N00296.001875
MOFFETT FIELD
SSIC NO. 5090.3

CLEAN
Contract No. N62474-88-D-5086

Contract Task Order 0134

Navy Engineer-in-Charge: Stephen G. Chao, PE
PRC Project Manager: Joshua D. Marvil
JMM Project Manager: Joseph P. LeClaire, Ph.D

NAVAL AIR STATION, MOFFETT FIELD
MOUNTAIN VIEW, CALIFORNIA

TECHNICAL REVIEW COMMITTEE
MEETING NOTES
MEETING DATE: MARCH 24, 1992

Prepared By

PRC Environmental Management, Inc.
1099 18th Street, Suite 1960
Denver, Colorado 80202
303/295-1101

and

James M. Montgomery, Inc.
365 Lennon Lane
Walnut Creek, California 94598
510/975-3400

May 1, 1992

1875

MINUTES OF THE TECHNICAL REVIEW COMMITTEE MEETING FOR THE INSTALLATION RESTORATION (IR) PROGRAM AT NAVAL AIR STATION, MOFFETT FIELD, CA.

The meeting was called to order at 10:16 AM on March 24, 1992 at NAS Moffett Field. The minutes for the meeting were recorded by a stenographers service and are on permanent record as part of the public record at the Mountain View Library. The attendance list for the meeting is attached at the end of these notes.

Captain Gray opened the meeting and then introduced Jim Haas as the first speaker.

Mr. Haas, the base Environmental Coordinator, welcomed everyone to the meeting and said that the base would like to get the meetings back on their original quarterly schedule. Jim also briefly described the process for the development of the Operable Units (OUs) and indicated that the concept had been accepted by the Environmental Protection Agency (EPA) and was now in progress. The first two OU Remedial Investigation (RI) reports due to the agencies are for OU 4 and OU 2 by April 1, 1992, and are on schedule.

Mr. Haas said that the the agenda for the TRC had been modified to include a presentation on the Hydrogeology Technical Memorandum prepared by PRC and JMM. Mr. Haas also introduced Mr. Josh Marvil of PRC Environmental Management, Inc. (PRC) as the first speaker of the day.

Mr. Lewis Mitani, of the EPA introduced Ms. Roberta Blank as the new EPA project manager for the NAS Moffett Field National Priorities List (NPL) site. Mr. Mitani stated that he was being transferred to other duties.

Mr. Marvil provided a brief description of the activities currently being conducted at the North Base Area (NBA). He also indicated that the Additional Sites Investigation would be starting soon at the Zook Road, Golf Course Landfill, and Patrol Road Ditch Sites. The site investigations were based on the review of IT Corporation documents, Naval archive photographs, interviews of former and current base employees, and other aerial photographs. Mr. Marvil then presented a description of the rationale and locations for the Additional Sites Investigation. In addition to the previously described activities, PRC was scheduled to begin activities on a tank and sump investigation and additional investigations at Operable Unit 4 (OU-4).

Mr. Ted Smith of the Silicon Valley Toxics Coalition (SVTC) asked Mr. Marvil about the burn pit identified on one of the IT figures. Mr. Marvil said that the "burn pit" was tentatively identified by IT Corp. based on aerial photographs. Mr. Lenny Siegel, also of the SVTC, asked what types of materials were landfilled at the Golf Course landfill. Mr. Marvil indicated that the scope of this investigation was to determine the nature of the materials in the landfill. Mr. Smith inquired about the time of operation of the burn pit at the site. Mr. Michael Howar of James M. Montgomery, Inc. (JMM) said that the burn pit may have been operated during the mid-to-late 1960s based on the IT Corp. documents. Mr. Keith Bradley of IT Corporation (IT) indicated that this landfill site should not be confused with the Installation Restoration Program (IRP) Site 2 Golf Course Landfill which has already been studied by IT Corp. and reported in the Phase I RI report.

Mr. Siegel then asked if Patrol Road was adjacent to Lockheed and if the base was coordinating with the Lockheed RI. Mr. Marvil showed the location of the Patrol Road Ditch and stated that the Lockheed RI was not being reviewed at this point. Mr. Marvil also described the general scope of the investigations at the Additional Sites and the schedule of events.

Mr. Marvil then proceeded with a description of the Tank and Sump Investigation including the locations of the tanks and sumps and the methods to be used in the investigation. Mr. Siegel asked several questions related to the breakdown of the jet fuel, and what contaminants were being tested

for. Mr. Marvil said that vinyl chloride was the result of the breakdown of VOCs in the presence of TPH and not of TPH alone, and that all of the samples were being analyzed for the full VOC scan. Mr. Haas added that there was no jet fuel associated with the tanks in this investigation.

Mr. Marvil then proceeded with a description of the sampling and testing methodologies to be used in the investigation. Mr. Marvil said that a Geoprobe™, and a mobile laboratory would be used for the soil screening at the Sump 60 and Sump 91 sites as well as at Tank 14 and Tank 53. Additionally, monitoring wells would be constructed near Sump 60 and Tank 53.

Dr. Jim McClure of Harding Lawson Associates (HLA) asked if wells were to be constructed at Sump 91. Mr. Marvil replied that no wells were scheduled for construction in the area because of the number of wells already present at the site. Ms. Blank asked Mr. Marvil to point out the location of Sump 91 again. Mr. Marvil said that Sump 91 was located adjacent to Building 88 and was used to collect and store waste dry cleaning solvents. Ms. Blank inquired as to why the soils were being investigated at this time. Mr. Marvil replied that the investigation was to determine if Sump 91 was impacting the groundwater, therefore it effected both OU 2 (soils) and OU 4 (groundwaters). Mr. Smith asked how Sump 91 was operated and if any sampling had occurred. Mr. Marvil described the construction and the operation of the sump and said that it was not a dry well and that the contents had been previously sampled and removed. The soils adjacent to the sump will be sampled as part of the Tank and Sump Investigation.

Mr. Marvil then provided a presentation on the OU 4 investigation, including the objectives, locations for soil borings, and monitoring wells.

Mr. Marvil also provided a brief summary of the other investigations currently being conducted at the base. These investigations included the quarterly sampling, and the NBA Investigation.

Mr. Marvil said that the OU 4 Draft Feasibility Study Report was due at the beginning of August, and that the Technical Memorandum on the OU 4 investigation would be submitted also during August or September 1992.

Dr. S. J. Chern of Science Applications International Corporation (SAIC) interjected that he was concerned about the historical data review and believed that reviewing the last 25 to 30 years was insufficient. Mr. Marvil and Dr. Joe LeClaire of JMM replied that interviews of current and former base employees, in addition to reviews of aerial photographs, had been conducted for the Additional Sites Investigation. Mr. Bradley added that extensive interviews had been conducted by IT Corp. personnel and that the original 19 IRP sites had been investigated. The Additional Sites Investigation is therefore a natural part of the process, and is partly a result of interviewing former base employees.

Mr. Marvil said that the Site 9 Source Control measures are not intended to be a long-term measure or to replace the long-term remediation of the aquifers beneath the base. The source control measures are intended to provide localized hydraulic control and remediation of a source area to prevent further contamination. Mr. Marvil pointed out that the Building 29 Tank Farm area, the Building 88 sumps, and the former NEX Gas Station are locations for inclusion within the Site 9 Source Control action. Additionally, a well in the vicinity of Building 45 will also be pumped to prevent contaminant migration through a paleo-channel at that site. The proposed remediation method for the four wells was groundwater extraction followed by liquid phase granular activated carbon treatment. The treated water would then be discharged to the storm water treatment system under a NPDES discharge permit.

Mr. Smith asked if any re-use options were being considered for the treated water. Mr. Marvil said that the treated water could be re-used by the base, possibly at the golf course for irrigation but not for drinking water.

Mr. Siegel asked if salt water intrusion was a potential problem. Mr. Marvil said that salt water intrusion effects would not be seen at the flow rate of 25 gallons per minute.

Ms. Marla Harrison of NASA ARC asked what the influent concentrations would be. Mr. Marvil said that he thought the influent concentration of TPH would be around 500 to 600 micrograms per liter (µg/l), depending on the sites included.

Mr. Smith was concerned about the stated treatment goals. Mr. Marvil indicated that the treatment goals were intended for costing purposes only and that the final treatment levels would be as low as technically feasible, or non-detect if possible, for VOCs. Mr. Siegel continued to be concerned that the base was not willing to spend the necessary dollars for the monitoring of low levels and suggested that the system should be designed to treat to as low a concentration as possible. Mr. Marvil summarized by stating that the design goals are 75 percent of the Regional Water Quality Control Board (RWQCB) standards, and that the efluent concentrations are expected to be considerably lower because of the safety factors built into the design. Mr. Marvil concluded by describing the schedule for the implementation of the source control action.

The next presenter, Dr. LeClaire was introduced.

Dr. LeClaire made a presentation on the current investigation at the North Base Area and the Site 8 anomaly. Dr. LeClaire described the results of the original NBA investigation and described how those results were being augmented with additional data from the current investigation. Dr. LeClaire also described some of the possible mechanisms for the accelerated transport of the contamination to the NBA through paleo-channels, utility trench backfill, and down the active storm drain lines and ditches.

Mr. Siegel asked what the ground surface elevation in the wetlands area and the northern end of the runways was. Mr. Howar stated that the ground surface ranged from 0.5 feet to about 1.5 feet above mean sea level (MSL) in the wetlands and as low as 1.0 feet below MSL at the northern end of the runways.

Dr. LeClaire presented two figures from the IT Corp. Characterization Report which show a cone of depression which has been created within the A1 and the A2/B1 zones around Building 191. Mr. Smith asked how fast the contaminants may be migrating. Dr. LeClaire stated that the rate of contaminant migration was dependant on several factors such as hydraulic gradient, contaminant concentration, contaminants present, and organic carbon present within the soils. Dr. LeClaire also said that, if the primary conduit was the storm drain system, that the rate of migration may be very fast.

Mr. Smith inquired as to the status of monitoring programs on the storm drain. Dr. LeClaire said that NASA ARC had conducted sampling at the diversion box and Ms. Sandy Olliges of NASA ARC related that the diversion box will occasionally show low levels of chlorinated solvents in the µg/l range. The storm drain is the same drain which had a problem several years ago from an release at the wind tunnels. Dr. LeClaire also related that NASA ARC had developed plans for diverting the storm drain to a separate treatment system. Ms. Olliges added that NASA ARC was planning to build a sedimention basin south of the wetlands to capture the storm flow. If subsequent testing indicates that aqueous treatment is necessary, then the water will be treaded prior to discharge into the wetland.

Dr. LeClaire then provided a description of the field activities associated with the NBA investigation. The investigation had resulted in the installation of 14 new monitoring wells, 12 piezometers, 8 cone penetrometer tests and a soil gas investigation adjacent to Site 8. Mr. Smith asked where the storm water retention basins were located with respect to the wetlands. Dr.

LeClaire showed the locations of the various basins, and Ms. Olliges and Mr. Haas described the nature of the various basins and their related vegetations.

Dr. LeClaire then described the schedule for reports. The Draft Field Investigation Report will be out at the end of June and the Final Field Investigation Report will be available at the end of July.

Ms. Blank asked if the the NBA investigation was a part of an operable unit. Dr. LeClaire replied that the work would probably be considered part of OU 4.

Dr. McClure inquired as to the possibility of completion of the remaining CPTs. Dr. LeClaire and Mr. Howar replied that the existing data were to be reviewed, and then the remaining locations tested if necessary. The areas not investigated were still too wet to enter and may not be accessible until summer. It was therefore decided to proceed with the report and collect the remaining data when possible.

Mr. Siegel asked if any plans had been prepared to conduct additional sampling within the marsh or storm water retention basin. Ms. Olliges replied that NASA had scheduled a sediment sampling program to start on April 6, 1992 for the two areas.

Mr. Smith asked if EPA participated in any of the meetings between the MEW Companies, NASA, and Navy, and if those meetings were open to the public. Dr. LeClaire replied that the EPA had attended several meetings and that the meetings were not open to the public.

Dr. LeClaire provided a brief presentation of the results of the NBA soil gas investigation. The results failed to suggest a source area for the contamination detected by NASA in their new monitoring well adjacent to Site 8. The concentrations of TCE detected were uniform throughout the area investigated. The nature of the wet clayey soils may have been responsible for the low levels of TCE detected in the soil gas. Mr. Smith asked if there are any known sources in the Site 8 area. Dr. LeClaire said that the former Site 8 sump had been removed and was not shown to be causing groundwater contamination from VOCs. The contamination detected at Site 8 may be coming from groundwater sources up-gradient of Site 8 and the new NASA monitoring well. Ms. Harrison of NASA ARC said that NASA had requested and received funding to conduct additional investigations in the area.

Mr. Marvil interjected that he had just received additional information on Sump 91. The sump is a concrete lined single chamber sump which contained Carbon Tetrachloride and rusty water when sampled. Additionally, the maximum levels of TPH and TCE to be treated at the Site 9 source Control were 480 µg/l and 2,800 µg/l respectively.

The next presenter, Mr. Martin Steinpress of JMM, was introduced.

Mr. Steinpress provided a brief presentation of the Hydrogeology Technical Memorandum for NAS Moffett Field. The presentation focused on the description of the geologic environments which resulted in the deposition of the alluvial sediments underlying the south bay area. The presentation drew on publications of the USGS which suggest that the B/C aquitard is the only regionally correlatable unit throughout the area and that it is the result of an interglacial period. The sediments above the B/C aquitard are therefore interpretated to be alluvial flood-plain deposits, crevasse-splay deposits, and north-trending channel deposits.

Dr. McClure inquired as to the source of the dates on the figures for the top and bottom of the B/C aquitard. Mr. Steinpress replied that the source was a USGS report on the analysis of the CalTrans cores taken at the Dumbarton Bridge. Dr. McClure also inquired about the sources of the figures in the report and the presentation. Mr. Steinpress stated that the figures were either from

the USGS report or were prepared for the TM and would be presented in the Final Hydrogeology Technical Memorandum.

Dr. McClure also asked if the technical memorandum would include information used for the models in preparation for the Navy. Dr. LeClaire stated that the data on the model would be presented in a separate document to be prepared upon completion of the model calibration and verification.

Mr. Gregory Minor of MHB Technical Associates, asked if the sands above the B/C Aquitard are being interpretated to be discontinuous lenses of permeable material, and if contamination could be trapped within the lenses. Dr. LeClaire replied that they were discontinuous sand lenses and that instead of trapping contamination, that they were serving as conduits for accelerated contaminant transport below the water table. Dr. LeClaire reiterated that the only potentially continuously-correlatable materials at the site were the channel deposits and the B/C aquitard.

Mr. Chern asked if JMM was using a 3-D model for the groundwater transport and what kind of model. Dr. LeClaire replied that the Navy was using MODFLOW, which is a 3-D model for groundwater flow and LEWASTE for the contaminant transport segment.

Mr. Chern then asked if the effects of the San Andres fault were being included within the model. It was explained that the San Andres Fault was not located within the model area and that the fault did not have a direct effect on groundwater flow within the basin.

Mr. Haas concluded the meeting by thanking the attendees and participants and stating that the Navy was going to attempt to get the TRC meetings back on schedule and that the next meeting would be scheduled for sometime in May.