

Health Impact Assessment for Proposed Coal Mine at Wishbone Hill, Matanuska-Susitna Borough Alaska



Prepared For:

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1.0 INTRODUCTION AND OVERVIEW

1.1 Project Overview

This HIA provides decision makers with a review of potential positive and negative human health impacts related to the proposed Wishbone Hill Mine (WHM). The proposed project area is located in the Matanuska-Susitna (Mat-Su) Valley near Sutton, Alaska.

Miners have extracted an estimated 7 million tons of coal from 18 different mines in the Matanuska-Susitna Valley since the early 1900's. Several mining companies have conducted extensive exploration activities within coal reserve areas since 1917, but these groups have not actively mined the Wishbone Hill area since 1983. Usibelli Coal Mine, Inc. (UCM) holds an active permit for the proposed WHM area (Permit Numbers 01-89-796 & 02-89-796), which is 8 miles east of Palmer, near Buffalo Mine road and the community of Buffalo Soapstone (Map 1, Appendix A). Idemitsu Alaska obtained the original permit for the area in 1991, but the permit was transferred to Usibelli Coal Mine (UCM) in 1997. UCM satisfied 5-year permit renewal requirements in 2001 and 2006 and is currently seeking to complete the next renewal. Because the mine will involve a coal production and processing plant, the renewal of the mining permit depends on obtaining an air quality permit as well. This is discussed in detail in section 5.

The proposed development focuses on a 6 million ton coal reserve identified in Mine Areas 1 and 2. (Map 2, Appendix B). UCM estimates that Mine Areas 1 and 2 could produce 500,000 tons of coal annually for approximately 12 years.

Since 2010, UCM has undertaken a feasibility study that examines development of Mine Area 1 and 2. Feasibility work included an exploration trail to facilitate confirmation drilling for geology and coal quality. The feasibility study analyzes transportation options (including a proposed test shipment from Point MacKenzie), permit updates, and additional environmental data collection. UCM plans to extract coal from the mining areas using conventional truck and excavator mining techniques.

1.2 Legal, Administrative and Legislative Requirements for Health Impact Assessment (HIA)

The State of Alaska does not require a formal HIA, but has developed a specific resource document entitled "Technical Guidance for Health Impact Assessment (HIA) in Alaska".¹ The WHM HIA utilizes the overall strategies and methodologies described in the Alaska HIA technical guidance.

1.3 Project Requirement for HIA

As a "best practices" approach to responsible natural resources development, the Alaska Department of Natural Resources (DNR) consulted with the Alaska Department of Health and Social Services (ADHSS) HIA Program. The ADHSS HIA program has developed this HIA for the WHM. The HIA is not required for permitting. The HIA does not have statutory power to (i) require additional data collection or (ii) write permit stipulations.

2.1.6 Air Quality

The Mat-Su Borough is classified by the Alaska Department of Environmental Conservation (ADEC) as a Class II P.S.D (Prevention of Significant Deterioration) area, which is considered to be clean air.⁵ Few significant sources of air pollution exist in the area. Naturally occurring blowing dust occurs as "Matanuska Winds" pick up glacial sediment from the Matanuska and Knik River floodplains. Dust may occur in any season, especially when high winds correspond with a lack of snow cover. Typically, several air quality alerts are issued per year by ADEC because of wind-blown dust events. Detailed discussion of air quality is presented in Chapters 4 and 5.

2.1.7 Land Use in the Project Area

Private residences exist within ¼ mile of the permit boundary. Additional residential units exist within ½ to 1 mile from the final footprint of active mining in Mine Area 1. Local residents utilize portions of the Wishbone Hill area for commercial and personal use timber harvesting, commercial firewood sales, and Christmas tree cutting. The Division of Forestry regulates these activities and has previously constructed a series of roads and trails to transport forest products from the area. In addition to mining and forest management, the public also uses the Wishbone Hill area for recreation. Popular activities include target shooting, four-wheeling, snowmobiling, large and small game hunting, dog sledding, hiking, biking, and skiing. On some of the private holdings west of the Wishbone Hill area, the land has been subdivided and used for either recreational summer cabins or residential dwellings. Local residents also use the area for harvesting subsistence resources and maintaining cultural traditions.

2.2 Potentially Affected Communities

The Alaska HIA Toolkit defines a potentially affected community (PAC) as an area, community, or village where project-related health impacts may reasonably be expected to occur.¹ This study refers to four zones created while considering distance from mine operations and movement of materials. (See Maps 5 and 6 and Table 2):

- Zone 1 -communities within 5km (3 miles) of mine site 1;
- Zone 2- communities approximately 5-10km (3-6 miles) from the mine;
- Zone 3- communities along the transportation route (e.g., path of the coal trucks); and,
- Zone 4 communities within 5km (3 miles) of Point MacKenzie.