

**APPLICATION TO RENEW SURFACE COAL MINING
PERMIT**

Decision
And
Findings of Compliance

October 3, 2014

Usibelli Coal Mine, Inc.

**Wishbone Hill Mine
Renewal**

Surface Coal Mining Permit Application

01-89-796

02-89-796

FINAL FINDINGS OF FACT AND DECISION

Renewal of Surface Coal Mining Permits No. 01-89-796 and 02-89-796

The Alaska Department of Natural Resources (DNR), Division of Mining, Land and Water (Division) has reviewed the permit renewal request for the Wishbone Hill (WBH) Mine, Permit Numbers 01-89-796 and 02-89-796, submitted by Usibelli Coal Mine, Inc., PO Box 1000, Healy, AK 99743. The Division has reviewed the request, all written comments, and other relevant information received regarding the renewal and makes the following Findings of Fact and Decision in accordance with the Alaska Surface Coal Mining Control and Reclamation Act (ASCMCRA), found at AS 27.21, and the implementing regulations found at 11 AAC 90.

1. A request to renew the Surface Coal Mining Permits 01-89-796 and 02-89-796 was filed with the Division of Mining, Land and Water on May 9, 2011. This request was received more than the 120 days before the expiration of the permit (November 27, 2011) as required by AS 27.21.080(d) and 11 AAC 90.129(b). Under AS 27.21.080(a), Surface Coal Mining Permits 01-89-796 and 02-89-796 have the right of successive renewal for areas within the previously approved permit boundary. An opponent of renewal of a permit has the burden of proving that the permit should not be renewed.
2. This renewal request is for an additional five-year term and includes the permit areas previously approved in the existing permits. No additional mining areas or revisions to the approved permits are proposed.
3. The WBH permit area includes approximately 1,285 acres, located approximately five (5) miles west of Sutton, Alaska. The mine is located within: portions of Sections 22, 23, 26, 27, 28, 34, 35, 36, Township 19 North, Range 2 East, within the Seward Meridian.
4. As part of the completeness review, the Division requested numerous revisions and updates to the existing Operation and Reclamation Plan. The applicant revised parts of the permit application to provide current information as required by 11 AAC 90.021 through 11 AAC 90.065.
5. Public notice of the complete permit renewal application was given for the period starting on August 24, 2011, and ending on October 14, 2011. Legal ads were placed in the Anchorage Daily News on August 24, 2011 and were noticed once a week, for four consecutive weeks. In addition, the Public Notice was posted on the DNR Public Notice website and in the Sutton, Palmer, and Wasilla, Alaska Post Offices. On August 24, 2011, the notice was mailed directly to the Division's mailing list of affected persons and agencies.

6. During the comment period the Division received several requests to extend the public comment period. Based on this request and the reasoning provided, the Division extended the comment period an additional 32 days.
7. A Public Notice of the extension of the public comment period and the announcement of an informal conference was given for the period beginning September 29, 2011 and ending November 15, 2011. The informal conference was held on November 15, 2011 at the Sutton Elementary School in Sutton, Alaska. Approximately 306 people attended the conference and 91 people gave public testimony.
8. During the comment period, the Division received a total of 1,588 comment submittals (letters, comment forms, e-mails and transcripts) containing numerous individual comments. The Division's response to these comments is included in "Appendix A: Responses to Public Comments Concerning the Wishbone Hill Mine Permit Renewal" and is attached as part of this Final Findings and Decision.
9. Following the end of the public comment period and the informal conference the Division reviewed the submitted permit renewal application, the current approved Operation and Reclamation Plan dated May 11, 2011 and public comments. On August 2, 2012, the Division issued a letter to UCM requesting additional information under AS 27.21.080(b). The required information was detailed in the attachment, "Appendix A", of the August 2nd letter, and is listed below.
 1. Installation of additional groundwater monitoring wells:
 - a. One additional monitoring well must be installed in the washplant area to better understand and monitor pond infiltration.
 - b. Four additional down-gradient monitoring well clusters must be installed between the mine areas and Moose Creek. The monitoring well clusters must consist of wells installed in both alluvium and bedrock. The monitoring wells must be positioned to adequately detect early signs of changes in water quality during mining and reclamation for both Mine Area 1 and Mine Area 2.
 - c. One additional monitoring well cluster must be installed immediately south of Mine Area 1 to monitor overburden and bedrock water quality.
 - d. Two up-gradient piezometers must be installed in the overburden and bedrock to the east of Mine Area 2 to detect drawdown in the groundwater during mining.
 2. Groundwater sampling of all active monitoring wells: This includes both groundwater quality and water levels. Enough samples should be collected to verify and correlate to existing groundwater data.

3. Surface Water Samples of Moose Creek and Buffalo Creek: At a minimum, bi-monthly water quality and quantity samples. Enough samples should be collected to verify and correlate to existing surface water data.
 4. Statistical analysis of water quality and quantity to determine if there has been a significant change in the pre-mining conditions and to determine if any trends have developed due to increased public use of the area.
 5. Fish studies on Buffalo Creek and Moose Creek to address presence/absences of resident and anadromous fish within the system.
 6. Update Operation and Reclamation Plans to reflect changes in precipitation as shown in Technical Paper No. 47, Probable Maximum Precipitation and Rainfall-Frequency Data" http://www.nws.noaa.gov/oh/hdsc/PF_documents/Atlas14_Volume9.pdf. This includes updates to all sediment ponds, conveyances and post mining channels.
 7. Update Chapter IV Hydrogeology: Provide an updated surface and groundwater model that includes a detailed water management plan. Must include a discussion of impacts to Moose Creek and surrounding residential areas.
 8. Update Chapter IX to include aquatic resource changes since the 2008 stream restorations work on Moose Creek.
 9. Update portions of the Operation and Reclamation Plan to address potential impacts to aquatic species in Moose Creek from blasting operations, potential surface water runoff and groundwater withdraw which may potentially impact Moose Creek.
10. In response to Item 1 above, UCM agreed that the proposed new monitoring wells are part of the approved permit, but did not agree it was appropriate to install the new wells as part of this renewal because the areas the wells will monitor have not been constructed or disturbed by mining operations. They believe the potential delays during construction of the monitoring wells will be detrimental to their ability to secure a coal contract. UCM reiterated their commitment to install and monitor these wells at least 3 months prior to disturbance in the washplant area and the Phase I and II mine areas. After several meetings with UCM on this issue, the Division requested they submit a detailed plan for the installation of the monitoring wells and the monitoring of the site through all phases of mining and reclamation.

In response to this request UCM, on November 26, 2013, submitted a plan for installing monitoring wells. The plan included the proposed locations new monitoring wells, along with a plan to monitor the wells prior to disturbance, during mining and post mining. the Division reviewed this plan and requested several changes including the location of monitoring wells and additional details on the plan. As part of the Division's review of

this plan, the Alaska Department of Environmental Conservations (DEC) was consulted. DEC provided recommendations on the number of samples to be collected and the sample criteria.

On February 19, 2014, UCM submitted a revised monitoring plan. This plan included the relocation of monitoring wells, the piezometer locations and more details on the pre-mining monitoring program. The revised plan includes a commitment to start monitoring at least six months prior to disturbance and the collection of 10 unique water samples at least two weeks apart. As part of this submittal, UCM also submitted a plan for groundwater monitoring during active and post mining operations. The Division requested additional minor changes to the plan on March 10, 2014.

DMLW finds that the proposed monitoring plan, along with the stipulations below, to be acceptable. The stipulations include a minimum number of wells to be sampled and the criteria for water samples. After consultation with DEC, the Division finds that the location and number of new and existing monitoring wells will be sufficient to detect potential offsite impact. UCM will also be required to collect 10 unique samples over a minimum of a 6 month period. UCM has been advised to collect over a longer period to ensure they identify periods where water quality changes due to seasonal variation.

11. In response to Item 2, UCM contracted with MWH to review the existing groundwater data. MWH's review is provided in a Technical Memo dated May 3, 2013. This memo compared the 1988-1990 sampling event with 2008 sampling events. MWH concluded that the groundwater monitoring wells, and piezometers are sufficient to characterize background conditions at the Wishbone Hill site. MWH also concluded that the limited size of the 2008 sampling event was not enough to determine if there has been a statistically significant change in water quality/quantity. MWH concluded that the results from 2008 were comparable to the original sampling from 1988 to 1990. Prior to disturbance in the washplant area and the Phase I and II mine areas, UCM will be required to collect additional groundwater samples from both the overlying glacial till and bedrock for at least six months to capture pre-mining conditions.
12. In response to Item 3, UCM contracted with MWH to review the existing surface water data. MWH's review is provided in a Technical Memo dated May 3, 2013. This memo compared the 1988-1990 sampling events with 2008 sampling events. MWH determined that the results from 2008 were comparable to the original sampling from 1988 to 1990. MWH also stated that the limited size of the 2008 sampling event was not enough to determine if there has been a statistically significant change in water quality and quantity. However, they were able to conclude that the existing data and the network of surface water monitoring locations are sufficient to characterize background conditions at the Wishbone Hill site. The Division finds that this response is sufficient to address the issues raised in Item 3.

13. In response to Item 4, UCM has conducted activities required by the Division in order to maintain its permit and to address changes to the local community. Previous renewals were accepted by the Division based on existing background data, which included regional watershed data, characterization of site-specific watersheds, stream flow data from streams in and near the permit area, stream morphology data, analytical results from surface water quality monitoring and an evaluation of baseline yield conditions.

Seven surface water monitoring stations were established to characterize surface water quality and quantity background conditions. Four stations were located on Moose Creek, two on Buffalo Creek and one on Premier Creek. Two of the Moose Creek stations and one Buffalo Creek station included continuous stream flow monitoring with data loggers. Water quality data was collected at all stations.

In addition, UCM has maintained a groundwater monitoring network. During 1999 through 2001, and again in 2008 and 2009, quarterly water quality samples were collected on Moose Creek. During 1998 through 2001, and again in 2007 through 2009, quarterly discharge/flow measurements were also collected on Moose Creek. Discharge/flow and stream morphology assessments were also collected on Buffalo Creek during 2008. Water quality assessments for groundwater as well as piezometer readings were collected between 2008 and 2009. Aquatic biologic resource studies were conducted for Moose Creek and Buffalo Creek in 2008. Usibelli also completed an updated wetlands jurisdiction report in 2009.

For this permit renewal the Division has stipulated that additional monitoring wells be installed to detect potential impacts prior to any effects to Moose Creek or local water supplies. Therefore, since all water quality and quantity data that has been collected has been prior to development activities, the information is considered “background”. The baseline groundwater monitoring data is valid for the documentation of existing, pre-mining background conditions at WBH. This existing data provides a historical record and a basis for the future comparative analysis moving forward through the mining life cycle.

14. In response to Item 5, the Alaska Department of Fish and Game (ADF&G) provided UCM with fisheries information from Moose Creek and Buffalo Creek from a 2008 and 2009 study conducted by WHPacific. A discharge measurement and fish sampling study was also completed for Buffalo Creek by WHPacific in the summer of 2012. A synopsis of the aquatic resource changes since the 2008 stream restoration work on Moose Creek from ADF&G was also received by UCM and is outlined in response number 17 below.

The ADF&G synopsis of the fisheries resources changes since the 2008 stream restoration work on Moose Creek dated February 7, 2013 states that the Moose Creek watershed supports various fish species, including all five species of pacific salmon and resident rainbow trout and Dolly Varden. Fishery sampling was conducted in Moose

Creek and Buffalo creek in 2008, 2009, and 2012. The updated data are sufficient to address presence or absence of resident and anadromous fish within the system.

15. In response to Item 6, UCM initially designed the drainage structures based on data contained in the “Technical Paper No. 47, Probable Maximum Precipitation and Rainfall-Frequency Data.” Design calculations were then updated and revised with the current data contained in the NOAA Atlas 14 Volume 7, which indicates the maximum point precipitation during a 100-year, 24-hour event to be 3.81 inches of rain, supporting the permit’s Part D, Operation and Reclamation Plan. DMLW accepted the amended design of sediment and drainage control structures as meeting the requirements of 11 AAC 90.301 through 11 AAC 90.501.

During the review the Division also requested an explanation on the changes in the SEDCAD design, the source for the sieve values with the SEDCAD runs, an update of drainage map elevations, structure detail, culvert drainage elevation data and better quality scanned copies. UCM has made the requested changes and provided the additional information as requested except for “Mine Area 1 and 2 Drainage Map” and Plate X-X. This information was submitted to the Division as part of the June 5, 2014 submittal.

16. In response to Item 7, UCM initially stated on May 9, 2013 that they had reviewed the existing model produced by Golder Associates in 1989 to evaluate pit inflows and responded, “There are no changes to the surface water flow characteristics within the permit area that can be used to update the permit in Chapter IV Hydrogeology. The Golder Associates Model is included in Attachment D. UCM had this independently verified please see Attachment A: ‘Technical Memorandum by MWH’ dated May 3rd, 2013.”

Following the Division’s review and continued request for additional information, UCM responded with more information dated October 16, 2013 along with references that cited more detailed information in various chapters, figures and sections of the Permit Application. The Division found that the information UCM provided updated the surface and groundwater model by showing the approximate extent and thickness of saturated sediments. This review also determined that the potential impact to groundwater resources into Moose Creek would be less than two percent. The Division found all the submitted information satisfactory on December 13, 2013.

17. In response to Item 8, UCM submitted to the Division information received in an email to UCM from Samuel Ivey, the Area Management Biologist for Northern and West Cook Inlet, ADF&G Sport Fish Division, which stated, “The Moose Creek watershed supports various fish species, including all five species of pacific salmon and resident rainbow trout and Dolly Varden. Chinook and [Coho] salmon are the most prevalent salmonids. The Anadromous Waters Catalog (AWC) maintained by the Alaska Department of Fish

and Game (ADF&G) lists the following species and life stage for Moose Creek: King salmon rearing and spawning, [Coho] salmon rearing and spawning, and presence of sockeye, chum, and pink salmon. The abundance of Chinook salmon has been monitored by ADF&G since about 1979 by means of aerial index counts conducted by helicopter on an annual basis. The average all years count is 460 and range from 175 [to] 1,072 fish. In 2005 Chickaloon Village Traditional Council restored salmon passage to upper Moose Creek by returning the channel to its original state prior to construction of the railroad spur in the early [1920's] that caused the formation of a waterfall. This project opened at least 5 additional miles of spawning habitat for salmon. As a result, Chinook salmon were found spawning further upstream and the [Department's] index area for assessing Chinook abundance was extended from Buffalo Mine Road Bridge near the Superior Mine upstream to the point of entrance into the mountains, the current upstream limit of documented spawning in the AWC. In October, 2012, adult [Coho] and juvenile Chinook were documented in Buffalo Creek, a small tributary upstream of the old barrier waterfall. During the October survey, 21 Dolly Varden and 1 rainbow trout were also noted in Buffalo Creek.” This information is included in Chapter IX.

18. In response to Item 9, UCM understands that they are required to use the more restrictive of either ADF&G Blasting standards or ASCMCRA Blasting Standards in the protection of Aquatic Resources. These standards were developed to prevent the shock waves and instantaneous pressure changes from explosives that can injure or kill fish. The instantaneous pressure rise in the water column in rearing habitat and migration corridors is limited to no more than 7.3 psi where fish are present. Peak particle velocities in spawning gravels are limited to no more than 2.0 in/s during early states of embryo incubation before epiboly is complete.

To maintain compliance with the ASCMCRA standards UCM will monitor blasting with seismograph, overpressure monitoring and setback calculations. The ASCMCRA blasting requirements include specific standards and values for air blasts, decibels, distances and maximum allowable peak particle velocity. UCM's Operation and Reclamation Plan also includes a fish and wildlife protection plan that addresses the use of explosives. According to the plan UCM will follow ADF&G's "Blasting Standards for the Protection of Fish" during blasting operations in mine pits that are in close proximity to Moose Creek.

For potential surface water runoff and groundwater withdraw UCM found that there would be no changes to the surface water flow characteristics that could be used to update the permit in Chapter IV Hydrogeology. UCM based this determination on its own review of the model, but it also contracted with MWH for the aforementioned Technical Memo to conduct an independent regulatory and data review of the Wishbone Hill groundwater and surface water information to verify its findings (MWH Technical Memo, May 3, 2013). (For more information on potential surface water runoff and

groundwater withdraw please see the response in number 15 for Item 7 and the response in number 12 for Item 4.)

19. The following is an approximate timeline for how changes occurred to the Mine Permit Application: On August 2, 2012 DMLW submitted a letter to UCM outlining additional information required in order to proceed with the permit renewal process and make a decision to grant, condition, modify or deny the application. This letter contained an appendix titled "Appendix A" listed the required material DMLW required to complete the technical review of the renewal application. After a conversation with the Division on March 7, 2013, UCM submitted its first written response to the Division's August 2, 2012 request on May 9, 2013. The responses were in the form of technical explanations as well as proposed permit application changes. The letter had four Attachments: the attachments included a technical memorandum, revisions and additions to Part C and Part D of the Permit Application and a hydrologic model.

Upon review of UCM's May 9, 2013 submittal the Division sent a completeness checklist, dated August 5, 2013 that outlined the current permit issues and needed changes to UCM.

UCM submitted more information, October 16, 2013 that included changes attached in Addendum 2 and Addendum 3, changes in a revised Attachment C and responses to five questions listed as DNR Requirement #7. UCM also incorporated their responses into the deficiency spreadsheet

UCM next submitted a letter dated November 26, 2013. This letter was a follow up to discussions concerning information first sought by the Division in the August 2, 2012 letter regarding Part 1 of Appendix A. The outstanding issue is the installation of additional groundwater monitoring wells. UCM submitted two attachments to this letter, a "Well Description and Monitoring Plan" and a "Well Location Map" to address the monitoring wells. Responses were also incorporated into the deficiency spreadsheet.

On December 16, 2013 the Division sent an email to UCM with the deficiency spreadsheet attached. According to DMLW the major review items were covered but there were still concerns with the clarity of some of the figures and text. Poor quality scans needed to be updated and resubmitted.

On December 24, 2013 the Division sent a letter to UCM regarding the review of the renewal documents that also included updates to the deficiency spreadsheet that identified individual items to be addressed. This included general requirements for better quality scans of figures and text and corrections of minor errors such as elevation. Additionally, more specific information was again requested regarding Requirement #1 and the monitoring wells issues. Also requested was a list of items requiring updating and rescanning in Attachments C and D, the October 16, 2013 submittal, and Permit Documents in Chapters IV, V, VI, XVI and Part C and Part D.

On January 7, 2014 DNR requested more information regarding a water balance review (Part D, Appendix C of the Permit Application). Also on January 22, 2014 DMLW forwarded blasting information to UCM for review.

On February 19, 2014 UCM sent a letter to DMLW summarizing its response to the December 24, 2013 Division request in addition to other items brought forward by the Division subsequent to the letter. The letter included six attachments with updates to various parts of the mine Permit Application. Also included were UCM responses to the individual questions from DMLW in the deficiency spreadsheet. Some of the issues identified by the Division and addressed by UCM included the clarity of figures and text, correction of minor errors, monitoring well issues (installation timelines, sampling schedule, and well locations), updates to plates and maps and updates to climatological and blasting data. The UCM responses were provided in the cover letter, attachments and in the deficiency spreadsheet.

On March 10, 2014 DMLW sent a letter to UCM regarding the documents submitted on February 19, 2014. The letter included comments back to UCM and the latest updates to the deficiency spreadsheet. Several of the responses received by DMLW were deemed acceptable and required no further information from UCM. DMLW's review resulted in dropping several comments from the checklist, noting that further review was required for some drawings, and that several responses require further discussion between DMLW and UCM.

On March 12, 2014 UCM sent an email to the Division with an updated deficiency spreadsheet. The updates included changes made by UCM to two tables and an agreement by UCM to have a qualified person (per statute and regulation) certify (stamp and sign) all final figures and plates once the Division determines that no additional changes would be required.

On March 21, 2014 DMLW sent a letter to UCM regarding the updated completeness spreadsheet submitted on March 12, 2014. The letter included the latest updates to the deficiency spreadsheet. Several of the response explanations received by the Division were deemed acceptable and required no further information from UCM; several responses and several drawings were being further reviewed by the Division and several responses were still being deliberated between the Division and UCM (e.g. wells H-32 and DNR-1a, haul road contours, climatological information). At this point there was continued discussion between the Division and UCM regarding several monitoring wells to determine the best location for these wells. The concerns about the remaining monitoring wells were addressed in a meeting on May 21, 2014 between the Division, DEC and UCM. These final proposed monitoring well locations are reflected in UCM's June 5, 2014 submittal.

On June 5, UCM provided additional documents and revisions that addressed the remainder of the outstanding issues identified in the March 21, 2014.

20. On Monday March 5, 2012 the Department of Health and Social Services (DHSS) released the Draft Health Impact Assessment (HIA) for the Wishbone Hill project for public review. The Division reviewed DHSS' material associated with the HIA process. To the degree it pertained to the statutory and regulatory requirements of ASCMCRA, the Division considered the material in the course of developing the Renewal Permit for the Wishbone Hill Mine as well the development of the stipulations listed in the paragraphs below. Based on comments received during the public notice period and information associated with the Department of Environmental Conservation Air Permitting process, HSS is revising the draft HIA as part of its independent process and will issue a final document in a separate action outside of this permit renewal.
21. The HIA materials provide recommendations to address concerns in eight priority health impact categories: Social Determinants of Health; Accidents and Injuries; Exposure to Potentially Hazardous Materials; Food, Nutrition and Subsistence; Infectious Diseases; Chronic Non-Communicable Diseases; Water and Sanitation; and Health Infrastructure and Capacity. While the Division's renewal focused only on the statutory and regulatory requirements laid out in ASCMCRA, and this renewal was not expanded to include any topics beyond that scope, to the degree information in the eight HIA categories was pertinent to the ASCMCRA analysis it was reviewed and considered by the Division.
22. As part of this renewal, the Division has revised the reclamation bond to reflect current cost for equipment, fuel and labor. Based on this review and pursuant to 11 AAC 90.205(d) the Division has determined that reclamation bond in the amount of \$34,800 is sufficient to guarantee the present obligations under the surface mining permits. Prior to additional non-predevelopment work, a reclamation bond in the amount of \$7,940,616 needs to be provided to the Division. This bond is sufficient to guarantee obligations for the first year of activity, once operations commence. The bond is conditioned upon the completion of the required reclamation and compliance with all terms, stipulations, and conditions of the original permits and this renewal.
23. The permit areas have not changed and are not within an area designated unsuitable for mining under AS 27.21.260.
24. The proposed Surface Coal Mining Reclamation and Operation Plan will not affect known threatened or endangered species or their critical habitat.
25. This renewal is subject to the stipulations of the original permits as revised in this Final Findings of Fact and Decision to ensure that the surface coal mining and reclamation operations will comply with the requirements of AS 27.21 and 11 AAC 90.

26. As stipulated below, the application for renewal meets the criteria of AS 27.21.180 and the renewal of the Surface Coal Mining Permits 01-89-796 and 02-89-796 can be approved.

27. The following stipulations have been revised as part of this renewal:

- a. **GEOMORPHIC APPROACH.** The permittee shall apply geomorphic principles to create channels and landforms that are appropriate to create a stable final grading and surface drainage for the post-mining topography to the extent technically feasible. Examples of available practices include scalloped complex slopes, sinuous drainage channels with concave longitudinal profiles, appropriate drainage density, and slopes with the bottom half concave in shape.
- b. **ALASKA POLLUTANT ELIMINATION SYSTEM (APDES) PERMIT.** Water may not be directly discharged from ponds or disturbed areas into Moose Creek unless in compliance with an APDES permit issued by the Alaska Department of Environmental Conservation (DEC).
- c. **MONITORING WELLS.**
 - i. After consultation with DEC, the following new operation and post mining monitoring wells must be installed: DNR 1A, DNR 1b-1, DNR 1b-2, DNR 1b-3, DNR 1b-4, DNR 1c, DNR 1d-1, and DNR 1d-2. Locations of these new monitoring wells are shown in in Part D Section 15 figures 15-2, 15-3, of the revised operation and reclamation plan. These new wells must be installed prior to any additional surface coal mining activities.
 - ii. In addition, the following 11 wells will act as the operational and post mining monitoring wells: H88 14A, H88-22, H88-27, DNR 1A, DNR 1b-1, DNR 1b-2, DNR 1b-3, DNR 1c, DNR 1d-1, DNR 1d-2, and DNR 1b-4. UCM may add additional wells to this list but may not remove or fail to install any of the listed monitoring wells without approval from DMLW.
- d. **PRE-DEVELOPMENT WATER QUALITY MONITORING.** At least 6 months prior to the development of the washplant pond and related facilities or the Phase I or II mining areas UCM must collect 10 unique water quality samples from the list of operational and post mining monitoring wells in Stipulation “c. ii.” These samples must be tested for the full suite of total recoverable inorganics and nitrates as described and listed in Part D, Operation and Reclamation Plan, 15.10 Monitoring of Groundwater Quality and Quantity.
- e. **WATER QUALITY/QUANTITY MONITORING.** Monitoring for surface water quality of Moose Creek and Buffalo Creek will be conducted on at least a bi-


monthly (every other month) interval. New monitoring wells will be sampled on the same intervals as existing monitoring wells as outlined in Part D, Section 15.10.2.

- f. **BLASTING.** In addition to the requirements found in 11 AAC 90.379(e) all blasting operations for the Wishbone Hill Mine will be designed to not produce an instantaneous pressure rise in the water column of Moose Creek of no more than 7.3 psi where fish are present and a peak particle velocity in spawning gravels of no more than 1.25 inches per second. This requirement may be waived or a different pressure change value set upon prior written approval from the Department of Fish and Game and the Department of Natural Resources, Division of Mining Land and Water. Unless approved by the Department, the compliance point for meeting the blasting requirements of 11 AAC 90 will be Moose Creek.
 - g. **CULTURAL/HISTORIC ARTIFACTS.** The Alaska Historic Preservation Act (AS41.35.200) prohibits the appropriation, excavation, removal, injury, or destruction of any State-owned historic, prehistoric (paleontological) or archaeological site without a permit from the Commissioner. If cultural or paleontological resources are inadvertently discovered as a result of, or during, the activities authorized by this renewal, all activities which would disturb such resources shall be stopped and measures taken to protect the site. The State Historic Preservation Officer (907-269-8722) shall be contacted immediately so that compliance with state laws may begin. If burials or human remains are found, in addition to the State Historical Preservation Officer, the State Troopers (907-745-2131) are to be notified immediately.
 - h. **NOISE.** Usibelli will work with the Mat-Su Borough and the local community to minimize the impacts of noise to the local community. Surface mining operations will, to the furthest extent possible, limit the noise level of surface mining operations at the permit boundary to 70 dB between 7:00 AM and 6:00 PM and 60 dB between 6:00 PM and 7:00AM.
 - i. **LIGHT.** Usibelli will communicate and work with appropriate Mat-Su Borough officials and the local community to minimize the impacts of light from surface mining operations to the local community.
28. Public notice of this final decision for renewal of the Wishbone Hill Permits will be given for the period starting on October 3, 2014, and ending on November 3, 2014. A Legal ad will be placed in the Alaska Dispatch News and the Mat-Su Valley Frontiersman on October 3, 2014. On October 3, 2014, the notice of the decision will be distributed simultaneously to each person who filed a written comment, DMLW's list of affected

persons, state and federal agencies, appropriate local government agencies and placed on the State of Alaska Public Notice Website and the DMLW Mining Resources Website.

Copies of the Renewal Permit Application, existing Mine Permit, the Preliminary Findings of Facts and Decisions, and the Final Findings of Facts and Decisions are available for review at the Alaska Department of Natural Resources, Division of Mining, Land and Water, 550 West 7th Avenue, Suite 920, Anchorage, Alaska 99501-3577 or on our website at (www.dnr.state.ak.us/mlw/mining/index.htm).

Approved:



Scott Pexton

Chief, Mining Section

DNR, Division of Mining, Land and Water

10-3-14

Date

The applicant, or a person with an interest, which is or may be adversely affected by this decision may request in writing a hearing under AS 27.21.150 to review the reasons for this decision. Any request for a hearing must be received within 30 calendar days after the date of this decision. The request for a hearing may be mailed or delivered to Joe Balash, Commissioner, Department of Natural Resources, 550 West 7th Avenue, Suite 1400, Anchorage, AK 99501; or faxed to 907.269.8918; or sent by electronic mail to: dnr.appeals@alaska.gov.