MEETING MINUTES

AUGUST 15-16, 2001

INDIAN HEAD INSTALLATION RESTORATION TEAM MEETING

INDIAN HEAD NAVAL SURFACE WARFARE CENTER

INDIAN HEAD, MARYLAND

The meeting was held on August 15, 2001 and August 16, 2001, at Indian Head Division Naval Surface Warfare Center, Indian Head, Maryland.

The following personnel attended the meeting on August 15, 2001:

Anne Estabrook – CH2M HILL
David Steckler – CH2M HILL
Curtis DeTore – Maryland Department of the Environment
Shawn Jorgensen – NSWC Indian Head
Heidi Morgan – NSWC Indian Head
Jeff Morris – EFACHES
George Latulippe – Tetra Tech NUS
Dennis Orenshaw – US Environmental Protection Agency, Region III
Steve Hirsh- Tier II link

The following guests attended the meeting on August 15, 2001:

David Barclift – EFANE
Christine Eisner – EFANE
Sherry Poucher – SAIC
Greg Tracey – SAIC
Dean Neptune – Neptune and Co.

The following personnel attended the meeting on August 16, 2001:

Anne Estabrook – CH2M HILL
David Steckler – CH2M HILL
Curtis DeTore – Maryland Department of the Environment
Shawn Jorgensen – NSWC Indian Head
Heidi Morgan – NSWC Indian Head
Jeff Morris – EFACHES
George Latulippe – Tetra Tech NUS
Dennis Orenshaw – US Environmental Protection Agency, Region III
Steve Hirsh - Tier II link

Wednesday, August 15, 2001

- **Introductions**

Familiarizing group, catching up: Dennis Orenshaw (scribe), George Latulippe, Curtis DeTore, David Steckler (minutes), Anne Estabrook (time keeper), Heidi Morgan, Jeff Morris (chair), Steve Hirsh (Tier II Link), and Shawn Jorgensen (host). Began meeting at 10 AM.

- **Review today's agenda**

- **Review previous meeting's minutes and meeting evaluation**

Specific comments noted at the meeting are as follows:

Curtis noted that it would be easier to read the minutes if team members were referred to by name rather than as 'team member'. The team briefly discussed this issue then decided to put it in the parking lot because the issue could not be resolved quickly. An informal consensus was reached to refer to team members by name during this meeting.

- **Greg Tracey: Discussion of TIE Results for Site 42 and Mattawoman Creek**

Greg opened the presentation by explaining that program Y0817 is an innovative program to identify toxicity to stream biota from sediment. The program was sponsored by NORTHDIV. The program was initiated because standard ecological risk assessments yield overly conservative cleanup goals. The TIE technology is a series of lab tests that manipulate sediment pore water to determine which constituents actually contribute to toxicity and which are unavailable biologically.

Requirements of the program were that results must be consistent and cost-effective. The IHDIV-NSWC was identified as a TIE demonstration site. Samples were collected from Sites 39, 41, and 42 and Mattawoman Creek. Greg noted that toxicity was previously identified at Site 42. Dean asked from what depth the samples were collected. Greg responded that samples were collected from 0-6 inches bgs.

Greg next explained the TIE procedure. Chemicals and filtering are used to remove metals, ammonia, and other constituents in a series of steps. The theory being that, as certain chemicals are removed toxicity will decrease, thereby isolating the constituents providing the toxicity. At each stage a constituent is removed, then the remaining pore water is analyzed to determine toxicity. The end result should be pore water with no toxicity.

Greg showed a slide that indicated survival rates of Hyalella (an anthropod) when exposed to pore water and summary of hazard quotients calculated from sediment concentrations. Part of the study also looked at dilution factors (i.e. what are the toxicity rates what sample water is more and more diluted). Steve asked why an LD20 is used (20% of the population dies when exposed to a given concentration of a given contaminant)? Sherry replied that LD20 was deemed statistically significant. Greg showed another slide that identified manganese, a pesticide, and un-ionized ammonia as toxic in Mattawoman Creek. Steve noted that manganese is likely part of the groundwater regime. Dennis asked how the pesticide was identified as toxic. Greg replied that it was detected in the pore water at high concentrations. Greg summarized other findings.

The TIE determined silver was not a concern and ruled out PAHs and PCBs, as well. Sample filtration provided some decrease in toxicity.

Greg then summarized the lessons learned: there was significant variation with small spatial distribution; contaminants of concerns may collect on filters; the TIE demonstrated the removal of ordnance and associated toxicity. Greg closed the presentation by summarizing the milestones and deliverable schedule.

Greg then opened the discussion for questions. Dean asked about samples with similar chemicals that did not show similar results. Greg replied that metal speciation may contribute the observed effects (e.g Cr^{+3} vs. Cr^{+6}). Dean asked about manganese at the facility. Heidi replied that she needs to look into the past uses of manganese at the facility. The team discussed manganese concentrations measured in groundwater samples. Heidi noted that at Site 28 a zinc recovery unit existed. Heidi then asked what the concern from manganese is. Greg replied that there is a tap-water RBC for manganese. Steve noted that manganese may be naturally occurring; however, may still be site related. In other words, manganese may not have been used or disposed of at the facility but naturally occurring manganese may be mobilized by other contaminants. The team discussed the presence of source areas. Heidi noted that the original intent of the study was to identify which form of silver is toxic. Greg replied that the type of silver present was determined to be nontoxic.

- **Lunch**

- **George Latulippe: Status and Trends vs. CLP Analysis**

George opened the discussion with a summary of the issue at hand. He said that there needs to be a decision as to the use of 'status and trends' analysis methods vs. 'CLP' methods prior to the Mattawoman Creek sampling event scheduled for September. George noted that the lab has not been identified yet. He noted that this issue also came up at Quantico. Dennis asked if Quantico had resolved this issue. George replied that they had not. Jeff noted that the Navy's ecological risk assessor is the same for IHDIV-NSWC project as well as Quantico. George noted that, following discussions with ecological risk assessors at TTNUS, he felt that using the status and trends methods may not be the preferred method of analysis. Dean asked whether he should provide input at this point or wait until the conclusion of George's presentation. George responded that he wants to present a case against using the standards and trends methods and would like Dean to present a counter point following the presentation. George and Dean briefly discussed the status and trends methods. George noted the primary reason to use the status and trends methods is because for several compounds the BTAG standard is below the detection limit of the CLP methods. For some of these compounds the status and trends methods provide a lower detection limit.

George continued with the presentation, he noted that the list of analytes was previously agreed to by the team. He also noted that BTAG did not indicate the list needed to be modified in any way. Shawn read a comment provided by BTAG regarding the analyte list. The comment noted that the detection limits must be sufficient to meet the data quality objectives. Dean noted that the list is intended to determine causality and if George felt that the CLP methods will meet the objectives then they should be used.

George passed out a spreadsheet that outlined method detection limits and reporting limits for status and trends and CLP methods.

The spreadsheet indicates that there are 7 analytes for which the status and trends method provides a lower detection limit than the BTAG criteria. Curtis asked if the point of the discussion is to determine whether or not to use status and trends methods because of those few compounds. George noted that when a sample is sent to the lab one of the analysis methods must be applied; you cannot pick and choose based on compound.

Dean noted that status and trends methods removes interferences that confound detection limits. Heidi asked what the costs are. George responded that it is not easy to estimate the costs because there are no Basic Ordering Agreement (BOA) rates and the costs depend on compound lists which can vary site by site. In general the method appears to be 70% higher than CLP. To run both methods would be 170% higher than CLP alone; however, both methods would be needed to obtain all the required analytes at the detection limits needed. Steve noted that status and trends methods may not be as defensible as CLP. George added this study includes a HHRA which means the data must be validated. Dean noted that the difference between CLP and status and trends methods is only sample preparation; therefore, the data package could be the same as CLP and validated the same as CLP. George noted that it may not be easy for the lab that does the work to provide a CLP package because the labs that are capable of doing status and trends analyses are not typical. Dennis noted that there are only a few analytes that have higher detection limits than the BTAG criteria using CLP alone. Dean reiterated George's point that if the standard detection limits don't meet the project needs there are ways to get lower detection limits using CLP.

George noted that a decision needs to be made quickly to get bids out. Steve noted that a response to BTAG comment could be addressed in a letter and the team could proceed. Dennis noted that a decision could be reached and he could present it to BTAG to obtain their opinion. Dennis added that he is comfortable using the CLP method and he did not believe that BTAG would object. Heidi mentioned that if the team opts not to use the status and trends methods, the team needs to be able to defend the decision. George noted that in the QuAPP it does not specify detection limits. Anne asked what happens when CLP methods indicate an exceedance of a screening level during the initial screening (due to detection limits being above screening levels). Dean noted that has been a source of contention in the past, but that typically the compound is carried on to the next step as a COPC. Anne added that at a new site the status and trends methods could be more valuable to rule out the extra compounds. George reiterated that the HHRA needs to be considered.

Consensus: The team agrees that CLP methods will be used to analyze samples from the Mattawoman Creek Study 'main event' field investigation because the study objectives will be met using CLP methods. The SPAWAR RSM effort will use the 'status and trends' methods for the confirmation samples.

Action Item: Dennis will brief Simeon Hahn on use of CLP methods for Mattawoman Creek Study by 8/17/01

- **George LaTulippe and Curtis DeTore: Site 42 – Number of Wells and Site Characterization**

Action Item: Curtis will distribute information from Solid Waste Department regarding Site 42 monitoring well issues by 8/27/01

Action Item: George will set up conference call for Tuesday 8/28/01 at 9:00 AM by 8/24/01

- **Anne Estabrook: Site 5 Update on Fieldwork and Discussion of Groundwater Analysis**

Anne opened the discussion by explaining that the goal is to reach a consensus as to groundwater sampling analysis. At the conference call the team agreed to sample for metals only given that silver is the contaminant of concern. Dennis relayed a conversation with Alvaro. Alvaro asked what work had been done in the past (i.e, has a full suite of analysis ever been run for the site.) There are no monitoring wells at the site and no soil samples have been analyzed for organics. There are however, monitoring wells 42MW7 and 42MW2 near by. A sample collected from 42MW2 was analyzed for VOCs and SVOCs. Chlorobenzene was detected at 2 J ppb. During the later round a sample collected from 42MW7 contained 1,1,1-TCA at 7 ppb, 1,1-DCA at 3 ppb, and TCE at 6 ppb.

A discussion ensued about what solvents were used at Site 5. Heidi mentioned that a fixer was discharged at the site. Shawn noted that the composition of the fixer is outlined in the MSDS. Heidi added that xylenes were used in one half of the building. Curtis noted that there is an MCL exceedance for TCE in 42MW7; therefore, VOCs must be analyzed for during the groundwater sampling. Curtis further suggested that monitoring wells may need to be installed closer to the building. Anne replied that the monitoring wells have already been installed.

Consensus: The team agrees that, based on analytical results from monitoring well 42MW7, the Site 5 monitoring well samples should be analyzed for VOCs, SVOCs, and total and dissolved metals.

Anne continued that 3 monitoring wells have been installed and they will be sampled this coming Monday. Sediment sampling and GPS will also occur this coming week.

- **Steve Hirsh: Tier II Input**

Steve opened the discussion by telling the team that Brad Rock is joining SAIC. There is no one lined up to take his place in Tier II as of yet. Jeff asked what the status of Patti's replacement was. Steve replied that she had been replaced by a woman named Betsy. Steve asked if the team felt there was a need for Janet to return. Anne mentioned that the team had discussed bringing her back in February or March. The team briefly discussed the need to have Janet come back at some point next year.

Action Item: Anne will arrange for Janet to attend our February 2002 meeting by 8/31/01.

Steve asked whether the team felt Tier II input is useful. Dennis replied that as far as conducting the meetings are concerned: no. The meetings run smoothly. With respect to technical experience: yes. Often the Tier II link provides valuable information to technical discussions. Shawn agreed and added that Tier II is a value-added component. Steve agreed with the sentiments expressed. He noted that at Tier II meetings, most links have expressed that the IHIRT runs smoothly. Steve briefly discussed the joint meeting in Lancaster.

- **Anne Estabrook: Update on Sites 6, 39, and 45**

Anne opened the discussion by noting that at this point all three sites are all going into one report. Anne continued that the team agreed that at Sites 39 and 45 no Phase II will occur. At Site 6, silver was used and is the contaminant of concern. The monitoring wells are due to be installed on September 8 and 9. Heidi asked whether the work could occur after hours rather than on the weekends. Shawn noted that the work must start on a Friday to get the work permit.

Anne returned to the schedule. The ecological and human health risk assessments are in progress for Sites 39 and 45. The Site 6 ERA and HHRA won't occur for 2 months following

groundwater sampling; therefore, the report won't be ready until February of 2002. Anne noted that the report could be split into Sites 39 and 45 and Site 6. The team generally agreed that that was a good idea. Shawn asked whether the reports for Sites 5 and 6 could be combined. Dennis noted that may not be a good idea. Dennis then asked what detriment there would be holding up the other 2 sites. Curtis noted that Site 6 may require additional field work which would further delay the review of Sites 39 and 45. Curtis noted that he would rather the report for Sites 39 and 45 proceed rather than holding them up for Site 6. Shawn suggested sending the Report for Sites 6, 39, and 45 as one document less Site 6, which could be delivered later. The team discussed the difficulty of adding Site 6 to the document. Heidi asked whether holding up the RI report for Site 6 is legitimate. The response was yes, it is a legitimate delay. Curtis mentioned that there may not be a large benefit to letting the RI report proceed without Site 6. Anne noted that the EPA toxicologist will get interim deliverables for Sites 6, 39 and 45 regardless. Curtis said he would be happy either way. Jeff said he has some concern about splitting up the document into pieces. Shawn added that he would prefer to receive one document.

Consensus: The team agrees that the RI report for Sites 6, 39, and 45 will be a single report.

- **Anne Estabrook : Discussion of document submission format**

Anne asked for the team's input regarding delivery of all or part of documents in electronic format rather than hard copy.

Action Item: Dennis will find out about reviewers preference in document submission: hardcopy versus electronic, PDF versus Spreadsheets and text by 9/12/01.

- **Shawn Jorgensen: Review Revision to 2/8/01 Consensus Agreement**

Based on the June discussion the 2/8/01 agreement needed to be revised.

Consensus: The team agrees to amend the 2/8/01 consensus agreement as follows:

Purpose of Background Study:

- Separate anthropogenic and naturally occurring effects from site release.
- Limit remediation to site specific releases, not naturally occurring or anthropogenic.
- Establishment of cleanup goals.
- Screening criteria; Contaminants of Potential Concern (COPC) selection.
- Used to make risk based decisions.
- Aid in the evaluation of need for additional samples.

Consensus: Background study should include:

- Chemicals that result from local and region anthropogenic effects, where
  - Local means immediate surrounding area (e.g. town or county), and
  - Anthropogenic effects are those resulting from off-base *and on-base* activities.

- *VOCs, SVOCs, TAL inorganics, pesticides/PCBs, grain size and TOC analyses to build a database of these parameters and to ensure that samples are collected from locations that have not been impacted.*

- **Heidi Morgan: Makeup of the Core Team**

Heidi asked if she should become a core team member due to her increased site responsibilities. The team felt that this is appropriate.

Consensus: Heidi is being added as a core team member.

- **Review Tomorrows Agenda**

Outcome: change tomorrows agenda to include the Site 12 decision tree. The outcome of the talk will be to inform the team of the decision tree thinking to date.

- **End meeting at 4:00 PM**

Thursday, August 16, 2001

- **Introductions**

Familiarizing group, catching up: Dennis Orenshaw (scribe), George Latulippe, Curtis DeTore, David Steckler (minutes), Anne Estabrook (time keeper), Heidi Morgan, Jeff Morris (chair), Steve Hirsh (Tier II Link), and Shawn Jorgensen (host). Began meeting at 8 AM.

- **Review today's agenda**

- **Dennis Orenshaw: OHM Representation and Role at IHIRT Meetings**

Goal: Discuss OHM representation at IHIRT meetings.

Dennis opened the discussion by suggesting the main out come of this talk should be decide how OHM should be represented at IHIRT meetings. He then suggested the discussion take the form of a round-robin: each team member putting in a suggestion.

Dennis led his discussion by talking about Ft. Deitrich. The RAC contractors come in periodically to make presentations to the team. The contractors also e-mail data plus descriptive text about work taking place. No 'membership' status has been granted to the contractor.

Curtis agreed. He didn't see the need to make contractors members as opposed to guest speakers. He liked the idea of getting e-mail periodically and doing site visits from time to time.

Shawn discussed Site 8 and Site 56. He felt that when the RAC contractor is handed the design packages, there may be some benefit to having representation to help avoid construction changes.

George said that from experience with design efforts, some input from the RAC is helpful in the review process. This coupled with communication between the design team and RAC also help avoid problems later. The RAC may have preferred materials or methods that are important input to the design process. He summarized his opinion by saying: rather than have the RAC attend all meetings, a representative could attend some meetings to provide comments during the review process.

Heidi agreed with all previous comments. She said she had not been through a remediation but asked should the ROICC be involved as well as RAC. She felt that neither needs to be a full member but since the team knows what the agenda is a head of time, the ROICC or the RAC or both could be asked to be at specific meetings.

Steve indicated that it depends on the level of complexity of the remediation. In his opinion, full member status is not necessary, especially, if the project is small (e.g. earth moving). He felt getting the ROICC involved may be a good thing.

Anne recalled an experience with Pax River. The RAC was either a full member or an adjunct. She felt this was a good thing because of the level of accountability and communication. Anne asked George if TTNUS has PCAS oversight. George replied that sometimes they do but not always. George said that the upcoming work at 12 and 42 does not. Anne said in that case it's very important to speak w/ the ROICC in advance. Anne felt there should be significant involvement by the RAC and ROICC in the IHIRT.

Jeff liked all of the points expressed. He felt the ROICC is an important element to be included in some meetings. He expressed the opinion that the ROICC should know that the team cares about what happens in the field. He felt the more they attend the meetings the more they will feel accountable. He also indicated that having the RAC and ROICC at out of town meetings may not be worth the cost for a short presentation.

The team briefly discussed which representative attends Pax River meetings and whether or not he is the person who does the work.

Dennis summarized the discussion: most team members felt that there is no need for the RAC to become a full time member but should be a frequent adjunct member. This person does not need to be at all meetings or for the full duration. Dennis reiterated George's comment about getting comments on the design.

Dennis said the first step is to determine who the best person is to attend our meetings. Anne suggested at the first meeting the team could lay out expectations. Dennis agreed and added that the RAC should buy into the process.

Heidi reiterated that the ROICC should be involved, as well. Anne agreed and added that it would also help because often the ROICC and the RAC get too close. George noted that he's seen the ROICC get too close to the RAC.

Points of general agreement:

- The RAC should get involved early
- Not full time
- Updates and briefings
- Who? – OHM and ROICC
- When? – January 2002 (pre-start up)

Action Item: Shawn will identify and brief ROICC on plans by 9/20/01

Action Item: Jeff will invite OHM & ROICC to January 2002 meeting by 9/20/01

- **Dennis Orenshaw: Teams Involvement in Construction Changes**

Dennis opened the discussion with an example of a construction change from 12-inch drainage layer to a 'geonet'. The team discussed the example. There was general agreement that in the event of a change such as that (something specifically called for in the ROD), there needs to be team involvement. There was also general agreement that in the event there needed to be a change in diameter of a pipe or similar change, there does not need team involvement. Curtis agreed that as long as the end result of the remedy is the same, he is not concerned. He continued that if, for example, plans submitted to Sediment and Erosion Control call for a 'super-silt' fence, then that is what must be used in the field. Heidi noted that there will not always be agreement about what is 'significant' and warrants team involvement. Dennis replied that anything that has been agreed to by the team is significant. The team agreed to the following:

The team needs to be involved in design changes when:

- the change affects what is called for in ROD and or supporting documents
- the change is determined by the team
- the change affects the performance standards of the remedy

- the change affects operation and maintenance
- the change affects compliance w/ARARS (must have regulator buy-in)

Heidi noted that the ROICC must be given very detailed information because they may not understand ARARS and also ROICCs have multiple projects. She continued that if the ROICC has input they will be more likely to follow procedures. George suggested each team member think about the things that are important to them and then return to the November meeting with items for discussion. Steve mentioned that the team may want to speak with other teams at the joint meeting to share lessons learned. The team members felt having a discussion about the ROICC's involvement in remedial construction at the joint meeting would also be helpful. The team suggested rather than each team making presentations as they did last year at the joint meeting, a meeting regarding this issue would be better.

Action Item: Each team member will identify key design elements of Site 12 Remedial Action in order to develop checklist for ROICC and RAC Contractor by 11/14/01

- **David Steckler: Site 47 Update**

Goal: Discuss proposed scope of work for the next round of sampling and impact on schedule

David distributed copies of the work plan memo. He then summarized the work done at the site to date. IS47MW12 and IS47MW 12 are the drivers for additional work, both had detected levels of VOCs and are approximately downgradient from the site (groundwater flow is approximately to the SE). Original contaminants of concern identified were carbon tetrachloride and chloroform (in IS47MW 3). The primary concerns at leading edge of plume are PCE, TCE, and their degradation products.

David summarized the August 1, 2001 conference call. A decision to use an onsite lab rather than an offsite fixed-base lab was made. Advantages of offsite lab are data quality (higher likelihood that data could be validated), slightly lower cost, and reliability (i.e. backup equipment is available). The primary disadvantage is much longer turnaround time. Advantages of onsite lab is data in near real-time (results are available in 4 to 5 hours). Samples can also be auto-analyzed overnight. This allows for faster decision-making. The cost may be slightly higher, but very small increase relative to overall cost of Phase 3 field effort.

Curtis asked if the onsite lab will have multiple GCs in the event that a "hot" sample spikes the GC. This could cause significant recovery time. David responded that during the bid process we could identify mobile labs with multiple GCs. Jeff asked how many samples per day an onsite lab can analyze. Curtis replied that sample analysis time can vary from 14 minutes to 2 hours. Jeff asked how many samples would need to be analyzed per day to meet the objectives in the time allotted? David responded that he planned on analyzing 8 – 9 per day. Curtis added that this would not present a problem; sampling is likely to be time limiting factor rather than analysis.

David summarized the field effort. The first part of this effort will be to install 5 primary direct push sample points in a "fence line" approximately perpendicular to groundwater flow direction. Samples will be collected at two depths at each location. Simultaneously, seep samples will be collected from 5 locations in the Site 8 swale, and two stream samples will be collected from two small streams entering Site 8 swale SE of Buildings 765 and 766. Dennis asked if there's a potential to miss some contamination entering the streams if we just do seep sampling. Along the same lines he asked if we should we also collect stream samples. David responded that steam

samples would likely not show an effect from discharging groundwater because of dilution and volatilization. Heidi wondered about any previous sampling at Site 8. Shawn and George thought that sampling at Site 8 was probably for mercury only.

Results of the first phase of field effort will be evaluated daily and secondary locations will be selected and sampled as necessary. Soil samples will be collected at two locations for lithological (not chemical) information, to verify the presence of the clay layer. Curtis asked if lithological information will be collected at all direct push locations. David responded that lithological information will only be collected at two locations because of the time required to collect soil samples using direst-push methods. David then continued with a discussion of the field effort. 'Deep' groundwater samples will be collected just above clay layer based on the estimated elevation of the clay from data collected during the MIP/EC investigation. David explained that the results of the MIP/EC investigation indicate that the subsurface elevation of the clay is nearly uniform. Heidi asked if the groundwater flow direction at Site 47 is well-defined. David responded that the overall direction of groundwater flow is to the southeast. Shawn asked if CH2M HILL could generate a contour map of the subsurface topography of the clay layer based on current information. David responded that a map could be generated in the vicinity of Building 856 to not far beyond. The team discussed having more detailed information regarding the extent of the clay layer to ensure that the layer is present at the proposed sampling depths. Team members were also concerned that DNAPL that may exist in the source area does not travel along the top of the layer. David reiterated that it is not cost effective to collect soil samples at all of the proposed sampling locations because of the time constraints. Instead, David suggested mobilizing a MIP/EC rig for one day to collect the data.

The team discussed the potential for DNAPL to exist in the source area and to migrate in directions not anticipated by the team. David reviewed the data generated during the Phase II investigation. He felt the data did not support the presence of DNAPL in the source area. Most team members, however, still had some questions regarding the presence of DNAPL and possible migration directions. The team did generally agree that the workplan as it exists is adequate to characterize dissolved phase contamination.

Action Item: David will develop and distribute a memo outlining a field investigation to define presence and extent of DNAPL at Site 47 by 9/7/01.

- **George LaTulippe: Design Issues**

George opened the presentation by saying that there is no need to discuss Site 42 at this time. George then briefly discussed Site 41. The main issue is the sampling verification plan. The team will need to decide how many samples should be collected and where they are collected. George then discussed Site 12. He noted that he had a discussion with the Safety Department. According to Safety, there may be cartridge activated devices in the landfill. Based on this information, George felt that prior to excavating the soil needs to be screened.

George then passed out a paragraph with language that could be added to the ROD. He explained that the team has a vested interest in the proposed language. Curtis asked what a cartridge activated device is. Shawn responded that CADs are used to eject pilots from airplanes in the event of an emergency. Curtis asked what the explosive capability of a CAD is. Heidi replied that it is approximately equal to a blasting cap. Curtis wanted to know whether or not if in the future a CAD in the landfill detonated could it injure someone. Heidi replied that it would not.

The team discussed the language to be used in the statement. The results of the discussions are presented in the following statement:

After the public comment period, the IHDIV-NSWC Safety Department identified the possibility that Site 12 soils may contain objects with explosive residue. Therefore, because of safety concerns, the Navy, EPA, and MDE decided that soil, sediment, and small objects removed from near the shoreline of the ponds would be consolidated on site.

- **George: Site 12 Long Term Monitoring**

George passed out a handout that presents the monitoring program objectives, the decision criteria, and the data evaluation required. The handout outlined when given sampling trends are observed, what action will be taken. For example: if after 3 9-month intervals, no upward trend is observed, monitoring is decreased to 18-month. If an upward trend is observed in a well, then monitoring of that well will be increased to quarterly. If any contaminant of concern is below criteria for 3 rounds, the contaminant will be eliminated from sampling program. If all contaminants of concern are below criteria for 3 rounds, the monitoring well will be eliminated altogether. George L. noted this may be logistically difficult but not prohibitively so.

Curtis commented that John Fairbanks would say ask "what if there is a drum of solvent in the exists in the landfill and it rusts how would you know once a monitoring well has been removed?" George replied that you wouldn't but that problem exists at all landfills indefinitely. Steve suggested that groundwater sampling could be continued indefinitely but at a interval defined based on groundwater flow velocities. This would be technically defensible.

The team briefly discussed well numbers and placement. Then the discussion returned to frequency. Dennis suggested that the 3-round scheme does not allow for even a full year of sampling. George replied that the table should be redrawn as a decision tree. Curtis reiterated his point that if sampling for a given contaminant or group is eliminated, a contaminant in a drum or other container could be released at a later date.

Jeff noted that sampling on an irregular basis may confuse the field effort. George agreed but reiterated that it could be done. Curtis asked if mobilization costs would need to paid during quarters when, for example, only one well needs to be sampled. The team briefly discussed logistics.

George asked if the team agrees that the table in the handout should be changed to a decision tree. Dennis said yes but that the main concern is do we need to sample the monitoring wells in perpetuity. Dennis felt that we could calculate a minimum sampling effort as Steve had indicated. Jeff suggested that if a landfill is a special case then the team should agree to a given timeframe and sample for a full suite of analytes. Steve replied that was a good idea. The team briefly discussed possible groundwater flow velocities at the landfill.

Action Item: The team will review the LUCAP/LUCIP document and forward comments to George by 9/7/01

Review Goals, Action Items, and Parking Lot

Items left in the Parking Lot:

Parking Lot

Partnering session (Team building)

Discuss dig permit policy

Identify OHM/ROICC Roles and responsibilities for Site 12 and chain of communication

- **Close Out**

The following items were suggested for inclusion in the next meeting agenda:

Next Agenda	Lead	Time (hr)
Site 47	David	1.5
LUCAP/LUCIP LTM Plan	George	1.0
Partnering Session	Jeff	If time allows
Site 14 - need for further investigation	Shawn	0.5
Discussion of Comments from Sites 11 et al RI	Anne	1.5
Mattawoman Creek Update	Kent	1.0
Lab Area Investigation	Anne	0.5
Site 42 Groundwater Issues	George	1.5
LTM Decision Tree	George	1.0

- **Schedule of Future Meetings**

Date of meeting	12-13 September 2001	9-10 October 2001	14-15 November 2001	15-16 January 2002	19-20 February 2002	March 2002 TBD
Location	Philadelphia	Lancaster	Annapolis	Indian Head	Philadelphia	
Host	Dennis	Tier II	Curtis	Shawn	Dennis	
Chair	Dennis	Shawn	Curtis	Heidi	Dennis	
Scribe	Jeff	George	Shawn	Curtis	Anne	
Tier II Link	John T.	TBD	John F.	TBD	TBD	
Time Keeper	Heidi	Shawn	George	Dennis	George	

A conference call will be held on September 5, 2001 at 10:00 AM.

- **Meeting Evaluation**

  (Separate file)

- **Adjourned at 1:30 PM.**

ACTION ITEMS COMPLETED SINCE LAST MEETING

Goal Number	Goal	Status of Goal	Action Number	Action	Person Responsible for Action	Date Action Created	Status of Action	Date Action Must Be Completed
To be defined	**To be defined**	In Progress	304	Check on historical information for abandoned waste acid disposal pit in lab area	Heidi Morgan	05/23/2001	Completed	Completed
To be defined	**To be defined**	In Progress	305	Check on the posting of the minutes on the website (printability)	Anne Estabrook	05/23/2001	Completed	Completed
To be defined	**To be defined**	In Progress	306	Report to team on LUCAP/LUCIP after meeting with Navy counsel	Jeff Morris	05/23/2001	Completed	Completed
To be defined	**Basewide Background Report**	In Progress	311	Send Lee Ann CH2M HILL site-specific background sampling information	Anne Estabrook	05/24/2001	Completed	Completed
To be defined	**Finalize Remedial Investigation Report for Sites 6, 39, and 45**	In Progress	315	Check with hydro about Site 45 monitoring wells (filtered vs. unfiltered results)	Dennis Orenshaw	06/27/2001	Completed	Completed
To be defined	**Finalize Remedial Investigation Report for Sites 6, 39, and 45**	In Progress	316	Finalize memo on Sites 39 and 45 to include discussion of Site 45 surface water sampling results and distribute results to team	Anne Estabrook	06/27/2001	Completed	Completed
To be defined	**To be defined**	In Progress	317	E-mail goals, minutes, agendas, etc. to all Tier II members	David Steckler	06/27/2001	Completed	Completed

ACTION ITEMS COMPLETED SINCE LAST MEETING

Goal Number	Goal	Status of Goal	Action Number	Action	Person Responsible for Action	Date Action Created	Status of Action	Date Action Must Be Completed
To be defined	**Work Load Tool**	In Progress	318	Sort WLT by time and site for future meetings	David Steckler	06/27/2001	Completed	Completed
To be defined	**To be defined**	In Progress	319	Check with Alvaro regarding his acceptance of screening of Site 5 for silver only	Dennis Orenshaw	06/27/2001	Completed	Completed
To be defined	**Basewide Background Report**	In Progress	320	Develop key tables and figures for background study workplan and share recommendations through e-mail	Lee Ann Sinagoga	06/27/2001	Completed	Completed
3	**Finalize Remedial Investigation Report for Site 47 by 07/17/00**	In Progress	321	Investigate alternatives for investigation at Site 47 (including onsite GC, MIP, off site lab, etc.) and prepare memo to team with recommendations and cost comparison	David Steckler	06/28/2001	Completed	Completed
1	**Sign Record of Decision for Sites 12, 41, 42, and 44 by 04/04/01**: (a) Finalize Feasibility Study by 04/19/00 (b) Finalize Proposed Plan by 09/13/00	In Progress	324	Set up conference call with MDE, EPA, and TTNUS hydrogeologists	Lee Ann Sinagoga	06/28/2001	OBE	08/15/2001

ACTION ITEMS COMPLETED SINCE LAST MEETING

Goal Number	Goal	Status of Goal	Action Number	Action	Person Responsible for Action	Date Action Created	Status of Action	Date Action Must Be Completed
To be defined	**Work Load Tool**	In Progress	325	Distribute updated WLT with the minutes	David Steckler	06/28/2001	Completed	Completed
1	**Sign Record of Decision for Sites 12, 41, 42, and 44 by 04/04/01**: (a) Finalize Feasibility Study by 04/19/00 (b) Finalize Proposed Plan by 09/13/00	In Progress	326	Distribute marked up Site 12 ROD and set up conference call	Dennis Orenshaw	06/28/2001	Completed	Completed
To be defined	**To be defined**	In Progress	327	Provide BMP to Jeff	Shawn Jorgensen	06/28/2001	Completed	Completed
To be defined	**To be defined**	In Progress	329	Revise 2/8 consensus agreement and distribute to team	Shawn Jorgensen	06/28/2001	Completed	Completed

OPEN ACTION ITEMS

Goal Number	Goal	Status of Goal	Action Number	Action	Person Responsible for Action	Date Action Created	Status of Action	Date Action Must Be Completed
To be defined	**To be defined**	In progress	287	Scope for BMP update	Jeff Morris	04/24/2001	In Progress	02/19/2002
To be defined	**To be defined**	In progress	289	Check on site contract to get GIS data into system	Jeff Morris	04/24/2001	In Progress	02/19/2002
1	**Sign Record of Decision for Sites 12, 41, 42, and 44 by 04/04/01**: (a) Finalize Feasibility Study by 04/19/00 (b) Finalize Proposed Plan by 09/13/00	In Progress	309	Check on as-builts for the steamline footers at Site 42	Shawn Jorgensen	05/23/2001	In Progress	09/12/01
To be defined	**Finalize Remedial Investigation Report for Sites 6, 39, and 45**	In Progress	313	Send Anne information on risk numbers for exotic chemicals	Dennis Orenshaw	05/24/2001	In Progress	09/12/01
1	**Sign Record of Decision for Sites 12, 41, 42, and 44 by 04/04/01**: (a) Finalize Feasibility Study by 04/19/00 (b) Finalize Proposed Plan by 09/13/00	In Progress	322	Ask base personnel if there has been filling around steam line footers at Site 42	Shawn Jorgensen	06/28/2001	In Progress	09/12/2001
1	**Sign Record of Decision for Sites 12, 41, 42, and 44 by 04/04/01**: (a) Finalize Feasibility Study by 04/19/00 (b) Finalize Proposed Plan by 09/13/00	In Progress	323	Ask EPA hydrogeologist to look at RI (regarding flow directions) for Site 42 and schedule conference call	Dennis Orenshaw	06/28/2001	In Progress	09/12/2001

OPEN ACTION ITEMS

Goal Number	Goal	Status of Goal	Action Number	Action	Person Responsible for Action	Date Action Created	Status of Action	Date Action Must Be Completed
To be defined	**To be defined**	In Progress	328	Send GIS contract information to Jeff	Shawn Jorgensen	06/28/2001	In Progress	09/12/2001
		In Progress	330	Brief Simeon Hahn on use of CLP methods for Mattawon Creek Study	Dennis Orenshaw	08/15/2001	In Progress	08/17/2001
1	**Sign Record of Decision for Sites 12, 41, 42, and 44 by 04/04/01**: (a) Finalize Feasibility Study by 04/19/00 (b) Finalize Proposed Plan by 09/13/00	In Progress	331	Distribute information from Solid Waste Department regarding Site 42 monitoring well issues	Curtis DeTore	08/15/2001	In Progress	08/27/2001
1	**Sign Record of Decision for Sites 12, 41, 42, and 44 by 04/04/01**: (a) Finalize Feasibility Study by 04/19/00 (b) Finalize Proposed Plan by 09/13/00	In Progress	332	Set up conference call for Tuesday 8/28/01 at 9:00 AM	George Latulippe	08/15/2001	In Progress	08/24/2001
To be defined	**To be defined**	In Progress	333	Arrange for Janet to attend our February 2002 meeting	Anne Estabrook	08/15/2001	In Progress	08/31/2001
To be defined	**To be defined**	In Progress	334	Find out about reviewers preference in document submission: hardcopy versus electronic, PDF versus spreadsheets and text	Dennis Orenshaw	08/15/2001	In Progress	09/12/2001

OPEN ACTION ITEMS

Goal Number	Goal	Status of Goal	Action Number	Action	Person Responsible for Action	Date Action Created	Status of Action	Date Action Must Be Completed
To be defined	**To be defined**	In Progress	335	Identify and brief ROICC on plans	Shawn Jorgensen	08/16/2001	In Progress	09/20/2001
To be defined	**To be defined**	In Progress	336	Invite arranged OHM & ROICC to January 2002 meeting	Jeff Morris	08/16/2001	In Progress	09/20/2001
3	**Finalize Remedial Investigation Report for Site 47 by 07/17/00**	In Progress	337	Develop and distribute a memo outlining a field investigation to define presence and extent of DNAPL at Site 47	David Steckler	08/16/2001	In Progress	09/07/2001
To be defined	**To be defined**	In Progress	338	Review the LUCAP/LUCIP document and forward comments to George	Team	08/16/2001	In Progress	09/07/2001