NEVADA DIVISION OF
ENVIRONMENTAL PROTECTION

STATE OF NEVADA
Department of Conservation & Natural Resources
Steve Sisolak, *Governor*
James R. Lawrence, *Acting Director*
Greg Lovato, *Administrator*

August 31, 2022

Jay A. Steinberg
Nevada Environmental Response Trust
35 East Wacker Drive, Suite 690
Chicago, IL 60601

Re: **Tronox LLC (TRX) Facility**
Nevada Environmental Response Trust (Trust) Property
NDEP Facility ID #H-000539
Nevada Division of Environmental Protection (NDEP) Response to: *Response to NDEP Comments on the Sampling and Analysis Plan, Revision 2*

Dated: May 6, 2022

Dear Mr. Steinberg,

The NDEP has received and reviewed the Trust's above-identified Deliverable and provides comments in Attachment A. A revised Deliverable should be submitted by **10/31/2022** based on the comments found in Attachment A. The Trust should additionally provide an annotated response-to-comments letter as part of the revised Deliverable.

Please contact the undersigned with any questions at wdong@ndep.nv.gov or 702-668-3929.

Sincerely,

Dong Weiquan

Weiquan Dong, P.E.
Bureau of Industrial Site Cleanup
NDEP-Las Vegas City Office

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Attachment A

1st NDEP Comments	NERT's Response	NDEP Comments on Response
1. General Comments & Discussion		
Chloroform data gaps between the OSSM property and the NERT Operable Unit 1 (OU-1) could be resolved with the addition of several monitoring wells planned for installation along the eastern edge of OU-1. Historically, chloroform analysis was included in site investigations on NERT property beginning in the late 1980s. However, at that time, the focus was limited to areas surrounding the existing facilities, not necessarily located along the property boundary, and there was no consideration for contamination migration from adjacent properties. Historical records for well logs were vague or missing depth information for data collected from the OSSM property limiting the ability to define depth of chloroform contamination and migration pathways. Figures 5a-f identify the location of the planned monitoring wells. Table 2 identifies the planned analysis annually or five-year period. The new wells to be sampled annually include six wells planned for the 0-55 ft interval, six wells for the 55-90 ft interval, eight wells for the 90-130 ft interval. There are existing transducers that cover the 130-175 ft interval (2) and 175-300 ft interval (3). These wells have been located near the OU1 boundary adjacent to historically high concentrations of chloroform results from the OSSM property. Data from	This comment is understood to be regarding the OSSM property and the western edge of OU-1 (not the eastern edge, as written). Generally speaking, the purpose of the NERT Groundwater Sampling and Analysis Plan (SAP) is to identify an approach to effectively monitor the performance of the NERT Groundwater Extraction and Treatment System (GWETS) and generally assess groundwater conditions with data primarily used to prepare the NERT Annual Groundwater Monitoring and GWETS Performance Report and the Semi-Annual Groundwater Monitoring and GWETS Performance Memorandum. This program also bridges the gap between the Remedial Investigation (RI) and Remedial Design (RD) since completion of the Feasibility Study, Proposed Plan, and Record of Decision can take a number of years to complete. If additional data are required to complete RD, such requirements will be evaluated at that time. The SAP is not designed to characterize the extent of chloroform contamination. As NDEP is aware, NERT recently completed the RI for Operable Units 1 and 2 (OU-1 and OU-2). This investigation was specifically designed to determine the nature and extent of contamination in OU-1 and OU-2. The characterization of the nature and extent of chloroform (and other chemicals of potential concern [COPCs]) in the vicinity of NERT's property boundary with OSSM was presented in the RI Report for OU-1 and OU-2. This evaluation was based on all available information, including soil, soil gas, dense non-aqueous phase liquids (DNAPL), and groundwater data. The RI Report concluded that the existing data were sufficient to characterize the nature and extent of chloroform within OU-1 and OU-2. There were no comments received from NDEP on the RI Report indicating that	The NDEP's BMI Regional Goals and Directives state that all remedy evaluations must identify all contaminants of potential concern (COPCs) discovered on the individual properties regardless of origin of these chemicals, including alleged trespass contaminants. NDEP is not requiring NERT to treat any other companies' chemicals except for Henderson Legacy Chemicals. This comment meant to refer to the western edge of the NERT property with OSSM. It is also understood that chloroform plume delineation is not part of the overall goal of this version of the SAP, however, chloroform itself is part of the groundwater quality that will be monitored as part of the SAP. The original comment was general in nature, and while it concluded with a sentence mentioning additional wells, the intent was to highlight the fact that the proposed wells could also function in a way to help delineate the trespassing plume (it was intended as an overall positive, not critical comment). There is no need to install more wells along the OSSM – NERT boundary than those already mentioned in this report. Therefore, NDEP requires that NERT and other BMI companies to analyze the VOCs including chloroform for the wells suggested below at least for the respective 2023 annual sampling event. Some of these wells are in the annual sampling events of this SAP Reversion 2. The goal is to build a sound foundation to determine the chemicals migrating through the east and west NERT property boundaries.

these planned monitoring wells should provide the additional detail to determine the depth of contamination and migration pathway if present. NERT may also consider new wells if these existing wells don't provide the data required to fully define the depth of contamination and migration pathways.	the available chloroform data on the west side of OU-1 was insufficient for this purpose. The submitted SAP Revision 2 (SAP v2) proposed adding 20 annually-sampled wells to the program in in the vicinity of NERT's property boundary with OSSM to effectively monitor OSSM's trespassing plume, with intent to bridge the time between the RI and RD, and inform the operation of the GWETS. While historical records for data collected from the OSSM property may be insufficient to fully define the depth of OSSM's contamination and migration pathways on their property, it is not NERT's responsibility to resolve this issue. As such, NERT disagrees with NDEP's conclusion that additional monitoring wells should be considered in this area in either the context of the SAP or the NERT RI.	
2. Maps & Figures		
1) Evaluation of the coverage for VOCs and other analytes is quite difficult with the current maps. Perhaps the maps could be updated to include which analytes are monitored at given wells. Additionally, in figures B-3 through B-10 it is hard to tell if the transducer density is relative between figures or not. It might be more meaningful to add values to the density legend rather than 'high' or 'low' and to discuss an intended density benchmark that was supported by the references.	As stated in the response to Comment #1, the purpose of the SAP is to identify an approach to effectively monitor the performance of the NERT GWETS and generally assess groundwater conditions with data primarily used to prepare the NERT Annual Groundwater Monitoring and GWETS Performance Report and the Semi-Annual Groundwater Monitoring and GWETS Performance Memorandum. This program also bridges the gap between the RI and RD. If additional data are required to complete RD, such requirements will be evaluated at that time. The figures in the SAP are not intended to evaluate spatial coverage of individual analytes. Tables 3 through 7 are organized by OU and Study Area to help understand the proposed analytical program by geographic area. With few exceptions, the four NERT Primary COPCs, as further defined in the RI Report (perchlorate, chlorate, chromium, and chloroform), are analyzed at every monitoring well specified in the SAP to be sampled within OU-1 and west of Pabco Road within OU-2 and OU-3. East of Pabco Road in OU-2, COPCs are administratively limited to perchlorate and chlorate. While	The comment's intent was to suggest that perhaps the maps could be updated to include which analytical suites are monitored at given wells, specifically where VOCs are planned to be monitored. It is agreed that coverage for individual analytes does not need to be mapped for this report. While Tables 6 and 7 provide this information, it is not easy to find each well on each of the maps. If the spatial delineation is simply that all wells in Tables 6 and 7 that are not being monitored for VOCs are because they are in OU-3, please make that clearer in Sections 3.1.4 and 3.1.5. If it is not as simple as that, it would be helpful to show which wells are planned to be sampled for VOCs on Figures 5a through 6f. For example, Figure 6e shows all Lower Middle wells, regardless of if they are in OU-2 or not, and also shows a legend for wells that are not shown at all (Shallow and Deep).

NDEP Comment	Response	NDEP Comment on Response
	chloroform, hexavalent chromium, and other potential contaminants may be present in groundwater within OU-2 east of Pabco Road, and consistent with NDEP's July 2016 directive, NERT's investigations within the Eastside Sub-Area are limited to the investigation of perchlorate and chlorate impacts to the subsurface, as further detailed in the RI Report for OU-1 and OU-2. Consistent with the Settlement Agreement and Administrative Order on Consent: BMI Common Areas, Phase 3, known as AOC3, the potential presence of chloroform, hexavalent chromium, and other potential contaminants in groundwater within the Eastside Sub-Area will be addressed separately by BRC under the oversight and direction of NDEP. The exception to this is east of Pabco Road in OU-3. In this area, the Primary COPC chromium is also analyzed in addition to perchlorate and chlorate for consistency with the Downgradient Investigation performed by AECOM. The NERT SAP will be updated to include additional language to present an expanded justification for the proposed analytical program which will be consistent with the discussion of administratively limited COPCs east of Pabco Road. With respect to the comment regarding transducer density, the information presented in the SAP is not intended to be compared between Figures B-3 through B-10 in Appendix B. The kernel density tool in ArcGIS generates an arbitrary scale between the lowest and highest densities observed each time the tool is run (i.e., for each figure). As such, there is no specific value assigned using the software that can be used as a benchmark throughout the analysis. The figures are solely intended to provide a qualitative representation of transducer density. They are not intended to provide a quantitative basis on which decisions about keeping or removing transducers can be made	Perhaps the symbology marking the locations could be utilized to show VOC or non-VOC monitoring instead, as these figures never show a shallow, middle, and deep well on the same map. It is actually a little bit confusing having those depths in the legend key when they don't appear on the maps. This is one possible way to show the VOC analytical suite on these maps, though it is not the only acceptable response. However, it is still requested to spatially clarify where the annual and 5-year VOC sampling will occur. For the transducer density comment, the reply is acceptable pending review of the revised report.
2) Comparison to Chloroform Data Investigation and Current Well Coverage: NDEP previously performed a data investigation of chloroform on the entire	As stated in the response to Comment #1, the purpose of the SAP is to identify an approach to effectively monitor the performance of the NERT GWETS and with data primarily used to prepare the NERT Annual Groundwater Monitoring	It is understood chloroform is not the primary focus of this report, but it can be considered a stand-in for the purposes of the comments for groundwater monitoring on the site. The SAP

NDEP Comment	Response	NDEP Comment on Response
BMI Complex and surrounding area in its "Chloroform Report Black Mountain Industrial Complex (BMI)" that was distributed as a draft on January 7, 2022. This draft report looked at historical accounts of chemical production and storage by different companies as well as the production of spatio- temporal chloroform groundwater plumes based on all data available in the BMI Regional Database. Based on this investigation, there were several suggested areas to target for additional sampling. Comparing those suggestions to this report regarding the NERT subareas specifically, there are some specific suggestions/notes (a- e):	and GWETS Performance Report and the Semi-Annual Groundwater Monitoring and GWETS Performance Memorandum. This program also bridges the gap between the RI and RD. If additional data are required to complete RD, such requirements will be evaluated at that time. The SAP is not designed to characterize the extent of chloroform impact (or other COPCs). The RI Report for OU-1 and OU-2 concluded that the existing data were sufficient to characterize the nature and extent of chloroform in groundwater within OU-1 and OU-2. There were no comments received from NDEP on the RI Report for OU-1 and OU-2 indicating that the available chloroform data were insufficient for this purpose. See additional detailed responses (a through e) below.	is concerned with groundwater monitoring, and to that extent, should be concerned with, or at least be made aware of, potential data gaps that have arisen since the RI.
2a. OU-1: One deeper well to the south of the Units 4 and 5 buildings (re: Figure 5b). Additional wells in the Lower Shallow Water-Bearing Zone directly between the Unit 4 building and the barrier wall, at an annual sampling interval for the next five years (re: Figure 5b). There are few Lower Shallow wells on this side of OU-1 in general. NDEP suggests adding some existing shallow monitoring wells for this SAP.	The Unit 4 and 5 Buildings area and the Lower Shallow Water-Bearing Zone between the Unit 4 Building and the barrier wall have been thoroughly characterized in the Unit Buildings 4 and 5 Source Area Characterization Report and the RI Report for OU-1 and OU-2. The Unit Buildings 4 and 5 Source Area Characterization Report was approved by NDEP on January 13, 2020, and NDEP's comments on the RI Report for OU-1 and OU-2 did not indicate that the available chloroform data, including both soil and groundwater data, were insufficient. Since the extent of contamination has been sufficiently delineated in the Unit Buildings 4 and 5 Source Area Characterization Report and the RI Report for OU-1 and OU-2, the installation of additional wells as suggested by NDEP is not necessary to achieve the stated goals of the SAP.	The suggestion here was highlighting potential spatial gaps and was two-part: 1) considering to add a deeper well to the south of Units 4 & 5 buildings and 2) add more existing wells to the SAP between Units 4 and 5 buildings and the barrier wall in the Lower Shallow zone. As for suggestion 1, perhaps a deeper well south of the buildings is not needed if the characterization report is deemed sufficient in spatial coverage for the extent of potential Units 4 and 5 buildings. For 2, however, it is still not clear why more existing Lower Shallow zone wells are not included on the east side of OU-1 between the Units 4 and 5 buildings and the barrier wall. It is understood there is an OU 1 & OU 2 RI report that has been reviewed but not approved at this point and an approved characterization report for Units 4 and 5 buildings. However, those reports were concerned with using data that has been collected, and this report is concerned with

		monitoring data that will be collected. There is a striking hole in Figure 5b for wells on the east side of OU-1. Perhaps wells in the Lower Shallow do not exist in that area? If so, please state this. It seems as if there was a lack of wells in this area at a similar depth in the OU 1 & OU 2 RI. If there are existing wells in this area in the Lower Shallow zone, which is in the area characterized as containing contamination, why are they excluded as part of the SAP? Stating that there were no wells used here because they weren't used in previous reports is not a fully acceptable answer. NERT should consider these comments when adding more monitoring wells from the wells suggested below, because the Unit 4 was confirmed one of the chloroform sources in the BMI region.
2b. Two or three wells in the Former Parcels C & D in both the Upper and Lower Shallow Water-Bearing Zone, if possible (re: Figure 5b). Some model results have shown a lobe of the chloroform plume through this area, but there are no wells here. The NDEP Chloroform draft report shows that potential areas of contamination at depth (below 55 ft., perhaps related to early results from well H-23) for early years (ca. 1984) in the spatio-temporal chloroform plume model map. However, there is not much sampling that has been done at depth in this area since 1984.	Former Parcels C and D are no longer owned by NERT and, consistent with the terms of the 2013 Easement Agreement between NERT and TRECO, NERT is required to and is currently in the planning and coordination stage of relocating certain monitoring wells to the northern property boundary or Former Parcels C and D. NERT did not start discussions with the new owner of Former Parcels C and D until after submittal of SAP v2. Accordingly, concurrent with the preparation of these response to comments, NERT is in the process of preparing correspondence to send to NDEP to detail the relocations of up to four NERT-owned wells (MC-50, MC-51, MC-53, and potentially M-23). Once approved by NDEP, NERT will submit a revised SAP to detail this change. NERT understands that the new property owner will have a similar request for any other owners of groundwater monitoring wells located on these parcels. In addition to the NERT owned wells, there are an additional 12 wells owned by others of which two (MC-93 and MC-45) are included in the NERT SAP v2 which will most likely be abandoned by others and thus will be	This is acceptable pending review of the revised report.

	removed from the SAP in a future iteration of the document. It should be noted that the removal of these two wells (MC-93 and MC- 45) is not considered detrimental to NERT at this stage in the program. The Trust would also like to note that the configuration of the four NERT replacement wells as currently conceived will allow for better east-west delineation of OSSM's trespassing plume that migrates through the NERT site and into this area. However, these wells will be screened in the upper shallow water bearing zone. Acknowledging the above, the NERT RI Report for OU-1 and OU-2 demonstrated that the chloroform west of the WC-West Pond originates from the OSSM site. East of the trespassing OSSM plume (underlying the WC-West and WC-East Ponds), there is chloroform in groundwater that is associated with the Unit 4 and 5 Building source area. Accordingly, and to the extent NDEP requires additional vertical delineation west of the WC-West Pond, such delineation should be performed by OSSM. Please note that Figure 7-70b of the RI Report for OU-1 and OU-2 provides an isoconcentration contour map of chloroform within the lower shallow water bearing zone	
2c. To help delineate the edges of the OSSM plume at depth, it may be helpful to sample wells M-243, M-246, M-5D, M- 14D, and M-230 annually for the first five years.	NERT is not responsible for the further delineation of OSSM's plume. The NERT RI Report for OU-1 and OU-2 demonstrated that the chloroform referenced in this comment originates from the OSSM site. Accordingly, and to the extent NDEP requires additional delineation in this area, such delineation should be performed by OSSM. As stated in the response to Comment #1, the purpose of the SAP is to identify an approach to effectively monitor the performance of the NERT GWETS and generally assess groundwater conditions with data primarily used to prepare the NERT Annual Groundwater Monitoring and GWETS Performance Report and the Semi-Annual Groundwater Monitoring and GWETS Performance Memorandum. This	Part of the purpose of the SAP is to understand groundwater conditions on NERT property, and sampling five wells once a year for five years would help to do so. However, it is understood that evaluating a specific groundwater plume originating off of NERT's property is not fully within the scope of the SAP

	program also bridges the gap between the RI and RD. If additional data are required to complete RD, such requirements will be evaluated at that time. Accordingly, modifying the NERT SAP to include sampling wells M-243, M-246, M-5D, M-14D, and M- 230 annually for five years is not necessary.	
2d. OU-2: There was a possibility, based on the modeled chloroform plume that the Alpha and Beta ditches could have helped transport chloroform through OU-2 in the NDEP Chloroform draft report. The ditches are not mapped on the figures showing the planned and existing sampling locations, but if a few of the wells on Figure 6a could be associated with the ditch, this would be interesting to identify them in the sampling plan. In Figure 6a, a suggestion is to move the new five-year monitoring interval wells east of Pabco Rd. in OU-2 to the annual interval for the first five years.	The NERT SAP will be updated to include the Alpha and Beta Ditches to the relevant figures as suggested. However, as discussed in response to Comment #2.1, NERT's COPCs within the Eastside Sub-Area east of Pabco Road are administratively limited to perchlorate and chlorate. Accordingly, and to the extent NDEP requires the collection of groundwater samples for chloroform analysis in this area east of Pabco Road, such sampling and analysis should be performed by BRC. Since the suggestion to move the new five-year monitoring interval wells east of Pabco Road in OU-2 to the annual interval for the first five years appears to be associated with obtaining chloroform data, NERT does not believe this change would provide any benefit to the proposed monitoring of perchlorate and chlorate east of Pabco Road. The primary performance metric in this area is the calculation of the mass flux along an east-west transect that separates OU-2 and OU-3 as required by NDEP. As such, NERT does not believe this sampling frequency change in appropriate.	In light of the limited and administrative responsibilities placed on NERT, this is considered an acceptable response, pending review of the revised report and the regulator's agreement regarding the administrative boundaries
2e. OU-3: Adding a well to monitor annually below 55 ft. somewhere between wells DBMW-4 and DBMW-5 at the boundary of the OU-2 area would fill in a spatial gap at that depth (re: Figure 7b).	NERT assumes that this comment pertains to monitoring chloroform in groundwater between monitoring wells DBMW-4 and DBMW-5. As indicated above, NERT's COPCs are administratively limited to perchlorate and chlorate east of Pabco Road. Based on the particle tracking evaluation presented in Figures 9-7b and 9-7c of the RI Report for OU-1 and OU-2, any chloroform in this area would have originated from the Eastside Sub-Area. Accordingly, and to the extent NDEP requires additional delineation of chloroform in this area east of Pabco Road, such delineation should be performed by BRC. Also please note, NERT is aware that BRC has decommissioned monitoring wells DBMW-4 and DBMW-5 as of April 7, 2022.	In light of the limited and administrative responsibilities placed on NERT, this is considered an acceptable response, pending review of the revised report and the regulator's agreement regarding the administrative boundaries.

NDEP Comment	Response	NDEP Comment on Response
1) Specific Comment #1 Figures. There is a discrepancy in Figure 2b between the main map and the associated inset map. The figure should be internally consistent. The cluster of wells to the east side of the inset map appears to lack a monitoring well that is displayed within that area on the primary map. Please ensure that the inset map and is accurate and shows all relevant well locations. The inset map should show more specificity than the larger/zoomed-out map, not less. Many of the proposed added locations are justified in Table 1b for the purpose of improving the known boundaries of trespassing groundwater plumes. Including a figure of the chloroform plume, and possibly others, would help visualize how the chosen additions would contribute to this goal. It might be helpful to have the chloroform plume on every relevant figure of well locations and/or a figure of wells by purpose. However, the request here is to include a figure showing the location of the trespassing plume, and to include the Alpha and Beta ditches on that map as well.	The NERT SAP will be updated to resolve the discrepancy in Figure 2b between the inset and main map as follows: 1. ART-6 was shown as a monitoring well in the main map while the inset layer did not include this location. ART-6 is not a monthly monitoring location and therefore it will be removed from the main map. 2. The Alpha and Beta Ditches will be added to the relevant figures as suggested With respect to the chloroform plume, the goal of the RI was to delineate the nature and extent of contamination in OU-1 and OU-2. It is the opinion of NERT that the RI Report for OU-1 and OU-2 achieved that goal and the comments received from NDEP on the report do not indicate otherwise. However, as requested by NDEP, the Trust has prepared the attached Figures 1 and 2 that present the well locations in Table 1b on maps with the most recent chloroform plume (2021) for depth intervals of 0 to 55 ft bgs and 55 to 90 ft bgs. Since the SAP includes all COPCs that are monitored across the NERT RI Study Area, and not just chloroform, the Trust does not believe it is necessary to add these maps to the SAP.	Points 1 and 2 above will be acceptable, pending review of the revised report. As for the chloroform plume maps, the supplied maps are appreciated. It is agreed that the groundwater chloroform plume does not belong on every figure previously included in the report. However, the context provided by a general figure of the trespassing groundwater VOC plume referenced in the report and Table 1b would help evaluate the added wells.
2) Specific Comment #2 Table 2. Cross-referencing the monitoring well locations shown in Figures 6a through 6e to Table 2 indicates that most (or perhaps all) of the wells east of the Pabco Road will not be monitored for volatile organic compounds (VOCs) as part of the monitoring program. Chloroform is included in the VOCs List provided in Table 8. Elevated chloroform levels have been measured at many of	As indicated above, NERT's COPCs are administratively limited to perchlorate and chlorate within the Eastside Sub-Area, east of Pabco Road. To eliminate any ambiguity of the stated goal of the NERT SAP, the SAP will be updated throughout to provide justification regarding the selection of constituents to be monitored east of Pabco Road. Accordingly, and to the extent NDEP requires additional delineation of chloroform in this area east of Pabco Road, such delineation should be performed by BRC.	This is acceptable pending review of the revised report. It is noted that it has been administratively determined that NERT has no mandate to monitor constituents other than perchlorate and chlorate east of Pabco Road.

these wells east of Pabco Road including locations near the road (e.g., POU-3, DBMW-1, DBMW- 3, DBMW-4, DBMW-5) and those farther to the northeast (e.g., DBMW-12). Including VOC measurements as part of the annual sampling plan would further the goal stated in Section 2.1.2 ("defining the extent of key monitored constituents; perchlorate, chlorate, chromium, and chloroform"). Please justify why monitoring for VOCs in these areas is not included in the monitoring plan.		
3) Specific Comment #3 Table 2 and Figures 7a- 7e. A cross reference between the monitoring wells in Figures 7a-7e to Table 2 shows most of the wells in the Tuscany residential village will not monitor for VOCs. Please justify why monitoring for VOCs in these areas is not included in the monitoring plan.	Based on the particle tracking evaluation presented in Figure 9-7c of the RI Report for OU-1 and OU-2, the Tuscany residential village is located downgradient of the Eastside Sub-Area. Accordingly, if chloroform is present in groundwater below the Tuscany residential village it would have originated from the Eastside Sub-Area. Since NERT's COPCs are administratively limited to perchlorate and chlorate within the Eastside Sub-Area the same restriction applies to the Northeast Study Area and the Downgradient Study Area east of Pabco Road which includes the Tuscany residential village. Accordingly, and to the extent NDEP requires additional VOC data in this area, such data collection should be performed by BRC	This is acceptable pending review of the revised report. It is noted that it has been administratively determined that NERT has no responsibility for VOCs in the Tuscany village area.
4) Specific Comment #4 Sections B3.2 & B3.3. The first bullet states: "a geospatial density analysis was performed to identify gaps in coverage. The geospatial analysis looked at how closely grouped transducer locations were in relationship to other transducer locations. The output from this assessment was a set of "heat maps" that identify "hot spots" (areas of high transducer coverage) and "cold spots" (areas where transducer coverage could be improved) throughout OU- 3 for a given WBZ."	The NERT SAP will be updated to include a detailed description of the tool used to generate the density heat maps in Appendix B.	This is acceptable pending review of the revised report.

NDEP Comment	Response	NDEP Comment on Response
Appendix B gives no quantitative or qualitative details about how the heat maps in the figures are produced other than saying that the analysis "looked at how closely grouped transducer locations were in relation to other transducer locations" (Section B3.2). A brief description of the calculation would improve the support for the heat maps and the decisions made based on them. Please provide details including the calculations and software used to develop the heat maps.		
5) Specific Comment #5 Section 2.1.2. The last paragraph of Section 2.1.2 states: "Groundwater wells added for chemical analysis will only be sampled during the annual or five-year events. These monitoring frequencies will provide sufficient data to evaluate performance metrics in forthcoming annual performance reports. More frequent monitoring is not expected to substantively improve the effectiveness of the monitoring program." This statement could be strengthened by adding some additional context for this expectation. For example, were temporal trends at monitoring locations evaluated for the contaminants of concern and found to not change significantly over the stated intervals? Additional information would help the reader understand, for example, why certain contaminants are measured monthly while others are measured annually, as shown in Table 2.	Section 2.1.2 of the NERT SAP will be expanded to specify that the basis for the sampling frequencies were the temporal trends identified in the 2016 Groundwater Monitoring Optimization Plan approved by NDEP. The trends observed in 2016 have remained consistent, as evidenced in subsequent annual reporting.	This will be sufficient if added to the text with references to the 2016 document and pertinent annual reports.
6) Specific Comment #6 Section 2.1.3.1. Footnote 8: Please include a callout to	Since the submittal of the SAP Revision 2 on December 9, 2021, all locations requiring the installation of a new well have	This is acceptable pending review of the revised report.

Table 10 here, as this appears to be the only place in the document to find out which locations are yet to be installed; no distinction is made on the figures between existing locations and those yet to be installed.	been completed as part of the OU-3 RI field activities completed in late 2021. Table 10 of the NERT SAP will be updated to present the current status and construction information for all monitoring wells. Furthermore, Footnote 8 in Section 2.1.3.1 will be deleted.	
7) Specific Comment #7 Figure 6a. Several monitoring well location labels on the figure are inconsistent with those given in Table 10 in that the labels on the figure omit the dash (e.g., POD7, POD8, POU3) while the identifiers in Table 10 include the dash (e.g., POD-7). Searching the document for information about these locations would be easier if the identifiers were consistent. Please update the identifiers in the figures to be consistent with the tables or vice versa.	Figure 6a and Table 10 of the NERT SAP will be modified for consistency.	This is acceptable pending review of the revised report.
8) Specific Comment #8 Figure B-9. Figure B-9 is missing the density layer in the figure legend. Please add this in so it matches the other figures in the series.	The NERT SAP will be updated to add the density layer to the legend in Appendix B, Figure B-9.	This is acceptable pending review of the revised report.

The wells suggested for the chloroform analysis. It is acceptable that NERT refines the suggested wells for the VOCs including chloroform analysis if the refined wells have appropriate spatial and vertical distribution. This requirement is intended at least for the 2023 annual sampling event.

Well ID	Water Bearing Zone	Chloroform
LG-032	Shallow	√
M-057A	Shallow	√
M-1	Shallow	√
M-123	Shallow	√
M-124	Shallow	√
M-125	Shallow	√
M-125D	Shallow	√
M-126	Shallow	√
M-127	Shallow	√
M-131	Shallow	√

NDEP Comment	Response	NDEP Comment on Response
M-134	Shallow	√
M-135	Shallow	√
M-142	Shallow	√
M-14A	Shallow	√
M-14D	Shallow	√
M-159	Shallow	√
M-160	Shallow	√
M-186	Middle	√
M-19	Shallow	√
M-191	Shallow	√
M-195	Middle	√
M-196	Middle	√
M-197	Middle	√
M-199	Middle	√
M-200	Middle	√
M-201	Shallow	√
M-202	Shallow	√
M-206	Shallow	√
M-223	Shallow	√
M-224	Shallow	√
M-224R	Shallow	√
M-225R	Middle	√
M-226	Shallow	√
M-227	Shallow	√
M-227R	Shallow	√
M-228	Middle	√
M-228R	Middle	√
M-229	Shallow	√
M-22A	Shallow	√

NDEP Comment	Response	NDEP Comment on Response
M-230	Shallow	√
M-234	Shallow	√
M-240	Middle	√
M-245	Shallow	√
M-249-100	Middle	√
M-251-100	Middle	√
M-263	Shallow	√
M-31A	Shallow	√
M-35	Shallow	√
M50	Shallow	√
M-52	Shallow	√
M-57A	Shallow	√
M-66	Shallow	√
M-67	Shallow	√
M-68	Shallow	√
M-72	Shallow	√
M-73	Shallow	√
M-74	Shallow	√
M-81A	Shallow	√
M-98	Shallow	√
MC-MW-17	Middle	√
MC-MW-18	Middle	√
PG-107	Shallow	√
RISB-31	Shallow	√
RISB-32	Shallow	√
RISB-33	Shallow	√
RISB-34	Shallow	√
RISB-35	Shallow	√
RISB-36	Shallow	√

NDEP Comment	Response	NDEP Comment on Response
RISB-37	Shallow	√
TR-06	Middle	√
U4U5-16	Middle	√
U4U5-2	Middle	√
U4U5-31	Middle	√
U4U5-74	Middle	√
U4U5-76	Middle	√