To: Brown, Anthony R (RM)[anthony.brown@bp.com]
Cc: Hillenbrand, John[Hillenbrand.John@epa.gov]; Wirtschafter, Joshua[Wirtschafter.Joshua@epa.gov]; Dana Barton[Barton.Dana@epa.gov]; Shaffer, Caleb[Shaffer.Caleb@epa.gov]; Gary Riley[Riley.Gary@epa.gov]; Greg Reller[gr@burlesonconsulting.com]; Cory Koger[Cory.S.Koger@usace.army.mil]
From: Deschambault, Lynda
Sent: Thur 2/9/2017 1:05:53 AM
Subject: FW: EPA comments on the Management Alternatives for Beaver Dams
EPA comments on the Draft Beaver FFS Outline_11.22.16.pdf
12_12_16 Letter re FFS for Beaver Ponds Complex.pdf

Hello Tony,

EPA received your comments and is completing our review. As indicated previously, EPA is willing to review and consider ARC's proposal to reduce the risk of beaver dam failure and coincidental release of acid drainage and metals accumulated in the beaver ponds.

ARC has offered to submit that work plan by March 21, 2017. Given the high water volumes and attention and review that will be necessary from headquarters for work to be done in this area---I wanted to check in to see if ARC needs the full additional 7 weeks, or is it possible to receive the workplan sooner?

Best Regards,

Lynda Deschambault

Environmental Scientist

USEPA Region 09

(415) 947-4183

Please be advised I may have limited access to email , therefore please be patient with any communication delays.

From: Lombardi, Marc [mailto:Marc.Lombardi@amecfw.com]
Sent: Monday, December 12, 2016 3:29 PM
To: Deschambault, Lynda <Deschambault.Lynda@epa.gov>
Cc: Brown, Anthony R (RM) <anthony.brown@bp.com>; Riley, Gary <riley.gary@epa.gov>; Shaffer, Caleb <Shaffer.Caleb@epa.gov>; Wirtschafter, Joshua <Wirtschafter.Joshua@epa.gov>; Darrel Cruz 1 <dcruz@washoetanf.org>; Darrel Cruz 2 <Darrel.Cruz@washoetribe.us>; Diane Vitols <Diane.Vitols@washoetribe.us>; Doug Carey <douglas.carey@waterboards.ca.gov>; Greg Reller <gr@burlesonconsulting.com>; Ken Maas <kmaas@fs.fed.us>; Steve Hampton <Steve.Hampton@wildlife.ca.gov>; Toby McBride <toby_mcbride@fws.gov>; David Friedman <dfriedman@ndep.nv.gov>; Halsey, Ronald H <ronald.halsey@bp.com>; Gallery, Patricia A <patricia.gallery@bp.com>; Johnson, Brian S <Brian.S.Johnson@bp.com>; Block, Nathan <Nathan.Block@bp.com>; Weber, Craig L <Craig.Weber@amecfw.com>; Sandy Riese <sriese@ensci-inc.com>
Subject: RE: EPA comments on the Management Alternatives for Beaver Dams

Lynda,

On behalf of Atlantic Richfield, Amec Foster Wheeler is submitting the attached letter in response to your November 23, 2016 email (below) and U.S. EPA's November 22, 2016 letter regarding the revised outline and proposed schedule for the Leviathan Creek beaver dam/pond complex FFS, which Atlantic Richfield submitted to U.S. EPA on

November 7, 2016.

Should you have any questions or comments please contact Tony Brown at (714) 228-6770 or anthony.brown@bp.com.

Thanks,

Marc

From: Brown, Anthony R (RM) [mailto:anthony.brown@bp.com]
Sent: Wednesday, November 23, 2016 3:11 PM
To: Deschambault, Lynda <Deschambault.Lynda@epa.gov>; Lombardi, Marc <Marc.Lombardi@amecfw.com>
Subject: FW: EPA comments on the Management Alternatives for Beaver Dams

Lynda, thanks for the letter.

Hi Marc, request AMECFW please address the items attached and noted below as quickly as possible. Thanks… Tony…

From: Deschambault, Lynda [mailto:Deschambault.Lynda@epa.gov]
Sent: Wednesday, November 23, 2016 11:27 AM
To: Brown, Anthony R (RM)
Cc: Black, Ned; Cory Koger; Darrel Cruz 1; Darrel Cruz 2; David Friedman; Diane Vitols; Doug Carey; Fred K; Riley, Gary; Greg Reller; Wirtschafter, Joshua; Ken Maas; Lombardi, Marc (marc.lombardi@amecfw.com); Patty Cubanski; Sanchez, Yolanda; Serda, Sophia; Shaffer, Caleb; Steve Hampton; Thomas Maurer; Toby McBride
Subject: EPA comments on the Management Alternatives for Beaver Dams

Dear Mr. Brown,

EPA has completed its review of Atlantic Richfield's Outline for Focused Feasibility Study Work Plan, Evaluation of Management Alternatives for Potentially Impacted Water and Sediments, dated October 7, 2016; and the revised Gantt chart dated November 7, 2016 Leviathan Mine Site, Alpine County, California. This work was submitted as part of the Scope of Work for completing the remedial investigation and feasibility study to identify a long term remedy pursuant to Administrative Order for Remedial Investigation and Feasibility Study (RI/FS), Leviathan Mine, Alpine County, California (CERCLA Docket No. 2008-18, June 23, 2008).

Please see the attached comments.

Within 30 days, or by December 2016 please provide the Focused Feasibility Work Plan and revised schedule incorporating these comments. Per recent discussions we look forward to a plan that will be implemented during the 2017 season to reduce the threat of a sudden release of the seasonally occurring low pH water or sediment containing elevated metals (i.e. arsenic, nickel, and thallium). If the work plan can achieve the goals outlined above, EPA will approve the proposed FFS approach. If the work plan cannot achieve these goals, EPA will consider initiating an EE/CA and a new removal action focused on addressing the dam situation.

If you have any questions, please feel free to contact me at (415) 947-4183 or Deschambault.lynda@epa.gov.

Best Regards,

Lynda Deschambault

Environmental Scientist

USEPA Region 09

(415) 947-4183

Please be advised I may have limited access to email , therefore please be patient with any communication delays.

From: Brown, Anthony R (RM) [mailto:anthony.brown@bp.com]
Sent: Thursday, September 22, 2016 9:01 PM
To: Deschambault, Lynda <Deschambault.Lynda@epa.gov>
Subject: FW: Debris Removal--winterization to minimize impacts/risk to Beaver Dams over the winter

Lynda – Thanks for forwarding the email chain below. Like EPA, Atlantic Richfield appreciates the Forest Service's willingness to remove downed trees and limbs from along Leviathan Creek on state-owned and federal land later this month. We agree that this should help to reduce the risk of large debris being mobilized during a major flow event and, in turn, impeding flow downstream (as long as existing dam structures are not being disturbed). We also agree that trained Forest Service personnel are best suited to perform this work.

As to the comment "undermining the removal action," we assume the meaning is not intended to suggest that the removal action work at the mine site is not substantially improving water quality in Leviathan Creek. Atlantic Richfield and the Regional Board have consistently operated containment, capture, and treatment systems for the known AMD sources in full compliance with the existing removal action orders, and all treated effluent from those systems has met and continues to meet discharge criteria. In addition, monitoring data confirm that water quality below the beaver pond complex is as good or better than upstream water quality—that is, the beaver ponds actually appear to be attenuating some metals concentrations and improving the quality of Leviathan Creek water as it moves through the pond complex. Finally, the high stream flow recorded on May 6, 2015 does not appear to be a true peak flow event. Higher flows have been measured in 2010, 2011, and spring 2016 without causing the dams to fail or release impounded water or sediments.

The removal action thus continues to achieve the primary objective for the NTCRA stated in EPA's September 25, 2008 modification to the NTCRA Memo (the "MRAM"), which is to "expeditiously improve temporary protection of human health and the environment from the known AMD discharges while obtaining critical information for selecting a long-term remedy."

Regarding next steps, Atlantic Richfield is planning additional water quality and sediment characterization in the beaver ponds as part of the RI to better characterize sources and causes of water quality changes within the beaver ponds and to help analyze whether remedial action may be warranted in this area. We are also developing a Focused Feasibility Study (FFS) work plan, not an EE/CA, to help assess potential remedial alternatives for this portion of the site. As discussed with EPA already, the FFS will evaluate appropriate measures for managing impacted sediments within the Leviathan Creek floodplain, and it will include field treatability testing of certain measures aimed at safely lowering water levels and reducing the risk of a release of hazardous substances from the ponds complex. We assume that EPA remains receptive to this approach. Given the extensive investigations already completed in lower Leviathan Creek and the additional work currently in development, we do not think it makes sense to deviate from the RI/FS path and commence with implementation of a new removal action and EE/CA focused solely on dam removal. Doing so would only divert EPA's and Atlantic Richfield's attention and resources away from current tasks and risk delaying completion of the RI/FS.

Anthony R Brown

Operations Project Manager – Mining

Atlantic Richfield Company

Remediation Management

4 Centerpointe Drive, Suite 200

La Palma, California USA 90623

MS Lync: 657-529-4537

Cell: 951-265-4277

From: Deschambault, Lynda [mailto:Deschambault.Lynda@epa.gov]
Sent: Monday, September 19, 2016 4:43 PM
To: Ken Maas
Cc: Riley, Gary; Hillenbrand, John; Wirtschafter, Joshua; Greg Reller; Black, Ned; Serda, Sophia; Sanchez, Yolanda; Shaffer, Caleb; Greg Reller; Cory Koger; Brown, Anthony R (RM); Doug Carey
Subject: RE: Debris Removal--winterization to minimize impacts/risk to Beaver Dams over the winter

Hello Ken,

Thank you for the site visit last Thursday with Atlantic Richfield and Waterboard staff in attendance, and for the write up you provided on Friday.

I heard back from Caleb today and no further action or details are necessary.

Please proceed with the Debris removal as outlined.

I've copied Atlantic Richfield and the Waterboard. Thanks for your leadership on this!

Best Regards,

Lynda Deschambault

Environmental Scientist

USEPA Region 09

(415) 947-4183

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