To: Deschambault, Lynda[Deschambault.Lynda@epa.gov]
Cc: 'Doug Carey'[douglas.carey@waterboards.ca.gov]; 'Greg Reller'[gr@burlesonconsulting.com]; 'Cohen, Adam'[Adam.Cohen@dgslaw.com]; 'Lombardi, Marc'[marc.lombardi@amecfw.com]; 'Stetler, Chris@Waterboards'[Chris.Stetler@waterboards.ca.gov]; anthony.brown@bp.com[anthony.brown@bp.com]; Dave McCarthy[dave.mccarthy@copperenv.com]; Wirtschafter, Joshua[Wirtschafter.Joshua@epa.gov]; Cory Koger[Cory.S.Koger@usace.army.mil]
From: Mike Johnson
Sent: Thur 4/13/2017 11:21:45 PM
Subject: RE: Leviathan Weekly Update
170407_table_1_170413_response.pdf
170320_compliance Results.pdf

All,

I inadvertently left of Josh and Cory from the email I previously sent. I resent to the entire group so please use this email for correspondence.

Sorry for the inconvenience,

Mike Johnson, PE

Senior Engineer

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From: Mike Johnson [mailto:mike.johnson@copperenv.com]
Sent: Thursday, April 13, 2017 5:10 PM
To: 'Deschambault, Lynda'
Cc: 'Doug Carey'; 'Greg Reller'; 'Cohen, Adam'; 'Lombardi, Marc (marc.lombardi@amecfw.com)'; 'Stetler, Chris@Waterboards'; anthony.brown@bp.com; Dave McCarthy
Subject: RE: Leviathan Weekly Update

Lynda,

Atlantic Richfield is working diligently to respond to the high-flow conditions occurring at the Leviathan site, and we are doing our best to address your numerous requests for on-site activities, sampling results, other information, and communications. Please keep in mind, however, that we are still within the Limited Access Season, as defined by the AOC, and Atlantic Richfield's obligations with respect to early response actions are accordingly limited. Although the site is experiencing historically high winter precipitation levels, sampling data and other observations continue to indicate that water quality conditions in Leviathan Creek and Bryant Creek remain consistent with what is typically observed during spring runoff.

You have questioned Atlantic Richfield's decisions about the safety of traveling to the site at times when the Water Board's contractor is performing spring treatment at Pond 1. Atlantic Richfield does not know what factors the Water Board or its contractor consider in deciding whether it is safe to access the site. Atlantic Richfield's considerations are clearly stated in its site-wide Health and Safety Plan and Winter Access and Operations Plan, which have been reviewed and approved by EPA. As stated in numerous documents submitted to EPA regarding site activities, "Atlantic Richfield is fully committed to its health, safety, security, and environment (HSSE) goals, which are no accidents, no harm to people, and no damage to the environment." We assume EPA shares those goals. Personnel did not access the site April 5 because no activities were planned. As for April 8 and 9, a major storm was forecasted and field observations made on April 7 indicated that conditions would be unsafe.

In response to some of the other questions and requests in your multiple emails sent earlier today:

•□□□□□□□□ Atlantic Richfield personnel had walked into Aspen Seep and were not present when the Water Board took the photos on April 6, 2017.

•□□□□□□□□ Atlantic Richfield did not collect flow measurements from the Pond 4 overflow discharge pipe on April 7, 2017. Water Board personnel provided estimates of flow observed on April 6, but we don't know how those estimates were determined. As we reported, flows were substantially reduced following the repairs made to the discharge pipe on April 7. No flow was observed after the additional repairs were made on April 11, 2017.

•□□□□□□□□ We do not believe metals concentrations in the Pond 4 discharge should be highlighted as "exceedances." Under the EPA action memorandum for the removal action (MRAM), the Discharge Criteria apply only to effluent from a treatment system; and as stated in the MRAM, EPA determined that discharges should meet the Discharge Criteria only "during periods when the Site typically is fully accessible from June 1 through September 30, except during the initial implementation of the treatment (start-up period) or during optimization trials intended to ultimately improve treatment performance." As further stated in the MRAM, "EPA recognizes that it currently may not be practicable to attain these Discharge Criteria at other times and during cold weather." Constituent concentrations in the discharge from Pond 4 should not be highlighted as "exceedances" at a time when (i) the HDS system is not operating, (ii) CUD and Delta Seep flows are not being collected and treated, and (iii) the site is not fully accessible, because the Discharge Criteria are not applicable requirements under these circumstances.

•□□□□□□□□ More complete analytical results for samples collected from Pond 4 on April 7 are provided in the attached Table 1. Additional samples were collected April 10, 2017 and we expect to see results in the next few days.

•□□□□□□□□ No additional sampling data are available for the Aspen Seep Bioreactor effluent since we reported the results for samples collected on March 20, 2017. The table summarizing those results (including pH measurement) is attached again (previously sent on April 7) here. Additional effluent compliance samples were collected on April 10, 2017. We expect to see results for those samples sometime in the next few days.

If data are readily available, we can try to provide a historical flow comparison for the Aspen Seep Bioreactor in the April monthly progress report (due May 10, 2017).

Thanks,

Mike Johnson, PE

Senior Engineer

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From: Deschambault, Lynda [mailto:Deschambault.Lynda@epa.gov]
Sent: Thursday, April 13, 2017 1:06 PM
To: Brown, Anthony R (RM
Cc: Doug Carey; Greg Reller; Cory Koger; Wirtschafter, Joshua; Cohen, Adam; 'Mike Johnson'; Lombardi, Marc (marc.lombardi@amecfw.com); Stetler, Chris@Waterboards
Subject: RE: Leviathan Weekly Update

Dear Mr. Brown:

A few more followup questions and clarification to those attached below.

- Site Access. Per an email from Taylor, I understand that TKT has had site access, and *has been "on site" every day (7 days a week) since February 24th*. ARC, please revise "no site access" to be consistent and add clarity. Waterboard and TKT: Thanks for being on site to ensure Pond 3 is treated, despite the battle with the snowstorms. (Again today!)

- Flow Rates. While ARC prepares its response and revised weekly Update-----Doug, Did

your field team take any additional flow rates or take any additional field assessments/ notes on the estimated flows during the Pond4 HDS discharge –estimated to be between the days of April 6 to April 11th (The time between when Waterboard noted the problem, ARC did their first repair-- and their final repairs? i.e. when the waterboard first detected flows and then when you may have found the flows had stopped?) Photos etc would be helpful as well.

- ARC please revise' complete and update your Weekly report by end of day today--- response to my earlier email (April 13, 2017 8:30 AM) and also clearly add both ASB and Pond4HDS data. Please incorporate all of the ASB information, including the charts and figures from the email from Mike Johnson dated Friday, April 07, 2017 12:00 PM and the mike Johnson email dated Wednesday, April 12, 2017 8:04 PM.

- ARC shall insert a table similar to the pond4HDS table 1---for the available ASB data. Please list all results alongside the discharge levels and shade/highlight any exceedences. i.e. Mike Johnson notes that that the 3/20/17 sampling event "indicated that all discharge standards were met with the exception of dissolved iron (7.9 mg/L)" Please include water quality parameters such as pH etc

EPA is preparing an update for managers to send out to stakeholders and appreciates a timely turnaround on this matter.

In addition to an updated report to be received by end of day today….EPA looks forward to receiving the rush turnaround time laboratory samples and any other recent results and chemistry data collected for the discharges at both ASB and Pond 4 HDS as soon as data is available.

Lynda

From: Deschambault, Lynda
Sent: Thursday, April 13, 2017 8:30 AM
To: 'Mike Johnson' <mike.johnson@copperenv.com>; Brown, Anthony R (RM) <anthony.brown@bp.com>
Cc: Doug Carey <douglas.carey@waterboards.ca.gov>; Stetler, Chris@Waterboards <Chris.Stetler@waterboards.ca.gov>; Greg Reller <gr@burlesonconsulting.com>; Cory Koger <Cory.S.Koger@usace.army.mil>; Lombardi, Marc (marc.lombardi@amecfw.com) <marc.lombardi@amecfw.com>; Wirtschafter, Joshua <Wirtschafter.Joshua@epa.gov>; Cohen, Adam <Adam.Cohen@dgslaw.com>
Subject: RE: Leviathan Weekly Update

Thanks Mike/Tony!

Please copy the the waterboard. As noted, it is important for consistency.

- April 5th--Doug, could you let me know if waterboard and/or TKT worked on site that day? If so ARC's "no site access" should be better clarified and consistent. Ditto on April 8 and 9.

- Please reference and include or attach the waterboard photos provided on April 6, 2017. Below and attached.

- April 7th- ARC provides a photo of the pond 4 HDS discharge, did you take flow measurements? Waterboard and EPA weeklies estimated approximately 40 to 50 gpm? Please confirm.

Please clarify if a discharge sample taken as EPA requested--- Or is ARC assuming pond sample = discharge sample?

- April 11th—is this the date repair was completed and discharge was stopped. Please confirm?

- EPA looks forward to receiving the other chemistry data for the discharge as soon as available. (Please do not wait for next weekly report)

Also, On Charts, as requested, please shade/highlight any exceedences. i.e. Copper?

Lynda

From: Mike Johnson [mailto:mike.johnson@copperenv.com]
Sent: Wednesday, April 12, 2017 6:47 PM
To: Deschambault, Lynda <Deschambault.Lynda@epa.gov>
Cc: anthony.brown@bp.com; gr@burlesonconsulting.com; Andy Slavik <andy.slavik@copperenv.com>; Abby Cazier <abby.cazier@copperenv.com>; Cohen, Adam <Adam.Cohen@dgslaw.com>; Dave McCarthy <dave.mccarthy@copperenv.com>; tavassoli, lily <tavassoli.lily@epa.gov>; douglas.carey@waterboard.ca.gov; Barton, Dana <Barton.Dana@epa.gov>; Marc Lombardi <Marc.Lombardi@amecfw.com>; 'Jef Peake' <jpeake@broadbentinc.com>
Subject: Leviathan Weekly Update

Lynda,

Please find attached the weekly update for April 5, 2017 through April 12, 2017. Snow removal efforts helped us improve access to the Aspen Seep Bioreactor for routine Maintenance today.

Please let us know if you have any questions.

Mike Johnson, PE

Senior Engineer

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From: Carey, Douglas@Waterboards [mailto:douglas.carey@waterboards.ca.gov]
Sent: Thursday, April 06, 2017 3:45 PM
To: Deschambault, Lynda <Deschambault.Lynda@epa.gov>
Cc: Brown, Anthony R (RM) (anthony.brown@bp.com) <anthony.brown@bp.com>; gr@burlesonconsulting.com; Cory.s.koger@usace.army.mil; Ferguson, Scott@Waterboards <scott.ferguson@waterboards.ca.gov>; Stetler, Chris@Waterboards <Chris.Stetler@waterboards.ca.gov>; Zentner, Taylor@Waterboards <taylor.zentner@waterboards.ca.gov>; Tom Bloomfield (tbloomfield@thegallaghergroup.com) (tbloomfield@thegallaghergroup.com) <tbloomfield@thegallaghergroup.com>; Lombardi, Marc (marc.lombardi@amecfw.com) <marc.lombardi@amecfw.com>
Subject: Leviathan Mine Observation - Pond 4 near HDS

Hi Lynda,

I am forwarding to you a brief field observation from today's visit to Leviathan Mine by Water Board staff (see below and attached photos). It appears there is a discharge currently taking place from the Pond 4 overflow standpipe (near the HDS plant) to Leviathan Creek.

Please let me know if you have any questions,

Douglas Carey, P.G.

Senior Engineering Geologist

Leviathan Mine

Regional Water Quality Control Board, Lahontan Region

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douglas.carey@waterboards.ca.gov

From: Zentner, Taylor@Waterboards
Sent: Thursday, April 06, 2017 3:07 PM
To: Carey, Douglas@Waterboards
Cc: Ferguson, Scott@Waterboards
Subject: Leviathan Mine Observation - Pond 4 near HDS

Doug,

While performing routine site observations today in the vicinity of the bottom of the Leviathan Creek concrete channel Darin and I noticed an unusually high flow of approximately 40-50 gpm coming from the 4-inch PVC Pond 4 overflow pipe (Pond 4 near the HDS plant), see photo 009a. This caused us to investigate the Pond 4 overflow structure in an effort to determine the source of the unusually high flow. As can be seen in photos 011 and 012 the Pond 4 overflow pipe appears to be compromised and flow could be heard entering the overflow pipe. Pond 4 is currently discharging to Leviathan Creek as seen in photo 009a.

If you have any questions please let us know.

Thanks

Taylor

Taylor Zentner

Engineering Geologist

Leviathan Mine

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