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NSWC INDIAN HEAD
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LETTER REGARDING THE TRANSMITTAL OF RESTORATION ADVISORY BOARD
MEETING MINUTES 15 OCTOBER 2009 WITH APPENDIX NSWC INDIAN HEAD MD
12/31/2009
U S NAVY



DEPARTMENT OF THE NAVY
NAVAL SUPPORT ACTIVITY
SOUTH POTOMAC
6509 SAMPSON ROAD
DAHLGREN, VIRGINIA 22448-5106

IN REPLY REFER TO

5090
Ser PRSI42NC/164
DEC 31 2009

Mr. Elmer Biles
6315 Indian Head Highway
Indian Head, Maryland 20640

Dear Mr. Elmer Biles:

We are forwarding the minutes from the Installation Restoration (IR) Program Restoration Advisory Board (RAB) meeting that was held on Thursday, October 15, 2009 at the Indian Head Senior Center, which is located at 100 Cornwallis Square, Indian Head, Maryland.

We would like to thank everyone who attended the RAB meeting and hope to see all of you at the next RAB meeting, which is scheduled for Thursday, April 15, 2010 at the Indian Head Senior Center from 5:00 - 7:00 pm.

Please direct all correspondence that you may have concerning the Installation Restoration Program (IRP) or the Munitions Response Program (MRP) at our Facility to:

ATTN: Director, Environmental Division
Department of Navy
NAVFAC Washington, PWD South Potomac
3972 Ward Road, Suite 101
Indian Head, Maryland 20640-5157

If you have questions or concerns related to the IRP or the MRP at our Facility please contact Mr. Nicholas Carros at (301) 744-2263 or by email at nicholas.carros@navy.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeffrey C. Bossart".

JEFFREY C. BOSSART
By direction

Enclosure: (1) Minutes from RAB Meeting of October 15, 2009

**NAVAL SUPPORT FACILITY INDIAN HEAD
INSTALLATION RESTORATION (IR) PROGRAM
RESTORATION ADVISORY BOARD (RAB) MEETING AGENDA**

October 15, 2009

- 5:00 - 5:10 pm** **ARRIVAL/WELCOME**
Mr. Joseph Rail
Naval Facilities Engineering Command, Washington (NAVFACWASH)
Remedial Project Manager
- 5:10 – 5:30 pm** **FY2010 NSF-IH BUDGET**
Mr. Joseph Rail
- 5:30 – 5:50 pm** **SITE 57 REMEDIAL DESIGN**
Mr. Joseph Rail
- 5:50 – 6:15 pm** **SITE 66 REMEDIAL INVESTIGATION**
Mr. Joseph Rail
- 6:15 pm** **ADJOURN**



*NAVAL SUPPORT FACILITY,
INDIAN HEAD*



FY10 Budget Update

*Joseph Rail
NAVFAC Washington*

October, 2009



FY10 Budget Update



- *Approximate budget for FY 2010-*

\$4.5 mil for IRP

\$258K for MRP

Planned work includes:

- *Site Inspection (SI)*
- *Remedial Investigation (RI)*
- *Engineering Evaluation/Cost Analysis (EE/CA)*
- *Remedial Action (RA or IRA)*
- *Proposed Plan (PP)*
- *Record of Decision (ROD)*
- *Long-Term Monitoring (LTM)*



FY10 Budget Update



- ***SI for:***
 - *Site 67- Hog-Out Facility*
 - *Site 69- Building 1018*

- ***RI for:***
 - *Site 37- Causeway*
 - *SWMU 14- Photographic Lab Septic Tank System*
 - *UXO 25- Roach Road Rifle Range*

- ***EE/CA for:***
 - *Site 1- Thorium Spill*
 - *Site 19- Catch Basins at Chip Collection Houses*
 - *Site 27- Thermal Destructor 1*



FY10 Budget Update



- ***Remedial Actions for:***
 - *Site 1- Thorium Spill*
 - *Site 14- Lab Area*
 - *Site 19- Catch Basins at Chip Collection Houses*
 - *Site 27- Thermal Destructor 1*

- ***PP/ROD for:***
 - *Site 1- Thorium Spill*
 - *Site 19- Catch Basins at Chip Collection Houses*
 - *Site 27- Thermal Destructor 1*



FY10 Budget Update



- *LTM for:*
 - *Site 12- Town Gut Landfill*
 - *Site 28- Original Burning Ground*
 - *Site 36- Closed Landfill*
 - *Site 57- Building 292 TCE Contamination*
 - *UXO 1- Air Blast Pond*



FY10 Budget Update



Questions?



*NAVAL SUPPORT FACILITY,
INDIAN HEAD*



Site 57 Remedial Design

*Joseph Rail
NAVFAC Washington*

October, 2009



Site 57 Remedial Design



- ***Purpose of Remedial Design-***

To provide design and performance criteria for a groundwater remedial action as described in the ROD.

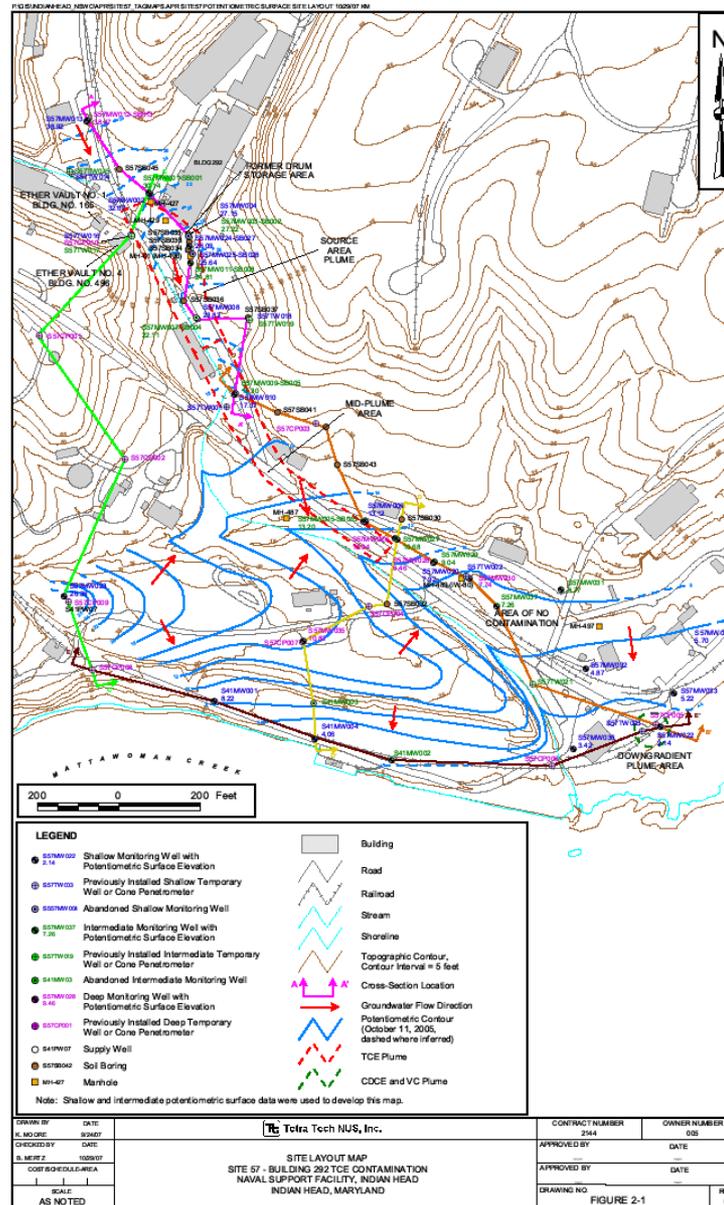
COCs include TCE and degradation products (cis-1,2-dichloroethene and vinyl chloride.)

- ***Remedial Action Components-***

- *In-situ bioremediation*
- *Natural Attenuation*
- *Land use controls (LUCs)*
- *Monitoring*



Site 57 Remedial Design





Site 57 Remedial Design



- **Remedial Action Objectives (RAOs)-**
 - *Prevent exposure to groundwater contaminated at concentrations greater than PRGs.*
 - *Prevent or minimize further migration of the groundwater contaminant plume (plume containment.)*
 - *Restore groundwater to its expected beneficial use (aquifer restoration.)*
- **Preliminary Remediation Goals PRGs)-**
 - *cis-1,2-dichloroethene: 70 ug/L*
 - *Trichloroethene: 5 ug/L*
 - *Vinyl Chloride: 2 ug/L*



Site 57 Remedial Design



- ***In-situ bioremediation-***

- *Will address chlorinated volatile organic compound (VOC) contamination in shallow groundwater.*
- *To be utilized in source area plume and downgradient plume area.*
- *In-situ anaerobic bioremediation via EOS injections in source area.*
- *In-situ aerobic bioremediation via ORC injections in downgradient area.*



Site 57 Remedial Design

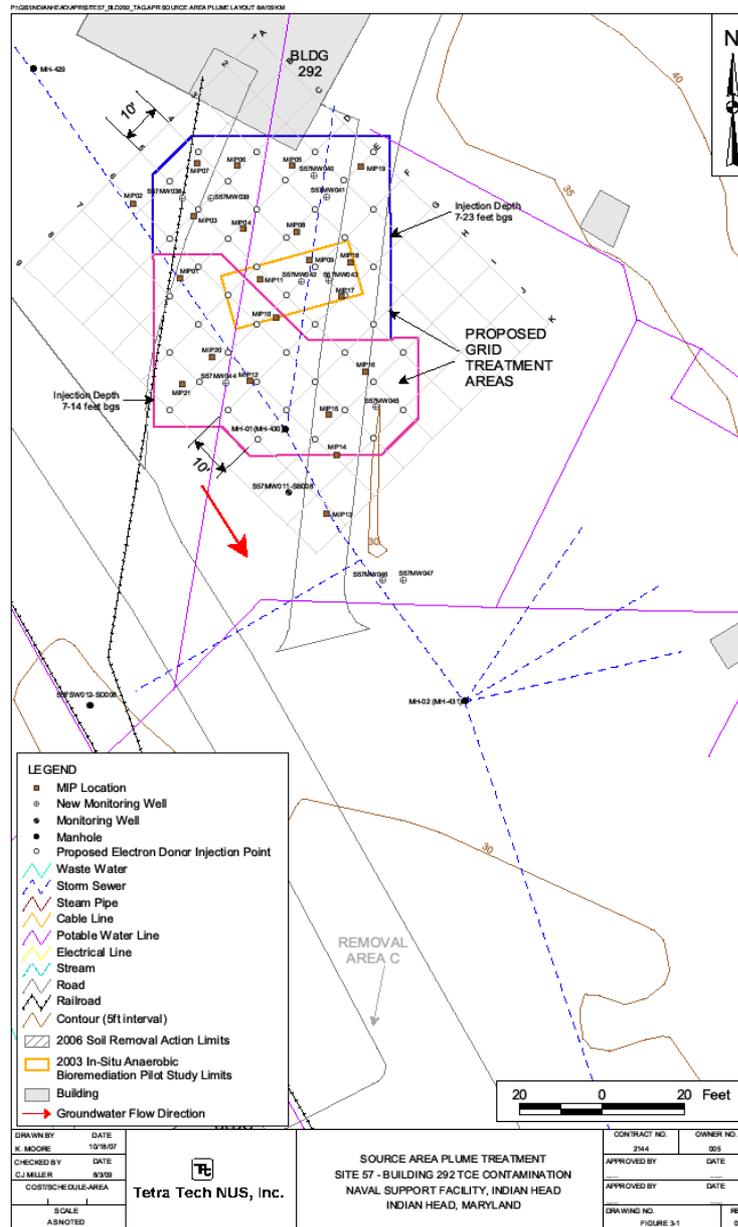


- ***In-situ anaerobic bioremediation-***

- *Electron donor (EOS- Emulsified Oil Substrate) to be injected to treat the most contaminated portion of TCE plume.*
- *Injections will promote anaerobic conditions suitable for reductive dechlorination of TCE.*
- *Presence of TCE degradation products indicates that some natural biodegradation is occurring.*
- *Tentative grid treatment area includes 45 injection points over two areas.*
- *In north treatment area, injection will be from 7 to 23 feet bgs.*
- *In south treatment area, injection will be from 7 to 14 feet bgs.*
- *Injection point spacing is 10 feet.*



Site 57 Remedial Design





Site 57 Remedial Design

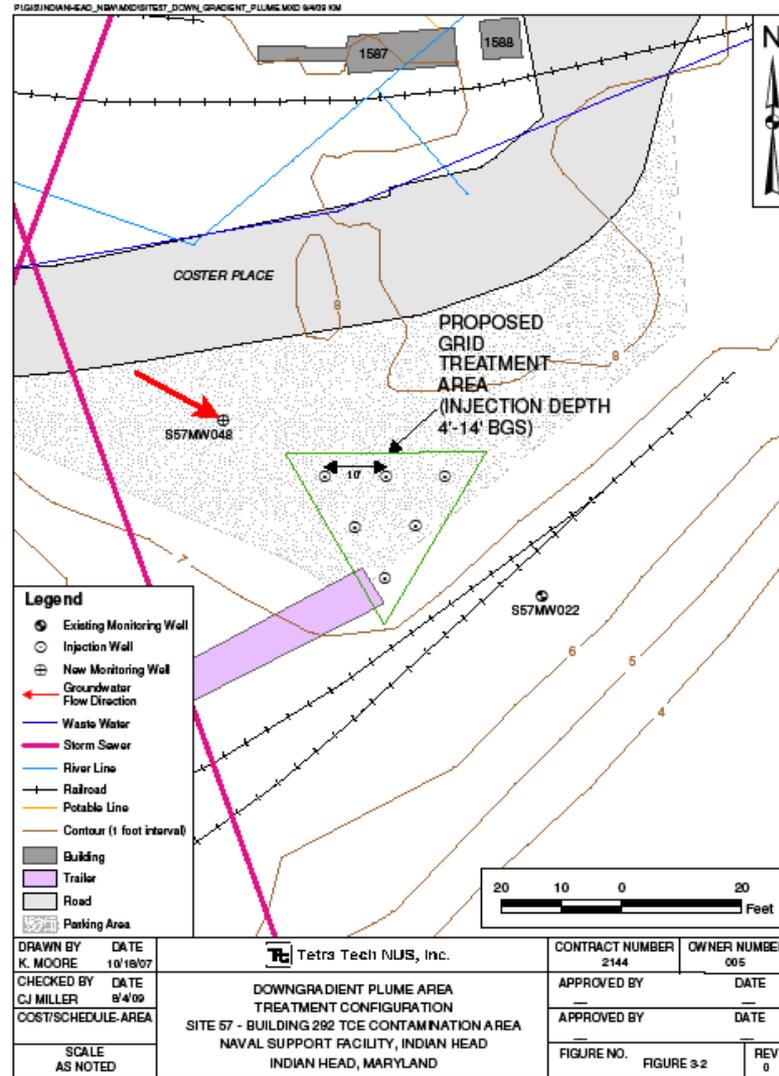


- ***In-situ aerobic bioremediation-***

- *Electron acceptor (ORC- Oxygen-Release Compound) to be injected to treat downgradient plume near Mattawoman Creek.*
- *Injections will promote aerobic conditions suitable for removal of cis-1,2-dichloroethene and vinyl chloride.*
- *One application of ORC was assumed in FS.*
- *Grid treatment area includes 6 injection points over a triangular area.*
- *Injection will be from 4 to 14 feet bgs.*
- *Injection point spacing is 10 feet.*



Site 57 Remedial Design





Site 57 Remedial Design



- ***Natural Attenuation-***

- *Used for remaining portion of TCE plume (mid-plume area.)*
- *Presence of TCE degradation products indicates that some natural biodegradation is occurring.*
- *Chemical concentrations in mid-plume area are much lower than in the source area plume and have continued to decline with time and downgradient distance.*

- ***Land Use Controls-***

- *LUCs would include restrictions maintained in GIS.*
- *No use of shallow groundwater until PRGs are achieved.*
- *A LUC Remedial Design is planned to document restrictions.*



Site 57 Remedial Design



- **Monitoring-**

- *11 new monitoring wells to be installed upgradient and downgradient of source area plume and downgradient plume areas.*
- *Samples from wells in source area to be analyzed for anaerobic biodegradation indicator parameters.*
- *Samples from wells in downgradient area to be analyzed for aerobic biodegradation indicator parameters.*
- *Samples from wells in mid-plume area to be analyzed for natural attenuation parameters.*
- *Prior to injecting EOS or ORC, samples will be collected from all wells to establish baseline conditions.*
- *Additional sampling will be performed after injections to monitor performance of bioremediation.*
- *Site will require 5-Year Reviews to evaluate remedy effectiveness and determine whether further action is necessary.*



Site 57 Remedial Design



Questions?



*NAVAL SUPPORT FACILITY
INDIAN HEAD*



Site 66

Turkey Run Disposal Area

Remedial Investigation Path Forward

Joe Rail

NAVFAC Washington

October 22, 2009



Site 66 RI Path Forward



OUTLINE

- *SI Activities/Conclusion*
- *RI Objectives*
- *Risk Assessments*
- *Next Steps*
- *Questions*

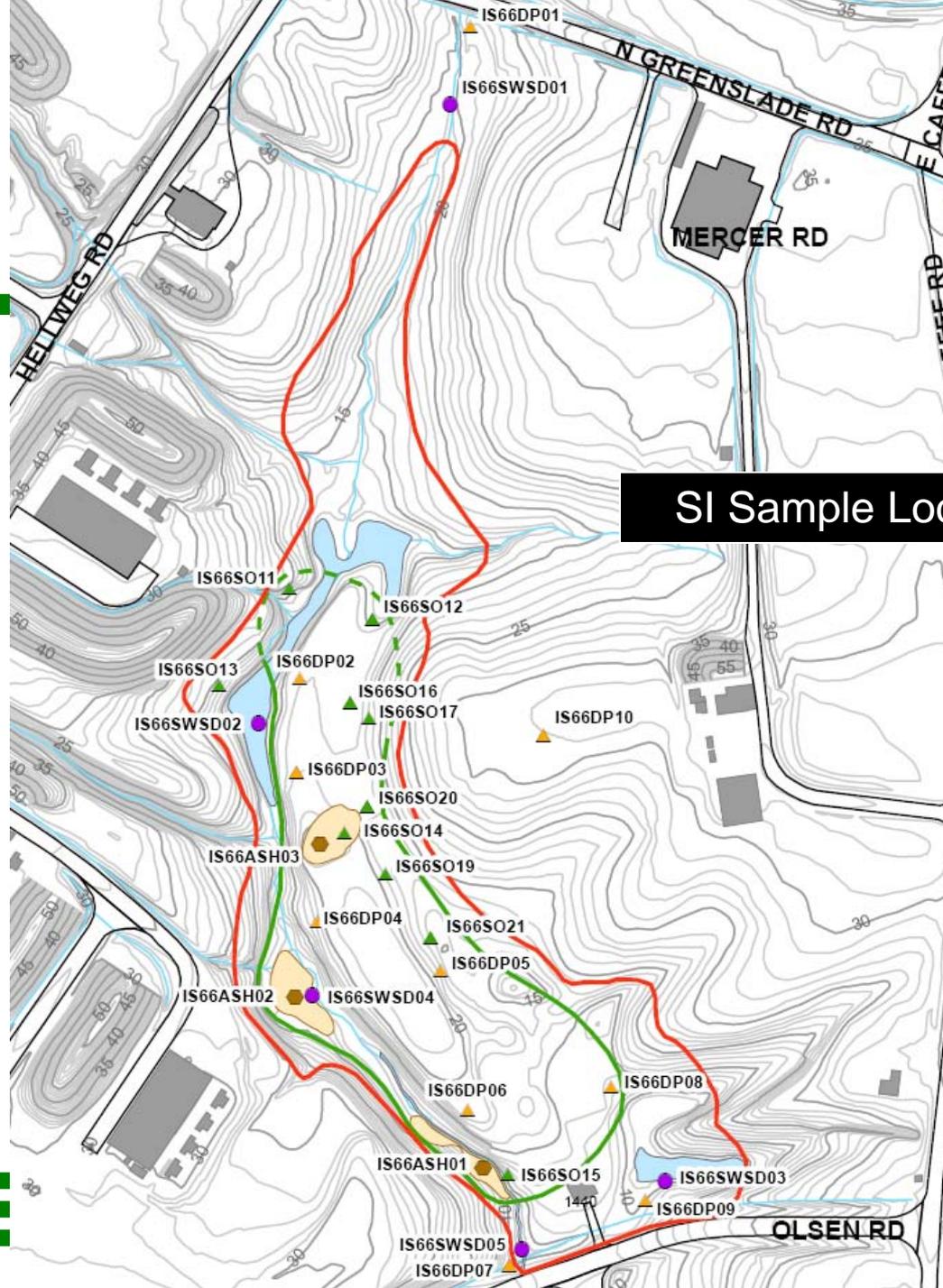


Site 66 RI Path Forward



Summary of SI Activities

- *Debris and site boundary survey*
 - *Based on limits of visible debris on surface*
- *Sampling*
 - *Surface and subsurface soil, in situ groundwater, surface water, sediment, and ash*
- *Laboratory analyses*
 - *VOCs, SVOCs, pesticides, PCBs, metals, cyanide, explosives, perchlorate*
 - *Dioxins and furans (ash only)*



SI Sample Locations



Site 66 RI Path Forward



SI Conclusions

- *Surface water and ash*
 - *No further evaluation warranted*
- *Surface soil, subsurface soil, groundwater, and sediment*
 - *Further evaluation for human health and/or ecological risks*



Site 66 RI Path Forward



Remedial Investigation Objectives

- *What is the nature and extent of contamination in the surface and subsurface soil outside the current Site 66 boundary?*
- *What is the nature and extent of contamination in the shallow groundwater at Site 66?*
- *What is the extent of sediment contamination within and downstream of the Site 66 boundary?*
- *What is the extent and thickness of the fill material within and outside the current Site 66 boundary?*
- *Do the concentrations of constituents detected in the soil, groundwater, or sediment present unacceptable human health or ecological risk?*
- *What further actions, if any, are needed to meet the Navy's preferred objective of unrestricted use of Site 66?*



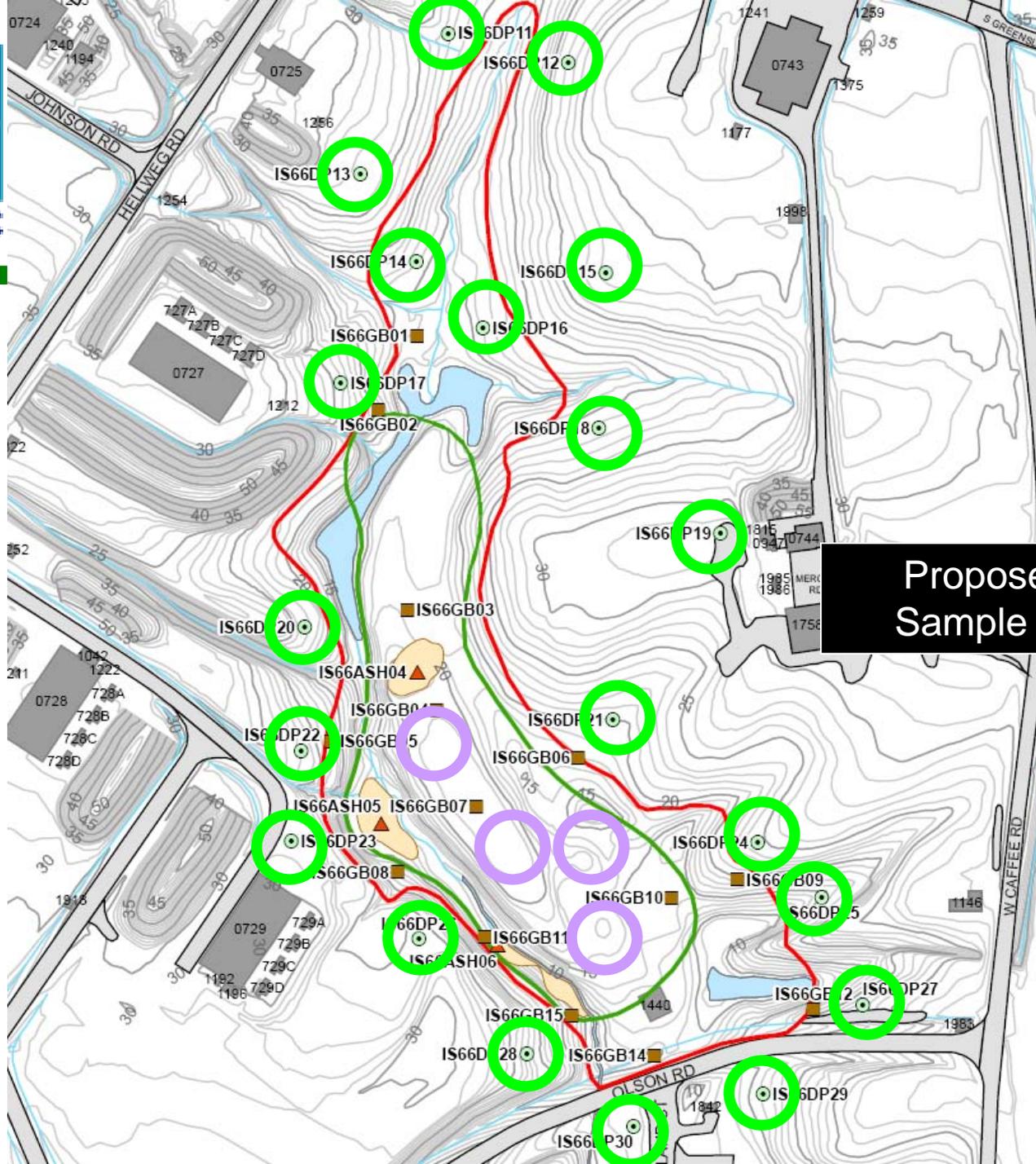
Site 66 RI Path Forward





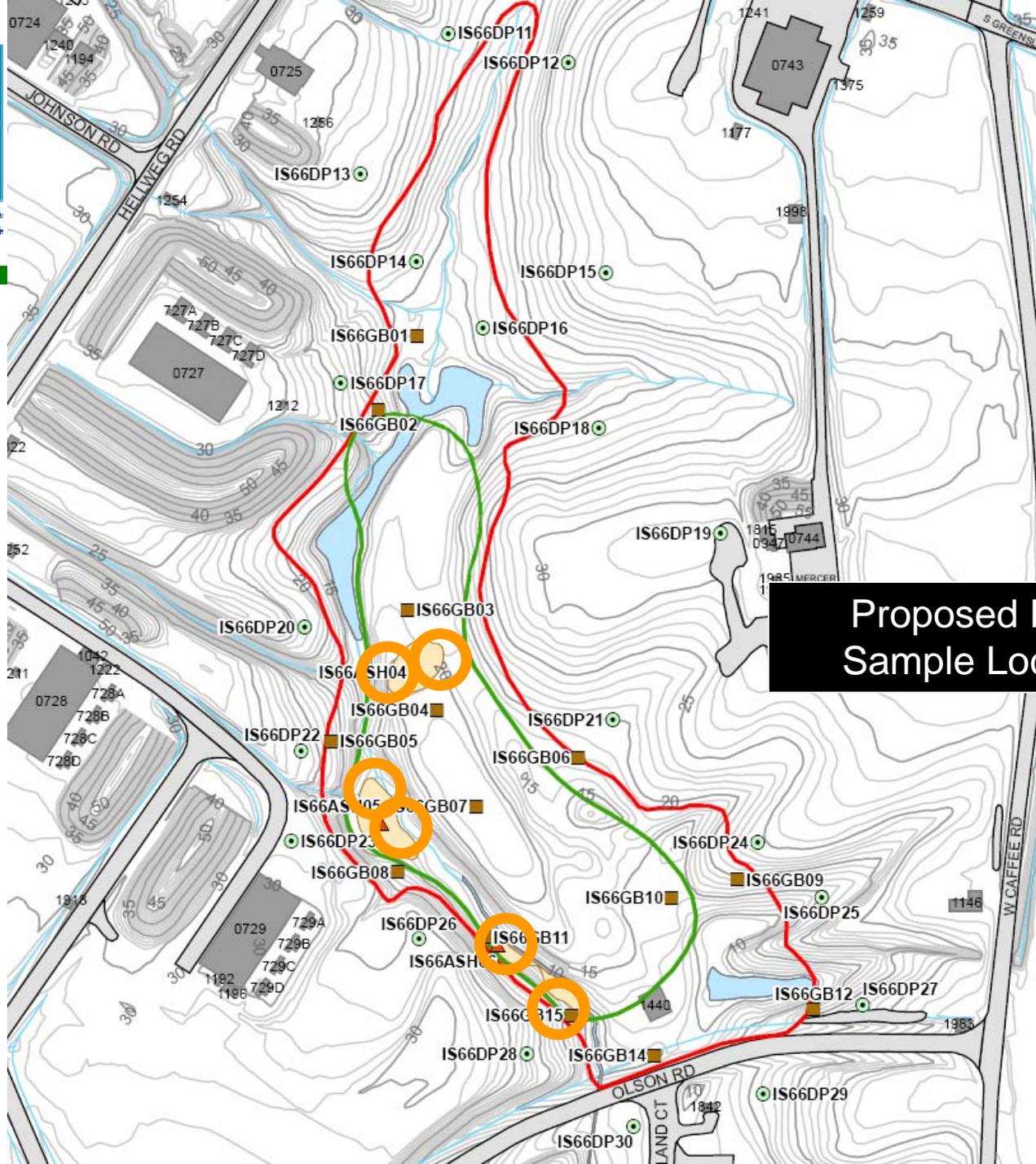
Site 66 RI Path Forward





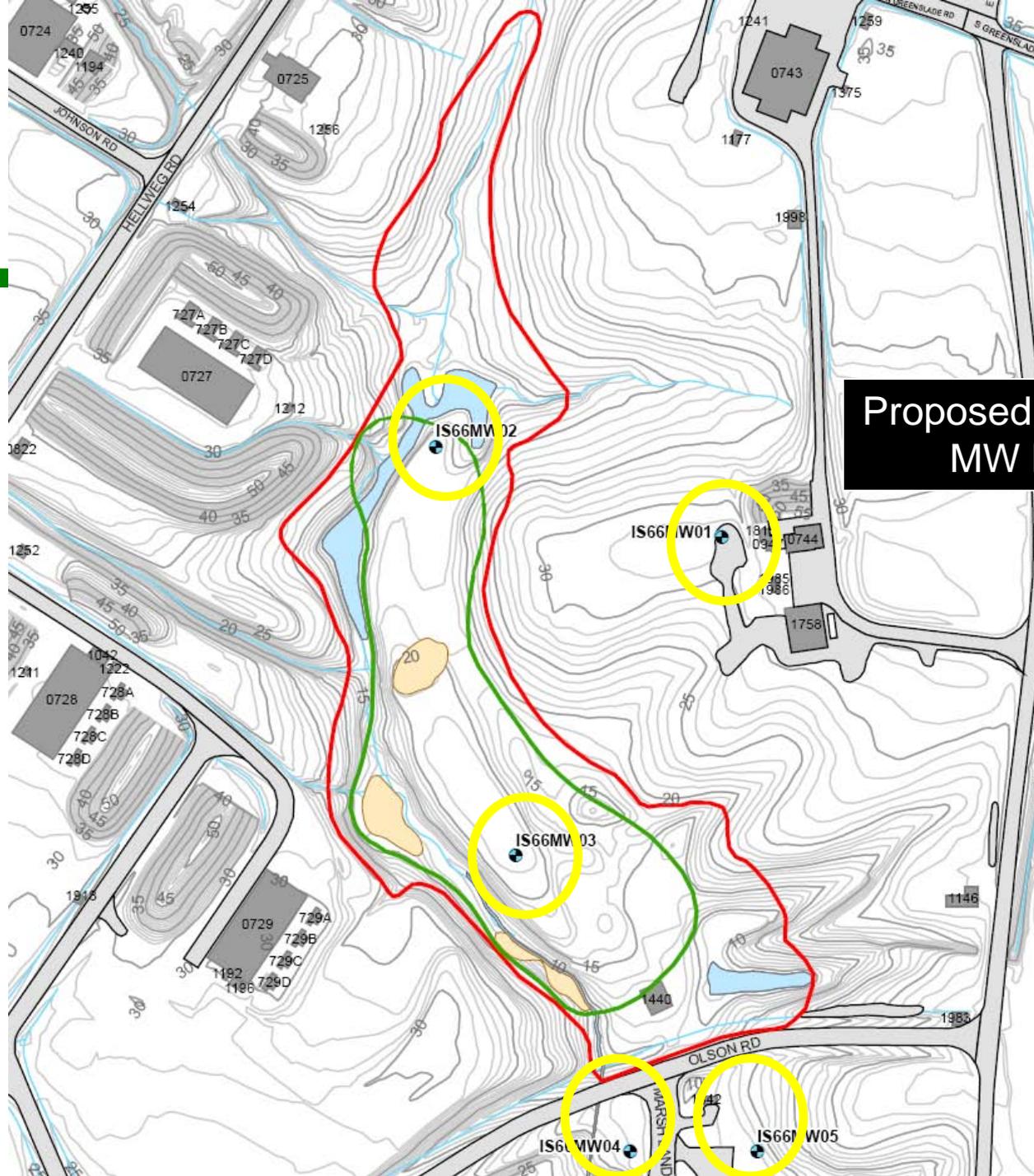
Proposed RI Soil Sample Locations





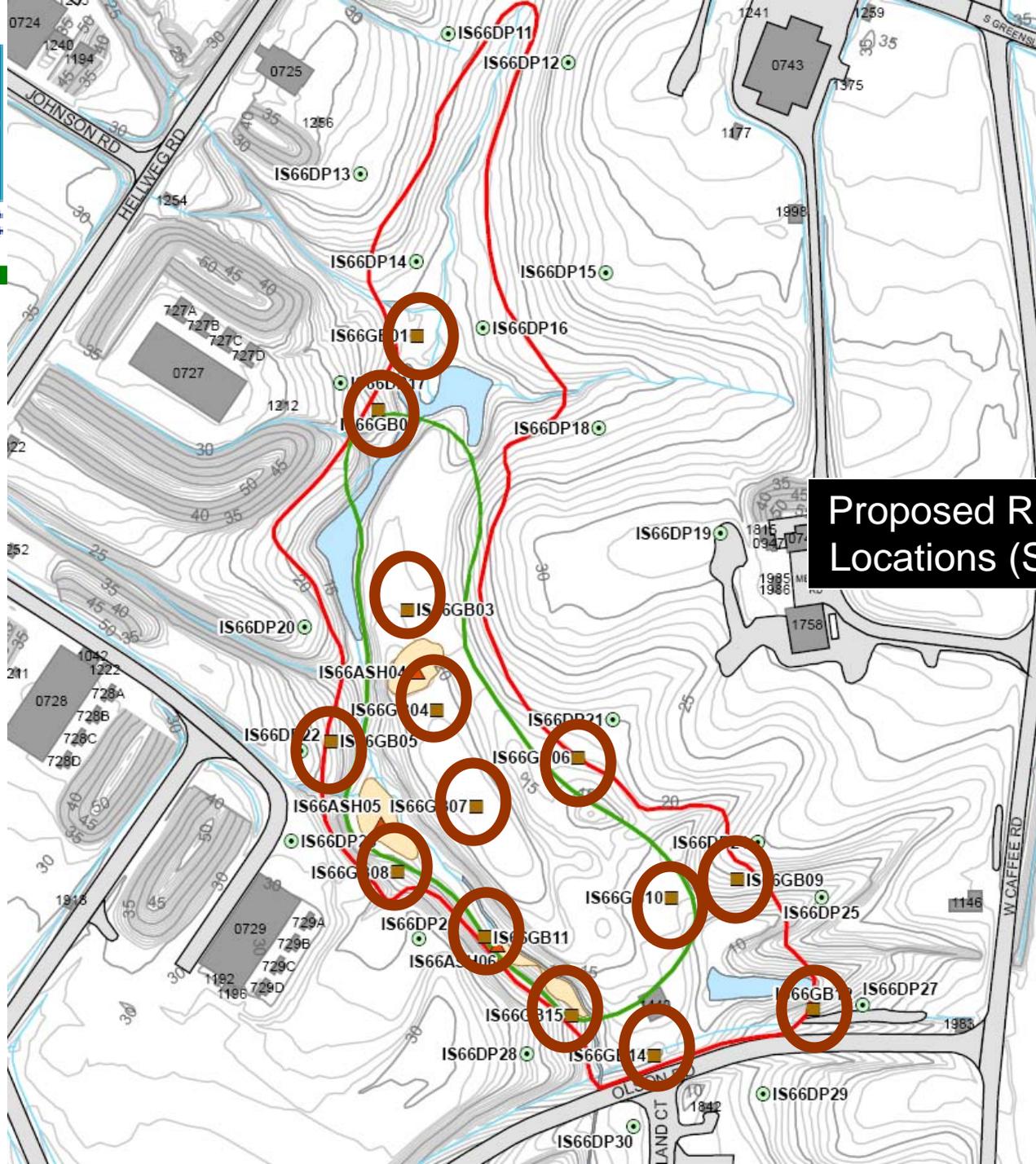
Proposed RI Ash
Sample Locations





Proposed RI Permanent
MW Locations





Proposed RI Soil Boring Locations (Stratigraphy)





Site 66 RI Path Forward



Human Health Risk Assessment

- *Baseline HHRA following current EPA risk assessment methodology*
- *Receptors*
 - *Current: adult and adolescent trespassers/visitors*
 - *Surface soil (incidental ingestion, dermal contact, inhalation of particulate and volatile emissions)*
 - *Sediment (incidental ingestion, dermal contact)*
 - *Future: adult industrial workers, construction workers, adult and child residents, adult and adolescent trespassers/visitors*
 - *Surface and subsurface soil and ash (incidental ingestion and dermal contact)*
 - *Groundwater (potable supply – ingestion, dermal contact, inhalation of volatiles while showering; construction – dermal contact, inhalation of volatiles)*



Site 66 RI Path Forward



Ecological Risk Assessment

- *Completion of the first two steps of the ERA process (screening ERA)*
 - *Screening-level problem formulation*
 - *Ecological effects evaluation*
 - *Screening-level exposure assessment and risk calculation*
- *If the results of the screening ERA warrant, Step 3a (refinement of conservative exposure assumptions).*



Site 66 RI Path Forward



Next Steps

- *Work Plan currently under review with Navy Chemist*
- *Incorporate Navy chemist comments and submit Work Plan to partnering team for review in November 2009*
- *Begin fieldwork early 2010*



Site 66 RI Path Forward



Questions?

INSTALLATION RESTORATION PROGRAM



NAVAL SUPPORT FACILITY,
INDIAN HEAD
101 STRAUSS AVENUE
INDIAN HEAD, MARYLAND
20640-5035



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

October 15, 2009

Arrival/Welcome

No questions were asked nor comments made during this topic.

FY2010 NSF-IH Budget

Question: What year did the IR program start at Indian Head and how much money has been spent to date?

Answer: Environmental restoration work related to the IR program began in 1985. In the early to mid 1990s, a Technical Review Committee was formed which later became the Restoration Advisory Board. Since 1985, approximately \$45 mil has been spent on IRP projects and \$10 mil on MRP projects.

Question: How does the Indian Head budget compare to other bases?

Answer: Since Indian Head has one of the largest IR programs, it has one of the largest budgets that averages between \$3-5 mil per year for the next several years. To compare to others, in 2010, Indian Head will receive \$3.6 mil, Dahlgren NSF-\$1.6 mil, PAX River NAS-\$4.5 mil, and Quantico MCB-\$1.1 mil. It is anticipated that in the future, annual costs will drop off as more sites have been cleaned up and closed.

Question: What is the expected IR program finish date?

Answer: The current projected date to have a remedy in place for all sites is January 2020. This date doesn't include long-term monitoring which could continue indefinitely until site-specific remediation goals are met.

Site 57 Remedial Design

Question: Has long-term monitoring been completed at Site 57, and if so, how long will it be required?

Answer: Groundwater and soil sampling was completed at Site 57 during the past Remedial Investigation and follow-up studies but it was not considered LTM. The LTM will start after the remedial action injections are complete in 2010. The length of the LTM program will depend on how long it takes to meet site remediation goals.

Question: Is Building 292 still in use?

Answer: Building 292 is still in use and undergoing renovations. Processes that caused a release of TCE in the past (loading and unloading of drums on a dock area) are no longer used.

Question: Could weather conditions (i.e. rain) affect the injection schedule?

Answer: Injection activities can occur during inclement weather and may not affect the schedule. However, for ease of operation, clear weather is preferred during field activities.

Site 66 Remedial Investigation

No questions were asked nor comments made during this topic.

General Questions

Question: How do we address air contamination on the base?

Answer: NAVFAC's Environmental Compliance division manages most air contamination issues at the base. For example, the boiler plant has an air detection system in place and must meet air compliance regulations. For IR sites, air monitoring is used when appropriate. For example, the air is currently being monitored during persulfate injections at Site 47 for VOC concentrations and lower explosive limits (LEL.) Air monitoring may also be utilized for similar remedial actions at Sites 17 and 57.

**NAVAL SUPPORT FACILITY INDIAN HEAD
INSTALLATION RESTORATION (IR) PROGRAM
RESTORATION ADVISORY BOARD (RAB) DRAFT MEETING AGENDA**

April 15, 2010

- | | |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 5:00 - 5:10 pm | ARRIVAL/WELCOME
Mr. Joseph Rail
Naval Facilities Engineering Command, Washington (NAVFACWASH)
Remedial Project Manager |
| 5:10 – 5:30 pm | UXO 32 (SCRAP YARD) UPDATE
Mr. Joseph Rail |
| 5:30 – 6:00 pm | SITE 47 ISCO INJECTION UPDATE
Mr. Nick Carros |
| 6:00 – 6:30 pm | MAIN AREA/STUMP NECK MRP SITE INVESTIGATION
UPDATES
Mr. Joseph Rail |
| 6:30 – 7:00 pm | SITE 28, 36, & LAB AREA PROPOSED PLANS
Mr. Nate Delong |
| 7:00 pm | ADJOURN |

INSTALLATION RESTORATION PROGRAM



NAVAL SUPPORT FACILITY,
INDIAN HEAD
101 STRAUSS AVENUE
INDIAN HEAD, MARYLAND
20640-5035



RESTORATION ADVISORY BOARD (RAB) MEETING

Date of Meeting: October 15, 2009, 5:00 pm

Restoration Advisory Board (RAB) Member Participants:

Mr. Curtis DeTore (S)
Mr. Joseph Rail (N)
Mr. Nathan Delong (N)

Mr. Elmer Biles (C)
Mr. Jeff Bossart (N)
Mr. Nicholas Carros (N)

RAB Members Not in Attendance:

Mr. Jerry Hamrick (L)
Ms. Karen Wiggen (L)
Mr. Wayne McBain (C)

Mr. Vincent Hungerford (C)
Mr. Dennis Orenshaw (F)

Additional Attendees:

Ms. Susan Yates (N)

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

ENCLOSURE (1)

Major Issues Discussed/Accomplished:

1. Arrival/Welcome

Mr. Joseph Rail of the Naval Facilities Engineering Command, Washington (NAVFAC Washington) began the meeting by introducing himself and welcoming everyone to the Indian Head Senior Center. Mr. Rail then presented the meeting agenda, which is included in Attachment A.

2. FY2010 NSF-IH Budget

Mr. Rail began the presentation by reviewing the approximate budgeted funds for Naval Support Facility, Indian Head (NSFIH) for 2010. Distribution of funds between the IR and MRP program was discussed as well as which sites will be addressed in the budget.

A copy of Mr. Rail's presentation is provided in Attachment B.

3. Site 57 Remedial Design

Mr. Rail began the presentation by discussing the history of Site 57 and reviewing information from the Proposed Plan and Record of Decision. Previous investigations at the site were mentioned, and the Remedial Action Objectives detailed in the 2009 Remedial Design were discussed.

The selected remedy included:

- In-situ bioremediation
- Natural attenuation
- Land use controls (LUCs)
- Long-term monitoring

Mr. Rail continued by detailing elements of the selected remedy, as well as its design and construction components. A main component of the design is injection of EOS (Emulsified Oil Substrate) in the source area and ORC (Oxygen Release Compound) in the downgradient area. Figures of the site were shown and discussed.

A copy of Mr. Rail's presentation is included in Attachment C.

4. Site 66 Remedial Investigation

Mr. Rail began the presentation by providing a summary of the recent SI sampling results. Surface and subsurface soil, in situ groundwater, surface water, sediment, and ash samples were taken. The results showed that no further evaluation was warranted for some surface water and ash locations. Further evaluation for human health and/or ecological risk is needed for the remaining

media. Mr. Rail proceeded to discuss the remedial investigation objectives and showed proposed locations for RI soil, ash, and sediment samples. Proposed monitoring well and soil boring locations were also presented. Following sample collection, a human health and ecological risk assessment will be completed. Finally, it was mentioned that the work plan for RI fieldwork is currently under review. Fieldwork is expected to begin in early 2010.

A copy of Mr. Rail's presentation (including pictures) is provided in Attachment D.

5. Comments, Questions, and Answers

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

6. Conclusion of Formal Presentations

Mr. Rail presented the tentative agenda for the next RAB meeting, which is scheduled for April 15, 2010. A copy of the agenda is included in Attachment F.

Mr. Rail then concluded the formal portion of the meeting at 6:00 P.M., and thanked all in attendance.

**NAVAL SUPPORT FACILITY INDIAN HEAD
INSTALLATION RESTORATION (IR) PROGRAM
RESTORATION ADVISORY BOARD (RAB) MEETING AGENDA**

October 15, 2009

- 5:00 - 5:10 pm** **ARRIVAL/WELCOME**
Mr. Joseph Rail
Naval Facilities Engineering Command, Washington (NAVFACWASH)
Remedial Project Manager
- 5:10 – 5:30 pm** **FY2010 NSF-IH BUDGET**
Mr. Joseph Rail
- 5:30 – 5:50 pm** **SITE 57 REMEDIAL DESIGN**
Mr. Joseph Rail
- 5:50 – 6:15 pm** **SITE 66 REMEDIAL INVESTIGATION**
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- 6:15 pm** **ADJOURN**