



NEVADA DIVISION OF
**ENVIRONMENTAL
PROTECTION**

STATE OF NEVADA
Department of Conservation & Natural Resources

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

August 14, 2015

Jason Reed
Senior Environmental Advisor
NV Energy
6226 W Sahara Ave M/S 30
Las Vegas, NV 89146

Re: **NV Energy (NVE)**
Reid Gardner Station (RGS)
NDEP Facility ID #H-000530
Nevada Division of Environmental Protection Comments to: *Source Area
Characterization Work Plans* for Source Areas 10, 11, 12, 15, and 16

Dear Mr. Reed:

The Nevada Division of Environmental Protection (NDEP) has received and reviewed NV Energy's (NVE's) work plans for five Source Areas (SA):

- Source Area 10, Former Units 1, 2, and 3 Lube Oil Rack
- Source Area 11, Former Gasoline UST and Warehouse 1
- Source Area 13, Former Diesel Fuel Unloading Area
- Source Area 15, Free Product Recovery System
- Source Area 16, Vehicle Maintenance Area

SA-10, SA-11, and SA-15 are dated July 8, 2015 and were received by the NDEP on July 10, 2015. SA-13 and SA-16 are dated July 20, 2015 and were received by the NDEP on July 21, 2015.

The work plans present site characterization work to delineate soil impacted by petroleum hydrocarbons and develop a remedial excavation approach to address contamination at the five listed sites. Based on review of these five Work Plans, the NDEP has technical and editorial comments, which are located in Attachment A. Because the five SA work plans follow the same template, the first set of general technical and editorial comments apply to all five Work Plans, or to a subset of Work Plans. Comments that are specific to individual Work Plans follow the general comments.

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

Sincerely,

Alison Oakley, CEM
Environmental Scientist III
Bureau of Corrective Actions

Mr. Jason Reed
RGS – Source Area Characterization Work Plans.
August 14, 2015
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cc: Jeff Collins, Nevada Division of Environmental Protection (NDEP)
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Anitha Rednam, Department of Water Resources, 1416 9th Street, Room 1140, Sacramento CA 95814

Attachment A

Technical Comments for Petroleum Source Area Work Plans

1. Section 3.4, Table – In the block that starts “TPH results exceed 100 mg/kg;...” Please note that TPH analysis may need a faster than standard turn-around from the analytical laboratory so that holding times for Methods 8260B and 8270C are not exceeded if the TPH result is greater than 100 mg/kg and additional analyses are needed.
2. Section 4.2, Soil Sample Collection Approaches – In-text table on page 10, regarding initial 1.5 foot sample and deeper soil sample appear clean: the procedure states that the initial sample will be collected at 1.5 feet and at 1-3-foot intervals below that. It is unclear how deep sampling will continue at any given location. In the immediate source area contaminants may have migrated vertically and then laterally at some depth along a lower permeable layer. As such, outside of the immediate source area, contamination may exist at depth, but not be observed in the shallow-most samples. The depth of investigation at each location must consider the potential for lateral spreading of contamination at depth outside of the immediate source area. Revise sample collection logic to include characterization of soil based on the potential for lateral spreading at depths below clean soil. Also, please address how the step-out approach will provide adequate delineation off of the line of direction (seventh paragraph). For example, if a step out to the north shows higher contamination than the original sample to the south, how will the area to the east and west of that new point be addressed?
3. Section 4.2 Soil Sample Collection Approaches – Provide a description of how field screening results will be used to determine whether a sample appears to be clean or impacted.
4. Section 6.5 Chemical Testing Plan – Provide analyte list and laboratory analytical methods for “general chemistry cations and anions.”
5. Section 7 Schedule and Communication – update schedule.
6. Figure 2 – Please show site-specific LIF locations on each Figure 2 (site specific figures) in each work plan because that aids in the understanding of potential TPH impacted areas.

Editorial Comments for Petroleum Source Area Work Plans

7. Section 3.0, First sentence – Generating units 1, 2, 3, and 4 are called out as located on Figure 1. These units are not shown on Figure 1. Please add a figure if the generating units need to be shown.
8. Section 3.2, first paragraph, second to last sentence – This sentence states, “The alluvial deposits mainly consist of clay, silt, and sand, with gravel deposits of dolomite, limestone, and volcanic rocks”. Revise the sentence to “... gravel deposits including dolomite, limestone, and volcanic rock fragments.”
9. Section 3.2, second paragraph, second to last sentence – In SA-10 and SA-13 Work Plans, this sentence includes report title “Semi-Annual Groundwater Monitoring Report.” Please

- revise report title to “Second Semi-Annual Groundwater Monitoring and Remediation Report” as shown in the reference list.
10. Section 3.3, first paragraph, last sentence – In SA-10 and SA-11, this sentence currently states, “TPH and VOCs were not detected in soil samples collected in in 1998...” Remove the redundant “in”.
 11. Section 3.5.2, Precision, second paragraph, third sentence (SA-10 and SA-15 only) – Revise sentence to “During data validation, **CH2M** Hill...”
 12. Section 3.5.2, Precision, second paragraph, third sentence (SA-11 only) – Please define CPR. “During data validation, **CPR** ...”
 13. Section 3.5.3, first sentence – This sentence varies by Work Plan. Revise this sentence to be consistent across all five Work Plans as follows, “Soil samples obtained during this study (as described in Section 4.3) will be placed in a lidded 4 oz. glass container (sample container) provided by the analytical laboratory.”
 14. Section 3.5.3 – Multiple terminologies are used for sample identification as follows: “Sample name” in Sample Containers and Labeling, “Sample identification number” in Chain-of-Custody Records, and “Sample unique name” in Field Document section. Please select a consistent sample identification nomenclature for this section.
 15. Section 4.1, first sentence – This sentence currently states, “Several pre-field activities will be performed, including coordination access, conducting site reconnaissance to identify remediation and sampling locations, ...” Since the sampling events will precede planned or potential remediation excavation activities, revise the sentence as follows, “Several pre-field activities will be performed, including coordination access, conducting site reconnaissance to identify soil sampling and remediation locations, ...”
 16. Section 4.1.1, first sentence – Please change the first sentence to “The drilling contractor will perform a utility clearance for all proposed boring locations, ...”
 17. Section 4.2, Soil Sample Collection Approach, second sentence (SA-16 only) – Change the second sentence to “ 50-foot spacing...”
 18. Section 5.2, Excavation Activities, third sentence (SA-13 and SA-16 only) – Change the third sentence to “The impacted soil will **be** excavated...”
 19. Section 5.3, Confirmation Soil Sample Collection Approach last sentence (SA-11 and SA-15 only) – Please change the last sentence to “Sidewall samples will **only** be collected...”
 20. Figures 1 and 2 – Please make the source area designation labels larger so they stand out from all of the other information on the figures.

SA-10 Work Plan Specific Comments

21. Section 3.2, last paragraph, last sentence – This sentence states, “Groundwater depth at SA-10 reported in the LIFR ranged from 20-21 feet.” Based on inferred depth to groundwater contours shown on Figure 4 of the LIFR, the depth to groundwater appears to be on the order of 10 feet, more consistent with the measured depth to groundwater of 12 feet stated in the first bullet of Section 3.3. Please verify depth to groundwater inferred from the LIF borings for this sentence and for the 20 foot depth to groundwater shown in the second bullet of Section 3.3. If significant differences in groundwater depth between the two

investigations do exist please provide a discussion of the variance and how it might impact proposed assessment activities.

22. Section 4.2, first paragraph, third sentence – This sentence states, “The SA-10 sampling grid measures 25 X 75 feet ...” Figure 2 shows the area as 50 X 50 feet. Please verify the SA-10 boundary lengths.
23. Section 4.6 Chemical Testing Plan – The plan states that additional soil samples with TPH concentrations over 100 mg/kg (gasoline, diesel, and oil range) may be analyzed for VOCs and PAHs. Section 3.1 states that “cleaning solvents” were historically stored in SA-10. Cleaning solvents may contain VOCs, for example tetrachloroethene (PCE), trichloroethene (TCE), and trichloroethene (TCA), that are not associated with total petroleum hydrocarbons (TPH). VOCs associated with cleaning solvents, but not associated with TPH, may occur at elevated concentrations even though TPH is less than 100 mg/kg. Testing for VOCs should be included where the potential for non-petroleum hydrocarbon-related VOCs exist, regardless of the observed TPH concentration.

SA-11 Work Plan Specific Comments

24. Section 3.2, second paragraph, last sentence (editorial comment) – Revise “NV Energy, 2014” to “NV Energy, 2015”.
25. Section 3.3, second bullet, fifth sentence – This sentence states, “Groundwater depth near SA-11 was interpreted as 14 feet (N22) to 20 feet in the LIF probe holes near SA-11.” Based on inferred depth to groundwater contours shown on Figure 4 of the LIFR, the depth to groundwater appears to be on the order of 10 feet, more consistent with the measured depth to groundwater of 12 feet stated in the first bullet of Section 3.3. Please verify depth to groundwater inferred from the LIF borings. If significant differences in groundwater depth between the two investigations do exist please provide a discussion of the variance and how it might impact proposed assessment activities.
26. Section 3.5.3, Field Documentation section – Add the bullet “Site or sampling area sketch showing sample location and measured distance;” as shown in the other four Work Plans.
27. Section 5.2, Excavation Sampling Plan (Editorial) – Note that Warehouse 1 is not labeled on any of the figures.

SA-13 Work Plan Specific Comments

28. Figure 2 – Soil sample locations are arranged on a 50-foot center grid. Please provide rationale for using a 50-foot grid spacing when the sampling locations for the SA-10, SA-11, and SA-15 Work Plans are spaced on a 25-foot grid.

SA-15 Work Plan Specific Comments

29. Section 5.2, second sentence, second paragraph – This sentence states, “Based on free product measurements at HM-7 and HR-1, 8 feet is the anticipated maximum depth of the excavation at SA-15.” In Section 3.3, depth to water in HM-7 and HR-1 is reported to be 15 to 22 feet. Please verify anticipated depth to water for SA-15.

30. Figure 2 – Historical soil sample DIESELCOMP-1 had TPH concentrations greater than 6,000 mg/kg in the 0-1 foot bgs depth interval. Provide rationale for not extending the SA-15 sample area to encompass the DIESELCOMP-1 sample location for source area delineation, or revise the sampling program to include this area of the site.

SA-16 Work Plan Specific Comments

31. Section 3.3, second to last sentence, first bullet under Additional investigation reports subsequent to the PSAICR – This sentence states, “Free product was also present at HM-44 (0.65 feet) and HM-42 (0.7 feet) located closer to SA-16, within 25 feet of the former building.” HM-42 is located approximately 80 feet to the southwest of the former building. Revise this sentence to more accurately indicate the location of HM-42 relative to SA-16.
32. Figure 2 – For the northern portion of the sampling area, soil sample locations are arranged on a 50-foot center grid. Provide rationale for using a 50-foot grid spacing in the north portion of the source area when the sampling locations for the southern portion of the sampling area are spaced on a 25-foot grid.