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December 30, 2015

Mr. James D. Dotchin
Chief, Bureau of Industrial Cleanup
Nevada Division of Environmental Protection
2030 East Flamingo Road, Suite 230
Las Vegas, Nevada 89119

Subject: NERT Work Plan (#2015-160) for the preparation of the Geophysical Pilot Test Work Plan – NERT Remedial Investigation, Downgradient Study Area, Henderson, Nevada

Dear Mr. Dotchin:

As requested by the Nevada Division of Environmental Protection (NDEP), AECOM is pleased to provide this work plan for developing the Surface Geophysical Pilot Test Work Plan in support of the Downgradient Study Area component of the Nevada Environmental Response Trust (NERT) Remedial Investigation in Henderson, Nevada. Following successful completion of the pilot test a full-scale surface geophysical survey will be conducted to evaluate the subsurface hydrogeological structures near and along segments of the Las Vegas Wash (LVW) within the Downgradient Study Area where significant contributions to the perchlorate loading are suspected based on historical data and surface water sampling to be performed under Work Plans 2015-150 and 2015-151. The ultimate goal of the full-scale geophysical survey is to improve the siting locations and screening depths of additional groundwater monitoring wells within the Downgradient Study Area.

The objective of this Work Plan is to describe procedures to evaluate and test which geophysical system can be expected to provide the most representative understanding of the subsurface hydrogeological structures near and along the LVW. For example, these data will be used to select which geophysical system is best able to identify the top of the Muddy Creek formation (MCf) including having sufficient depth of investigation to at least reach the bottom of the paleochannels, and possibly aide in the characterization of the sediments within the paleochannels. This NERT work plan includes a brief summary of the scope of work and a preliminary budget estimate and schedule to develop the Surface Geophysical Pilot Test Work Plan.

SCOPE OF WORK

AECOM will prepare a Work Plan that describes the tasks needed to conduct the surface geophysical pilot test activities. The Work Plan will include the collection and evaluation of existing geophysical surveys adjacent to and covering the NERT Downgradient Study Area, and existing borehole/well logs in and adjacent to NERT Downgradient Study Area and the adjacent northern NERT Core Plume Study Area, selection of two pilot test locations, and procedures to implement the pilot test. All work will be conducted under the supervision of a Nevada Certified Environmental Manager.

The success of previous geophysical investigations in the Study Area will be evaluated by comparing geophysical results to nearby boring logs and existing channel interpretation (cross-sections), particularly at the five paleochannel locations along and immediately up-gradient of the LVW. Interpreted top of the MCf from boring logs will be evaluated with the various geophysical sections both along the paleochannels and in between to existing borehole data. This comparison of datasets will show where correlations are confirmed and where there are discrepancies. In areas with discrepancies, possible alternative interpretations may be provided. Updated geophysical data

maps with the results of this evaluation will be prepared and potential locations for additional geophysical lines may be proposed. Based upon the performance of the pilot test and technical and cost comparisons of each geophysical system, the most cost-effective system that delivers the best product will be selected for the full-scale survey.

It is anticipated that the work will be conducted in conformance with the Quality Assurance Project Plan (QAPP) and Field Sampling and Analysis Plan (FSAP) as described in AECOM Work Plan #2015-130. The QAPP, FSAP, and Health and Safety Plan (HASP) will be updated to specifically address this scope of work, including updating the HASP for potential hazards associated with the geophysical survey work. Under this work plan, Standard Operating Procedures (SOPs) will be developed to specifically address surface geophysical survey operations.

Reporting

A Pilot Test Work Plan will be prepared that will include descriptions of preliminary geophysical and boring log data evaluation, proposed methodology for determining the pilot test locations, field methods, and other procedures to implement the geophysical pilot test investigation. A draft Pilot Test Plan will be prepared for review by NDEP. Upon receipt of NDEP comments, the Pilot Test Plan will be submitted to NERT and USEPA for comment. Upon finalization, the Pilot Test Plan will be submitted to NDEP, USEPA and the NERT Stakeholders.

Deliverable(s): Surface Geophysical Pilot Test Work Plan (Draft and Final) including SOPs; Project Budget.

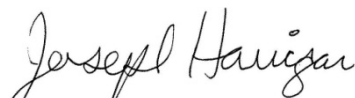
PRELIMINARY SCHEDULE AND ESTIMATED COSTS

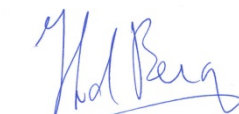
The following summarizes the preliminary work plan implementation schedule and estimated cost:

Task Order and Title	Approximate Schedule	Estimated Cost
2015-160-01 – Development of the Surface Geophysical Pilot Test Work Plan (AECOM)	December 2015 – March 2016	\$88,750
Work Plan Total		\$88,750

Scope of work and cost details for this NERT work plan have been uploaded in the NDEP BMI financial database. If this work plan meets with your approval, please send AECOM your authorization at your earliest convenience.

If you have any questions regarding this work plan, or if AECOM may be of further assistance, please contact Carmen Caceres-Schnell at (805) 764-4031 or either of the undersigned.


Joseph Harrigan
Geophysics Lead


Harry Van Den Berg, PE
Principal-in-Charge