To: Barton, Dana[Barton.Dana@epa.gov]; Michelle Hochrein[michelle.hochrein@washoetribe.us]; Doug Carey[douglas.carey@waterboards.ca.gov]; David.Coupe@waterboards.ca.gov[David.Coupe@waterboards.ca.gov]; David Friedman[dfriedman@ndep.nv.gov]; Rebecca Bodnar[rebecca.bodnar@ndep.nv.gov]; Ken Maas[kmaas@fs.fed.us]; Thomas Maurer[thomas_maurer@fws.gov]; Toby McBride[toby_mcbride@fws.gov]; Steve Hampton[Steve.Hampton@wildlife.ca.gov]; 'Ed James'[edjames@cwsd.org]; Anthony.brown@bp.com[Anthony.brown@bp.com]; Sarah Green[awg.sarah@gmail.com]; Noah Perch-Ahern[nperchahern@glaserweil.com]; david@parklivestock.com[david@parklivestock.com]; Jeff Dagdigian,[jdagdigian@waterstone-env.com]; Jane Long[Jane.Long@washoetribe.us]; Gavin Feiger[awg.gavin@gmail.com]
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From: Deschambault, Lynda
Sent: Wed 4/5/2017 10:30:10 PM
Subject: RE: Leviathan Mine Superfund Site Update

Leviathan Mine Site Update: Early spring treatment continues underway by the Water Board, however due to warm weather, there has been increased flow from the adit and pit underdrain. There is a storm predicted for this weekend if it is rainfall (rather than snow) it will exacerbate the problem. There is a chance that partially treated water may be discharged into Leviathan Creek within the next two weeks. EPA has notified the stakeholders. Early spring treatment began on March 3rd in order to treat and discharge water in three on-site holding ponds (a total of 13 million gallons of capacity) using a Rotating Cylinder Lime Treatment System. Despite the Water Board treating more than **5 million gallons** of water, less than 1 inch of freeboard remains in Pond 1 and less than 4 inches of freeboard still remains in Ponds 2 North and 2 South. Any overflow would be of partially treated water. In the event of a discharge, discharge samples would be taken and analyzed. To date the treated water discharges show that all discharge criteria were met except for one release that had a minor exceedance of copper values. EPA is receiving weekly reports and will be notified of any changes. In the event of an overflow, stakeholders will be contacted. Let me know if you have any questions.

Lynda Deschambault 415-947-4183

From: Barton, Dana
Sent: Thursday, March 23, 2017 11:16 AM
To: Michelle Hochrein <michelle.hochrein@washoetribe.us>; Doug Carey <douglas.carey@waterboards.ca.gov>; David.Coupe@waterboards.ca.gov; David Friedman <dfriedman@ndep.nv.gov>; Rebecca Bodnar <rebecca.bodnar@ndep.nv.gov>; Ken Maas

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Subject: Leviathan Mine Superfund Site Update

Dear Colleagues,

As most of you are aware, early spring treatment is currently underway by the Water Board at the Leviathan Mine Superfund Site. However, due to high levels of precipitation and increasing Adit and Pit Underdrain flows to the holding ponds, there is a chance that partially treated acid mine drainage (AMD) may be discharged into Leviathan Creek within the next few days, with continued possibility of discharge over the next two weeks. Any impact to Leviathan Creek is expected to have a minimal impact on downstream water quality for the reasons explained below.

The Water Board began early spring treatment on March 3rd in order to treat and discharge treated water from three on-site holding ponds (a total of 13 million gallons of capacity) using a Rotating Cylinder Lime Treatment System. Despite the Water Board treating and discharging more than 2.4 million gallons of treated water so far, less than 1 inch of freeboard remains in Pond 1 and approximately 4 inches of freeboard still remains in Ponds 2 North and 2 South. The treatment system operates 24/7 and is running at maximum capacity, treating and discharging approximately 300,000 - 400,000 gallons every two to three days. Water Board staff visit the site approximately 6 days a week, weather and site access conditions permitting. To date, samples of the treated water discharged show that all criteria were met except for one release that had a minor exceedance of copper values. [.047 mg/L (discharge quality) vs .026 mg/L (USEPA discharge criteria)].

The current short-term precipitation forecast is for a total of about 0.8 inches of mixed rain and snow. A current estimate of the potential timeframe for pond overflow is within the next few days to weeks. If precipitation decreases, or temperatures drop, an overflow could be avoided. This assumes that the current treatment rate is sustained and there is no sudden rise in flow rates from the acid mine drainage sources (Adit and Pit Underdrain).

Should a pond overflow occur, it is anticipated that the initial AMD quality will be more similar to snowmelt/rain water (slightly acidic/low metals concentrations). Further the overflow water will receive partial treatment, elevating pH levels and reducing metals concentrations. There will be a nearly 100 to 1 dilution rate within Leviathan Creek at the point of discharge, further reducing metal concentrations to the point that concentrations in Leviathan Creek below the discharge point will likely be near or below USEPA discharge quality for the Site criteria concentrations. As is the case every winter under current arrangements, the Channel Underdrain and Delta Seep AMD releases will not be captured until later in the spring. In this context, the additional loading of metals from any release of partly treated AMD in the ponds is likely to have a minimal impact on downstream water quality.

In the event of an overflow, samples of the partially treated water would be collected and analyzed. You will be notified if a discharge of partially treated water occurs as soon as possible within business hours.

If you have any questions, or would like additional details, please feel free to contact me or Lynda Deschambault, who can be reached via phone at (415) 947-4183 or email at Deschambault.lynda@epa.gov.

Sincerely,

Dana Barton

Dana Barton

Acting Assistant Director

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