RAMBOLL

ENVIRONMENT
& HEALTH

Ms. Wanda Washington
FOCUS
PO Box 28
Tallevast, FL 34270

October 15, 2021

Re: Review of the Monitoring Well Installation Work Plan, Lockheed Martin Tallevast Site, Manatee County Florida

Dear Ms. Washington,

At your request I have reviewed the Monitoring Well Installation Work Plan recently prepared by Lockheed Martin Corporation (LMC) for the Tallevast Site in Manatee County, Florida (the Work Plan), dated September 17, 2021. This Work Plan documents the results of a DPT investigation of the USAS aquifer in the area southeast of the LMC facility near PZ USAS-19 for 1,4 Dioxane and CVOCs; and proposes the installation of additional permanent monitoring wells to continue the assessment of contaminant conditions in this area.

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LMC began its recent investigation of this area by conducting a DPT sampling program to assess the level of 1,4, Dioxane and CVOCs at three levels (shallow, middle, bottom) of the USAS aquifer, as outlined in their prior DPT Work Plan, dated April 12, 2021. The findings of this investigation demonstrate that 1,4 Dioxane has migrated into this area from the northwest to southeast. The contamination is primarily found in the lowest 6-8 feet of the USAS aquifer. Shallower ground water near the water table was generally clean (see Figure 2 of the Work Plan). Concentrations of 1,4 Dioxane exceeding the state standard of 3.2 ug/L extend about 100 feet beyond and south/southeast of PZ-USAS-19. Some 1,4 Dioxane was also reported along the western boundary of the property currently being developed by AMAZON in the area of the proposed storm water retention pond. Other CVOCs were only found in a single DPT location (DPT-A) in the northwest corner of the investigation area (see Figure 3 of the Work Plan). These findings are consistent with the LMC facility along Tallevast Road as the original source of this contamination; and are generally consistent with my prior interpretations of the origin of the 1,4 Dioxane in PZ-USAS-19. Although there were no lithologic logs of these new DPT borings included in the Work Plan, I understand from a discussion with Paul Calligan that the soils encountered in this area of investigation were consistent with what has been previously observed in other nearby monitoring well borings. I assume these DPT logs will be included when the report is produced for the upcoming monitoring well /piezometer construction.

In response to this new information, LMC is proposing the installation of eleven additional monitoring wells in the USAS to provide for long term monitoring of this area (see Figure 4 of the Work Plan[1]). The number and location of wells on Figure 4 are appropriate given the current understanding of the extent of contamination in the area. Once constructed the wells will be sampled and tested for 1,4 Dioxane and CVOCs. It's also important that accurate water level measurements be performed to assess the influence of the ongoing USAS remediation system farther to the north in controlling the further migration of the 1,4 Dioxane to the southeast. In a recent phone conversation with Paul Calligan we discussed this issue and my concern as to whether the current pumping is centered too far to the north to effectively control migration, particularly after the AMAZON retention pond begins to accumulate storm water. Paul indicated he is aware of this concern, and it will be the subject of future evaluation by LMC's contractors once the data from the new monitoring wells are available. Given that we are now moving into the dry season the degree of this concern may not be fully apparent until data are available following next summer's rainy season. It will be important, in this regard to look for any increase in 1,4 Dioxane concentrations in the new monitoring wells south of the pond such as MW-260, 261 and 262 as compared to initial readings from this coming Winter and Spring 2022. The current Work Plan discusses initial sampling and testing of these wells, but longer-term plans are not apparent. Given the recent DPT finding and the potential changes to the ground water flow in the USAS that the Amazon retention pond may bring, quarterly sampling of all the new wells and existing piezometers in this area for at least the next two years would be appropriate.

I also note that LMC is not proposing any piezometers in the LSAS beneath the DPT investigation area. As I stated in my prior comments to the DPT Work Plan, three LSAS piezometers paired with PZ-USAS-17, 18 and 19 would provide an opportunity to confirm that the USAS contamination has not also leaked downward thru the hard streak into the LSAS and the vertical delineation of the plume is, therefore, complete. Absent these piezometers, that question will remain unresolved. It would also provide for measurement of the LSAS water level and gradient in this area. Prior mapping of the LSAS piezometric surface shows this same area to be near the edge of the capture zone for ground water in this unit. Confirmation of this model interpretation with real field measurements would be reassuring that any vertical contamination migration is fully controlled in this new investigation area.

If you have any questions regarding these thoughts and comments, I would be happy to discuss them with you further.

Very truly yours,

Robert L Powell, PhD, PE
Principal

[1] Although the Work Plan indicates 11 wells will be constructed, I only found 9 on the figure. The location of the remaining two wells is unknown to me.