



DEPARTMENT OF THE NAVY

INDIAN HEAD DIVISION
NAVAL SURFACE WARFARE CENTER
101 STRAUSS AVE
INDIAN HEAD MD 20640-5035

5090
Ser 0951/244
10 Aug 95

Ms. Helene Drago
EPA Region III
841 Chestnut Building
Philadelphia, PA 19107

Dear Ms. Drago:

This is Indian Head Division's first monthly progress report for the Notice of Violation (Docket No. III-FF-CWA-005) issued by EPA Region III on June 2, 1995. The report provides the status of actions being taken to correct lead violations at industrial wastewater outfall (IW) 87, and nitrate esters and total suspended solids (TSS) violations at IWS 46 and 53.

IW87 - The project to clean up the lead contamination at this site is on schedule (see enclosure [1]). Step 4 listed on the schedule, Development of the Final Engineering Evaluation and Cost Analysis (EECA), was completed in July.

We are currently completing Steps 5 and 7, EECA Public Review and Archaeological Survey. The letter forwarding the EECA for public review was sent to local libraries on August 9th and a notice of its availability will be advertised in the local newspaper, The Maryland Independent. The EECA must be available for public review for 30 days.

Louis Barger and Associates, Inc. is conducting the archaeological survey. Their field work began August 7th and will be completed by the end of the month. The final survey report is due September 17th.

In preparation for Step 19, Award Removal Action, the Navy is proceeding to negotiate a final contract award fee. The negotiation conference is scheduled for August 22nd with OHM, Inc., the Navy's Remedial Action Contractor, at the Washington Navy Yard. As indicated in our July 20th letter, we do not expect the release of Defense Environmental Restoration Account funding for the removal action (approximately \$625,000) until the end of fiscal year (FY) 1995 or first quarter FY 1996.

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Since the IW87 site is located in a wooded area, the clean up project includes construction of a road for ingress and egress of OHM's vehicles and heavy equipment. We recently learned that the road construction and work around the outfall stream will disturb over 5,000 square feet of earth. Therefore, a Sediment Erosion Control (SEC) plan must be prepared for this project and approved by the Maryland Department of the Environment (MDE).

Our Facilities Acquisition Division is awarding a priority contract delivery order for preparation of the SEC plan to Coastal Engineering, Inc. This will save time by eliminating the necessity of waiting for OHM to prepare and submit the plan as part of the clean up contract. The SEC plan is scheduled to be completed by the end of October. We will work closely with MDE to minimize the time for their review and approval.

A wetlands permit from the Army Corps of Engineers will likely also be required because of the proximity of the outfall to wetlands. Our Natural Resources Office will prepare the permit concurrently with the development of the SEC plan. Our Natural Resources Officer is meeting with an Corps of Engineers representative on August 16th to review the site.

The SEC and wetlands permit requirements have been added to the enclosed schedule. Please note that they are not expected to impact our overall project schedule for clean up and resolution of the lead violations at IW87.

IWs 46/53 - Construction of wastewater collection systems at IWs 46 and 53 to eliminate nitrate esters and total suspended solids (TSS) violations is also on schedule (see enclosure [2]). Step 2 of the schedule, Safety Redesign, was completed and the final design package was received in July.

We are now in Step 3, Construction Bid/Award. The design firm has estimated a construction cost of \$272,000. Since this project is being managed as a change order to an existing base-wide Military Construction project, funding has already been appropriated. The Navy's Engineering Field Activity, Chesapeake released the funds to Indian Head Division last week. The design and specifications were sent to the proposed construction contractor, Jowett, Inc., on August 4th, and we are presently awaiting their bid.

As reported in our July 20, 1995, letter, our laboratory had detected the possibility of nitroglycerin (NG) in one of the eight soil samples taken from IWs 46 and 53 during the second week of July. Mass spectrometry analysis run on July 31st, confirmed the presence of NG at 2.90 parts per million (ppm) in a surface soil sample taken from the IW 53 drainage ditch (see enclosure [3]).

We do not consider NG in soil at such a low level to be a safety or environmental hazard. Soils are not normally reactive until they reach a level of 10 percent (10,000 ppm) explosive contamination (a), and NG is biodegradable in the environment (b). The fact that the remaining seven soil samples showed no detectable NG is further evidence of its biodegradability.

As we discussed in our July 7, 1995, meeting, all outfall sites will be addressed jointly by EPA, MDE, and the Navy under our Installation Restoration Program. Indian Head Division was proposed for the National Priorities List (NPL) on February, 13, 1995.

As also discussed in our meeting, we have put together a synopsis of Indian Head Division's environmental program and some of the proactive steps we are taking to prevent wastewater permit violations. This information is provided as enclosure (4).

The other information you requested concerning the low pH storm-water problem at IW 40 will be included in our September 10, 1995, status report.

(a) "Approaches for the Remediation of Federal Facility Sites Contaminated with Explosive or Radioactive Wastes"; Environmental Protection Agency; September 1993.

(b) "Determination of the Fate of Unexploded Munitions and Munitions Ingredients in the Environment - A Literature Search"; Naval Explosive Ordnance Disposal Technology Center; January 1988.

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If you have any questions or need any additional information,
please contact Mike Dunn at (301) 743-4320.

Sincerely,



SUSAN P. ADAMS
Director, Environmental Division
By direction of the Commander

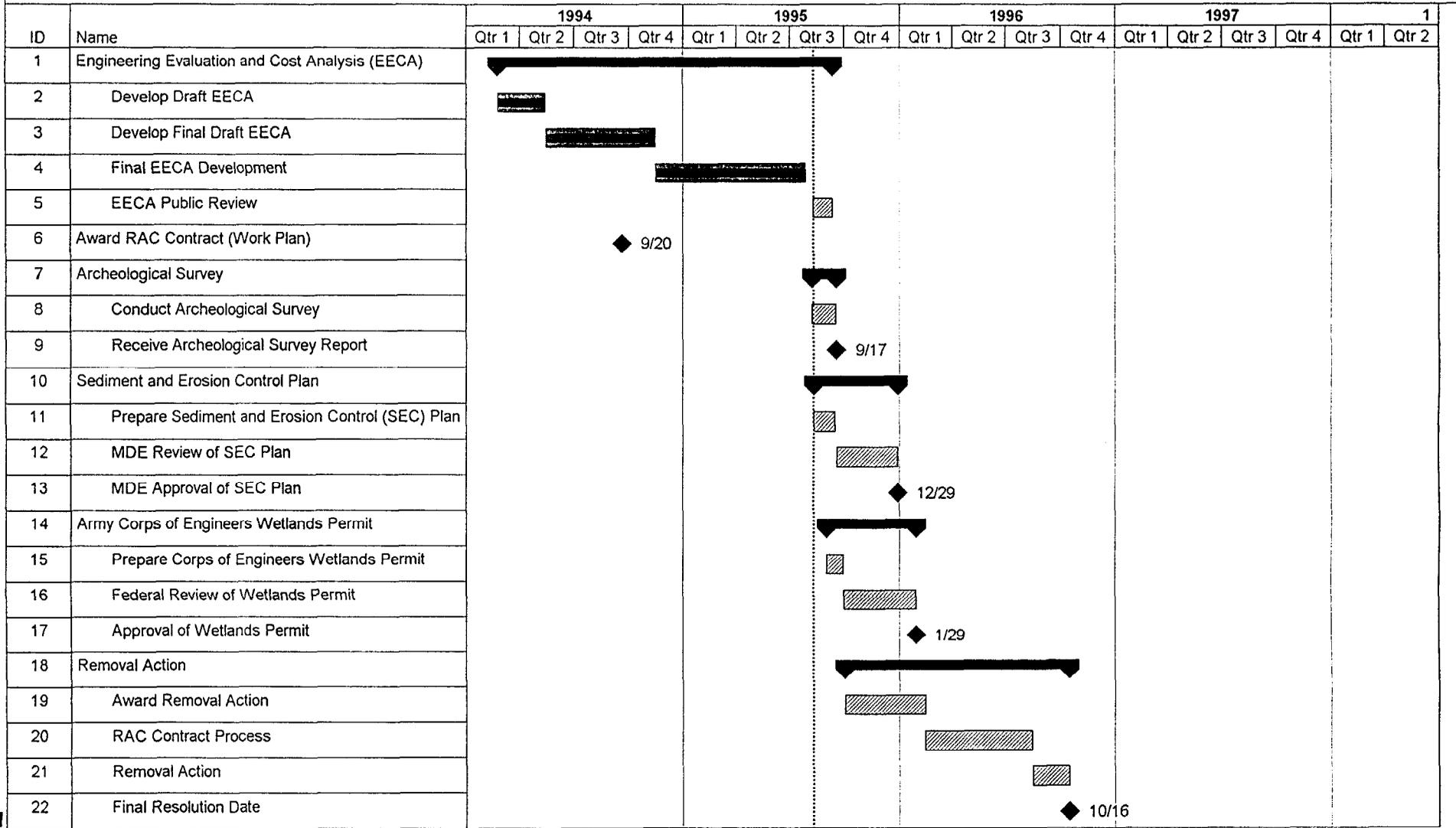
Encl:

- (1) IW87 Schedule
- (2) IW46/53 Schedule
- (3) Laboratory Results
- (4) Environmental Program
Summary

Copy to:

EPA Region III (P. Yeany)
MDE (C. Coates)
EFACHES (P. Gilbertson)
EFACHES (S. Phillips)
NAVSEASYS COM (SEA07E)
COMNAVBASE Norfolk (N9E3)
NSWC (NSWC 04E)

Plan for Cleanup of Lead Contamination at NPDES Industrial Wastewater Outfall IW 87

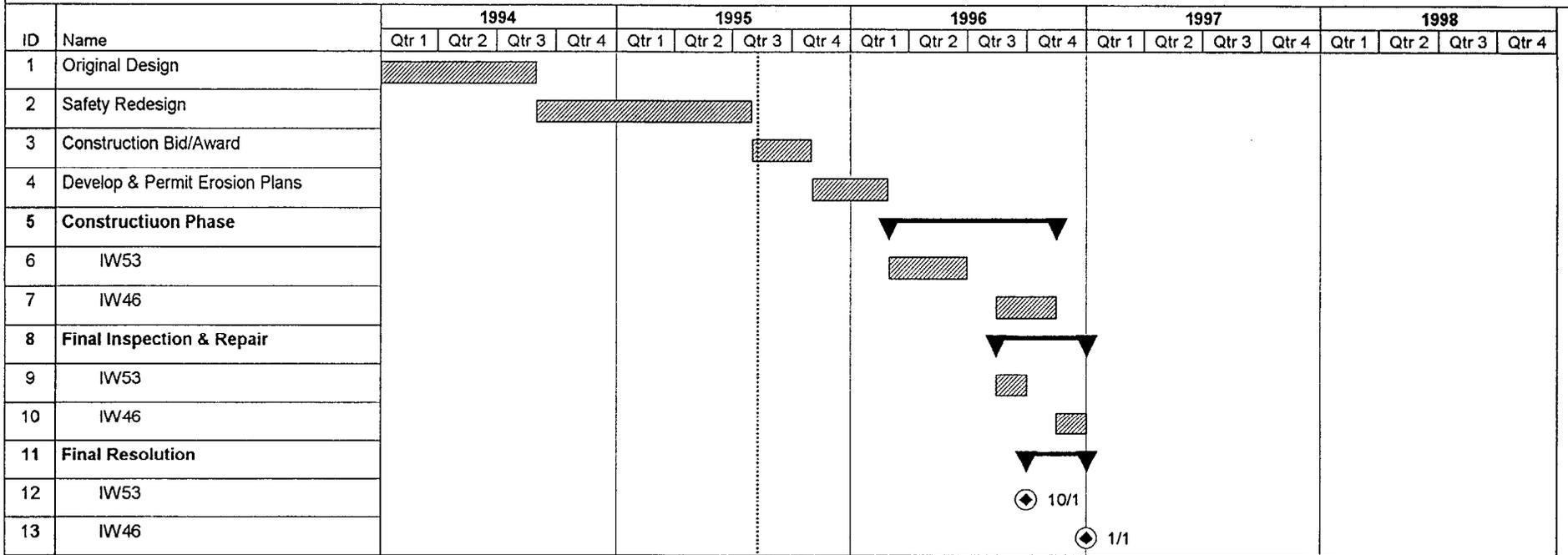


ENCLOSURE(1)

Project:
Date: 8/8/95

Critical
 Progress
 Summary
 Noncritical
 Milestone
 Rolled Up

Wastewater Collection Systems for Annealing Ovens



ENCLOSURE (2)

Project:
Date: 8/7/95

Critical	██████████	Progress	──────────	Summary	▾──────────▾
Noncritical	██████████	Milestone	◆	Rolled Up	◇

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CHEMICAL AND PHYSICAL ANALYSIS REPORT SSIC 8010

SAMPLE NUMBER: 923138
SAMPLE DESCRIPTION: INDUSTRIAL WASTEWATER
IW NUMBER: 53 A
SN NUMBER: SOIL TOP ANNEAL OVEN
LAB RECEIPT DATE: 07/11/95
ANALYSIS START DATE: 07/12/95
ANALYSIS START TIME: 1000

REQUESTED ANALYSIS	UNITS	RESULTS	COMPLETION DATE
NG: AVG. NITROGLYCERINE	MG/KG	2.90	07/17/95
NE/MS: MASS SPECTROMETRY CONFIRMED		YES	07/31/95

All tests conducted in accordance with specification procedures, unless otherwise noted. Nitrate ester analysis performed in accordance with IHDNSWC lab procedure 3330.63

Analyst: RTW, RT Date: 8/3/95

Laboratory Manager: Steve Helberg

CC: 0951, 0951C, 3330

ENCLOSURE(3)

Indian Head Division Environmental Program Summary

Facility Overview

The Indian Head Division (IHD), Naval Surface Warfare Center is the oldest, continuously operating Naval ordnance facility in the United States. Our mission is to provide primary technical capability in Energetics (explosives, pyrotechnics, propellants, warheads, rocket motors, chemicals, ordnance devices, rocket motors, and other energetic devices and materials). This includes engineering, fleet and operational support, manufacturing technology, limited production, industrial base support, research and development, and test and evaluation.

The IHD is located on a 3,500 acre peninsula approximately 25 miles south of Washington DC, in Charles County Maryland. The Potomac River borders the facility to the west and the Mattawoman Creek to the east. The IHD is the largest employer in Charles County, employing over 3,600 people directly or by contract. The Facility has approximately 1,600 buildings, 1,500 of which are used for operations. The current plant asset value is \$1.5 billion.

Environmental Management and Visibility

The IHD is committed to environmental compliance. Since 1989, the Activity has invested over \$50M in environmental facilities projects. Additionally, the Activity invests over 40 manyears of labor resources to environmental compliance each year. Our environmental office has 24 individuals dedicated to oversight of our environmental and natural resources program. Additionally, each of our major operating Divisions, eight in total, have a full time environmental coordinator assigned to address the area's day to day environmental issues. We also have a property disposal office which coordinates disposal of non-explosive HW and the Cast Division which executes disposal of explosive HW through thermal treatment.

The Activity's environmental program is structured to build ownership and stewardship of environment within our operating areas. The Environmental Division provides policy and guidance, assists in problem resolution, conducts wastewater sampling, performs all regulatory reporting, and oversees execution of environmental program Activity wide.

To ensure visibility of the Environmental program throughout the Command, the Activity established an Environmental Quality Management Board which meets once a month. At this meeting, the Environmental Division reviews status of the environmental program for the Commanding Officer, Operating Department Heads, Safety Director, Legal Counsel, Public Affairs, Tenant Environmental coordinators, and other interested attendees. Additionally, the Environmental Director meets directly with the

ENCLOSURE(4)

Commanding Officer separately on a monthly basis. These meetings are used to provide status, discuss issues, and assign additional priority or resources if needed.

The Environmental Division also meets regularly with the Ordnance Department and Utilities Division, which contain our major operating areas. These meetings address specific issues within the operating areas and track status of open actions.

Environmental Technology and Pollution Prevention

The unique nature of our explosives operations creates many environmental challenges for which there are not off the shelf solutions readily available. Our Environmental Technology branch, staff of 9, was developed to address the development of new environmental technologies for energetics for the Navy and DoD. Some of their recent efforts includes work on recycling scrap propellant and explosives, developing solventless mixing technology, and reutilizing explosive waste as a fuel.

Since 1991, we have had a full time pollution prevention (P2) position. This person is responsible for coordination, oversight, and implementation of the Activity' P2 program. Since it's establishment, the P2 coordinator and personnel throughout Indian Head Division have been instrumental in:

- a. Eliminating all wet paint spray booths,
- b. Switching to High Volume/Low Pressure paint spray guns to reduce overspray,
- c. Replacing hazardous solvents such as acetone, toluene and 1, 1, 1, trichloroethane with less hazardous aqueous solvents,
- d. Recycling machining coolant,
- e. Developing lead-free propellants,
- f. Recycling excess materials to commercial explosives firms, and,
- g. Replacing solvent paint stripping systems with plastic media blasters.

Wastewater Projects

The Activity dedicates at least half of our yearly budget for facility modernization to environmental compliance. The Environmental Division works with operating Departments to define projects and set priorities to ensure that the Activity's proactive approach does not falter.

Attached is a list of environmental facilities projects, either completed within the past 5 years or currently ongoing which are

aimed at water pollution prevention. These projects which include building and improving wastewater treatment plants and equipment, spill prevention measures, sewer repairs, nutrient reduction measures, and erosion control efforts were an investment of over \$20,000,000.

We have developed a comprehensive stormwater pollution prevention plan. This plan includes recommendations for improving operating and hazardous material storage procedures, and also identifies facilities projects aimed at improving water quality through stormwater pollution prevention. The facility is reinspected annually to ensure recommendations and projects are being implemented and add new recommendations if necessary.

Auditing and Problem Identification Systems

The Activity has a tiered environmental auditing program aimed at preempting wastewater and other environmental deficiencies. Once every three years, Navy Headquarters performs an environmental compliance evaluation of each Activity to assess the health of the Activity's environmental compliance.

The IHD conducts a yearly self audit where we examine our program and work to preempt deficiencies by performing field inspections, records reviews, and permit verifications using extensive checklists prepared for us by a contractor. Findings are documented and tracked until closure. Plans of Action and Milestones are prepared for long term corrective actions. Self audit results are reported to the Commanding Officer and Department Heads. Status of findings is presented periodically during the Environmental Quality Management Board meeting.

Additionally, the environmental office developed a checklist which is used by their office and environmental coordinators in the operating areas to perform random, unannounced field inspections. Findings from these inspections are documented and tracked until closure also.

The environmental office also annually reviews hundreds of operating procedures which involve the discharge of industrial wastewater. The procedures are checked to ensure compliance with our NPDES permit and identify potential problem areas.

As a final permit violation prevention effort, NPDES monitoring data is charted on Microsoft Excel to examine trends in all pollutant levels at all our major outfalls. This data is distributed to the plant operating managers as a tool for identifying trends that could lead to a permit violation so investigation and corrective action can be taken before the problem occurs.

<u>Project</u>	<u>Cost (\$)</u>
Carbon Treatment Systems at Biazzi Plant	2,438,800
Carbon Treatment Systems at Extrusion Plant	1,680,000
Industrial Wastewater Treatment (Phase I)	5,500,000
Industrial Wastewater Treatment (Phase II)	4,169,000
Upgrade Neutralization System at Power House	897,100
Improvements to Coal Pile Runoff System	169,000
Upgrade Fly Ash Conditioning System	145,000
Upgrade Wastewater Treatment at Moser Plant	329,425
Oil Spill Containment (Phase I)	121,200
Oil Spill Containment (Phase II)	177,000
Oil Spill Containment (Phase III)	61,100
Oil Spill Containment (Phase IV)	196,000
Oil Spill Containment (Phases V thru VII)	597,000
Oil Spill Containment (Phase VIII)	111,000
Miscellaneous Spill Prevention Dikes	95,300
Spill Dike at Nitration Plant	314,000
Construct Tank Dikes (Various Bldgs.)	159,000
Repair Spill Dikes (Phases I and II)	272,000
Upgrade Fuel Truck Transfer Area	569,000
Correct Sewage Plant Deficiencies	557,800
Repair Sewer Lines (Phase I)	786,570
Repair Sewer Lines (Phase II)	71,800
Repair Sewer Lines (Phase III)	305,800
Erosion Control at Outfalls (Phase I)	100,000
Erosion Control at IW03	33,100
Upgrade Vehicle Washdown Facility	83,600
Upgrade Acid Storage Tanks for Spill Prev.	400,000
Stormwater Pollution Prevention (Phase I)	100,000
Best Management Practices Projects	124,700
Total for Water Pollution Prevention Projects:	\$20,562,695