

**STATE OF KOSRAE, FEDERATED STATES OF MICRONESIA**  
**WASTE NEEDS ASSESSMENT SUMMARY**

**February 18-25, 2023**

**Performed and Prepared by:**

**Angela Sandoval, P.E., Freely Associated States Circuit Rider**

**Pacific Islands Office**

**US Environmental Protection Agency, Region IX**



US EPA Region 9 FAS Circuit Rider Engineer, Angela Sandoval, traveled to the State of Kosrae, in the Federated States of Micronesia from February 18-25, 2023, to meet with Kosrae Island Resource Management Agency (KIRMA) and perform an overall environmental needs assessment, including an estimated waste inventory. At the request of David Robert of KIRMA, this Waste Needs Assessment Summary is being provided. As the Federated States of Micronesia (FSM) is an independent country, US Environmental Protection Agency does not have regulatory jurisdiction, nor do US regulations apply, however this report can be considered a general technical assistance document. KIRMA is the regulatory agency for the State of Kosrae in environmental matters.

Site visits and general inventories were performed at the following locations and waste amounts indicated below:

1. KUA Power Plant Tofol [Estimated Total of 8,000 gallons of Waste Oil]— Waste oil has been accumulating at the power plant for reportedly over 10 years. The container types storing this oil is varied but includes both 55 gal drums and larger tanks ranging in an estimated size of 450 gallons to 2,500 gallons. The condition of these storage containers also varies from almost new to extremely corroded and likely leaking. Many of these containers have been claimed by vegetation overgrowth and could not be visually inspected. At this location, approximately thirty-eight (38) 55-gallon drums of waste oil were identified throughout the property, examples shown in the included photos. Additionally, at least 3 other larger tanks were identified containing waste oil totaling approximately 6,000 gallons. All these drums and tanks are outside, exposed to the elements, mostly lack properly labeling, and not secondarily contained. It is recommended that Kosrae attempt to pursue shipments of waste oil off-island either through the company utilized by other FSM Utilities such as the Chuuk Public Utilities Corporation Power Plant or investigate utilizing the newly available Moana Taka Partnership, once available to FSM. Additionally, it is recommended that all drums should be properly labeled, identifying the contents (ex. "Used Oil") and the date generated, and placed inside secondary containment, as well as removal of the vegetation overgrowth so that regular visual inspection can be performed, and leaks can be identified and addressed in a timely manner.





2. KUA Power Plant Tofol [Estimated amount of waste oil unknown]- This location is also being used as electrical transformer accumulation area. Approximately 50 retired, out-of-service, electrical transformers with oil are being stored in several locations throughout this property. These transformers are reported to not contain PCBs, but this should be verified through documentation or sampling. The transformers are exposed to the elements and not secondarily contained and in some areas covered by vegetation.



3. Department of Transportation Tofol [Estimated Total of 550 gallons of Waste Oil]- This location also has a small accumulation of waste oil drums. At the time of the site visit, approximately 10 drums of waste oil were identified. Similar to the Power Plant site, all these drums are outside, exposed to the elements, mostly lack properly labeling, and not secondarily contained. It is recommended that all drums should be properly labeled, identifying the contents (ex." Used Oil") and the date generated, and placed inside secondary containment.



4. Department of Transportation Tofol [Estimated Total 90 five-gallon buckets of Chlorine Product Storage] – This site has also been burdened with storing the chlorine disinfection supply materials for the Utwe Public Water System. It was reported that this inventory has been stored here for over a year and is causing corrosion to nearby metallic objects. The material is being stored outside but on a concrete pad which has a roof. The inventory being stored seems excessive for the current consumption rate. It is recommended that further investigation be completed to find out if the product was substantially over ordered or if the amount being used at the Utwe PWS is not appropriate for the disinfection needed for protection of public health. Most importantly, this product should NOT be stored near combustible or flammable materials, and ideally in as cool and dry location as possible with good ventilation. Attention should be paid to the expiration date or shelf life of this product, as this product will decompose faster in hot and humid atmospheres.



5. Port Fuel Farm – The visit to this site did not identify any substantial waste needs, as it was minimal, however, large quantities of new oil product are being stored here. Most of the oil product storage is in 55-gallon drums exposed to the elements and not secondarily contained. It

is recommended that all drums be stored in an area with secondary containment. This area is especially at risk due to the close proximity to the ocean/lagoon.

