



**Naval Air Station
South Weymouth, MA
Restoration Advisory Board
Summary of RAB Meeting – March 11, 2005**



1. INTRODUCTIONS/ APPROVAL OF PRIOR MEETING MINUTES

Ms. Susan Jeghelian, MA Office of Dispute Resolution, and RAB meeting facilitator, opened the meeting at approximately 7:00 PM. She requested that all attendees, including RAB members, regulators, and audience members, introduce themselves. The sign-in sheet for the meeting is provided as Attachment A to this meeting summary. S. Jeghelian asked if everyone had time to read the meeting notes from the prior RAB meeting and asked for comments on them. In addition, S. Jeghelian encouraged those with ideas for future RAB meeting topics to bring them to the attention of the RAB co-chairs. There were no comments on the January 2005 RAB meeting notes; the notes will stand as issued.

S. Jeghelian reviewed the guidelines for the meeting. She reminded the participants when asking questions to wait to speak until they are acknowledged, to state their names and affiliations, and to speak into the microphone when they have questions.

The Agenda for the meeting and the Action Item Tracking List are provided as Attachment B to this meeting summary. S. Jeghelian then noted that in accordance with the agenda, the two presentations (the Update of MCP Activities at the Jet Fuel Pipeline and IR Site 11 – the Solvent Release Area) would be followed by the Updates and Action Items portion of the meeting.

2. PRESENTATIONS

S. Jeghelian asked D. Barney, Navy, to introduce L. Hogan, ENSR, for the first presentation. L. Hogan presented an update of MCP activities at the Jet Fuel Pipeline and stated that the last update he gave was in October 2001. The following paragraphs summarize his presentation and include references to selected presentation slides in Attachment C.

Update of MCP Activities at the Jet Fuel Pipeline

L. Hogan stated that the goals of the presentation were to provide background information on the Jet Fuel Pipeline, discuss the phases under the MCP that have been completed, discuss the current status of the site and the steps being considered to achieve closure. The Jet Fuel Pipeline is a former fuel pipeline that transported fuel across the base from the eastern side to the western side (where the operations

area and holding tank was located). The pipeline is comprised of two main parts: the main and the auxiliary pipelines (Attachment C, Slide 1). Pipeline operations occurred from the 1950's through the late 1970's when they were discontinued in favor of trucking fuel from the fuel farm area. In 1988, the pipeline was entirely discharged of its remaining fuel, which was comprised primarily of residual fuel from the late 1970's. As part of base closure activities in 1998, the pipeline was removed and the 550 gallon holding tank, located at the western end of the site, was found to be leaking. A photo-ionization detector (PID) was used to screen the soil for contamination. The results indicated levels above the MCP standard, 100 parts per million (ppm). Therefore a 72-hour reporting condition was triggered which resulted in the area being listed as an MCP site. A response action was conducted which included the cleanup of soil around the main and auxiliary pipelines and around the holding tank to MCP regulatory levels. L. Hogan noted that the area in which the holding area was located is classified as a potential drinking water area. As a result, after the balance of the pipeline cleanup was completed the holding tank area required further remedial work to achieve the GW-1 standards. These activities are summarized on Attachment C, Slide 2.

One building (Building 100) is located in the vicinity of the holding tank in the western area of the site. All tanks and associated piping have been removed. A small plume was identified in this vicinity; it extended from the holding tank area, under the West Gate Landfill to a disposal area, which is also regulated under the MCP. A partial RAO (response action outcome) has been submitted for the disposal area. The upper portion of the holding tank plume is located along Trotter Road and extends to a wooded area with a small depression, which is seasonally wet (Attachment C, Slide 3). There are no mapped environmentally sensitive areas or vernal pools in the area.

M. Parsons, citizen of Rockland, asked for clarification as to whether the plume ran under the West Gate Landfill. L. Hogan responded that it does in part, however under the MCP the plume is being addressed as part of the Jet Fuel Pipeline area. M. Parsons followed up by asking whether the plume was stationary. L. Hogan responded that groundwater monitoring has been conducted on a continual basis since 1998. Although the shape of the plume varies seasonally, since the sources have been removed it has not traveled and has remained a fairly stable residual plume. The center of the plume is located around MW-9 and DP-8. Prior to implementation of the remedy in 2002, a baseline sampling round was conducted which indicated a similar shape of the plume and also confirmed that the highest concentrations remained consistently in the same wells. As a result of this sampling round two additional monitoring wells (MW11 and MW12) were added to help monitor whether the plume was migrating. The results indicated that the shape of the plume was unchanged.

M. Parsons continued by asking the distance from the plume to French's Stream. L. Hogan stated that it is at least 300 ft to 400 ft away. He estimated that the plume is approximately 200 ft long by 120 ft wide

and 10 ft deep. There are several deeper wells, one bedrock well (MW-1D-2) which is 42 ft deep and several deep (approximately 17 ft deep) injection points. The deeper wells and the deep injection points have been confirmed as "clean" by analytical results. In addition, as the depth to groundwater is shallow, the plume is typically confined to the upper groundwater zone. M. Parsons then asked what chemicals have been identified in the plume. L. Hogan responded that the chemicals being focused on are residual volatile petroleum hydrocarbons (VPHs), primarily C9-C10 aromatic hydrocarbons. M. Parsons asked if these are the same chemicals also detected in the West Gate Landfill. L. Hogan responded that the hydrocarbons found in the Jet Fuel Pipeline plume are associated with the holding tank and that he wasn't familiar with the compounds in the West Gate Landfill. He thought polycyclic aromatic hydrocarbons (PAHs) were prevalent in the landfill, which are different compounds from those being targeted in the plume.

L. Hogan then discussed the candidate technologies that were evaluated for the site remediation. These technologies included soil excavation (de-watering and saturated soil removal), in-situ bioremediation (ORC injections and biosparging), in-situ chemical treatment (ISCO), in-situ aeration/ volatilization (air sparge/soil vapor extraction), and in-situ thermal treatment (electrical resistance heating). The technologies were narrowed down to three alternatives: soil excavation and dewatering, ISCO, and in-situ aeration. After evaluating the hydraulic conductivity and the natural biological activities, ISCO was selected and later implemented as the remedy for the site.

A historical summary of the site activities was presented: beginning with the 72-hour notification of the holding tank release in 1998; tier classification in 1999; the Phase II and Phase III reports in 2001 (the latter includes the technology evaluation); the Phase IV Remedy Implementation Plan submittal in 2002 (for ISCO); and the remedy implementation which took place several weeks after the Phase IV submittal (Attachment C, Slide 4). Remedy implementation activities included the installation of 44 ISCO injectors, two rounds of injections conducted in January and February 2003, and the collection of groundwater samples in May 2003. Since several samples exceeded the MCP groundwater classification (GW-1) standard, two additional ISCO injectors were installed in the low seasonally wet area and an additional round of injections was conducted in September 2003. Since that time groundwater monitoring has continued. The latest round of sampling was conducted in April 2004. A follow-up round of sampling is being planned and will be conducted as soon as the monitoring wells can be accessed; currently the wells are snow-covered. Although there are still exceedances above the GW-1 standard, it is anticipated that within the next year or so the GW-1 standard will be achieved and the site will achieve closure under the MCP.

A question was asked whether L. Hogan thought the technology chosen had been successful. L. Hogan responded that it is a proven technology discovered in the 1800's and that it has been used on similar

sites for quite a long time. He continued by stating that the geology of the site is fairly sandy and the plume is shallow. Since the area of concern can be directly contacted he is confident that the ISCO technology will be successful. A follow up question asked if any rebounding has been noticed. L. Hogan responded that when there is a situation where the contamination has been in place for a while some rebounding is likely; for this reason the technology is implemented for a year. After the first injection, he added, success was seen, and coupled with the monitoring that takes place after an injection, there is an opportunity to inject again as needed.

As for the MCP requirements, L. Hogan stated that the Phase IV Completion Statement is ready to be filed with the MADEP showing that the remedy has been fully implemented and the Operation and Maintenance (O&M) phase is about to begin. Groundwater monitoring and ISCO injections will continue periodically until GW-1 standards have been achieved. A question was asked to clarify the meaning of "periodic monitoring." L. Hogan answered that following the injections the monitoring occurred on an almost monthly basis to measure hydrogen peroxide levels (the main component of the chemical injection). When the hydrogen peroxide levels dissipated to a level that was not likely to affect the groundwater results, groundwater samples were collected. Three or four months later a second round of sampling was conducted, therefore periodic monitoring is somewhat tied to the timing of the injections. Once the GW-1 standards are nearly achieved the monitoring will be reduced to quarterly: once four consecutive quarterly sampling results are below the GW-1 standards, permanent closure will be achieved under the MCP.

After the presentation M. Bromberg addressed the Tri-Town representative, stating that potential reuse options would allow residential use in this area; he wondered if the Tri-Town had any concerns with this. S. Ivas, IE/SSTTDC, responded that once the GW-1 standard is achieved this reuse option will be considered a permitted use. L. Hogan added that the GW-1 standard is the drinking water standard; as far as concerns about indoor vapor intrusion, the groundwater levels are well below the vapor intrusion limits. M. Bromberg added that this (vapor intrusion) was one of his concerns.

S. Jeghelian asked for further questions before moving on to the next presentation. There were none. Therefore S. Jeghelian asked D. Barney to introduce M. Leipert, Navy, for a presentation on IR Site 11. The following paragraphs summarize his presentation and include references to selected presentation slides in Attachment D.

IR Site II - Solvent Release Area

M. Leipert, EBS Project Manager, Navy, presented an update on IR Site 11, now also known as the Solvent Release Area (SRA) (formerly AOC 108). The site is located upgradient of the former pistol

range (AOC 35). Site history is summarized as follows (Attachment D, Slide 1): in 1998-1999 the site was part of a basewide background study, including location BG-05. During 2002, soil samples were collected from BG-05 at depths of 0 to 1 ft below ground surface (bgs), 3 to 5 ft bgs, and 5 to 7 ft bgs. Solvents were detected during this round of sampling. As a result, this background study area was elevated to Review Item Area (RIA) status, specifically known as RIA 108 (Attachment D, Slide 2). In April 2003, additional sampling was conducted and tetrachloroethene (PCE) was detected in a downgradient monitoring well, MW-302. During September and October 2003 a total of 33 temporary monitoring wells were installed to further evaluate the nature and extent of groundwater contamination. By the winter of 2004 a total of seven permanent monitoring wells (five overburden and two bedrock wells) were installed. Additional soil sampling was also conducted.

In October 2004 several geophysical investigations were conducted. In preparation for these investigations ground clearing activities were performed since it is a heavily wooded area and surficial debris (i.e., metals) needed to be removed to prevent interference with the geophysical equipment. Geophysics is used to determine what lies beneath the ground surface, with regard to metals and other magnetic areas, without doing any invasive work. The methods used during these investigations were electro-magnetic (EM) terrain conductivity, magnetometry, and seismic refraction surveys (Attachment D, Slide 3).

EM terrain conductivity is defined as measuring the magnetic field without electrodes or direct soil contact. Buried drums, underground storage tanks, some sludges and leachates, buried ferrous-metallic and non-metallic debris as well as other conductive sources located within 20 ft bgs could be detected as anomalies. The device used was a Geonics EM-31, a boom approximately 13 ft in length with a transmitter attached to one end and a receiver to the other. The device is held horizontally to the ground in order to collect readings. Readings were collected every 5 ft in a grid-like area (300 ft by 400 ft) across the site.

Magnetometry is defined as a survey technique used to map buried metallic objects (such as drums, steel pipes, and other ferromagnetic objects) for the purpose of providing information on geologic formations. This technique also allows for detection of buried metallic objects and different layers of sand and gravel, which may contain heavy metals. The device used was a Geometrics G-858-G magnetometer, a wand that is held perpendicular to and placed in direct contact with the ground surface. Readings were collected every 5 ft from the same 300 ft by 400 ft grid, as covered with the EM meter.

Since the same grid pattern was used in collecting data from the EM and the magnetometer, M. Leipert was able to show the anomalies detected. A culvert was detected in the upper left corner of the 300 ft by 400 ft grid running under the road toward the pistol range. Several large debris piles were also identified

along the road leading toward the pistol range. The EM and magnetometry results are summarized in Attachment D, Slide 4. Three monitoring wells and 153 different areas were detected as anomalies within the grid. Some of these anomalies were later identified as concrete, a pipe, and a vehicle gas tank (3 ft by 1 ft by 1 ft). Where the gas tank was detected, headspace readings were collected; no VOCs were detected. In addition, no buried drums were identified. In some areas excavation to remove the anomalies was conducted by the use of a shovel, while in other locations a backhoe was required. In addition, all of the solid waste detected at the site was removed.

Seismic refraction survey is defined as a survey technique which uses seismic waves that travel through different media (i.e., soil, saturated soil, bedrock, fracture zones, etc.) to determine the depth to bedrock and the bedrock topography. One seismic survey line, approximately 500 ft to 600 ft in length running in a northwestern to southeastern direction across the site was surveyed. Four transect lines in a northeastern to southwestern direction were also surveyed. The two existing bedrock monitoring wells (MW-302D and MW-304D) were used in calibrating the seismic refraction device, since depth to bedrock in those areas was already known. One 8-pound and one 16-pound hammer were used to generate the compression waves needed for the seismograph measurements. The hammer is used to hit an aluminum plate lying flat against the soil so that the waves bounce off the subsurface media and return at different velocities. A total of 24 geophones were laid across the site (at 10 ft intervals) to measure these velocities and generate data that when interpreted by the seismograph indicated three distinguishable layers.

The top layer (5 to 10 ft bgs) is indicative of a dry, slightly moist soil containing organics; the middle layer (capillary fringe where the top of the water table is located) is indicative of an unconfined aquifer containing saturated sediments. Towards the bottom of this middle layer lie unconsolidated or partially consolidated sediments and basal glacial deposits overlying the bedrock. The bottom layer contains unweathered gneiss and granitic bedrock, while the lower portions of this bottom layer contain weathered and/or fractured bedrock. While the bedrock varies in thickness across the site, deeper weathered zones were detected in the western area of the site (a possible indication of fracturing). Bedrock across the site was determined to range from 15 to 20 ft bgs.

The geophysical data collected was used to help determine soil sampling location points to better locate the source area of contamination. Since the water table is approximately 2 ft to 4 ft bgs, all samples collected were at shallow depths. A track-mounted geoprobe rig was used to collect the subsurface soil samples in this 300 ft by 400 ft wetland area (Attachment D, Slide 5). A split spoon sampler was used with an acetate sleeve to collect the soil. Once the sleeve was removed from the subsurface it was cut open, and a HNu instrument was used to screen for the presence of VOCs prior to analyzing the sample by gas chromatography in the on-site EPA mobile lab. S. Ivas questioned whether blow counts were

recorded; M. Leipert stated that a direct push method was used. S. Ivas asked whether they would have to go back and obtain that type of information. M. Leipert responded that there are approximately five or six overburden and two bedrock wells; therefore the installation of additional permanent wells will likely be required in the future, possibly along with some additional geophysical investigations to assist with placement of the wells.

M. Leipert concluded his presentation by stating that on March 2, 2005 a kick-off meeting was held with EPA and the MADEP to discuss the scope and approach for the preparation of a Remedial Investigation (RI) work plan. The draft work plan is scheduled to be completed by late spring or early summer so that the field work could be initiated late this summer (Attachment D, Slide 6). Activities anticipated to be included in the scope of work include refining the site conceptual model based on geophysical data, further evaluating the source area, conducting additional sampling, determining data gaps based on field screening conducted to date, and performing a groundwater evaluation in the overburden and bedrock to determine the nature and extent of contamination at the site (Attachment D, Slide 7). He then summarized the results of the geophysical efforts at the site to date (Attachment D, Slide 8).

S. Jeghelian asked if there were additional questions for M. Leipert. M. Parsons asked whether this area was considered a plume and what its dimensions are. M. Leipert stated that it is characterized as a plume. With regard to the size of the plume, it is known that contaminants were not detected in the temporary wells (located on the eastern side of the site). Contamination has been detected toward the west and south, however since there are only five or six overburden and two bedrock wells currently installed additional wells are needed to get a better understanding of the nature and extent of the plume. Contamination has not been detected at the East Mat Ditch. M. Parsons followed up by asking what solvents were detected. M. Leipert responded that it is primarily PCE, however some daughter products (e.g., TCE and DCE) have also been detected at lower levels. M. Parsons asked whether any polycyclic hydrocarbons (i.e. PAHs) were detected. M. Leipert stated there isn't enough data to determine that, however further characterization would be part of the RI work plan. M. Parsons mentioned an event where a relative witnessed dumping approximately 7 years ago; she wondered whether any household items were detected during the geophysical investigation. M. Leipert wasn't certain whether she was referring to the location of the SRA and M. Parsons replied that she was talking about the area north of the former pistol range. M. Leipert stated that the area of their investigation was north and northeast of the former pistol range and noted that household chairs, matting, metal debris, and drums were found in RIA-36 but were removed during a solid waste removal. He stated that if she would like to show him the area he would walk it with her.

S. Ivas asked about the groundwater flow direction. M. Leipert stated that it was in a southeasterly direction toward the East Mat. M. Bromberg asked whether the contamination would likely flow into the

East Mat Ditch. M. Leipert responded that sediment and surface water samples were collected during the downstream watercourse area investigation and there was also data from the actual ditch but contamination was not detected. He stated that diffusion samplers may need to be used to get a better indication of possible contaminants as part of the upcoming work. The goal is to get a better understanding of the interface between the surface water and any possible recharge to the East Mat Ditch and the interface between the bedrock and the overburden wells. M. Bromberg asked whether PCE could travel via water and M. Leipert responded in the affirmative. K. Hayes asked whether PCE was only seen in the deeper wells. M. Leipert stated initially PCE was noted in the overburden wells (in the former pistol range) at a concentration of approximately 230 ppb and in the bedrock it has been detected at approximately 1.2 ppm. M. Parsons asked about the range of concentration in the shallow and deeper wells. M. Leipert stated that there are only two bedrock wells, two couplets, and since there is greater flow and thus more dilution in the overburden than in the fractured bedrock, its not surprising that the concentration would be a little higher in the bedrock.

M. Bromberg asked if there was a general remedy being considered. M. Leipert stated that there are several potential remedies (e.g., chem-ox, HRC, bio-augmentation). M. Bromberg asked whether PCE was detected below the East Mat Ditch. M. Leipert responded that there are no bedrock wells in that location and the closest wells are upgradient of the Fire Fighting Training Area which is likely too far to get a good indication of groundwater quality below the ditch. He mentioned that these issues will be discussed in the work plan. M. Bromberg followed up by asking if there were any potential vapor problems associated with PCE in case buildings were constructed in the area. M. Leipert responded that there wasn't enough information available to answer that question. K. Hayes asked if during the investigations a source had been identified. M. Leipert stated that only shallow soil was sampled, above the water table (approximately 4 ft), and no source was identified. K. Hayes asked whether there was any water tested with respect to the geophysical investigation. M. Leipert stated that in September and October 2003 a total of 33 temporary wells had been installed with a geo-probe rig and the water was tested at that time. That information was the basis for well placement, however no water was sampled during the geophysical investigations.

S. Jeghelian asked if there were other questions. There were none. S. Jeghelian then asked for an update on the Action Items.

3. UPDATES AND ACTION ITEMS

Action Items

1. Provide the Vortech system O&M handout to the Navy - D. Barney stated that R. Marino, USCG, had e-mailed him the document that was requested of her at the last RAB meeting. This document is the O&M manual for the newly installed storm water management system. It contains a quarterly maintenance schedule. In addition, she provided a second document, an MSDS for the anti-fouling paint that the USCG uses. Copies of the documents can be obtained from D. Barney.
2. Provide a copy of the SMP schedule to J. Cunningham - D. Barney noted that he failed to bring it along but would mail it out next week.
3. Provide a completion date for the draft basewide assessment report - D. Barney stated that the draft would be available in the fall, September or October 2005. M. Parsons asked whether the basewide assessment would include an in-depth discussion of French's Stream. D. Barney responded that the Navy would be discussing the elements of the project with the regulators over the next several weeks.

M. Parsons asked about the iron floc and the fact that French's Stream is essentially a "dead stream," and stated she would like to know the cause. D. Barney stated that iron floc would be addressed and the characteristics of the stream would be evaluated as part of the basewide assessment. M. Bromberg asked if the iron floc could be tested at some point as it is his understanding that it has, to date, never been tested. P. Whittemore, EPA, stated that the parameters of what would be tested are currently being worked out; however the orange floc is likely iron. M. Bromberg said that he isn't sure it has ever been tested to confirm this theory. B. Olson, EPA, stated that he is surprised that it hasn't been tested but it would be at some point during this investigation. D. Barney indicated that the Navy's position is that the floc consists of iron bacteria and that it is iron and manganese enriched. He stated that he would mention it to their risk assessors and see what could be gained from sampling the floc. M. Bromberg stated that he thought a lot could be gained because the proposed reuse plan includes residential areas; to ease the concerns of some members of the public it might be useful to test those theories to confirm the floc's composition. D. Barney responded that he understands the concern and will raise the issue.

M. Parsons asked whether the state lists French's Stream as an impaired stream. D. Chaffin, MADEP, asked on what basis the stream would be considered impaired. M. Parsons said that she wasn't certain but wondered why nothing had been done about it. D. Chaffin stated that French's Stream is basically a drainage ditch. One of the primary objectives of the basewide assessment is to look into the question of the source of the iron floc; to determine whether it is

from a disposal site or whether it is simply naturally occurring in the groundwater. M. Bromberg added that the iron floc is not just in the stream but it is also present by the fuel farm and wondered if it originates from there. D. Chaffin again stated that the origin of the floc is the big question. He added that iron is naturally occurring in the area and if it that is determined to be the case here clean-up action would not likely be necessary. However, if the floc is related to a disposal site or another source, there could be some type of action taken. M. Parsons noted that the iron floc is located in a number of places but at French's Stream it is most prevalent. D. Chaffin added that pre-base topographic maps indicate that whole area was a wetland. B. Olson, EPA, said that this is a very common issue, not just at places like the base. He continued by concurring with D. Chaffin that the bigger question is determining if it is natural or not, and if it's not naturally occurring, whether it is a problem or not. D. Barney noted that he was not discounting M. Bromberg's concern and that he will make a note to have the iron floc tested.

S. Jeghelian then asked each of the Leads to provide updates to the list of eight Update Items.

1. Administrative Actions – D. Barney indicated that he has several copies of the Federal Register published in late January 2005 (30 CFR 202, 1/28/05) available for review. The publication is a solicitation of public comments on RAB topics: such as administrative support, establishing, and dissolution of RABs. He noted that the comment period is open until the end of March 2005. D. Barney noted that at the last meeting a request was made to have the MA Public Health make a presentation on their findings regarding the on-going MS study. J. Cunningham, RAB co-chair, said that when he asked for an update, Dr. Norr, MA Public Health, responded that they are in the process of gathering data and toward the end of the year they would be publishing their findings. Dr. Norr indicated that a presentation would be more appropriate at that time since it would be premature to do so presently. D. Barney stated that he received the same information when he followed-up with ATSDR. This will be noted as a topic for a future RAB meeting.
2. MADEP Update - D. Chaffin said that since the last RAB meeting the MADEP had visited the buoy depot area to oversee the removal action. The MADEP is awaiting submission of the removal action completion report. D. Chaffin confirmed that MADEP participated in a meeting concerning the SRA and other meetings to discuss the work plans for Buildings 81 and 82. In addition the MADEP has sent out comments on the Long Term Monitoring Plan (LTMP) for the Rubble Disposal Area.
3. Coast Guard Buoy Facility Update – D. Barney stated there was no update from the Coast Guard.

4. IR Program Sites Update – D. Barney said that the RAB members will be getting a letter indicating that M. Krivansky has been assigned to other duties and that D. Barney will be replacing him as the RPM. An excavation plan still needs to be formulated for the Rubble Disposal Area to address the residual PCBs. Discussions are on-going with the regulators regarding the LTMP. With regard to the Tile Leach Field, plans are being developed to collect additional data to address outstanding issues related to the rejected analytical data from the Phase II RI. Building 81 and 82 work plans will likely be finalized so that a large remedial field effort on both sites can begin this summer. D. Barney noted that the Navy hopes to meet with the regulators in the next few weeks to begin moving forward on finalizing the Feasibility Study for the Sewage Treatment Plant. The Fire Fighting Training Area has been moved to the MCP program; a contract has been awarded to develop a Release Abatement Measure (RAM).

5. MCP Release Areas Update – M. Leipert stated that for the plan for the Jet Fuel Pipeline is to collect water level measurements, survey the injectors and wells, and perform another round of injections in early spring. At RIA 21 (Building 15) a removal action of contaminated soil was completed in November. Some nearby monitoring wells were tested and the data showed no detections; therefore an RAO is being prepared. S. Jekhlian asked whether there were any questions. M. Smart, Weymouth Town Council, asked how many valve pits and hydrants with hookups existed at the Jet Fuel Pipeline and raised a concern about residual fuel in the hookups. D. Barney stated there were five valve pits and five or six hydrants with hookups but there were no residuals detected during the removal of the piping.

6. EBS Review Item Areas/Various Removal Action Update – M. Leipert stated that there has not been much activity given the transition from one contractor to another. The ROD for the former pistol range was signed and will be sent out with a public announcement. There are plans to move forward with the AOCs, particularly AOCs 3/13/100, and possibly 4A (near air traffic control tower) or 15 (the water tower). The goal is to group some of these sites together and complete a combined proposed plan (PRAP) and ROD. M. Leipert also stated that they were awaiting confirmatory sample results for some of the active AOCs. In addition, another round of sampling will be conducted at AOC 53 and additional removal activities will be conducted at AOC 8.

7. FOST/FOSL/CDR Update – D. Barney stated that FOST IV is the only outstanding item and comments are currently being compiled. M. Bromberg asked if there will be a FOST V. D. Barney stated that there are no current plans for one. M. Parsons asked if this will be the end of the FOST system and therefore whether the property will be ready for transfer. M. Leipert noted that there may be a FOST V after additional PRAPs and RODs are completed for some AOCs. D. Barney said that there is a lot of land that needs to be addressed and to have the land

transferred there needs to be either a FOST or covenant deferral request (CDR) signed and sealed.

8. SSTTDC Update – S. Ivas mentioned that T. Fancher had been selected as the new Executive Director. Mr. Fancher would like to introduce himself at the next RAB meeting. In addition, the revised plan had been given to the Town of Rockland and the new zoning plan will be voted on at the March 31st meeting of the SSTTDC. M. Bromberg asked if the public could comment. S. Ivas said that the public comment period was open.

Additional Discussions – Possible Issues to Discuss at the Next RAB Meeting

S. Jeghelian asked for future Agenda Items.

D. Barney said that there had been a discussion about an update on the Navy's turtle assessment program (particularly the spotted and box turtles) at the last RAB meeting and suggested that it be included as an agenda item. Several members of the audience agreed and it will be included on the agenda for the next RAB meeting.

M. Bromberg suggested that there be a discussion of the status of FOST IV. He stated that he had concerns relating to the western area. D. Barney stated that a presentation was not made to the RAB before the comment period on FOST IV, as were done for FOST I, II, and III. He noted that there are maps available of each site but since the regulators' comments would not be addressed in time for the next RAB meeting, he suggested delaying a discussion of FOST IV until the comments are addressed.

K. Hayes asked for an update on PCB removal, testing and completion of the Rubble Disposal Area cap, the monitoring plan and PCB removal at AOC-8. Several members of the audience agreed and this was also added as an Agenda Item for the next RAB meeting.

M. Bromberg asked if it would be possible to discuss turning a post-military/industrial site into a residential area as an agenda item to address any concerns with the proposed reuse plan since the towns will be voting on the Village Center Plan shortly. B. Olson, EPA, said that the general approach is to clean up sites to conditions appropriate to the reuse plan and if the reuse plan changes to a more sensitive use then the cleanup conditions are re-evaluated and the sites are cleaned up to the more sensitive use. J. Cunningham asked if the Navy would be responsible for the clean up. B. Olson said yes and added that the regulators do not have any concerns with the reuse plan that cannot be resolved by performing cleanup activities. P. Whittemore, EPA, added that if the anticipated reuse was for industrial use the property would be cleaned up to that standard. However, if the property was then sold

to a developer and the developer wanted to convert the land to a residential use, the developer would be responsible to ensure that the more stringent residential standards were met.

M. Parsons asked if a different level of cleanup would be required if housing was put on the eastern end of the base where the Small Landfill and the Rubble Disposal Area are located. B. Olson said yes, it would be required. The current reuse plan does not show housing in those areas. He added that there are no issues at the Small Landfill that can't be resolved by further cleanup actions. M. Parsons clarified that her concern was with the type of cleanup. B. Olson said again the future use would drive the type and level of cleanup, for example one level for residential and another for recreational; the cost for cleanup would depend on at what point in the process the cleanup would occur. He clarified that the key language is what is a "reasonably foreseeable future use." M. Parsons noted that a determination of no further action had already taken effect for the Small Landfill. P. Whittemore and B. Olson clarified that a determination of no further action had been given by EPA for the contaminants regulated under CERCLA but that the state would be responsible for cleanup for the non-CERCLA petroleum constituents or the Navy would complete the cleanup with oversight by the state.

D. Chaffin stated that since the proposed reuse plan had not yet been voted on, the regulators were moving forward in accordance with the current reuse plan. M. Bromberg asked whether there would have to be more testing if the reuse plan changed. P. Whittemore responded that additional testing would not be required since residential use is an option considered when risk assessments are conducted. B. Olson added that for areas where decisions haven't been made additional testing might be required. He added that in many areas it was just as easy to cleanup the property to unrestricted use, therefore the Navy took the extra step and did so. B. Olson suggested that if approved, at some point it would be worth discussing the reuse plan.

S. Jeghelian interjected and asked if the plan, either before it is voted on or even after it is voted on, could become a topic for a future RAB meeting. S. Ivas noted that the Tri-Town vote on the new reuse plan would be on March 31st. M. Bromberg mentioned that at the last public hearing the Navy agreed to perform clean up for the rest of this year, even after the vote, and possibly into the future. D. Barney concurred with this. D. Chaffin added that there are a number of sites that the Navy would likely hold on to initially since they are deemed sensitive areas.

D. Barney stated that with the Rubble Disposal Area there are actions that the Navy needs to complete and then, upon completion, the land will likely be transferred with restrictions upon it. M. Parsons asked how many activity and use limitations (AULs) are on these properties. D. Barney responded that there are four in effect, all involving buildings. Two are in the custody of the Tri-Town as a landowner (the BOQ building and Building 98 - the boiler house for the Charms Charter School). The other two are Building 8

(the central boiler plant) and Building 14 (paint fuel storage area). M. Parsons asked if an AUL would be placed on the Rubble Disposal Area. D. Barney and D. Chaffin explained that a similar limitation would be used, known as an institutional control (IC), which would effectively achieve the same result as an AUL. D. Chaffin stated that they are in the process of creating a document for the implementation of ICs at the Rubble Disposal Area. M. Parsons asked if there would be more properties with ICs. D. Chaffin responded only if it is part of the cleanup decision. B. Olson said that any areas residentially zoned won't have restrictions when the cleanup is complete.

S. Jeghelian asked if there were any other questions and confirmed April 14th as the next RAB meeting date.

M. Bromberg asked B. Olson if the USGS could get out into French's Stream to do a study this spring. B. Olson said that EPA would want to have all data compiled from the basewide report first and see whether there were data gaps before undertaking an additional study. M. Bromberg noted a situation at a swampy area, previously dealt with, and said that he had concerns that although contamination had not been found in the stream beds it was detected in the associated swampy areas. He wanted someone to check in the swampy areas off the base for contamination regardless of what the results are on the base. B. Olson stated that funding may be an issue but EPA would look into who is best suited to perform this work after it is determined whether it is even necessary based on results from the basewide assessment report. M. Leipert added that depth samples had been collected off of the Spruce Street extension. B. Olson asked if there were any areas known where they could look at to answer M. Bromberg's question. S. Ivas mentioned an area that he thought could be used to address this issue.

S. Jeghelian asked if there were any further questions. There were none.

Conclusion/Next Meeting

The meeting concluded at approximately 9:30 pm. The next monthly RAB meeting was set for Thursday, April 14, 2005.

ATTACHMENT A

SIGN-IN SHEET

SIGN IN SHEET
RESTORATION ADVISORY BOARD
PUBLIC MEETING

3/10/2005

<u>NAME</u>	<u>ADDRESS</u>	<u>TELEPHONE</u>
Phoebe Call	Katia Tech NWS	978-658-7899
Alicia Jeykelian	MUDIR	617-287-4047
Steve White	RAB	781-331-5523
Larry Hagan	ENSR	978 529-3000
Dan McCormack	Wey RAB	781-682-3585
DON MCGORMACK	Weymouth Resident	781-321-0208
Bryan Olson	US EPA	617 918-1365
JAMES CUNNINGHAM	RAB	781-331-0545
MARY A. PARSONS	ROCKLAND	871-3350
Beth Sortin	Abington (RAB)	
Michael Smart	Wey Town Council	
Paul F Anderson	CSO Wey	
David Urand	CH2M Hill	781-331-5466
Steve Ivas	IE/SST TDC	781.659.1690
Patty M-Whittemore	EPA	617/918-1382

ATTACHMENT B

AGENDA & ACTION ITEM TRACKING LIST



**Naval Air Station
South Weymouth
Restoration Advisory Board
RAB Meeting Agenda
South Weymouth, MA**



10 March 2005

Conference Center on Shea Memorial Drive

7:00 PM

<i>Agenda Items</i>	<i>Item Lead</i>	<i>Projected Time</i>
1. Introduction, Review of Meeting Notes	Facilitator	7:00 - 7:15
2. Jet Fuel Pipeline/AOC 108 (IR Site 11) Update	Navy	7:15 - 8:00
3. Updates and Action Items	Facilitator	8:00 - 8:30
4. Questions, Agenda Items, Next Meeting	Facilitator	8:30 - 8:45

Facilitator: Massachusetts Office of Dispute Resolution: Susan Jeghelian

Restoration Advisory Board (RAB) Members:

Abington: James Lavin, (Alternate: Steve Ivas); Phil Sortin (Alternate: Beth Sortin)

Hingham: no current representation

Rockland: no current representation

Weymouth: James Cunningham (Community Co-Chair); Ken Hayes; Verna Hayes
Dan McCormack; Steve White

Navy: Dave Barney (Navy Co-Chair); (Alternate: Mark Krivansky)

EPA: Patty Marajh-Whittemore (Alternate: Pamela Harting-Barrat)

MA DEP: David Chaffin (Alternate: Ann Malewicz)

BRAC Cleanup Team (BCT) Points of Contact:

Navy: Dave Barney, BRAC Environmental Coordinator (BEC) (617) 753-4656
Email: barneyda@efane.navfac.navy.mil

Mark Krivansky, EFA Northeast Remedial Project Manager (610) 595-0557,
ext. 153
Email: mark.krivansky@navy.mil

Mark Leipert, EFA Northeast EBS Project Manager (610) 595-0557, ext. 146
Email: mark.leipert@navy.mil

MA DEP: David Chaffin, Environmental Engineer Federal Facilities (617) 348-4005
Email: david.chaffin@state.ma.us

EPA: Patty Marajh-Whittemore, Remedial Project Manager, Federal Facilities Section
(617) 918-1382 Email: whittemore.patty@epamail.epa.gov



**Naval Air Station
South Weymouth
Restoration Advisory Board
Action Item Tracking List**



10 March 2005 – Next RAB Meeting

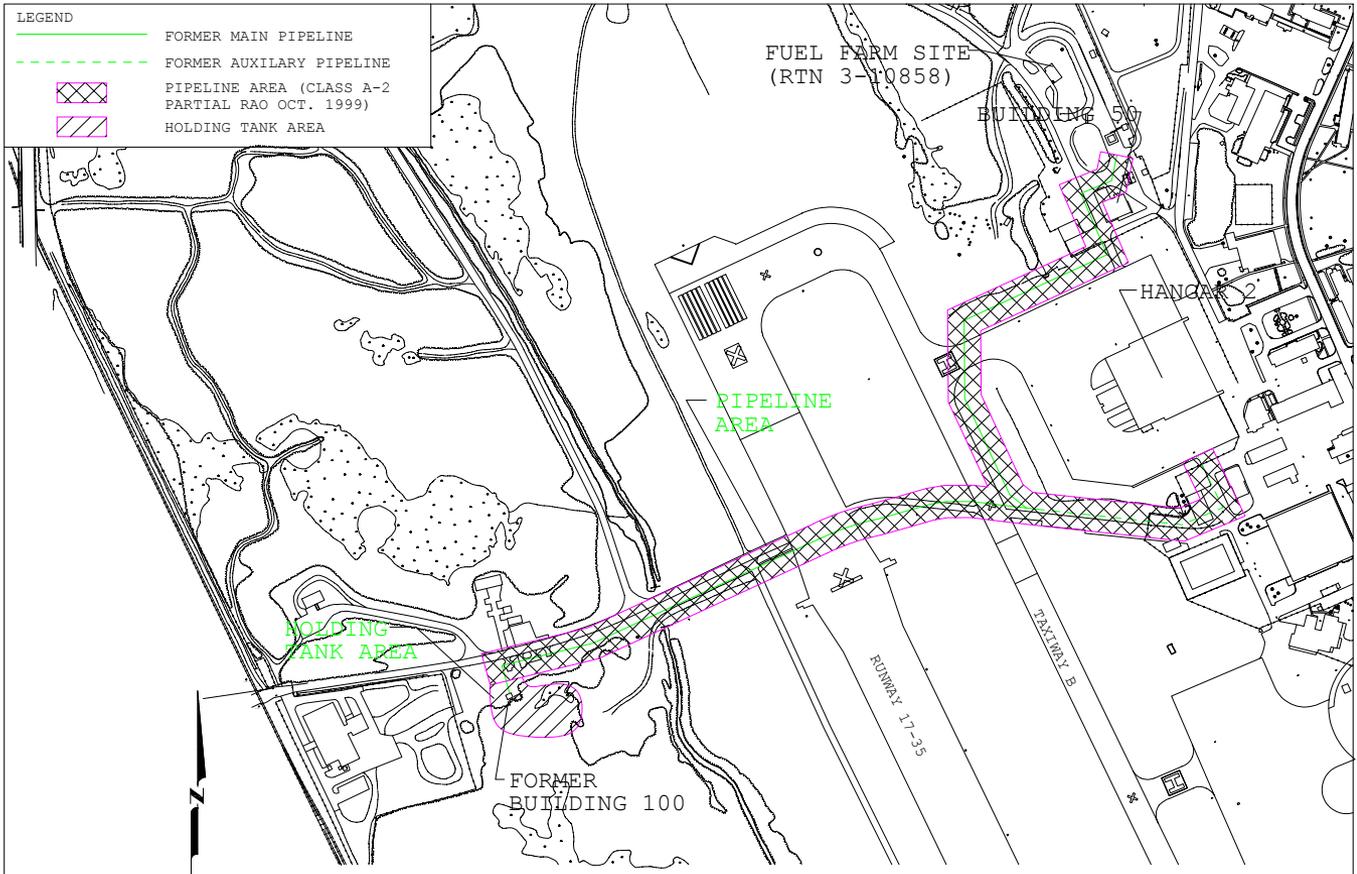
<i>Action Item</i>	<i>Item Lead</i>	<i>Deadline</i>
ACTION ITEMS		
Provide Vortech system O&M handout to Navy	R. Marino/D. Barney	March 10, 2005
Provide a paper copy of SMP schedule to J. Cunningham	D. Barney	March 10, 2005
Provide completion date of draft base-wide assessment report	D. Barney	March 10, 2005
UPDATES		
RAB Administrative Actions	D. Barney	Each RAB
MA DEP Update	D. Chaffin	Each RAB
Coast Guard Buoy Facility Update	R. Marino/J. Connet	Each RAB
IR Program Sites Update	M. Krivansky	Each RAB
MCP Release Areas Update	M. Leipert	Each RAB
EBS Review Item Areas/ Various Removal Action Update	M. Leipert	Each RAB
FOST/FOSL/CDR Update	D. Barney	Each RAB
SSTTDC Update	J. Lavin/ S. Ivas	Each RAB
COMPLETED ITEMS		
Post summarized version of DDA on SSTTDC Website (12/04)		
Check on seating capacity for Conference Center (12/04)		
Update RAB on BRAC conference (12/04)		
Check on analytical data from RIA 112 storm drain maintenance actions (12/04)		
Provide list of sites for L. Larrabee (12/04)		
Navy and consultant evaluate alternatives for reporting data on several metals for D. Wilmot (12/04)		
Provide sample ESCA from another Navy site to Mary Parsons/B. Sortin (12/04)		
Provide copy of EPA's June 14 Letter to Navy to M. Parsons		
Provide copy of Navy's June 24 Letter to SSTTDC to M. Parsons		
Provide data on RIA 4B surface water and sediment		
Provide analytical results for several metals to Dave Wilmot		
Check on whether any more barrels have been found at RDA		
Check on preliminary data from the Jet Fuel Pipeline Site		
Provide USGS with leads on sources of data for the Old Swamp River Study		
Compile and review available French Stream data – to be done as part of Basewide watershed study		
Provide mailing address for J. Sorenson, USGS		
Update community of off-Base well issues		
Contact Mission Statement subcommittee (S. White and B. Loring) and request update on progress for next meeting		
Compile and review available French Stream data		
Contact Susan Speers about potential changes in local public access TV		

ATTACHMENT C

SLIDES FROM JET FUEL PIPELINE PRESENTATION

C:\5600C10A.DWG

LEGEND	
	FORMER MAIN PIPELINE
	FORMER AUXILIARY PIPELINE
	PIPELINE AREA (CLASS A-2 PARTIAL RAO OCT. 1999)
	HOLDING TANK AREA



0 400 800
 SCALE IN FEET
 1" = 400'

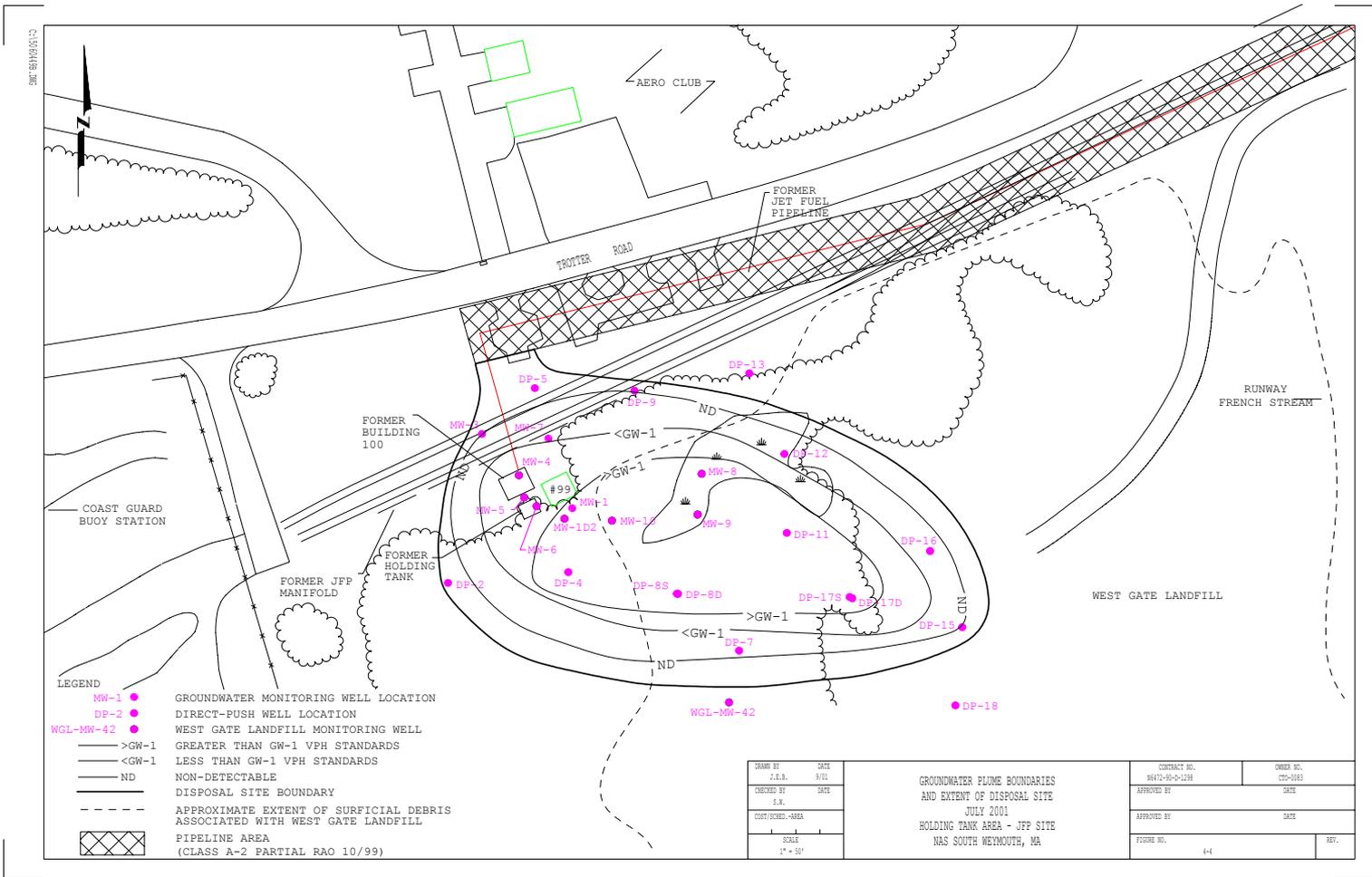
DRAWN BY J.E.B.	DATE 8/99
CHECKED BY M.D.K.	DATE 8/99
COST/SCHED.-AREA	
SCALE 1" = 400'	

SITE PLAN
 JET FUEL PIPELINE SITE
 NAS SOUTH WEYMOUTH, MA

CONTRACT NO. W62472-90-D-1298	OWNER NO. CTC-0083
APPROVED BY M.D.K.	DATE
APPROVED BY	DATE
FIGURE NO. 1-2	REV.

Release Description and Initial Response Activities

- March 13, 1998 – Impacted soil reporting detected above MCP threshold during removal of the Holding Tank (>100 ppmv)**
- Main and “Auxiliary” pipelines cleaned up to state standards and a partial closure report was completed (Partial Response Action Outcome – October 1999)**
- Holding Tank Area further assessed – potential jet fuel impact to groundwater, GW-1 area**



LEGEND

- MW-1 ● GROUNDWATER MONITORING WELL LOCATION
- DP-2 ● DIRECT-PUSH WELL LOCATION
- WGL-MW-42 ● WEST GATE LANDFILL MONITORING WELL
- >GW-1 — GREATER THAN GW-1 VPH STANDARDS
- <GW-1 — LESS THAN GW-1 VPH STANDARDS
- ND — NON-DETECTABLE
- DISPOSAL SITE BOUNDARY
- - - - - APPROXIMATE EXTENT OF SURFICIAL DEBRIS ASSOCIATED WITH WEST GATE LANDFILL
- ▨ PIPELINE AREA (CLASS A-2 PARTIAL RAO 10/99)

DRAWN BY	J.E.R.	DATE	8/01
CHECKED BY	S.M.	DATE	
CONTR/SCOPE-AREA			
SCALE	1" = 50'		

GROUNDWATER PLUME BOUNDARIES
AND EXTENT OF DISPOSAL SITE
JULY 2001
HOLDING TANK AREA - JFF SITE
NAS SOUTH WEYMOUTH, MA

CONTRACT NO.	WS412-90-0-1234	DRAWN NO.	CS2-0043
APPROVED BY		DATE	
APPROVED BY		DATE	
FIGURE NO.	4-1	REV.	

Summary/Next Steps

Date	Event
3/13/1998	72-hour reportable release discovery
3/16/1998	verbal notification to DEP
3/16/1998	VERBAL IRA Plan Approval
5/5/1998	IRA Plan
3/12/1999	Phase I Report and Tier II Classification
10/12/1999	IRA Completion and Partial RAO Report
6/4/2001	Phase II Report
7/12/2001	Phase III Report
12/6/2002	Phase IV Remedy Implementation Plan
12/02-1/03	Injector Installations
1/7/03 -2/6/03	Initial Peroxide and Catalyst Injections
8/14/2003	Additional Injectors Installed
9/3 to 9/11/03	Additional Peroxide and Catalyst Injected
5/03 to current	Groundwater Monitoring
3/14/2005	Phase IV Completion Statement Remedy Operation Status Submittal

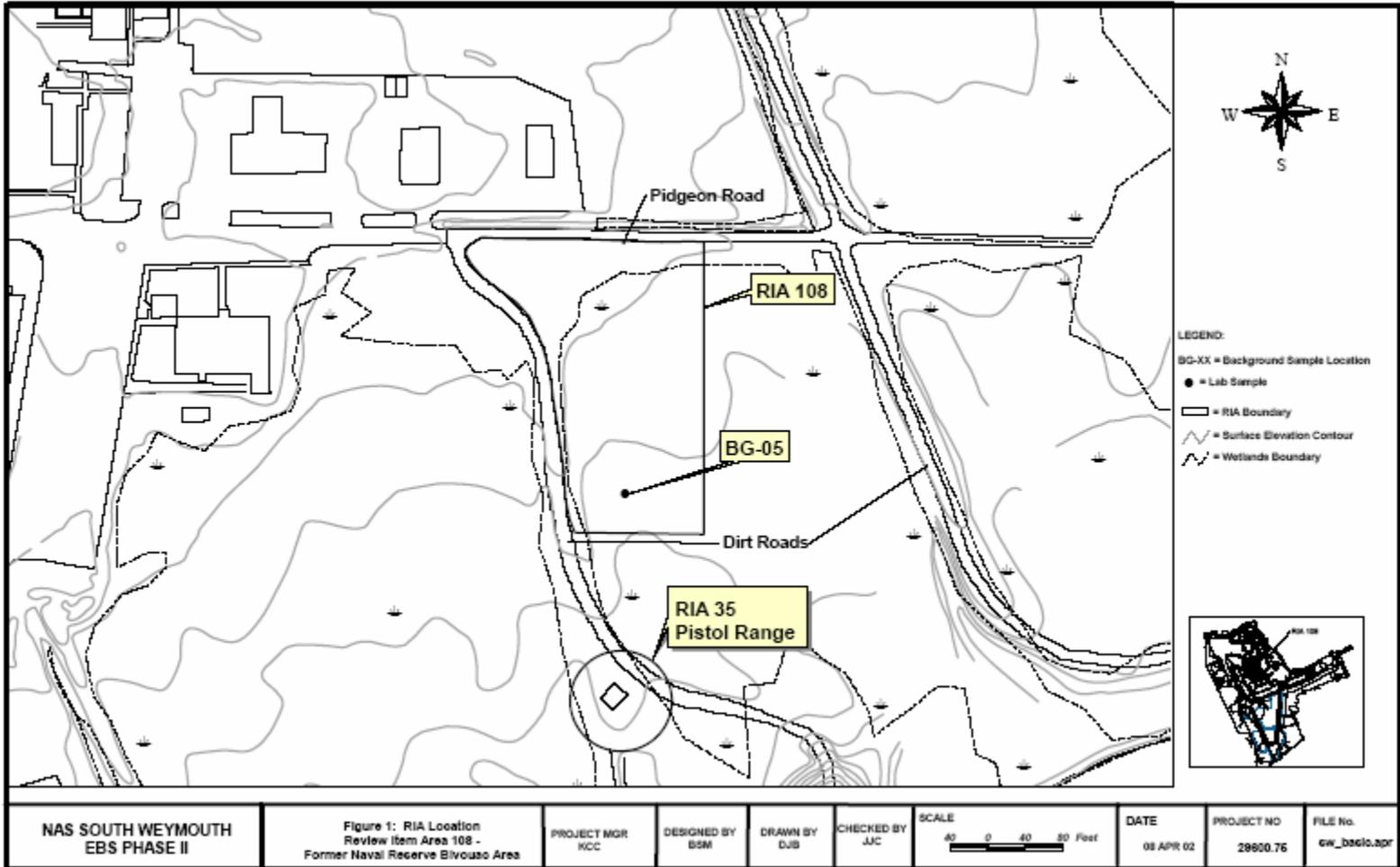
ATTACHMENT D

SLIDES FROM IR SITE 11 PRESENTATION

- **Timeline of Events:**

- **1998-1999 – BG-05 Basewide Background Study**
- **2002 – Soil sampling at BG-05 (0-1), (3-5), (5-7)**
- **April 2003 – VOCs at downgradient well (MW-302)**
- **September & October 2003 – (33) Temporary wells installed to evaluate the ground water.**
- **Winter 2004 – Installed seven monitoring wells (5 overburden & 2 bedrock wells)**
- **February 2004 – CH₂MHill installed 2 overburden monitoring wells**
- **October 2004 – Geophysical Investigations**
- **November /December 2004 –Ground truthing & solid waste removal.**
- **December 2004 – Soil sampling at potential source area**

Solvent Release Area Location Map



- **Conducted geophysical investigations in October 2004. Needed to clear vegetation and surficial metals.**
- **Geophysics – Gives information about the underlying ground/subsurface without having to engage invasive digging.**
 - **Includes – Electromagnetic (EM) Terrain Conductivity, Magnetometry and Seismic.**

- **Identified 153 anomalies; no drums found.**
- **Ground truthing each anomaly. By hand or by backhoe.**
- **Found surface metal or metal scraps at 12” to 18”. Backhoe was used for test pits and deeper anomalies. Found a gas tank to a vehicle at target ID 36. Head space readings on soil indicated no release.**
- **Solid waste was removed.**

Track mounted Geoprobe unit used to collect subsurface soil samples.



What's Next ???



- **Kick-off meeting with EPA and MADEP occurred on March 2nd.**
- **Begin scoping Remedial Investigation (RI) work plan.**
 - Draft work plan – late spring/early summer
 - Begin field work late summer.

- **Scope of Work to include:**

- **Refine site conceptual model after reviewing all information with team.**
- **Source area evaluation.**
- **Soil sampling program using innovative field screening methods.**
- **Identify data gaps.**
- **Ground water evaluation – overburden and bedrock.**
 - **Nature and Extent**

- **Geophysical efforts:**
 - **EM & Magnetometry penetration to approximately 20 feet.**
 - **No drums identified.**
 - **In general, depth to bedrock surface is 15 to 20 feet.**
 - **Weathered zone differ in thickness.**
 - **Velocities within the weathered zone are typical for gneissic or granitic bedrock. Deeper weathered zones on the west side of profiles 2 & 3.**
 - **In general, no large obvious and extensive fracture zones.**