

**DEPARTMENT OF THE NAVY**

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

5090
Ser 046C/250
18 Nov 96

Mr. Shawn Phillips
Engineering Field Activity Chesapeake
Washington Navy Yard Building 212
901 M Street SE
Washington, DC 20374-5018

Dear Mr. Phillips:

We are forwarding the minutes from the Installation Restoration (IR) Program Restoration Advisory Board (RAB) meeting that was held on Thursday, October 17, 1996.

Please note that we plan to have only three meetings in calendar year 1997. They are scheduled for February 20, June 19, and October 16, 1997. Once again, these dates are on the third Thursday of the month. A reminder will be sent to you prior to each meeting.

Unfortunately, due to contractors being present at the meeting, Mr. Shawn Phillips of the Engineering Field Activity, Chesapeake (EFACHES) was unable to provide the exact amount of funding that has been budgeted for IHDIV-NSWC for fiscal year 1997 (FY97). Since contractors do not receive this letter, we can tell you that EFACHES has one million dollars budgeted for IHDIV-NSWC's IR Program in FY97. We hope to perform Remedial Investigations (RI) on 4 to 6 of the 16 high priority sites that we have at our Activity.

For those RAB members who were not at the meeting, we are forwarding copies of the handouts that were given to RAB members in attendance. These handouts include amendments to the IR Site 57 Engineering Evaluation and Cost Analysis (EECA) and an EPA fact sheet on soil vapor extraction and air sparging.

There was some confusion concerning the November 1, 1996, date that was in the reminder letter for this meeting. We asked that you review the IR Site 57 EECA by November 1, 1996, not provide input into site priorities by that date. If you have not reviewed the IR Site 57 EECA yet, please provide comments to us by November 27, 1996.

As for site priorities, a suggestion was made that we prepare a matrix which shows how we arrived at these site priorities. We plan to do this after we meet with the EPA and MDE in mid-December to discuss this issue. If you have any particular concerns before that time, please let us know.

For those community members on the RAB, please sign the return postcard, enclosure (3), which states that you received this letter, and drop it in the mail.

To those community members who have expressed an interest in remaining on the RAB, we look forward to seeing you at the next RAB meeting. For those community members who will be leaving us, we wish to thank you for your participation on the RAB during the past two years. Your comments, questions, and concerns help to keep us on the right track in our common goal of protecting human health and the environment through the Navy Installation Restoration Program.

If you have any comments or questions, you may contact Mr. Shawn Jorgensen on (301) 743-6745/6746. In addition, you may FAX your comments/questions to (301) 743-4180 or submit them in writing to the address above, attention Code 046.

Sincerely,



SUSAN P. ADAMS
Head, Safety Department
By direction of the Commander

Encl:

- (1) Minutes from RAB Meeting
of 17 Oct 96
- (2) Tentative Agenda for
RAB Meeting of 20 Feb. 97
- (3) Return Postcard

Copy to:
RAB Members
EFACHES (Code 181)

INSTALLATION RESTORATION PROGRAM



INDIAN HEAD DIVISION,
NAVAL SURFACE WARFARE CENTER
101 STRAUSS AVENUE
INDIAN HEAD, MARYLAND
20640-5035



RESTORATION ADVISORY BOARD (RAB) MEETING

Date of Meeting: October 17, 1996

Restoration Advisory Board (RAB) Member Participants:

Capt. W. J. Newton, USN	Dr. Philip Giguere (C)
Ms. Susan Adams (N)*	Ms. Patricia Haddon (L)
Mr. Elmer Biles (C)	Mr. Vincent Hungerford (C)*
Ms. Kristen Burke (C)	Ms. Donna Lynch (S)
Mr. Charles Ellison (C)	Mr. Shawn Phillips (N)
Mr. Bob Foley (F)	

* Co-Chair

RAB Members Not in Attendance:

Mr. Gary Davis (L)	Ms. Marsha Atlee-Harley (C)
Mr. Stephen Elder (L)	Mr. Dennis Orenshaw (F)

Additional Attendees:

Ms. Sherry Deskins (N)	Mr. Gordon Miller (K)
Mr. Shawn Jorgensen (N)	Mr. John Stacy (C,N)
Mr. George Latulippe (K)	Mr. Mark Yeaton (C,N)
Ms. Elizabeth McIntyre (N)	

C = Community
F = Federal Official
K = Contractor
L = Local Official
N = Navy Official
R = Newspaper Reporter
S = State Official

Major Issues Discussed/Accomplished:

1. Meeting Introduction

Ms. Susan Adams of the Indian Head Division, Naval Surface Warfare Center (IHDIV-NSWC) began the meeting by presenting the meeting agenda, which changed slightly from the tentative agenda and is included as Attachment A.

2. Devolvement of Defense Environmental Restoration Account (DERA) Funds

Mr. Shawn Phillips discussed the affects that devolvement of DERA funds would have on the Navy's Installation Restoration (IR) Program. The main difference is that DERA was a line item in the Department of Defense (DoD) Appropriation Bill. Now, it is called Environmental Restoration, Navy (ER,N) and is a line item in the Department of the Navy (DoN) portion of the DoD Appropriation Bill. This means that the money goes through one less tier because DoD will no longer distribute the funding to each service, the funding will go directly to each service. In addition, the funding should get to the Engineering Field Divisions/Activities, where it will be used, in a more timely fashion.

3. Fiscal Year 1997 (FY97) Budget

Mr. Phillips briefly touched on the FY97 budget. He stated that in FY97 a Removal Action will be conducted on IR Site 57 and we will conduct Remedial Investigations (RI) on some of the sites in the RI Work Plan. Unfortunately, because contractors were present, he was unable to divulge the exact amount of money that has been budgeted for the Indian Head Division in FY97. A copy of Mr. Phillips presentation, including Devolvement of DERA funds and FY97 budget, is provided in Attachment B.

4. IR Site 56 Removal Action Update

Mr. Gordon Miller provided a brief background on IR Site 56 and described the Removal Action (RA) that was performed at this site. Many difficulties arose during the project, mostly due to the excessive amount of rain. Because the joints of the pipe deteriorated, groundwater infiltrated the pipe. This resulted in the need for eight Baker tanks of 20,000 gallons each to store the water before treatment. The water treatment system, which originally used only mechanical filters, had to be expanded to flocculate the lead out of solution because the lead was attached to very fine clay particles which the mechanical filters could not remove. Finally, more sediment was removed from the pipe than anticipated. Since the pipe joints were deteriorated, which

was shown by the video survey of the pipe, the excess soil most likely came from the soil surrounding the pipe, which entered through the joints.

As a result of the above difficulties, the RA took longer than expected. The actual excavation of the contaminated soil at the end of the pipe took place in two days, September 1-2, 1996. In addition, 300,000 gallons of lead contaminated water were treated before being released to the outfall and 160 tons of lead contaminated soil/debris were sent off-site for disposal at a cost of \$143 per ton. Of the 160 tons of soil/debris, 140 tons was soil that came from the pipe cleaning and excavation. A copy of Mr. Miller's presentation is provided in Attachment C.

5. IR Site 57 Construction Work

Mr. Gordon Miller briefly described IR Site 57 and the work that was performed by his company, OHM, in support of the construction of an oven pad and dock extension at Building 292. OHM excavated one foot below the future footing of the oven pad and dock extension. In addition, OHM excavated three feet out from the footing. An impermeable liner was placed over the excavation and was backfilled. The liner was placed over the excavation to keep the contractor that will be installing the oven pad and dock extension from encountering trichloroethylene (TCE) contaminated soil.

Approximately 320 tons of contaminated soil and debris were removed from the site and disposed of as hazardous waste at a cost of \$283 per ton. Of the 320 tons of soil and debris disposed of, approximately 12-16 tons were concrete and asphalt. A copy of Mr. Miller's presentation is included in Attachment D.

6. IR Site 57 EECA and SVE Pilot Scale Test Plan

Mr. George Latulippe provided a brief background of the work performed to date at IR Site 57 and discussed the Engineering Evaluation and Cost Analysis (EECA). An error was inadvertently made in the EECA with respect to the estimated volume of contaminated soil at the site. This error affected the estimated costs of some of the Removal Action (RA) alternatives in the EECA, but did not change the recommended alternative, which is Soil Vapor Extraction (SVE), an EPA presumptive remedy. A handout containing the amended costs were given to the RAB members at the meeting. Mr. Latulippe emphasized that the RA will only address trichloroethylene (TCE) in the soil. TCE that is in the groundwater at this site will be addressed during a Remedial Investigation.

During SVE, extraction wells are placed in the ground and the soil vapor is extracted. Each extraction well will have a defined radius of influence (the area around the well that will be affected by the vacuum applied to the well). Since we do not know what this area will be, a pilot scale study will be conducted, which involves the installation of one extraction well. Plastic sheeting will be placed on the ground to help draw soil vapor from a wider area. Information from this study will show whether or not SVE is a viable Removal Action alternative and how many extraction wells will need to be installed. In addition, EPA document number 542-F-96-008, "A Citizen's Guide to Soil Vapor Extraction and Air Sparging," was provided to all in attendance. A copy of Mr. Latulippe's presentation is included in Attachment E.

7. Remedial Investigation Work Plan and Site Priorities List

The final topic of discussion, which was led by Mr. Latulippe, included the upcoming Remedial Investigation (RI). The need for additional sampling in the work plan was based on EPA's Risk Based Concentrations (RBCs). Although RBCs are not cleanup goals, they do provide levels of contamination in soil that are protective of human health. However, Site Screening Levels (SSLs), which are the amounts of contamination that the soil could contain which would still be protective of groundwater, also need to be used. We have to reevaluate some of our planned sampling to incorporate SSLs.

Since funding is limited, the Navy will not be able to perform an RI on all of the sites in the work plan in fiscal year 1997. Therefore, we must prioritize these sites to determine which should be done first. A list containing the high priority sites (based on the Navy's computer model), historic sampling, contaminants found, and planned sampling was given to the meeting attendees. The ranking of these high priority sites was done in consultation with Shawn Phillips and Shawn Jorgensen. The four sites at the top of the list are what Mr. Phillips and Mr. Jorgensen felt are highest in priority. A copy of Mr. Latulippe's presentation, including this list, is provided in Attachment F.

8. Comments, Questions, and Answers

Numerous comments were made and questions asked during the meeting. These comments, questions, and answers are provided in Attachment G.

9. Conclusion

Ms. Susan Adams concluded the meeting by thanking all in attendance and presented the tentative agenda for the next RAB meeting, which includes the IR Site 57 SVE Pilot-Scale Test Status/Results, IR Site 57 Removal Action Status, and the Remedial Investigation Status. This meeting has been scheduled for February 20, 1997. As always, a reminder will be sent prior to the meeting. In addition, we will be soliciting for new RAB members since the two-year term for RAB membership will be fulfilled in January 1997. Ms. Adams thanked everyone for their participation in the past two years.

10. Future Schedule

The RAB meetings for 1997 have been scheduled for February 20, June 19, and October 16. These are the third Thursday in the months of February, June, and October. Please make a note of these dates.

**INDIAN HEAD DIVISION,
NAVAL SURFACE WARFARE CENTER
INSTALLATION RESTORATION PROGRAM
RESTORATION ADVISORY BOARD (RAB) MEETING
AGENDA**

October 17, 1996

7:00 - 7:10 ARRIVAL/WELCOME

 Ms. Susan P. Adams
 Indian Head Division, Naval Surface Warfare Center
 Head, Safety Department

7:10 - 7:20 DEVOLVEMENT OF DEFENSE ENVIRONMENTAL RESTORATION
 ACCOUNT (DERA) FUNDS

 Mr. Shawn Phillips
 Engineering Field Activity, Chesapeake
 Remedial Project Manager

7:20 - 7:30 FISCAL YEAR 1997 (FY97) BUDGET

 Mr. Shawn Phillips

7:30 - 7:50 IR SITE 56 REMOVAL ACTION UPDATE

 Mr. Gordon Miller
 OHM Environmental
 Project Manager

7:50 - 8:00 IR SITE 57 CONSTRUCTION WORK

 Mr. Gordon Miller

8:00 - 8:15 IR SITE 57 EECA AND SVE PILOT SCALE TEST PLAN

 Mr. George Latulippe
 Brown & Root Environmental
 Project Manager

8:15 - 8:40 REMEDIAL INVESTIGATION WORK PLAN/SITE PRIORITIES

 Mr. George Latullippe

8:40 - 9:00 COMMENTS, QUESTIONS, AND ANSWERS

9:00 ADJOURN

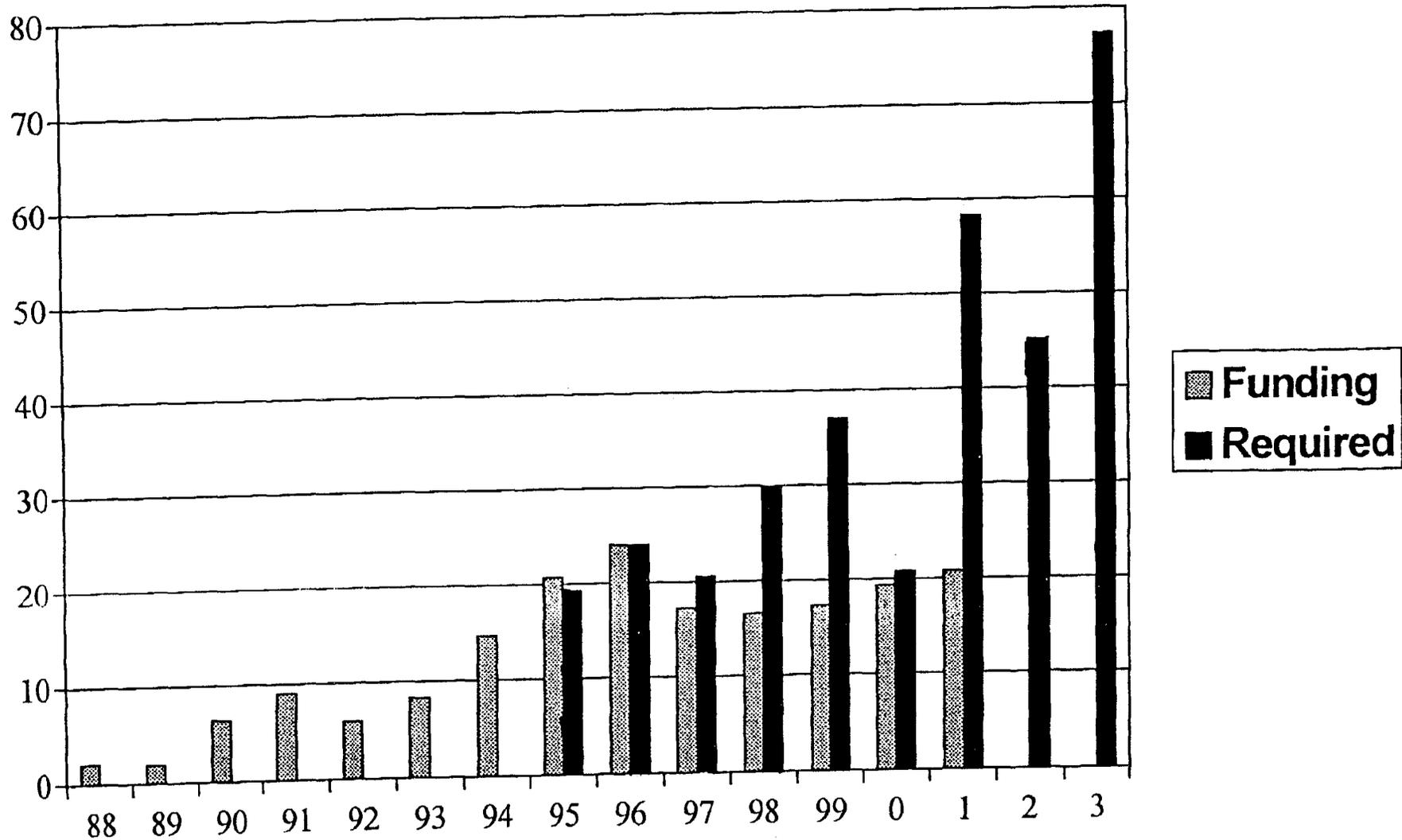
DERA VS. ER,N FUNDING

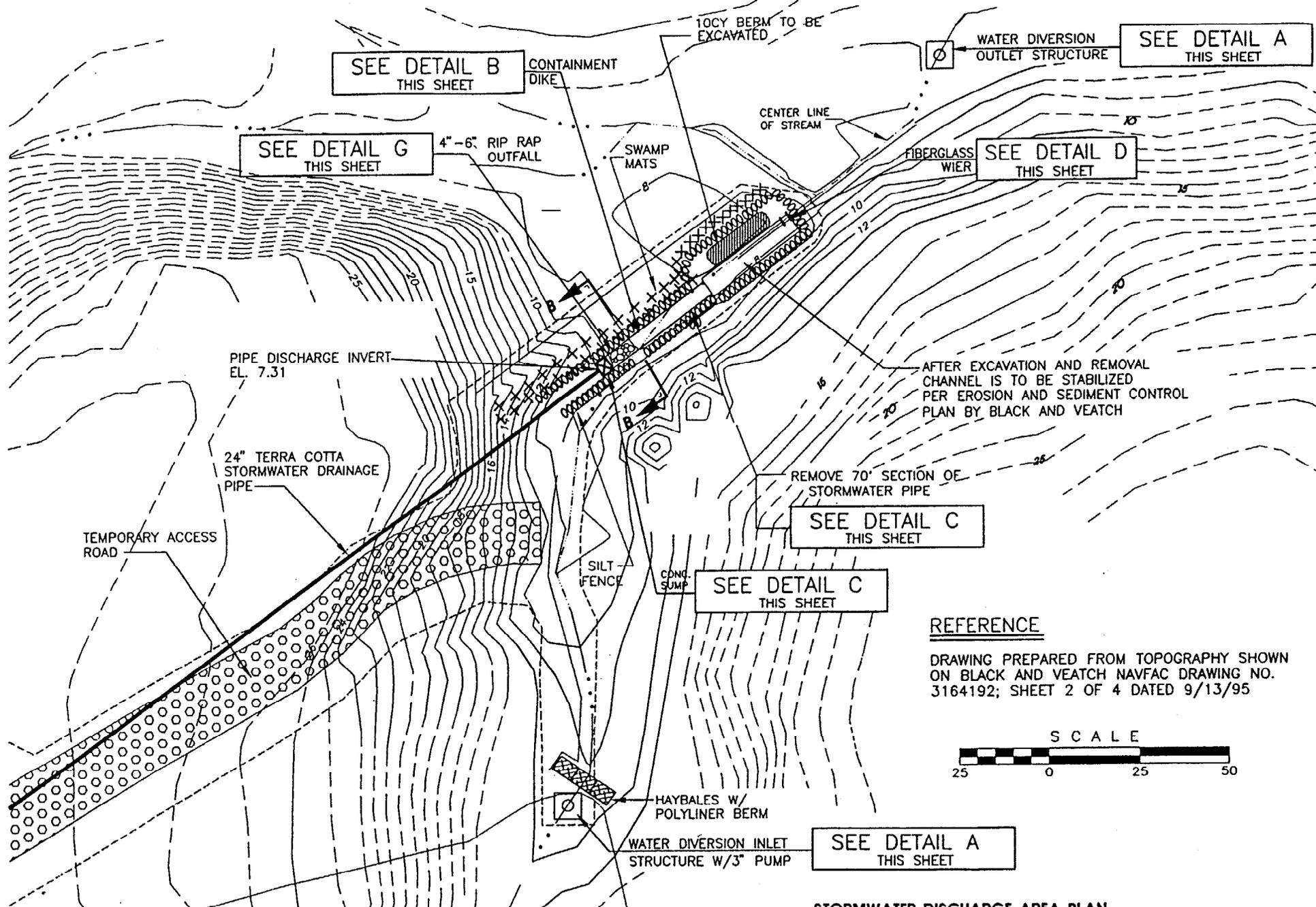
DERA	ER,N
DoD Prepares Budget w/ Input from DoN	DoN Prepares ER,N Budget
DoD DERA Line Item in DoD Appropriations Bill	DoN ER,N Line Item in the DoN Portion of the DoD Appropriations Bill
Congress Appropriates Funds	Congress Appropriates Funds
DoD Distributes Funds to Services	
DoN (NAVFAC) Distributes Funds to EFD/A's	DoN (NAVFAC) Distributes Funds to EFD/A's
EFD/A's Execute the Cleanup Program	EFD/A's Execute the Cleanup Program

FISCAL YEAR 1997 PROJECTS

- * Remedial Investigations on Several High Ranked Sites
- * Removal Action at Site 57, Building 292 TCE Site

EFA Chesapeake DERA Budget





REFERENCE

DRAWING PREPARED FROM TOPOGRAPHY SHOWN ON BLACK AND VEATCH NAVFAC DRAWING NO. 3164192; SHEET 2 OF 4 DATED 9/13/95



SEE DETAIL A THIS SHEET

STORMWATER DISCHARGE AREA PLAN

Activity ID	Activity Description	Orig Dur	Rem Dur	1996											
				MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC				
				12,19,26,29	2,9,16,27	1,4,21,28,4	11,18,25,1	8,15,22,29,6	13,20,27,3	10,17,24,1	8,1				
SETUP															
201000	MOBILIZATION	1	0	MOBILIZATION 6A / 20MAY96A											
201100	INSTALL TEMP FACILITIES	3	0	INSTALL TEMP FACILITIES 96A / 07JUN96A											
202000	INSTALL PERIMETER EROSION CONTROLS	2	0	INSTALL PERIMETER EROSION CONTROLS MAY96A / 06JUN96A											
203000	CLEAR AND GRUB	4	0	CLEAR AND GRUB 06JUN96A / 28JUN96A											
204000	CONST SITE ACCESS ROAD	3	0	CONST SITE ACCESS ROAD 12JUN96A / 11JUL96A											
206000	SETUP WATER FILTRATION PLANT	7	0	SETUP WATER FILTRATION PLANT 02JUL96A / 02AUG96A											
206100	CONST DECON PAD	2	0	CONST DECON PAD 18JUL96A / 19JUL96A											
SITWORK															
300100	UPSTREAM MANHOLE REPAIR	4	0	UPSTREAM MANHOLE REPAIR 17JUL96A / 18JUL96A											
301000	PLACE SWAMP MATS FROM ACCESS ROAD TO END SW PIPE	1	0	PLACE SWAMP MATS FROM ACCESS ROAD TO END SW PIPE 24JUN96A / 24JUN96A											
302000	CONST SILT FENCE AROUND EXCAV AREA	3	0	CONST SILT FENCE AROUND EXCAV AREA 17JUN96A / 20JUN96A											
302040	FILL CONTAINMENT SAND BAGS	8	0	FILL CONTAINMENT SAND BAGS 18JUL96A / 31JUL96A											
302100	REMOVE 70 FT SECTION OF SW PIPE	5	0	REMOVE 70 FT SECTION OF SW PIPE 07AUG96A / 09AUG96A											
303000	SET CONC SUMP W/ PUMP AT END PIPE	1	0	SET CONC SUMP W/ PUMP AT END PIPE 10AUG96A / 10AUG96A											
305000	PIPE CLEANING/SEDIMENT REMOVAL	5	0	PIPE CLEANING/SEDIMENT REMOVAL 14AUG96A / 01SEP96A											
306000	INSTALL PIPE LINER	10	10										INSTALL PIPE LINER 18NOV96 / 02DEC96		
307000	INSTL PUMPS FOR DIVERSION AND CONVEYANCE TO WTP	1	0	INSTL PUMPS FOR DIVERSION AND CONVEYANCE TO WTP 13AUG96A / 13AUG96A											

Project Start 01MAR94
 Project Finish 02DEC96
 Data Date 16OCT96
 Plot Date 16OCT96



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58V2

Removal of Lead Contaminated Soil

Naval Surface Warfare Center

Indian Head, Maryland - Site 58

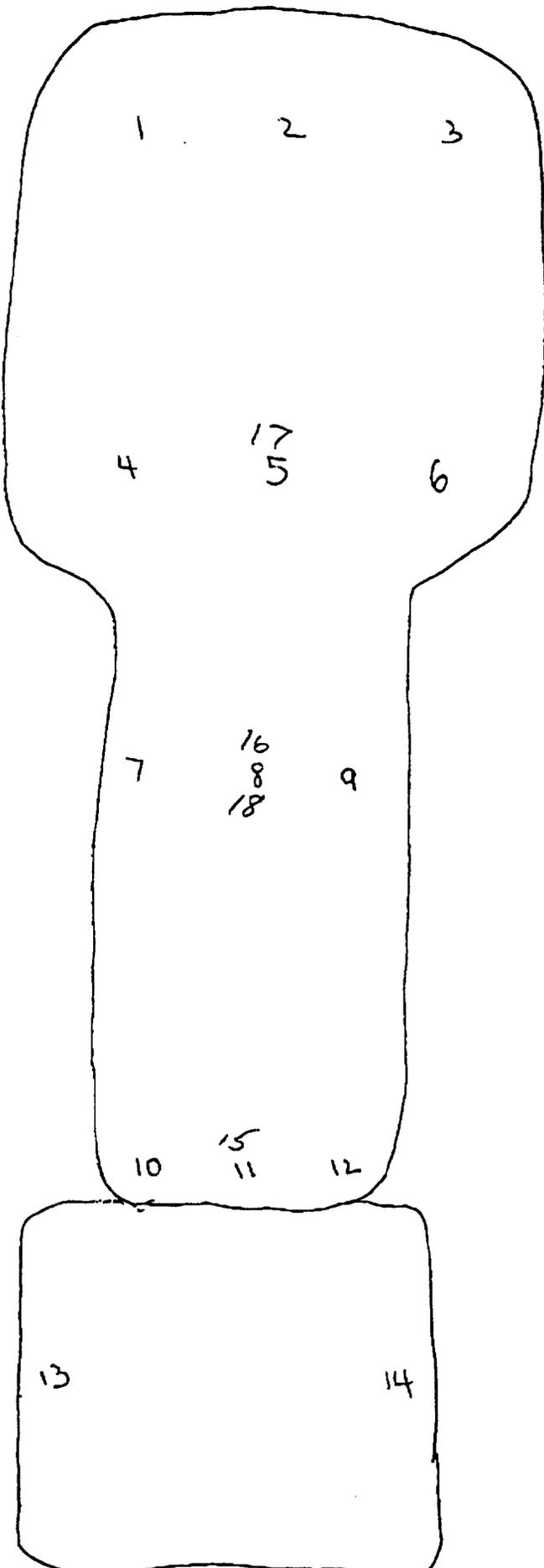
Sheet 1 of 2



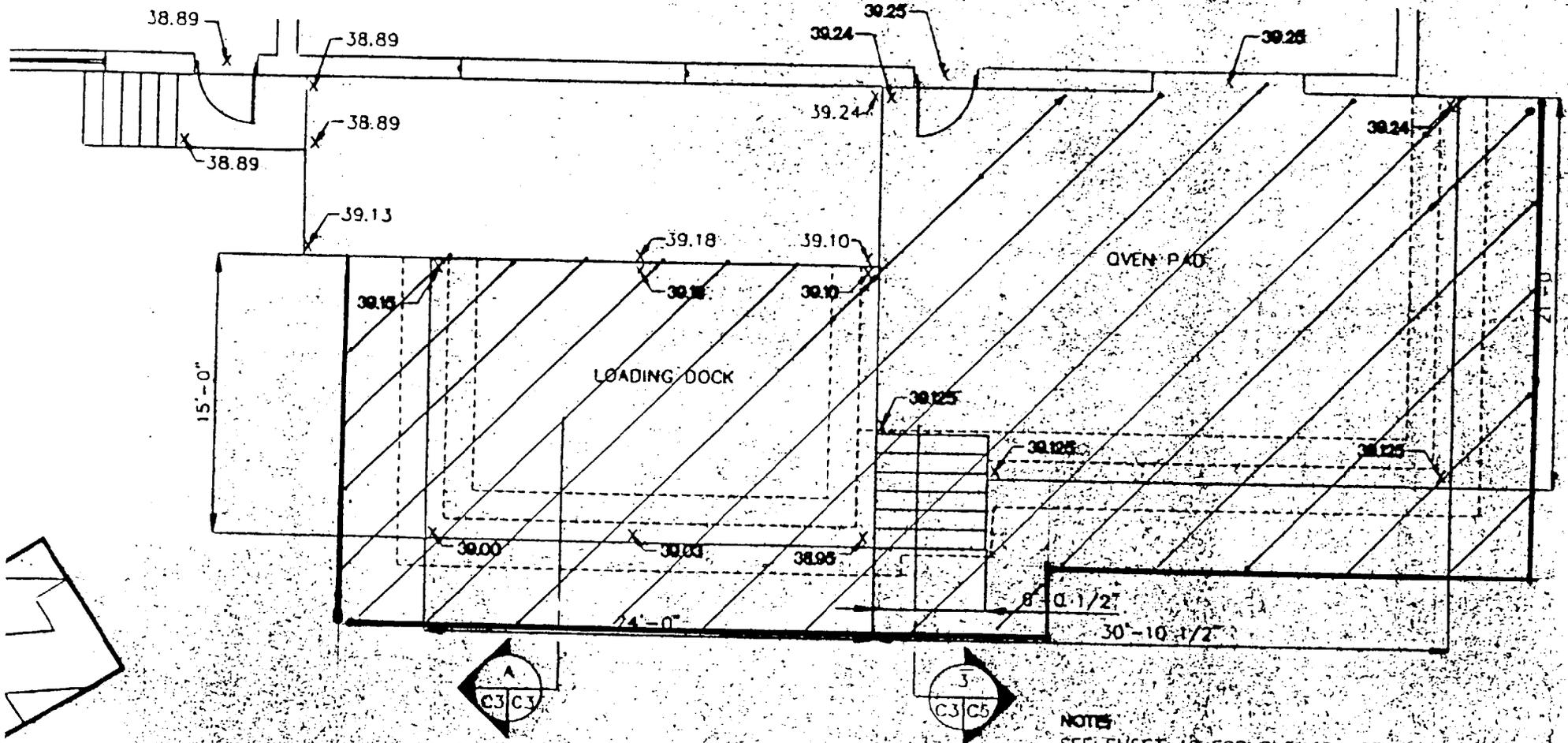
Activity ID	Activity Description	Orig Dur	Rem Dur	1996																													
				MAY			JUN			JUL			AUG			SEP		OCT		NOV		DEC											
				12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24	1
308000	EXCAVATE CONTAMINATED SEDIMENT BELOW OUTFALL	4	0	EXCAVATE CONTAMINATED SEDIMENT BELOW OUTFALL 01SEP96A // 02SEP96A																													
308050	RESET CONC. SUMP WITH RIP RAP STABILIZATION	1	0	RESET CONC. SUMP WITH RIP RAP STABILIZATION 02SEP96A // 02SEP96A																													
308100	CONFIRMATION SAMPLING AND ANALYSIS	5	0	CONFIRMATION SAMPLING AND ANALYSIS 03SEP96A // 11SEP96A																													
309000	T&D SEDIMENTS	2	0	T&D SEDIMENTS 10OCT96A // 15OCT96A																													
309100	TREAT CONTAMINATED WATER	20	0	TREAT CONTAMINATED WATER 09AUG96A // 27SEP96A																													
310000	REMOVE CONTAINMENT DIKE AND SUMP PUMPS	5	0	REMOVE CONTAINMENT DIKE AND SUMP PUMPS 25SEP96A // 30SEP96A																													
311000	STABILIZE CHANNEL	3	0	STABILIZE CHANNEL 12SEP96A // 13SEP96A																													
311005	CONSTRUCT CHANNEL, SET WEIR PLATES	1	0	CONSTRUCT CHANNEL, SET WEIR PLATES 01OCT96A // 02OCT96A																													
SITE BREAKDOWN																																	
311100	DECON AND REMOVE BAKER TANKS	10	0	DECON AND REMOVE BAKER TANKS 06SEP96A // 30SEP96A																													
312000	REMOVE SWAMP MATS, RESTORE WETLAND	5	0	REMOVE SWAMP MATS, RESTORE WETLAND 01OCT96A // 03OCT96A																													
312010	REMOVE WATER FILTRATION SYSTEM	6	3	REMOVE WATER FILTRATION SYSTEM 09OCT96A // 21OCT96																													
313000	REMOVE TRAILERS/UTILITIES	3	3	REMOVE TRAILERS/UTILITIES 22OCT96A // 24OCT96																													
314000	FINISH SITE RESTORATION	4	4	FINISH SITE RESTORATION 22OCT96A // 25OCT96																													
315000	DEMOBILIZATION	1	1	DEMOBILIZATION 28OCT96A // 28OCT96																													

From D. Radu

Site Map



<u>Sample ID</u>	<u>Pb Results</u>
1	8.1
2	9.4
3	15.5
4	9.0
5	554
6	10.0
7	8.8
8	737
9	8.3
10	48.1
11	17.8
12	3.7
13	4.0
14	2.6
15	20.5
16	683
17	7.5
18	12.4



NG 292 CONCRETE PLAN - NEW WORK

NOTES
SEE SHEET A9 FOR OVEN CANOPY

1/16" = 1'-0"

Attachment D

3 X 3 X 3/8 ANGLE
WITH 3/8" DIA.
ANCHORS @ 12" O.C.

DIAGONAL RUBBER BUMPERS
@ 24" O.C. (FRONT & SIDE)
OF LOADING DOCK

EXST. BITUM. CONC. PATCH
AS NECESSARY FOR NEW
CONSTRUCTION.

KEYED JOINT

12" THICK CONC. SLAB WITH
2 LAYERS #4 BARS @ 12"
O.C. BW
3/4" DIA. STE. BARS
@ 12" O.C. TO DOWEL
NEW CONC. TO EXST.
SEALED CONTRACTION
JOINT

EPOX

COMPACTED SELECTED FILL

2 LAYERS #4 BARS @
12" O.C. BW

2 ROWS #6 BARS 12" O.C.

KEYED JOINT

#6 BARS LONGITUDINAL
(4 DYS)

3'-0"

30"

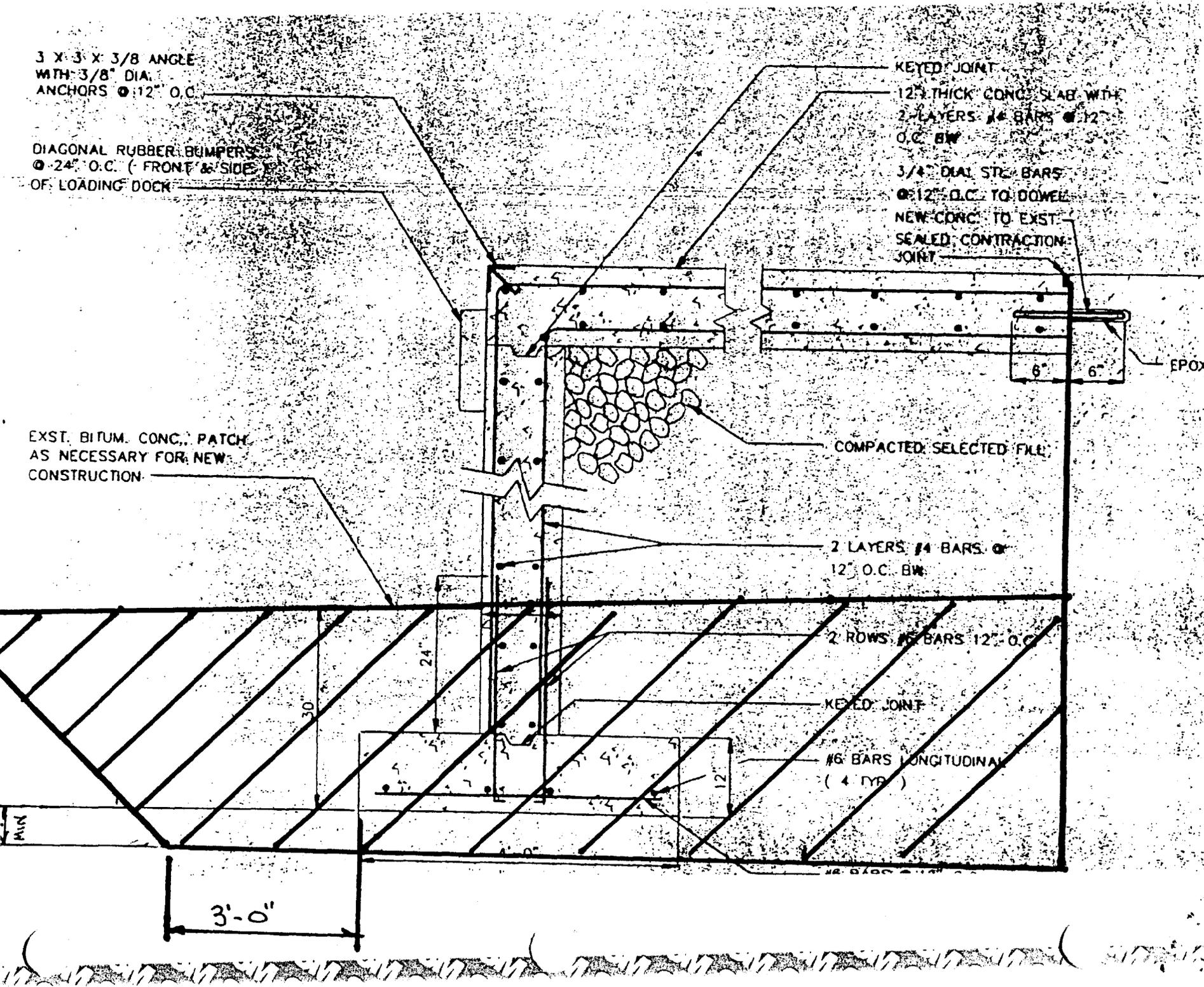
24"

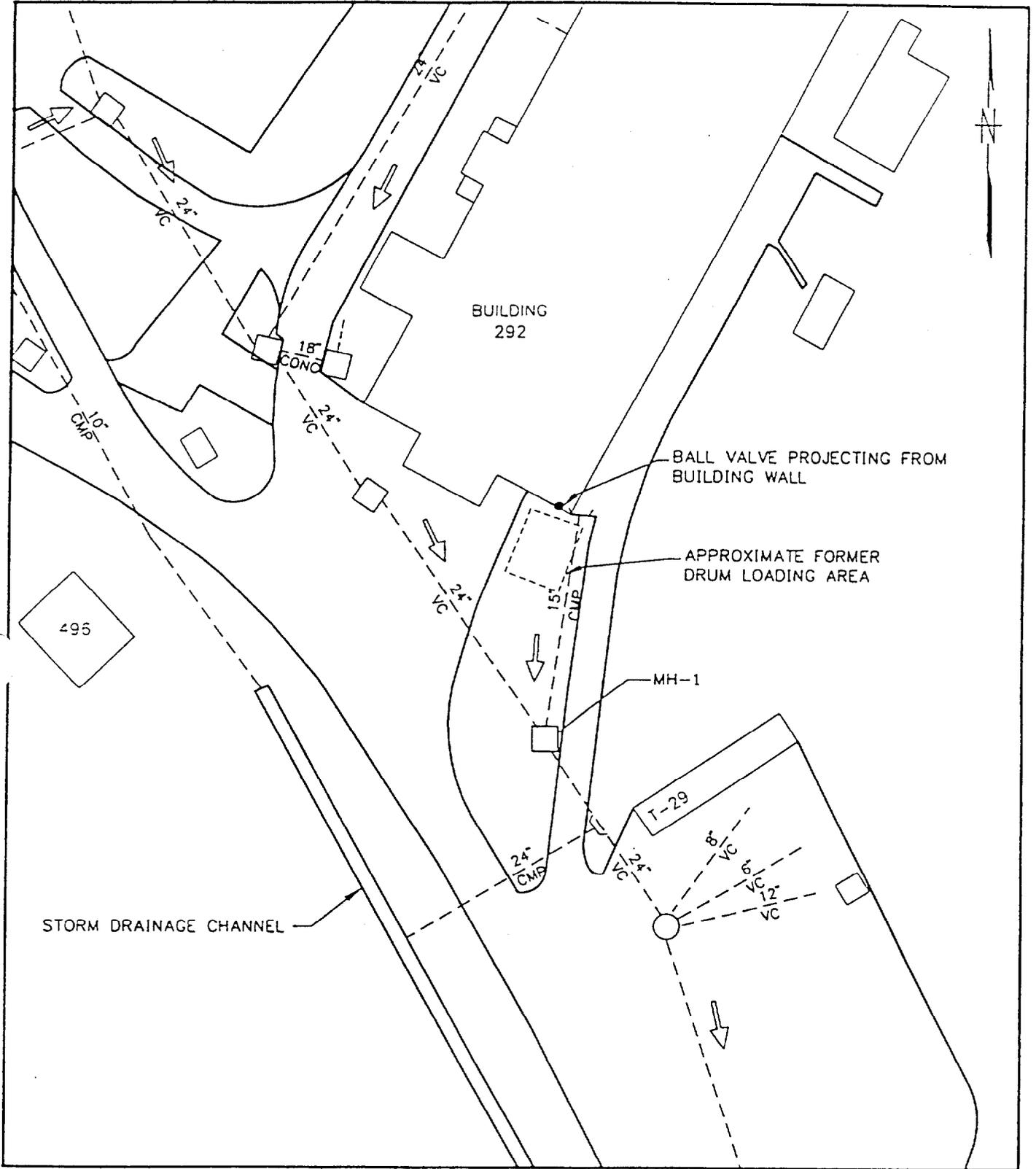
12"

6"

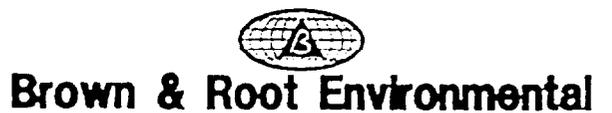
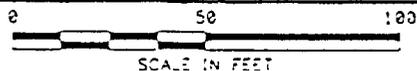
6"

MIN





BUILDING 292, FORMER DRUM LOADING AREA
NAVAL SURFACE WARFARE CENTER,
INDIAN HEAD, MARYLAND



SITE 57 CHRONOLOGY

Mid-1960s to 1989: Degreasing in Building 292

1989: TCE usage ceased

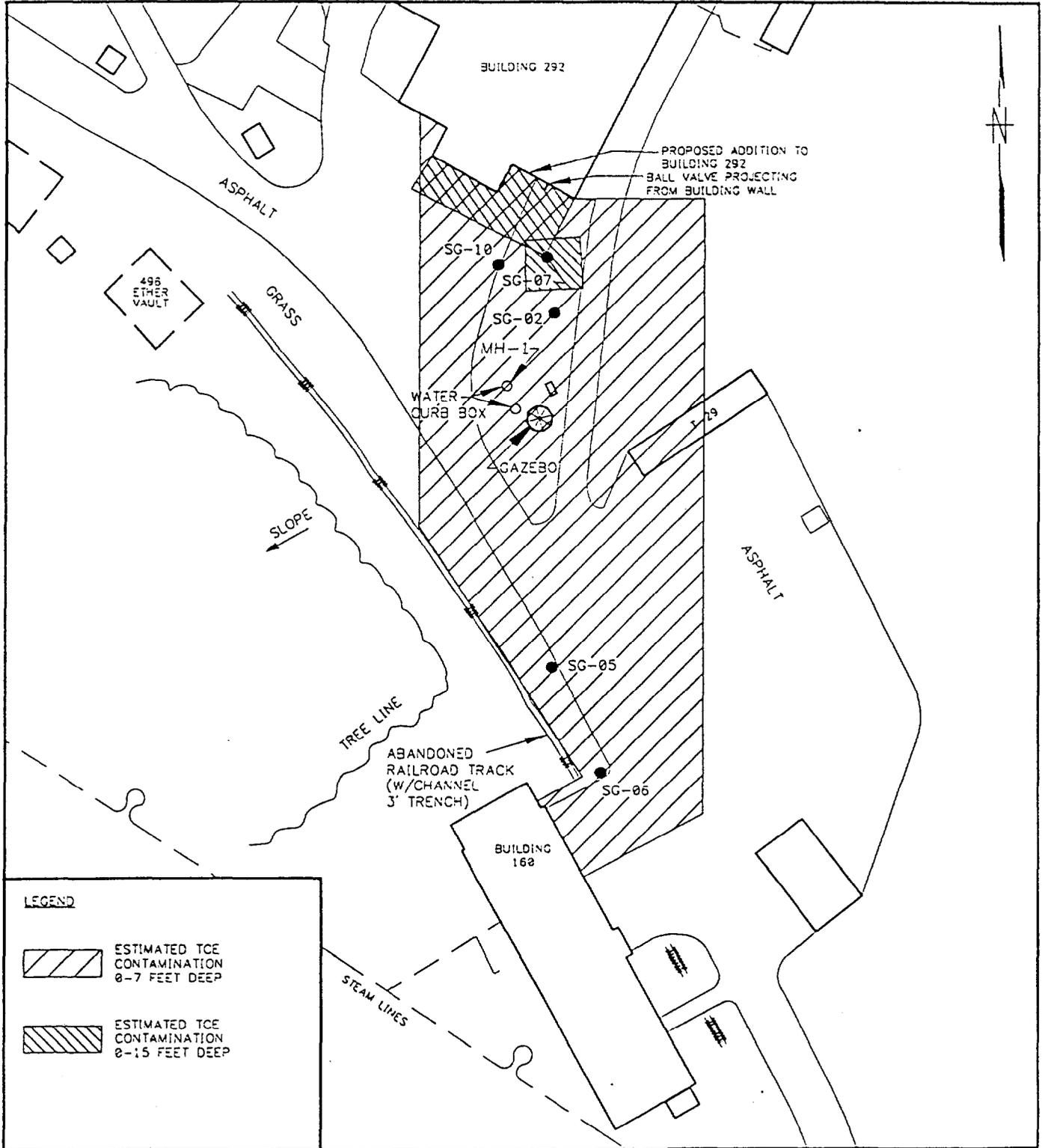
February 1994: TCE detected at IW-80 outfall

July 1994: Sampling

September 1995: Soil Gas Investigation

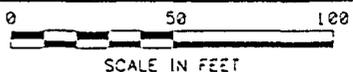
March 1996: Final Data Report

October 1995⁶: Draft EE/CA submitted



CONTAMINATED SOIL VOLUME ESTIMATE
BUILDING 292, FORMER DRUM LOADING AREA
NAVAL SURFACE WARFARE CENTER,
INDIAN HEAD, MARYLAND

FIGURE 3-1



ENGINEERING EVALUATION/COST ANALYSIS (EE/CA)

GOALS

Identify the objectives of the removal action and to analyze the various alternatives that may be used to satisfy these objectives for:

- . COST

- . EFFECTIVENESS

- . IMPLEMENTABILITY

PRESUMPTIVE REMEDIES

"... preferred technologies for common categories of sites. based on historical patterns of remedy selection and EPA's scientific and engineering evaluation of performance data on technology implementation. The objective of the presumptive remedies initiative is to use the program's past experience to streamline site investigation and speed up selection of cleanup actions. Over time, presumptive remedies are expected to ensure consistency in remedy selection and reduce the cost and time required to clean up similar types of sites."

PRESUMPTIVE REMEDY TECHNOLOGIES

Soil Vapor Extraction (SVE)

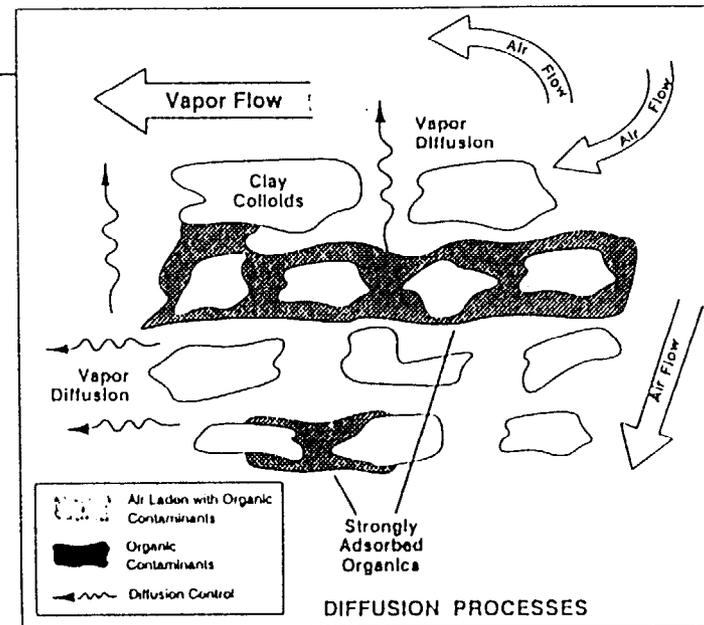
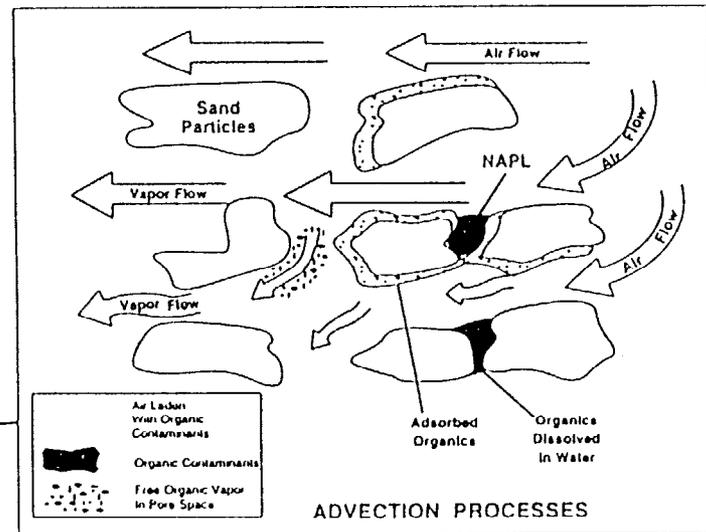
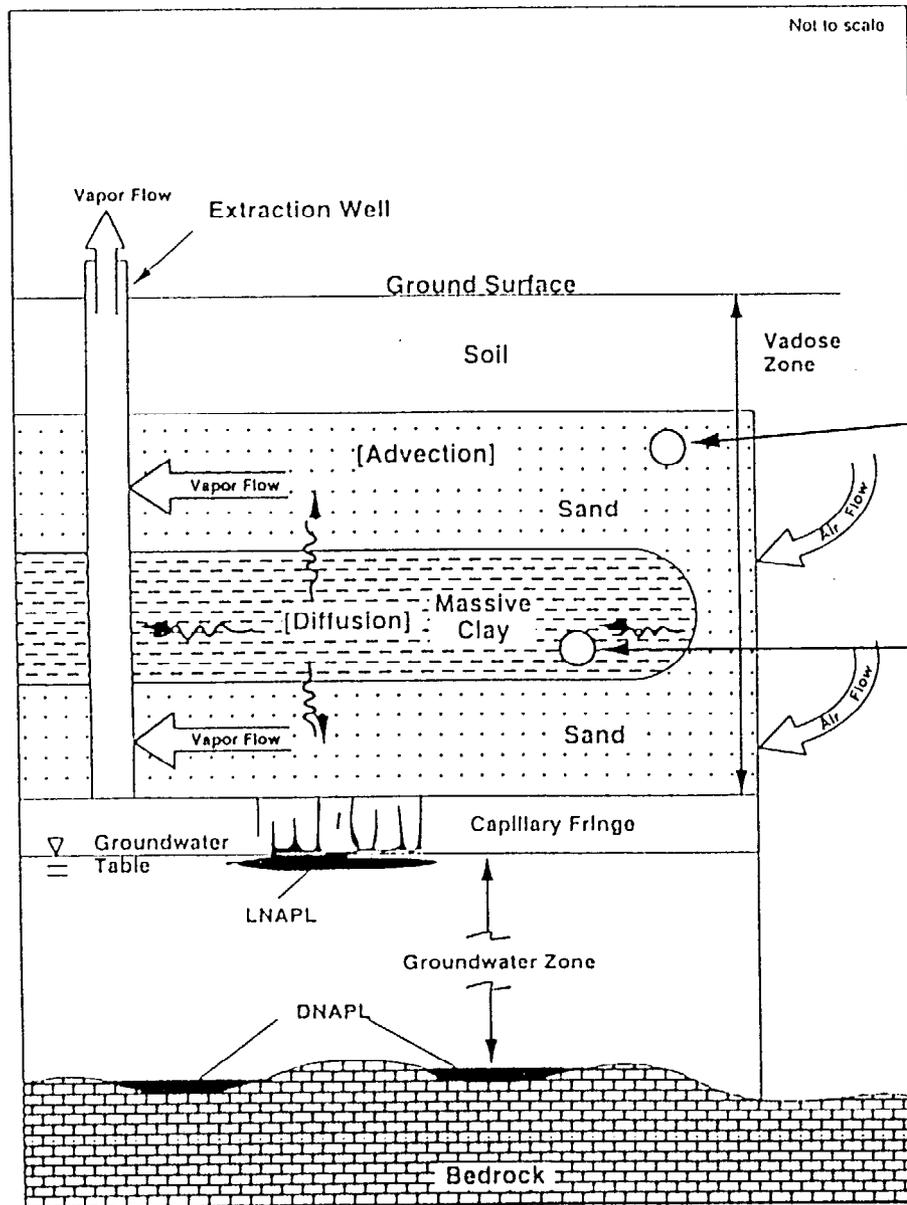
An in-situ (or ex-situ) process which physically removes contaminants from soils by inducing air flow through the soil matrix. The flowing air strips volatile compounds from the solids and carries them to extraction wells. The recovered vapors may require further treatment.

Thermal Desorption

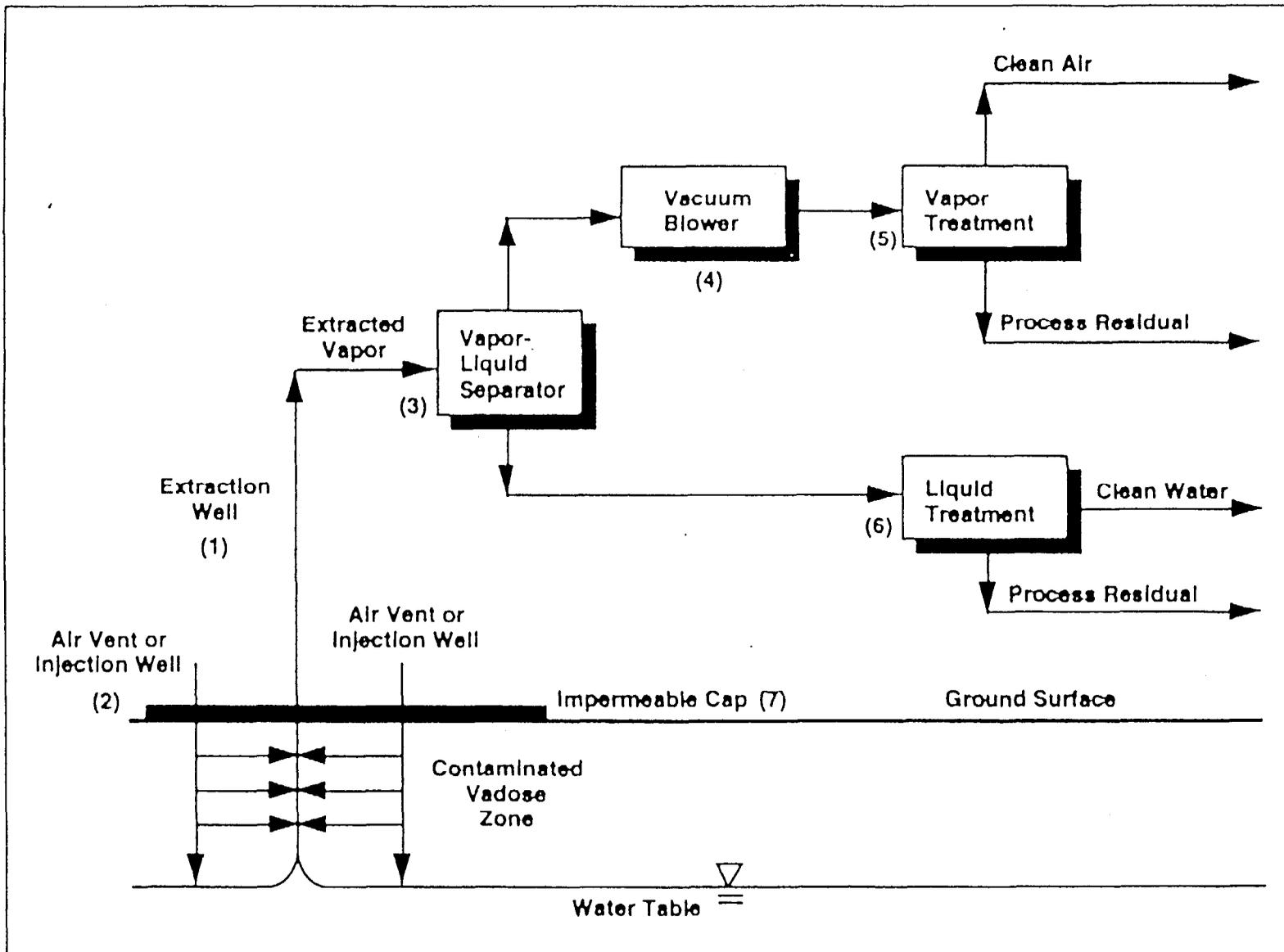
An ex-situ process that uses direct or indirect heat exchange to vaporize organic contaminants from soil, sediment, sludge or other solid and semisolid matrices. The vapors are then condensed or otherwise collected for further treatment.

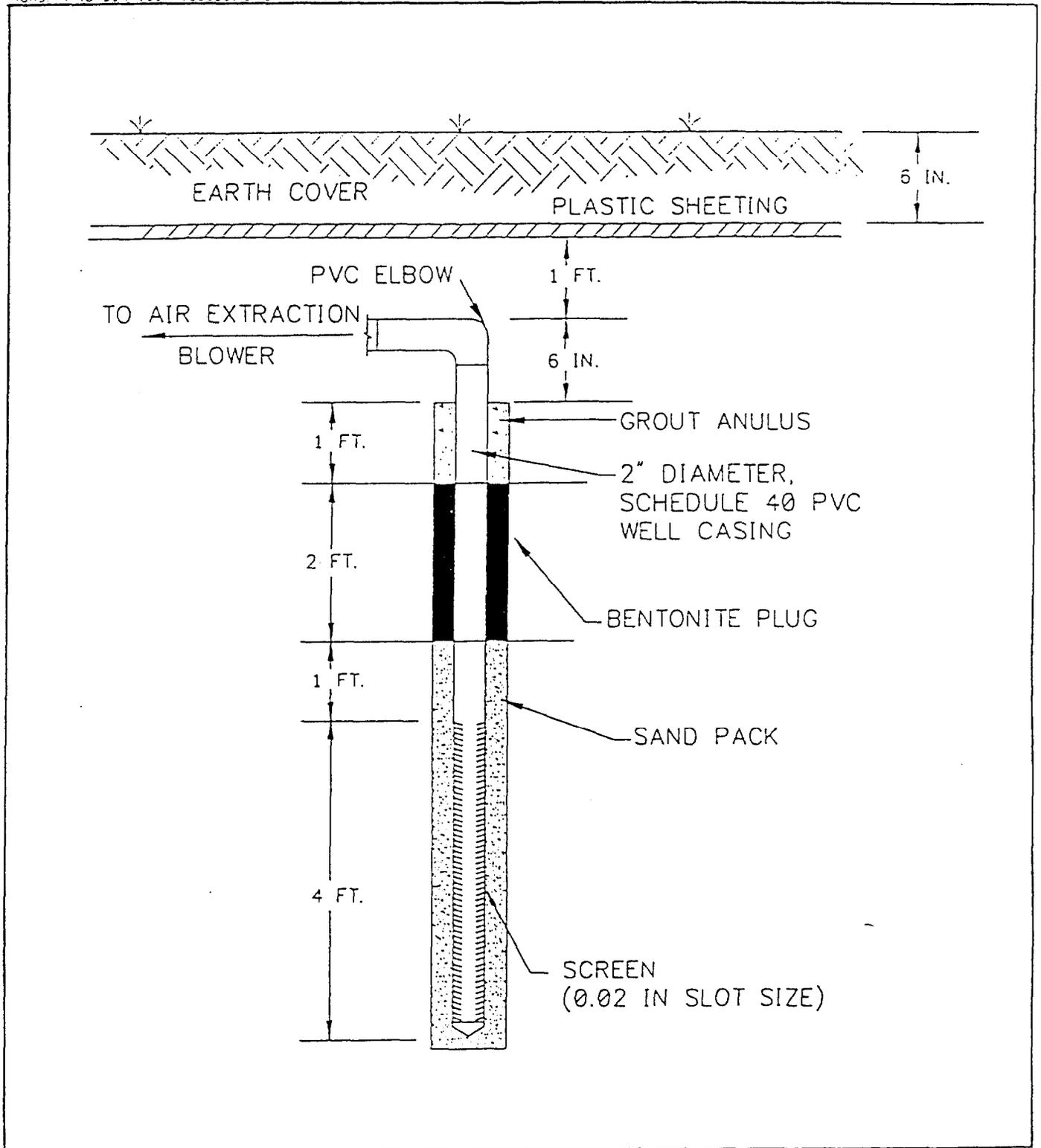
Incineration

An ex-situ engineered process that employs thermal decomposition via oxidation at temperatures usually greater than 900°C to destroy the organic fraction of the waste.



SVE technology processes.



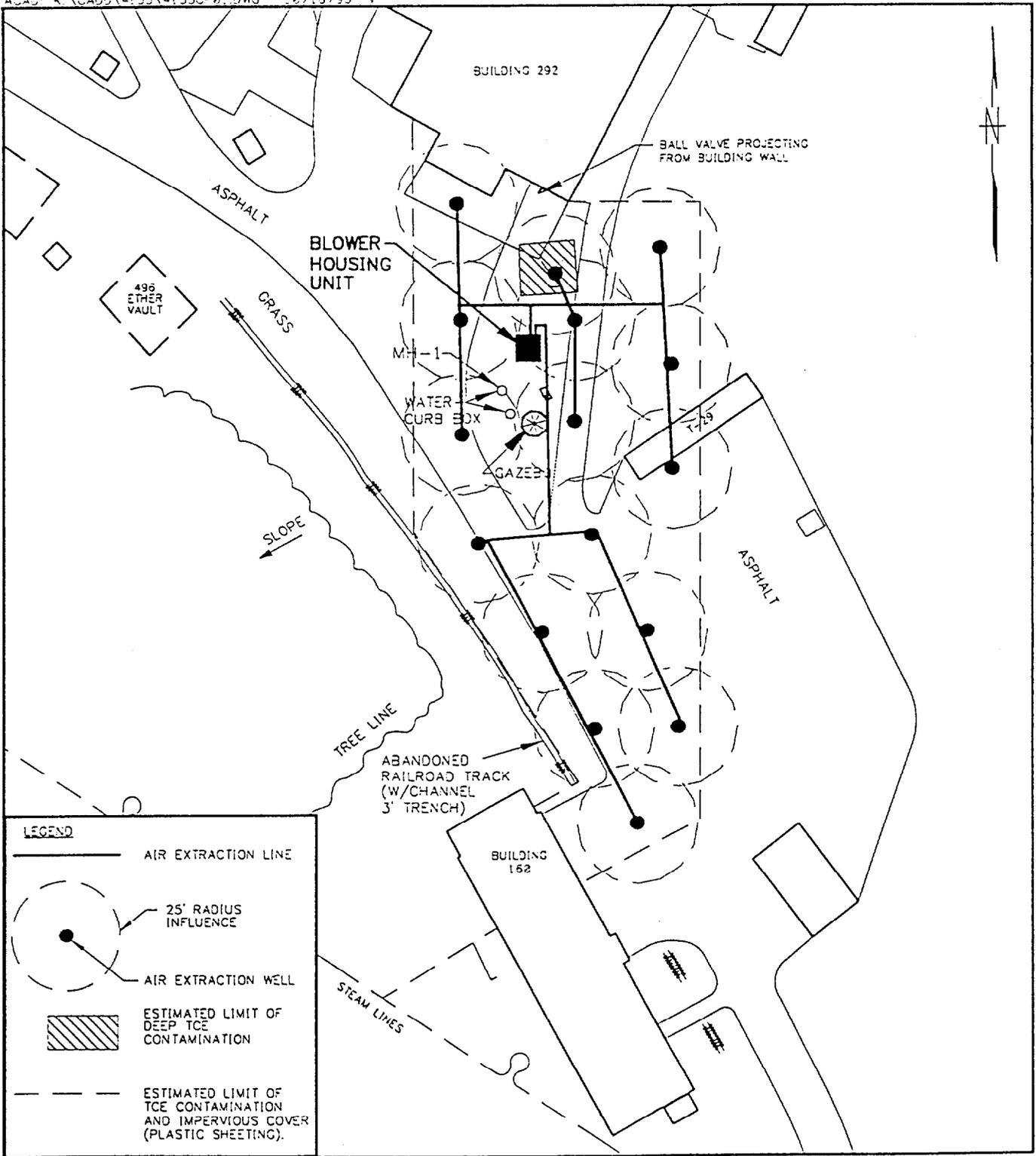


TYPICAL AIR EXTRACTION WELL DETAIL
NAVAL SURFACE WARFARE CENTER,
INDIAN HEAD, MARYLAND
NOT TO SCALE

FIGURE 4-3

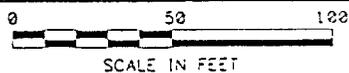


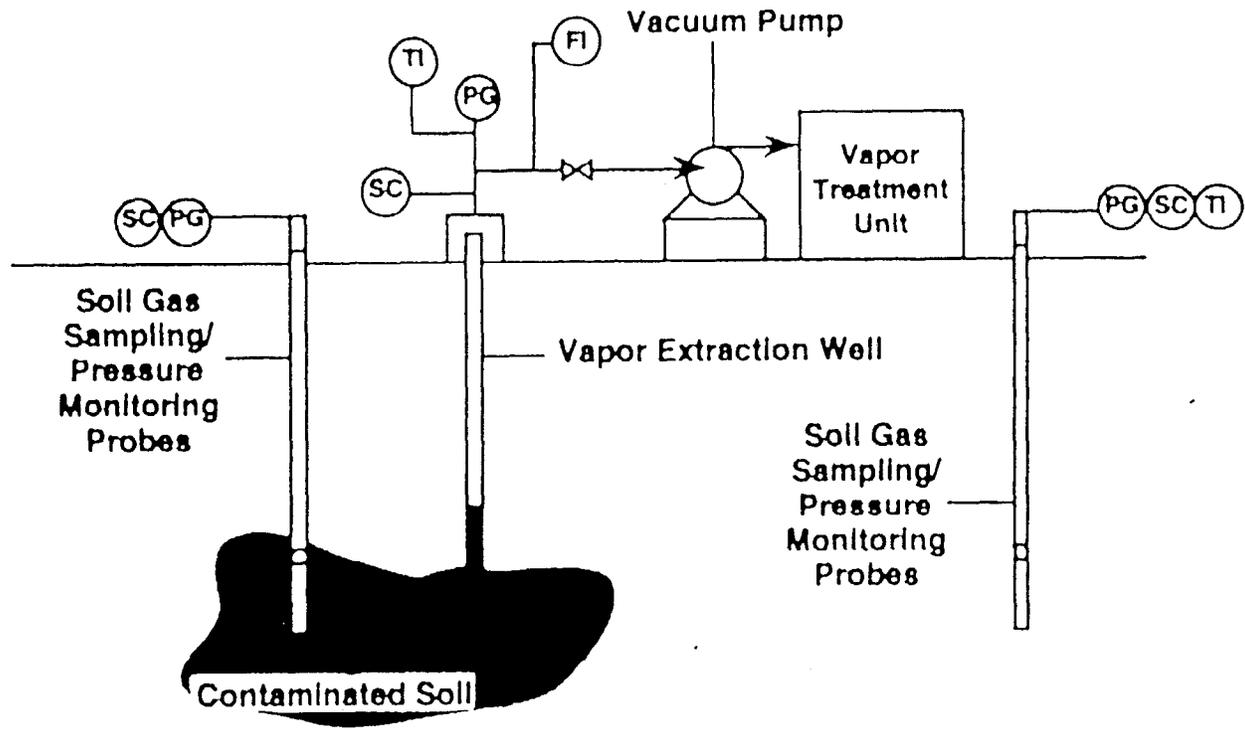
Brown & Root Environmental



SVE SITE LAYOUT PLAN
BUILDING 292, FORMER DRUM LOADING AREA
NAVAL SURFACE WARFARE CENTER,
INDIAN HEAD, MARYLAND

FIGURE 4-1





Vapor
Flow

(FI)	Flowmeter/Indicator	⊗	Valve to Control Flow
(SC)	Sample Probe/Connector	GAC	Granulated Activated Carbon Bed
(PG)	Pressure Gauge	←	Vapor Flow
(TI)	Temperature Indicator		

SITE PRIORITIES

- #1 Site 12 - Town Gut Landfill
- #2 Site 39 - Scrap Yard (Sites 39, 40 and 41)
- #3 Site 42 - Olson Road Landfill
- #4 Site 47 - Mercuric Nitrate Disposal Area
- #5 Site 53 - Mercury Contamination in the Sewage System
- #6 Site 46 - Cadmium Sand Blast Grit Area
- #7 Site 49 - Chemical Disposal Pit
- #8 Site 54 - Building 101 Mercury Contamination
- #9 Site 55 - Building 102
- #10 Site 56 - IW87 Lead Contamination
- #11 Site 44 - Soak Out Area

SITE SUMMARY

Priority	Site No.	Site Name	Historic Sampling	Planned Sampling
1	12	Town Gut Landfill	Leachate (1983) Sediment (2/84) Surface Water (2/84)	Surface Soil Subsurface Soil Groundwater Surface Water Sediment
2	39 (40 & 41)	Scrap Yard	Surface soil, subsurface soil, sediment, surface water, groundwater (9/92)	Surface Soil Sediments Groundwater
3	42	Olson Road Landfill	Surface soil, subsurface soil, groundwater (9/92)	Groundwater Surface Water Sediment
4	47	Mercuric Nitrate Disposal Area	Soil (9/92)	Surface Soil Groundwater
5	53	Mercury Contamination of the Sewage System	Subsurface soil, sediment (9/92)	Sediment
6	46	Cadmium Sandblast Grit Area	Soil (9/92)	None
7	49	Chemical Disposal Area	Subsurface soil, sediment (9/92)	Surface Soil Groundwater Sediment
8	54	Building 101	Wipe Samples, concrete, bulk material (9/92)	Building Materials
9	55	Building 102	Wipe samples, concrete, bulk material (9/92)	Building Materials
10	56	IW87 - Lead Contamination	Sediment, surface water, groundwater, waste water	Sediment
11	44	Soak Out Area	Surface soil, sub-surface soil, soil gas, groundwater (9/92)	Groundwater
	57	TCE Building 292 Area		
	43	Toluene Disposal Site	Soil, soil gas (8/92)	Groundwater
	45	Abandoned Drums	Soil, soil gas (9/92)	Groundwater
	48	Nitroglycerine Plant Disposal Area	Soil (9/920)	None
	50	Building 103, Crawl Space	Surface soil (9/92)	Surface Soil Groundwater

Site No.	Site Name	Historical Sampling	Contaminants	Planned Sampling
12	Town Gut Landfill	Leachate (1983) Sediment (2/84) Surface Water (2/84)	Metals Sediment: VOCs, Metals Surface Water: VOCs, Metals	Surface Soil Subsurface Soil Groundwater Surface Water Sediment
39 (39, 40& 41)	Scrap Yard	Surface soil, subsurface soil, sediment, surface water, groundwater (9/92)	Soil: VOAs, Semivolatiles, Pesticides, Metals Sediments: VOAs, Semivolatiles, Pesticides and Metals Surface Water: Semivolatiles, Pesticides, Metals Groundwater VOAs, Pesticides and Metals	Surface Soil Sediments Groundwater
42	Olson Road Landfill	Surface soil, subsurface soil, groundwater (9/92)	Soil: VOCs, Semivolatiles, Pesticides and Metals Groundwater: VOCs, Semivolatiles, Pesticides and Metals	Groundwater Surface Water Sediment
47	Mercuric Nitrate Disposal Area	Soil (9/92)	Soils: VOCs, Semivolatiles and Metals	Surface Soil Groundwater
53	Mercury Contamination of the Sewage System	Subsurface soil, sediment (9/92)	Soil: Metals Sediment: Mercury, Explosives	Sediment
46	Cadmium Sandblast Grit Area	Soil (9/92)	Soils: Metals	None
49	Chemical Disposal Area	Subsurface soil, sediment (9/92)	Soil: Metals Sediment: VOCs, Semivolatiles, Metals and Explosives	Surface Soil Groundwater Sediment
54	Building 101	Wipe Samples, concrete, bulk material (9/92)	Wipe Samples: Mercury: Bulk Material: Mercury Concrete: Mercury	Building Materials
55	Building 102	Wipe samples, concrete, bulk material (9/92)	Wipe Samples: Mercury: Bulk Material: Mercury Concrete: Mercury and Explosives	Building Materials
56	IW87 - Lead Contamination	Sediment, surface water, groundwater, waste water	Sediment: Lead Surface Water: Lead	Sediment GW
44	Soak Out Area	Surface soil, sub-surface soil, soil gas, groundwater (9/92)	Soil :VOCs, Semivolatile Organics and Total Petroleum Hydrocarbons Soil gas: VOCs Groundwater: VOCs, Semivolatile and Organics	Groundwater
57	TCE Building 292 Area		Trichloroethene	
43	Toluene Disposal Site	Soil, soil gas (8/92)	Soil: Acetone Soil gas: VOCs	Groundwater
45	Abandoned Drums	Soil, soil gas (9/92)	Soil: VOCs, semivolatiles and metals Soil gas: VOCs	Groundwater
	Nitroglycerine Plant Disposal Area	Soil (9/920)	Soils: Semivolatiles, metals	None
50	Building 103, Crawl Space	Surface soil (9/92)	Soil: VOCs, Semivolatiles and Metals	Surface Soil Groundwater

INSTALLATION RESTORATION PROGRAM



INDIAN HEAD DIVISION,
NAVAL SURFACE WARFARE CENTER
101 STRAUSS AVENUE
INDIAN HEAD, MARYLAND
20640-5035



RESTORATION ADVISORY BOARD (RAB) MEETING COMMENTS, QUESTIONS, AND ANSWERS October 17, 1996

Devolvement of Defense Environmental Restoration Account (DERA) Funds

No questions or comments.

Fiscal Year 1997 (FY97) Budget

Question: How far in the future does the budget go and what is the total cost to complete all of the sites?

Answer: The budget on the chart is up to the year 2003. However, the actual budget for Indian Head continues past 2005. The budget is calculated using a computer model. The cost to complete is part of the computer model and exceeds 24 million dollars for all IR sites at Indian Head.

IR Site 56 Removal Action Update

Comment: The purpose of this RA was to reduce and eliminate the sediment in the pipe.

IR Site 57 Construction Work

No questions or comments.

IR Site 57 EECA and SVE Pilot Scale Test Plan

Question: We know the trichloroethylene (TCE) is located down to 15 feet, so why is the well depth only 10 feet?

Answer: The 10 feet shown is an estimate. The actual depth of the extraction well will depend on the depth to groundwater. If the well is too shallow, the system will short circuit, pulling air from the surface. Likewise, if the well too deep, it will pull up water. This RA is to remove TCE in the soil only.

Remedial Investigation (RI) Work Plan and Site Priorities List

Comment: You must also consider environmental health when determining what and how many samples are to be taken.

Question: We must consider risk to humans, including workers, for each hazardous material found and how to evaluate the various degrees of confinement of these chemicals at each site. Perhaps we could evaluate risk using the surface soils and the transfer of contamination by hands through smoking, eating, etc.?

Answer: The type of data you are describing is obtained by performing a Remedial Investigation. It is based on the uniqueness of the site, which plays a role on the exposure scenarios, and can get very detailed. At this point, we can only prepare a qualitative risk based on the information at hand.

Question: Can we do something qualitatively to say that the site is located in the woods, or people are always or never on the site?

Comment: These sites were identified as high priorities because a positive or possible source, pathway, and receptor were identified.

Comment: Perhaps you could prepare a matrix to show how you arrived at the priorities on the list.

Question: Why is IR Site 56 on the list since a Removal Action (RA) was just completed there?

Answer: After the post-RA report is received, it will drop off the high priority list. However, the pond (formerly called the Site 8 pond) receives effluent from Site 56 as well. The pond will be addressed with Site 12.

Comment: These sites are all high priority sites from the computer model (block X1 in the relative risk model). Even though an RA has been performed on a site, some data needs may still exist. For example, at Site 56, no groundwater samples were ever taken. Therefore, additional sampling is required before we can even consider removing the site from the list.

Comment: With respect to the funding issue, each year there appears to be more things that need to be done. You may want to give consideration to the most expensive, when prioritizing because the funding may not be available in the next year.

Response: Using a phased approach is typical when performing an RI because, as was stated, sometimes the full amount of money required is not available.