Monitoring of Water and Wastewater Quality in the Royal Thai Army Installations

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Progress Report

Monitoring of water and wastewater quality in the Royal Thai Army (RTA) installations is one of active surveillance projects of Armed Forces Research Institute of Medical Sciences. This project has been initiated for more than 20 years as for quality of life of RTA personnel. Furthermore, convincing of the RTA unit commanders to realize that their soldiers should have good water quality for drinking and consuming is another purpose of this project. Moreover, analysis of wastewater or effluent releasing from the RTA hospitals to environment is conducted as well.

Water samples are analysed in 4 categories based on their physical, chemical, microbiological properties and toxic substances. Standard methods for the examination of water are derived from Thai Industrial Standard Institute, TISI 257. While effluents from the RTA hospitals are analyses for wastewater quality with particular respect on pH, BOD, solids, sulfide and TKN. The wastewater quality is based on the effluent standards in accord with the environmental law, 2005. In 2009, we analysed water samples from RTA installations as well as RTA forward area units. We found 55.76 % of treated water samples were in the acceptable standard while 100 % of untreated water samples were found to be higher than maximum allowable limits. For wastewater quality, 64.71 % of wastewater samples from Army area 1and 2 were in allowable limits.

The results from this project had been forwarded to the RTA installations in order to point out the important of environmental health effect.