# Lower Colorado River Water Quality Partnership



Central Arizona Project P.O. Box 43020 Phoenix, Arizona 85080-3020 623-869-2333



Metropolitan Water District of Southern California P.O. Box 54153 Los Angeles, California 90054 213-217-6000



Southern Nevada Water Authority 1001 South Valley View Las Vegas, Nevada 89107 702-258-3100

### VIA E-MAIL AND FEDERAL EXPRESS

July 11, 2017

Mr. James (JD) Dotchin Chief, Bureau of Industrial Site Cleanup Nevada Division of Environmental Protection 2030 E. Flamingo Rd., Suite 230 Las Vegas, NV 89119

Dear Mr. Dotchin:

Comments on the May 5, 2017 Draft RI/FS Work Plan Addendum: Phase 3 Remedial Investigation for the Nevada Environmental Response Trust Site

Thank you for the opportunity to review and comment on the May 5, 2017 draft RI/FS Work Plan Addendum: Phase 3 Remedial Investigation ("Phase 3 RI Work Plan" or "Work Plan") for the Nevada Environmental Response Trust ("NERT") site ("Site") in the Henderson, Nevada area. This letter is being sent by the Central Arizona Project, the Metropolitan Water District of Southern California, and Southern Nevada Water Authority (collectively, the Lower Colorado River Water Quality Partnership ("Partnership")). Our agencies deliver water from the Colorado River to over 25 million people in the American Southwest. As you know, we have been actively involved in working with the Nevada Division of Environmental Protection ("NDEP") and other stakeholders for several years to address the issue of perchlorate contamination originating from the NERT Site, a result of past chemical manufacturing operations, and mitigating its impact within our service areas.

Under NDEP's oversight, there has been significant progress in reducing the loading of perchlorate into the Las Vegas Wash since perchlorate was first discovered in the Colorado River in 1997. At that time, loading into the Wash was approximately 900 pounds per day, resulting in perchlorate levels exceeding 20 micrograms per liter ( $\mu g/L$ ) at times within Lake Mead. The rapid response to this issue has resulted in over a 90 percent reduction in perchlorate loading into the Las Vegas Wash, with levels in Lake Mead and the downstream Colorado River remaining typically below 2  $\mu g/L$  over the past several years. Although the remedial efforts to date have been successful in reducing perchlorate loading into the Las Vegas Wash, a significant perchlorate mass still remains at the NERT Site

<sup>&</sup>lt;sup>1</sup> Similar to the use of these terms in the Phase 3 RI Work Plan, "NERT" is used to describe the geographic area of the work, and "Trust" is used to describe the entity.

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and continues to migrate downstream towards the Wash and ultimately to the Colorado River.

As part of the RI/FS Work Plan for the NERT Site and associated downgradient plume areas, the Trust is conducting a remedial investigation for different areas presumably impacted by legacy NERT perchlorate discharges, collectively referred to as the "NERT RI Study Area." This area requires further characterization to determine the nature and extent of chemicals of potential concern (COPCs) in soil and groundwater. The initial phase (Phase 1) of remedial investigations included monitoring of the On-Site NERT RI Study Area, the Off-Site NERT RI Study Area, and the Downgradient Study Area, as shown in **Figure 1**. Phase 2 expanded the investigation to include additional sampling within these areas to better understand the perchlorate pathways and improve estimates of perchlorate flux to the Las Vegas Wash. The Trust is now initiating a Phase 3 of the remedial investigation to include the Eastside Study Area (**Figure 1**). The Eastside Study Area includes the following two subareas: (1) the Eastside Area, which was historically part of the BMI Common Area; and (2) the Northeast Area.

The stated purposes of the Phase 3 RI Work Plan are to: (1) present a work plan for the investigation of the Eastside Study Area, the investigation of which is designed to determine the extent of contamination in the Eastside Study Area, obtain data to support future feasibility study evaluations, and assist in the selection of the final remedy; and (2) refine and modify the Remedial Action Objectives ("RAOs") for the NERT RI Study Area to incorporate the findings of the NERT Phase 1 RI and expanded NERT RI Study Area, including the Eastside and Downgradient Study Areas. This is a critical process as it will determine the final remedy that will be employed to address the contamination in these areas to the extent that it originates at the NERT Site and continues to seep into the Las Vegas Wash.

The Partnership provides the following general comments on the Phase 3 RI Work Plan and includes specific comments in **Attachment A**.

### GENERAL PARTNERSHIP COMMENTS

# Operable Units Strategy

As shown in **Figure 1**, the revised potential long-term RAOs identified in the Phase 3 RI Work Plan include: (1) Plume Containment and Source Control, (2) Mid-Plume Containment and Mass Removal, and (3) Mitigate Discharge to Las Vegas Wash. We recognize that these RAOs address different geographic areas of the NERT RI Study Area, each with differing contamination issues that may require distinct remedial approaches. The Plume Containment and Source Control RAO focuses on removing and preventing the continued release of COPCs from the higher contamination source area. The Mid-Plume Containment and Mass Removal RAO focuses on mitigating the migration of COPCs present in downgradient groundwater. Lastly, the Mitigate Discharge to Las Vegas Wash RAO focuses on mitigating the discharge of COPCs to the Las Vegas Wash by reducing the COPC concentrations in the alluvial aquifer and Upper Muddy Creek formation.

The NERT RI Study Area is a complex site, and the Partnership supports the Trust's overall strategy to organize the study area into Operable Units ("OUs") to facilitate the remediation process. The National Oil and Hazardous Substances Pollution Contingency Plan ("NCP") defines an OU as "a discrete action that comprises an incremental step toward comprehensively addressing site problems. This discrete portion of a remedial response manages migration, or eliminates or mitigates a release, threat of a release, or pathway of exposure." 40 C.F.R. § 300.5. Based on the Work Plan, the Trust proposes to

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organize the NERT RI Study Area into two OUs with the intent to accelerate the remediation schedule and to create efficiency and effectiveness in attaining the RAOs. The Trust's proposed OU-1 would include the On-Site NERT RI Study Area, the Eastside Area, and the portion of the Off-Site NERT RI Study Area south of the mid-plume containment boundary line. The Trust's proposed OU-2 would include the Northeast Area, the Downgradient Study Area, and the portion of the Off-Site NERT RI Study Area north of the mid-plume containment boundary line.

When aligning the Trust's proposed OUs with the RAOs, OU-2 would address the Mitigate Discharge to Las Vegas Wash RAO, and OU-1 would address the other two RAOs - Plume Containment and Source Control RAO and Mid-Plume Containment and Mass Removal RAO. The Partnership believes combining the On-Site NERT RI Study Area with the newly added Eastside Area in OU-1 is not an optimal approach and could potentially delay remedial actions at the On-Site NERT RI Study Area. The Trust's proposed OU-1 represents sub-areas with very different contamination issues that will likely require different remedial approaches and technologies. The source area soil and groundwater contamination requires immediate source control actions to minimize downgradient migration. We believe the investigation for the Eastside Area groundwater contamination is still in its early stages and may require different perchlorate mass removal actions, as well as other unique challenges associated with its location.

To better align the OUs with the three revised long-term RAOs, the Partnership recommends organizing the NERT RI Study Area into three OUs as shown in **Figure 2**: (1) Proposed OU-1 (On-Site NERT RI Study Area): Plume Containment and Source Control RAO; (2) Proposed OU-2 (same areas that the Trust proposes for OU-2): Mitigate Discharge to Las Vegas Wash RAO; and (3) Proposed OU-3 (Eastside Area and the portion of the Off-Site NERT RI Study Area south of the mid-plume containment boundary line): Mid-Plume Containment and Mass Removal. These Proposed OUs represent discrete actions that would comprehensively achieve the remedial objectives for the RI Study Area.

In addition to maintaining consistency with the Trust's three proposed revised RAOs, organizing the NERT RI Study Area into three OUs allows for risk assessments to be conducted in accordance with the unique characteristics of each sub-area. Each of the three proposed OUs represents varying levels of actual and potential risks to human health and the environment. Separating the OUs in this manner provides flexibility to address risk reduction in a phased approach. As a significant mass of perchlorate remains on-site, the Proposed OU-1 should be addressed as the highest priority to reduce risks in a timely manner. This contaminant mass has the potential over time to mobilize to groundwater and migrate towards the Las Vegas Wash. This approach would be in accordance with U.S. Environmental Protection Agency ("EPA") guidance indicating that, "Sites should generally be remediated in operable units when early actions are necessary or appropriate to achieve significant risk reduction quickly; when phased analysis and response is necessary or appropriate given the size or complexity of the site; or to expedite the completion of total site cleanup. Operable Units (OUs) are used to break up the site into more manageable parts to perform cleanup." (EPA Superfund Program Implementation Manual Fiscal Year 2017) Accordingly, sites may be divided into separate OUs in order to "move quickly to reduce health and environmental risks while continuing the process of studying other matters on the site."

Dividing the NERT RI Study Area into the three Proposed OUs would also separate the Study Area into geographic areas with distinct issues (extent and magnitude of contamination, current understanding of site characteristics and contamination, ease of access to and ownership of Study Area properties, etc.) that may require site-specific remedies to move forward on different timelines. Initial site investigations have identified the contamination sources in the On-Site RI Study Area (represented by the Proposed

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OU-1) requiring source control to reduce downgradient migration and contaminant loading to the midplume areas (represented by the Proposed OU-3) and to the Las Vegas Wash (represented by the Proposed OU-2). The Phase 3 RI Work Plan will further characterize perchlorate mass for the NERT RI Study Area. If new information for the Proposed OU-2 and/or the Proposed OU-3 requires additional investigation, the Proposed OU-1 may proceed independently with time-critical remedial actions to reduce health and environmental risks. Also, proceeding with the Proposed OU-2 separate from the Proposed OU-3 would allow the Trust to focus on mitigating perchlorate and other contaminant loading into the Las Vegas Wash (ultimately, the primary goal of these remedial efforts) while developing an appropriate long-term remediation strategy for the entire Study Area, as necessary.

Creating the Proposed OU-3 would allow the Trust to investigate the newly added Eastside Area on a separate track from the other two Proposed OUs. In comparison to the Trust's investigation and remediation activities at Proposed OU-1 which have been ongoing since the Trust's formation in 2011. only recently did NDEP direct the Trust to investigate perchlorate and chlorate impacts to the subsurface in the Eastside Study Area in May 2016. Based on the data available for the Eastside Study Area, it appears that the perchlorate and chlorate concentrations in groundwater in the Eastside Study Area are much lower than at the NERT Site. Also, according to the Phase 3 RI Work Plan, many of the wells in the Eastside Study Area have not been sampled since 2009, and some may have been decommissioned. Additionally, the accuracy of the status of the monitoring wells within the Eastside Study Area is "unknown," as noted in the Work Plan. Furthermore, under NDEP's oversight, Basic Remediation Company LLC ("BRC") is currently investigating and remediating the environmental impacts associated with constituents other than perchlorate and chlorate within the Eastside Study Area. Accordingly, there may be an opportunity for BRC and the Trust to coordinate remedial actions for this area which may lead to cost-effective, mutually beneficial solutions. Thus, it is more efficient and effective for the Trust to prioritize its ongoing investigation and remedial efforts at Proposed OU-1 for source control. Ongoing investigations are also critical at Proposed OU-2 to develop remedial strategies to reduce perchlorate loading to the Las Vegas Wash, while continuing the Trust's more recent investigation of Proposed OU-3. Investigating and remediating the on-site and Las Vegas Wash areas will provide the greatest protection for the Colorado River system, and we believe should have the highest priority for current use of Trust funds.

It should be noted that the proposed strategy incorporating three OUs allows flexibility for the separate OUs to be merged later at any point during the RI/FS or Record of Decision ("ROD") processes. The OUs may be merged in the FS to consider comprehensive remedial alternatives for the entire Study Area or they can be merged in a final ROD to select the final remedial actions based on separate FSs for the OUs. If determined to be more effective in achieving RAOs, the OUs may also proceed with separate FSs and RODs based on recommended remedy technologies or other time-critical risk reduction needs. The Partnership recognizes that minor administrative costs may be incurred with organizing the NERT RI Study Area into three Proposed OUs instead of the Trust's two proposed OUs identified in the Work Plan. However, we believe that the three Proposed OUs will provide much greater flexibility and opportunities for addressing risk reduction quicker and more efficiently.

### II. Protection of Downstream Interests

As noted earlier, the Phase 3 RI Work Plan presents revised potential long-term RAOs for the NERT RI Study Area. These RAOs are focused on achieving source control goals for the area and protection of the Las Vegas Wash consistent with EPA and Nevada regulations. The Partnership emphasizes the importance for the Trust to continue considering downstream interests and to ensure long-term

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protection for Lake Mead and Colorado River users when developing the final remedies for the NERT Site and the downgradient areas impacted by contamination originating at the NERT Site.

The potential for a new, lower perchlorate standard (an EPA and/or a California primary drinking water standard) further emphasizes the need for remedial measures to be in place to reduce loading into the Las Vegas Wash. In California, perchlorate has been a regulated drinking water constituent since October 2007. California's maximum contaminant level ("MCL") for perchlorate is 6 µg/L. On February 27, 2015, California lowered the public health goal ("PHG") for perchlorate from 6 µg/L to 1 ug/L. California Health and Safety Code Section 116365(a) requires the California State Water Resources Control Board ("State Board") to set a primary drinking water standard for perchlorate that is as close to the PHG as is economically and technologically feasible. In 2016, the State Board started its review of the perchlorate MCL. Recently, on June 16, 2017, the State Board's Division of Drinking Water recommended a two-step approach for possibly revising the perchlorate MCL. First, the State Board would propose lowering the detection limit for purposes of reporting ("DLR") from the current 4 μg/L concentration to a level closer to, equal to, or less than the PHG of 1 μg/L. With a revised DLR, new occurrence data can be collected to support the development of a revised MCL if appropriate. Second, if supported by the new occurrence data, the State Board would propose a new MCL as close to the 1 µg/L PHG as is technologically and economically feasible. Thus, there is potential for a lower perchlorate MCL to be developed in California in the near future. In addition, there is currently no federal MCL for perchlorate. However, as a result of EPA's settlement last year of NRDC's lawsuit that sought to compel EPA to set a drinking water standard for perchlorate, EPA must propose an MCL and a maximum contaminant level goal ("MCLG") for perchlorate by October 31, 2018, and EPA must issue a final MCL and MCLG for perchlorate by December 19, 2019.

Reducing perchlorate loading into the Colorado River and ensuring current and future regulatory limits are met are critical to the Partnership and its member agencies. As an example of the NERT Site's farreaching impact, the Metropolitan Water District of Southern California ("Metropolitan") faces significant potential liability as a result of the perchlorate from the NERT Site in Metropolitan's water supply. For example, in 2004, the Orange County Water District ("OCWD") filed a lawsuit against several industrial defendants, alleging that they were responsible for contaminating OCWD's groundwater primarily with volatile organic compounds ("VOCs"). Subsequently, OCWD advised defendants that the remediation costs had considerably increased due to the presence of perchlorate in the groundwater. In 2008, the defendants filed cross-claims against Metropolitan based on Metropolitan's sale of water containing perchlorate to OCWD for replenishment purposes. The source of the perchlorate in Metropolitan's water was traced to the NERT Site in Henderson, Nevada. The trial was divided into phases, with the cross-claims against Metropolitan reserved for a later phase. At the end of the initial phase of the trial, the court ruled in favor of the industrial defendants. Because the defendants were not liable to OCWD, the court dismissed all pending cross-complaints. The appellate court recently reversed the judgment as to two of OCWD's claims against Northrop, and affirmed the rest of the judgment. It is currently unknown whether any of the parties will appeal.

For these reasons, it is imperative that the Trust's Phase 3 RI Work Plan, which will be conducted under NDEP's oversight, focus on necessary short- and long-term actions that ensure full protection of the Las Vegas Wash and the downstream Colorado River. The overarching goal should be that the water reaching users in downstream states fully complies with those states' regulations. In this regard, the Partnership supports the goals of the revised long-term RAOs which focus on reducing source contamination and ultimately protecting the Las Vegas Wash. Additionally, we encourage NDEP and

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the Trust to maintain their focus on both short- and long-term remedial actions which, as stated in the Work Plan, "will help achieve at downstream state boundaries out-of-state MCLs; namely, California's MCL for perchlorate of 6  $\mu$ g/L . . . and other MCLs for COPCs originating at the Site." Remedial actions in the NERT RI Study Area should also be designed to achieve, downstream in California, the hexavalent chromium MCL of  $10~\mu$ g/L.

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The Partnership appreciates the opportunity to identify our key concerns and interests, and to provide input to the Trust and NDEP in the RI/FS process. In addition to the issues already discussed, detailed comments on the Phase 3 RI Work Plan are included in **Attachment A** to this letter. We hope this information will be helpful to NDEP as you direct the Trust in revising the Work Plan. We view the Phase 3 RI Work Plan as a critical roadmap because it will further help define the long-term remedy for the NERT Site and the downgradient areas impacted by contamination originating at the NERT Site. This remedy must be developed not only by looking at technical feasibility and effectiveness, but also by considering the associated costs and appropriate prioritization of remedial efforts. As already explained, we believe the containment and cleanup of contamination at the NERT Site, along with mitigating perchlorate loading into the Las Vegas Wash and the downstream Colorado River system, should be the primary goals for the cleanup efforts. Accordingly, the remedial objectives, standards, and alternatives should be defined and structured in the Work Plan to achieve those goals and to ensure the protection of downstream interests.

The Partnership values the continued efforts by NDEP to diligently oversee and direct cleanup operations at the NERT Site. We look forward to our continued coordination with NDEP and the Trust through quarterly stakeholder meetings, technical roundtables, and participation throughout the RI/FS process.

Sincerely,

Theodore C. Cooke General Manager Central Arizona Project Jeffrey Kightlinger General Manager The Metropolitan Water District of Southern California John J. Entsminger General Manager Southern Nevada Water Authority

Attachments

cc:

Jeff Kinder, NDEP Deputy Administrator Weiquan Dong, NDEP Bureau of Industrial Site Cleanup Carlton Parker, NDEP Bureau of Industrial Site Cleanup Christa Smaling, NDEP Bureau of Industrial Site Cleanup Frederick Perdomo, Nevada Attorney General's Office Alison Fong, U.S. Environmental Protection Agency, Region 9 Mark Duffy, U.S. Environmental Protection Agency, Region 9 Jay A. Steinberg, Nevada Environmental Response Trust Mr. James (JD) Dotchin Page 6 July 11, 2017

the Trust to maintain their focus on both short- and long-term remedial actions which, as stated in the Work Plan, "will help achieve at downstream state boundaries out-of-state MCLs; namely, California's MCL for perchlorate of 6  $\mu$ g/L . . . and other MCLs for COPCs originating at the Site." Remedial actions in the NERT RI Study Area should also be designed to achieve, downstream in California, the hexavalent chromium MCL of 10  $\mu$ g/L.

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The Partnership appreciates the opportunity to identify our key concerns and interests, and to provide input to the Trust and NDEP in the RI/FS process. In addition to the issues already discussed, detailed comments on the Phase 3 RI Work Plan are included in **Attachment A** to this letter. We hope this information will be helpful to NDEP as you direct the Trust in revising the Work Plan. We view the Phase 3 RI Work Plan as a critical roadmap because it will further help define the long-term remedy for the NERT Site and the downgradient areas impacted by contamination originating at the NERT Site. This remedy must be developed not only by looking at technical feasibility and effectiveness, but also by considering the associated costs and appropriate prioritization of remedial efforts. As already explained, we believe the containment and cleanup of contamination at the NERT Site, along with mitigating perchlorate loading into the Las Vegas Wash and the downstream Colorado River system, should be the primary goals for the cleanup efforts. Accordingly, the remedial objectives, standards, and alternatives should be defined and structured in the Work Plan to achieve those goals and to ensure the protection of downstream interests.

The Partnership values the continued efforts by NDEP to diligently oversee and direct cleanup operations at the NERT Site. We look forward to our continued coordination with NDEP and the Trust through quarterly stakeholder meetings, technical roundtables, and participation throughout the RI/FS process.

Sincerely,

Theodore C. Cooke General Manager Central Arizona Project

Jeffrey Klightlinger General Manager

The Metropolitan Water District of Southern California

John J. Entsminger General Manager Southern Nevada Water Authority

### Attachments

cc: Jeff Kinder, NDEP Deputy Administrator
Weiquan Dong, NDEP Bureau of Industrial Site Cleanup
Carlton Parker, NDEP Bureau of Industrial Site Cleanup
Christa Smaling, NDEP Bureau of Industrial Site Cleanup
Frederick Perdomo, Nevada Attorney General's Office
Alison Fong, U.S. Environmental Protection Agency, Region 9
Mark Duffy, U.S. Environmental Protection Agency, Region 9
Jay A. Steinberg, Nevada Environmental Response Trust

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Andrew Steinberg, Nevada Environmental Response Trust Tanya C. O'Neill, Foley & Lardner, LLP

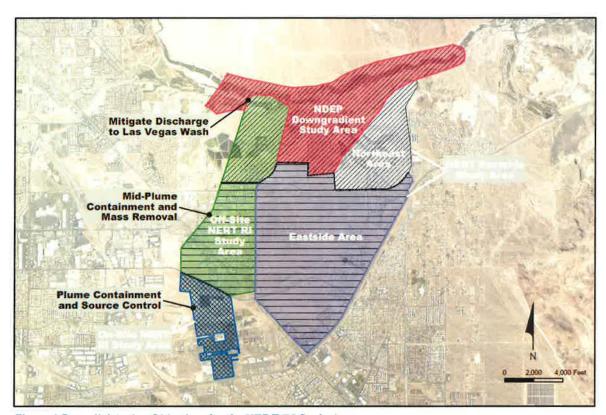


Figure 1 Remedial Action Objectives for the NERT RI Study Area
(Adapted from RI/FS Work Plan Addendum: Phase 3 Remedial Investigation by Nevada
Environmental Response Trust, May 2017)

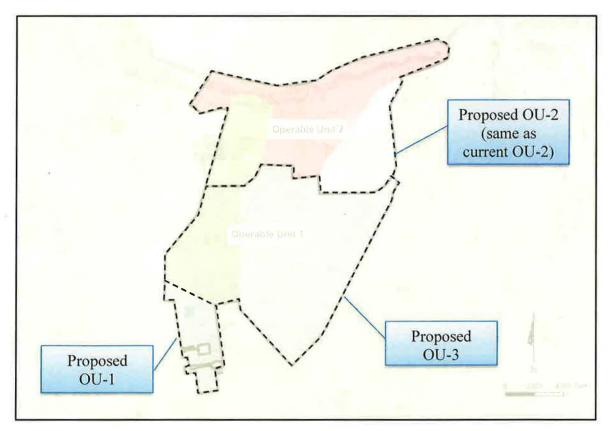


Figure 2 Proposed Operable Units
(Adapted from RI/FS Work Plan Addendum: Phase 3 Remedial Investigation by Nevada
Environmental Response Trust, May 2017)

## LOWER COLORADO RIVER WATER QUALITY PARTNERSHIP

# COMMENTS ON PHASE 3 RI WORK PLAN FOR NEVADA ENVIRONMENTAL RESPONSE TRUST SITE

The Partnership appreciates the opportunity to comment on the draft Phase 3 RI Work Plan for the NERT RI Study Area. Below are our specific comments.

## **A. GENERAL COMMENTS:**

# 1. The Operable Units Strategy Should Include Three OUs

As discussed in the preceding letter, the Partnership recommends organizing the NERT RI Study Area into three Proposed OUs: (1) Proposed OU-1 (On-Site NERT RI Study Area): source control and groundwater containment at the NERT Site; (2) Proposed OU-2 (same areas that the Trust proposes for OU-2): mitigate discharge in Las Vegas Wash and downgradient aquifer restoration in the off-site area north of Galleria Road; and (3) Proposed OU-3 (Eastside Area and the portion of the Off-Site NERT RI Study Area south of the mid-plume containment boundary line): mid-plume containment and mass removal. This OU strategy will align the three Proposed OUs with the three proposed revised RAOs, provide flexibility in addressing risk reduction in a phased approach, separate the RI Study Area into geographic areas with distinct issues, and allow an independent investigation of the newly added Eastside Study Area.

## **B. COMMENTS ON SPECIFIC SECTIONS:**

- 1. Executive Summary, page ES-1, second paragraph: Insert "originating from the NERT Site" in the second sentence as follows: "The investigation is designed to determine the extent of contamination originating from the NERT Site in the Eastside Study Area, . . . ."
- 2. Executive Summary, page ES-1, fourth paragraph: Clarify the location of the Eastside Study Area. The first sentence of this paragraph states: "The Eastside Study Area is located adjacent to an industrial land use area (the current Black Mountain Industrial [BMI] Complex). . . ." However, it is not clear whether the Eastside Area is part of the BMI Complex since the first sentence in Section 3.0 on page 11 states: "Much of the Eastside Study Area where the Phase 3 RI will take place was part of the original BMI Complex area, . . . ."
- 3. Section 1.0 Introduction, page 1, second paragraph: Change "NERT" to "the Trust" in the first sentence as follows: "In May 2016, NDEP directed NERT the Trust to expand its RI Study Area and investigate Henderson Legacy Conditions (HLC) in . . . ."
- **4.** Section 1.0 Introduction, page 2, second bullet: Change "Section 2" to "Sections 2 and 4.2.3."
- 5. Section 2.7.2 Local Geology, page 8, first partial paragraph: Change "NERT's" to "the Trust's" in the following sentence: "The BRC CSM will be evaluated and refined as part of NERT's the Trust's development of the NERT CSM and as part of the NERT RI Study Area RI Report."

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- **6.** Section 2.8 Surface Water: The man-made lakes for the golf course in the Northeast Area should also be identified as surface water in the study area. Groundwater studies in the area should evaluate potential groundwater mounding that would affect groundwater flow.
- 7. Section 3.0 Regulatory Actions and Site Investigations, page 12, first paragraph, and Figure 3-1: Why did NDEP grant NFA status to certain non-impacted areas of the BMI Common Area (which are referred to as "Exclusion Areas")? Are those areas still excluded, or is BRC currently investigating and remediating the environmental impacts associated with constituents other than perchlorate and chlorate within those areas? Why are those "Excluded Areas" included within the Eastside Study Area that NDEP has directed the Trust to investigate?
- 8. <u>Section 3.0 Regulatory Actions and Site Investigations, page 13, third paragraph:</u> Should the references to "chromium" be changed to "hexavalent chromium," such as "Perchlorate and <u>hexavalent</u> chromium are the primary Site-related chemicals detected in soil at the NERT Site and in groundwater beneath and downgradient of the Site"?
- **9.** Section 4.1 Initial Evaluation of Current Conditions: The occurrence and distribution of hexavalent chromium in the Eastside Study Area should be included in the discussion provided in this section.
- 10. <u>Section 5.0 Remedial Action Objectives and ARARs, page 22, first full bullet:</u> Should the reference to "chromium" in the following sentence be changed to "hexavalent chromium": "The most prevalent COPC detected in groundwater at the Site other than perchlorate is chromium"?
- 11. Section 5.0 Remedial Action Objectives and ARARs, page 22, footnote 2: The word "Hazardous" should be changed to "Hazard" and the words "perchlorate in" should be added to the following sentence: "Office of Environmental Health Hazardous Assessment (OEHHA) within the California Environmental Protection Agency (Cal EPA) has issued a preliminary health goal (PHG) of 1 μg/L for perchlorate in drinking water (Cal EPA 2015)."
- 12. Section 5.0 Remedial Action Objectives and ARARs, page 22, second paragraph According to the RI/FS Work Plan (Revision 2), hexavalent chromium is a COPC at the NERT Site and, according to the Phase 3 RI Work Plan, the OU reports will include "[u]pdated interpretations of the lateral and vertical distributions of perchlorate and hexavalent chromium in soil and groundwater, which will provide the basis for estimates of the residual COPC mass in vadose zone soil and groundwater." However, the Phase 3 RI Work Plan does not mention California's MCL for hexavalent chromium and, instead, focuses only on chromium, stating that the "chemical-specific ARAR for chromium is the federal maximum contaminant level (MCL) of 100 μg/L, which the State of Nevada has adopted by reference (NAC 445A)." Similar to referencing California's MCL for perchlorate, Section 5.0 Remedial Action Objectives and ARARs should indicate that short- and long-term remedial actions will help achieve California's MCL for hexavalent chromium.

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- 13. Section 5.2 Revised Potential Long-Term RAOs for the Expanded RI Study Area, page 23, fourth bullet: Change "will" to "may" in the last sentence as follows: "Contaminant reduction efforts will may be necessary to ensure that mitigating discharge to the Las Vegas Wash can be achieved."
- 14. Section 6.9 Data Evaluation and Reporting, page 32, paragraph #1: "The mass estimates are anticipated to include estimates of perchlorate and chromium mass in the unsaturated zone, the saturated alluvium, and the saturated UMCf." Will the mass of hexavalent chromium also be estimated in these various zones?
- 15. <u>Figure 1-2 Surrounding BMI Complex Facilities</u>: The legend shows American Pacific to be a purplish color, but the former AMPAC site is not colored on the figure. Also, the Endeavour (former AMPAC; former Pepcon) site on Figure 1-2 is a different shape from the Endeavour (former AMPAC; former Pepcon) site on Figure 1-3.