ANDERSEN AFB
GUAM

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 245

ANDERSEN AIR FORCE BASE, GUAM
RESTORATION ADVISORY BOARD (RAB)

MINUTES OF MEETING - 6:00-7:30 PM, 15 FEBRUARY 1996
YIGO ELEMENTARY SCHOOL

RAB MEMBERS PRESENT:

Col. V. Jaroch - Installation co-chair
Sen. J. Brown - Community co-chair
Mr. M. Cruz
Mr. J. Jenson
Ms. C. Taitano
Mr. F. Castro
Mayor E. Artero
Mr. M. Gawel
Mr. M. Stacy
Ms. M. Schutz
Mr. V. Wuerch
Ms. J. Duwel
Ms. J. Poland
Mr. P. Packbier - (alternate)
Mr. D. Cruz
Mr. J. Iglesias - (alternate)

RAB MEMBERS ABSENT:

Sen. M. Charfauros
Mayor N. Blas
Mr. V. Blaz
Mr. N. Rodriguez
Ms. R. Limtiaco

PUBLIC ATTENDEES:

Capt. B. Jones - AAFB
Capt. D. Biles - AAFB
Ms. M. Miclat - AAFB
Mr. F. Leon-Guerrero - AAFB
Mr. F. Madlangbayan - AAFB
Ms. Heidi Hirsh - AAFB
Mr. A. Marquez - GEPA
Mr. D. Stralka - USEPA
Mr. B. Oxford - Booz-Allen Hamilton
Mr. J. Lazzeri - EA Engineering
Mr. G. Colgan - Montgomery Watson
Mr. B. Glascott - Montgomery Watson
Ms. D. Batatian - Montgomery Watson
Mr. G. Werkman - ICF Kaiser
Mr. W. Barner - ICF Kaiser
Mr. P. Cook - ICF Kaiser
Mr. M. Bordallo - Duenas & Associates
Mr. J. Sullivan - HQ PACAF
Mr. G. Fujimoto, HQ PACAF
Ms. Rowena Perez - Citizen
Mr. M. Carey - Citizen
Mr. T. Magtoto - Guahan Waste Control

PROCEEDINGS

Colonel V. Jaroch called the meeting to order at 6:09 p.m. and welcomed fellow RAB members, interested citizens, and distinguished guests (George Fujimoto and John Sullivan) from Headquarters Pacific Air Forces (HQ PACAF).

I. REVIEW OF OLD BUSINESS

A. Meeting Minutes

Members reviewed the previous meeting minutes. Col. Jaroch asked whether the board had any recommended revisions to the minutes from the previous meeting, to which there was no response. A motion was made and seconded to adopt the previous meeting minutes.

B. Presentation of Tumon-Maui Well (Captain Biles, 36 CES/CEV)

Col. Jaroch introduced Capt. Dan Biles to discuss the status of the Tumon-Maui well and a proposed treatment facility at the MARBO Booster No. 2 pump station. Capt. Biles briefly discussed the history of the Tumon-Maui well as follows: the tetrachloroethylene (PCE) problem was discovered during regular sampling; the well was immediately shut down; Gueam Environmental Protection Agency (GEPA) was notified; and the public was notified by notice in the newspaper. Capt. Biles stated that subsequent sampling indicates that PCE is still present in the Tumon-Maui well, at levels above the Maximum Contaminant Level (MCL), and that the well will remain off until a treatment facility can be installed at Booster No. 2 .

Capt. Biles stated that the Air Force selected air stripping as the best available technology for treating volatile organic compounds (VOCs) from the production well water. The Air Force has designed an air stripper treatment facility at Booster No. 2 (located at MARBO to treat the water from the Tumon-Maui containing PCE) and three of MARBO production wells (MW-1, MW-2, & MW-3) that have historically contained low concentrations of trichloroethylene TCE (below MCL). The Air Force has solicited a bid proposal for construction of the treatment facility; the sealed bids are going to be opened next week, and the contract is to be awarded soon thereafter. The work is scheduled for completion by the end of August 1996.

Capt. Biles provided a schematic diagram of the air-stripping process and then reviewed the capabilities of the proposed air stripping system. The two stripping towers operate with the water cascading downward from the top through a packed bed, while air is forced upward from below. This forced air *strips* (removes) the volatile organic compounds (VOCs) from the water, and it is calculated that the stripping process has a 90-95% efficiency (i.e., 90-95 % of dissolved VOCs are removed). The treatment facility is designed to handle 1,400-1,500 gpm, and the treatment process will result in post-treatment concentrations of TCE and PCE in the water that are well below Clean Water Act Standards. The stripped VOCS are entrained in the air, which is vented to the

atmosphere. Given the projected design capacity (1,400-1,500 gallons per minute [gpm]), the VOC concentrations in groundwater, and the stripping efficiency, it is estimated that 40 pounds of PCE will be vented to the atmosphere annually, which is well below Clean Air Act Standards.

Senator Brown asked what is being done to look for the source of PCE in the Tumon-Maui well. Colonel Jaroch responded that the source does not appear to be related to any Air Force activity, and as such the Air Force cannot investigate off Air Force property. Victor Wuerch asked if the system is designed with an sampling port and Capt. Biles answered in the affirmative.

II. PRESENTATIONS

A. The RAB's Role in prioritizing sites (Marriane Miclat, 36 CES/CEV)

Col. Jaroch introduced Marriane Miclat to the discuss the responsibilities of RAB community members and the RAB's role in prioritizing work efforts at IRP sites. Marriane briefly discussed the purpose of the RAB, and stressed that the RAB is the mechanism that allows for community involvement and participation in the CERCLA cleanup process. Further, she stated that the RAB's primary focus is to address key community concerns relating to health, economics, and the environment. Marriane then stressed that for the RAB to effectively address community concerns; community RAB members had to accept the following responsibilities:

- Regularly attend RAB meetings.
- Actively participate in discussions about IRP issues; advise and comment as necessary.
- Effectively report back RAB business to their constituents, be it the community or the organization they represent.
- Review and provide comments on documents.
- Serve in a voluntary capacity.

Marriane then described the RAB members role in the process of prioritizing investigation and cleanup efforts as follows:

- To effectively express what community cleanup objectives and concerns are.
- To make the cleanup objectives consistent with existing and future land use plans.
- To provide community input as to their priorities among the existing sites.

B. Overview of the Relative Risk Process (Mr. Dan Stralka - USEPA Region 9)

Col. Jaroch introduced Dan Stralka, Ph.D. Toxicologist from EPA Region 9, who provided a brief overview of the Relative Risk Process. Dan discussed the Relative Risk Process as a valuable tool in that, if used properly, it allows that sites with higher risks (relative to the other sites) to be addressed first. The process does not determine whether or not a cleanup is necessary, but provides a tool in determining the sequence in which sites should be addressed. A Relative Risk evaluation of a site consists of understanding the following three key factors:

- **Contaminant Factor** - what contaminants are present (or potentially present), and at what concentrations are they present.
- **Migration Factor** - to what degree are pathways (how a contaminant travels through air, soil, or water) evident.
- **Receptor Factor** - to what degree is the population (human and ecological) potentially exposed.

Dan summarized the presentation by stating that the risk assessments themselves (using quantitative data) are necessary to determine the actual risk posed to receptors, what (if any) remedial actions and cleanup levels are appropriate ("How clean is clean?") and how far the action should go.

C. Relative Risk Ranking of Sites (Joan Poland 36 CES/CEV)

Col. Jaroch introduced Joan Poland and she discussed the Relative Risk Ranking of the 39 Andersen IRP sites, on an operable unit by operable unit basis.

- OU-1 - There are five sites in the Landfill Complex area; four are high risk, and one is medium.
- OU-3 - There are six sites at MARBO; all are high risk.
- OU-4 - There are fourteen sites inside the groundwater protection zone; ten are high risk, three are medium risk, and one is low risk.
- OU-5 - There are fourteen sites outside the groundwater protection zone; eight are high risk, five are medium risk, and one is low risk.

In addition to discussing the relative risk for the sites, Joan noted that the order the sites get investigated and cleaned up is also influenced by other factors. In particular, Joan noted that sites that are related to land excessing issues (Harmon Annex) are being moved to higher priority so lands can be transferred to Gov Guam.

D. OU-1 Investigation Results; Waste Pile 3 (George Werkman, ICF Kaiser)

Col. Jaroch introduced George Werkman who discussed the preliminary results from the initial investigative activities at Waste Pile 3. George summarized the overall findings and recommendations of the investigation as follows:

Detailed Site Inventory - Most of the identified fill material consisted of miscellaneous debris (scrap metal, auto parts, glass bottles, cans, etc.) and construction debris (concrete blocks and pieces of asphalt paving). There were only two areas that had stained surface soils, and there were a total of 479 drums inventoried, of which 413 were empty, 39 were buried (contents unknown), 5 had oily contents, and 2 had unknown contents.

Soil Gas Survey - A total of 86 initial and 74 secondary whole-air soil gas samples were collected and analyzed, of which only two samples detected traces of VOCs. An

additional 13 passive soil gas samples were collected and analyzed, of which 2 contained VOCs just above the detection limit.

Test Ditches - Sixty test ditches were dug in suspected features such as surface mounds, topographic lows, and geophysical anomalies, of which 50% encountered no fill material. Of the ditches that encountered debris, most consisted of scrap metal, glass, and concrete. One ditch had remnants of six drums and two ditches contained burnt material.

Recommendations - The following recommendations were made for additional sampling to further characterize Waste Pile 3: Excavate ten test pits and collect surface and subsurface samples.

George Werkman also briefly summarized that the investigative work at Waste Piles 1 & 2 indicated that the primary fill material is asphaltic drums. Senator Brown acknowledged that we are getting a lot of new data, but she questioned whether we know what impact the asphaltic material is having on the groundwater and how the data are impacting prioritization of cleanup activities. Joan Poland answered the question by reiterating that the data are preliminary, and that not all the data have been collected and analyzed. Further Joan pointed out that we are thinking about remedial technologies as we are doing the site investigations. Waste Piles 1 & 2, and one of the sites at OU-3 all have the common problem of having asphaltic material, and that the Air Force and it's contractors were developing a single cleanup technology (i.e., asphalt recycling) for sites that pose similar problems.

E. OU-4 Investigation & OU-2 Groundwater Sampling Results; Main Base, Northwest Field, and Harmon Annex; (Gary Colgan, Montgomery Watson)

Col. Jaroch introduced Gary Colgan who discussed the OU-4 investigation and preliminary results of chemical analysis of groundwater samples collected November-December 1995 from wells, seeps, and cave pools at the Main Base, Northwest Field, and Harmon Annex. Gary very briefly summarized the results from field investigations at Landfill 9 and Fire Training Area 2.

Preliminary data from Fire Training Area 2 (geophysics, soil gas & soil sampling) indicate very minor concentrations of PCE in the soil, around the aboveground storage tank (AST) that was used to store the flammable liquids. Surface soil samples are presently being analyzed.

Landfill 9 has been vaguely cited in the past, and its location was supposedly in the vicinity of Potts Junction, near the United States Geological Survey (USGS) Observatory. Aerial photos and record search material have been reviewed, Mr. Hattori (has lived at the USGS Observatory since late 50s) has been interviewed, a detailed reconnaissance has been conducted, and the only things encountered have been a small area of surface debris and a bottle pit. At present the recommendation is to write a No Further Response Action Planned (NFRAP) document for the site.

A RAB member asked where the groundwater protection zone (GWPZ) on the display map came from, and Gary responded that he thought it was an arbitrary boundary established at certain distance from the coast (parallel to coast) that was taken from GEPA documents.

Gary then summarized the groundwater results from the 1995 groundwater sampling event and noted that the data have not been validated and are PRELIMINARY. Gary noted that in eighteen monitoring wells, five production wells, five uncased borings, five cave pools, two seeps/springs, and two private hand-dug wells (Star Sand & Castro wells) were sampled. In the Northwest Field, groundwater samples, no organic or inorganic contaminants were detected. In the Landfill Complex groundwater samples there were low concentrations of TCE, PCE, and trichlorofluoromethane (TCFM). In the Main Base groundwater samples low concentrations of VOCs were detected in monitoring well IRP-3 and VOCs and semi-volatile organic compounds (SVOCs) detected in monitoring well USGS-150. The VOCS detected in monitoring well IRP-3 were TCE (89 micrograms per liter [ug/l]) , PCE (3 ug/l), carbon tetrachloride (4 ug/l) and DCE (2 ug/l). In addition, a potential source has been identified (tank containing TCE near Building 18006) and 160 galllons of TCE has been removed, and the Air Force is looking at removing the tank.

A RAB member asked Gary if the Air Force had any record of a spill in recent years that could account for the chlorinated solvents in monitoring well IRP-3. Gary responded that the Air Force has not been using TCE for probably more than ten years, so the activity related to the solvents getting into the groundwater is greater than ten years old, and there are no records to indicate a spill in recent years.

F. OU-3 Investigation Results; Waste Pile 3 (Pat Cook, ICF Kaiser)

Col. Jaroch introduced Pat Cook who discussed the results from the investigative activities at OU-3 (MARBO). Pat summarized the six OU-3 IRP sites as follows:

Site 20/Waste Pile 7. Waste Pile 7 is an abandoned quarry about 1.5 acres in size. Six test pits have been dug and results indicate Waste Pile 7 was filled in with construction and metal debris and then covered with soil.

Site 22/Waste Pile 6. Waste Pile 6 consists of trenches filled mostly with construction and metal debris and there are also approximately 150 drums with asphaltic material very similar to those found in Waste Piles 1 & 2.

Site 23/Waste Pile 5. Waste Pile 5 is a landfill with trenches 10-18 ft deep consisting of household trash such bottles, cans, glass, cardboard and newspaper waste.

Site 24/Landfill 29. Landfill 29 is a depression that was filled with waste and covered with soil. Fill material is very similar to Waste Pile 5 (household trash).

The War Dog Borrow Pit. The site is next to the waste transfer station on Marine Drive. The original work at this site indicated minor surficial debris, but additional work indicated a layer of recalcified limestone, that looked like the floor of the pit. There was 3-4 ft of metal and automotive debris was found under this layer.

MARBO Laundry. The laundry facility has not been in operation since 1973. This is the only OU-3 site that had positive detection's of organics (PCE) from soil gas, and it is probably related to old dry cleaning activities at the site. The PCE may have persisted in the soil/rock since the early 1970s because a lot of the area is covered by the building slab and pavement, thus making it difficult for the PCE to volatize.

Pat then described the various field procedures that are utilized in the investigation of a site as follows:

Detailed Site Inventory - The first process in field investigation is the field people walk across the site to see what type of material consists at the surface.

Soil Gas Survey - Gas samples are collected from soil (rock) at a 4 ft depth from a 100 ft x 100 ft sampling grid. Samples are analyzed by on-island gas chromotograph/mass spectrometer (GC/MS) lab.

Soil Sampling - Collect surface and subsurface soil samples.

Test Pits - In areas of suspected waste, the backhoe is used to dig holes to characterize waste type and collect subsurface soil samples.

G. OU-2 Groundwater Sampling Results; MARBO (Wendell Barner, ICF Kaiser)

Col. Jaroch introduced Wendell Barner who discussed the preliminary results from the groundwater sampling event at MARBO. Groundwater samples were collected and analyzed for 21 monitoring wells and 12 production wells in the MARBO area. Groundwater results indicate two areas of concern. The first area of concern is behind the former MARBO Laundry where monitoring wells IRP-14 & IRP-29 had PCE in concentrations of 6.2 & 11 ug/l, respectively. The former laundry operation may be the source for the PCE. The second area is near War Dog Borrow Pit where monitoring wells IRP 30 and IRP-31 had 0 ug/l (not detected) and 160 ug/l respectively of TCE. The vertical separation between the zones where the two samples were collected is approximately 80-100 ft apart. The nearby AAFB production well (MW-2) had 6.7 ug/l TCE. Note that most of the production wells in the area are pumping from the shallow interval, and not the deep where the highest concentrations were encountered. There will be another round of sampling starting in the next few weeks and the plan is to collect samples from all the previously sampled wells plus two wells on Guam Power Authority (GPA) property.

Senator Brown asked Wendell to comment on the wells across from the transfer station (monitoring wells IRP-30 & IRP-31), as she was concerned about using the nearby production wells. Wendell replied that, as noted earlier by Capt. Biles those wells are going to be treated by the new stripping towers. Senator Brown asked if the wells are currently in use, and Col Jaroch answered that MW-2 has had low concentrations of TCE, and that the water is blended with other wells that are free of TCE. Senator Brown wondered if someone should look at the activities at the waste transfer station and the power station for possible sources. Wendell replied that the Air Force has looked at the possible sources on Air Force property (War Dog Borrow Pit), but have not been able to identify any sources. Victor Wuerch expressed that he sees two separate issues. Between the waste transfer station and IRP-30 and IRP-31 there appears to be a groundwater divide, and water reaching the water table below the waste transfer station should move to the northwest towards the PUAG well field.

H. GLUP 77 Parcels (Joan Poland 36 CES/CEV)

Col. Jaroch introduced Joan Poland and she discussed the Harmon Annex. Joan reported that the Phase I was conducted last year to identify Areas of Concern (AOCs), and Air Force subcontractors are currently conducting Phase II EBSs for Guam Land Use Plan 1977 (GLUP 77) parcels at 53 AOCs at Harmon Annex, Camp Edusa, MARBO Annex I, Andersen Radio Beacon Annex, and the Harmon POL Tank Farm. Joan also noted that Andersen is trying to accelerate the investigations of the three IRP sites at Harmon even though they are classified as low to medium risk sites.

Col. Jaroch summed up that the Air Force is looking at actively clearing and excessing lands further from the Base (Harmon Annex) and progressively working toward clearing and excessing lands closer to the Main Base. Col. Jaroch then threw the floor open to comments and questions.

A RAB member commented that the Air Force has been working on the investigative phase approximately ten years and the latest groundwater sampling event; he is concerned that the remediation will happen at the same pace. Col. Jaroch commented that the philosophy has shifted from studies to clean up, and that the RAB can be an integral part in determining priorities for site cleanups and closures.

Fred Castro asked if we can expect the Community Relations Plan to be updated in the near future. Marriane Miclat replied that the CRP is getting some revisions, and in particular she is trying to get more people to respond to the questionnaire.

As a closing comment Senator Brown stated that she would like to get back to her collegues in Gov Guam to bring them up to speed with the situation at Dededo and the potential impact to PUAG wells. She also added that GovGuam needs to be active in addressing non-military activities that may be impacting the groundwater.

III. Adjournment

There were no more comments or questions, and Col. Jaroch adjourned the meeting at 7:36 p.m. The next RAB meeting and logistics will be taken care of on a later date.

APPROVED/DISAPPROVED

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COLONEL VICTOR D. JAROCH, USAF — Date
Installation Co-Chair
Restoration Advisory Board

_____ _____

SENATOR JOANNE SALAS BROWN — Date
Community Co-Chair
Restoration Advisory Board

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