

## Substantive Public Comments and Responses to RX Exploration Drumlummon De-watering Proposal Draft EA

### A. Comment Period and Public Notice

Comment 1: I request a public meeting to discuss these concerns with DEQ and RX, and to have full disclosure as to RX's intentions for the future.

Response 1: An Open House was held Monday, March 2, 2009 at 7:00 p.m. in Marysville Pioneer Hall. A discussion of the company's plans was given by Pete Strazdas, Consultant to RX. Environmental Management Bureau (EMB) Chief Warren McCullough described the role of the EMB and the scope of the Metal Mine Reclamation Act. The meeting was then opened to comments and discussion by attendees.

Comment 2: Please note that on February 3, I asked Bob for an extension to the comment period for RX's permit to dewater the mine in Marysville, since many in the community were not aware of the comment period and wanted more time to review the EA and respond.

Response 2: Comments were accepted through February 20, even though the official comment period closing date was February 9, 2009.

### B. Self-monitoring by RX

Comment 1: It also appears that RX is the main entity responsible for monitoring, and I do not feel that a self-monitoring entity adequately protects our water quality and quantity.

Response 1: DEQ does not have resources to conduct long-running monitoring programs. Like other persons operating under either an exploration license or operating permit, RX would have to perform the required monitoring. The DEQ may take part in monitoring efforts from time to time and would review data gathered from monitoring. As noted in the Draft EA: Results of monitoring must be submitted to DEQ on a monthly basis. Exceedance of any effluent limits in the discharge from the treatment plant must be reported by RX to DEQ immediately upon receipt of analytical results, and may result in requirements for additional monitoring, modification of the treatment system, and/or cessation of discharge. Identification of increased dissolved metals concentrations in Silver Creek would result in a required investigation of possible causes, and may result in reduction in allowable discharge rates, modification of effluent limits, additional monitoring requirements, cessation of discharge, and/or other required actions.

### C. Ground Water Disposal, Domestic Wells and Water Quality

Comment 1: Many wells are fairly shallow and I feel this could pose a problem. What studies/evidence is there to determine if and how much drawdown might occur in surrounding wells. If any drawdown does occur, who is responsible to remediate the situation? Is it RX, DEQ? Why is there no mention of monitoring for water levels?

Response 1: RX proposes to lower the water level in the mine by 400 feet. It is difficult to accurately predict the resulting drawdown in adjacent aquifers. The bedrock beneath the town of Marysville is granitic (a quartz diorite intrusive known as the Marysville Batholith). The mine is located mostly within the Helena Limestone. Intrusion of the granite into the limestone caused alteration and fracturing of the limestone and the formation of gold/silver veins within the limestone. Groundwater in the granite near the mine is likely to be recharged by Silver Creek and by water seeping from the mine void into the granite. North of Silver Creek, recharge to groundwater in the granite most likely comes from Jennies Fork Creek and the highlands to the north and west (Edwards Mountain and Mount Belmont). These sources are expected to maintain the water table beneath most of Marysville; however, south of Silver Creek nearer the mine void substantial drawdown of the water table within the granite is likely to occur. The degree to which this drawdown would extend beneath Silver Creek into Marysville, if at all, is unknown. Effects would be concentrated along faults and fractures in the granite that are intersected by the mine void, if any such fractures exist. Geologic maps of the area do not show any mapped faults within the Marysville Batholith, with the exception of the Transcontinental Fault which trends north-northwest from the mine area beneath Silver Creek just west of the town of Marysville (Walker, 1992). Other unmapped fractures may exist. Groundwater movement through granite is usually concentrated along faults and fractures. DEQ has requested a map of existing underground workings from RX for purposes of assessing where the existing workings are nearest the town, which areas are most likely to be affected, and where groundwater level monitoring should occur.

If drawdown from an exploration or mining operation affects domestic wells, the operator is responsible for replacing losses in either quantity or quality of water supply. (See 82-4-355, MCA.). In cases where there is a great potential for water supplies to be adversely affected by mining or exploration, the law requires the operator to establish a water monitoring program, which must be approved by DEQ before the activity (e.g. dewatering of the mine) may begin. Property owners who believe their water supply has been compromised by the exploration or mining activity must file a complaint with DEQ. After investigation, DEQ may determine that the loss of water quality or quantity is caused by the exploration or mining activity. In that event, DEQ is required to order the operator to immediately provide the needed water on a temporary basis and replace the water supply within a reasonable time. If the operator fails to do so, DEQ is required to suspend the exploration license or operating permit. If DEQ determines the mining or exploration activity is not likely the cause of a loss of water quality or quantity and the property owner disagrees with that determination, the property owner may sue the operator. Under 82-4-355, MCA, an operator may not be required to replace a junior water right if the operator's withdrawal or dewatering is not in excess of the operator's senior right.

Monitoring of water levels was not initially proposed by RX, and the potential for impacts to domestic wells was not identified as an issue until raised by the public during the EA comment period. DEQ will require RX to submit a water quantity monitoring plan for review, potential modification, and approval, prior to authorization of dewatering pursuant to 82-4-355, MCA.

Comment 2: I believe there is a high potential for the dewatering to negatively affect health and safety in the area.

Response 2: Dewatering would lower the water table in the immediate vicinity of the underground workings. Testing indicates that the water draining from the mine complies with all human health standards, with the exception of arsenic, for which it would be treated prior to discharge. There is a potential for dewatering to affect water supplies, but no potential health or safety effects have been identified.

Comment 3: Add a periodic (daily-weekly-bi-weekly) inspection of discharge site to identify developing seepage, indicating saturation. (none may occur)

Response 3: Monthly seep/spring surveys between the infiltration area and Silver Creek were proposed by RX (letter of 10/27/2008). This was noted in the EA (Section 2, Page 2).

Comment 4: I am deeply concerned that they may drill or tunnel underneath my property ruining my water. I am also concerned they might drain the water table down and affect the availability of water at my current well depth. I want to see something in place to fairly compensate me and my family and my property interests should something occur due to their negligence that effect me or my family or my property or my water.

Response 4: Known ore-bearing veins within the Drumlummon mine are located exclusively beneath Drumlummon Hill, south of Silver Creek. Ore veins occur in sedimentary rocks of the Belt Supergroup (Helena and Empire formations) near their contact with the granitic Marysville Batholith. The town of Marysville is located completely on granite which has a low potential for mineralization. RX would be required to notify DEQ where underground development is occurring so that the potential for effects to water supplies in Marysville could be considered. RX would be required to establish an approved water quantity monitoring program before dewatering begins. See also E.1 regarding the reclamation bond that would be in place.

Comment 5: I have had some experience with abandoned rail lines and wonder if the assessment process has taken into account possible contaminants that could be flushed out of the railroad grade.

Response 5: DEQ may recommend that the trench be deepened to avoid leaching from the railroad grade and prevent freezing (6'). The rail line has been out of service for over 80 years, and no contamination is anticipated. Water quality monitoring downstream in Silver Creek will occur.

Comment 6: What are the by-products of the "ion exchange water treatment system"? I cannot imagine that the arsenic just disappears. How does this system work?

Response 6: These systems adsorb arsenic, which is retained in the filtration system. The media which adsorb the arsenic must be replaced periodically. RX is now proposing a treatment system that uses 'zero valent iron' to adsorb the arsenic. These systems are very effective for removal of arsenic from water. The proposed treatment system would route the water sequentially through three tanks: an aeration tank, a tank for the media (containing the zero valent iron), and a polishing tank containing activated alumina. RX estimates that the system can operate for up to two years before the media must be replaced. RX proposes to dispose of the spent media in a dry

portion of the mine. DEQ will require testing of the material prior to disposal. If not of a quality suitable for disposal underground in the mine, the spent media would be shipped to a landfill.

Comment 7: What water monitoring will RX Exploration perform in relation to the impact, if any, to nearby wells in the Marysville area? Specifically water level and quality monitoring. If it is assumed that Marysville itself is isolated from the inflows to the Drumlummon, how will that theory be proved?

Response 7: DEQ would require that RX submit a water quantity monitoring plan for review and approval by DEQ prior to commencement of dewatering. Water quality monitoring is proposed for the discharge from the water treatment plant, and also at several locations along Silver Creek. Water discharged from the mine cannot flow toward the town of Marysville (the water would be discharged east of town, and would flow downgradient, to the east). The mine workings are located mostly in the Helena limestone formation beneath Drumlummon Hill. Marysville is located on granitic bedrock which is less likely to be affected by dewatering of the adjacent mine (also see C.3). The actual response of the granite aquifer would be monitored through a plan currently under development by RX. Dewatering may not commence until DEQ has approved this monitoring plan.

Comment 8: The EA submittal discusses performing the arsenic removal inside the mine. This is a novel approach and should be applauded. Questions that remain are:

- (a) What will RX Exploration do for disposal of the residue removed from the water treated?
- (b) All water pumped should be run through the water treatment plant as the EA is unclear if 100% of the dewatering water will be treated for arsenic, and other heavy metals, removal.
- (c) Will RX Exploration cease pumping should the water treatment plant be inoperable for any period of time?

Response 8: (a.) See Response C.6. (b.) DEQ would require that all water pumped from the mine must be treated for arsenic removal prior to discharge. (c.) See C.7 and C.8 (b.) above. Water treatment would be required whenever water is being pumped from the mine. RX would likely maintain the water level in the mine sufficiently below the working levels to allow continued operation during temporary cessation of pumping.

Comment 9: While we recognize that Silver Creek fish are currently under a consumption advisory we urge that no further degradation be accommodated. The objective must remain the recovery and reclamation of the stream. Item # 2 of the CEA discusses the infiltration of the discharge water into the groundwater and "Monitoring of Silver Creek upstream and downstream of the discharge area." To do this effectively the path of the discharged water needs to be determined so the downstream monitoring can be conducted below the point where these effluents become inflows to surface waters.

Response 9: As noted in the EA, the water to be discharged from the mine currently meets all aquatic life standards without treatment, and meets all human health standards with the exception of arsenic. Arsenic treatment would be required. Based on this information, no degradation will occur. The most downstream monitoring site on Silver Creek is located over a mile

downgradient of the end of the infiltration gallery, near the confluence of Silver Creek with Sawmill Gulch.

Comment 10: We want to be on record stating: There is no documentation available for measuring the affects on groundwater resources nor is there any research available indicating what kind of time frames which impacts will be seen resulting from a sustained pumping of 200 400 gpm from the Drumlummon Mine.

Response 10: Effects of dewatering cannot be precisely determined in advance. Consequently, DEQ would require RX to institute a water quantity monitoring program.

Comment 11: In the event that groundwater resources are affected (i.e. depleted or degraded) by activities at the Drumlummon Mine, is RX or the state of Montana proposing to assume the financial responsibility of drilling new wells or extending municipal water to rural areas surrounding the mine?

Response 11: The issue of damages to water supplies is addressed under 82-4-355(1) and (2), MCA. As discussed in Response 1, the property owner may file a complaint with DEQ which will result in an investigation. Based on the investigation, DEQ may determine that RX's operation has adversely affected water quantity or quality and issue an order to supply water in like quality, quantity and duration. If DEQ determines otherwise, or is unable to reach a conclusion from the evidence, the property owner can sue the operator in district court for loss of water quantity or quality.

Comment 12: Is there anything written into the permit that states "In the event adjacent or regional water resources are negatively affected, the permit will be revoked and all pumping of groundwater cease."?

Response 12: The DEQ can suspend RX's exploration license under 82.4.355(2)(iv), MCA, if DEQ determines RX's operation causes a loss of water supply and RX fails to replace the water supply. See the response to comment C.1 above.

#### D. Public Safety, Hours of Operation and Property Values

Comment 1: Noise impact is not addressed at all. Construction noise and all future above ground operation of equipment, compressors and machinery should be kept to reasonable working hours of Monday – Friday, 6:00 AM-7:00 PM.

Response 1: These are issues that DEQ does not have authority to regulate under the Metal Mine Reclamation Act (MMRA). The noise levels heard by the neighbors would be a nuisance but should not exceed any thresholds for public safety. Increased noise is an unavoidable impact of mining.

Comment 2: The small positive impact stated will be negated by the devaluing of property values in the area, if the creek is further polluted and wells are depleted, and if the mine goes into full production. Would you buy property next door to an operating mine?

Response 2: Sale or market value of adjacent property may be negatively affected by the presence of a mining operation, but DEQ has no specific information on this issue at this site.

In the context of DEQ's regulation of gravel pits under the Opencut Mining Act, DEQ contracted a study to determine whether the existence of a gravel pit and gravel operation impacted the value of surrounding real property. The study (Rygg, February 1998) involved some residential property near two gravel operations in the Flathead valley. Rygg concluded that DEQ authority under the Opencut Mining Act to protect air quality, to minimize noise and visual impacts to the degree practicable through the use of berms, vegetation screens, and limits on hours of operation, to otherwise prevent significant physical harm to adjacent land, and to require reclamation of the site was effective in preventing decrease in taxable value of those lands surrounding the gravel pits. In his review of the study, Jim Fairbanks, Region 3 Manager of the Montana Department of Revenue, Property Assessment Division, said:

In the course of responding to valuation challenges of ad valorem tax appraisals, your reviewer has encountered similar arguments from Missoula County taxpayers regarding the presumed negative influence of gravel pits, BPA power lines, neighborhood character change, and traffic and other nuisances. In virtually ALL cases, negative value impacts were not measurable. Potential purchasers accept newly created minor nuisances that long-time residents consider value diminishing.

Despite DEQ's lack of authority under the MMRA to minimize noise, visual impacts and to limit hours of operation, the proposed operation should have a significantly less noticeable presence than typical gravel operations, which generally operate from 7 a.m. to 7 p.m. at least five days a week, have significantly more truck traffic hauling mined material, and often include the operation of a crusher. Thus, its impact on the taxable value and marketability should be significantly less.

Comment 3: I feel that RX's activities have already impacted lifestyle and community with the unreasonable hours that they choose to operate equipment and machinery. I live in a small mountain community for peace and quiet, and safety from crime. This is not an industrial zone. I should not have to listen to this in the evenings and on weekends, when I am trying to enjoy my property. Do their private property rights supercede mine?

Response 3: Development in or adjacent to an unzoned private neighborhood is a civil matter. DEQ is unaware of any limitations on use of the permit area for commercial development set by any local homeowners association, covenants, or regulations. The existing and proposed operations are in compliance with mining regulations.

DEQ has no authority to limit hours or days of operation. The applicant would have to voluntarily agree to set limits before they could be incorporated into a license or operating permit. Impacts to neighbors from hours and days of operation would be an unavoidable impact of permitting a mining operation.

Comment 4: I also request that RX keep all above ground operations to reasonable working hours, and do something to baffle the sound from the compressor, which runs 24/7. (Form Letter)

Response 4: DEQ does not have authority under MMRA to regulate hours of operation or noise.

Comment 5: I know when it all comes out in the wash the combination of potential water pollution, incessant noise, debeautification of the area, and the potential of a hopelessly dangerous road, combined will without a doubt negatively affect my property value. We bought this home because the road was going to be improved by pavement and the parking area for the snowmobiling and other recreation at Ottawa Gulch was going to improve and the potential of the rural ski town for future growth and value are undeniable. This home is our retirement home! I am 34 my wife is 32 and we worked hard for 12 years to make this dream come true. We made this our retirement plan! This is a lifes work for us and we are going nowhere! It is a dangerous thing to affect peoples live in such a drastic way when everyone knows its wrong to do so, warned of it, and when the concerns, and the obvious nature of the truth is ignored.

Response 5: See responses to D.2, 3 and 4 above.

#### E. Bonding

Comment 1: If drawdown does occur, who is responsible to remediate the situation? What kind of bond is in place to protect the community if such an event does occur?

Response 1: Please see response to comment C.1 concerning drawdown. A \$2500 bond is in place for work that would disturb the surface (trench and pipeline removal, the rest stays underground). Additional bond would be required as appropriate.

#### F. Wildlife

Comment 1: As a resident, I am aware of the existence of the Grey Wolf and possibly Canada Lynx in the area.

Response 1: An NRIS search revealed no known species of special concern in the area. The only surface-disturbing activity would be the installation of 2000 feet of pipeline which should not hinder wildlife travel or habitat.

Comment 2: Item #10 of the CEA asks, "Are there other activities nearby that will affect the project?" Here again, we stress the need to view projects in the context of the cumulative effect they will have on other social, cultural and natural values. In this, the wildlife movement corridors mentioned earlier, need attention. For example, the continental divide corridor from Lincoln to Boulder is being impacted by: the Marysville road project, the ski development, Helena Forest Travel Planning, a proposed biathlon on MacDonald Pass, mine waste dumping in the Lutrell Pit, the Montana Tunnels mine, a proposed recreation highway to Rimini, and more. Cumulative impacts really must be addressed or we risk rupturing a very critical part of

Montana's wildlife resource. This particular issue could also qualify for discussion under item #20 in the CEA.

Response 2: Cumulative impacts in this regard would apply only to those activities that would add to the expected impacts of the Drumlummon mine. There are no other known mining activities planned for the area in question. The main surface disturbance associated with the project being evaluated under this EA is the excavation of a 2000' long infiltration trench along an existing road (the old railroad grade) parallel to the Marysville road and adjacent to the town of Marysville. This activity would be of short duration, and would likely be less disruptive to wildlife than routine traffic on the Marysville road, or activity within the town.

Comment 3: Item #6 of the CEA concludes there are no wetlands to be addressed, while Item #2 recognizes the presence of beaver. These wetlands should be recognized and impacts evaluated.

Response 3: The location where beavers are found is below the proposed disturbance area. Wetlands have not been found in the proposed areas to be disturbed.

Comment 4: Item #9 asks "Will the project use resources that are limited in the area?" Wildlife movement corridors are surely a limited resource and this project happens to be in one of the nations most critical. We recognize the work under evaluation is exploration, however, given the importance of the area in general we feel it is important to address this issue early and in a comprehensive manner.

Response 4: The presence of wildlife corridors does not fit into the category of "Demands on Environmental Resources of Land, Water, Air or Energy." Impacts on wildlife are addressed under item #5 (Terrestrial, Avian and Aquatic Life and Habitats).

#### G. Recommendations/Follow-up

Comment 1: Approve the proposal and then jointly consider the options for adding a secondary discharge area to be included by extending discharge line, etc. if area (1) proves to be inadequate.

Response 1: Changes to the proposed plan and additional disturbances would have to be considered under a revision to the exploration license or operating plan.

Comment 2: I have reviewed the Checklist Environmental Assessment for RX Exploration's purposed dewatering of the Drumlummon Mine. This assessment is comprehensive and well presented. I support the proposal with the following comment (see comment C5 above) taken into consideration.

Response 2: Thank you for your comment.

Comment 3: Joe Bardswich, Chief Mining Engineer for RX Exploration, Inc. (RX) has indicated that initially there will be 10,000 tons of ore that will be extracted from the mine as a part of their exploration efforts. Number 15 of the CEA asks "will substantial traffic be added to existing

roads." The CEA indicated "No" that there isn't a substantial increase; however the impact to the newly constructed road is significant. 600 to 700 loads of ore will be hauled out of Marysville across a road that has been designed more for recreational use rather than a mining haul road. A legally loaded Truck and Trailer (23 -25 yard) is equivalent to approximately 2,380 equivalent passenger vehicles. Currently as of 2006 the ADT estimated at 260 and projected to be 430 ADT in 2026 (with 1.3% truck traffic and an annual growth rate of 2.6%). The Marysville road was designed as a low volume road. LCC concern is that with an increased amount of truck traffic the life span of this road will be drastically reduced. It can be estimated that for every 100 trucks there is a reduction of 11% or approximately 2.2 years (per "Damages from Heavy Vehicles on Rural Roads in Montana," by Ivanoff 1993 -MD1). LCC concern is that the 3" of asphalt that will be placed as a part of the safety project will not be sufficient to withstand this type of increase in traffic loading increase. Additionally, if it is projected that there will be somewhere between 150,000 to 155,000 tons of ore that could possibly be extracted from the Drumlummon Mine in a 15 year time frame. This road will not survive with this type of use. The Marysville Road Reconstruction and Safety Project has taken several years to secure adequate funding and is a great benefit to the LCC residents, and it should be restated that this road was not designed as a mining haul road.

Response 3: Currently, the only proposal submitted to DEQ concerns exploration of the Drumlummon mine. The issues raised in this comment are beyond the scope of this draft EA. If the company wishes to expand operations beyond a 10,000 ton exploration bulk sample, they would likely apply for an operating permit, which would require a full-scale EA or EIS.

Comment 4: Please address public and private access easements that RX must use in order to access the existing site. Does RX currently have an existing approach permit for the county roads? Has RX considered utilizing alternative haul roads other than Marysville road?

Response 4: See response to comment 3 above. The applicant has not proposed a specific haul route to a specific milling facility.

Comment 5: If a mill site is constructed in the Marysville area will it use Marysville road as a haul road?

Response 5: See response to comment 4 above.

Comment 6: In the event the Drumlummon is reopened, is RX proposing to make the necessary improvement to local infrastructure, or will the safety of local residents be compromised until local taxpayers assume the financial burden of improving local roads?

Response 6: See response to comment 3 above.

Comment 7: Is there any guarantee RX will assume the responsibility of cleaning up any environmental degradation created by mining this resource? Are there any laws in place to assure RX cleans up the mess when they are done (and what loopholes exist removing them from liability)? Will this be one more superfund site left to the responsibility of the American tax payer ... and the environmental degradation to the local residents?

Response 7: A reclamation bond has been posted for the exploration activities proposed by RX under 82-4-332(3), MCA. If reclamation of the exploration disturbances is not performed in a timely manner, DEQ has the authority to forfeit the bond and hire a contractor to perform the required reclamation. It is unlikely that a regulated exploration program would create a superfund site.

If RX decides to obtain an operating permit to commence mining, DEQ would review the mine plan and determine any additional bond that RX would be required to submit prior to commencing mining. RX would be required to immediately reclaim the exploration disturbances that are not covered by the operating permit. Reclamation of exploration disturbances covered by the operating permit would not need to be performed until mining is completed and would be covered by the reclamation bond associated with the operating permit. 82-4-332(4), MCA.

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