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David P. Biller

16 November 2012

Report of Findings Regarding 1980's Toxic Chemical Exposure at Andersen AFB Guam

From January 1986 to June 1988 I was stationed at Andersen AFB Guam in the 43rd Civil Engineering Squadron as a mason in the carpenter shop and later was assigned to a special group called the ACE Team. Guam has been listed as a superfund site by the Environmental Protection Agency (EPA) with a list of chemicals. (attachment 1.) My exposures were to the skin and ingested. While working, I was constantly exposed to materials that were contaminated such as manufactured sand that was made out of local mined aggregates these local materials contained years of leached chemicals dating back to WWII. Due to my occupation in the military, I was always in contaminated soil and water and around hazardous materials. I spent several months in the boonies working on wells that I recently found out were being used to pump less contaminated water into heavier contaminated wells to try and buffer the contamination. We drank this water from a hose at the jobsite. (Figure 1)

Figure 1: Dave Biller took this picture of the guys working on a well pumping station just outside of Andersen South (Marbo Annex). I worked on this project for multiple months.

From the exposures, my hands would get all dried, hard and I would have to cut stuff off with a knife. (Figure 2). In addition, the skin on my face developed issues and to this day I still have problems with my face being dry and chaffing.

Figure 2: Dave Biller in the 43rd CE barracks with hands affected by toxic chemicals

I began having symptoms of exposure while stationed on Guam. Aside from the physical evidence on the hands noted in the picture above, I developed Hepatitis, which studies document a link to TCE exposure. (Environmental Health Perspectives, Volume 117, May 2009) In addition, I complained of tingling sensations in my back and said that it felt like needles; another indication of acute exposure to toxic chemicals.

Other exposures I had were asbestos in various old structures. We did a lot of work at the Marbo Annex, also known as Ande South. This place has been abandoned due to contamination and is still abandoned due to the inability to clean it up.

Figure 3: This is the barracks, laundry and shoppette at the Marbo Annex. We gutted these in the mid 80's for renovation. They are now abandoned. These photos were taken in January 2012

Figure 4: This is one of the single houses at the Marbo Annex now abandoned.

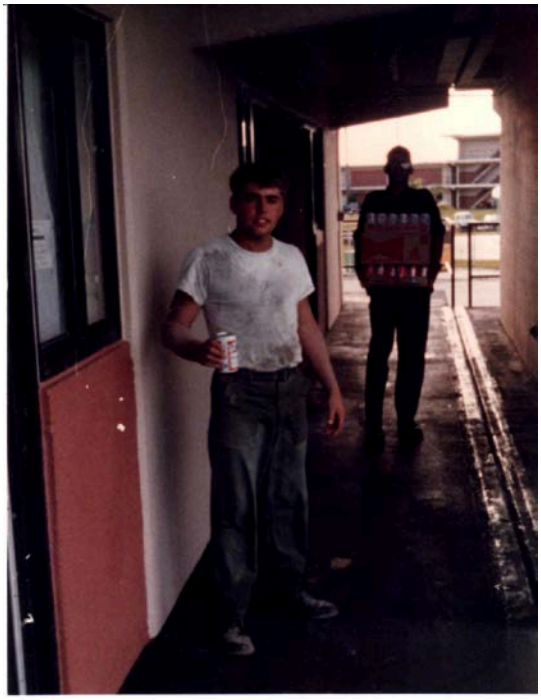
Figure 5: This is one of the family housing complexes abandoned at the Marbo Annex

Figure 6: This is the gate at the Marbo Annex. Now abandoned and closed for any access.

Figure 7: Dave Biller running a jackhammer at Tarague Beach removing grill pads

Andersen AFB was heavily contaminated from years of military presence. The following attachments identify information of contaminants from the 1980's and present.

- *Attachment 3:* GAO report from 1987 that identifies areas of contamination. Figure 2.5 shows where I cut curbs on a work order. I remember stuff splashing up that was ponded and had leaked from stored items. Our uniforms and bodies were always getting covered with stuff as I am in the picture to the right.



- *Attachment 4:* Agency for Toxic Substance and Disease Registry, Public Health Assessment for Andersen AFB Guam. This shows levels of contamination. Some of the items are identified as no public

health risk, but those of us who worked in Maintenance regularly worked in areas that were not public accessible. Moreover, they did not test all contaminated areas. More recent reports as noted in attachment 6, identify site 5 in base housing as well as other sites; still a hazard.

- *Attachment 5:* Sub basin map. I lived in the Yigo sub basin for most of the time I was stationed on Guam in 3 different houses close to the Marbo Annex. I lived off base with several other CE guys for a while until they moved back in the barracks. Nevertheless, there are so many contaminated sites; all of the sub basins are affected. It also shows the Quarry where Aggregates were mined. The Marbo Annex is still abandoned.
- *Attachment 6:* USAF Map of contamination sites shows fire training site 1 where we built a large septic system as part of the flight line aircraft maintenance unit construction project. Some of us earned an achievement medal for saving money on this project. Another project I worked on at that side of the base was the construction of a fuel/water separator at the jet engine test facility. I jack hammered all of the concrete up that was saturated with years of contamination; built forms and installed new concrete. The map shows the storage areas where I cut the curbs as shown on the GAO report. Locations 08, 09, 33, where we stored our raw materials. Aggregates, block, mixers, pipe, etc…. According to the Air Force Installation Restoration Program Final Report, Record of Final Decision for sites 5 and 8 dated August 2007; at sites 8/33, the contamination was so severe, buildings had to be demolished and fences constructed. There are no future plans for human inhabitation. Site 5, which is in the middle of base housing shows unacceptable risks to humans as of the 2007 report. The following quote was directly from page 2-9 "*The exposure pathways that are considered for the*

current and future resident adults and children scenario are incidental ingestion of, dermal contact with, and inhalation of dust particulates from surface soil. It is assumed that residents could be exposed to subsurface soil, which could be disturbed during digging or excavation activities and brought to the surface. Therefore, residents are evaluated for incidental ingestion of, dermal contact with, and inhalation of dust particulates from subsurface soil. The exposure pathways that are considered for current and future utility workers are incidental ingestion of, dermal contact with, and inhalation of airborne particulates of subsurface soil." The most current base landfill at 01, 02, etc.. These zones are where we did most of our dumping when on the main base. Zone 07 is where we worked on the Potts Tank Farm containments and pipelines from the base across the island. The areas around tank farms, pipe lines and pump stations were sprayed with toxic herbicide regularly. These areas always smelled bad. Attachment 1 references Zone 7 as positive testing for TCDD, a key component of Agent Orange.

(*http://www.britannica.com/EBchecked/topic/8993/Agent-Orange*)

Some of the guys I was stationed with on Guam have reported health problems. At this time, they shall remain nameless, but one of them has reported symptoms like mine such as ears ringing and very tired all the time. His arms, hands and feet go numb and his bones hurt constantly. One of the other guys has diabetes. Another guy has reported that he has had shakes and tremors. The military regularly sent us into areas without proper personal protective equipment, including the Marbo Annex Asbestos demolition. I worked with all three of these guys on projects and they have all three worked in multiple contaminated zones. It took me 20 years and multiple congressional inquiries to get my medical records from the VA. Another guy says he is having the same problem obtaining his records. They always say the records are lost when you request them.

Figure 8: Ray Major working on a masonry barrier next to a storage lot. Notice the parking lot was sprayed and the dead vegetation in the background.

It is clear that by reviewing the documents, during the 1980's Agent Orange and a long list of other toxic chemicals was still a problem on Guam. To this day, contamination remains a

major issue at Andersen AFB. Soldiers and their dependents have been affected for years and are still being affected by the dangers of the contamination.

Works Cited

Glinda S. Cooper, Susan L. Makris, Paul J. Nietert, and Jennifer Jinot. Evidence of Autoimmune-Related Effects of Trichloroethylene Exposure from Studies in Mice and Humans.

http://www.britannica.com/EBchecked/topic/8993/Agent-Orange

Attachments

1. EPA Contaminates of Concern
2. GAO Report 1987
3. ATSDR Public Health Assessment, Andersen AFB Guam
4. Water Sub basin Map
5. Andersen AFB Main Base Contamination Site Test Location Map
6. David Biller Achievement Medal for Aircraft Maintenance Unit Construction Project

Superfund Site Information
Site Documents
Data Element Dictionary (DED)
Order Superfund Products

Contaminants of Concern at ANDERSEN AIR FORCE BASE (EPA ID: GU6571999519)

Back to the Profile for this Site

The data and content on this page were last updated on Tuesday, September 14, 2010.

Cleanup Activities | Operable Units (OUs) | Site Contacts
Additional Site Documents | Other Names for this Site (Aliases) | Contaminants of Concern | GPRA Measures

The chemical substances (i.e., hazardous substances, pollutants, or contaminants) listed below were identified as contaminants of concern (COC) for the site. COCs are the chemical substances found at the site that the EPA has determined pose an unacceptable risk to human health or the environment. These are the substances that are addressed by cleanup actions at the site. Identifying COCs is a process where the EPA identifies people and ecological resources that could be exposed to contamination found at the site, determines the amount and type of contaminants present, and identifies the possible negative human health or ecological effects that could result from contact with the contaminants.

The contaminants of concern at this site are sorted below by contaminant name. You may also sort this list by the area of the site on which it is found, called operable units (OUs), or sort this list according to the media in which they were found (e.g. soil or ground water).

see the glossary for definitions of contaminated media and operable units (OUs) >>

CAS #	Contaminant Name	Contaminated Media	Area of Site Found (OU)	More Information
72-55-9	4,4-DDE	Soil	MARBO SOILS (03)	ATSDR Profile
50-29-3	4,4-DDT	Soil	MARBO SOILS (03)	ATSDR Profile
Banned in the U.S. in 1972, but still used at Andersen in 1986				
57-74-9	ALPHA-CHLORDANE	Soil	MARBO SOILS (03)	ATSDR Profile
7440-36-0	ANTIMONY	Soil	MARBO SOILS (03)	ATSDR Profile
7440-36-0	ANTIMONY	Soil	URUNAO (07)	ATSDR Profile
7440-36-0	ANTIMONY	Subsurface Soil	MAIN BASE (01)	ATSDR Profile
11097-69-1	AROCLOR-1254	Soil	MARBO SOILS (03)	
11097-69-1	AROCLOR-1254	Soil	URUNAO (07)	
11096-82-5	AROCLOR-1260	Soil	MARBO SOILS (03)	
7440-38-2	ARSENIC	Soil	MARBO SOILS (03)	ATSDR Profile
7440-38-2	ARSENIC	Soil	URUNAO (07)	ATSDR Profile
7440-39-3	BARIUM	Soil	URUNAO (07)	ATSDR Profile
205-99-2	BENZO(B)FLUORANTHENE	Soil	MARBO SOILS (03)	
56-55-3	BENZO[A]ANTHRACEN	Soil	MARBO	

Agent Blue

	E		SOILS (03)	
50-32-8	BENZO[A]PYRENE	Soil	MARBO SOILS (03)	
50-32-8	BENZO[A]PYRENE	Soil	URUNA O (07)	
7440-41-7	BERYLLIUM	Soil	URUNA O (07)	ATSDR Profile
39638-32-9	CADMIUM	Soil	URUNA O (07)	
7440-43-9	CADMIUM	Soil	MARBO SOILS (03)	ATSDR Profile
7440-50-8	COPPER	Soil	URUNA O (07)	ATSDR Profile
7440-50-8	COPPER	Subsurface Soil	MAIN BASE (01)	ATSDR Profile
60-57-1	DIELDRIN	Soil	MARBO SOILS (03)	ATSDR Profile
60-57-1	DIELDRIN	Subsurface Soil	MAIN BASE (01)	ATSDR Profile
60-57-1	DIELDRIN	Surface Soil	MAIN BASE (01)	ATSDR Profile
TBD-00000004	DIOXINS (CHLORINATED DIBENZODIOXINS)	Soil	URUNA O (07)	
57-74-9	GAMMA-CHLORDANE	Soil	MARBO SOILS (03)	ATSDR Profile
193-39-5	INDENO(1,2,3-CD)PYRENE	Soil	MARBO SOILS (03)	
7439-92-1	LEAD	Soil	MARBO SOILS (03)	ATSDR Profile

7439-92-1	LEAD	Soil	URUNAO (07)	ATSDR Profile
7439-92-1	LEAD	Subsurface Soil	MAIN BASE (01)	ATSDR Profile
7439-92-1	LEAD	Surface Soil	MAIN BASE (01)	ATSDR Profile
7439-96-5	MANGANESE	Soil	URUNAO (07)	ATSDR Profile
7439-96-5	MANGANESE	Subsurface Soil	MAIN BASE (01)	ATSDR Profile
7439-97-6	MERCURY	Soil	URUNAO (07)	ATSDR Profile
7440-02-0	NICKEL	Soil	URUNAO (07)	ATSDR Profile
7782-49-2	SELENIUM	Soil	URUNAO (07)	ATSDR Profile
7440-22-4	SILVER	Soil	URUNAO (07)	ATSDR Profile
79-01-6	TCE	Ground Water	MARBO SOILS (03)	ATSDR Profile
41903-57-5	TETRACHLORODIBENZO-p-DIOXINS (TCDD)	Soil	URUNAO (07)	
7440-28-0	THALLIUM	Soil	URUNAO (07)	ATSDR Profile
7440-66-6	ZINC	Soil	URUNAO (07)	ATSDR Profile

Agent Orange