RAMBOLL

ENVIRONMENT
& HEALTH

Ms. Wanda Washington
FOCUS
PO Box 28
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Re: Groundwater Split Sample Test Results,
Lockheed Martin Tallevast Site, Manatee County Florida

November 8. 2023

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Dear Ms. Washington,

I am writing to convey the results of the laboratory analyses for four split ground water samples that Ramboll collected during the recent August 2023 ground water sampling event at the Tallevast Site. Ramboll collected split samples at four wells (MW-44R, MW-75, EW-2015, and EW-5002) which Lockheed indicated it was considering suspending from operations in the ground water program. Samples from all the wells were tested by Pace Laboratories for CVOCs and 1,4-Dioxane. I have attached the final laboratory test reports and a spreadsheet that summarizes these results.

The tests show that 1,4-Dioxane remains in three of the wells (MW-44R, MW-75, and EW-5002) at low concentrations below the GCTL of 3.2 μg/L. TCE was found in the fourth well (EW-2015) at 1.4 μg/L which is about 47 percent of the GCTL of 3 μg/L. These concentrations are similar to what Lockheed reported in the 2022 RASR.

The TCE still being detected in EW-2015 in the USAS at nearly half the GCTL suggests that higher concentrations may continue to exist in portions of the aquifer along Tallevast Road, immediately bordering the Lockheed facility. EW-2015 is an extraction well pumping more than 500 gallons/day from the entire USAS water column. Historic and more recent tests in the USAS found that contaminant plumes historically spread in relatively thin portions of the shallow aquifer and tended to be concentrated in the lower portion of the aquifer, with the upper portion of the water column often being cleaner. When the aquifer is pumped, however, all of the water column is blended, diluting the concentrations that would be found in monitoring wells discretely screened in the more contaminated portion of the aquifer alone. This is the reason that active extraction wells (i.e., those still being pumped) are not ideal or normally used for compliance monitoring in ground water remediation programs.

In the 2023 RASR Lockheed proposed to suspend pumping of EW-2015 and EW-5002 but will continue to monitor these and nearby monitoring wells (four times) over the next year. Monitoring of extraction wells (and nearby monitoring wells) after shutdown is important, because rebound of COC concentrations is a common phenomenon once the pumping ends and the

water table around the well is resaturated. In this case, other onsite extraction wells to the southeast should help continue the flushing of COCs from the USAS near EW-2015. This is a strategy that Lockheed believes will enhance the rate of overall contaminant removal, as it will better flush stagnate zones that tend to form between multiple nearby pumping centers. While this strategy is theoretically sound, the proof of its success will depend on the EWPARM monitoring record over the next year.

Similarly, Lockheed is recommending in the 2023 RASR retesting MW-44R and MW-75 over the next year, with an expectation to discontinue monitoring these wells if concentrations in these and other nearby extraction wells remain below applicable GCTLs.

Although I have made some limited comments herein on information recently published in the 2023 RASR, I will be preparing a more complete review of the RASR and commenting on its recommendations for modifications of the GRTS and monitoring systems at a later date.

If you have any other questions regarding these test results, please call.

Very truly yours,

Robert L Powell PhD, PE
Principal