

Memo to the File



FROM: Pat Stewart

RE: Cannon Air Force Base SWMU 101 – Sewage Lagoons
Statement of Basis for Request for Corrective Action Complete Status
CAFB 8-002
March 27, 2009

During review of the Statement of Basis Neelam Dhawan pointed out that a SLERA for soils had not been conducted following excavation of the North Sewage Lagoon. I compared the concentrations of metals present in soils beneath the sludge in the North Sewage Lagoon pre-excavation to concentrations in surface soils in the North Sewage Lagoon post-excavation. Maximum detected arsenic was higher and maximum detected selenium was lower post excavation. Post-excavation maximum detected barium, cadmium, chromium and lead were among the range of concentrations pre-excavation. Post-excavation maximum detected arsenic, barium, chromium, selenium and silver were slightly above CAFB background. With the exception of arsenic all were well below NM SSL for residential soil. Arsenic exceeded NM SSL for residential soils, but did not exceed NM SSL for industrial soil.

Metals produced elevated ESQs (Ecological Screening Quotient) pre-excavation. The report stated, “Most of the inorganics were detected at concentrations only slightly higher than background and would pose risk to potential receptors even at background concentrations”.

Conducting another SLERA (Screening Level Ecological Risk Assessment) now would most likely produce the same conclusion.

The depression that remains following excavation of the sludge beneath the former North Sewage Lagoon is currently designed to temporarily hold storm water. Terrestrial invertebrates, plants, deer mouse, mourning dove, least shrew and red-tailed hawk were potential receptors to arsenic, barium, cadmium, chromium, lead and selenium with elevated ESQs pre-excavation. They are likely potential receptors to the same metals post-excavation. However, as stated in the SLERA, metals at background concentrations would pose risk to the potential receptors.

Because further removal of soil (to an unknown depth where only background levels remain) will not eliminate risk to the potential receptors, I recommend that Corrective Action Complete Status be granted to CAFB.

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