

Air base research paper example

[Environment](#), [Water](#)



Anderson Air Force Base - Guam is a military port based in the United States of America located approximately 4 miles northeast of Yigo. Along with the Naval Base of Guam, they were placed under the Joint Region Marianas on the late 2009 that was in October. Anderson Air Force Base was established in 1944 as North Field and was a posthumous recognition in the name of the late of Brigadier General James Roy Andersen (Mulligan and Gibbs 2005).

This base was built to serve as a bomber forward operating locations of the United States Air Force, which provides back-up support to the bomber crew deployed overseas in Europe, Southwest Asia and in Pacific regions. This air base hosts some of the most treasured assault unit of the country, that is, 39th Wing (PACAF), 734th Air Mobility Support Squadron (Air Mobility Command), Helicopter Sea Combat Squadron Twenty-Five (HSC-25).

How did Anderson Air Force Base come about? It is during the world war two periods when the Guam was attacked by Japanese forces-the infamous battle of Guam. The United States Navy surrendered to the Japanese. It is approximated that close to 19000 imperial Japanese soldiers.

Below is the overview map of Andersen Air Force base-Guam

In terms of demographics, it is estimated that Anderson Air Force Base and the environ has slightly above 140000 people at least from the most recent census of 1995. The community at Anderson Air Force Base is self-sufficient, this is attributed to the fact that most services and social amenities are provided in the base. The climate of the regions is favorable with no extremities. That is there are periods of snow, normal temperatures and warm days.

Over the years, Anderson Air Force Base has provided support services for the American military. The services range from vehicle maintenance, fuel storage, stockpiling, explosive ordinance disposal and ammunition safe-keeping. It is regrettable to note that base activities have resulted in fuel, chemical and pesticide leaks and spills to the environment. The state has since sought the services of environmental consultants to do remedial investigations to assess the full impact and effects of the damage or determine the nature and extent of the contamination (confirm whether it poses a risk to the environment or the public).

The results of the remedial investigation found some levels of contamination to the ecosystem as a whole. The source of water was found to be contaminated with volatile organic compounds (VOCs). The contaminated water is the very same one that supplies close to 70% of the Anderson Air Force Base population with drinking water. The VOCs were at levels above ATSDR health based acceptable/comparison levels. The VOCs include trichloroethylene and tetrachloroethylene. There were traces of exposure to biota. Only arsenic and aluminum in the sample needed further investigation. However, due to the conservative nature of ATSDR's analysis process, there was uncertainty of evidence of either arsenic or aluminum toxics at such low level of environmental exposure. Thus, it was ruled out a potential threat to either humanity or the environment. The soil was determined that it was contaminated with toxics due to military activities albeit in restricted areas (Maxwell Steven and Tompson 2008). The consulting environmentalists also established that there was exposure to radon. However, this contaminant was not occasioned by military actions

(Presley 2006). The traces of radon had been found in the Air Force Base in as early as 1987 when monitoring against radon was begun.

Physical hazards and dangers due to unexploded ordnance are likely because there has been a disposal in the Northwest region, which is out of bounds to the public. Therefore, the chance of the harm meeting a person is almost nil. It is mitigation efforts like these that have reduced the likelihood of fatalities due to spills and leakages. In the Northwest region, there have been ordinances deposited in that region for a lone period. Military actions of testing explosives have been undertaken in that region and no chance of safety can be overlooked. Other than restricting access to the general public members, the regulatory authority has put in place other measures. For instance, the Northwest region is accessible to hunters who have been licensed. Therefore, the safety of these hunters cannot be assumed at any rate. These hunters have been educated and sensitized on how the explosives look like, so that in the event that they meet one they would be in a position to know what to do or not.

The risk levels assessed and ascertained for the contaminants have been contained and controlled to manageable levels. For instance, the threat of radon has been controlled through comprehensive housing program. There were several housing units found with traces of radon of above 4 pCi/L which is above the EPA recommended level

It is the best practice world over that whenever remedial investigation is conducted feasibility study is also conducted concurrently. The basic purpose of feasibility study is to assess the cost of the necessary treatment and cure or evaluate alternative pocket-friendly remedial exercise for the pollutants or

contaminants of concern.

The Air force and deed regulation agency has put in place mitigation efforts to contain the possible pollutants and/or contaminants to manageable levels.

As a mitigation measure the regulatory agency purposed to continue monitoring the groundwater for any possible future contamination, through spread, from the initially contaminated source to other fresher water sources not affected as from the previous remedial investigations. Air Force Base was to give close oversight to the water sources to ensure that the community receives clean water from private entities.

Deed restriction was to be implemented to the fullest. All contaminated soil was to be put out of bounds, to reduce the possibilities of fatalities or injury, prior to land transfer. The contaminated land could not for instance be used for agriculture purposes rather it could be put to other uses as discerned fit. On the question of unexploded ordnances, the Air force was to continue with its sensitization campaign and educational programs to enlighten the public on the best courses of action in case their encounter the unexploded ordnance. The sensitization campaign is an extension of the UXO safety Education a program launched by Department of Defense as a “ toolkit” or heads-up in case of danger. The Air Force is to continue with abatement efforts to contain radon to acceptable limits before allowing people to occupy the building. Going forward, ATSDR recommends future remedial investigation to include coconut crab and concern exists regarding for coconut crab to bio accumulate heavy metals and organic soil contaminants. This is a recommendation that is to include objects not covered in the initial studies.

Anderson Air Force Base has taken some commendable steps to ensure that the externalities occasioned by military actions or otherwise are factored in. So far, Anderson Air Force Base has installed monitoring wells and it has identified groundwater plumes along Anderson Air Force Base operations. Soil sampling has been done to the contaminated regions as well as gas surveying. Installation restoration program has been completed in as many as 39 installation sites. The finished sites require no further action and are cleared as fit. Terrestrial biota has been characterized to analyze human or ecological threats that come with bioaccumulation of contaminants in Guam regions. It is important to note that radon levels have been reduced to acceptable limits of less than 4 p/Cil. Discarded drums containing asphalt and associated debris, which were laced with VOCs. The resultant product is that the metal levels are reduced to manageable standards.

Conclusion

All the mitigation and prevention efforts are estimated to cost close to up to \$200 million costs of building units and revamping the old ones. Money has been used to pay the environmental consultants who conducted the remedial and feasibility studies of the military. These costs are expected to factor future mission emanating from Andersen Air Force Base. In the fiscal year of 2010, Andersen Air Force Base-Guam had an approximated budget of \$700 million in military construction projects authorized, Pacific Daily News files show. Currently, the Base at Guam, hosts two offensive wings for military bomber operation just as I highlighted in the opening remarks. At this stage, it is important to note that Andersen Air Force Base in Guam will be one of the most costly in terms of operational costs from maintaining the

recovered sites, preventing against the possible exposures of threats to both the ecology and humanity and increased public sensitization campaign, which require funds and resources. Presently, some of the most sophisticated weapons of bombing are based in Guam for obvious strategic, logistical and topographical purposes. Being an island, there is no other better-suited region that can replace Andersen Air Force Base as a naval Bomber Base for the United States.

Work Cited

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