y | | y | | | | |

NAVBASE WELL LISTING

As of June 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 6/99 | Completed | Action taken | Status as of 6/99 | Action taken | Completed |
|------------------|-----|-------------|----------|--------------------------------------|-----------|----------------|-------------------|--------------|-----------|
| 620 | 1 | NBCF\620001 | y | | y | | | | |
| 620 | 2 | NBCF\620002 | y | | y | | | | |
| 620 | 3 | NBCF\620003 | y | no tag | n | tag ordered | | | |
| 620 | 4 | NBCF\620004 | y | no tag | n | tag ordered | | | |
| GDF | 1 | NBCF\GDF001 | y | recovered lid from 1" asphalt no tag | n | tag ordered | | | |
| GDF | 1D | NBCF\GDF01D | y | recovered lid from 1" asphalt no tag | n | tag ordered | | | |
| ZONE G | | | | | | | | | |
| 3 | 1 | NBCG\003001 | y | needs new pad | y | sub-contract | | | |
| 3 | 2 | NBCG\003002 | y | | y | | | | |
| 3 | 3 | NBCG\003003 | | abandoned | y | | | | |
| 6 | 1 | NBCG\006001 | y | | y | | | | |
| 6 | 2 | NBCG\006002 | y | | y | | | | |
| 6 | 3 | NBCG\006003 | y | | y | | | | |
| 6 | 4 | NBCG\006004 | y | | y | | | | |
| 6 | 5 | NBCG\006005 | y | | y | | | | |
| 6 | 6 | NBCG\006006 | y | | y | | | | |
| 6 | 7 | NBCG\006007 | y | | y | | | | |
| 8 | 1 | NBCG\008001 | y | needs new hinge | y | hinge replaced | | | |
| 8 | 2 | NBCG\008002 | y | needs new hinge | y | hinge replaced | | | |
| 8 | 3 | NBCG\008003 | y | needs new hinge | y | hinge replaced | | | |
| 8 | 4 | NBCG\008004 | y | | y | | | | |
| 8 | 5 | NBCG\008005 | y | | y | | | | |
| 8 | 6 | NBCG\008006 | y | needs new pad | y | pad replaced | | | |
| 11 | 1 | NBCG\011001 | y | | y | | | | |
| 11 | 2 | NBCG\011002 | y | | y | | | | |
| 11 | 3 | NBCG\011003 | y | | y | | | | |
| 24 | 1 | NBCG\024001 | y | | y | | | | |
| 24 | 2 | NBCG\024002 | y | | y | | | | |
| 24 | 3 | NBCG\024003 | y | | y | | | | |
| 24 | 4 | NBCG\024004 | y | | y | | | | |
| 120 | 1 | NBCG\120001 | y | | y | | | | |
| 120 | 2 | NBCG\120002 | y | | y | | | | |
| 120 | 3 | NBCG\120003 | y | | y | | | | |
| 636 | 1 | NBCG\636001 | y | | y | | | | |
| 637 | 1 | NBCG\637001 | y | needs well tag | n | tag ordered | | | |
| 637 | 2 | NBCG\637002 | y | needs well tag | n | tag ordered | | | |
| 637 | 3 | NBCG\637003 | y | needs well tag | n | tag ordered | | | |
| 638 | 1 | NBCG\638001 | y | | y | | | | |
| 706 | 1 | NBCG\706001 | y | | y | | | | |
| GDG | 1 | NBCG\GDG001 | y | | y | | | | |
| GDG | 1D | NBCG\GDG01D | y | wire brushed and painted | n | | | | |
| GDG | 2 | NBCG\GDG002 | y | needs well tag | n | tag ordered | | | |
| GDG | 2D | NBCG\GDG02D | y | needs well tag | n | tag ordered | | | |
| FDS WELLS | | | | | | | | | |
| FDS | 1A | NBCG\FDS01A | y | | y | | | | |
| FDS | 1B | NBCG\FDS01B | y | | y | | | | |
| FDS | 1C | NBCG\FDS01C | y | | y | | | | |
| FDS | 1D | NBCG\FDS01D | y | | y | | | | |
| FDS | 1E | NBCG\FDS01E | y | | y | | | | |
| FDS | 2A | NBCG\FDS02A | y | | y | | | | |
| FDS | 2B | NBCG\FDS02B | y | | y | | | | |
| FDS | 2C | NBCG\FDS02C | y | | y | | | | |
| FDS | 3A | NBCG\FDS03A | y | | y | | | | |
| FDS | 3B | NBCG\FDS03B | y | | y | | | | |
| FDS | 3C | NBCG\FDS03C | y | | y | | | | |
| FDS | 4A | NBCG\FDS04A | y | | y | | | | |
| FDS | 4B | NBCG\FDS04B | y | | y | | | | |
| FDS | 4C | NBCG\FDS04C | y | | y | | | | |
| FDS | 5A | NBCG\FDS05A | y | | y | | | | |
| FDS | 5B | NBCG\FDS05B | y | | y | | | | |

NAVBASE WELL LISTING

As of June 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 6/99 | Completed | Action taken | Status as of 6/99 | Action taken | Completed |
|---------------|-----|------------|----------|---------------------------|-----------|----------------|-------------------|--------------|-----------|
| FDS | 6A | NBCGFDS06A | y | | y | | | | |
| FDS | 6B | NBCGFDS06B | y | | y | | | | |
| FDS | 6C | NBCGFDS06C | y | | y | | | | |
| FDS | 7A | NBCGFDS07A | y | | y | | | | |
| FDS | 7B | NBCGFDS07B | y | | y | | | | |
| FDS | 7C | NBCGFDS07C | y | | y | | | | |
| FDS | 7D | NBCGFDS07D | y | | y | | | | |
| FDS | 8A | NBCGFDS08A | y | | y | | | | |
| FDS | 8B | NBCGFDS08B | y | | y | | | | |
| FDS | 8C | NBCGFDS08C | y | | y | | | | |
| FDS | 9A | NBCGFDS09A | y | | y | | | | |
| FDS | 9B | NBCGFDS09B | y | | y | | | | |
| FDS | 9C | NBCGFDS09C | y | | y | | | | |
| FDS | 10A | NBCGFDS10A | y | | y | | | | |
| FDS | 10B | NBCGFDS10B | y | | y | | | | |
| FDS | 10C | NBCGFDS10C | y | | y | | | | |
| FDS | 11A | NBCGFDS11A | y | no tag | n | tag ordered | | | |
| FDS | 11B | NBCGFDS11B | y | no tag | n | tag ordered | | | |
| FDS | 11C | NBCGFDS11C | y | no tag | n | tag ordered | | | |
| FDS | 12A | NBCGFDS12A | y | | y | | | | |
| FDS | 12B | NBCGFDS12B | y | | y | | | | |
| FDS | 13A | NBCGFDS13A | y | | y | | | | |
| FDS | 13B | NBCGFDS13B | y | | y | | | | |
| FDS | 13C | NBCGFDS13C | y | | y | | | | |
| FDS | 13D | NBCGFDS13D | y | | y | | | | |
| FDS | 13E | NBCGFDS13E | y | | y | | | | |
| FDS | 14A | NBCGFDS14A | y | | y | | | | |
| FDS | 14B | NBCGFDS14B | y | | y | | | | |
| FDS | 14C | NBCGFDS14C | y | | y | | | | |
| FDS | 15A | NBCGFDS15A | y | | y | | | | |
| FDS | 15B | NBCGFDS15B | y | | y | | | | |
| FDS | 15C | NBCGFDS15C | y | | y | | | | |
| FDS | 16A | NBCGFDS16A | y | | y | | | | |
| FDS | 16B | NBCGFDS16B | y | | y | | | | |
| FDS | 16C | NBCGFDS16C | y | | y | | | | |
| FDS | 17A | NBCGFDS17A | y | no tag | n | tag ordered | | | |
| FDS | 17B | NBCGFDS17B | y | no tag | n | tag ordered | | | |
| FDS | 18A | NBCGFDS18A | y | no tag | n | tag ordered | | | |
| ZONE H | | | | | | | | | |
| 9 | 1 | NBCH009001 | y | needs new hinge | y | hinge replaced | | | |
| 9 | 2 | NBCH009002 | y | | y | | | | |
| 9 | 3 | NBCH009003 | y | needs new hinge | y | hinge replaced | | | |
| 9 | 4 | NBCH009004 | y | | y | | | | |
| 9 | 5 | NBCH009005 | y | | y | | | | |
| 9 | 6 | NBCH009006 | y | | y | | | | |
| 9 | 7 | NBCH009007 | y | | y | | | | |
| 9 | 8 | NBCH009008 | y | | y | | | | |
| 9 | 9 | NBCH009009 | y | needs new hinge | y | hinge replaced | | | |
| 9 | 10 | NBCH009010 | y | | y | | | | |
| 9 | 11 | NBCH009011 | y | | y | | | | |
| 9 | 12 | NBCH009012 | y | | y | | | | |
| 9 | 13 | NBCH009013 | y | | y | | | | |
| 9 | 14 | NBCH009014 | y | | y | | | | |
| 9 | 15 | NBCH009015 | y | | y | | | | |
| 9 | 16 | NBCH009016 | y | | y | | | | |
| 9 | 17 | NBCH009017 | y | | y | | | | |
| 9 | 18 | NBCH009018 | y | | y | | | | |
| 9 | 19 | NBCH009019 | y | | y | | | | |
| 9 | 20 | NBCH009020 | y | | y | | | | |

NAVBASe WELL LISTING

As of June 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 6/99 | Completed | Action taken | Status as of 6/99 | Action taken | Completed |
|----------|-----|------------|----------|---------------------------|-----------|-----------------|-------------------|--------------|-----------|
| 9 | 21 | NBCH009021 | y | | y | | | | |
| 9 | 22 | NBCH009022 | y | | y | | | | |
| 9 | 23 | NBCH009023 | y | | y | | | | |
| 9 | 24 | NBCH009024 | y | | y | | | | |
| 9 | 25 | NBCH009025 | y | | y | | | | |
| 9 | 26 | NBCH009026 | y | | y | | | | |
| 9 | 121 | NBCH009121 | y | | y | | | | |
| 9 | 1D | NBCH00901D | y | | y | | | | |
| 9 | 2D | NBCH00902D | y | | y | | | | |
| 9 | 3D | NBCH00903D | y | needs new casing | y | casing replaced | | | |
| 9 | 4D | NBCH00904D | y | | y | | | | |
| 9 | 5D | NBCH00905D | y | | y | | | | |
| 9 | 6D | NBCH00906D | y | | y | | | | |
| 9 | 7D | NBCH00907D | y | | y | | | | |
| 9 | 8D | NBCH00908D | y | needs new casing | y | casing replaced | | | |
| 9 | 12D | NBCH00912D | y | needs new hinge | y | hinge replaced | | | |
| 9 | 23D | NBCH00923D | y | | y | | | | |
| 9 | 24D | NBCH00924D | y | | y | | | | |
| 9 | 25D | NBCH00925D | y | | y | | | | |
| 9 | 26D | NBCH00926D | y | | y | | | | |
| 9 | 27 | NBCH009027 | y | | y | | | | |
| 9 | 28 | NBCH009028 | y | | y | | | | |
| 9 | 29 | NBCH009029 | y | | y | | | | |
| 9 | 30 | NBCH009030 | y | | y | | | | |
| 9 | MW4 | NBCH009MW4 | | needs tag | | | needs tag | | |
| 13 | 1 | NBCH013001 | y | | y | | | | |
| 13 | 2 | NBCH013002 | y | | y | | | | |
| 13 | 3 | NBCH013003 | y | | y | | | | |
| 13 | 4 | NBCH013004 | y | | y | | | | |
| 13 | 5 | NBCH013005 | y | | y | | | | |
| 13 | 6 | NBCH013006 | y | | y | | | | |
| 13 | 7 | NBCH013007 | y | | y | | | | |
| 14 | 1 | NBCH014001 | y | | y | | | | |
| 14 | 2 | NBCH014002 | y | | y | | | | |
| 14 | 3 | NBCH014003 | y | | y | | | | |
| 14 | 4 | NBCH014004 | y | | y | | | | |
| 14 | 5 | NBCH014005 | y | | y | | | | |
| 14 | 6 | NBCH014006 | y | | y | | | | |
| 14 | 7 | NBCH014007 | | needs tag | | | needs tag | | |
| 14 | 1D | NBCH01401D | y | needs cut down | y | cut down | | | |
| 14 | 2D | NBCH01402D | y | | y | | | | |
| 14 | 3D | NBCH01403D | y | | y | | | | |
| 14 | 4D | NBCH01404D | y | needs new hinge | y | hinge replaced | | | |
| 14 | 5D | NBCH01405D | y | | y | | | | |
| 14 | 6D | NBCH01406D | y | | y | | | | |
| 17 | 1 | NBCH017001 | y | | y | | | | |
| 17 | 2 | NBCH017002 | y | | y | | | | |
| 17 | 3 | NBCH017003 | y | flushmount will not seal | y | replaced cap | | | |
| 17 | 4 | NBCH017004 | y | | y | | | | |
| 17 | 5 | NBCH017005 | y | | y | | | | |
| 17 | 6 | NBCH017006 | y | | y | | | | |
| 17 | 7 | NBCH017007 | y | | y | | | | |
| 17 | 8 | NBCH017008 | y | | y | | | | |
| 17 | 9 | NBCH017009 | y | | y | | | | |
| 17 | 10 | NBCH017010 | y | | y | | | | |
| 17 | 2D | NBCH01702D | y | | y | | | | |

NAVBASE WELL LISTING

As of June 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 6/99 | Completed | Action taken | Status as of 6/99 | Action taken | Completed |
|---------------|-----|-------------|----------|---------------------------|-----------|-----------------|-------------------|--------------|-----------|
| 121 | 1 | NBCH\121001 | y | | y | | | | |
| 136 | 1 | NBCH\136001 | y | | y | | | | |
| 159 | 1 | NBCH\159001 | y | | y | | | | |
| 159 | 2 | NBCH\159002 | y | | y | | | | |
| 178 | 1 | NBCH\178001 | y | | y | | | | |
| 178 | 2 | NBCH\178002 | y | | y | | | | |
| 653 | 1 | NBCH\653001 | y | | y | | | | |
| 655 | 1 | NBCH\655001 | y | | y | | | | |
| 655 | 2 | NBCH\655002 | y | | y | | | | |
| 655 | 3 | NBCH\655003 | y | | y | | | | |
| 656 | 1 | NBCH\656001 | y | | y | | | | |
| 656 | 2 | NBCH\656002 | y | | y | | | | |
| 656 | 3 | NBCH\656003 | y | | y | | | | |
| 656 | 4 | NBCH\656004 | | needs tag | | | needs tag | | |
| 660 | 1 | NBCH\660001 | y | | y | | | | |
| 660 | 2 | NBCH\660002 | y | | y | | | | |
| 662 | 1 | NBCH\662001 | y | | y | | | | |
| 662 | 2 | NBCH\662002 | y | | y | | | | |
| 663 | 1 | NBCH\663001 | y | | y | | | | |
| 663 | 2 | NBCH\663002 | y | | y | | | | |
| 665 | 1 | NBCH\665001 | | needs tag | | | needs tag | | |
| 665 | 2 | NBCH\665002 | | needs tag | | | needs tag | | |
| 666 | 1 | NBCH\666001 | y | | y | | | | |
| 666 | 2 | NBCH\666002 | y | | y | | | | |
| 666 | 3 | NBCH\666003 | | needs tag | | | needs tag | | |
| 667 | 1 | NBCH\667001 | y | | y | | | | |
| 667 | 2 | NBCH\667002 | y | | y | | | | |
| GDH | 1 | NBCH\GDH001 | y | | y | | | | |
| GDH | 2 | NBCH\GDH002 | y | | y | | | | |
| GDH | 3 | NBCH\GDH003 | y | | y | | | | |
| GDH | 4 | NBCH\GDH004 | y | | y | | | | |
| GDH | 5 | NBCH\GDH005 | y | | y | | | | |
| GDH | 6 | NBCH\GDH006 | y | | y | | | | |
| GDH | 7 | NBCH\GDH007 | y | | y | | | | |
| GDH | 8 | NBCH\GDH008 | y | | y | | | | |
| GDH | 9 | NBCH\GDH009 | y | | y | | | | |
| GDH | 10 | NBCH\GDH010 | y | | y | | | | |
| GDH | 11 | NBCH\GDH011 | y | | y | | | | |
| GDH | 12 | NBCH\GDH012 | y | | y | | | | |
| GDH | 1D | NBCH\GDH01D | y | | y | | | | |
| GDH | 2D | NBCH\GDH02D | y | needs new casing | y | casing replaced | | | |
| GDH | 3D | NBCH\GDH03D | y | | y | | | | |
| GDH | 4D | NBCH\GDH04D | y | | y | | | | |
| GDH | 5D | NBCH\GDH05D | y | needs cut down | y | cut down | | | |
| GDH | 6D | NBCH\GDH06D | y | | y | | | | |
| GDH | 7D | NBCH\GDH07D | y | | y | | | | |
| GDH | 8D | NBCH\GDH08D | y | | y | | | | |
| GDH | 9D | NBCH\GDH09D | y | | y | | | | |
| GDH | 10D | NBCH\GDH10D | y | | y | | | | |
| GDH | 11D | NBCH\GDH11D | y | needs new hinge | y | hinge replaced | | | |
| GDH | 12D | NBCH\GDH12D | | needs tag | | | needs tag | | |
| ZONE I | | | | | | | | | |
| 12 | 1 | NBCI\012001 | y | | y | | | | |
| 12 | 2 | NBCI\012002 | y | | y | | | | |
| 12 | 3 | NBCI\012003 | y | | y | | | | |
| 177 | 1 | NBCI\177001 | y | | y | | | | |
| 177 | 2 | NBCI\177002 | y | | y | | | | |

NAVBASE WELL LISTING

As of June 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 6/99 | Completed | Action taken | Status as of 6/99 | Action taken | Completed |
|----------|-----|-------------|----------|---------------------------|-----------|----------------|-------------------|--------------|-----------|
| 671 | 1 | NBCI\671001 | y | | y | | | | |
| 671 | 2 | NBCI\671002 | y | | y | | | | |
| 671 | 3 | NBCI\671003 | y | | y | | | | |
| 674 | 4 | NBCI\671004 | y | | y | | | | |
| 675 | 1 | NBCI\675001 | y | | y | | | | |
| 675 | 2 | NBCI\675002 | y | | y | | | | |
| 676 | 1 | NBCI\676001 | y | | y | | | | |
| 677 | 2 | NBCI\677002 | y | | y | | | | |
| 678 | 1 | NBCI\678001 | y | | y | | | | |
| 678 | 2 | NBCI\678002 | y | | y | | | | |
| 678 | 3 | NBCI\678003 | | needs tag | | | needs tag | | |
| 678 | 4 | NBCI\678004 | | needs tag | | | needs tag | | |
| 679 | 1 | NBCI\679001 | | needs tag | | | needs tag | | |
| 680 | 1 | NBCI\680001 | y | | y | | | | |
| 680 | 2 | NBCI\680002 | y | | y | | | | |
| 680 | 3 | NBCI\680003 | y | | y | | | | |
| 680 | 4 | NBCI\680004 | | needs tag | | | needs tag | | |
| 681 | 1 | NBCI\681001 | | needs tag | | | needs tag | | |
| 681 | 2 | NBCI\681002 | | needs tag | | | needs tag | | |
| 681 | 3 | NBCI\681003 | | needs tag | | | needs tag | | |
| 687 | 1 | NBCI\687001 | y | | y | | | | |
| 687 | 2 | NBCI\687002 | y | | y | | | | |
| 687 | 3 | NBCI\687003 | y | | y | | | | |
| 687 | 4 | NBCI\687004 | y | | y | | | | |
| GDI | 1 | NBCI\GDI001 | y | | y | | | | |
| GDI | 1D | NBCI\GDI01D | y | | y | | | | |
| GDI | 2 | NBCI\GDI002 | y | | y | | | | |
| GDI | 2D | NBCI\GDI02D | y | | y | | | | |
| GDI | 3 | NBCI\GDI003 | y | | y | | | | |
| GDI | 3D | NBCI\GDI03D | y | | y | | | | |
| GDI | 4 | NBCI\GDI004 | y | | y | | | | |
| GDI | 4D | NBCI\GDI04D | y | needs new hinge | y | hinge replaced | | | |
| GDI | 5 | NBCI\GDI005 | y | needs new casing | y | sub-contract | | | |
| GDI | 5D | NBCI\GDI05D | y | needs new casing | y | sub-contract | | | |
| GDI | 6 | NBCI\GDI006 | y | | y | | | | |
| GDI | 6D | NBCI\GDI06D | y | | y | | | | |
| GDI | 7 | NBCI\GDI007 | y | | y | | | | |
| GDI | 7D | NBCI\GDI07D | y | | y | | | | |
| GDI | 8 | NBCI\GDI008 | y | | y | | | | |
| GDI | 8D | NBCI\GDI08D | y | | y | | | | |
| GDI | 9 | NBCI\GDI009 | y | | y | | | | |
| GDI | 9D | NBCI\GDI09D | y | needs new hinge | y | hinge replaced | | | |
| GDI | 10 | NBCI\GDI010 | y | | y | | | | |
| GDI | 10D | NBCI\GDI10D | y | needs new hinge | y | hinge replaced | | | |
| GDI | 11 | NBCI\GDI011 | y | | y | | | | |
| GDI | 11D | NBCI\GDI11D | y | needs new hinge | y | hinge replaced | | | |
| GDI | 12 | NBCI\GDI012 | y | | y | | | | |
| GDI | 12D | NBCI\GDI12D | y | needs new hinge | y | hinge replaced | | | |
| GDI | 13 | NBCI\GDI013 | y | | y | | | | |
| GDI | 13D | NBCI\GDI13D | y | | y | | | | |
| GDI | 14 | NBCI\GDI014 | y | | y | | | | |
| GDI | 14D | NBCI\GDI14D | y | | y | | | | |
| GDI | 15 | NBCI\GDI015 | y | | y | | | | |
| GDI | 15D | NBCI\GDI15D | y | | y | | | | |
| GDI | 16 | NBCI\GDI016 | y | | y | | | | |
| GDI | 16D | NBCI\GDI16D | y | | y | | | | |
| GDI | 17 | NBCI\GDI017 | y | | y | | | | |
| GDI | 17D | NBCI\GDI17D | y | | y | | | | |
| GDI | 18 | NBCI\GDI018 | y | | y | | | | |
| GDI | 18D | NBCI\GDI18D | y | needs tap and die | n | | | | |

NAVBASE WELL LISTING

As of June 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 6/99 | Completed | Action taken | Status as of 6/99 | Action taken | Completed |
|---------------|-----|-------------|----------|---------------------------|-----------|--------------|-------------------|--------------|-----------|
| GDI | 19 | NBCK\GDI019 | y | | y | | | | |
| GDI | 19D | NBCK\GDI19D | y | | y | | | | |
| ZONE K | | | | | | | | | |
| 161 | 1 | NBCK\161001 | y | | y | | | | |
| 162 | 1 | NBCK\162001 | y | | y | | | | |
| 162 | 2 | NBCK\162002 | y | | y | | | | |
| 163 | 1 | NBCK\163001 | y | | y | | | | |
| 163 | 2 | NBCK\163002 | | needs tag | | | needs tag | | |
| 163 | 3 | NBCK\163003 | | needs tag | | | needs tag | | |
| 166 | 1 | NBCK\166001 | y | | y | | | | |
| 166 | 2 | NBCK\166002 | y | | y | | | | |
| 166 | 2D | NBCK\16602D | y | | y | | | | |
| 166 | 3 | NBCK\166003 | y | | y | | | | |
| 166 | 3D | NBCK\16603D | y | | y | | | | |
| 166 | 4 | NBCK\166004 | y | | y | | | | |
| 166 | 4D | NBCK\16604D | y | | y | | | | |
| 166 | 5 | NBCK\166005 | y | | y | | | | |
| 166 | 5D | NBCK\16605D | y | | y | | | | |
| 166 | 6 | NBCK\166006 | y | | y | | | | |
| 166 | 6D | NBCK\16606D | y | | y | | | | |
| 166 | 7 | NBCK\166007 | y | | y | | | | |
| 166 | 7D | NBCK\16607D | y | | y | | | | |
| 166 | 8 | NBCK\166008 | y | | y | | | | |
| 166 | 8D | NBCK\16608D | y | | y | | | | |
| 166 | 9D | NBCK\16609D | y | | y | | | | |
| 166 | 10D | NBCK\16610D | y | | y | | | | |
| 166 | 11D | NBCK\16611D | y | | y | | | | |
| 166 | 12D | NBCK\16612D | y | | y | | | | |
| 166 | 13 | NBCK\166013 | y | | y | | | | |
| 166 | 13D | NBCK\16613D | y | | y | | | | |
| 166 | 14 | NBCK\166014 | y | | y | | | | |
| 166 | 14D | NBCK\16614D | y | | y | | | | |
| 166 | 15 | NBCK\166015 | y | | y | | | | |
| 166 | 15D | NBCK\16615D | y | | y | | | | |
| 166 | 16 | NBCK\166016 | y | | y | | | | |
| 166 | 16D | NBCK\16616D | y | | y | | | | |
| 166 | 17 | NBCK\166017 | y | | y | | | | |
| 166 | 17D | NBCK\16617D | y | | y | | | | |
| 166 | 18 | NBCK\166018 | y | | y | | | | |
| 166 | 18D | NBCK\16618D | y | | y | | | | |
| 166 | 19 | NBCK\166019 | y | | y | | | | |
| 166 | 19D | NBCK\16619D | y | | y | | | | |
| 166 | 20 | NBCK\166020 | y | | y | | | | |
| 166 | 20D | NBCK\16620D | y | | y | | | | |
| 166 | 21 | NBCK\166021 | y | | y | | | | |
| 166 | 21D | NBCK\16621D | y | | y | | | | |
| 698 | 1 | NBCK\698001 | y | | y | | | | |
| GDK | 1 | NBCK\GDK001 | y | | y | | | | |
| GDK | 2 | NBCK\GDK002 | y | | y | | | | |
| 166 | 22D | NBCK\16622D | Y | | y | | | | |
| 166 | 23D | NBCK\16623D | Y | | y | | | | |
| 166 | 24 | NBCK\166024 | | needs tag | | | needs tag | | |
| 166 | 24D | NBCK\16624D | | needs tag | | | needs tag | | |
| 166 | 25 | NBCK\166025 | | needs tag | | | needs tag | | |
| 166 | 25D | NBCK\16625D | | needs tag | | | needs tag | | |
| 166 | 26 | NBCK\166026 | | needs tag | | | needs tag | | |
| 166 | 26D | NBCK\16626D | | needs tag | | | needs tag | | |
| 166 | PW1 | NBCK\166PW1 | | needs tag | | | needs tag | | |
| 166 | P01 | NBCK\166P01 | | needs tag | | | needs tag | | |
| 166 | P02 | NBCK\166P02 | | needs tag | | | needs tag | | |

NAVBASE WELL LISTING

As of June 1999

| swmu/aoc | Loc | Well ID | New lock | Repairs needed as of 6/99 | Completed | Action taken | Status as of 6/99 | Action taken | Completed |
|---------------|-----|-------------|----------|---------------------------|-----------|--------------|-------------------|--------------|-----------|
| <i>ZONE L</i> | | | | | | | | | |
| 37 | A01 | NBCLA037A01 | | needs tag | | | needs tag | | |
| 37 | A02 | NBCLA037A02 | | needs tag | | | needs tag | | |
| 37 | C01 | NBCLA037C01 | | needs tag | | | needs tag | | |
| 37 | C02 | NBCLA037C02 | | needs tag | | | needs tag | | |
| 37 | E01 | NBCLA037E01 | | needs tag | | | needs tag | | |
| 37 | E02 | NBCLA037E02 | | needs tag | | | needs tag | | |
| 37 | G01 | NBCLA037G01 | | needs tag | | | needs tag | | |
| 37 | G02 | NBCLA037G02 | | needs tag | | | needs tag | | |
| 37 | H01 | NBCLA037H01 | | needs tag | | | needs tag | | |
| 37 | H02 | NBCLA037H02 | | needs tag | | | needs tag | | |
| 37 | H03 | NBCLA037H03 | | needs tag | | | needs tag | | |
| 37 | I01 | NBCLA037I01 | | needs tag | | | needs tag | | |

NAVAL BASE CHARLESTON
RESTORATION ADVISORY BOARD (RAB) MEETING

Minutes of 13 April 1999
Live Oak Community Center
2012 Success Street
North Charleston, SC

RAB Members Attending

| | |
|------------------|---|
| Bobby Dearhart | Charleston Environmental Detachment |
| Tom Fressilli | Navy Base Transition Coordinator |
| Wilburn Gilliard | Community Representative |
| Don Harbert | Community Representative |
| Tony Hunt | Navy Co-Chair, Southern Division Naval Facilities Engineering Command |
| Jeri Johnson | RDA |
| Melissa King | SCDHEC |
| Lou Mintz | Community Co-Chair |
| Arthur Pinckney | Community Representative |
| Henry Shepard | Navy Caretaker Site Office |
| Dann Spariosu | U.S. Environmental Protection Agency |

Guests Attending

| | |
|------------------------|---------------------------|
| Mr. Rick Albers | Environmental Detachment |
| Mr. Reece Batten | Southern Division |
| Mr. Jim Beltz | Southern Division |
| Mr. Paul Bergstrand | SCDHEC |
| Mr. Larry Bowers | EnSafe |
| Ms. Peggy Bowers | Guest |
| Mr. Eric Cathcart | SCDHEC |
| Mr. Rick Davis | Southern Division |
| Mr. David Dodds | Southern Division |
| Mr. W.A. Drawdy | Navy Co-chair |
| Mr. Keith Johns | EnSafe |
| Mr. Joe Land | Galileo Quality Institute |
| Mr. Gabriel Magwood | Southern Division |
| Mr. J. Michael Reubish | Citizen |
| Mr. William Smells | Environmental Detachment |
| Mr. Kevin Tunstan | Citizen |
| Mr. Bill Warner | Environmental Detachment |
| Mr. Charles Watson | SCDHEC |

Introduction of the RAB Members and Guests

Tony Hunt, Navy Co-chair, brought the meeting to order. Member and audience introductions were made.

Administrative Remarks and Discussion of Last Meeting Minutes

Mr. Hunt asked for comments or questions on the minutes from the February meeting. There were none.

Mr. Hunt then encouraged visitors to ask questions and participate during appropriate times in the program.

Subcommittee Reports

Community Relations Subcommittee

A community relations subcommittee meeting was not held today; one will be held within two weeks.

Environmental Cleanup Progress Report

Mr. David Dodds reported that progress had been made on a few particular sites in recent months.

- Zone A: Corrective Measures Study (CMS) work plan has been finalized.
- SWMU 2: Expecting to issue a draft CMS report for SWMU 2, 38, 42, AOC 505 in April.
- SWMU 39: Obtaining additional groundwater samples.
- SWMU C: CMS work plans in progress.
- SWMU 44: Final CMS reports due in June.
- Zone E: RCRA Facility Investigation (RFI) report is being reviewed.
- Zone F: Comments have been received from regulators on the RFI Report. The Navy is preparing a response to the regulators' comments.
- Zone G: RFI report being reviewed.
- Zone H: CMS reports are in development.
- Zone I: RFI reports are in review. The Navy is starting the process of developing CMS work plans.
- Zone J: A meeting will be held on 4-14-99 to discuss sampling.
- Zone K: RFI reports are in review.
- Zone L: RFI reports are in review.
- AOC 7: Treatability studies are final.
- SWMU 166: Engineering aspects of the aerobic/anaerobic treatability study will be issued on April 16 containing detailed plans and engineering specs.
- AOC 607: Treatability work study program has been revised and will be resubmitted to the project team at the end of April.

Mr. Lou Mintz commented that he would like time lines so that he can review them later. Mr. Hunt advised he will have one for the next meeting. Mr. Mintz requested that a written report be submitted with the minutes. Mr. Hunt advised one will be provided.

Mr. Hunt asked for a show of hands from the RAB members on how many would like to see the treatability study work plans and the design work plans. There were four hands raised. Mr. Hunt advised that RAB members will get a copy.

Mr. Mintz questioned whether they were proposed work plans, and Mr. Hunt advised they are pilot studies that tell whether the technology is feasible or not. They have been able to go back to other Navy sites and see the success rate.

Mr. Mintz questioned if RAB would like to see those past results, and Ms. Johnson and Mr. Dearhart answered they would. Mr. Hunt advised he will bring those results to the next meeting.

Mr. Arthur Pinckney inquired about his list of 12 questions. Mr. Hunt advised that would be a constructive discussion and will plan that as an agenda item for the next meeting.

U.S.T. Program Update

Mr. Gabriel Magwood presented a brief rundown on progress of the petroleum program:

- Three additional underground tanks need to be removed.
- Zone H: Field work is 40 percent complete on those tanks.
- Contracts for Zones B, C, F, and G have been awarded. The Environmental Detachment will be doing field work in those zones.
- Chicora tank farm is still in the process of being disposed. After disposal, the oil tank will be cleaned. Cleaning needs to be done in order to get the property transferred.
- Demolition of tanks K and L have begun.

Members were advised that Mayor Summey and the school district received letters requesting them to show an expression of interest on the tank farm property by April 17, 1999. Mr. Mintz requested a copy of those letters. Mr. Magwood stated that cleaning the tanks (and not demolition) is the only thing required for the transfer of the property.

They are in the process of demolishing two of the six tanks right now. Once the cleaning is complete, no more funding exists to completely demolish the remaining hills unless there is a definite purchaser.

Redevelopment Authority Report

Ms. Jeri Johnson informed the members that they are three weeks away from signing a lease with the Ports Authority for a break bulk facility. The economic development conveyance application has been made and waiting for the Navy to finish its appraisal so they can start the negotiating process.

The RDA has received another \$10 million gift from the Navy, through Senator Hollings' office, for

infrastructure upgrades.

Mr. Pinckney queried when the RDA was going to move their facility. Ms. Johnson informed the members that they are renovating Building 7, which is an historic brick warehouse behind Building 234, the Shipyard Commander's building. The RDA is going to lease the first floor to other tenants and gradually put in more tenants. This project won't be complete until December. Ms. Johnson stated that the land should be cleaned up completely by the time the negotiations are completed. Most of the property should be conveyed by 2001.

There was a discussion that the Army Corps of Engineers is tied to the City of Charleston and must remain in the City of Charleston.

Also in discussion, the members were advised that two transfers are in the works; the credit union parcels to the credit union and the marina to the Parks and Recreation Commission. The Ports Authority is taking a major chunk of the CSI parcel. The RDA has some serious suitors for the other CSI parcel, although nothing is final.

The Environmental Detachment is paying rent for its building to the RDA, but does not pay taxes. RDA does not lease property to federal agencies. The RDA is assessing a program of payments in lieu of taxes from both state and federal agencies. This would be to provide some relief to the City of North Charleston for the burden of police and fire protection and utilities. It will not be a tax but a contribution that will be passed to the City. This payment is not yet part of the leases.

Status of the Environmental Detachment Charleston

Bobby Dearhart announced that the purpose of tonight's briefing is to advise the members what the Detachment Division has done, is currently doing and what their future is.

Since 1996, the EDC has removed 135 underground and above ground storage tanks, ranging from 100 gallons to 2.1 million gallons; removing contaminated soils and also have done some site assessments up in the housing area.

At the Chicora Tank Farm, they have completely cleaned and demolished tank P (the 1.25 million gallon tank). Tanks K and L are being demolished. Tank O has 125,000 gallons of sludge that needs to be removed before they can start cleaning. Right now it's a hazard to get into tank O. The Detachment Division has engineers that certify the tanks are gas free before they can be entered and cleaned.

At Chicora Tank Farm, they used a large hydraulic "cruncher" to tear away the concrete, reinforced with rebar, around tank P. The area around the former Tank P has a clay cap, has been seeded and grass is growing there.

As part of the preparation for demolishing the tanks requires removing equipment from the pump

rooms and cleaning the pump rooms. They contain a lot of piping and pumps that need to be rigged out. As they demolish the tank, they remove the metal and recycle it.

The EDC has completed 40 asbestos abatements. They have used a Vacloader to suck up asbestos shingles and insulation; had to remove up to three feet of soil underneath the houses to get rid of the asbestos; and have done some demolition as buildings were condemned. On historical buildings, they had to return the building to its original condition where possible using the existing materials.

In 1997, the Detachment started doing lead-based paint surveys, and have completed 55 surveys so far. One piece of equipment used for this process is an x-ray fluorescent lead analyzer that analyzes the lead content of paint without having to disturb the paint itself. Currently, they are working on 20 asbestos abatements and 15 historic lead-based paint abatements.

The Detachment has completed many interim measures. Interim measures actions taken mainly to remove the source of contamination, such as polychlorinated biphenyls, pesticides, petroleum, or unexploded ordnance. As part of this program, they cleaned out five miles of storm drains downstream from industrial sources where there was a potential for contaminants in the silt. They also cleaned out the pesticide-impacted soil area near Hess on the north side; removed petroleum-impacted soil, arsenic-impacted; and excavated 147 drums of a non-corrosive decontaminant agent near the chemical pond.

Working on SWMU 8, the oil sludge pit at the south end of the base; they removed 20,000 tons of petroleum-impacted soil, recovered 30,000 gallons of oil, along with construction debris and pipes from this area. They have stand pipes there now and continue to recover oil from this area. They will be working on the pistol range near the chemical pond. At AOC 39 they will be doing some passive sampling in the marsh area. At SWMU 2, they'll be doing some lead removal. On Viaduct Road, they excavated 200 feet of pipe, put in stand pipes and are recovering oil from there.

Southern Division went in and cleaned up the powerhouse so that it can be now occupied. There's still asbestos in the building but it's not accessible, and therefore is not required for abatement.

The Detachment completed due diligence in four sites for unexploded ordnance and worked through the water-borne sites. They used robotics to dig on one site and did not find any unexploded ordnance.

The Detachment also has provided profiles on hazardous waste management and contingency and response plans; operate a 90-day hazard waste storage area; spill response and cleanup team; water sampling; well installations with a small well rig; taken over 3,000 soil samples and 1,600 groundwater samples. Mr. Dearhart added that they have in-house laboratory capabilities for testing asbestos and a portable gas chromatograph.

Mr. Dearhart mentioned that the EDC is very involved in the community around Charleston and North Charleston. They have adopted a block; have been very energetic in the United Way

campaigns; are involved in schools by giving presentations on Earth Day and Career Day; participated with North Charleston Fire Department in a rescue drill with a mannequin in a well; given firemen awareness presentations; worked with the Coast Guard, Department of State, Border Patrol, Defense Finance and Accounting Service, Army, NOAA, SPAWAR and the Navy.

On September 11, 1999, the Detachment goes away. The Navy made three commitments to them. The first was to establish an environmental group to help cleanup the naval base. The second commitment was to assist the employees to reach retirement goals. There are 141 employees and 101 will reach their retirement goals.

The final commitment was to provide some experience to the employees so that they will be able to go into the private sector and find jobs. They have applied with several different government agencies to continue their work and were denied. They have now decided to work with South Carolina Research in an effort to continue the Detachment and its work beyond September 1999. South Carolina Research is a public nonprofit organization chartered in 1983. Also, the Detachment will be working with an environmental science and technology consulting group and have been requested to be on the advisory committee of Clemson's technology lab. Lastly, the EDC will be meeting with four large remediation companies on a strategic alliance.

There are plans to continue working out of the same facility they are presently in. The Detachment can not presently bid on the work to be done in their building. RDA has to go through the regular state procurement regulations.

Every employee in the Detachment will be offered a job whether they retire or not. They anticipate growing to 300 people within three years.

Outsourcing Presentation

Mr. Rick Davis revealed that, three weeks ago, Southern Division Naval Facilities Engineering Command (SOUTHDIV) was offered an opportunity to take on a different approach to the way they conduct their business. Southdiv looked at the pros and cons associated with it and agreed that it was worth pursuing.

South Div approached Rear Admiral Granuzzo in reference to looking at pursuing a firm, fixed price, insured contract for the environmental program at one facility. The plan is for an industry to buy Southdiv's environmental program at one facility, take out an insurance policy to cap the cost and guarantee closure on known and unknown contamination and then meet or accelerate the current schedules.

Above the fixed price, the industry will have to invest their own capital and insure it above a certain cap so that an insurance company picks up any cost beyond that. To do this, the contractor would take their own money, set it up in an interest-bearing account with an escrow manager managing.

Mr. Davis' goal is to environmentally close the sites and make the property available for transfer. Under this new contracting arrangement, the contractor defines what it takes to get there and specify their payment schedules. The interest bearing account pays for unforeseen events.

On the east coast, they don't see as great a savings as they see on the west coast. There are a lot of old technologies (like pump-and-treat systems) in place that could be shut down and replaced with newer technology. In Kings Bay, for example, they've reduced the contamination level, letting natural attenuation take over.

The concept again is to award a firm, fixed price contract for environmental site closure, meaning no other action is required on that site. The contract includes insurance protection for all known and unknown contamination. It would meet or accelerate current schedules for transfer.

The second firm Mr. Davis spoke with had a different approach. Their approach is to go into a limited liability partnership where there is shared risk, while the first approach is a lump sum contract. In this second approach, the Navy enters into a partnership with the contractor and there's a target price. Above this target price, they share in the cost overruns and decision-making authority. Above the target price, there is a cap above which the insurance company picks up. Below the target price, they share in the savings.

The Navy owns a property in the Port of Oakland. The Navy entered into a cooperative agreement with the Port of Oakland in which there's a transfer of funding to approach a fixed price contract.

SOUTHDIV is issuing a request for information on April 14, 1999, to see who's interested in bidding on such an contract, and to see what comments or questions might need to be incorporated by SOUTHDIV. It will be a paperless solicitation. After Mr. Davis gets the comments, SOUTHDIV will see what firms responded and then call those firms in for a discussion. After that, they'll have a request for proposals, issued in June. The schedule is to award the contract in October of 1999.

Then SOUTHDIV will watch the program and learn from it. If it's a disaster, they won't repeat it again. It's a \$20 million, \$30 million or \$10 million pilot plan study.

There will be performance and payment bonds during the life of the contract. And then there's the cost cap; if the bid price was \$10 million, anything above that puts the contractor firm's capital at risk. After the contractor has made their co-payments, the insurance kicks in.

The RAB's role is to provide comments from a community perspective into the reuse plan or into the cleanup plan. The Navy does not see that role changing. As long as the Navy owns the base, there will be a RAB.

Remaining Questions and Comments

The membership committee would meet within two weeks. Mr. Hunt did send out a letter that

addresses the membership issue, identified the fact that they had put together a committee and the direction they're going.

Meeting Adjourned

Editor's note: The next meeting of the RAB will be on Tuesday, June 8, 1999 at the Live Oak Community Center, North Charleston. The meeting will begin at 6:00 p.m.

NAVAL BASE CHARLESTON
RESTORATION ADVISORY BOARD (RAB) MEETING
Minutes of June 8, 1999
Live Oak Community Center
2012 Success St., North Charleston, SC

RAB Members Attending

Ms. Ann Clark
Mr. Bobby Dearhart
Mr. Tom Fressilli
Mr. Louis Mintz
Mr. Arthur Pinckney
Mr. Dann Spariosu
Mr. Henry Shepard

Guests Attending

| | |
|---------------------|-------------------|
| Mr. Mihir Mehta | SCDHEC |
| Ms. Melissa | SCDHEC |
| Mr. Charles Watson | SCDHEC |
| Mr. Michael Reubish | Citizen |
| Mr. Gabriel Magwood | Southern Division |
| Mr. David Dodds | Southern Division |
| Mr. Larry Bowers | EnSafe Inc. |
| Mr. Paul Bergstrand | SCDHEC |

Introduction of Rab Members and Guests

Mr. Louis Mintz brought the meeting to order at 6:00p.m. Mr. Mintz apologized that timely notice was not sent out to everyone. Member and audience introductions were made.

Administrative Remarks, Comments of the Last Meeting Minutes

Mr. Mintz asked for comments on the minutes that were distributed at the meeting along with a verbatim transcript of Mr. Rick Davis' presentation on April 13, 1999. Mr. Shepard commented that on page 3, Redevelopment report, it should read that the RDA is three weeks away from signing with a "breakbulk" facility. Mr. Mintz commented that the \$10 million gift reported as being from Senator Hollings should be corrected to read that the \$10 million was from the Navy.

Mr. Mintz advised he would like to have another community meeting next month since the June meeting was not properly announced to the membership. Mr. Hunt agreed and a meeting was set for July 13.

Environmental Cleanup Progress Report

Mr. Hunt informed the members that the Navy is expecting the Finding Of Suitability to Transfer for the credit union and the marina to be ready by July. This will be the first property transfer to other than a federal agency.

RCRA Corrective Action Report

Mr. Dodds gave the members a slide presentation of their progress along with a chart for dates of the CMS significant events.

- SWMU 1 - They are preparing for lead removal.
- SWMU 2 - anticipate significant removal. These Corrective Measures Study (CMS) reports will be out in June or July.
- SWMU 38 had elevated levels of pesticides in the soils. Environmental Detachment did the removal. The interim measure report said the objective has been met.
- SWMUs 42 and 505 - the Corrective Measures Study report is due.
- AOC 607 - In the next two weeks, EnSafe will be starting a study that entails dewatering and soil vapor extraction. More vent and extraction wells will be put in.
- Zone H Corrective Measures Study reports coming out in June or July.
- SWMU 166 - The aerobic/anaerobic treatability study is nearing completion. One more permit needs approval. Also, Navy will be completing the RFI study.

Mr. Spariosu inquired about the dispute in Zone A with Mayor Summey and the RDA. Mr. Dodds advised that the area is cleaned up for unrestricted use, but a draft report has not yet been issued.

Mr. Dearhart inquired about the river and Mr. Dodds advised they're taking quite a bit of data and selecting screening objectives to compare the data to. Research Lab has been doing studies in the Cooper River for contamination and sources of contamination. SouthDiv is going to wrap up that study into the Navy's proposal. SouthDiv is expecting to receive this report in November.

Mr. Dearhart wanted to know if SouthDiv will be doing sediment investigation in the Cooper River deeper than six inches if the Ports Authority dredges deeper. Mr. Hunt stated that SouthDiv's assessment is to only look at existing conditions. When the Ports Authority gets their dredge permits, they have to sample the full dredge depth.

Mr. Gabriel Magwood announced that:

- Zone 8 work has been completed.
- at Zones D, C, E & G, they will start putting in monitoring wells next week.
- Zone I - just received approval to begin work.
- Zone F - 40 percent completed with the field work.

Chicora Tank Farm Report

Mr. Magwood provided an update to the RAB on the progress at the Chicora Tank Farm.

- Tanks P, K & L have been permanently closed and will be demolished.
- Tank M is in the process of being closed and demolished.

- Tank N is being unearthed.
- The fuel line on the Chicora property and the transfer lines that run from the Chicora tank farm to the Naval base have been pigged and cleaned. The foam contractor has started filling the field lines with foam.

Pictures were presented of uncovering the tanks, demolition of tanks, pigging the lines and grading the property. As SouthDiv was pigging the lines, they found three new areas of soil contamination near tank M. SouthDiv has removed 900 tons of contaminated soil out of one of the valve pits they uncovered, and the soil is now slightly above the risk-based screening level (RBSL).

Back in the '92-'93 time frame, petroleum contamination was not detected in these areas. Mr Magwood says what happened is the fuel sat in the tanks and pipelines and caused the tanks and lines to corrode, creating spots where fuel could leak out. That's why there are now pockets of contamination near these leaking spots.

Tetra Tech is doing an assessment plan on these areas and expect approval soon from DHEC. The target date for them to be in the field is June 30th.

Mr. Mintz wondered if there was a response back from the Board of Education on this property. Mr. Shepard relayed that it is in the process. Mr. Pinckney queried about the final look of the three tanks that were demolished. Mr. Magwood replied that the height of the mounds after demolishing the tanks is 16 feet at mean sea level. There is a slight rise for drainage reasons. The last tank is expected to be completed in August.

Outsourcing Discussion

Mr. Hunt described the insured, fixed priced contracts on the remaining environmental work. The insurance is for the financial liability of the company should unknown circumstances exist, and it would cover the cost of taking care of those unknown circumstances. The contract will not have any change clauses. The contractors will be required to get cost cap insurance, which means that whatever additional costs are associated, the insurance will absorb those costs. This also applies to any regulatory changes in the future.

SouthDiv is trying to complete the investigation phases of the RCRA program, the UST program, and the lead based paint work so that they can begin the corrective measures studies or actions. SouthDiv understands that the regulatory agencies deal with private industry much differently than they deal with federal facilities, so there will be some changes there.

The new contractor will be determining and negotiating with the regulatory agencies what sort of corrective measures have to be taken, the cleanup levels involved and essentially managing the program.

The Navy will be measuring their performance and mainly doing contract administration. The Navy will make decisions on whether the contractor's remedial alternatives meet the Navy's interest in

reducing long-term liability. The Navy will still be involved with the RAB in soliciting questions and comments and making sure that those concerns are incorporated in the remedy selection. It will be the contractor's responsibility to attend the RAB meetings and provide information.

The biggest change will probably be the pace of the work. The contractor is going to do the work as fast and timely as possible.

The implementation schedule is to be incorporated into a draft request for proposals (RFP) issued from June 10th to July 7. After the final RFP is issued, there will be a proposal conference to answer any questions that the bidders may have. Then there will be a Phase 1 Request For Qualifications. There will be a screening of the potential contractors, narrowing the group to three. Those three contractors will prepare a proposal due in November and from that the Navy will make a selection in December.

The bidders will be given access to information on the base, the RFI investigation, corrective measure studies and corrective measure actions, the UST program, lead based paint abatement and asbestos surveys.

Mr. Mintz inquired if Bechtel had anything to do with this outsourcing program. Mr. Hunt responded they would have an opportunity to bid on this program.

Mr. Shepard asked why the Navy was doing more asbestos surveys. Mr. Hunt responded that the Navy needed updated surveys for the appraisal and for transfer of property.

Mr. Mintz inquired if DHEC or the EPA was enthusiastic on this program. Mr. Spariosu said the EPA is committed to cleaning up the site and will work with whatever mechanism that the Navy chooses. The EPA will still hold the Navy responsible for the cleanup. The Navy will continue to hold the Resource Conservation and Recovery Act (RCRA) permit.

There was discussion about Zone J (the water bodies) and Mr. Hunt recognized that there are some things that they can't define well enough to include in the new contract. Also, the Navy will have to apply some restrictions in the contract about unexploded ordinance.

Mr. Spariosu stated that EPA's concern is how the Navy will work out the issue if the community doesn't like the contractor's remedy. The way EPA looks at RFI law is the Navy is committed to the response of the community. EPA has worked hard to establish a partnering relationship with the Navy to do these cleanups without bringing lawyers to the table. He said he feels it works well.

Mr. Dearhart requested when the funding would be available. Mr. Hunt was assured that the Navy will have full funding available. Mr. Hunt said that the Navy was not providing cost estimates, but that one number was given out for this proposal at the industry forum: \$35 million.

DHEC's Cancer Investigation Report

Ms. Ann Clark spoke about a recent project that looked at incidences of cancer in the Neck area of Charleston. A copy of DHEC's report was also provided. DHEC found excess pleural cancer in the 29405 ZIP Code area, so they expanded the research to the Tricounty region. DHEC found 19 cases of pleural cancer, two-thirds of which were former shipyard workers. There will be a lot of follow-up on this survey.

Ms. Clark also took the opportunity to remind the board, and the community, that there is still a fish advisory for Shipyard Creek. The advisory is to avoid eating shrimp or blue crab from Shipyard Creek because of chromium contamination.

Mr. Pinckney asked if the Navy was going to take any steps to check out more people or was looking at paying for people to check themselves out. Mr. Hunt provided information on a toll free number in Philadelphia to get directions and instructions on how to proceed if you think you have a medical condition. He noted that these inquiries would normally be handled locally, through the Personnel Office at the base, but that there are no longer representatives of Personnel on base.

Mr. Mintz asked how one might differentiate between the responsibility of the Navy or other industries and other factors (such as smoking). Ms. Clark responded that there are all kinds of factors that go into epidemiological studies and that further studies are being done.

Remaining Questions and Comments

There was a discussion about why the RAB meetings were moved to every other month. Mr. Hunt responded that it was decided to have meetings every other month because monthly meetings were becoming redundant, with not enough new information or updates available. He also noted that this could change.

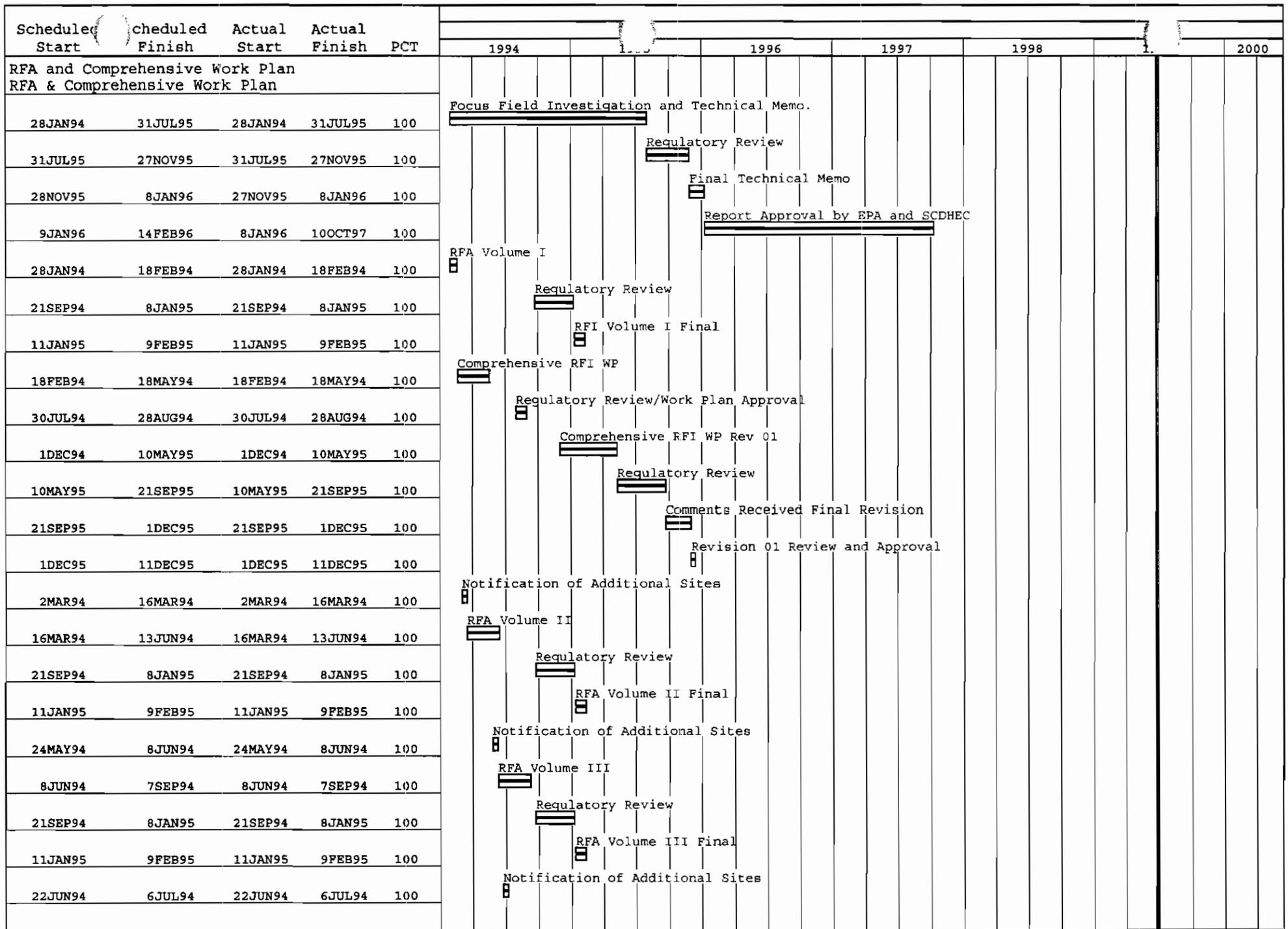
There was a question from the audience about the property the School Board was going to buy and the members were advised that the School Board had put in their application.

Minutes approved by:

Tony Hunt
Navy Co-Chair

Louis Mintz
Community Co-Chair

NOTE: The next meeting will be Tuesday, July 13 at 6:00 p.m. at the Live Oak Community Center, 2012 Success St., N. Charleston, SC.



Plot Date 30JUN99
 Data Date 25JUN99
 Project Start 1JAN94
 Project Finish 14MAR00



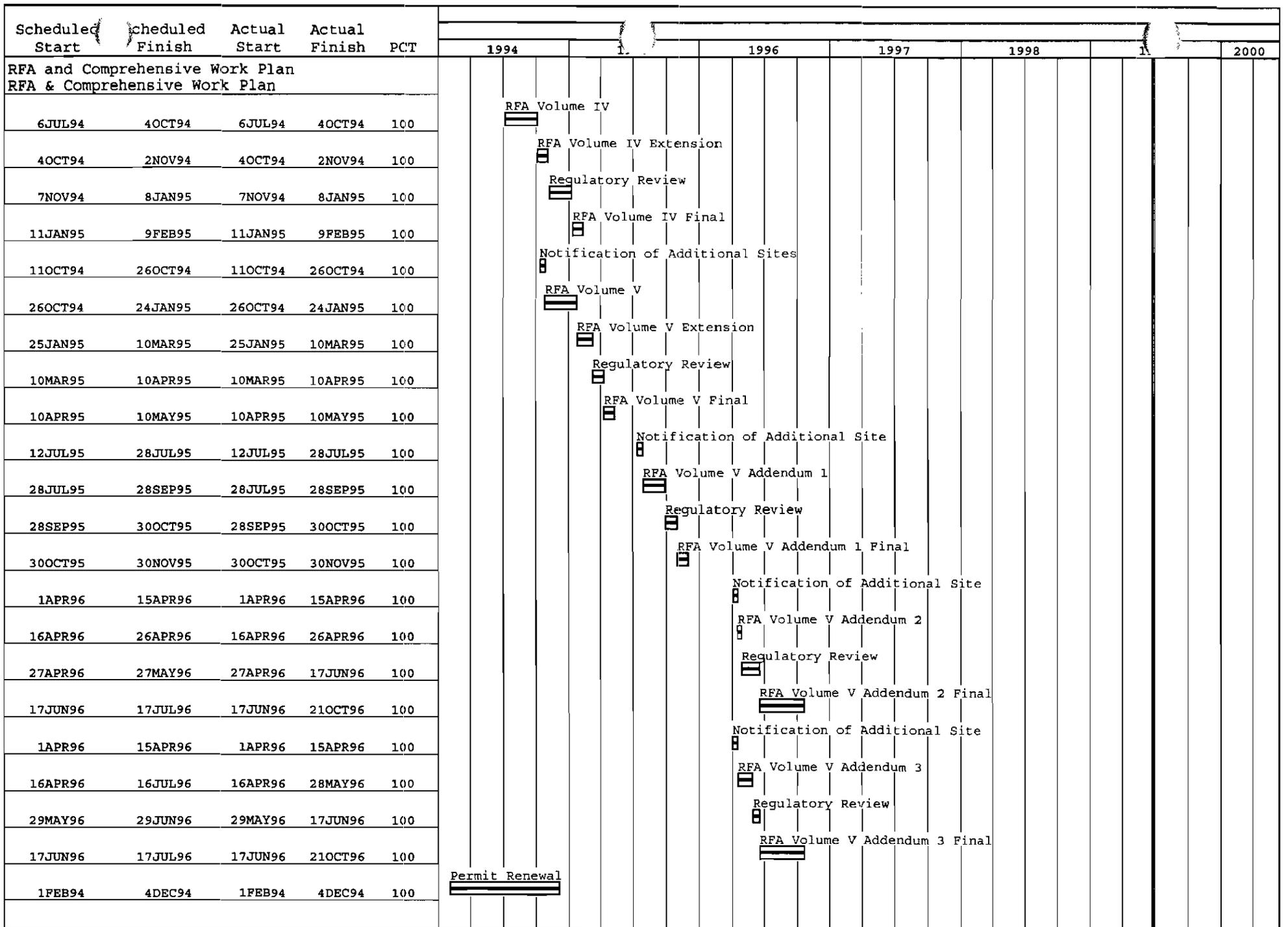
Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

2916

Sheet 1 of 19

Naval Base Charleston
 Corrective Action Management Plan

| NAVY CLEAN 662467-89-0-0318 | | | |
|-----------------------------|----------|---------|----------|
| Date | Revision | Checked | Approved |
| 10 Oct 97 | Rev 0 | GTH | KMH |
| 15 Jan 98 | Rev 1 | GTH | KMH |
| 15 Apr 98 | Rev 2 | GTH | KMH |
| 15 Jul 98 | Rev 3 | GTH | KMH |
| 15 Oct 98 | Rev 4 | GTH | KMH |
| 30 Apr 99 | Rev 5 | GTH | UPS |
| 10 Jun 99 | Rev 6 | KTH | UPS |



Plot Date 30JUN99
 Data Date 25JUN99
 Project Start 1JAN94
 Project Finish 14MAR00

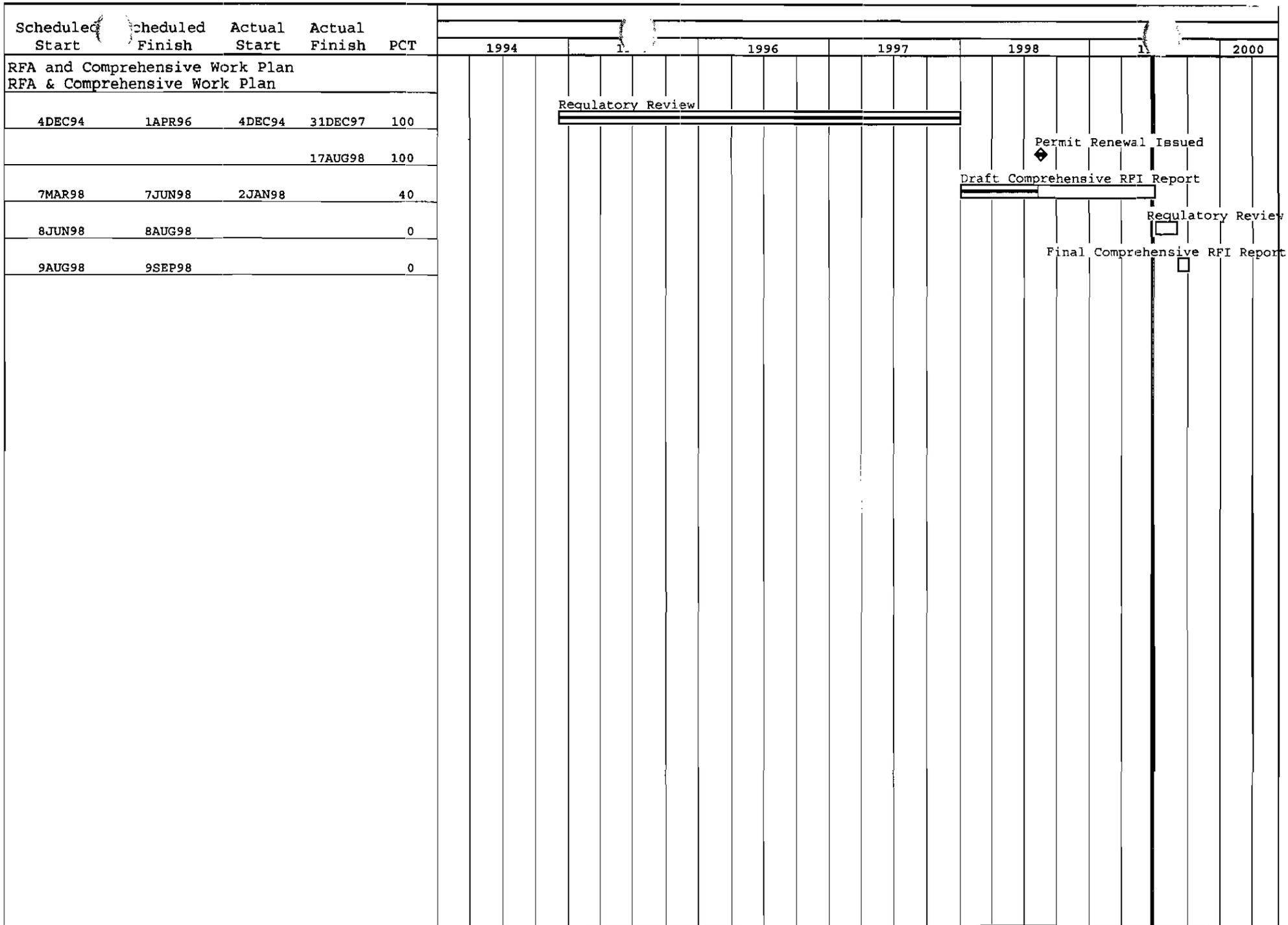
Activity Bar/Early Dates
 Critical Activity
 Program Bar
 Milestone/Flag Activity

2916

Naval Base Charleston
 Corrective Action Management Plan

Sheet 2 of 19

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 18 Dec 97 | Rev 0 | GTW | KOH |
| 15 Jan 98 | Rev 1 | GTW | KOH |
| 15 Apr 98 | Rev 2 | GTW | KOH |
| 15 Jul 98 | Rev 3 | GTW | KOH |
| 15 Dec 98 | Rev 4 | GTW | KOH |
| 20 Apr 99 | Rev 5 | GTW | DPB |
| 16 Jun 99 | Rev 6 | GTW | DPB |



Plot Date 30JUN99
 Data Date 25JUN99
 Project Start 1JAN94
 Project Finish 14MAR00

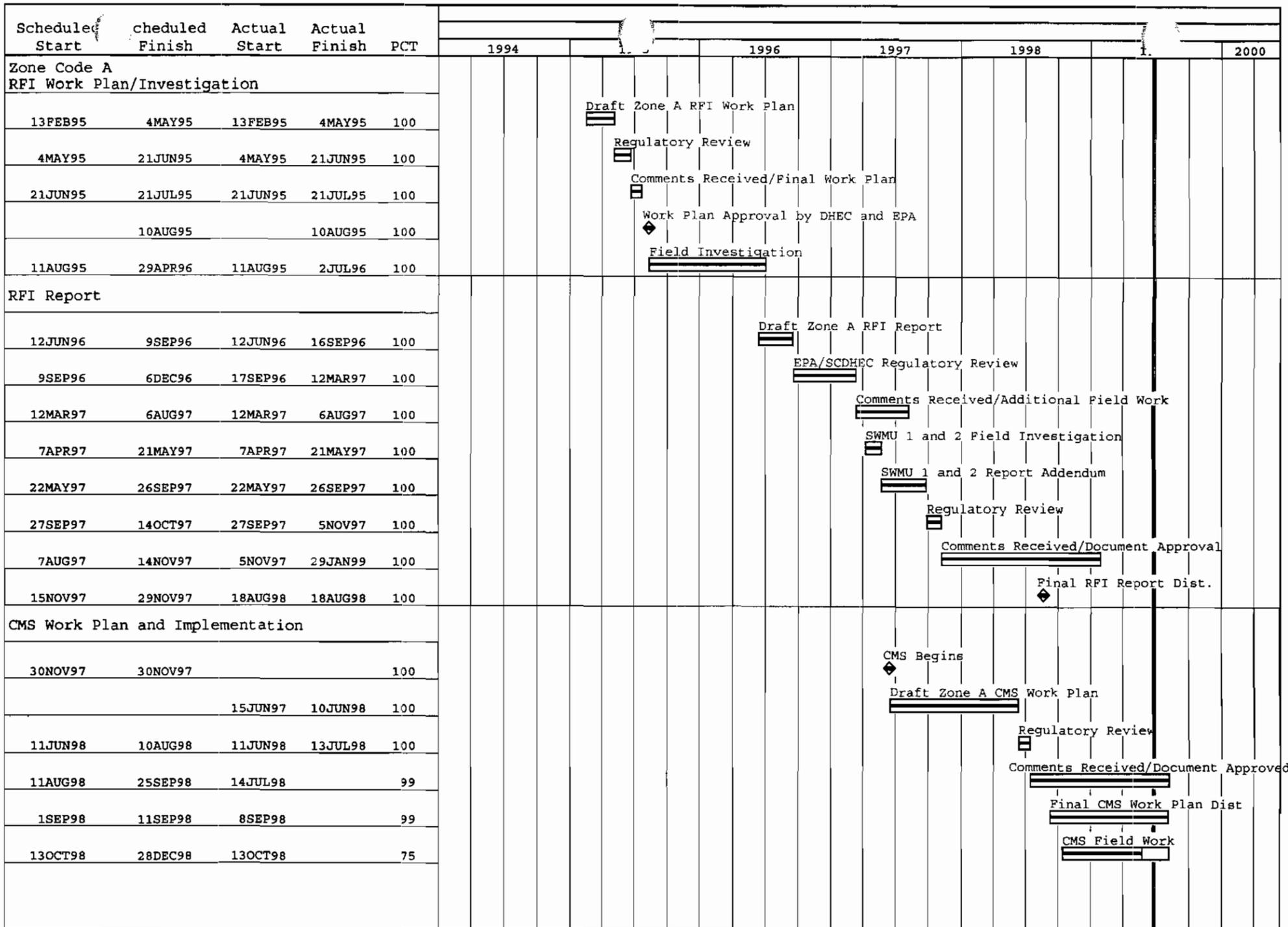
Activity Bar/Barly Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

2916

Sheet 3 of 19

Naval Base Charleston
 Corrective Action Management Plan

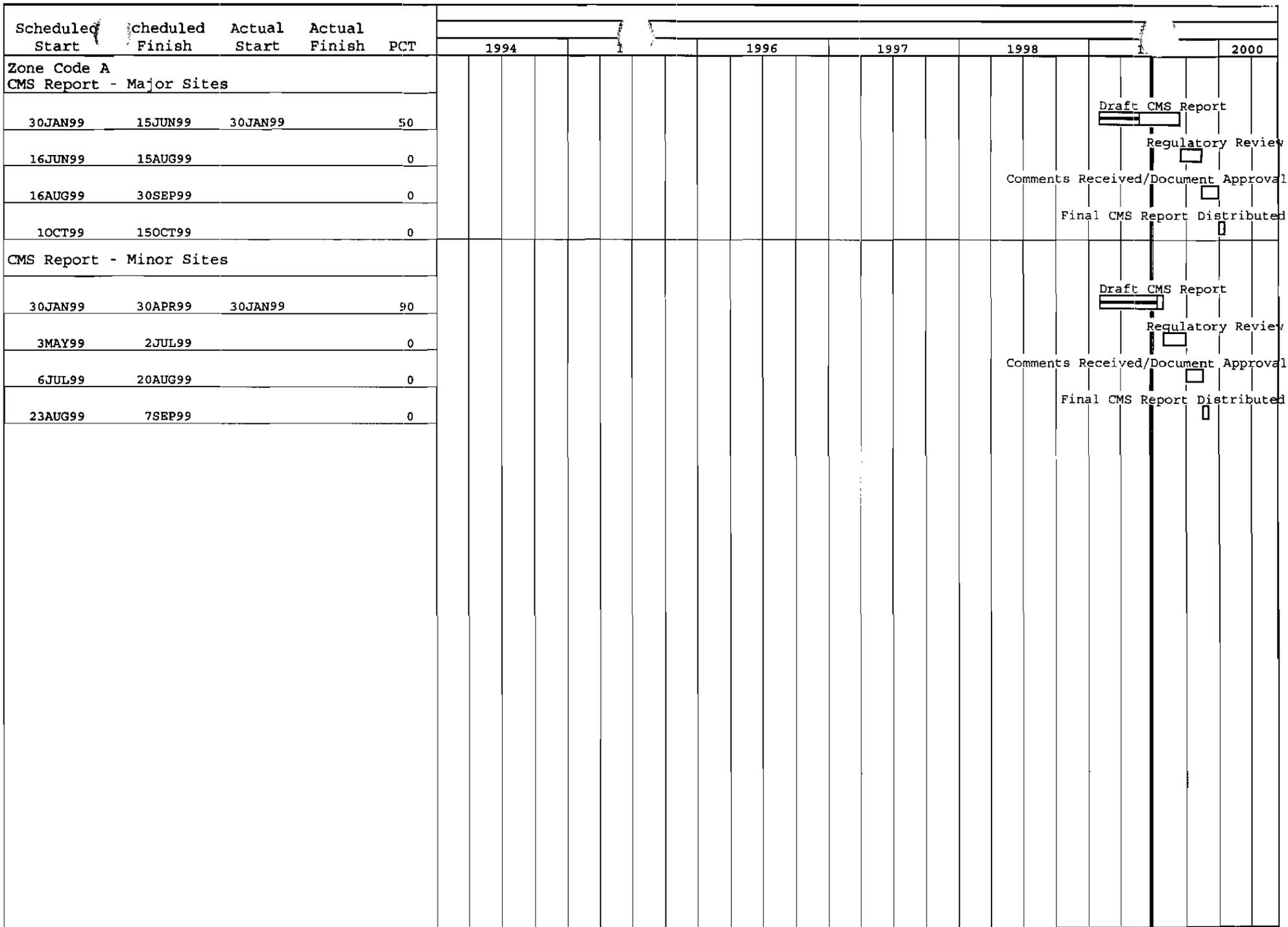
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| 15 Apr 98 | Rev 2 | GTR | MAN |
| 15 Oct 98 | Rev 3 | GTR | MAN |
| 15 Oct 98 | Rev 4 | GTR | MAN |
| 20 Apr 99 | Rev 5 | GTR | DPB |
| 10 Jun 99 | Rev 6 | GTR | DPB |



Plot Date 30JUN99
 Data Date 25JUN99
 Project Start 1JAN94
 Project Finish 14MAR00

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

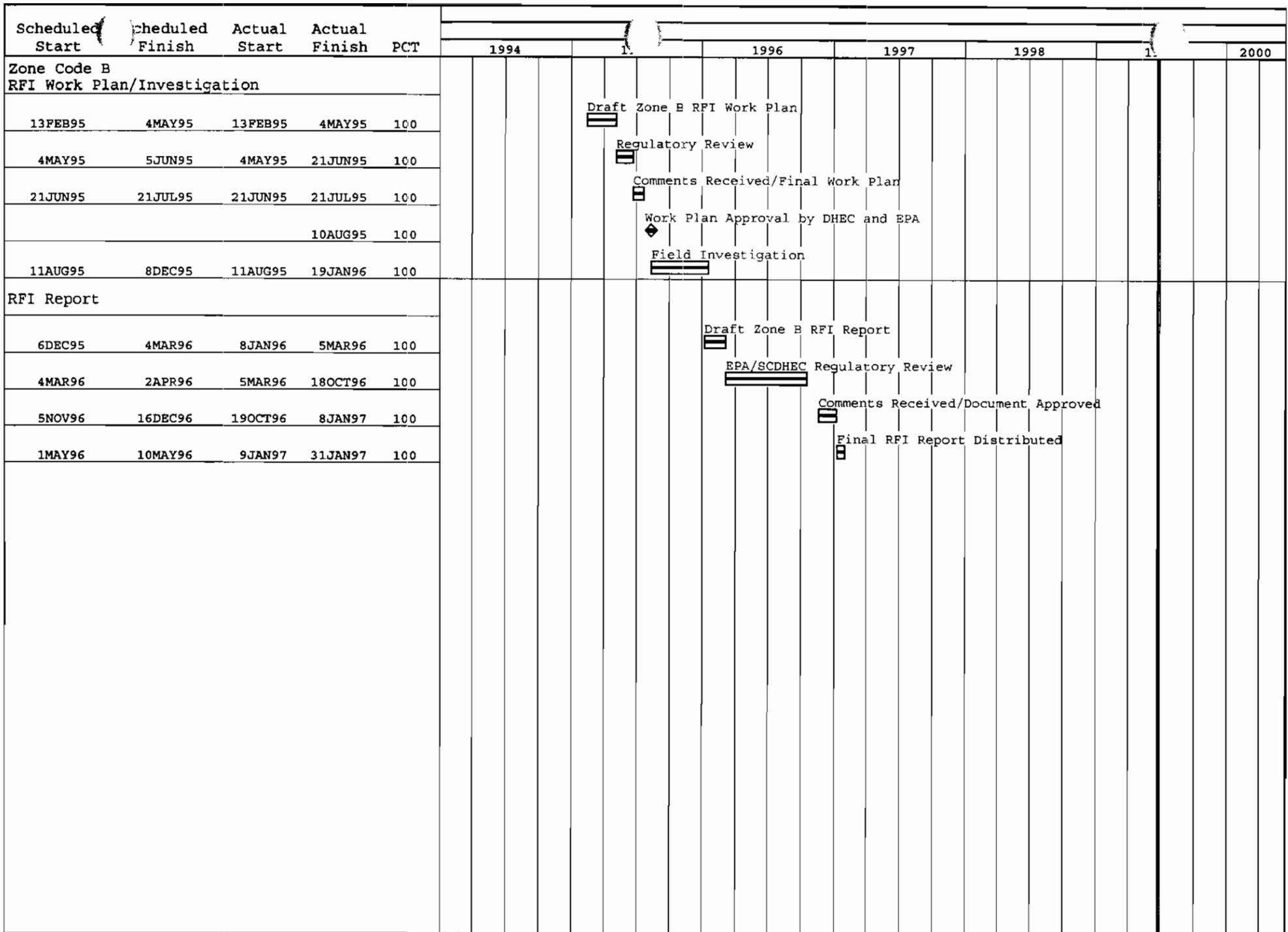
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| 15 APR 98 | Rev 2 | GIN | KAH |
| 15 JUL 98 | Rev 3 | GIN | KAH |
| 15 OCT 98 | Rev 4 | GIN | MAH |
| 26 APR 99 | Rev 5 | GIN | DFB |
| 16 JAN 99 | Rev 6 | GIN | DFB |



Plot Date 10JUN99
 Data Date 25JUN99
 Project Start 1JAN94
 Project Finish 14MAR00

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
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| 15 Jun 98 | Rev 1 | GTH | KAH |
| 15 Apr 98 | Rev 2 | GTH | BAH |
| 15 Jul 98 | Rev 3 | GTH | BAH |
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| 30 Jun 99 | Rev 6 | GTH | DPH |



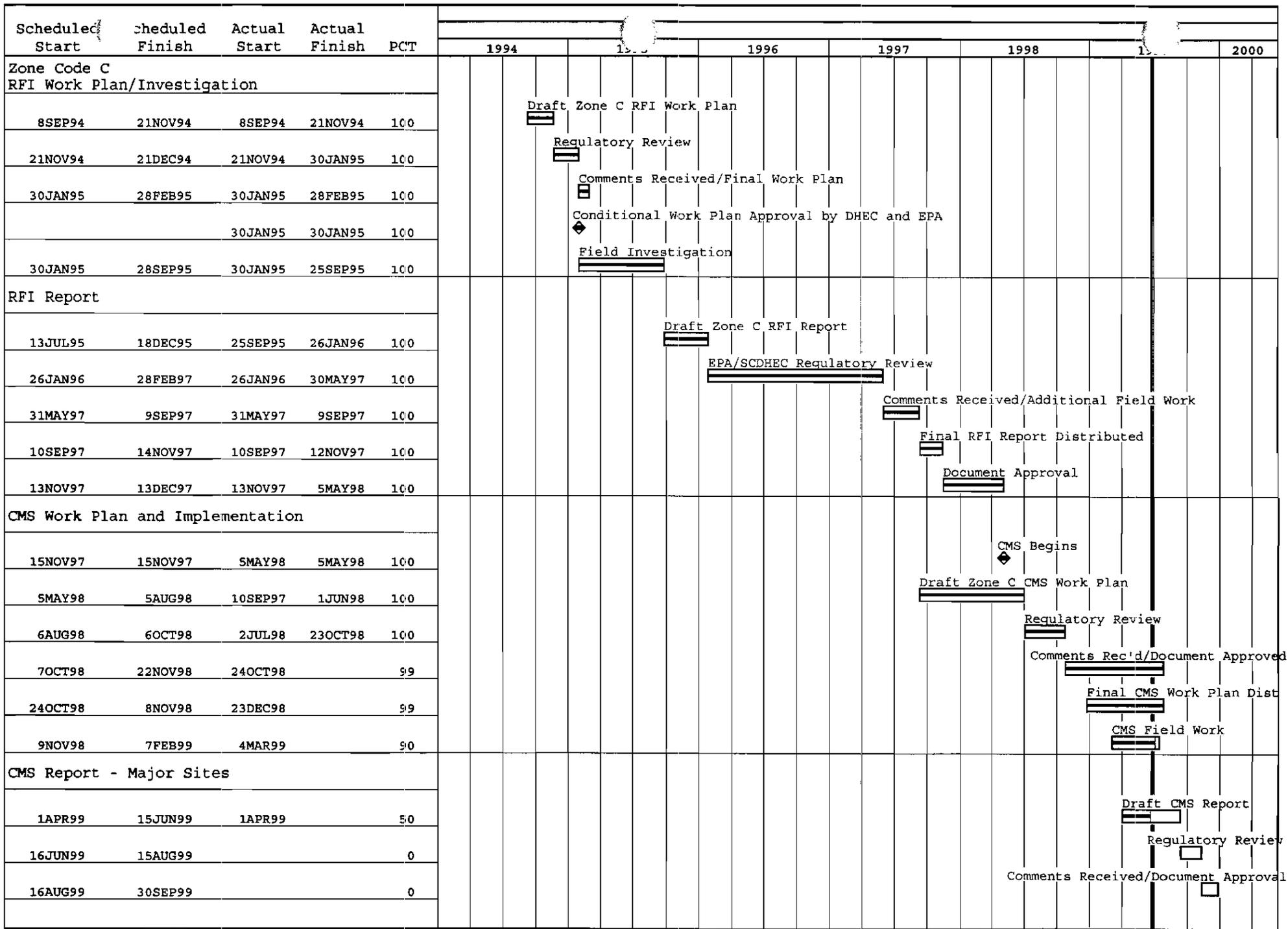
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 Data Date 25JUN99
 Project Start 1JAN94
 Project Finish 14MAR00

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

Naval Base Charleston
 Corrective Action Management Plan

Sheet 6 of 19

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 10 Oct 97 | Rev 0 | GTH | KEM |
| 15 Jan 98 | Rev 1 | GTH | KEM |
| 15 Apr 98 | Rev 2 | GTH | KEM |
| 15 Jul 98 | Rev 3 | GTH | KEM |
| 15 Oct 98 | Rev 4 | GTH | KEM |
| 26 Apr 99 | Rev 5 | GTH | SPS |
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Plot Date 30JUN99
 Data Date 25JUN99
 Project Start 1JAN94
 Project Finish 14MAR00

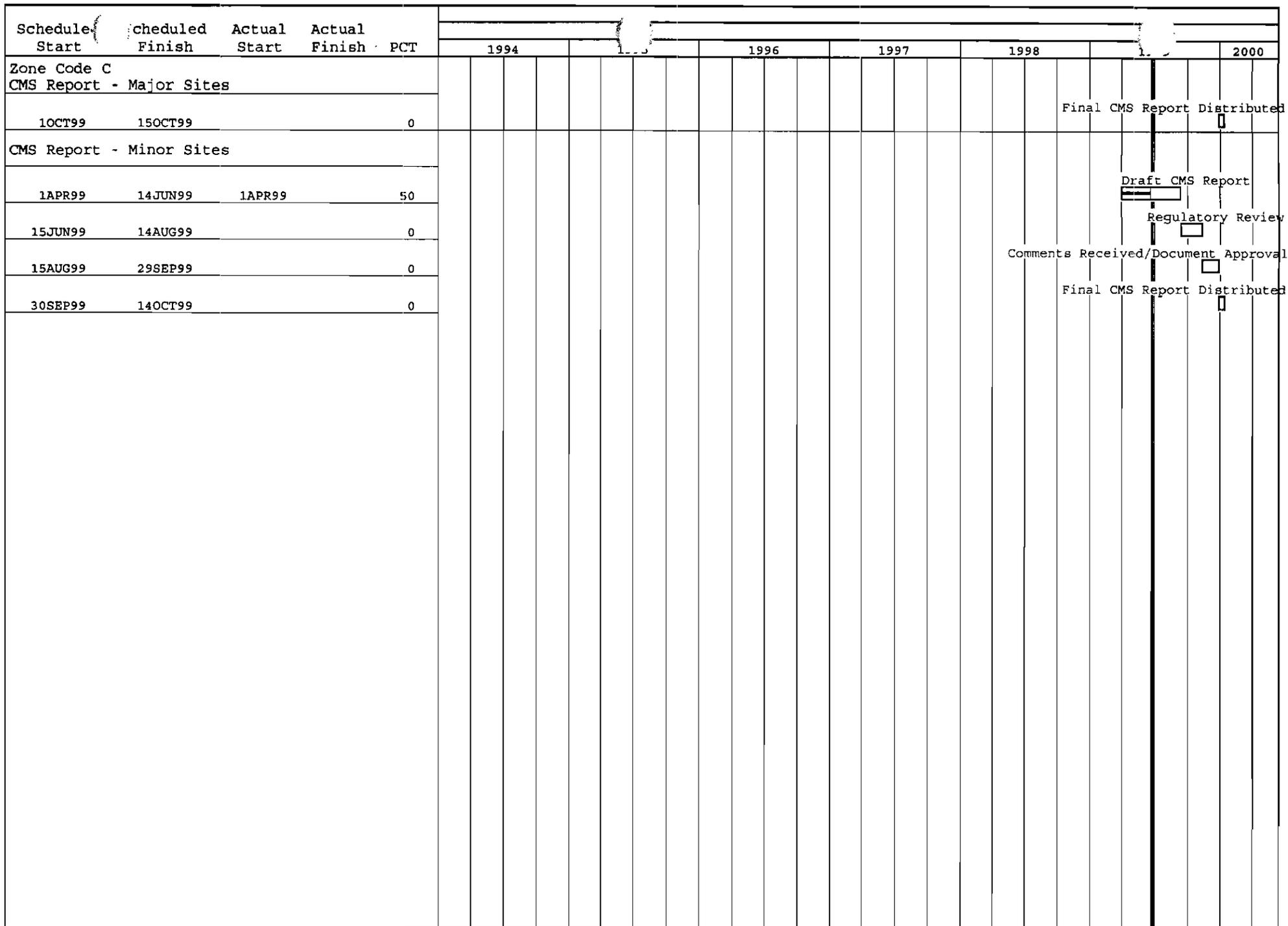
Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

2916

Sheet 7 of 19

Naval Base Charleston
 Corrective Action Management Plan

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
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| 15 Jan 98 | Rev 1 | GTH | KAN |
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| 15 Oct 98 | Rev 4 | GTH | KAN |
| 30 Apr 99 | Rev 5 | GTH | KAN |
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Plot Date 30JUN99
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 Project Start 1JAN94
 Project Finish 14MAR00

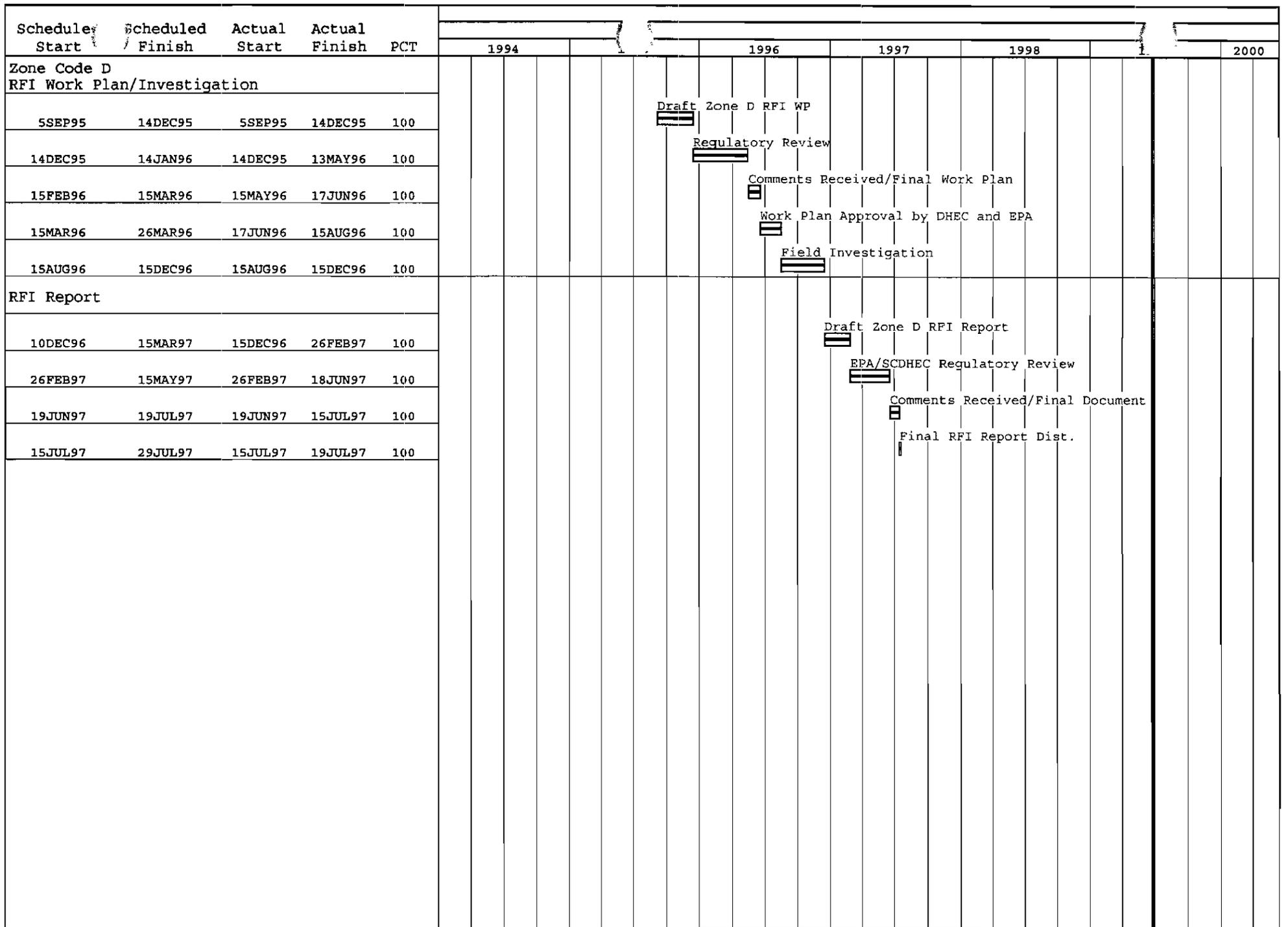
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Sheet 8 of 19

Naval Base Charleston
 Corrective Action Management Plan

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| 15 Jan 98 | Rev 1 | GR | BD |
| 15 Apr 98 | Rev 2 | GR | BD |
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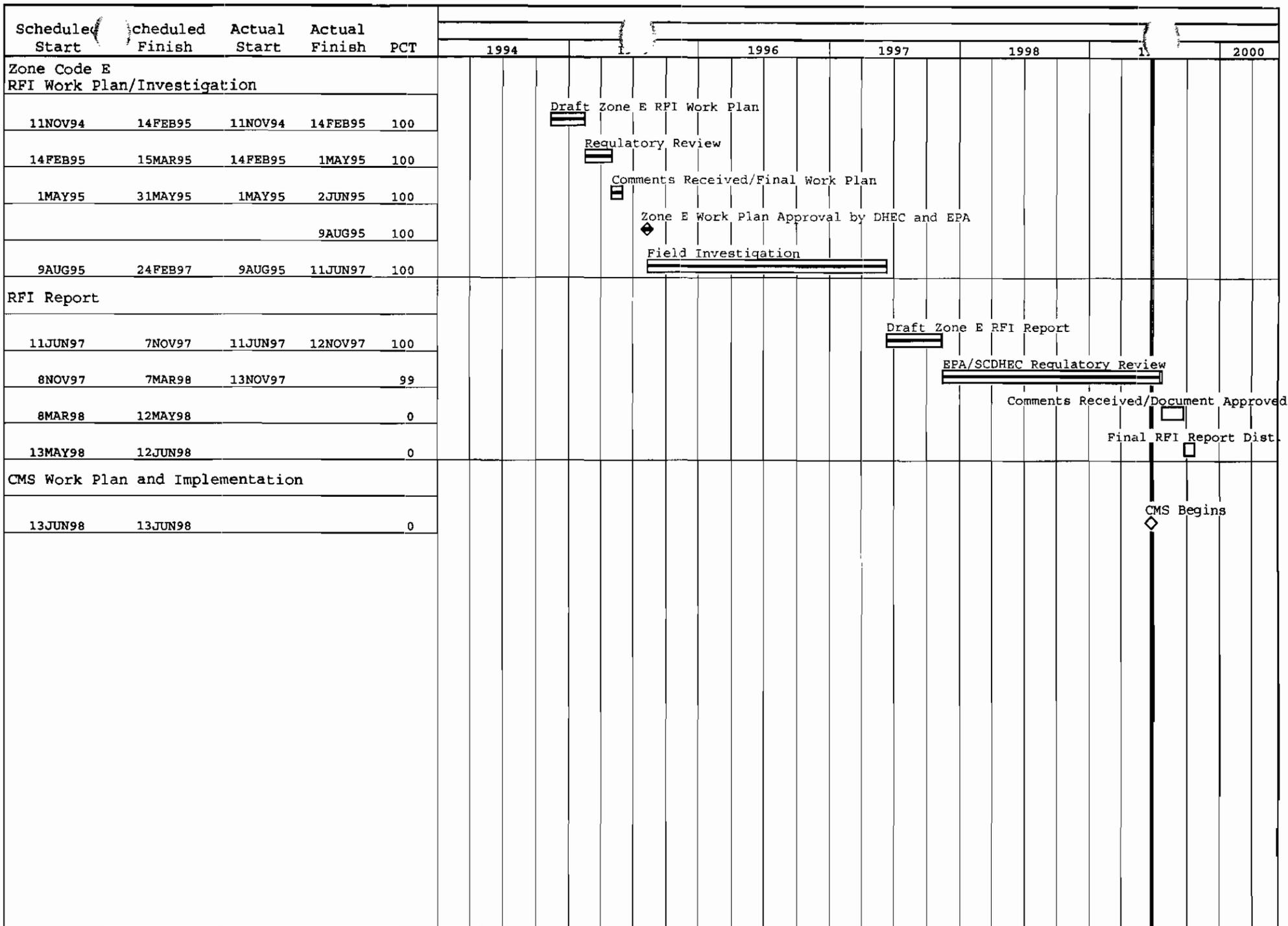


Plot Date 30JUN99
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 Project Start 1JAN94
 Project Finish 14MAR00

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

Naval Base Charleston
 Corrective Action Management Plan

| NAVY CLEAN M62467-89-0-0318 | | | |
|-----------------------------|----------|---------|----------|
| Date | Revision | Checked | Approved |
| 19 Oct 97 | Rev 0 | GTH | RAM |
| 15 Jan 98 | Rev 1 | GTH | RAM |
| 15 Apr 98 | Rev 2 | GTH | RAM |
| 15 Jul 98 | Rev 3 | GTH | RAM |
| 15 Oct 98 | Rev 4 | GTH | RAM |
| 30 Apr 99 | Rev 5 | GTH | DPB |
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Plot Date 30JUN99
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 Project Start 1JAN94
 Project Finish 14MAR00

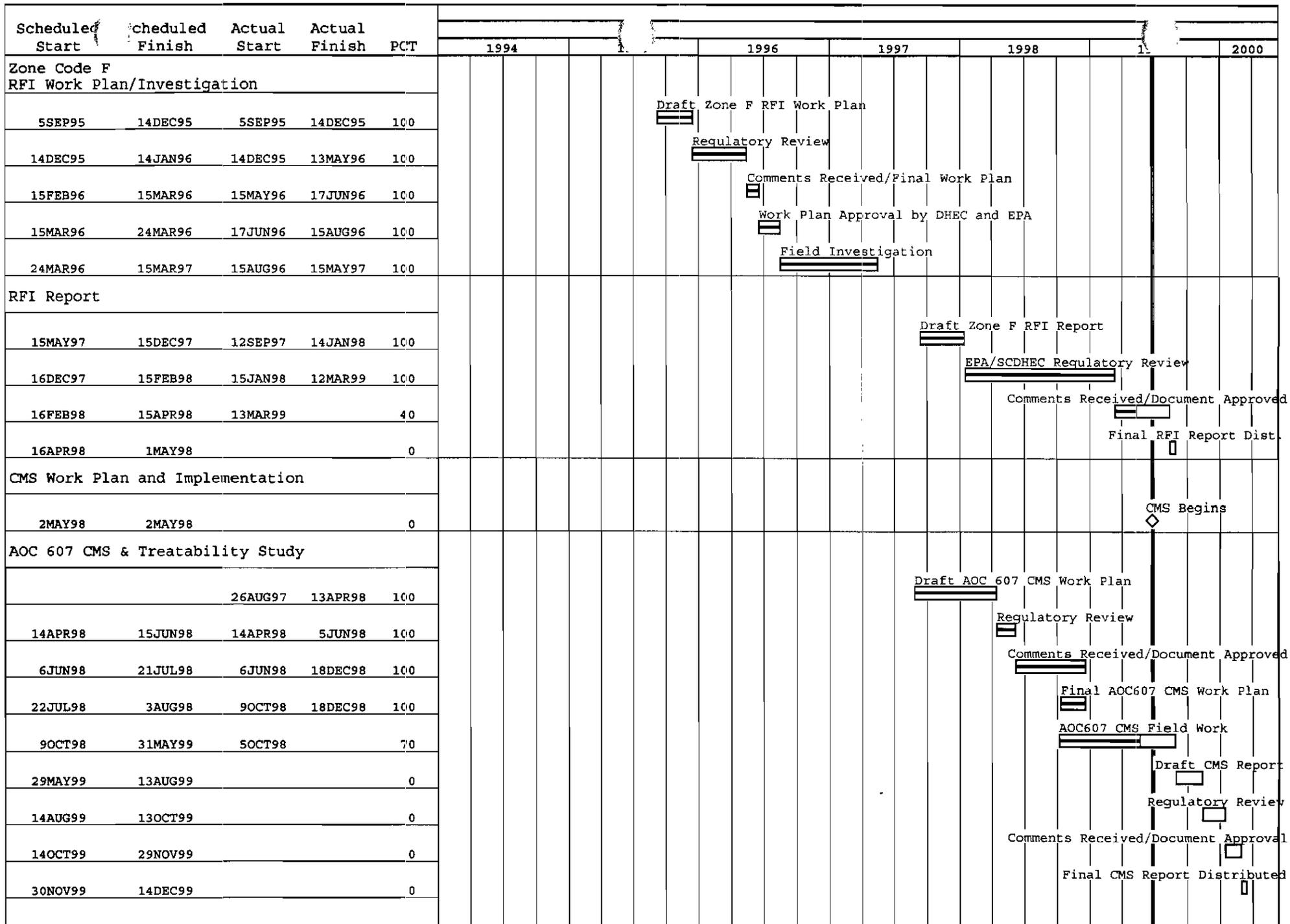
Activity Bar/Barly Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

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Sheet 10 of 19

Naval Base Charleston
 Corrective Action Management Plan

| NAVY CLEAN 662467-89-0-0318 | | | |
|-----------------------------|----------|---------|----------|
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| 15 Jan 98 | Rev 1 | GIR | KUM |
| 15 Apr 98 | Rev 2 | GIR | KUM |
| 15 Jul 98 | Rev 3 | GIR | KUM |
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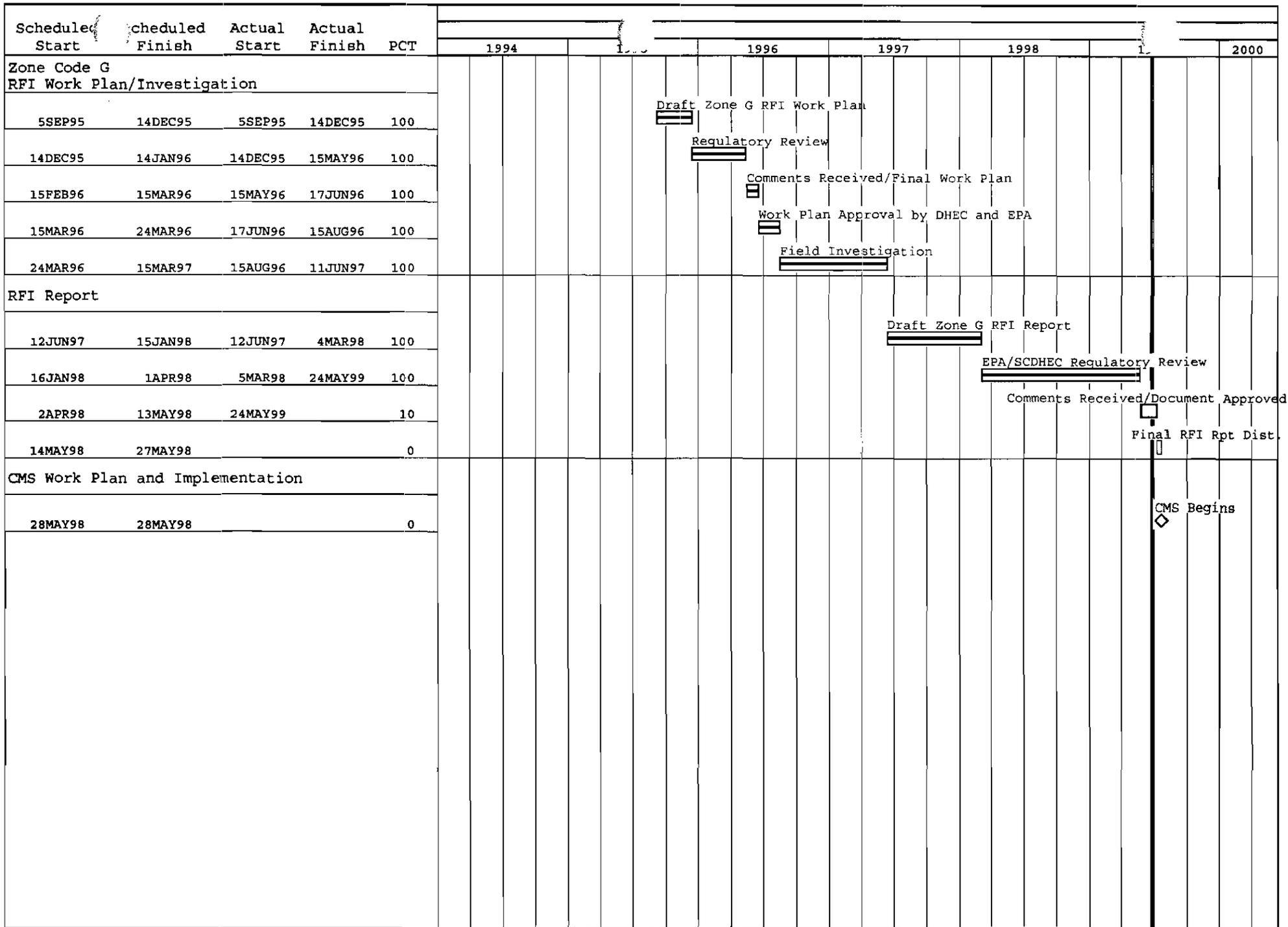
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 Project Start 1JAN94
 Project Finish 14MAR00

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

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| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 10 Oct 97 | Rev 0 | GM | MM |
| 15 Jan 98 | Rev 1 | GM | MM |
| 15 Apr 98 | Rev 2 | GM | MM |
| 15 Jul 98 | Rev 3 | GM | MM |
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| 30 Apr 99 | Rev 5 | GM | MM |
| 30 Sep 99 | Rev 6 | GM | MM |

NAVY CLEAN 62467-89-D-0318



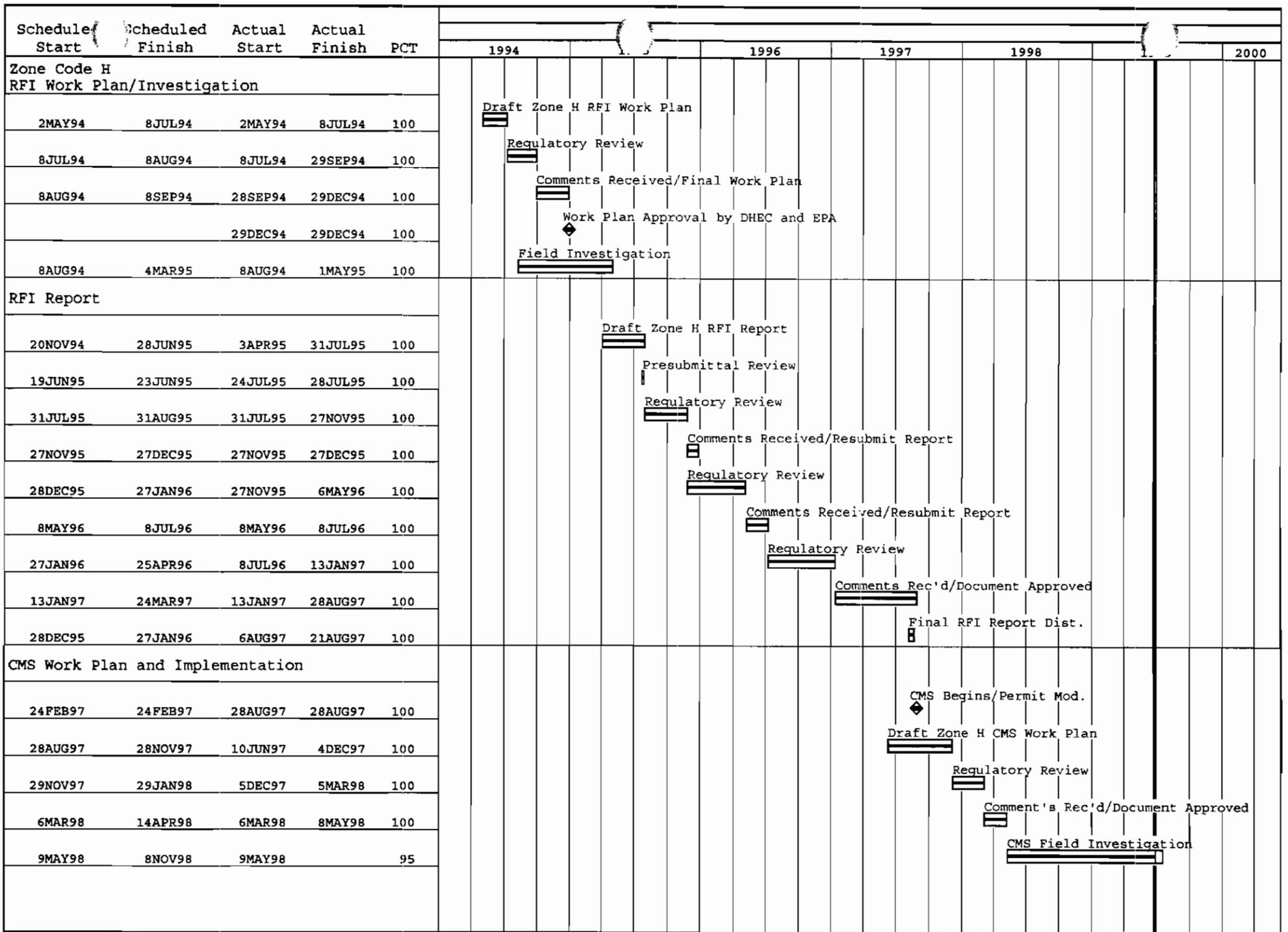
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 Project Start 1JAN94
 Project Finish 14MAR00

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Activity Bar/Barly Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

NWAY CLEAN W62457-89-D-0318

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 18 DEC 97 | Rev 0 | GTH | MAH |
| 15 JAN 98 | Rev 1 | GTH | MAH |
| 15 APR 98 | Rev 2 | GTH | MAH |
| 15 JUL 98 | Rev 3 | GTH | MAH |
| 15 OCT 98 | Rev 4 | GTH | MAH |
| 18 SEP 98 | Rev 5 | GTH | DPB |
| 30 JUN 99 | Rev 6 | GTH | DPB |



Plot Date 30JUN99
 Data Date 25JUN99
 Project Start 1JAN94
 Project Finish 14MAR00

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

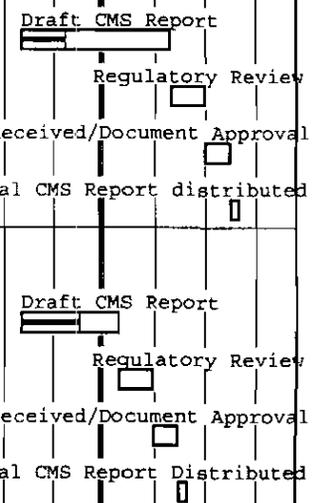
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Sheet 13 of 19

Naval Base Charleston
 Corrective Action Management Plan

| NAVY CLEAN #62467-89-0-0318 | | | |
|-----------------------------|----------|---------|----------|
| Date | Revision | Checked | Approved |
| 15 Oct 97 | Rev 0 | GH | RAH |
| 15 Jan 98 | Rev 1 | GH | RAH |
| 15 Apr 98 | Rev 2 | GH | RAH |
| 15 Jul 98 | Rev 3 | GH | RAH |
| 15 Oct 98 | Rev 4 | GH | RAH |
| 15 Apr 99 | Rev 5 | GH | DPB |
| 15 Oct 99 | Rev 6 | GH | DPB |

| Scheduled Start | Scheduled Finish | Actual Start | Actual Finish | PCT | Year | | | | | | | | | | | | | | | |
|---------------------------------|------------------|--------------|---------------|-----|------|--|--|------|--|--|------|--|--|------|--|--|------|--|--|------|
| | | | | | 1994 | | | 1995 | | | 1996 | | | 1997 | | | 1998 | | | 1999 |
| Zone Code H | | | | | | | | | | | | | | | | | | | | |
| CMS Report - Major Sites | | | | | | | | | | | | | | | | | | | | |
| 30JAN99 | 31JUL99 | 30JAN99 | | 30 | | | | | | | | | | | | | | | | |
| 1AUG99 | 30SEP99 | | | 0 | | | | | | | | | | | | | | | | |
| 1OCT99 | 14NOV99 | | | 0 | | | | | | | | | | | | | | | | |
| 15NOV99 | 1DEC99 | | | 0 | | | | | | | | | | | | | | | | |
| CMS Report - Minor Sites | | | | | | | | | | | | | | | | | | | | |
| 30JAN99 | 30APR99 | 30JAN99 | | 60 | | | | | | | | | | | | | | | | |
| 1MAY99 | 30JUN99 | | | 0 | | | | | | | | | | | | | | | | |
| 1JUL99 | 15AUG99 | | | 0 | | | | | | | | | | | | | | | | |
| 16AUG99 | 30AUG99 | | | 0 | | | | | | | | | | | | | | | | |



Plot Date 30JUN99
 Data Date 25JUN99
 Project Start 1JAN94
 Project Finish 14MAR00

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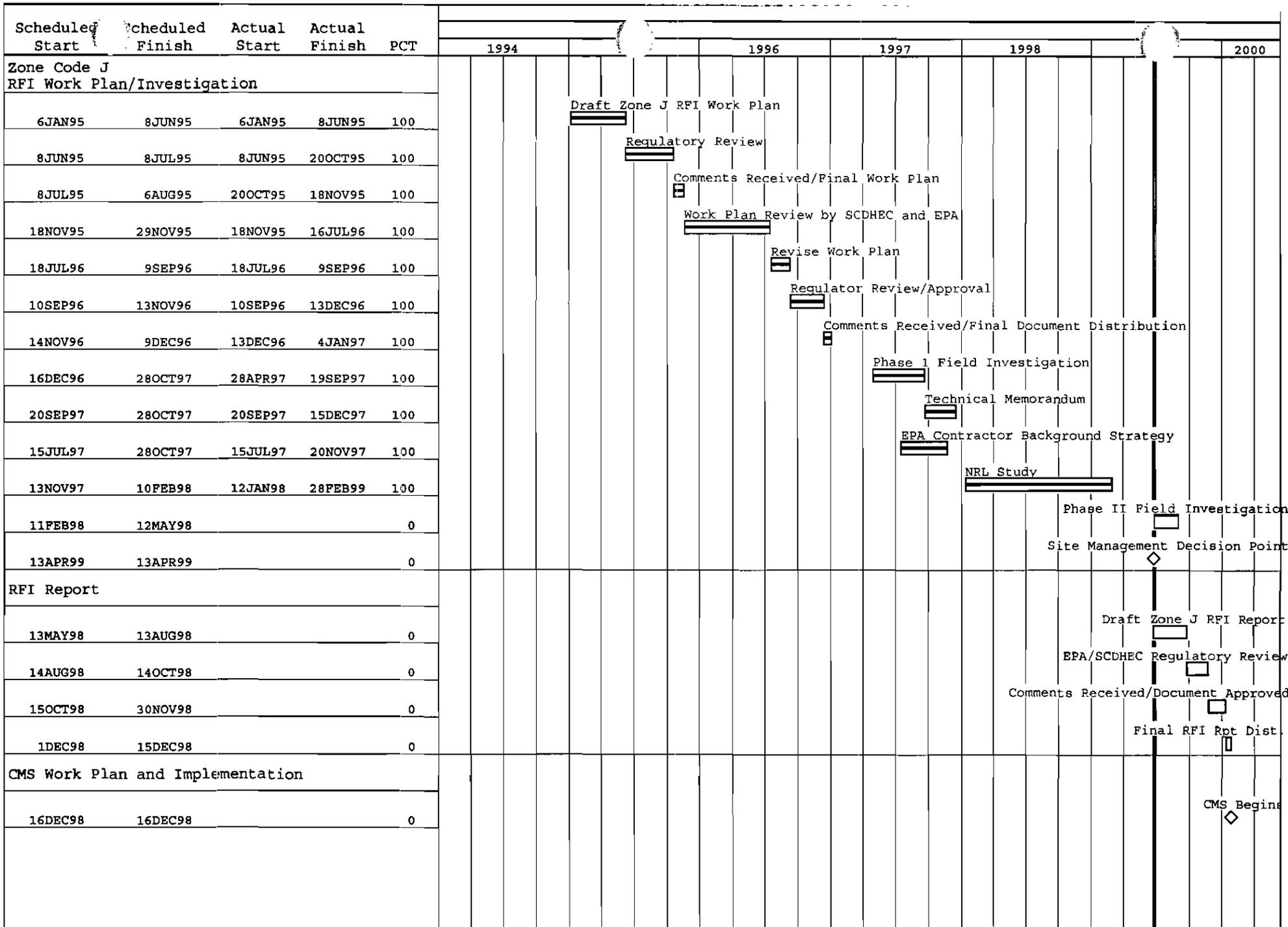
Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

Sheet 14 of 19

Naval Base Charleston
 Corrective Action Management Plan

NAVY CLEAN 662467-89-0-0318

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 15 Oct 97 | Rev 0 | CTR | MAN |
| 15 Jan 98 | Rev 1 | CTR | MAN |
| 15 Apr 98 | Rev 2 | CTR | MAN |
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| 30 Apr 99 | Rev 5 | CTR | DPB |
| 30 Apr 99 | Rev 6 | CTR | DPB |

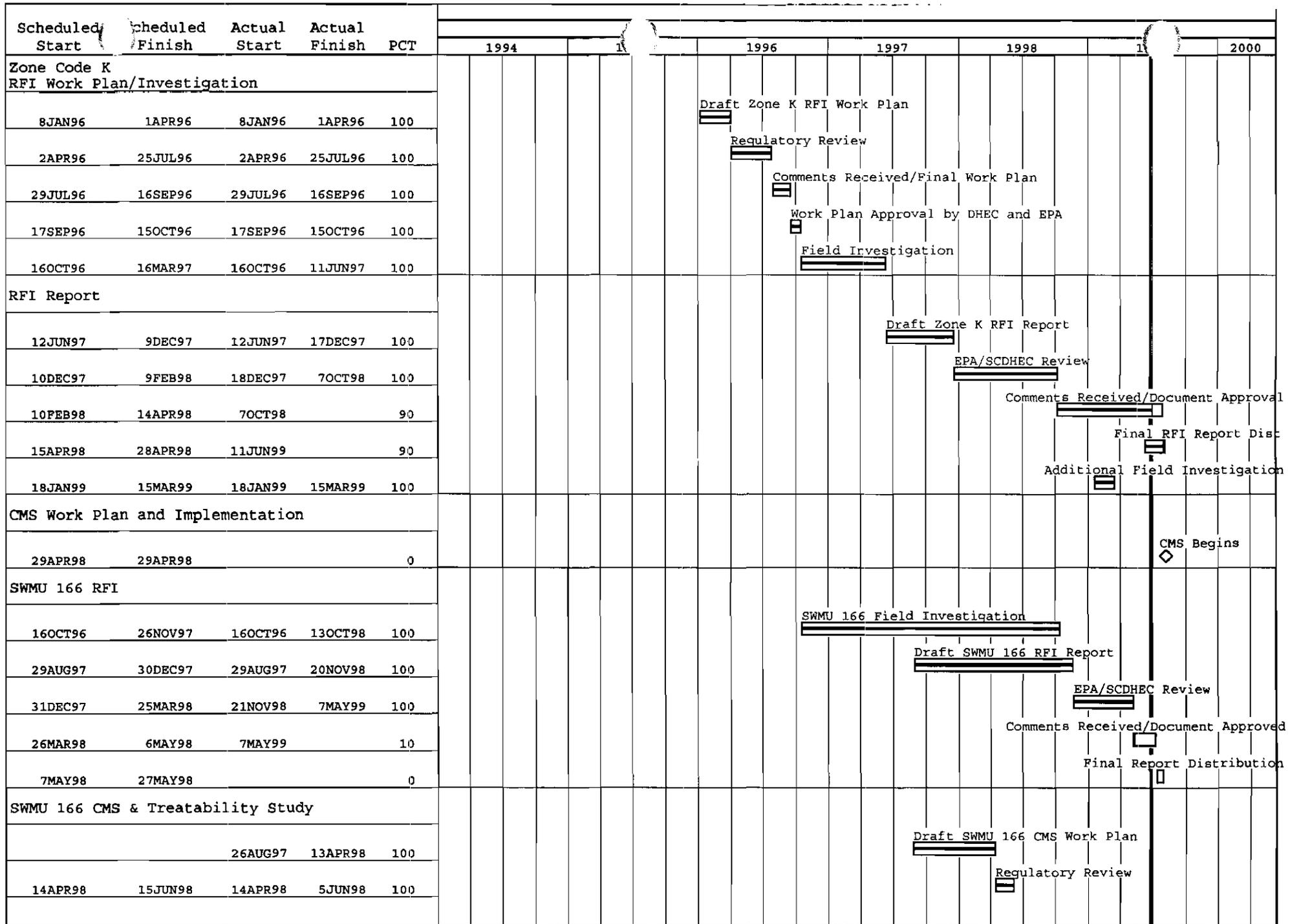


Plot Date 30JUN99
 Data Date 25JUN99
 Project Start 1JAN94
 Project Finish 14MAR00

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

2916

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|-----------------------------|----------|---------|----------|
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| 15 Apr 98 | Rev 2 | GTN | AAH |
| 15 Jul 98 | Rev 3 | GTN | AAH |
| 15 Oct 98 | Rev 4 | GTN | AAH |
| 30 Apr 99 | Rev 5 | GTN | DPD |
| 30 Jun 99 | Rev 6 | GTN | DPD |



Plot Date 30JUN99
 Data Date 25JUN99
 Project Start 1JAN94
 Project Finish 14MAR00

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

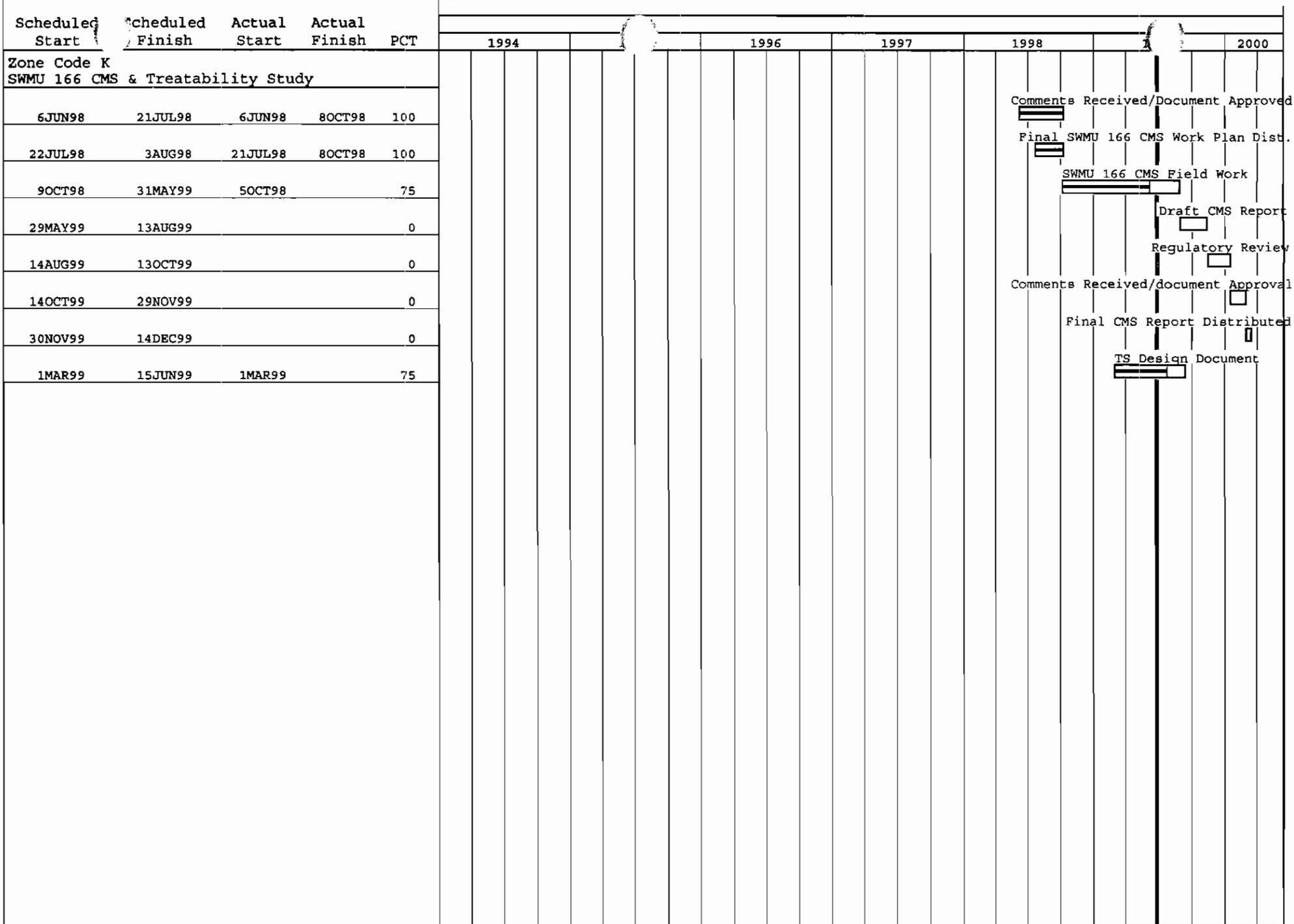
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Sheet 17 of 19

NAVY CLEAN 662467-89-D-0318

Naval Base Charleston
 Corrective Action Management Plan

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 10 Oct 97 | Rev 0 | GTH | MAK |
| 15 Jan 98 | Rev 1 | GTH | MAK |
| 15 Apr 98 | Rev 2 | GTH | MAK |
| 15 Jul 98 | Rev 3 | GTH | MAK |
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| 20 Aug 99 | Rev 6 | GTH | OPD |



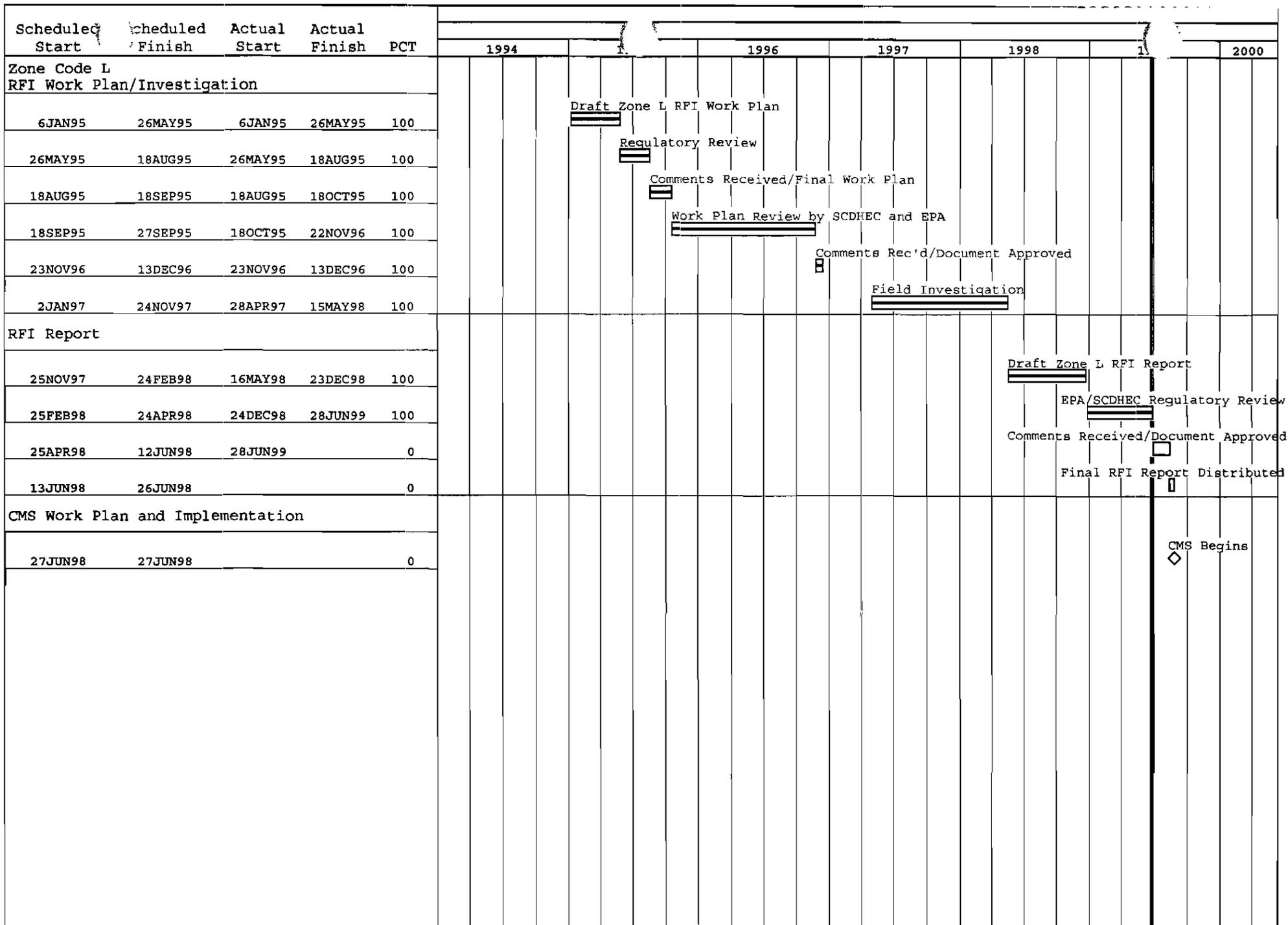
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 Project Finish 14MAR00

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Sheet 18 of 19

Naval Base Charleston
 Corrective Action Management Plan

| NAVY CLEAN 862467-89-0-0218 | | | |
|-----------------------------|----------|---------|----------|
| Date | Revision | Checked | Approved |
| 15 Oct 97 | Rev 0 | CMH | KAM |
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| 15 Apr 98 | Rev 2 | CMH | KAM |
| 15 Jul 98 | Rev 3 | CMH | KAM |
| 15 Oct 98 | Rev 4 | CMH | KAM |
| 28 Apr 99 | Rev 5 | CMH | OPB |
| 31 Jun 99 | Rev 6 | CMH | OPB |



Plot Date 30JUN99
 Data Date 25JUN99
 Project Start 1JAN94
 Project Finish 14MAR00

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

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Naval Base Charleston
 Corrective Action Management Plan

Sheet 19 of 19

| Date | Revision | Checked | Approved |
|-----------|----------|---------|----------|
| 18 Oct 97 | Rev 0 | GTH | KAN |
| 15 Jan 98 | Rev 1 | GTH | KAN |
| 15 Apr 98 | Rev 2 | GTH | KAN |
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| 30 Apr 99 | Rev 5 | GTH | DPD |
| 18 Jun 99 | Rev 6 | GTH | DPD |

NAVY CLEAN N62467-89-0-0310

**CHARLESTON NAVAL COMPLEX
RFI/CMS STATUS REPORT
PERIOD: SUMMARY OF
01 July 1999 To 30 September 1999**

I. INTRODUCTION

The following quarterly status report has been prepared to satisfy condition II.E.3.a of the Part B Permit Renewal dated 5 December 1994 for the Charleston Naval Complex (CNC). The requirements of this condition are in effect since the total elapsed time to complete the RCRA Facility Investigation (RFI) is projected to be greater than 180 calendar days from the approval date of the *Final Comprehensive RFI Work Plan* as indicated in the Corrective Action Management Plan (CAMP).

II. PORTION OF THE RFI COMPLETED

General

Attachment A is a spreadsheet which list the results of a comprehensive inspection performed in 1998, repairs needed, whether the action was complete, and the current status as of 30 September 1999.

A presentation was made to the Project Team 13 September 1999 on the Navy's strategy for completion of the remaining RFI reports and CMS sites. Both EnSafe and the Navy discussed completion proposals and strategies to attendees representing SCDHEC, EPA and SOUTHDIV. Zones E, F, G, K, & L and sites in Zones H and I still await SCDHEC approval. EnSafe and the Navy will be providing SCDHEC an updated deliverable schedule in the early part of the 4th quarter of 1999.

It was determined that the GEL 15 Area would become SWMU 196 and be covered under the present RCRA permit. An addendum to the Zone H RFI Report will include the investigations findings and data interpretations.

SWMU 17 was scoped in September 29, 1999 to delineate the nature and extent of free product in groundwater.

Data from a inorganics in groundwater study by College of Charleston professor June Mirecki that is due at the end of December 1999 will be incorporated into relative RFI reports to help explain anomalies of inorganics in CNC groundwater data sets.

Task 2901 - Zone A

Statement of Basis (S.O.B.) for SWMU 2 was sent to SCDHEC on 30 July 1999.

EnSafe received the Navy comments on the Draft SWMU 42/AOC 505 CMS report. Comments will be incorporated into the document for delivery in mid-October 1999.

Task 2901 - Zone A (Continued)

The well pairs at SWMU 39 along the railroad line and the deep well at SWMU 42 were installed in July and sampled in August 1999.

Response to Comments to the AOC 506 Benzo(a)pyrene SSL evaluation memo were submitted on 14 July 1999.

EnSafe is currently revising SWMU 42/AOC 505 CMS Report for mid-October 1999 submittal.

Task 2902 - Zone B

All tasks for Zone B are 100 percent complete, and no further action is required.

Task 2903 - Zone C

Currently, the preparation of the minor sites CMS report (SWMU 47/AOC 516, AOC 508/AOC 511, and AOC 518 and AOC 700) along with SWMU 44 is continuing and the revised schedule for delivery of documents is mid-November.

Wells in SWMU 44 and 47 were sampled and analyzed for metals as part of the CMS work for Zone C.

Revised the comments/response to comments/reply/response to reply for SWMU 44 CMS Work Plan and presented to Navy on 11 August 1999.

Task 2904 - Zone D

All tasks for Zone D are 100 percent complete, and no further action is required.

Task 2905 - Zone E

EnSafe began responding to comments from SCDHEC on the Draft Zone E RFI Report in July 1999.

Comments were received on 21 July 1999 concerning the memorandum/report for the AOC 621 soil sampling.

22 Soil samples were collected and analyzed for lead at AOC 621.

Response to Comments to the Draft Zone E RFI Report were resolved at a comment resolution meeting on 25 August 1999.

Task 2905 - Zone E (Continued)

Response to Comments to the AOC 621 memorandum were resolved at a comment resolution meeting on 25 August 1999.

A work plan addendum is being prepared for additional sampling in Zone E for further nature and extent and human health risk characterization.

Groundwater level measurements were taken at selected monitoring wells in Zone E for documentation in the Final Zone E RFI Report.

Task 2906 - Zone F

As part of the CMS field work nine shallow wells were sampled and analyzed for VOCs.

Additional comments were received from SCDHEC on AOC 709 for the Zone F RFI Report.

Three deep wells were installed and sampled at AOC 607 as part of the CMS.

As part of the CMS field work at AOC 607 wells were sampled and analyzed for VOCs in early July 1999.

VOC sampling continued in August and September 1999 at AOC 607 in support of the treatability study that began on early July 1999.

Pressure transducers were installed in August 1999 to evaluate the effectiveness of the SVE test at AOC 607.

Dismantling of the pilot study was completed in September. As part of the final evaluation of the pilot study AOC 607 wells were sampled and analyzed for VOCs.

Groundwater level measurements were taken in September 1999 at selected monitoring wells in Zone F for documentation in the Final Zone F RFI Report.

EnSafe provided information at a September 29, 1999 scoping meeting with SCDHEC, EPA and the Navy to discuss additional sampling efforts to further characterize nature and extent issues.

EnSafe continued with the preparation of the AOC 607 CMS Report.

Task 2907 - Zone G

Additional field work was conducted at SWMU 3 and AOCs 633, 642, 643 and 706 as per comments to the Zone G RFI Report.

Stand pipes at SWMU 8 were sampled for a check on the presence of free product

EnSafe provided information for a September 29, 1999 scoping meeting with SCDHEC, EPA and the Navy to discuss additional sampling efforts to further characterize nature and extent issues.

Groundwater level measurements were taken at selected monitoring wells in Zone G for documentation in the Final Zone G RFI Report.

Task 2908 - Zone H

Wells 014006 and 014007 were sampled as part of the quarterly monitoring well program.

S.O.B. for SWMU 159/AOC 653 was delivered to SCDHEC on 30 July 1999.

Comments were received from SCDHEC on 21 July 1999 for the technical memorandum proposing NFA status for SWMU 136/AOC 663.

The SWMU 9 (combined) CMS Report is currently being revised to incorporate the USEPA proposed remedy for site groundwater and additional Zone G sites (AOCs 706, 636, 637; portion of AOCs 633 and 642; SWMU 8; FDS Areas 2 through 6).

The AOC 503 draft CMS report and was submitted to the Navy on 14 July 1999.

A Sampling Summary and Recommendations Tech Memo was delivered to the Navy on 7 July 99.

Wells 667001 and 667002 were sampled in response to regulatory comments.

Draft Statement of Basis for AOC 503 was delivered to the Navy on 18 August 1999.

Task 2908 - Zone H (Continued)

Soil samples were collected at SWMU 196 (GEL 15 Area) as part of further nature and extent characterization.

The SWMU 196 and SWMU 17 work plan addendums were presented at a scoping meeting on September 29, 1999.

Task 2909 - Zone I

Page changes along with the AOC 681 Addendum to the Zone I RFI Report were submitted in July 1999.

EnSafe attempted to locate suspected sludge pit at SWMU 12.

CMS Site Selection Tech Memo was completed on 6 July 1999 and submitted to the Navy and SCDHEC. The memo proposed only two CMS sites for Zone I; AOC 685 and AOC 699/690.

Soil samples at AOC 685 were collected and analyzed for metals.

Task 2910 - Zone J

EnSafe is currently calculating the proposed ecological screening levels for submittal to SCDHEC and EPA review.

Task 2911 - Zone K

Surface water and sediment sampling near the Radisson Hotel was conducted in response to comments to the Zone K RFI Report.

The revised Design Document for Anaerobic-Aerobic Sequential Treatability for SWMU was submitted on 30 July 1999.

Preparations were under way for the implementation pilot test at SWMU 166.

The vertical profiling field investigation began at SWMU 163. Groundwater samples were collected and analyzed for VOCs.

EnSafe continued with the preparation of the AOC 607 CMS Report.

Task 2912 - Zone L

EnSafe began responding to comments from SCDHEC on the Draft Zone L RFI Report.

Response to Comments to the Draft Zone E RFI Report were resolved at a comment resolution meeting on 25 August 1999.

EnSafe continued with the nature and extent and human health risk characterization from the initial round of sampling in Zone L.

III. SUMMARIES OF FINDINGS

The latest findings to date are generally summarized and discussed in detail at the monthly project team meetings where handouts including data have been distributed in lieu of presenting the data quarterly in this report. Project team meeting minutes with the meeting handouts are maintained at the project team office located on Naval Base Charleston.

IV. DEVIATIONS FROM APPROVED WORK PLANS THIS REPORTING PERIOD

There were no known deviations from the approved RFI Work Plans for this reporting period.

V. SUMMARY OF CONTACTS WITH LOCAL COMMUNITY PUBLIC INTEREST GROUPS OR STATE GOVERNMENT

As of June 1997 the Restoration Advisory Board (RAB) agreed to meet on a bi-monthly basis. Minutes from the August 1999 meeting is enclosed as Attachment B.

VI. SUMMARY OF PROBLEMS OR POTENTIAL PROBLEMS AND ACTION TAKEN TO RECTIFY PROBLEMS

There were no problems or potential problems identified during this reporting period.

VII. KEY PROJECT PERSONNEL

EnSafe named Charlie Vernoy in assisting Todd Haverkost, the EnSafe CNC project manager, in the daily operations of the CNC project.

VIII. PROJECTED WORK FOR THE NEXT REPORTING PERIOD

Document Preparation and Data Evaluation:

- Resubmit the CMS report for SWMU 42/AOC 505
- Submit the technical memorandum for the SWMU 39 CMS report.
- Submit the CMS report for SWMU 44 and Minor sites.
- Submit the CMS reports for SWMUs 9 and 14 and AOC 503.
- Submit the CMS report for SWMU 17.
- Submit the SWMU 196 RFI Addendum.

Field Activities:

- Soil and/or groundwater sampling to resolve RFI comments for Zones E, F, G, I and K.
- Zone H CMS at SWMU 17
- Soil and groundwater sampling at SWMU 196.
- Zone K SWMU 166 treatability study.

IX. COPIES OF DAILY REPORTS, INSPECTION REPORTS, LABORATORY DATA

Daily activities are recorded in accordance with the Data Management Plan included as Section 14 of the Final Comprehensive Sampling and Analysis Plan. Photocopies of these daily records have not been included with this status report; however, this information is available for review upon request.

Per agreement with SCDHEC and EPA, hard copies of the analytical data are not being submitted. A copy of the data is maintained at the EnSafe office in Charleston and is available for review.

X. CORRECTIVE ACTION MANAGEMENT PLAN (CAMP)

As agreed upon by the project team, the CAMP will normally be updated and submitted quarterly as part of the *Quarterly RFI Status Report*. The baseline schedule presented in the CAMP was revised in October 1997 and submitted as Appendix F-15 of the RCRA Part B permit renewal submitted to SCDHEC. The CAMP had not been updated this quarter because the project team last revised the project schedule in April 1999. At the 13 October 1999 Project Team meeting, members will revise the project schedule and subsequently the CAMP will be revised as well.

As of September 1999

| <u>swmu/aoc</u> | <u>Loc</u> | <u>Well ID</u> | <u>New Lock Repairs needed as of 9/99</u> | <u>Completed</u> | <u>Action taken</u> | <u>Status as of 9/99</u> | <u>Action taken</u> | <u>Completed</u> |
|-----------------|------------|----------------|---|------------------|---------------------|--------------------------|---------------------|------------------|
| <i>ZONE A</i> | | | | | | | | |
| 38 | 1 | NBCA\038001 | | | | | | |
| 38 | 1D | NBCA\03801D | | | | | | |
| 38 | 2 | NBCA\038002 | | | | | | |
| 38 | 3 | NBCA\038003 | | | | | | |
| 39 | 1 | NBCA\039001 | | | | | | |
| 39 | 2 | NBCA\039002 | | | | | | |
| 39 | 3 | NBCA\039003 | | | | | | |
| 39 | 4 | NBCA\039004 | | | | | | |
| 39 | 4I | NBCA\03904I | | | | | | |
| 39 | 4D | NBCA\03904D | | | | | | |
| 39 | 5 | NBCA\039005 | | | | | | |
| 39 | 6 | NBCA\039006 | | | | | | |
| 39 | 7 | NBCA\039007 | | | | | | |
| 39 | 8 | NBCA\039008 | | | | | | |
| 39 | 8D | NBCA\03908D | | | | | | |
| 39 | 9 | NBCA\039009 | | | | | | |
| 39 | 9I | NBCA\03909I | | | | | | |
| 39 | 9D | NBCA\03909D | | | | | | |
| 39 | 10 | NBCA\039010 | | | | | | |
| 39 | 10I | NBCA\03910I | | | | | | |
| 39 | 10D | NBCA\03910D | | | | | | |
| 39 | 11 | NBCA\039011 | | | | | | |
| 39 | 12 | NBCA\039012 | | | | | | |
| 39 | 12I | NBCA\03912I | | | | | | |
| 39 | 12D | NBCA\03912D | | | | | | |
| 39 | 13 | NBCA\039013 | | | | | | |
| 39 | 13I | NBCA\03913I | | | | | | |
| 39 | 13D | NBCA\03913D | | | | | | |
| 39 | 14 | NBCA\039014 | | | | | | tag replaced |
| 39 | 14D | NBCA\03914D | | | | | | tag replaced |
| 39 | 15 | NBCA\039015 | | | | | | tag replaced |
| 39 | 15D | NBCA\03915D | | | | | | tag replaced |
| 39 | 16 | NBCA\039016 | | | | | | tag ordered |

| swmu/aoc | Loc | Well ID | New Lock Repairs needed as of 9/99 | Completed | Action taken | Status as of 9/99 | Action taken | Completed |
|----------|-----|-------------|------------------------------------|-----------|--------------|-------------------|--------------|-----------|
| 39 | 16I | NBCA\03916I | | | | | tag ordered | |
| 39 | 16D | NBCA\03916D | | | | | tag ordered | |
| 39 | 17 | NBCA\039017 | | | | | tag ordered | |
| 39 | 17I | NBCA\03917I | | | | | tag ordered | |
| 39 | 17D | NBCA\03917D | | | | | tag ordered | |
| 39 | 18 | NBCA\039018 | | | | | tag ordered | |
| 39 | 18I | NBCA\03918I | | | | | tag ordered | |
| 39 | 18D | NBCA\03918D | | | | | tag ordered | |
| 39 | 19 | NBCA\039019 | | | | | tag ordered | |
| 39 | 19I | NBCA\03919I | | | | | tag ordered | |
| 39 | 19D | NBCA\03919D | | | | | tag ordered | |
| 39 | 20 | NBCA\039020 | | | | | tag ordered | |
| 39 | 20I | NBCA\03920I | | | | | tag ordered | |
| 39 | 20D | NBCA\03920D | | | | | tag ordered | |
| 39 | 21 | NBCA\039021 | | | | | tag ordered | |
| 39 | 21I | NBCA\03921I | | | | | tag ordered | |
| 39 | 21D | NBCA\03921D | | | | | tag ordered | |
| 39 | PZ1 | NBCA\039PZ1 | | | | | | |
| 39 | PZ2 | NBCA\039PZ2 | | | | | | |
| 39 | PZ3 | NBCA\039PZ3 | | | | | | |
| 39 | PZ4 | NBCA\039PZ4 | | | | | | |
| 39 | PZ5 | NBCA\039PZ5 | | | | | | |
| 42 | 1 | NBCA\042001 | | | | | | |
| 42 | 2 | NBCA\042002 | | | | | | |
| 42 | 3 | NBCA\042003 | | | | | tag replaced | |
| 43 | 1 | NBCA\043001 | | | | | tag replaced | |
| 505 | 1 | NBCA\505001 | | | | | | |
| 506 | 1 | NBCA\506001 | | | | | | |
| GRID | 1 | NBCA\GDA001 | | | | | | |
| GRID | 1D | NBCA\GDA01D | | | | | | |
| GRID | 2 | NBCA\GDA002 | | | | | | |
| GRID | 2D | NBCA\GDA02D | | | | | | |
| GRID | 3 | NBCA\GDA003 | | | | | | |
| GRID | 3D | NBCA\GDA03D | | | | | | |
| 2 | 1 | NBCA\002001 | | | | | | |

| <u>swmu/aoc</u> | <u>Loc</u> | <u>Well ID</u> | <u>New Lock Repairs needed as of 9/99</u> | <u>Completed</u> | <u>Action taken</u> | <u>Status as of 9/99</u> | <u>Action taken</u> | <u>Completed</u> |
|-----------------|------------|----------------|---|------------------|---------------------|--------------------------|---------------------|------------------|
| 2 | 2 | NBCA\002002 | | | | | tag ordered | |
| 2 | 3 | NBCA\002003 | | | | | | |
| 2 | 4 | NBCA\002004 | | | | | tag ordered | |
| 2 | 5 | NBCA\002005 | | | | | | |
| 2 | 6 | NBCA\002006 | | | | | | |
| 2 | 7 | NBCA\002007 | | | | | tag ordered | |
| 2 | 8 | NBCA\002008 | | | | | tag ordered | |
| ZONE B | | | | | | | | |
| GDB | 1 | NBCB\GDB001 | | | | | | |
| GDB | 1 | NBCB\GDB01D | | | | | | |
| GDB | 2 | NBCB\GDB002 | | | | | | |
| GDB | 3 | NBCB\GDB003 | | | | | | |
| GDB | 4 | NBCB\GDB004 | | | | | | |
| GDB | 4 | NBCB\GDB04D | | | | | | |
| ZONE C | | | | | | | | |
| 44 | 1 | NBCC\044001 | | | | | | |
| 44 | 2 | NBCC\044002 | | | | | | |
| 44 | 3 | NBCC\044003 | | | | | | |
| 44 | 4 | NBCC\044004 | | | | | | |
| 44 | 5 | NBCC\044005 | | | | | | |
| 44 | 6 | NBCC\044006 | | | | | | |
| 44 | 7 | NBCC\044007 | | | | | | |
| 44 | 8 | NBCC\044008 | | | | | | |
| 47 | 1 | NBCC\047001 | | | | | | |
| 47 | 2 | NBCC\047002 | | | | | | |
| 47 | 3 | NBCC\047003 | | | | | | |
| 47 | 4 | NBCC\047004 | | | | | | |
| 47 | 5 | NBCC\047005 | | | | | | |
| 47 | 6 | NBCC\047006 | | | | | | |
| 47 | 7 | NBCC\047007 | | | | | | |
| 47 | 8 | NBCC\047008 | | | | | | |
| 47 | 9 | NBCC\047009 | | | | | | |
| 47 | 10 | NBCC\047010 | | | | | | |
| 47 | 11 | NBCC\047011 | | | | | | |
| 47 | 12 | NBCC\047012 | | | | | | |

| <u>swmu/aoc</u> | <u>Loc</u> | <u>Well ID</u> | <u>New Lock Repairs needed as of 9/99</u> | <u>Completed Action taken</u> | <u>Status as of 9/99</u> | <u>Action taken</u> | <u>Completed</u> |
|-----------------|------------|----------------|---|-------------------------------|--------------------------|---------------------------|------------------|
| 47 | 13 | NBCC\047013 | | | | | |
| 47 | 15 | NBCC\047015 | | | | | |
| 510 | 1 | NBCC\510001 | | | | | |
| 510 | 2 | NBCC\510002 | | | | | |
| 523 | 1 | NBCC\523001 | | | | | |
| 523 | 2 | NBCC\523002 | | | | | |
| GDC | 1 | NBCC\GDC001 | | | | | |
| GDC | 1D | NBCC\GDC01D | | | | | |
| GDC | 2 | NBCC\GDC002 | | | | | |
| GDC | 2D | NBCC\GDC02D | | | | | |
| 508 | 1 | NBCC\508003 | | | | | |
| 511 | 2 | NBCC\511002 | | | | | |
| 512 | 2 | NBCC\512002 | | | | | |
| 512 | 3 | NBCC\512003 | | | | | |
| 700 | 1 | NBCC\700001 | | | | | |
| ZONE D | | | | | | | |
| GDD | 1 | NBCD\GDD001 | | | | | |
| GDD | 1 | NBCD\GDD01D | | | | | |
| ZONE E | | | | | | | |
| 18 | 1 | NBCE\018001 | | | | | |
| 18 | 2 | NBCE\018002 | | | | | |
| 21 | 1 | NBCE\021001 | | | | Gone | |
| 21 | 2 | NBCE\021002 | | | | Gone | |
| 21 | 3 | NBCE\021003 | | | | Gone | |
| 23 | 1 | NBCE\023001 | | | | East side X31 Street | |
| 23 | 1D | NBCE\02301D | | | | East side X31 Street | |
| 25 | 1 | NBCE\025001 | Foundation cracked | | | | |
| 25 | 2 | NBCE\025002 | Needs label plate - Foundation cracked | | | | |
| 25 | 3 | NBCE\025003 | Needs label plate | | | | |
| 25 | 4 | NBCE\025004 | Needs label plate | | | | |
| 53 | 1 | NBCE\053001 | Road Side B-35 needs lock | | | | |
| 54 | 2 | NBCE\054002 | | | | | |
| 63 | 1 | NBCE\063001 | | | | North side X31 street 226 | |
| 63 | 2 | NBCE\063002 | North side 226 - No label plate | | | | |
| 65 | 1 | NBCE\065001 | | | | | |

| swmu/aoc | Loc | Well ID | New Lock Repairs needed as of 9/99 | Completed Action taken | Status as of 9/99 | Action taken | Completed |
|----------|-----|-------------|---|------------------------|--------------------------|--------------|-----------|
| 65 | 2 | NBCE\065002 | | | | | |
| 65 | 3 | NBCE\065003 | | | Good | | |
| 65 | 4 | NBCE\065004 | | | Good | | |
| 65 | 5 | NBCE\065005 | | | Good | | |
| 65 | 6 | NBCE\065006 | | | Good | | |
| 65 | 4D | NBCE\06504D | | | Good | | |
| 65 | 7 | NBCE\065007 | | | | | |
| 65 | 8 | NBCE\065008 | Inaccessible | | Inaccessible | | |
| 67 | 1 | NBCE\067001 | | | PHD 1st well outside X31 | | |
| 67 | 2 | NBCE\067002 | East Side X31 street - Needs pad lock cut & replaced | | | | |
| 70 | 1 | NBCE\070001 | Needs label plate | | | | |
| 70 | 2 | NBCE\070002 | | | Good | | |
| 70 | 1D | NBCE\07001D | Needs label plate | | | | |
| 83 | 1 | NBCE\083001 | | | Good | | |
| 83 | 2 | NBCE\083002 | Needs new lock and clamp down device - Concrete cracked | | | | |
| 84 | 1 | NBCE\084001 | Needs new lock | | | | |
| 84 | 2 | NBCE\084002 | Needs locking device | | | | |
| 97 | 1 | NBCE\097001 | | | OK-Blue parkway | | |
| 100 | 1 | NBCE\100001 | Inaccessible | | | | |
| 102 | 1 | NBCE\102001 | | | | | |
| 106 | 1 | NBCE\106001 | | | | | |
| 106 | 1D | NBCE\10601D | | | | | |
| 145 | 1 | NBCE\145001 | | | Ok | | |
| 145 | 2 | NBCE\145002 | Lock missing | | | | |
| 145 | 3 | NBCE\145003 | | | Ok | | |
| 145 | 1D | NBCE\14501D | | | Ok - Blue Parkway | | |
| 172 | 1 | NBCE\172001 | No tag | | | | |
| 172 | 2 | NBCE\172002 | Inaccessible | | | | |
| 172 | 2D | NBCE\17202D | Inaccessible | | | | |
| 525 | 1 | NBCE\525001 | Cracked cover, plate | | | | |
| 526 | 1 | NBCE\526001 | | | | | |
| 526 | 2 | NBCE\526002 | Road side B35 - Needs lock | | | | |
| 526 | 1D | NBCE\52601D | | | | | |
| 526 | 3 | NBCE\526003 | Can't find | | | | |
| 528 | 1 | NBCE\528001 | | | Behind B35 parking lot | | |

| <u>swmu/aoc</u> | <u>Loc</u> | <u>Well ID</u> | <u>New Lock Repairs needed as of 9/99</u> | <u>Completed Action taken</u> | <u>Status as of 9/99</u> | <u>Action taken</u> | <u>Completed</u> |
|-----------------|------------|----------------|---|---|---|---------------------|------------------|
| 530 | 1 | NBCE\530001 | | Not marked - North side BHD 226 Facility 31 | | | |
| 530 | 2 | NBCE\530002 | | | Bldg 35 East end street | | |
| 530 | 1D | NBCE\53001D | | | Outside X31 door | | |
| 530 | 2D | NBCE\53002D | | | Bldg 35 East end street | | |
| 538 | 1 | NBCE\538001 | | Bldg 226 BHD cover plate broken B-35 North End | | | |
| 538 | 1D | NBCE\53801D | | | Bldg 226 BHD across from B-35 North end | | |
| 539 | 1 | NBCE\539001 | | BHX - Needs pad lock | | | |
| 539 | 1D | NBCE\53901D | | | BHD X31 | | |
| 542 | 1 | NBCE\542001 | | Needs pad lock BHD X31 | | | |
| 542 | 2 | NBCE\542002 | | Front X31 North side B222 - Needs plug | | | |
| 542 | 3 | NBCE\542003 | | Needs old lock cut & replaced - Bldg 226 BHP | | | |
| 542 | 4 | NBCE\542004 | | Cover plate broken - Needs plug FTB31 | | | |
| 543 | 1 | NBCE\543001 | | East side B31 Road side - Needs pad lock cut & replaced | | | |
| 549 | 1 | NBCE\549001 | | Needs lock front Bldg 95 | | | |
| 549 | 2 | NBCE\549002 | | | Alley B5 & X31 | | |
| 549 | 3 | NBCE\549003 | | | Alley X31 | | |
| 550 | 1 | NBCE\550001 | | | | | |
| 551 | 1 | NBCE\551001 | | | Good | | |
| 551 | 2 | NBCE\551002 | | | Good | | |
| 551 | 2D | NBCE\55102D | | | Good | | |
| 559 | 1 | NBCE\559001 | | | Good | | |
| 559 | 2 | NBCE\559002 | | | Good | | |
| 559 | 3 | NBCE\559003 | | | Good | | |
| 559 | 4 | NBCE\559004 | | Needs label plate | | | |
| 559 | 5 | NBCE\559005 | | | Good | | |
| 559 | 2D | NBCE\55902D | | | | | |
| 559 | 3D | NBCE\55903D | | | | | |
| 559 | 4D | NBCE\55904D | | Needs label plate - Cap lock needs replaced | | | |
| 563 | 1 | NBCE\563001 | | ID Plate loose - Hard to read | | | |
| 563 | 2 | NBCE\563002 | | ID Plate loose - Hard to read - Missing 2 bolts | | | |
| 563 | 3 | NBCE\563003 | | Needs well cover and ID plate | | | |
| 563 | 1D | NBCE\56301D | | ID Plate loose - Hard to read | | | |
| 566 | 1 | NBCE\566001 | | Bolts missing / Rusty lock | | | |
| 566 | 1D | NBCE\56601D | | No tag | | | |
| 569 | 1 | NBCE\569001 | | | Good | | |

| <u>swmu/aoc</u> | <u>Loc</u> | <u>Well ID</u> | <u>New Lock Repairs needed as of 9/99</u> | <u>Completed Action taken</u> | <u>Status as of 9/99</u> | <u>Action taken</u> | <u>Completed</u> |
|-----------------|------------|----------------|---|--|--------------------------|---------------------|------------------|
| 569 | 2 | NBCE\569002 | | Cover plate broken | | | |
| 569 | 1D | NBCE\56901D | | Needs new lock | | | |
| 570 | 1 | NBCE\570001 | | ID plate loose - Needs new lock | | | |
| 570 | 2 | NBCE\570002 | | | Good | | |
| 570 | 3 | NBCE\570003 | | | Good | | |
| 570 | 4 | NBCE\570004 | | | Good | | |
| 570 | 2D | NBCE\57002D | | | Good | | |
| 570 | 3D | NBCE\57003D | | | Good | | |
| 572 | 1 | NBCE\572001 | | ID plate loose - Hard to read - Needs new lock | | | |
| 572 | 2 | NBCE\572002 | | ID plate loose - Hard to read - Broke 1 bolt off | | | |
| 572 | 3 | NBCE\572003 | | Hard to read | | | |
| 573 | 1 | NBCE\573001 | | Needs new lock | | | |
| 573 | 1D | NBCE\57301D | | | Good | | |
| 574 | 1 | NBCE\574001 | | | Good | | |
| 574 | 2 | NBCE\574002 | | | Good | | |
| 574 | 3 | NBCE\574003 | | Needs new lock - ID plate reattached | | | |
| 574 | 1D | NBCE\57401D | | | | | |
| 576 | 1 | NBCE\576001 | | ID plate loose | | | |
| 576 | 2 | NBCE\576002 | | | Ok | | |
| 576 | 2D | NBCE\57602D | | Replace lock | | | |
| 580 | 1 | NBCE\580001 | | Can't read plate - Needs 1 bolt | | | |
| 580 | 2 | NBCE\580002 | | | Good | | |
| 580 | 1D | NBCE\58001D | | Needs new lock & gasket - ID plate can't read | | | |
| 583 | 1 | NBCE\583001 | | | | | |
| 583 | 2 | NBCE\583002 | | | Ok - Tag clear | | |
| 583 | 3 | NBCE\583003 | | | Ok | | |
| 583 | 2D | NBCE\58302D | | No tag - Needs plug & lock | | | |
| 586 | 1 | NBCE\586001 | | Needs new plug & lock | | | |
| 590 | 1 | NBCE\590001 | | | Ok | | |
| 590 | 1D | NBCE\59001D | | | Ok | | |
| 596 | 1 | NBCE\596001 | | | | | |
| 596 | 2 | NBCE\596002 | | | | | |
| 596 | 3 | NBCE\596003 | | | | | |
| 596 | 4 | NBCE\596004 | | Well cap bad | | | |
| 596 | 1D | NBCE\59601D | | | | | |

| swmu/aoc | Loc | Well ID | New Lock Repairs needed as of 9/99 | Completed Action taken | Status as of 9/99 | Action taken | Completed |
|----------|-----|-------------|---|------------------------|-------------------|--------------|-----------|
| 596 | 4D | NBCE\59604D | | | | | |
| 598 | 1 | NBCE\598001 | Well cap bad - No label - Pad cracked | | | | |
| 599 | 1 | NBCE\599001 | | | | | |
| 605 | 1 | NBCE\605001 | | | | | |
| 605 | 2 | NBCE\605002 | | | Removed | | |
| 605 | 3 | NBCE\605003 | | | | | |
| GDE | 1 | NBCE\GDE001 | No label | | | | |
| GDE | 2 | NBCE\GDE002 | | | | | |
| GDE | 3 | NBCE\GDE003 | Surface crack | | | | |
| GDE | 4 | NBCE\GDE004 | 2 cover bolts rung off | | | | |
| GDE | 5 | NBCE\GDE005 | Canopy covering cap | | | | |
| GDE | 6 | NBCE\GDE006 | | | Ok | | |
| GDE | 7 | NBCE\GDE007 | | | | | |
| GDE | 8 | NBCE\GDE008 | | | | | |
| GDE | 9 | NBCE\GDE009 | | | Ok - Blue Parkway | | |
| GDE | 10 | NBCE\GDE010 | | | Ok | | |
| GDE | 11 | NBCE\GDE011 | Inaccessible | | | | |
| GDE | 12 | NBCE\GDE012 | No tag | | | | |
| GDE | 13 | NBCE\GDE013 | Plug broken | | | | |
| GDE | 14 | NBCE\GDE014 | Needs label plate | | | | |
| GDE | 15 | NBCE\GDE015 | | | | | |
| GDE | 16 | NBCE\GDE016 | Bolt on cover is stripped - Could not remove cover | | | | |
| GDE | 17 | NBCE\GDE017 | Cover size hole in frame for cover mount for 1 bolt needs fixed | | | | |
| GDE | 18 | NBCE\GDE018 | | | BHD B35 Alleyway | | |
| GDE | 19 | NBCE\GDE019 | Bldg 35 Ramp needs lock | | | | |
| GDE | 20 | NBCE\GDE020 | Cover plate destroyed | | | | |
| GDE | 21 | NBCE\GDE021 | | | | | |
| GDE | 22 | NBCE\GDE022 | | | | | |
| GDE | 23 | NBCE\GDE023 | | | | | |
| GDE | 24 | NBCE\GDE024 | | | | | |
| GDE | 25 | NBCE\GDE025 | | | | | |
| GDE | 26 | NBCE\GDE026 | | | Good | | |
| GDE | 27 | NBCE\GDE027 | Bldg 07- Needs pad lock | | | | |
| GDE | 28 | NBCE\GDE028 | Not there | | Not there | | |
| GDE | 29 | NBCE\GDE029 | | | Good | | |

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|----------|-----|-------------|------------------------------------|-----------|--------------|-------------------|--------------|-----------|
| GDE | 30 | NBCE\GDE030 | | | | Good | | |
| GDE | 1D | NBCE\GDE01D | | | | | | |
| GDE | 2D | NBCE\GDE02D | | | | | | |
| GDE | 2D1 | NBCE\GDE2D1 | | | | | | |
| GDE | 3D | NBCE\GDE03D | Surface crack | | | | | |
| GDE | 4D | NBCE\GDE04D | | | | | | |
| GDE | 5D | NBCE\GDE05D | No bolts in cover | | | | | |
| GDE | 6D | NBCE\GDE06D | | | | Ok - Blue Parkway | | |
| GDE | 7D | NBCE\GDE07D | | | | | | |
| GDE | 8D | NBCE\GDE08D | | | | | | |
| GDE | 9D | NBCE\GDE09D | | | | Ok - Blue Parkway | | |
| GDE | 10D | NBCE\GDE10D | | | | Ok | | |
| GDE | 11D | NBCE\GDE11D | | | | Ok - Blue Parkway | | |
| GDE | 12D | NBCE\GDE12D | | | | Ok | | |
| GDE | 13D | NBCE\GDE13D | | | | Ok | | |
| GDE | 14D | NBCE\GDE14D | Needs label plate | | | | | |
| GDE | 15D | NBCE\GDE15D | Foundation cracked | | | | | |
| GDE | 16D | NBCE\GDE16D | | | | Good | | |
| GDE | 17D | NBCE\GDE17D | | | | Good | | |
| GDE | 18D | NBCE\GDE18D | | | | BHD B35 Alleyway | | |
| GDE | 19D | NBCE\GDE19D | Bldg 35 Cross Street - Needs lock | | | | | |
| GDE | 20D | NBCE\GDE20D | | | | | | |
| GDE | 21D | NBCE\GDE21D | | | | | | |
| GDE | 22D | NBCE\GDE22D | | | | | | |
| GDE | 23D | NBCE\GDE23D | | | | | | |
| GDE | 24D | NBCE\GDE24D | | | | | | |
| GDE | 25D | NBCE\GDE25D | | | | Good | | |
| GDE | 26D | NBCE\GDE26D | | | | | | |
| GDE | 27D | NBCE\GDE27D | | | | Bldg 07 | | |
| GDE | 28D | NBCE\GDE28D | | | | | | |
| GDE | 29D | NBCE\GDE29D | | | | Good | | |
| GDE | 30D | NBCE\GDE30D | | | | Good | | |
| 54 | 1 | NBCE\054001 | Gone | | | Gone | | |
| 54 | 2 | NBCE\054002 | | | | | | |
| 54 | 3 | NBCE\054003 | Gone | | | Gone | | |

| <u>swmu/aoc</u> | <u>Loc</u> | <u>Well ID</u> | <u>New Lock Repairs needed as of 9/99</u> | <u>Completed Action taken</u> | <u>Status as of 9/99</u> | <u>Action taken</u> | <u>Completed</u> |
|-----------------|------------|----------------|---|-------------------------------|---------------------------|---------------------|------------------|
| ZONE F | | | | | | | |
| 109 | 1 | NBCF\109001 | | | Ok | | |
| 109 | 2 | NBCF\109002 | | | Ok | | |
| 607 | 1 | NBCF\607001 | | | Ok | | |
| 607 | 2 | NBCF\607002 | | | Ok | | |
| 607 | 3 | NBCF\607003 | | | | | |
| 607 | 4 | NBCF\607004 | | | | | |
| 607 | 6 | NBCF\607006 | | | Ok | | |
| 607 | 7 | NBCF\607007 | | | Ok | | |
| 607 | 1D | NBCF\60701D | | | Ok | | |
| 607 | 1I | NBCF\60701I | | | | | |
| 607 | 2D | NBCF\60702D | | | Ok | | |
| 607 | 2I | NBCF\60702I | | | | | |
| 607 | 3D | NBCF\60703D | Catch threads, one bolt missing | | | | |
| 607 | 3I | NBCF\60703I | | | | | |
| 607 | 4D | NBCF\60704D | | | | | |
| 607 | 4I | NBCF\60704I | | | | | |
| 607 | 5D | NBCF\60705D | | | Ok | | |
| 607 | 6I | NBCF\60706I | | | | | |
| 607 | 6D | NBCF\60706D | | | | | |
| 607 | 8 | NBCF\607008 | | | Ok | | |
| 607 | 9 | NBCF\607009 | | | One bolt missing in cover | | |
| 607 | 10 | NBCF\607010 | | | | | |
| 607 | 11 | NBCF\607011 | | | | | |
| 607 | 12 | NBCF\607012 | | | | | |
| 607 | 13 | NBCF\607013 | | | | | |
| 607 | 14 | NBCF\607014 | | | | | |
| 607 | 15 | NBCF\607015 | | | | | |
| 607 | 16 | NBCF\607016 | | | | | |
| 607 | 17 | NBCF\607017 | | | | | |
| 607 | PW1 | NBCF\607PW1 | | | | | |
| 607 | P01 | NBCF\607P01 | | | | | |
| 607 | P1D | NBCF\607P1D | | | | | |
| 607 | P02 | NBCF\607P02 | | | | | |
| 607 | P2D | NBCF\607P2D | | | | | |

| <u>swmu/aoc</u> | <u>Loc</u> | <u>Well ID</u> | <u>New Lock Repairs needed as of 9/99</u> | <u>Completed Action taken</u> | <u>Status as of 9/99</u> | <u>Action taken</u> | <u>Completed</u> |
|-----------------|------------|----------------|---|---|--------------------------|---------------------|------------------|
| 609 | 1 | NBCF\609001 | | Not marked - Wrong lock - Small dolphin lock | | | |
| 609 | 2 | NBCF\609002 | | Not labeled - Wrong lock - Small dolphin lock | | | |
| 613 | 1 | NBCF\613001 | | No label | | | |
| 613 | 3 | NBCF\613003 | | Covered vault, inaccessible | | | |
| 613 | 4 | NBCF\613004 | | In asphalt, inaccessible | | | |
| 613 | 5 | NBCF\613005 | | | | | |
| 613 | 2D | NBCF\61302D | | No pad | | | |
| 613 | 6 | NBCF\613006 | | Marked OS - FDS Well | | | |
| 613 | 7 | NBCF\613007 | | | | | |
| 617 | 1 | NBCF\617001 | | Pad cracked | | | |
| 617 | 2 | NBCF\617002 | | No label | | | |
| 617 | 3 | NBCF\617003 | | No label, dolphin lock | | | |
| 619 | 1 | NBCF\619001 | | | | | |
| 619 | 2 | NBCF\619002 | | | | | |
| 619 | 3 | NBCF\619003 | | Unreadable label plate | | | |
| 620 | 1 | NBCF\620001 | | Cracked pad | | | |
| 620 | 2 | NBCF\620002 | | Cracked pad | | | |
| 620 | 3 | NBCF\620003 | | | | | |
| 620 | 4 | NBCF\620004 | | No label | | | |
| GDF | 1 | NBCF\GDF001 | | Not labeled | | | |
| GDF | 1D | NBCF\GDF01D | | Not labeled | | | |
| ZONE G | | | | | | | |
| 3 | 1 | NBCG\003001 | | | | | |
| 3 | 2 | NBCG\003002 | | | | | |
| 3 | 3 | NBCG\003003 | | | | | |
| 6 | 1 | NBCG\006001 | | | | | |
| 6 | 2 | NBCG\006002 | | | | | |
| 6 | 3 | NBCG\006003 | | | | | |
| 6 | 4 | NBCG\006004 | | | | | |
| 6 | 5 | NBCG\006005 | | | | | |
| 6 | 6 | NBCG\006006 | | | | | |
| 6 | 7 | NBCG\006007 | | | | | |
| 8 | 1 | NBCG\008001 | | | | | |
| 8 | 2 | NBCG\008002 | | No well tag | | | |
| 8 | 3 | NBCG\008003 | | | | | |

| swmu/aoc | Loc | Well ID | New Lock Repairs needed as of 9/99 | Completed Action taken | Status as of 9/99 | Action taken | Completed |
|------------------|-----|-------------|------------------------------------|------------------------|-------------------|--------------|-----------|
| 8 | 4 | NBCG\008004 | | | | | |
| 8 | 5 | NBCG\008005 | | | | | |
| 8 | 6 | NBCG\008006 | | | | | |
| 11 | 1 | NBCG\011001 | Well cap lock | | | | |
| 11 | 2 | NBCG\011002 | Lock | | | | |
| 11 | 3 | NBCG\011003 | Ok | | Ok | | |
| 24 | 1 | NBCG\024001 | Not labeled | | | | |
| 24 | 2 | NBCG\024002 | | | Ok | | |
| 24 | 3 | NBCG\024003 | | | Ok | | |
| 24 | 4 | NBCG\024004 | Needs new lock | | | | |
| 120 | 1 | NBCG\120001 | | | | | |
| 120 | 2 | NBCG\120002 | | | | | |
| 120 | 3 | NBCG\120003 | | | | | |
| 636 | 1 | NBCG\636001 | | | | | |
| 637 | 1 | NBCG\637001 | Can't close well cap and lock | | | | |
| 637 | 2 | NBCG\637002 | | | | | |
| 637 | 3 | NBCG\637003 | | | | | |
| 638 | 1 | NBCG\638001 | | | | | |
| 706 | 1 | NBCG\706001 | Not labeled | | | | |
| GDG | 1 | NBCG\GDG001 | No access to | | | | |
| GDG | 1D | NBCG\GDG01D | No access to | | | | |
| GDG | 2 | NBCG\GDG002 | | | Ok | | |
| GDG | 2D | NBCG\GDG02D | | | Ok | | |
| FDS WELLS | | | | | | | |
| FDS | 1A | NBCG\FDS01A | | | Ok | | |
| FDS | 1B | NBCG\FDS01B | No tag | | | | |
| FDS | 1C | NBCG\FDS01C | | | Ok | | |
| FDS | 1D | NBCG\FDS01D | | | Ok | | |
| FDS | 1E | NBCG\FDS01E | | | | | |
| FDS | 1F | NBCG\FDS01F | No well plate | | | | |
| FDS | 2A | NBCG\FDS02A | Pad cracked | | | | |
| FDS | 2B | NBCG\FDS02B | Pad cracked - Need bolts for lid | | | | |
| FDS | 2C | NBCG\FDS02C | Lock broken - Needs bolt | | | | |
| FDS | 2D | NBCG\FDS02D | No well tag | | | | |
| FDS | 3A | NBCG\FDS03A | | | | | |

| swmu/aoc | Loc | Well ID | New Lock Repairs needed as of 9/99 | Completed Action taken | Status as of 9/99 | Action taken | Completed |
|----------|-----|-------------|---|------------------------|-------------------|--------------|-----------|
| FDS | 3B | NBCG\FDS03B | | | | | |
| FDS | 3C | NBCG\FDS03C | | | | | |
| FDS | 4A | NBCG\FDS04A | No well tag | | | | |
| FDS | 4B | NBCG\FDS04B | Lock sticks | | | | |
| FDS | 4C | NBCG\FDS04C | | | Ok | | |
| FDS | 5A | NBCG\FDS05A | Lock full of mud - needs bolts | | | | |
| FDS | 5B | NBCG\FDS05B | | | | | |
| FDS | 6A | NBCG\FDS06A | | | | | |
| FDS | 6B | NBCG\FDS06B | | | | | |
| FDS | 6C | NBCG\FDS06C | | | | | |
| FDS | 7A | NBCG\FDS07A | Full of bentonite | | | | |
| FDS | 7B | NBCG\FDS07B | | | | | |
| FDS | 7C | NBCG\FDS07C | Could not open - Flush mount sealed tight | | | | |
| FDS | 7D | NBCG\FDS07D | | | | | |
| FDS | 7E | NBCG\FDS07E | Could not find - covered by ingots | | | | |
| FDS | 8A | NBCG\FDS08A | Replace lock - Need cutter | | | | |
| FDS | 8B | NBCG\FDS08B | Not labeled | | | | |
| FDS | 8C | NBCG\FDS08C | Not labeled - Lock missing | | | | |
| FDS | 8D | NBCG\FDS08D | Lock | | | | |
| FDS | 9A | NBCG\FDS09A | | | Ok | | |
| FDS | 9B | NBCG\FDS09B | | | Ok | | |
| FDS | 9C | NBCG\FDS09C | | | Ok | | |
| FDS | 10A | NBCG\FDS10A | | | | | |
| FDS | 10B | NBCG\FDS10B | No bolts | | | | |
| FDS | 10C | NBCG\FDS10C | No bolts | | | | |
| FDS | 11A | NBCG\FDS11A | | | | | |
| FDS | 11B | NBCG\FDS11B | | | | | |
| FDS | 11C | NBCG\FDS11C | | | | | |
| FDS | 12A | NBCG\FDS12A | | | Ok | | |
| FDS | 12B | NBCG\FDS12B | Lock | | | | |
| FDS | 13A | NBCG\FDS13A | Lock | | | | |
| FDS | 13B | NBCG\FDS13B | Lock | | | | |
| FDS | 13C | NBCG\FDS13C | | | Ok | | |
| FDS | 13D | NBCG\FDS13D | Lock | | | | |
| FDS | 13E | NBCG\FDS13E | | | Ok | | |

| <u>swmu/aoc</u> | <u>Loc</u> | <u>Well ID</u> | <u>New Lock Repairs needed as of 9/99</u> | <u>Completed Action taken</u> | <u>Status as of 9/99</u> | <u>Action taken</u> | <u>Completed</u> |
|------------------|------------|----------------|---|--|--------------------------|---------------------|------------------|
| FDS | 14A | NBCG\FDS14A | | New well cap | | | |
| FDS | 14B | NBCG\FDS14B | | | Ok | | |
| FDS | 14C | NBCG\FDS14C | | | Ok | | |
| FDS | 15A | NBCG\FDS15A | | Not labeled | | | |
| FDS | 15B | NBCG\FDS15B | | Not labeled | | | |
| FDS | 15C | NBCG\FDS15C | | Not labeled | | | |
| FDS | 16A | NBCG\FDS16A | | Lock rusted - Locked gate - lock replace | | | |
| FDS | 16B | NBCG\FDS16B | | | | | |
| FDS | 16C | NBCG\FDS16C | | | | | |
| FDS | 17A | NBCG\FDS17A | | No label | | | |
| FDS | 17B | NBCG\FDS17B | | Cracked Pad - No label | | | |
| FDS | 18 | NBCG\FDS018 | | Needs new plug & lock | | | |
| FDS | 18A | NBCG\FDS18A | | | | | |
| SME Wells | | | | | | | |
| | | SME001 | | No lock - Not labeled - Cover missing - Cap broken | | | |
| | | SME003 | | No lock (well unsecured) - Cover missing - Well cap broken | | | |
| | | SME004 | | Not labeled - Needs new well cap & lock | | | |
| | | SME005 | | Not labeled - 3" cap broken PVC | | | |
| | | SME006 | | Not labeled | | | |
| | | SME007 | | Not labeled - Needs new well cap & lock | | | |
| | | SME008 | | Lock rusted - Locked gate - Lock replace | | | |
| ZONE H | | | | | | | |
| 9 | 1 | NBCH\009001 | | | | | |
| 9 | 2 | NBCH\009002 | | Lid broken | | | |
| 9 | 3 | NBCH\009003 | | | | | |
| 9 | 4 | NBCH\009004 | | | | | |
| 9 | 5 | NBCH\009005 | | | | | |
| 9 | 6 | NBCH\009006 | | | | | |
| 9 | 7 | NBCH\009007 | | | | | |
| 9 | 8 | NBCH\009008 | | | | | |
| 9 | 9 | NBCH\009009 | | | | | |
| 9 | 10 | NBCH\009010 | | | | | |
| 9 | 11 | NBCH\009011 | | | | | |
| 9 | 12 | NBCH\009012 | | | | | |
| 9 | 13 | NBCH\009013 | | | | | |

| swmu/aoc | Loc | Well ID | New Lock Repairs needed as of 9/99 | Completed | Action taken | Status as of 9/99 | Action taken | Completed |
|----------|-----|-------------|------------------------------------|-----------|--------------|-------------------|--------------|-----------|
| 9 | 14 | NBCH\009014 | | | | | | |
| 9 | 15 | NBCH\009015 | | | | | | |
| 9 | 16 | NBCH\009016 | Lock | | | | | |
| 9 | 17 | NBCH\009017 | | | | | | |
| 9 | 18 | NBCH\009018 | | | | | | |
| 9 | 19 | NBCH\009019 | | | | | | |
| 9 | 20 | NBCH\009020 | | | | | | |
| 9 | 21 | NBCH\009021 | | | | | | |
| 9 | 22 | NBCH\009022 | | | | | | |
| 9 | 23 | NBCH\009023 | | | | | | |
| 9 | 24 | NBCH\009024 | | | | | | |
| 9 | 25 | NBCH\009025 | | | | | | |
| 9 | 26 | NBCH\009026 | | | | | | |
| 9 | 121 | NBCH\009121 | | | | | | |
| 9 | 1D | NBCH\00901D | | | | | | |
| 9 | 2D | NBCH\00902D | Lid won't close | | | | | |
| 9 | 3D | NBCH\00903D | | | | | | |
| 9 | 4D | NBCH\00904D | | | | | | |
| 9 | 5D | NBCH\00905D | | | | | | |
| 9 | 6D | NBCH\00906D | | | | | | |
| 9 | 7D | NBCH\00907D | | | | | | |
| 9 | 8D | NBCH\00908D | | | | | | |
| 9 | 12D | NBCH\00912D | | | | | | |
| 9 | 23D | NBCH\00923D | | | | | | |
| 9 | 24D | NBCH\00924D | | | | | | |
| 9 | 25D | NBCH\00925D | | | | | | |
| 9 | 26D | NBCH\00926D | | | | | | |
| 9 | 27 | NBCH\009027 | | | | | | |
| 9 | 28 | NBCH\009028 | | | | | | |
| 9 | 29 | NBCH\009029 | | | | | | |
| 9 | 30 | NBCH\009030 | | | | | | |
| 9 | MW4 | NBCH\009MW4 | | | | | | |
| 13 | 1 | NBCH\013001 | | | | | | |
| 13 | 2 | NBCH\013002 | | | | | | |
| 13 | 3 | NBCH\013003 | | | | | | |

| <u>swmu/aoc</u> | <u>Loc</u> | <u>Well ID</u> | <u>New Lock Repairs needed as of 9/99</u> | <u>Completed Action taken</u> | <u>Status as of 9/99</u> | <u>Action taken</u> | <u>Completed</u> |
|-----------------|------------|----------------|---|-------------------------------|--------------------------|---------------------|------------------|
| 13 | 4 | NBCH\013004 | | | | | |
| 13 | 5 | NBCH\013005 | | | | | |
| 13 | 6 | NBCH\013006 | | | | | |
| 13 | 7 | NBCH\013007 | | | | | |
| 14 | 1 | NBCH\014001 | | | | | |
| 14 | 2 | NBCH\014002 | | | | | |
| 14 | 3 | NBCH\014003 | | | | | |
| 14 | 4 | NBCH\014004 | | | | | |
| 14 | 5 | NBCH\014005 | | | | | |
| 14 | 6 | NBCH\014006 | | | | | |
| 14 | 7 | NBCH\014007 | | | | | |
| 14 | 1D | NBCH\01401D | | | | | |
| 14 | 2D | NBCH\01402D | | | | | |
| 14 | 3D | NBCH\01403D | | | | | |
| 14 | 4D | NBCH\01404D | | | | | |
| 14 | 5D | NBCH\01405D | | | | | |
| 14 | 6D | NBCH\01406D | | | | | |
| 17 | 1 | NBCH\017001 | | | | | |
| 17 | 2 | NBCH\017002 | | | | | |
| 17 | 3 | NBCH\017003 | | | | | |
| 17 | 4 | NBCH\017004 | | | | | |
| 17 | 5 | NBCH\017005 | | | | | |
| 17 | 6 | NBCH\017006 | | | | | |
| 17 | 7 | NBCH\017007 | | | | | |
| 17 | 8 | NBCH\017008 | | | | | |
| 17 | 9 | NBCH\017009 | | | | | |
| 17 | 10 | NBCH\017010 | | | | | |
| 17 | 2D | NBCH\01702D | | | | | |
| 121 | 1 | NBCH\121001 | | | | | |
| 136 | 1 | NBCH\136001 | | | | | |
| 159 | 1 | NBCH\159001 | | | | | |
| 159 | 2 | NBCH\159002 | | | | | |
| 178 | 1 | NBCH\178001 | | | | | |
| 178 | 2 | NBCH\178002 | | | | | |
| 653 | 1 | NBCH\653001 | | | | | |

| swmu/aoc | Loc | Well ID | New Lock Repairs needed as of 9/99 | Completed Action taken | Status as of 9/99 | Action taken | Completed |
|----------|-----|-------------|------------------------------------|------------------------|-------------------|--------------|-----------|
| 655 | 1 | NBCH\655001 | | | | | |
| 655 | 2 | NBCH\655002 | | | | | |
| 655 | 3 | NBCH\655003 | | | | | |
| 656 | 1 | NBCH\656001 | | | | | |
| 656 | 2 | NBCH\656002 | | | | | |
| 656 | 3 | NBCH\656003 | | | | | |
| 656 | 4 | NBCH\656004 | | | | | |
| 660 | 1 | NBCH\660001 | | | | | |
| 660 | 2 | NBCH\660002 | | | | | |
| 662 | 1 | NBCH\662001 | | | | | |
| 662 | 2 | NBCH\662002 | | | | | |
| 663 | 1 | NBCH\663001 | | | | | |
| 663 | 2 | NBCH\663002 | | | | | |
| 665 | 1 | NBCH\665001 | | | | | |
| 665 | 2 | NBCH\665002 | | | | | |
| 666 | 1 | NBCH\666001 | | | | | |
| 666 | 2 | NBCH\666002 | | | | | |
| 666 | 3 | NBCH\666003 | | | | | |
| 667 | 1 | NBCH\667001 | | | | | |
| 667 | 2 | NBCH\667002 | | | | | |
| GDH | 1 | NBCH\GDH001 | | | | | |
| GDH | 2 | NBCH\GDH002 | | | | | |
| GDH | 3 | NBCH\GDH003 | | | | | |
| GDH | 4 | NBCH\GDH004 | | | | | |
| GDH | 5 | NBCH\GDH005 | | | | | |
| GDH | 6 | NBCH\GDH006 | | | | | |
| GDH | 7 | NBCH\GDH007 | | | | | |
| GDH | 8 | NBCH\GDH008 | | | | | |
| GDH | 9 | NBCH\GDH009 | | | | | |
| GDH | 10 | NBCH\GDH010 | | | | | |
| GDH | 11 | NBCH\GDH011 | | | | | |
| GDH | 12 | NBCH\GDH012 | | | | | |
| GDH | 1D | NBCH\GDH01D | | | | | |
| GDH | 2D | NBCH\GDH02D | | | | | |
| GDH | 3D | NBCH\GDH03D | | | | | |

| <u>swmu/aoc</u> | <u>Loc</u> | <u>Well ID</u> | <u>New Lock Repairs needed as of 9/99</u> | <u>Completed</u> | <u>Action taken</u> | <u>Status as of 9/99</u> | <u>Action taken</u> | <u>Completed</u> |
|-----------------|------------|----------------|---|------------------|---------------------|--------------------------|---------------------|------------------|
| GDH | 4D | NBCH\GDH04D | | | | | | |
| GDH | 5D | NBCH\GDH05D | | | | | | |
| GDH | 6D | NBCH\GDH06D | | | | | | |
| GDH | 7D | NBCH\GDH07D | | | | | | |
| GDH | 8D | NBCH\GDH08D | | | | | | |
| GDH | 9D | NBCH\GDH09D | | | | | | |
| GDH | 10D | NBCH\GDH10D | | | | | | |
| GDH | 11D | NBCH\GDH11D | | | | | | |
| GDH | 12D | NBCH\GDH12D | | | | | | |
| ZONE I | | | | | | | | |
| 12 | 1 | NBCI\012001 | | | | | | |
| 12 | 2 | NBCI\012002 | | | | | | |
| 12 | 3 | NBCI\012003 | | | | | | |
| 177 | 1 | NBCI\177001 | | | | | | |
| 177 | 2 | NBCI\177002 | | | | | | |
| 671 | 1 | NBCI\671001 | | | | | | |
| 671 | 2 | NBCI\671002 | | | | | | |
| 671 | 3 | NBCI\671003 | | | | | | |
| 674 | 4 | NBCI\671004 | | | | | | |
| 675 | 1 | NBCI\675001 | | | | | | |
| 675 | 2 | NBCI\675002 | | | | | | |
| 676 | 1 | NBCI\676001 | | | | | | |
| 677 | 2 | NBCI\677002 | | | | | | |
| 678 | 1 | NBCI\678001 | | | | | | |
| 678 | 2 | NBCI\678002 | | | | | | |
| 678 | 3 | NBCI\678003 | | | | | | |
| 678 | 4 | NBCI\678004 | | | | | | |
| 679 | 1 | NBCI\679001 | | | | | | |
| 680 | 1 | NBCI\680001 | | | | | | |
| 680 | 2 | NBCI\680002 | | | | | | |
| 680 | 3 | NBCI\680003 | | | | | | |
| 680 | 4 | NBCI\680004 | | | | | | |
| 681 | 1 | NBCI\681001 | | | | | | |
| 681 | 2 | NBCI\681002 | | | | | | |
| 681 | 3 | NBCI\681003 | | | | | | |

| <u>swmu/aoc</u> | <u>Loc</u> | <u>Well ID</u> | <u>New Lock Repairs needed as of 9/99</u> | <u>Completed Action taken</u> | <u>Status as of 9/99</u> | <u>Action taken</u> | <u>Completed</u> |
|-----------------|------------|----------------|---|-------------------------------|--------------------------|---------------------|------------------|
| 687 | 1 | NBCI\687001 | | | | | |
| 687 | 2 | NBCI\687002 | | | | | |
| 687 | 3 | NBCI\687003 | | | | | |
| 687 | 4 | NBCI\687004 | | | | | |
| GDI | 1 | NBCI\GDI001 | | | | | |
| GDI | 1D | NBCI\GDI01D | | | | | |
| GDI | 2 | NBCI\GDI002 | | | | | |
| GDI | 2D | NBCI\GDI02D | | | | | |
| GDI | 3 | NBCI\GDI003 | | | | | |
| GDI | 3D | NBCI\GDI03D | | | | | |
| GDI | 4 | NBCI\GDI004 | | | | | |
| GDI | 4D | NBCI\GDI04D | | | | | |
| GDI | 5 | NBCI\GDI005 | | | | | |
| GDI | 5D | NBCI\GDI05D | | | | | |
| GDI | 6 | NBCI\GDI006 | | | | | |
| GDI | 6D | NBCI\GDI06D | | | | | |
| GDI | 7 | NBCI\GDI007 | | | | | |
| GDI | 7D | NBCI\GDI07D | | | | | |
| GDI | 8 | NBCI\GDI008 | | | | | |
| GDI | 8D | NBCI\GDI08D | | | | | |
| GDI | 9 | NBCI\GDI009 | | | | | |
| GDI | 9D | NBCI\GDI09D | | | | | |
| GDI | 10 | NBCI\GDI010 | | | | | |
| GDI | 10D | NBCI\GDI10D | | | | | |
| GDI | 11 | NBCI\GDI011 | | | | | |
| GDI | 11D | NBCI\GDI11D | | | | | |
| GDI | 12 | NBCI\GDI012 | | | | | |
| GDI | 12D | NBCI\GDI12D | | | | | |
| GDI | 13 | NBCI\GDI013 | | | | | |
| GDI | 13D | NBCI\GDI13D | | | | | |
| GDI | 14 | NBCI\GDI014 | | | | | |
| GDI | 14D | NBCI\GDI14D | | | | | |
| GDI | 15 | NBCI\GDI015 | | | | | |
| GDI | 15D | NBCI\GDI15D | | | | | |
| GDI | 16 | NBCI\GDI016 | | | | | |

| <u>swmu/aoc</u> | <u>Loc</u> | <u>Well ID</u> | <u>New Lock Repairs needed as of 9/99</u> | <u>Completed Action taken</u> | <u>Status as of 9/99</u> | <u>Action taken</u> | <u>Completed</u> |
|-----------------|------------|----------------|--|-------------------------------|--------------------------|---------------------|------------------|
| GDI | 16D | NBCI\GDI16D | | | | | |
| GDI | 17 | NBCI\GDI017 | | | | | |
| GDI | 17D | NBCI\GDI17D | | | | | |
| GDI | 18 | NBCI\GDI018 | | | | | |
| GDI | 18D | NBCI\GDI18D | | | | | |
| GDI | 19 | NBCI\GDI019 | | | | | |
| GDI | 19D | NBCI\GDI19D | | | | | |
| ZONE K | | | | | | | |
| 161 | 1 | NBCK\161001 | | | | | |
| 162 | 1 | NBCK\162001 | No well | | | | |
| 162 | 2 | NBCK\162002 | | | | | |
| 163 | 1 | NBCK\163001 | | | | | |
| 163 | 2 | NBCK\163002 | | | | | |
| 163 | 3 | NBCK\163003 | | | | | |
| 166 | 1 | NBCK\166001 | | | | | |
| 166 | 2 | NBCK\166002 | | | | | |
| 166 | 2D | NBCK\16602D | | | | | |
| 166 | 3 | NBCK\166003 | Well removed | | Well removed | | |
| 166 | 3D | NBCK\16603D | Well removed | | | | |
| 166 | 4 | NBCK\166004 | | | | | |
| 166 | 4D | NBCK\16604D | | | | | |
| 166 | 5 | NBCK\166005 | | | | | |
| 166 | 5D | NBCK\16605D | | | | | |
| 166 | 6 | NBCK\166006 | | | | | |
| 166 | 6D | NBCK\16606D | | | | | |
| 166 | 7 | NBCK\166007 | | | | | |
| 166 | 7D | NBCK\16607D | | | | | |
| 166 | 8 | NBCK\166008 | | | | | |
| 166 | 8D | NBCK\16608D | Plug gasket bad | | | | |
| 166 | 9D | NBCK\16609D | | | | | |
| 166 | 10D | NBCK\16610D | | | | | |
| 166 | 11D | NBCK\16611D | | | | | |
| 166 | 12D | NBCK\16612D | No lock - Stick up has been damaged (bent) | | | | |
| 166 | 13 | NBCK\166013 | | | | | |
| 166 | 13D | NBCK\16613D | | | | | |

| swmu/aoc | Loc | Well ID | New Lock Repairs needed as of 9/99 | Completed | Action taken | Status as of 9/99 | Action taken | Completed |
|----------|-----|-------------|------------------------------------|-----------|--|-------------------|--------------|-----------|
| 166 | 14 | NBCK\166014 | | | No tag | | | |
| 166 | 14D | NBCK\16614D | | | | | | |
| 166 | 15 | NBCK\166015 | | | | | | |
| 166 | 15D | NBCK\16615D | | | | | | |
| 166 | 16 | NBCK\166016 | | | | | | |
| 166 | 16D | NBCK\16616D | | | | | | |
| 166 | 17 | NBCK\166017 | | | | | | |
| 166 | 17D | NBCK\16617D | | | | | | |
| 166 | 18 | NBCK\166018 | | | | | | |
| 166 | 18D | NBCK\16618D | | | | | | |
| 166 | 19 | NBCK\166019 | | | | | | |
| 166 | 19D | NBCK\16619D | | | | | | |
| 166 | 20 | NBCK\166020 | | | Unable to open | | | |
| 166 | 20D | NBCK\16620D | | | Unable to open | | | |
| 166 | 21 | NBCK\166021 | | | | | | |
| 166 | 21D | NBCK\16621D | | | | | | |
| 698 | 1 | NBCK\698001 | | | | | | |
| GDK | 1 | NBCK\GDK001 | | | | | | |
| GDK | 2 | NBCK\GDK002 | | | | | | |
| 166 | 22D | NBCK\16622D | | | | | | |
| 166 | 23D | NBCK\16623D | | | | | | |
| 166 | 24 | NBCK\166024 | | | Need label | | | |
| 166 | 24D | NBCK\16624D | | | Need label | | | |
| 166 | 25 | NBCK\166025 | | | Not locked - No tag - Casel lip damamged | | | |
| 166 | 25D | NBCK\16625D | | | Not locked - No tag - Casel lip damamged | | | |
| 166 | 26 | NBCK\166026 | | | No label | | | |
| 166 | 26D | NBCK\16626D | | | No label | | | |
| 166 | PW1 | NBCK\166PW1 | | | Not labeled | | | |
| 166 | PWA | NBCK\166PWA | | | No pad - No tag | | | |
| 166 | PWB | NBCK\166PWB | | | No pad - No tag | | | |
| 166 | P01 | NBCK\166P01 | | | Not labeled | | | |
| 166 | P02 | NBCK\166P02 | | | Not labeled | | | |
| 166 | AS1 | NBCK\166AS1 | | | No pad - No tag | | | |
| 166 | AS2 | NBCK\166AS2 | | | No pad - No tag | | | |
| 166 | IN1 | NBCK\166IN1 | | | Flush - No pad - Cap loose - No tag | | | |

| swmu/aoc | Loc | Well ID | New Lock Repairs needed as of 9/99 | Completed Action taken | Status as of 9/99 | Action taken | Completed |
|----------|-----|-------------|------------------------------------|-------------------------------------|-------------------|--------------|-----------|
| 166 | IN2 | NBCK\166IN2 | | Flush - No pad - Cap loose - No tag | | | |
| 166 | IN3 | NBCK\166IN3 | | Flush - No pad - Cap loose - No tag | | | |
| 166 | IN4 | NBCK\166IN4 | | Flush - No pad - Cap loose - No tag | | | |
| 166 | TM1 | NBCK\166TM1 | | No tag | | | |
| 166 | TM2 | NBCK\166TM2 | | No tag | | | |
| 166 | TM3 | NBCK\166TM3 | | No tag | | | |
| 166 | TM4 | NBCK\166TM4 | | No tag | | | |

ZONE L

| | | |
|----|-----|-------------|
| 37 | A01 | NBCK\037A01 |
| 37 | A02 | NBCL\037A02 |
| 37 | C01 | NBCL\037C01 |
| 37 | C02 | NBCL\037C02 |
| 37 | E01 | NBCL\037E01 |
| 37 | E02 | NBCL\037E02 |
| 37 | G01 | NBCL\037G01 |
| 37 | G02 | NBCL\037G02 |
| 37 | H01 | NBCL\037H01 |
| 37 | H02 | NBCL\037H02 |
| 37 | H03 | NBCL\037H03 |
| 37 | I01 | NBCL\037I01 |

**Not sure

| | | |
|--------|--------------------------|--------------------------|
| 240003 | Paved over, inaccessible | Paved over, inaccessible |
|--------|--------------------------|--------------------------|

GEL Wells

| | |
|--------|--------------------------|
| GEL005 | Paved over, inaccessible |
| GEL006 | Ultra lock, No label |
| GEL007 | |
| GEL008 | Paved over, inaccessible |
| GEL011 | |
| GEL012 | Paved over, inaccessible |
| GEL013 | Ultra lock |
| GEL014 | Paved over, inaccessible |

NAVAL BASE CHARLESTON
RESTORATION ADVISORY BOARD MEETING
Minutes of 10 August 1999

Live Oak Community Center
2012 Success Street
N. Charleston, SC

RAB Members Attending

Mr. Oliver Addison
Ms. Ann Clark
Mr. Wilburn Gilliard
Mr. Don Harbert
Mr. Tony Hunt
Ms. Jeri Johnson
Ms. Wannetta Mallette
Mr. Lou Mintz
Mr. Henry Shepard
Mr. Dann Spariosu
Mr. Bob Veronee

Guests Attending

| | |
|---------------------|-------------|
| Mr. Mihir Mehta | SCDHEC |
| Mr. Todd Haverkost | EnSafe Inc. |
| Mr. Tom Fressilli | NAVFAC |
| Mr. Keith Johns | EnSafe Inc. |
| Mr. Paul Bergstrand | SCDHEC |
| Mr. Andrew Wertz | EnSafe Inc. |

Mr. Lou Mintz, Community Co-Chair, brought the meeting to order at 6:10 p.m. Member and audience introductions were made.

Administrative Remarks and Discussion of Last Meeting

Lou Mintz asked for comments on the minutes from the July meeting. Mr. Mintz expressed that the minutes for the July meeting were brief but adequate.

Subcommittee Reports

Mr. Mintz noted that he had recently driven by the Chicora Tank Farm and the Charleston

Environmental Detachment has done an excellent job there.

Wannetta Mallette inquired on how ownership of the Chicora property was progressing. Oliver Addison said that a community meeting was scheduled for August 16th, and after that he will be able to report to the RAB members on the ownership transfer. Tony Hunt informed the audience that there was still a bit of contamination that the detachment is still trying to characterize.

Mr. Mintz stated that the community relations subcommittee meeting, held earlier that day, was attended only by Mr. Hunt and himself. The subcommittee is discussing a new fact sheet on how the property is transferred from the Navy to the end user.

Environmental Cleanup Progress Report

Mr. Hunt reported that David Dodds (Southern Division, Naval Facilities Engineering Command) had taken a job with the detachment's construction branch. In the interim, Mr. Hunt will be the Remedial Project Manager. He reported that there are some comments to be resolved in the RCRA Facility Investigation reports. These issues should be resolved within a month and a half.

Mr. Hunt noted that Corrective Measures Study reports covering four sites were sent to the RAB members who had requested copies. Jeri Johnson asked to receive those reports also. Two of the sites were in Zone H; solid waste management unit (SWMU) 159 and area of concern (AOC) 653. The two other sites were SWMU 12 and SWMU 38 in Zone A. Mr. Hunt presented a conveyance map that indicates the strategy for the parcel transfer. The different colors on the map indicate the mechanism and expected date of transfer.

SWMU 159 is next to the commissary and has soil contamination from batteries, aluminum, and oils. AOC 653 was the auto rack and paint booth shop. SWMU 32 had lead contaminated soil and SWMU 39 had a large groundwater contamination plume.

The Corrective Measures Study reports contain an evaluation of the contamination and alternatives to clean up these areas. The reports contain data related to cost, ability to protect human health and the environment, ease of implementation, and other criteria used to evaluate the alternatives. The next step is to get the RAB's input into the selection of alternatives for these sites. After receiving the RAB's input, the next step is a Statement of Basis. A Statement of Basis is a document that describes the alternative selected and the rationale behind that decision. After the Statement of Basis is issued, the next step is public comment. Mr. Hunt was considering if a meeting might be necessary before the next RAB meeting to go through these documents and answer questions.

All of the finalized Corrective Measures Study reports are in Building 761 on base, and the public library. These are available, and Mr. Hunt encouraged everyone to review that information.

Mr. Mintz wanted everyone to be aware that the Request for Proposal on an insured, fixed price

contract for base cleanup has been sent out. Mr. Mintz suggested slowing down the cleanup process because a new contractor is coming in and may make different recommendations. Mr. Addison asked when the contract was to be awarded. Mr. Hunt said they are expecting the award to take place in December.

Mr. Hunt suggested reviewing a Statement of Basis, providing comments and letting the selection of alternative cleanup go to the new contractor. This idea is open for discussion.

Dann Spariosu (US Environmental Protection Agency) questioned if contractors have expressed a desire to have remedy selection complete so they could provide cost estimates on identified remedies. Mr. Hunt stated that some contractors would like the decision on remedy to be made already (for easier budgeting) and some would rather make that decision themselves (for greater latitude in cost savings). Todd Haverkost (EnSafe Inc.) said that he thought the contractor wanted to see uncertainty reduced in the site characterization. The flexibility to pick and choose a remedy is where the competitiveness comes in. Mr. Mintz commented that they should give all the information available to the contractors and not waste time doing things that might change down the line with the new contractor.

Ms. Mallette wanted to know how long the contractor selection period was. Mr. Hunt said that Phase One proposals, which include their financial capacity and competency, are due August 27th. Two weeks later, three contractors will be selected to submit their price. The government will look at their proposed technology to be used and the long-term liabilities associated with it, the structure of their insurance and indemnification. Phase Two selections will be in December. The start date for the successful contractor will be in December. Government funding should be in place by then.

AOC 607 Progress Report

Andrew Wertz (EnSafe Inc.) presented slides showing the dewatering system in use, which is a pilot treatability study at AOC 607. The first phase is a soil vapor extraction system. However, water must first be removed from the ground before the soil vapor extraction system can be installed, scheduled for sometime next week.

Mr. Wertz said that the dewatering system now in place has an air stripper tower, through which water is pumped to remove the contamination. Water removed from the ground first flows through drums filled with granular activated carbon. These filter contaminants out of the water before it enters a small holding tank.

When water in the tank reaches a certain volume, a float switch kicks on a pump which sends the water to the top of the stripping tower. As the water falls down through the stripping tower, air blows up through it and forces the volatile organic material out of the water, vaporizing the organic material. The water is then pumped into a sanitary sewer drain by an agreement with the City of North Charleston. The groundwater can't be put back into the ground because they're

trying to remove water from the site. Mr. Wertz noted that the effects of the rainy season on groundwater levels are minimal.

Weekly samples are taken of the water before it goes to the stripping tower. Periodically, samples are taken from the water after it has gone through the stripping tower. The air that blows through the stripping tower is not recaptured but allowed to escape into the atmosphere. This vapor is also analyzed regularly so that they can quantify what is being emitted into the air. The amount of contaminants in these emissions is below regulatory limits.

Mr. Wertz pointed out that there are 37 well points around the building. Only half of these are turned on at any one time to keep the vacuum pressure in the system.

Regarding safety, Mr. Wertz noted that the power box for the electrical source is always locked and has a danger sign on it with EnSafe's emergency number. This machine runs unmanned 24 hours a day.

The water level in the ground has gone down about two feet in the month the system has been operating. The confining layer of hard soil is about 12 feet down. The well points go down 12 feet. Water levels were initially about four feet below ground surface and now they're six feet down. Under the building the water level is even lower, down to nine feet.

Ms. Mallette wanted to know the reason for the dewatering. Mr. Wertz responded that contamination is in the groundwater. Removing the water from the soil serves two purposes: to "flush" contaminants out of the soil, and lower the water table so the vapor extraction system can work more efficiently.

Mr. Haverkost stated that the water flows first through the carbon tanks which gets rid of most the contamination and the air stripper is really a polishing step. Mr. Wertz advised the carbon filters can be changed periodically. Because this is a short test, however, more filters will probably not be needed. He noted that vendors sometimes take the carbon filters and recycle them.

Mr. Wertz explained that this pilot study will last only two or three months. The pumps will operate until the groundwater level drops to a desired elevation then a soil vapor extraction unit will be installed to suck the vapor out of the soil, which will volatilize the organic compounds.

Questions Submitted by Arthur Pinckney

This will be postponed until Arthur is present. There was discussion about whether the written answers should be handed out to everyone. Mr. Hunt replied that copies of the answers are available.

Comments and Questions

Mr. Mintz remarked that RAB members used to get regular reports from DHEC. Ann Clark replied that nothing interesting has happened all summer.

Mr. Mintz queried Ms. Clark if there are any thoughts on the pending fixed price contract. Ms. Clark replied that DHEC is waiting and watching. It's going to be an adjustment in the way DHEC does business. The contractor will be moving at a faster pace and their monetary awards from the Navy will be based on DHEC's approval of documents. She noted that this will put a lot of pressure on the project.

Mr. Spariosu mentioned that there have been law and policy changes. There are new reforms in the Resource Conservation and Recovery Act (RCRA) that are supposed to make the cleanup process move faster. These new changes are geared more toward sites that didn't already have a permit. Some of the changes may allow easier ways to handle waste disposal.

Mr. Spariosu said that the recently passed GPRA law, which calls for rating environmental sites by health-risk priority, is now being implemented. Charleston is a high priority cleanup site. That calls for certain actions to make sure that the groundwater contamination is under control, and any risk from contaminated soil is removed before the year 2005. Mr. Spariosu noted that the detachment's schedule has been way ahead of that.

Mr. Mintz stated that he has seen the cleanup on the plant in Ravenel on 17 South, left hand side, and now the plant looks like Magnolia Gardens. It's a good cleanup job from DHEC and EPA and the rest.

Wilburn Gilliard inquired if there's a projected cleanup completion date. Mr. Hunt responded they're looking for the remedies to be in place by the end of 2001. Even with the most aggressive schedule, it's probably going to be sometime in 2002 or 2003 to get the wells and that sort of thing operating properly and successfully. Mr. Spariosu advised that groundwater remedies can take 20 or 30 years to reduce contamination to the regulatory level. Most of the soil has already been cleaned up and hazards reduced to acceptable levels. The health risks have been minimized.

Mr. Mintz asked when the RDA will be able to take full possession of the base. Henry Shepard replied that they should have it by the year 2003. Mr. Hunt replied that the conveyance map identifies the different phases of transfer. Green areas have no environmental concerns. Blue areas are interim measures or tank removals, just awaiting resolution with regulatory agencies. Yellow areas are long-term remedies that require installation of groundwater monitoring and treatment systems.

Ms. Clark shared a compliment to the RAB. Another RAB is struggling with their communication mechanism, getting information out to the public. The other RAB was impressed with the fact sheets put out by this project.

The next meeting will be on Tuesday, October 12 at 6:00 p.m. at the Live Oak Community

Center, 2012 Success Street, North Charleston.

Adjournment

Minutes approved by:

Tony Hunt
Navy Co-Chair

Louis Mintz
Community Co-Chair