Subject: Consultation Package /Upper Tenmile Creek Mining Area Superfund Site –

MTSFN7578012 (Category 2 - Fluid hazard mining and mineral Site):

Short Term Preemptive Measures to Fluid ‘back up’/’build up’ in the event of a

an entrance collapse at the Failing Susie Portal and Lee Mountain Mine

Entrances

1. **Site Description:** The Upper Tenmile Creek Mining Area Superfund Site (MTSFN7578012) is located 10 miles west of the City of Helena, Montana, south of Montana Highway 12. The Site is approximately 53 square miles in size and contains the community of Rimini and Landmark Subdivision (Attachment 1- Maps on Susie Rehabilitation Design Cover: provides location of Susie Portal and Lee Mountain Mine entrance). All Remedial Action activities are pursued under Operable Unit 4 – the Tenmile Creek Watershed. Of the 150 plus mine waste sites identified in the mining area, just over 70 were identified as requiring remedial action due to impact.
2. **Assessment of the fluid hazard:** The specific fluid hazards are discharges emitting from the Susie Portal entrance and the Lee Mountain Mine entrance. Both discharges are located in the Community of Rimini, Montana. The Susie fluid discharge has been averaging 17,000 gallons per day since Remedial Action began in 2002. There is an historical collapse located 200 feet beyond the portal entrance (Attachment 2 – Figure of Susie) but this collapse feature is only partial thus a “blow out” scenario is not associated with the historical collapse. On April 2, 2016, EPA’s Prime RACs Contractor was contacted by the Susie Portal property owner and informed that the volume of fluid exiting the Susie Portal was significantly above the normal discharge. Upon investigation, some of the earthen material above the portal entrance timbers collapsed causing partial blockage and the subsequent fluid pressure build up ‘scoured out’ a portion of the blockage (Attachment 3 – Photo of remains of Susie blockage and Attachment 4 -“Susie Mine Portal Memo 20160407” by CDM Smith). Any future collapse could develop a negative situation potentially involving greater volumes of fluid such that impacts to residential properties and Upper Tenmile Creek may occur. Given that the Susie Portal entrance and the Lee Mountain Mine entrance were ‘shored’ during the same construction season, EPA’s Contractor investigated the Lee Mountain Mine entrance on April 12 and noted ‘cracking’ of wooden/timber supports (Attachment 5 – “Lee Mountain Memo). The current state of the timbers and bulging wall that can be seen on the left side of the photo require action to keep the historical rate of flow, 8 gallons per minute or 11,520 gallons per day, leaving the mine.

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1. These activities will not involve historical collapse features of the Susie Portal or Lee Mountain Mine; these actions are designed to proactively prevent any future collapse from blocking the current historical discharge. The work planned would provide a conduit/engineering control for the historical discharge to continue to exit the portal in the event of a collapse that could partially or completely block the fluid from discharging from the entrance of these facilities. Addressing these matters is time sensitive as the entrances are failing. If no action is taken, future collapse may result in the partial or complete blockage of historical adit discharge and the subsequent imminent release will occur in the middle of the Rimini Community.

1. **Description of the work to be performed:** The **short-term immediate response** is to insert a HDE grade pipe, 30 inch diameter or greater, into the Portal and Mine entrances past the wooden/timber support section and terminating in the steel supported section of the portals. For the Susie Portal, work activities outside of the portal will include clearing material from the culvert system that became plugged during the previous event and increase the size of the settling pond. The **long term response** is to move forward with Remedial Design of the Susie Portal Rehabilitation (which will provide for safe human egress back to the historical collapse) and begin the Lee Mountain Mine Entrance Rehabilitation so that when the Remedial Design for a treatment system for these Rimini Area Source Adit Discharges (Red Water, Lee Mountain/Little Lily, and Susie) is completed, it can then be implemented. A detailed description of the work proposed can be found in Attachments 4 and 5.

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