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Subject: Shallow Vapor feedback
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Attachments: 2021-02-16_Response to KAFB Conceptual Outline_SSVSWP_.pdf



Attached please find our comments concerning the "Results Driven Investigative Approach for Shallow Soil Vapor Sampling" document which was provided to NMED on February 1, 2021. I think this should help us prepare for our call tomorrow. Please let me know if you have any questions.

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NMED Response to KAFB February 1st “Conceptual Outline” titled Draft Final Results Driven Investigative Approach Shallow Soil Vapor Sampling

Slide 2, First bullet: The Permittee neglected to address NMED’s requirement to investigate residual soil vapor contamination under homes, buildings, and paved areas. NMED has repeatedly directed the Permittee to investigate historical vapor contamination near the VA campus and the Siesta Hills neighborhood.

NMED’s February 25, 2019 letter requiring this Work Plan specifically directed the Permittee to conduct sampling “in the residential area north of Ridgecrest or amid buildings on the VA hospital campus”. In addition, the EPA VI Guidance states, “EPA recommends that soil gas samples be taken as close to the areas of interest as possible and preferably from directly beneath the building structure.”

NMED’s May 26, 2020 disapproval letter again required the Permittee to site soil vapor sampling wells as directed previously and in accordance with EPA guidance. Multiple meetings were conducted between the Permittee and NMED in 2020 and 2021, where the same direction was repeated. NMED continues to require siting of vapor wells adjacent to the VA buildings, in the Siesta Hills subdivision, within paved areas, and utility corridors. The conceptual outline failed to address these directions and provides no new information to justify reconsideration of this direction.

Following the Permittee’s continued efforts to negotiate regarding sampling in essential areas where historical soil vapor concentrations have exceeded NMED screening levels by several orders of magnitude, NMED provided the US EPA with the Permittee’s November 2019 work plan and the resulting May 26, 2020 Disapproval letter for their review. The EPA provided four pages of comments which are attached to this response. In summary, the EPA provided two comments with the following headings:

- 1. EPA concurs with NMEDs recommendation that KAFB develop a VI [vapor intrusion] Conceptual Site Model (CSM) to guide further evaluation of the VI pathway. EPA recommends completing the CSM before making final risk management decisions for any given site.**
- 2. Shallow soil gas sampling should be conducted adjacent to the VA hospital and at certain homes in the Siesta Hills subdivision before the pathway should be excluded from further consideration.**

The Permittee has not addressed either of these issues in their “conceptual outline”. The “conceptual outline” was also provided to EPA for review. EPA provided a response on February 10, 2021, which stated that EPA, “maintain that our previous comments are still applicable to the investigation of the potential VI pathway north of the base” and reiterated the two recommendations listed above. In addition, EPA stated, “[w]e agree that collecting soil gas

samples over utility lines north of the base would provide another useful line of evidence to add to the CSM, but it shouldn't preclude the collection of soil gas samples near the VA hospital and Siesta Hills residential area."

Slide 2, Third bullet: The approach, as outlined, will not confirm that no off-base vapor intrusion risk exists.

Slide 3, Objectives, first bullet: NMED does not concur with the proposed "limited" investigation as outlined in the presentation.

Slide 3, Objectives, third bullet: Sampling is required in the vicinity of the VA campus and the Siesta Hills subdivision. Failure to incorporate this into the conceptual outline and the next workplan submittal will only delay a final determination concerning shallow soil vapor risks to the VA and the neighborhood.

Slide 3, Objectives, fourth bullet: Workplan approval by May 2021 may be unrealistic given the continued delays in addressing NMED concerns and responding to NMED comments.

Slide 3, Constraints, first bullet: Contracting matters are an internal issue that the AF must address to assure that AF has the capability to undertake and complete work required by NMED in a timely manner. Sufficient time is required for NMED review of plans and reports without regard to contract performance periods. AF contracting matters and contracting process will not be allowed to dictate required performance activities or schedules.

Slide 3, Constraints, second bullet: Contracting matters are an internal issue that the AF must address to assure that the AF has the capability to undertake and complete work required by NMED in a timely manner. Sufficient time is required for NMED review of plans and reports without regard to contract performance periods. AF contracting matters and contracting process will not be allowed to dictate required performance activities or schedules.

Slide 4, First bullet: The *Shallow Soil Vapor Sampling Work Plan* was submitted on November 8, 2019, not May 20, 2019, per NMED records.

Slide 4, Third bullet: In the November 10, 2020 presentation, the Permittee utilized data that did not meet quality assurance requirements and may not be used for decision making purposes. NMED clearly indicated that this was not appropriate and would not be considered.

Slide 4, Sixth bullet: In the January 6, 2021 presentation the Permittee continued to use data that did not meet quality assurance requirements and may not be used for decision making purposes. NMED clearly indicated that this was not appropriate and would not be considered. NMED disagrees that VISLs are "conceptually inaccurate" for use at the bulk fuels facility.

Slide 5, First bullet: Some of the utilities depicted in slide 13 are not included on slides 7 and 8. It is clear based on slide 13 that the utilities mapping is incomplete and inconsistent with the information provided in response to the NMED's information request. This needs to be rectified and addressed in the workplan. Slide 13 shows 3 water meters that have no water lines running to them, irrigation lines that are not connected to the water system, and baseball fields and park areas that would clearly have irrigation systems, but they are not depicted.

Slide 6, First bullet: While NMED agrees that 8 soil vapor monitoring points should be sufficient to evaluate VI potential, it does not agree with the proposed locations. NMED agrees with 5-foot, 10-foot, and 15-foot sampling points for each vapor monitoring well location.

Slide 10, KAFB-106-SVMP-1 through 4: It is unclear why 4 wells in the same utility corridor would be considered an efficient use of resources. In addition, these four locations are all within the radii of influence of many years of soil vapor extraction, which significantly reduced vadose zone contamination in the area, as well as the recent bioventilation pilot testing that ended in November 2020. No such treatment was conducted in the vicinity of the VA campus or the Siesta Hills subdivision. While one of the four wells may provide useful data regarding potential contaminant rebound, NMED does not agree with locating four wells in this area. At least three of these wells should be moved to other locations including below or directly adjacent to buildings in the VA campus, below or directly adjacent to homes in the Siesta Hills subdivision, within or directly adjacent to subsurface utility corridors nearer to the VA campus and the Siesta Hills subdivision, and below large paved areas.

Slide 10, KAFB-106-SVMP-5 through 7: These three wells are all located in a park where the soil is open to the atmosphere. These wells do not address any of NMED's concerns regarding utility corridors, paved areas, or homes/buildings. NMED does not agree with any of these three locations. These three wells should be relocated to locations including below or directly adjacent to buildings in the VA campus, below or directly adjacent to homes in the Siesta Hills subdivision, within or directly adjacent to subsurface utility corridors nearer to the VA campus and the Siesta Hills subdivision, and below large paved areas.

Slide 10, KAFB-106-SVMP-8: While this well is proposed to be located near a utility corridor, it is also located in a parking lot. This parking lot has the highest amount of unpaved area of the local parking lots. This well should be relocated to the parking area to the west in a location that is centric to the largest paved area while also within or directly adjacent to the utility corridor depicted.

Slide 12, First bullet: Details regarding the DPT technology and well installation will be required prior to approval for use of DPT. The Permittee must provide details on boring diameter and how sloughing will be avoided during multiple sampling point installation.

Slide 12, Fourth bullet: Hollow-stem auger, or other appropriate drilling technology must be used when DPT fails to penetrate to design depths.

Slide 17, First bullet: NMED recommends stainless steel tubing for soil vapor monitoring ports. Should problems arise with degradation of Teflon tubing in direct contact with the subsurface, replacement wells will be required.

Slide 17, Second bullet: Placing bentonite chips opposite the vapor ports would clog the vapor ports. This description does not match the figure on Slide 18 and was commented on previously by NMED.

Slide 22, Second bullet: As the Permittee has previously been directed, and as is stated in the KAFB RCRA Permit, for sample data to be considered valid, the analytical limits of detection must be below the NMED VISLs. The Permittee has previously committed to complying with this requirement.

Slide 22, Third bullet: The Permittee is required to submit an investigation report in accordance with the KAFB Permit and NMED's September 2, 2020 letter titled *Reporting Requirements for All Document Submittals*.