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To: [Shean, Rick, ENV](#); [Catechis, Chris, ENV](#)
Cc: [Cobrain, Dave, ENV](#); [Andress, Lane, ENV](#)
Subject: KAFB Soil Vapor Monitoring
Date: Thursday, August 18, 2022 11:24:15 AM

Chris and Rick,

I understand you're setting up a meeting to discuss the soil vapor monitoring issues with Ryan Wortman, Chris Segura, and possibly KAFB technical staff. I thought I'd provide some information regarding the purge volumes and flow rates to support the position stated in the August 31, 2021 letter in your discussions.

EPA's November 22, 2021 letter (EPA Letter) to NMED states, "Three purge volumes of the sampling train are both recommended by EPA and state agencies. It is considered to be an industry standard." KAFB is currently purging less than one purge volume.

The EPA Letter also states, "The proper flow/purge rate recommended by EPA is 200 to 500 ml/min, but no more than 1,500 ml/min." The table below converts these flow rates to cubic feet per minute (cfm) and compares the recommendations to current KAFB sampling practices.

	Flow/Purge rate, ml/min	Flow/Purge rate, cfm	KAFB exceeds EPA recommendation by this many times	Notes
KAFB's purge/flow rate	28317	1		KAFB exceeds EPA's "no more than" and range recommendations by 2-3 orders of magnitude
EPA recommended low end of range for flow/purge rate	200	0.007	143	
EPA recommended high end of range for flow/purge rate	500	0.017	59	
EPA recommended "no more than" flow/purge rate	1500	0.053	19	

The EPA Letter goes on to state that EPA "recommends the approximate sampling time for a 6-liter canister is 20-minutes." While KAFB does not record the canister fill time, their field notes indicate that there is as little as 4 minutes between consecutive sample collection times, which includes all purging, field parameter collection, sampling train connection and disconnection, leak testing, etc, and indicates that a sample canister is likely filled in less than one minute,



which is at least 20 times less than EPA's recommendation.

I hope you find this information useful.

Thanks,

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