

**Appendix A: Department of Natural Resources
Responses to Public Comments Regarding
The Chickaloon Exploration Permit Application**

July 23, 2012

This document is the Response to Comments for the public comments submitted to the Alaska Department of Natural Resources (DNR) in the form of letters, e-mails, and faxes during the public comment period held from May 11, 2012 to June 18, 2012.

The DNR Division of Mining, Land and Water (DMLW), Coal Regulatory Program received a total of 75 comment submittals. Most of these individual submittals contained comments on multiple subjects.

Of the 75 comments submitted 63 came from private individuals, seven were from Non-Government Organizations, three were from State and Local Governments Agencies and two were from a Community or Tribal Council. There were zero comments from Federal Agencies. The table below provides a summary of the location provided by commenters as either a return address or place of residence as well as the type of organization.

General Area (No return address provided)	3
Chickaloon Area	34
Sutton Area	5
Mat-Su Area	9
Municipality of Anchorage	9
Fairbanks - Healy Area	0
Statewide	1
Out-of-state	2
Non-governmental Organizations	7
Community and Tribal Councils	2
Borough Government	1
State Agencies	2
Federal Agencies	0
Total	75

Response to Comments

Ecological, Resource and Habitat Issues

1. **Comment:** Concerns were expressed regarding ecological changes associated with strip mining for coal. This includes the loss of topsoil, forest loss, altered topography, acid mine drainage, water quality changes, aquatic life disruptions and settling ponds not properly reclaimed following mine closure.

Response: DNR is currently reviewing an application for exploration under 11 AAC 90.163. The activities described by this comment are not being proposed as part of the exploration program.

Aquatic Life - Salmon

2. **Comment:** Several comments were received regarding incomplete information on fish and aquatic resources. Commenters would like fish surveys completed on California Creek, the Castle Mountain watershed and Fish Lake. King salmon began returning to Sawmill Creek in 2001 after an 80 year absence.

Response: The Alaska Dept. of Fish and Game (ADF&G) reviewed the public notice and provided comments that were addressed by Riversdale Alaska, LLC (RAL) prior to the public notice period. ADF&G comments included:

- Fish Habitat Permits may be required if water withdrawals are proposed from fish bearing waters;
- Any motorized crossings or any other activity below the ordinary high water mark of the Kings River will likely require Fish Habitat Permits;
- Any upgrades or replacement of culverts in fish bearing streams will require Fish Habitat Permits; and
- Additional review of the exploration program will be necessary once Phase II and Phase III exploration plans are developed.”

They also provided recommendations that pertained to roads, trails, pads, and other ground disturbance as well as moose, reclamation and vegetation, which will be stipulated as required in the exploration permit. Further, 11 AAC 90.423 outlines the Standards for the Protection of Fish and Wildlife.

Wildlife and Birds

3. **Comment:** The list of terrestrial wildlife and bird species in the application is incomplete. There is no mention of studies to determine the types, numbers, and routes of migratory birds, although a list of ten migratory species compiled during a 1989 Survey is included. Commenters requested that a complete list of all birds and terrestrial wildlife species in the exploration lease area be included in the permit application.

Response: A complete list of all birds and terrestrial wildlife is beyond the scope of an application for exploration. In accordance with 11 AAC 90.161(a)(2)(A) a brief description of important habitat for fish, wildlife and plants, including any endangered

species listed under the Endangered Species Act of 1973 as amended, is included in the exploration application.

On April 28, 2012 RAL completed a Raptor study. The results showed no active raptor nests within a half mile of the proposed areas of exploration and associated areas of access routes and areas proposed for field studies. Three inactive nests were identified; however, none of these nests were eagle nests.

4. **Comment:** Important nesting areas should be avoided, regardless of the impact on the timing of the exploration program. Coordination should occur with the U.S. Fish and Wildlife Service (USFWS) between April 10 to August 10, or as defined as important breeding and hatching periods by local USFWS.

Response: RAL will be directed to work with USFWS to minimize adverse impacts to important nesting areas as part of the approved permit.

Baseline Studies

5. **Comment:** Commenters recommend a public plan be required of RAL and requests that DNR require advance baseline testing of water, soils and wildlife. Concern was expressed regarding the commitment to “additional environmental baseline measurements in 2013” at the end of section 6.0. DNR is asked to closely monitor the actual operations to ensure the exploration is done in a way that preserves the environment.

Response: As stated previously, RAL’s Application has met the standards for an Exploration Application as outlined in 11 AAC 90.163, which includes:

- Information required under 11 AAC 90.161(a)(1), (a)(2), and (a)(5)
- An exploration and reclamation plan of operations, that includes the requirements of 11 AAC 90.163 (a)(2) through (a)(5).

The scope of this review is to provide a summary of readily available information. Baseline studies as proposed in this comment are not required for an exploration permit and are above and beyond the normal compliance requirements for a permit of this type.

During active exploration activities DNR will be required to inspect RALs operations at least once a month.

All Information acquired by RAL during the exploration phase(s) will be used to determine any further exploration activities and if the project applies for a mining permit will be utilized as appropriate

Reclamation and Soils

6. **Comment:** The application does not specify the soil salvage, storage or replacement protocols or standards. Soil salvage should specify that all available soils and subsoils should be salvaged to maximize the amount of available material for reclamation. Horizons should be stored separately. It should also specify for revegetation; that replaced soil materials should be scarified to their full depth to ensure that compaction

does not impair future root development. Details of erosion mitigation need to be provided. Only native species should be selected for final reclamation.

Response: Any topsoil that is removed as part of the operations must be stored and protected from erosion. This includes temporary seeding and berms to prevent soil loss. Individual soil horizons are generally too thin to be successfully segregated and is not required for this operations. Topsoil that is replaced as part of the reclamation process must not be compacted. If compaction is a problem the site must be furrowed or ripped to insure proper root growth.

7. **Comment:** The application describes generalized plans but really no criteria or measurable goals. The permit should establish actual reclamation plans and standards. The commenters recommend the reclamation bond release be timed to ensure that all vegetation has had at least three years of untreated, undisturbed conditions to demonstrate establishment/success, not just short-term emergence and growth. They also recommend that quantitative measures of success over time need to be established and measured prior to bond release.

Response: All disturbed areas must be seeded or planted to the same seasonal characteristics of growth as the original vegetation. The vegetation cover must be capable of stabilizing the soil against erosion. Revegetation must be carried out in a manner that encourages prompt vegetative cover and recovery of productivity levels compatible with the approved post-exploration land use (11 AAC 90.167(j)). DNR will generally hold reclamation bonds for vegetation at least five years to insure vegetative success.

8. **Comment:** The application states, “Fertilizer will be at least the equivalent of N20-P20-K10.” According to a local USDA NRCS soils scientist, spoils don’t have cation exchange capacity, which means that without organic material or clay in the groundcover material, the fertilizer will not be taken up by developing plants and will instead leach into the groundwater and surface water systems. Therefore, fertilizer is not appropriate for stimulating re-growth of vegetation at core drilling sites or trenches or other sites where cuttings will be distributed over the ground surface.

Response: As stated above, all disturbed areas must be seeded or planted to the same seasonal characteristics of growth as the original vegetation. The vegetation cover must be capable of stabilizing the soil against erosion. Revegetation must be carried out in a manner that encourages prompt vegetative cover and recovery of productivity levels compatible with the approved post-exploration land use. The permit has also been stipulated to say, “In order to encourage native vegetation, RAL will minimize the use of seeding and fertilizer on reclaimed topsoil.” DNR will have further discussions with RAL and the Plant Material Center to determine the appropriate use of fertilizer both for bare spoil areas and areas that have reclaimed topsoil.

Incomplete Resource Information

9. **Comment:** RAL failed to include significant information in its exploration permit application and the information that is included is outdated. ASCMCRA requires RAL to include information in its permit application about surface water, vegetative cover, fish

and wildlife habitat, and other important baseline information under 11 AAC 90.163(a)(2)(A).

Response: RAL's Application has met the standards for an Exploration Application as outlined in 11 AAC 90.163, which includes:

- Information required under 11 AAC 90.161(a)(1), (a)(2), and (a)(5)
- An exploration and reclamation plan of operations, that includes the requirements of 11 AAC 90.163 (a)(2) through (a)(5).

The scope of this review is to provide a summary of readily available information. During active exploration activities DNR will be required to inspect RALs operations at least once a month.

All Information acquired by RAL during the exploration phase(s) will be used to determine any further exploration activities and if the project applies for a mining permit will be utilized as appropriate

Climate Change

10. **Comment:** Concerns regarding a foreign company mining the land to sell coal to Asia and contribute to climate change.

Response: RAL is authorized to conduct business in the State of Alaska.

Surface Water and Groundwater

11. **Comment:** Riverdale's geophysical electromagnetic helicopter flights should provide information on where aquifers are located. This new data should be reviewed and used to place groundwater wells. Water monitoring well locations should include: wells in the directions of all private properties (as these properties likely have or will have drinking water wells); wells around the perimeter of the lease area; and wells in locations that will be long-term monitoring sites and therefore sites that won't be potentially mined. Groundwater monitoring needs to be relevant to how it will impact Chickaloon area wells and streams.

Response: When sighting surface and groundwater monitoring locations RAL will be directed to work with DNR and other resources agencies to determine the appropriate locations. Sites will be selected based on the need to understand potential impacts to the local environment and to the local community. RAL has begun discussions with various agencies to determine monitoring locations.

12. **Comment:** Concerns regarding water impacts to local water wells and natural springs that are recharged from groundwater originating on the slopes of Castle Mountain. This water also feeds Fish Lake, Ida Lake and other creeks supporting a population of fish, waterfowl, moose and other wildlife. Coal washing will damage the pristine environment the community enjoys and wants to preserve.

Response: Each exploration hole, borehole, well, or other exposed underground opening must comply with 11 AAC 90.303. This states that, "Closure measures must be designed to prevent acid or other toxic drainage from entering ground or surface water, to

minimize disturbance to the prevailing hydrologic balance, and to ensure the safety to people, livestock, fish and wildlife, and machinery.” Coal washing is not being proposed in this exploration permit.

13. **Comment:** The exploration activities may be accurate in stating that any stream crossing will not contribute additional suspended solids to a stream. However earth disturbance, such as trenching, stock-piling overburden, or storage of drill cuttings in a 10-ft x 10-ft area, are all activities that may contribute to sediment to a stream. Disturbed soil, whether by shallow trenching or by drilling, must be treated as a sediment source with the potential to be transported by storm water or wind.

Response: No surface activities are authorized within 100 feet of any naturally occurring surface water body. All subsurface and surface water in a disturbed area must be handled in accordance with 11 AAC 90.167(f)(2) “If the road, trail, runway, or marine facility is significantly altered or its use contributes additional suspended solids to streamflow or runoff, (j) of this section applies to those portions of the activity.” Section (j) outlines the revegetation standards for disturbed areas. These areas must all be in compliance with 11 AAC 90.325 “Diversion and Conveyance of Flow.” Drainage and sediment control measures are required to prevent any sediment from leaving the disturbance site. DMLW will be conducting regular inspections of the exploration activity to ensure that sediment and erosion control measures are working properly.

14. **Comment:** A Storm Water Pollution Prevention Plan (SWPPP), Best Management Practices (BMPs) must be implemented. A SWPPP may be required if the total disturbance area of all Phase I exploration activities (trenches, drill locations, camp area) are greater than 1 acre. ADEC may require a SWPPP prior to initiating exploration activity. Our state agencies must collaborate to protect the environment if responsible development is to be permitted.

Response: The decision to issue a SWPPP is beyond the scope of 11 AAC 90 Article 8, “Exploration”. This decision is the responsibility of the Alaska Department of Environmental Conservation (ADEC). Please refer to the ADEC website for more information on SWPPP requirements [http://dec.alaska.gov/water/wnpssc/stormwater/sw_construction.htm]. As part of the public notice process all state agencies were included in the public notice mailing.

ADEC included the following comment during the public notice period: “Drilling and trenching activities do not require authorization from the Department if the activity falls within Alaska Statute 46.03.100(e)(4) permit exemption criteria for the discharge of liquid waste material or water discharges for activities such as mineral drilling, water well drilling, or geophysical drilling if the discharge is incidental to the activity and the activity does not produce a discharge from a point source that discharges into waters of the United States. If water discharged from the drill sites are greater than what would be considered incidental, if there is a discharge into waters of the United States or if the site conditions change such that there could be potential harm [to] human health or the environment, then exploration drilling activity may [be] subject to further compliance

oversight and a wastewater discharge permit requirements in order to continue of exploration.”

15. **Comment:** Commenters requested more application details on stream gauge, water quality and overburden studies. Studies should have sufficient data to characterize the site(s) spatially and over time. Details should include : 1) stream gauge placement and names of the water bodies, 2) soil and overburden sampling test methods, constituent list and analytical detection limits, 3) groundwater and surface water quality sampling methods, frequencies, constituent list and analytical detection limits.

Response: As part of RALs future work on this project, the company will be directed to work with DNR and other resources agencies to design suitable studies to understand the surface and groundwater hydrology, gauging stations, and other baseline data of the study area. This study design will be based on the need to understand environmental setting and potential impacts to the local environment and to the local community. The design of this study is beyond the current scope of review for an exploration permit application.

Groundwater Monitoring

16. **Comment:** The application lacks adequate data to inform agencies permitting decision process. Specifically there is inadequate data regarding groundwater and the complexity of the watershed. Little data has been collected on water quality, water quantity and community needs.

Response: As stated previously, RAL’s Application has met the standards for an Exploration Application as outlined in 11 AAC 90.163, which includes:

- Information required under 11 AAC 90.161(a)(1), (a)(2), and (a)(5)
- An exploration and reclamation plan of operations, that includes the requirements of 11 AAC 90.163 (a)(2) through (a)(5).

The scope of this review is to provide a summary of readily available information. Baseline studies as proposed in this comment are not required for an exploration permit.

During active exploration activities DNR will be required to inspect RALs operations at least once a month.

All Information acquired by RAL during the exploration phase(s) will be used to determine any further exploration activities and if the project applies for a mining permit will be utilized as appropriate

17. **Comment:** The application references hydraulic conductivity and permeability from the Jonesville Mining Permit, the State of Alaska Well-Log Tracking System (WELTS) and Wishbone Hill Coal Leases. Both the Jonesville and WELTS data show low flows in bedrock, but the Wishbone Hill data were found to have very high water flow where the bedrock was fractured. The RAL application notes that fractures can increase flow locally. Commenters requested details of how the hydrologic study is to be conducted and include how the data is to be collected (piezometer, monitoring wells, other), as well

as methods for determining conductivity and permeability in different strata and geographic locations.

Response: As part of RALs future work on this project, the company will be directed to work with DNR and other resources agencies to design suitable studies to understand the surface and groundwater hydrology of the study area. This study design will be based on the need to understand current hydrologic setting and potential impacts to the local environment and to the local community. This will include a detailed study to characterize fracture dominated aquifer that can significantly increase hydraulic conductivity.

Water Quality

18. **Comment:** The application provides a table of water quality data for seven streams in the Matanuska Valley (Application Table 1). However, it does not provide water quality or stream flow data for California Creek, which will likely be a water source for drilling. Published data exists (Maurer, MA. 1998. Hydrologic data for the Matanuska River Watershed, Southcentral Alaska. State of Alaska DNR, DGGS public data file 98-41). Commenters recommend the application include water quality data for California Creek. They also suggest for all streams to determine whether data on metals and stream flow exists and include the data.

Response: DMLW has reviewed the report by Maurer, 1998. Water quality data for California Creek and springs that feed into California Creek have temperatures, pHs and specific conductance that fall within the ranges shown for the Chickaloon River. The report has been forwarded on to RAL to be included in their references.

Drill Lake

19. **Comment:** Concerns were raised about the amount of water in Drill Lake, these include:

- The stream that used to flow into Drill Lake was blocked off years ago and now limits the lake to recharge by rain and snow only.
- Drill Lake is a source of water for the volunteer Chickaloon Fire Service.
- Drill Lake has no public access and is entirely surrounded by private land holdings. There are permanent water rights in the area at risk for additional pollution.
- Drill Lake has important ecological value. The commenters suggest that alternative pump sites be considered and explored. There are limited lakes in the area and there are residential homes around all of them.

Response: The first application from RAL requested water from Drill Lake. RAL has submitted an updated Temporary Water Use Permit (TWUP) application and removed Drill Lake from the requested water sources.

Currently all points proposed for water withdrawals are within the coal lease area. The current TWUP application is for Edwardson Gulch Creek, Unnamed Pond and California Creek.

DNR has directed RAL to provide a corrected Coal Exploration Permit Application with references to Drill Lake as a water source removed and correct water sources added.

Drilling and Test Pits

20. **Comment:** The application contains no information on how RAL intends to dispose of drilling muds. One of the MSDS sheets specifically states that the fluid is “not for use in the United States.” RAL does not address either why it plans to use a drilling fluid specifically not for use in the United States or how it intends to keep a drilling fluid from making contact with groundwater when used in a drill hole.

Response: Division policy requires that a company conducting exploration drilling in the state submit Material Safety Data Sheets (MSDS) for all drilling fluids. DNR has raised this issue with RAL. After consultation with the manufacturer, RAL will be using Dextrid NT which does not contain the presence (1-5%) of paraformaldehyde (the fluid in question) used in this product as a preservative.

Performance Standards enforced by the DNR require the sealing and reclamation of drill holes and trenches and are covered under 11 AAC.90.301 – 501. They include standards for the protection of water during exploration activities. The standards require that siltation structures, topsoil replacement, confinement and isolation of subsurface water bodies (plugging and sealing of drill holes to that end), are implemented by the applicant as part of the operations plan, and as a part of reclamation. Unless noted otherwise, MSDS address potential risk of occupational exposure. The primary hazard outlined in the MSDS sheets concerning the drilling material is inhalation while in a dry state during handling. The MSDS do identify potential toxic effects to fish at elevated concentration of these drilling fluids. Under the current exploration application, no drilling is authorized within 100 feet of any intermittent or perennial streams.

21. **Comment:** RAL states that “drill cuttings are inert and will return to soil.” DNR should require the testing of drill cuttings to ensure that heavy metals or other potentially toxic materials are not present. Only if the drill cuttings are proven inert should RAL be permitted to spread the drill cuttings on-site. Alternatively, DNR should prohibit the spreading of drill cuttings on the surface.

Response: Historic mining and exploration activities in the Chickaloon/Castle Mountain area have not encountered any acid or toxic forming material. The proposed exploration activities are within the same geologic units that have been previously disturbed and are not likely to produce acid or toxic forming material. The approximate volume of rock chips produced from any reverse circulation drilling down to 250 feet as proposed in the permit application is 1 cubic yard. After drill hole plugging and abandonment approximately a half yard will remain to be spread over the surface of the drill pad. Core drilling will produce considerably less cuttings as a majority of the rock will be removed from site as core samples. Spreading this material over the surface of the drill pad will have minimal impacts to the environment.

22. **Comment:** The timeline is inadequate because it does not account for any project time past Phase I. Given the lack of specific information about Phases 2 and 3, DNR should only grant the permit for Phase I. Issuing a permit now for these activities contravenes

the requirement that the permit application include information on how the permittee will comply with coal exploration performance standards to minimize environmental damage. If and when RAL decides to proceed with later phases, it can apply for a permit to cover those activities.

Response: The proposed drill schedule includes a drill plan for the first two seasons, which coincides with the two-year length of the exploration permit. At the end of the two-year permit term RAL will have to apply for a renewal of the exploration permit for an additional two-year permit term and include additional drilling for Phase 2 and 3. The location of any additional drill holes or trenches not shown on Figure 10 must be submitted to and approved by DMLW and any additional reclamation bonding must be in place prior to commencement of work. Depending on the significance of any additional disturbance, public notice and comment may be required prior to approval.

Cultural and Historical Resources

23. **Comment:** The application's Cultural and Historical Resources Section is incomplete. RAL Alaska did not consult with Chickaloon Village Tribal Council (CVTC) and therefore presents an inaccurate description of the history of the Chickaloon area. The commenters express concern regarding historical impacts of coal mining on Chickaloon. All cultural resources work conducted by RAL must include input from the CVTC. DNR should require that RAL incorporate Chickaloon Tribe input for all aspects of the cultural resource survey including hiring Tribal Cultural Resource Experts and Representatives.

Response: As described in its permit application, RAL is conducting a cultural resources survey. A Mat-Su Valley company was contracted to conduct the study and hired CVTC members who accompanied the cultural survey crew during on-site work.

24. **Comment:** DNR and the Mental Health Trust (MHT) must comply with Section 106 of the National Historic Preservation Act (NHPA) and consult with CVTC prior to RAL undertaking any exploration activity. The Alaska's State Historic Preservation Office (SHPO) provided the MHT with information on compliance with both the NHPA and the Alaska Historic Preservation Act (AHPA). The commenter does not feel that MHT is properly complying with the acts, including the requirements of Section 106 of the NHPA.

Response: The proposed application has been reviewed by SHPO. RAL has contacted SHPO to determine what cultural resources work needs to be completed within the lease area. Section 106 of the NHPA is applicable whenever a project involves federal funding, federal jurisdiction or federal authorization. Phase I of this project does not involve federal funding or a federal authorization that triggers a Section 106 consultation. MHT's interactions with SHPO are beyond DNR's scope of review of the proposed exploration application under 11 AAC 90.

25. **Comment:** Commenters consider it inappropriate to include this paragraph in the exploration permit application, "With the river being glacier-fed and having no recognized presence of anadromous species in feeder tributaries upstream with the exception of a few coho salmon in Riley Creek."

Response: This responsibility falls to the ADF&G, who will be given opportunity to comment on this document and all accompanying documents.

Extension of Public Comment Period

26. **Comment:** Several Non-Governmental Organizations requested an extension of the public comment period.

Response: DNR extended the comment period on the Preliminary Decision and Exploration Permit Application to June 18, 2012

Land and Trail Access

27. **Comment:** Road access along the Chickaloon River Road, East Chickaloon Lake Road, Castle Mine Road and Fish Lake Road may not be public.

- Parts of East Chickaloon Lake Road go through private property; a Matanuska-Susitna Borough (MSB) public right-of-way does not exist.
- State maintenance of Chickaloon River Road ends at the end of the pavement.
- California Hill, just past the end of the pavement on Chickaloon River Road, cannot be widened or improved according to MSB Platting Board Resolution Number 86-9.

Commenters provided the following recommendations:

- RAL needs to establish right-of-way through private property.
- RAL should work with the Chickaloon Community Council and residents on East Chickaloon Road, California Hill, and Castle Mine Road to minimize road use conflicts.
- After consultation, notification of equipment transport dates and times should be posted with sufficient advance notice for community accommodation in the Post Office and in both directions on East Chickaloon Road.
- Plans must consider access for emergency vehicles, particularly for community fire and ambulance crews, and must assume that no improvements to the road will be made.

A request was also made to require RAL to set up a website with road and project information so that it is easily accessible to those who do not travel the local roads daily.

Response: The ASCMCRA performance standards for roads and trails (11 AAC 90.167(a)(f)) state that existing roads, trails, runways, and marine facilities may be used under specific conditions listed in the regulation. These conditions must be met for RAL to utilize any road or trail in the exploration area. If needed, RAL must also acquire, as stipulated in the permit, legal right-of-way access to all roads and trails used for exploration purposes. RAL is coordinating with the DMLW South-central Region Office, which is addressing legal access on roads and trails in the Chickaloon area.

28. **Comment:** Hauling heavy equipment on Fish Lake Road is not practical because of its inadequate road bed, narrow width, lack of guardrails and poor maintenance. The Chickaloon – Nelchina Trail is only a “two track” trail that is not maintained and is unsuitable for use by heavy equipment.

Response: Roads and trails constructed or significantly altered for the exploration activities must comply with 11 AAC 90.491 for design, construction, maintenance, and removal. The operator shall design, locate, construct or reconstruct, use, maintain, and restore roads. 11 AAC 90.491(b) “All roads and other facilities covered by this section must be designed and constructed or reconstructed to incorporate recognized engineering minimum design criteria approved or established by the Commissioner for environmental protection and safety and appropriate for the planned duration and use and must be maintained to meet the approved design criteria throughout their life. According to 11 AAC 90.491(c) All roads and other facilities covered by this section must be reclaimed immediately after they are no longer needed for operations.

29. **Comment:** RS2477 trails are those historical trails for which the federal government has funded construction and/or maintenance. Historic trails can receive RS2477 status if federal funding is associated with them; not all historic trails are RS2477. Additionally, many current trails in use do not follow original historical routes.

Response: The ASCMCRA performance standards for roads and trails (11 AAC 90.167(a)(f)) state that existing roads, trails, runways, and marine facilities may be used under specific conditions listed in the regulation. These conditions must be met for RAL to utilize any road or trail in the exploration area. If needed, RAL must also acquire, as stipulated in the permit, legal right-of-way access to all roads and trails used for exploration purposes. RAL is coordinating with the DMLW South-central Region Office, which is addressing legal access on roads and trails in the Chickaloon area.

Water Rights

30. **Comment:** Some residents have long established water rights for a well located approximately 50 feet from the RAL holding. These residents also have diversionary water rights for the surface waters of the California Creek tributary that flows through their lands and RAL’s lease lands. This information is available at DNR offices. The location of California Creek on the USGS topographic maps (Section 24, T20N, R5E, SM) does not match the location of the stream in the vicinity of the local residence (and has not for nearly 30 years). The bifurcation of California Creek and its primary tributary is actually located on the residential area. DNR’s issuance of temporary water use permits (TWUP) for RAL must ensure legal access to points of water withdrawal, and that such withdrawals not detrimentally impact the rights of existing water right holders and the fisheries.

Response: The Coal Regulatory Program is aware of existing water rights and is coordinating with the DNR Water Resource Section to review the information contained in the above comment. There is one resident with two Certificates of Appropriation; the first is a drilled well (LAS 2866) with a priority date of February 26, 1985, the second is from an unnamed tributary of California Creek located within the NW1/4NW1/4NE1/4NW1/4 of Section 25, Township 20 North, Range 5 East, Seward Meridian. This surface source is LAS 26468 with a priority date of October 27, 2006. Each of these is for 500 gallons per day (gpd). The resident has priority over any temporary water use authorization issued to RAL. A search of the DNR Land Administration System (LAS) shows that at one point a second resident had a valid

permit to appropriate water from California Creek. This permit expired and was closed when the resident did not answer the Division's request for additional information.

Although USGS topographic maps, Alaska Mapper, or other mapping system may not be exactly correct the Water Resources Section relies on maps, diagrams and as-built surveys to determine the locations of water withdrawal points. The temporary water use application submitted by Riverdale is upstream from the above mentioned appropriation in a different tributary of California Creek (Sec 23 T20N, R05E, SM). Riverdale is requesting 4,000 gpd or 0.0062 cubic feet per second (cfs) which is considered a de minimus use and will not impact existing water rights. A withdrawal rate of 0.0062 cfs represents just 0.62 percent of even a very small stream flowing at 1.0 cfs. A stream that is 2 feet wide, 6 inches deep, and has a flow rate of 1 foot per second is flowing at 1 cfs.

In conjunction with the ADF&G, Division of Habitat, the Water Resources Section will place conditions on the TWUP to protect fish and their habitat, including conditions that require any water intake structure in fish bearing waters to be designed, operated and maintained to prevent fish entrapment, entrainment, or injury. The permit will also include conditions to protect the water source itself.

In regard to the legal access to points of water withdrawal on the TWUP permit; all points of water withdrawal are within the coal lease. The current temporary water use application is for Edwardson Gulch Creek, Unnamed Pond and California Creek. A corrected Coal Exploration Permit Application will be annotated and references to Drill Lake removed and correct water sources added.

Incomplete Application

31. **Comment:** DNR should reject the application because it is incomplete. The application does not contain sufficient information regarding the location of test pits and trenches. There is also not enough information to justify the proposed Phase 2 and 3 activities. They request that DNR issue an exploration permit that will expire in November 2012 and require a new application for the Phase 2 and 3 activities.

Response: The proposed drill schedule includes drill holes for the first two seasons, which coincides with the two-year length of the exploration permit. At the end of the two-year permit term RAL will have to apply for a renewal of the exploration permit for an additional two-year permit term and include additional drilling for phase II and III.

Review Like a Mining Permit

32. **Comment:** The exploration permit should be viewed with the same critical review as a mining permit. The application fails to accurately portray the residential community, the private parcels of land and homes with ¼ mile of the lease site, and the historic, archeological and cultural features of the area.

Response: The review requirements under ASMCRA are based on the anticipated surface disturbance for exploration activities. The proposed activities are consistent with exploration as defined under ASMCRA. The exploration permit application was reviewed to insure that it meets the requirements of 11 AAC 90.163-11 AAC90.167. Prior to development and mining, RAL must meet the requirements for surface or underground mining under the 11 AAC 90 including the collection of site specific baseline environmental data.

Mineral Closure Order 509

33. **Comment:** RAL failed to disclose that a portion of the leased land is closed to Mineral Entry (Mineral Closure Order 509, December 6, 1986). The Matanuska Valley Moose Range Plan closes certain land in the Range to mineral entry, including some of the area that MHLT leased to RAL. Specifically, the Matanuska Valley Moose Range Plan closed the following areas to mineral location and development: The southern face of Castle Mountain shall be closed to locatable mineral entry to protect the unique scenic quality of the mountain. The southern face of Castle Mountain will not be made available for the exploration or development of leasable minerals. (For a legal description of the area please visit the DNR website at: (http://dnr.alaska.gov/projects/las/Case_Abstract.cfm?FileType=MCO&FileNumber=509&LandLand))

Response: The land encompassed by the Chickaloon coal lease is a “split estate.” The surface estate is General State Land and the subsurface, or mineral estate, is owned by the Alaska Mental Health Land Trust (The Trust) and managed by the Trust Land Office (TLO).

On December 6, 1986, DNR issued Mineral Closing Order (MCO) 509 closing 1,800 acres in the Matanuska Valley Moose Range to mineral entry. However, this land was already closed to mineral entry by a March 3, 1986 DNR decision for all original Mental Health Trust Land.

On August 18, 1994 a court order determined that all original Mental Health Trust Lands were temporarily closed to mineral entry until regulations for Trust Lands could be adopted. In other words, the court protected the original status of the designated Trust Lands until The Trust was prepared to manage the land.

Based on the 1994 court order, the Mental Health Settlement Agreement and the statutory authority of the DNR under Title 38, the regulations that were adopted for the management of The Trust mineral land in 1997 *supersede* all pre-existing mineral closing orders previously adopted by DNR, including MCO 509. Therefore the TLO had the statutory and regulatory authority to reopen the Chickaloon area for mineral exploration and make available for lease the lands pursuant to 11 AAC 99.100. RAL has The Trust’s authority to explore those lands.

Moose Range and Chickaloon Community Plan

34. **Comment:** Commenters believe there is a conflict with the compatibility of exploration with community land use planning. The Chickaloon Comprehensive Plan (2008) (Comp

Plan) makes it clear that the community strongly favors a rural-residential area. About 15 percent of the lands within the Comp Plan area are owned by the MHT, which has leased lands for exploration to RAL. Much of the land within the Comp Plan area is Matanuska Valley Moose Range, and both the Moose Range Plan, 1986, (Range Plan) and Susitna Area Plan considers coal development as part of multiple-use. However, both recognize that these uses may conflict.

Response: The lands within the lease area are state lands that are part of the Matanuska Susitna Valley Moose Range, which was established by the legislature in 1984 (AS 16.20.340-360). The Moose Range Management Plan provides for multiple uses as required by the legislature. The objectives identified in the plan include the enhancement of moose populations and habitat, and of other wildlife resources of the area; preserve, maintain, and provide opportunities for coal and mineral development; and to perpetuate public use of the area, including fishing, grazing, forest management, hunting, trapping, and other public use of public land not incompatible with the purposes stated. A complete list of objectives is found in the Moose Range Management plan starting on page 65. Coal exploration and mining is an acceptable land use in the Moose Range.

Matanuska-Susitna Borough Permits

35. **Comment:** As a condition of the exploration permit, RAL must obtain a Conditional Use Permit from the Matanuska-Susitna Borough. DNR regulations governing exploration permits require that an applicant's roads and trails must comply with all local requirements under 11 AAC 90.167(f1).

Response: The applicant is required to obtain all applicable federal, state and local authorizations, including the Conditional Use Permit from the MSB. Approval of the ASCMCRA permit does not relieve the applicant of the responsibility of securing and complying with other laws and regulations.

Bonding

36. **Comment:** On Page 59 of the application the following sentence states, "Therefore, bonding calculations for two monitoring wells to 150 feet are included in the Reclamation Bonding Section discussed in...." This reference needs to be changed to read, "Part C, Section 11.0", not Part B.

Response: RAL will make this correction to their application and a corrected, complete application will be available at DNR offices.

Informal Conference Request

37. **Comment:** Commenters request an informal conference pursuant to AS 27.20.140.

Response: The requirement to hold an informal conference under AS 27.21.140 applies to applications for Surface Coal Mining Permits and not Exploration Permits. Under regulations adopted under ASCMCRA, the administrative processing of coal exploration permits 11 AAC 90.165(g), provides only for "[w]ritten comments on the application . . . in accordance with 11 AAC 90.907(g)."

Other Comments

Health Issues

38. **Comment:** Residents commented on their disregard for a coal mine adjacent to their properties citing the threat of pollution, contamination and noise. There are approximately 250 homes in Bestline Subdivision and 27 signed the comment letter stating there is no such thing as clean coal. There were several residents from the Chickaloon area that voiced concerns on the subject of a coal mine ruining the natural Alaska landscape and contributing funds not for the Mental Health Trust but to polluting the Matanuska Valley and the deterioration of their mental health.

Response: This comment is beyond DNR's scope of review of the proposed exploration application under 11 AAC 90.

39. **Comment:** Most coal mining regions are very poor. Medical studies from England, Australia, and the Appalachian Region of the United States, link coal mining to higher rates of chronic disease, birth defects, cancer and pre-mature deaths. Medical literature casually links arsenic, lead, cadmium to numerous health problems, as well as PM2.5 and PM10 to respiratory and cardiovascular disease. Exposing local residents to these pollutants poses a health risk.. The residents of Chickaloon should not be subjected to these impacts.

Response: This comment is beyond DNR's scope of review of the proposed exploration application under 11 AAC 90.

Reclamation Issues

40. **Comment:** Commenters believe it is irresponsible for DNR to consider allowing coal mining in the Chickaloon River area when the previous mining efforts have not yet been reclaimed.

Response: This comment is beyond DNR's scope of review of the proposed exploration application under 11 AAC 90. An inquiry to the DNR Abandoned Mine Land (AML) section showed that currently there are no known un-reclaimed mine lands in the area.

Expanded Operations

41. **Comment:** Expanded operations should only be allowed by permit amendments and after public notice and comment. RAL indicates that it intends to begin operations using one day shift only, i.e., a 10 to 12 hour shift, but contemplates extending operations to around-the-clock. Given the residential nature of the project area, any expansion in operations beyond a single daytime operation should be subject to a formal permit amendment, with public notice and comment.

Response: The Coal Regulatory Program does not contain provisions for addressing operational hours. The Mat-Su Borough has governing ordinances and policies that it enforces for items such as light and noise control on a community by community basis that

reflects the values of the community. RAL may be required to obtain local or additional permits from the Mat-Su Borough, which is beyond the DNR's scope and jurisdiction.

Geophysical Exploration

42. **Comment:** The description of geophysical exploration plans has information gaps. The application describes the exploration methods, but lacks specifics regarding methods. Seismic exploration techniques can disrupt fish and wildlife. Noise and vibration from seismic work may disrupt human activities as well. Given the potential for harm to the surrounding environment and human communities, a specific description of geophysical exploration methods, location, timing, and decibel levels must be included in any permit application. The blasting noise and vibration need to be restricted to levels protective of human and environmental health.

Response: Seismic explorations that cause noise and vibration are not a part of RAL's current Exploration Permit.

43. **Comment:** Commenters questioned why RAL is allowed to conduct dighem [*sic*] survey [aerial geophysical] exploration before they have a permit. They want to know the consequences to the migratory and nesting birds and how will it affect the wildlife in the lease area, and if there are there human impacts from these surveys?

Response: Airborne geophysical surveys are exploration activities that do not substantially disturb the natural land surface and are authorized via a notice of intent to explore under 11 AAC 90.161. They are issued separately from the proposed exploration activities under 11 AAC 90.163.

Maps

44. **Comment:** This application contains a lot of "boiler plate", in terms of text and maps while many in the discipline of natural resources or environmental science utilize this approach, this consultant's use was both misleading as well as inaccurate, in portraying and describing the current state of rural residential development in the Chickaloon area.

Response: As stated previously, RAL's Application has met the standards for an Exploration Application as outlined in 11 AAC 90.163, which includes:

- Information required under 11 AAC 90.161(a)(1), (a)(2), and (a)(5)
- An exploration and reclamation plan of operations, that includes the requirements of 11 AAC 90.163 (a)(2) through (a)(5).

The scope of this review is to provide a summary of readily available information. Baseline studies as proposed in this comment are not required for an exploration permit and are above and beyond the normal compliance requirements for a permit of this type.

During active exploration activities DNR will be required to inspect RALs operations at least once a month.

All Information acquired by RAL during the exploration phase(s) will be used to determine any further exploration activities and if the project applies for a mining permit will be utilized as appropriate

Mental Health Trust Coal Lease

45. **Comment:** A final coal lease does not appear to have been signed. If it has been signed, the final lease has not been made public on DNR or MHT office websites. It is not clear how much acreage will be available for coal exploration; while the draft lease mentions 11,487.60 acres, the exploration permit only refers to 9,927.6 acres. Commenters recommend that the lease comment period should not begin until a final land lease has been signed and reviewed by the public.

Response: DNR has reviewed the final coal lease issued by the MHT. A hard copy of the lease is available directly from the MHT upon request. This comment is beyond DNR's scope of review of the proposed exploration application under 11 AAC 90.

Taxpayer Concerns

46. **Comment:** Residents commented in regard to private landowners in the Chickaloon Community boundary who pay taxes on the area that will be impacted by mining while the largest land owners, the State of Alaska and the Mental Health Trust as well as the foreign company with the coal lease in the area, do not pay any property taxes.

Response: This comment is beyond DNR's scope of review of the proposed exploration application under 11 AAC 90.

Foreign Ownership

47. **Comment:** Allowing a foreign coal company to operate in Alaska is not in Alaskans best interests.

Response: RAL is authorized to conduct business in the State of Alaska. This comment is beyond DNR's scope of review of the proposed exploration application under 11 AAC 90.

Property and Economic Values

48. **Comment:** Commenters state that coal exploration activity may employ only two or three local contractors and that this is not a significant benefit to the community. Coal exploration activity and development will diminish property values; lessen the tax base for this area and reduce public services.

Response: This comment is beyond DNR's scope of review of the proposed exploration application under 11 AAC 90.

49. **Comment:** Commenters maintain that coal is economically devastating for a community and costs states more in jobs and revenue than it generates. They say coal mining

becomes a dominant industry in an area at the expense of any other economic development.

Response: This comment is beyond DNR's scope of review of the proposed exploration application under 11 AAC 90.

50. **Comment:** Commenters state that reduced property values have always been a sensitive issue. Under the current proposal they do not feel there will be more fish, better air quality, less noise, or safer roads. Property values will not benefit from the development.

Response: This comment is beyond DNR's scope of review of the proposed exploration application under 11 AAC 90.

Benefits to the Community

51. **Comment:** The application does not include adequate information regarding economic benefits to the State of Alaska for use of the public land and resources. A fiduciary note should be attached to the application to assist in the determination of the profit and loss for the state. Commenters want to know how much it will cost the state to monitor this activity and how it will benefit the residents of the state of Alaska.

Response: This comment is beyond DNR's scope of review of the proposed exploration application under 11 AAC 90.

52. **Comment:** Residents expressed concern that RAL has not provided enough information to know what the benefits are for the Chickaloon Community. They request that RAL provide information on potential employment and salaries, the benefit to the residents of Chickaloon even if they are not employees of RAL and the type of compensation RAL will offer if residents move and the property values have dropped due to the view of an open pit mine.

Response: This comment is beyond DNR's scope of review of the proposed exploration application under 11 AAC 90.

Supporting Statements

53. **Comment:** There were 18 comments received in support of the Chickaloon Project.

Response: These comments are acknowledged by DNR.