



STATE OF NEVADA
Department of Conservation & Natural Resources
DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor
Leo M. Drozdoff, P.E., Director
Colleen Cripps, Ph.D., Administrator

February 13, 2014

Jason Reed
NV Energy
6226 W. Sahara Avenue, M/S 30,
Las Vegas, NV 89146

Re: Nevada Division of Environmental Protection (NDEP) Comments on:
***Laser Induced Fluorescence Investigation Work Plan – Former Underground Product Piping,
Petroleum Tanks (Source Area 14)***

Facility NV Energy (NVE) Reid Gardner Station (RGS)
NDEP Facility ID # H-000530

Dear Mr. Reed:

The NDEP has received and reviewed NVE's *Laser Induced Fluorescence Investigation Work Plan at Former Underground Product Piping, Petroleum Tanks (Source Area 14)*. The work plan is dated January 16, 2014 and was received on January 17, 2014. NVE has requested an expedited review of the work plan to facilitate contracting and scheduling the investigation. The NDEP has the following comments to the work plan:

1. General Comment: Upon selection, please provide NDEP with information regarding the vendor who will perform the UVOST survey. Of interest will be experience in performing surveys of this kind and equipment to be used.
2. General Comment: While the UVOST data will be extremely valuable in delineating the vertical and lateral extent of petroleum hydrocarbons within the areas sampled, it will be equally important to consider the hydrocarbon distribution within the context of the local lithologic and stratigraphic framework. This can be facilitated by acquiring electrical conductivity (EC) data simultaneously with the UVOST data. Most contractors will routinely include the EC dipole with the UVOST assembly and acquire the EC data at no additional cost (e.g., Vironex). The EC data can be used to distinguish between fine-grained (clay and silt) and coarse-grained (sandy) sediments, identify vertical and lateral continuity of soil types, and provide critical information regarding why hydrocarbons are observed at some locations and not others or in identifying preferential pathways for hydrocarbon migration. It is our recommendation that EC data be collected in addition to UVOST data, if practical.
3. Page 4, Section 8, Paragraph 3: Suggest explicitly stating in the work plan that the locations of the 20 LIF boreholes and the 5 LIF borehole in LNAPL-free area are not shown on Figure
4. Page 4, Section 8, Paragraph 4: A concern regarding the proposed rationale for lateral delineation of hydrocarbons is that local lithologic variations may result in a low response at a selected location where further step-out locations may still encounter hydrocarbons. It is recommended that a few locations (perhaps on a larger grid spacing) be included beyond a



single low response boring to confirm the lateral extent has been delineated. The collection of EC data concurrent with UVOST data may also be used to ensure that low responses are truly beyond the impacted area and not associated with local lithologic variations.

5. Page 6, Section 11, Borehole Abandonment: Boreholes must be plugged in accordance with NAC 534.4371. Type II backfill is not listed as an approved plugging material.
6. Figure 2, Legend: The symbols for the active diesel AST and UST cannot be distinguished from each other on the figure.

Please contact me with any questions or comments about this letter at (775) 687-9396 or aoakley@ndep.nv.gov

Sincerely,



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