

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

Re: Review of FDEP's Comments on the 2024 RASR, Tallevast Site, Florida

Dear Ms. Washington,

May 7, 2025

I have reviewed the April 2025 comments by the FDEP on the 2024 Remedial Action Status Report (AECOM; October 2024) for the Tallevast Site and would offer the following observations.

The 2024 RASR reported the status of the Groundwater Removal and Treatment System (GRTS), and the status of the contamination plume in the Tallevast community following the passage of several hurricanes over/near Manatee County in the Summer of 2024. As a result of the heavy rainfall from these storms the USAS ground water levels reportedly rose almost five feet. This caused a material shrinkage of the USAS capture zone for the GRTS east and south of the Lockheed site, which then allowed the 1,4-Dioxane plume in the southeast area to spread farther to the south onto the properties of Project Woodworking (now UNFI) and the planned multifamily housing project immediately to the east. This spreading contamination was initially suggested by the August 2024 ground water tests reported in the 2024 RASR and was subsequently confirmed by the follow-up tests conducted in December 2024.¹

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This southeast area has previously been a concern for spreading of the USAS contamination beyond the reach of the GRTS capture zone and has been the focus of additional field investigations and operational changes to the GRTS pumping schedule. Initially, circa 2019, Lockheed increased the pumping from the two USAS galleries on property to the north and suspended any recharge to the infiltration gallery protecting TW-6, both to deepen the aquifer drawdown and extend the capture zone farther south.² Subsequently in 2021/2022, Lockheed installed DPT borings and additional monitoring wells and conducted ground water testing which showed the "plume" of 1,4-Dioxane extended to at least piezometer PZ-USAS-19, an

¹ Although this FDEP review only explicitly addresses the 2024 RASR, by the time of its preparation in April 2025 a subsequent report on the December 2024 ground water tests in the southeast area had also been released in January 2025. Accordingly, I am assuming that FDEP was aware of the findings of this later investigation at the time it prepared its comments.

² Discharge to the infiltration gallery resumed in January 2023 after it was concluded that exfiltration from the Amazon Pond was helping to prevent migration to the southeast.

area likely beyond the reach of the then current GRTS capture zone as was depicted by AECOM in the 2021- 2023 RASRs. While over time the concentration of 1,4-D in PZ-USAS-18 and PZ-USAS-19 subsequently declined to below the GCTL, this was more likely caused by dilution and mixing with storm water exfiltrating and outflowing from the unlined Amazon pond which lies close by, immediately to the north, than by recovery in the GRTS. With the recent infusion of additional 1,4-D contamination into the same area, further dispersion/dilution of this contamination to the south by the same processes is likely to continue.

In-light-of this recent history, it is surprising that the FDEP had no specific comments or observations about this adverse development and what Lockheed should do going forward to address it, beyond continued pumping. There are several items I have recommended in my comments on this same 2024 RASR and the subsequent Interim Report Groundwater Levels and Analytical Results (AECOM; January 2025) that would help to better understand the current aquifer conditions and GRTS performance that come to mind.

First, AECOM needs to reestablish surveyed elevations on the monitoring wells in the southeast area so that water level measurements can resume. These wells were modified several years ago to protect against damage during construction at Project Woodworking (now UNFI). Since that time there has been no reliable water elevation data to estimate the capture zone in the USAS in this area.³ I understand from the community that the Project Woodworking (now UNFI) construction was completed in 2024, so these wells need to be restored as soon as possible. With the recent spread of contamination, potentially now beyond the reach of the capture system, it is even more important that judgements about the GRTS effectiveness in controlling this migration is based on hard water level data, and not solely the chemical testing and “professional judgement” AECOM has employed the past several years. Similarly, water quality and level monitoring need to continue in all the piezometers in this area that are important to understand the current position and future spread of the 1,4-D contamination. I note that FDEP apparently concurs with this latter point and requested that PZ-USAS-19 also be included in this monitoring effort.

Secondly, it is past time to construct the LSAS well in this southeast area to bound the southern extent of the 1,4-D plume which currently resides beneath the golf course property. I recommended this additional well several years ago, and FDEP subsequently concurred and asked Lockheed to construct it, but construction has been deferred to some unknown future date due to the ongoing development projects. My recent communications with FOCUS indicate that there has not been any additional construction in the area other than UNFI, which was completed last year. Based on FDEP’s recent comments, they apparently are comfortable that this deferral will continue, even though Lockheed has not identified the specific projects that are at issue, and when construction is likely to occur. At present there is no information as to whether the ground water in the LSAS in this area is clean or contaminated⁴. If contaminated, this could raise

³ In light of the potential historic dilution influence of exfiltration from the nearby Amazon pond, and a second pond recently completed on the north side of Project Woodworking (now UNFI), the water quality testing data that AECOM has been collecting cannot alone establish the capture zone of the GRTS.

⁴ Another LSAS well (MW-268) farther east has shown 1,4-D contamination for the last two years, so it is clearly “in the neighborhood”.

significant concerns in the event ground water on these development properties is used for landscape irrigation or other non-potable purposes. Any pumping could cause even further spreading of the LSAS plume, if present, and could pose potential health concerns for future property residents. These are water management decisions that should not be made in the current informational vacuum.

Also unaddressed in FDEP's comments is the status of the DPT ground water investigation that FDEP previously directed Lockheed to perform in the residential area immediately south of their site to define the residual CVOC contamination in the USAS. Although AECOM has depicted this area as meeting GCTLs for CVOCs since at least 2020⁵, more recent rebounding of the concentrations of PCE/TCE in MW-35 in this area, following shutdown of local USAS pumping, caused AECOM to remove extraction well EW-2102 from EWPARM and to restore pumping to control and remove this contamination. This was a prudent step, but the fact remains that CVOC contamination continues to affect this area of the USAS and the monitoring well network is too sparse to effectively define its level and extent. The DPT investigation I had previously recommended, and FDEP directed Lockheed to perform, could have addressed these questions; however, it is unclear whether FDEP intends to require Lockheed to proceed with it or not, as its status was not raised in the recent 2024 RASR comments or any other correspondence between the two parties that I have seen in the past year.

Finally, I have commented over multiple years of RASR reviews that there has been little progress in reducing the 1,4-D plume in the USAS north of Tallevast Road and the Lockheed site. This seemingly is the result of very limited water production from the few extraction wells in this area. Also, the monitoring well network in this area is too sparse to confidently draw the northern boundary of the plume and confirm if it is indeed captured by the GRTS pumping, as AECOM represents is the case. I have previously recommended a limited DPT investigation to address both concerns. In its past and current comments on the various RASRs FDEP has not acknowledged my recommendation for this investigation, so it would seem they are currently satisfied with the present status of the investigations and remedial efforts in this area. If true, this is unfortunate as this persistent problem continues to exist, without significant improvement, in shallow water under a residential area that the agency and Lockheed committed to clean up when this project began over 10 years ago.

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

Very truly yours,



Robert L Powell, PhD, PE
Principal

⁵ The USAS monitoring in this area potentially understates the amount of residual contamination because the monitoring well network is sparse and widely spaced, and also there has been a use of pumping wells, known to be subject to dilution effects, for water quality testing.