

30 August 2019

Mr. Adam C.T. Matthews, Co-Lead  
Investor Mining & Tailings Safety Initiative  
Director of Ethics & Engagement  
Church of England Pensions Board

Mr. John Howchin, Co-Lead  
Investor Mining & Tailings Safety Initiative  
Secretary General  
Swedish Council on Ethics for the AP Public  
Pension Fund

**Re: Urgent request for information concerning tailings dam management**

Dear Director Matthews and Secretary General Howchin,

Your letter of 17 April to various members of the extractive industries and the oil and gas sector, including BP plc, has been referred to my office for a reply. As an initial observation, no member of the BP Group is engaged in any current commercial mining or mineral processing activities. Nor does any BP Group company own or operate any mine tailings storage facilities (“TSFs”) with large tailings dams that present the type of catastrophic failure risks that have given rise to recent concerns. As such, we do not believe the BP Group’s current activities fall within the scope of your inquiry or the concerns of the investors you represent, and the BP Group has nothing to report concerning any active mining operations.

However, in the interest of providing a more complete response to your inquiry, your letter was forwarded to Atlantic Richfield Company, a subsidiary of BP America Inc. Atlantic Richfield and its predecessor, the Anaconda Company, previously engaged in commercial mining and mineral processing operations that ceased more than 30 years ago. Although all such operations have been sold or closed, Atlantic Richfield continues to have certain environmental accountabilities at several former mining and minerals processing sites in the United States.

Atlantic Richfield has reviewed its current US legacy mine site accountabilities and assessed the tailings waste management facilities located thereon. Atlantic Richfield owns and has direct accountability for the following sites that involve management and storage of some mine tailings among other wastes that arguably fall within the scope of your inquiry:

- Two adjacent mine waste repositories (one with a small active waste management cell) that have been closed and reclaimed and are subject to on-going regulatory oversight;
- One fully closed, capped and reclaimed tailings/mine waste repository; and
- One active waste impoundment and water treatment facility, that is subject to periodic regulatory review and oversight.

Given the disparate nature of its closed legacy sites, Atlantic Richfield does not maintain a uniform tailings management system, as one might expect from a mining company with active operations. Instead, risk management is conducted, where the risks warrant, in accordance with Atlantic Richfield’s general risk management processes and governance system, informed by professional engineers (internal and external) who have expertise in tailings and other waste repository construction, operation, maintenance, closure, remediation and reclamation. Each

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facility that Atlantic Richfield is accountable for has site-specific closure and risk management plans and procedures. Each facility is maintained pursuant to its approved design.

Given their different characteristics and mature reclaimed state, Atlantic Richfield does not see its closed legacy sites as carrying the same risk profile that drives the concerns set forth in your joint inquiry letter.

We also have included a description of a third-party owned TSF that the Anaconda Company originally built and operated, and which was later sold to an independent, private mining company which still owns and operates the facility today.

The remainder of this letter summarizes in more detail Atlantic Richfield's principal accountabilities and current actions to directly manage or influence third-party management of risks associated with these sites. Based on the nature of Atlantic Richfield's relationships with these various sites, and the very different characteristics and circumstances of the sites themselves, we concluded that it would be more accurate and relevant to provide this information in narrative form rather than employing the spreadsheet which you provided.

### **Atlantic Richfield Company closed sites**

The Anaconda and Opportunity Ponds Mine Waste Repositories – Montana, USA. (46°7'9"N, 112° 53'35"W and 46°8'19"N, 112°49'57"W – WGS84) The Anaconda and Opportunity Ponds were originally designed and built as tailings impoundments for waste byproducts produced at the nearby Anaconda smelter.

The smelter closed in 1980 and was subsequently demolished. The Anaconda and Opportunity Ponds are now part of the Anaconda Smelter Complex federal CERCLA (Superfund) site owned by Atlantic Richfield and its subsidiary, ARCO Environmental Remediation LLC, and managed under the supervision of the U.S. Environmental Protection Agency (EPA) and Montana Department of Environmental Quality (DEQ). Starting in the late 1990s and continuing into the early 2000s, the Anaconda and Opportunity Ponds underwent a dry closure. They were drained, capped and reclaimed with an engineered cover that includes soil, native grasses and other vegetation to contain tailings waste on site and provide habitat compatible with the surrounding rural landscape and land uses. A small portion of the Opportunity Ponds has been converted to use as a waste management area for a series of coordinated waste consolidation and environmental remediation projects.

The Anaconda Ponds dry-closure plan was approved by EPA in 2000, and construction was completed in 2002. EPA inspected the facility and confirmed that the closed ponds met all site-specific and regulatory closure criteria and performance standards in 2009-2011. Subsequent EPA inspections in 2014 confirmed that the impoundment banks and cap remain stable and the closed facility continued to meet all closure performance criteria. Under CERCLA, EPA will continue to inspect this closed facility at five-year intervals to assess whether it continues to meet all closure criteria.

Construction for dry closure of the Opportunity Ponds is complete, apart from a smaller area that continues to be used for the disposal of material excavated and removed from other

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remediation projects nearby. In the areas where construction is complete, all site-specific and regulatory closure criteria have been met, including criteria for impoundment stability and vegetative cover. EPA inspections in 2014 confirmed that the closed and capped area met the closure performance criteria or was functioning as intended during a short-term monitoring period that precedes a finding that the closure criteria are met. Under CERCLA, EPA will continue to inspect this closed facility at five-year intervals to assess whether it continues to meet all closure criteria.

International Smelter & Refining Co. (IS&R) Smelter Complex and Carr Fork Operations – Tooele County, Utah, USA. (40°33'16"N, 112°14'44"W – WGS84) The IS&R Smelter Complex and Carr Fork Operations site is a long-closed and reclaimed tailings and mine waste disposal facility. The IS&R facility operated from 1910 through 1972 as a copper and lead smelting and metals recovery facility. The copper smelter was closed in 1946, followed by the closure of the lead-zinc floatation mill in 1968. The lead smelter was closed and demolished in 1972. From 1974 through 1981, the Anaconda Company constructed and operated a mine and mill adjacent to the east of the former IS&R site, which was called the Carr Fork Operations.

The concentrating facilities at the IS&R Smelter complex and Carr Fork Mill produced tailings during their operations. The tailings facilities were dry closed -- covered and capped with clean soils and re-vegetated in 1986, after the mine and mill closed. The Carr Fork Mill tailings area was reclaimed under supervision of the Utah Division of Oil, Gas and Mining. EPA deemed the remedy complete in 2007 and took the site off the National Priorities List in 2011, although the site remains subject to EPA five-year reviews. The most recent EPA five-year review was completed in 2017 and determined that the remedy was functioning as designed and all risks to human health and the environment were under control. The facilities are in a rural area and feature a retention basin that has the capacity to capture a breach or erosion caused release of tailings before they could impact downstream areas or resources.

Warm Springs Ponds (WSP) – Deer Lodge County - Montana, USA. (46°10'17"N, 112°46'29"W – WGS84) The WSP is not a traditional TSF. It consists of a complex of three settling ponds covering approximately 2,500 acres. The Anaconda Company constructed and operated this waste impoundment and treatment facility over a span of approximately 60 years (beginning in 1911) for the purpose of capturing and removing heavy metals and other pollutants from a combination of mining and municipal wastes released to local waterways from a variety of upstream sources. In the 1960s and 1970s, other facilities were constructed to treat and dispose of most of these wastes. In the 1990s, the EPA selected an interim remedy for the WSP that included an improved water treatment system to remove pollutants from water that still flows into and through the ponds, before reaching the Clark Fork River.

Today, the water treatment facility and all property within the WSP is owned and operated by Atlantic Richfield and its subsidiary, ARCO Environmental Remediation LLC. The facility and surrounding land are leased to the State for concurrent use as a designated wildlife management area. The WSP is part of an active water treatment system regulated and managed under federal and state environmental laws. Wastes are contained in the ponds beneath a water cover. Water movement through the ponds is controlled by a series of engineered dikes, outlet structures and an emergency spillway.

The dikes that form the water retention (settling) ponds range from 10 to 40 feet in height and are regulated by Montana law. Atlantic Richfield has retained external engineering consulting support to supplement its own in-house engineering team in managing the facility in accordance with applicable regulations. Working under EPA direction and supervision, with state agency review and comment, the pond embankments were raised, strengthened and armored between 1990-1995 to protect against failure during major earthquakes or floods, and to provide additional storage capacity to hold and treat water in a 100-year flood event. A by-pass channel was also reconstructed and armored during this time to divert floodwaters around the ponds, if necessary, during the estimated probable maximum flood event. The facility has a series of piezometers that are used to monitor changes in the phreatic surface within the earthen dikes. The monitoring and early warning systems are currently undergoing a review to confirm whether any potential upgrades might be appropriate in the circumstances of the facility.

Additional field monitoring is conducted by facility operations staff (dike monitoring and maintenance) and by video surveillance. There is an emergency spill way system to mitigate flooding risks, and an emergency action and evacuation plan that was developed after evaluating the potential downstream impact of a catastrophic failure of the ponds during an emergency. The emergency action plan is updated on a regular basis as required by state law and by EPA. Dam safety inspections are also conducted on a regular basis, and EPA conducts a review of this facility every five years, as required by federal law. EPA's last five-year review was completed in 2015 and confirmed that the Warm Springs Ponds comply with all dam safety requirements, are in good working order, and are functioning as intended. The next review is due to be completed in 2020.

### **Third-Party Owned Active TSF**

Beyond the three sites owned and operated by Atlantic Richfield described above, we are also including information about an active tailings storage facility owned and operated by a third-party. Atlantic Richfield shares certain environmental remediation accountabilities with the current third-party owner and operator.

The Yankee Doodle Tailings Impoundment - Butte, Montana, USA. (46°10'17"N, 112°46'29"W – WGS84) The Yankee Doodle is a very large, active tailings management facility owned and operated by an unrelated third-party, Montana Resources, LLP, a member of the Washington Group of companies. The Yankee Doodle provides tailings management capacity to support Montana Resources' active copper and molybdenum mining and mineral processing operations in Butte. The Yankee Doodle Tailings Dam reaches a current height of approximately 750 feet and Montana Resources has plans to expand the height of the dam by an additional 50 feet to support its continued operations. The impoundment holds millions of tons of tailings and a large lake (currently estimated at 32,000 acre-feet) behind a series of earthen dams constructed over more than half a century of open pit mining. To reiterate, Atlantic Richfield holds no current ownership or operational interests in the mine or mineral processing operations, but it does share certain environmental remediation accountabilities with Montana Resources, including water management and treatment requirements associated with fluids draining from the impoundment.

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In 2017, Montana Resources began the process of applying to modify and expand the Yankee Doodle to create additional tailings storage capacity for its Butte operations. Because we share your organizations' concerns about the risks of tailing dam failures and potential impacts on communities and because we conduct environmental remediation projects downstream of this facility, Atlantic Richfield has been actively engaged with Montana Resources and federal, state and local regulators to assess and pursue mitigation of risks associated with the proposed expansion of the Yankee Doodle Tailings Impoundment.

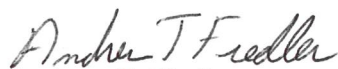
Atlantic Richfield has retained its own tailings dam safety experts to evaluate the proposed expansion project. As part of this effort, Atlantic Richfield's experts have assessed available data and potential failure scenarios and engaged directly with Montana Resources and its consultants and Engineer of Record, to provide feedback on potential TSF risks and potential mitigation measures.

Most recently, Atlantic Richfield submitted detailed public comments in response to the State regulator's draft environmental impact study for Montana Resources' proposed expansion of this TSF, urging the State to impose enforceable conditions in the permit that would require adoption of state-of-the art dam integrity monitoring and early warning systems as part of any final approval for the proposed expansion. Atlantic Richfield is also working collaboratively with Montana Resources to build a pilot water treatment system that would reduce the amount of water managed in the impoundment to the level established by the Engineer of Record and to create additional capacity at the mine site to contain any mine waste material and water that might be released during an emergency if a breach of the impoundment were to occur.

In closing, I wish to acknowledge that Atlantic Richfield supports your organizations' joint efforts to promote: i) accurate and complete assessment of the risks of tailings dams at high potential consequence TSFs; ii) sharing of information about the risks and mitigations in place or planned with affected communities; iii) appropriate measures being established, actively monitored and enforced to mitigate the risk of failure and the potential consequences of a catastrophic release of mine waste material, and (iv) development of an international standard for tailings dams.

We believe the actions we have taken and are proposing to take, in conjunction with third-parties and the applicable regulatory authorities, demonstrate Atlantic Richfield's alignment with the concerns expressed and a real commitment to responsible risk management. We trust that our response to your inquiry is satisfactory and meets the spirit of your project. Please contact Ron Halsey, Atlantic Richfield's VP of Operations, at [Ronald.Halsey@bp.com](mailto:Ronald.Halsey@bp.com), if you have any questions.

Sincerely yours,



Andrew T. Fiedler  
President  
Atlantic Richfield Company

cc: Ronald Halsey