



# Rio Algom

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July 16, 2003

CERTIFIED MAIL  
Return Receipt Requested

Susan Frant, Chief  
Fuel Cycle Facilities Branch, NMSS  
Mail Stop T-8A33  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

**Subject: Staff Meeting with Rio Algom Mining LLC on July 10, 2003**

Dear Ms. Frant:

I want to thank you and your staff for meeting with representatives of Rio Algom Mining LLC ("RAM") on July 10, 2003, to address matters raised earlier by Nuclear Regulatory Commission ("NRC") staff regarding RAM's Groundwater Corrective Action Program ("GWCAP") and its Alternative Concentration Limit ("ACL") applications. We believe the discussions at that meeting suggest that a solution can be reached that will satisfy both RAM and NRC Staff. This letter provides a brief summary of those discussions.

As noted, RAM, in response to an NRC directive, filed an application for a license amendment proposing a GWCAP in 1989. Subsequently, in 1990, NRC approved the GWCAP allowing RAM to install a complex water balance system to address potential contamination from uranium recovery activities (i.e., 11e.(2) byproduct material) in deep bedrock aquifers and alluvial materials.

The approved GWCAP is designed to intercept and capture potential seepage from surface impoundments into the deep bedrock aquifers in downgradient underground mine workings. The water collected in the mine sumps includes the potential seepage from surface impoundments, natural drainage into the mine, and until 1999 substantial volumes of water from Old Stope Leaching ("OSL") activities. This water is then pumped to the Ion Exchange ("IX") facility for treatment and subsequently discharged into a designated surface watercourse as part of the GWCAP for contamination in the alluvial materials. This treated minewater creates a hydraulic head to sweep contaminants from the alluvial materials into the interceptor trench at the base of the tailings impoundments. The captured water is then pumped from the interceptor trench and disposed of through evaporation in lined evaporation ponds. The 11e.(2) constituents in the treated minewater stream was conservatively estimated to have been under 0.01% of the total flow through the IX during OSL operations.

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In early 1992, NRC's Uranium Recovery Field Office ("URFO") raised questions about the propriety of using the treated minewater, which potentially contained miniscule quantities of 11e.(2) constituents from tailings seepage to the deep bedrock aquifers, in the GWCAP for contamination in the alluvial materials. RAM responded by providing data demonstrating that the level of any contaminants from tailings seepage to the bedrock aquifers reaching the mine sumps was negligible compared to the quality and quantity of the treated minewater discharged into the water-course. After conducting a review of the site conditions and data provided by RAM, on November 4, 1992, URFO released a decision stating that the tailings seepage collected from the bedrock aquifers in the treated minewater stream was negligible and the facility was in conformance with 10 CFR Part 40 requirements. Then, in 1996, virtually the same issue was raised again during an inspection wherein the NRC inspector questioned whether 11e.(2) constituents were being discharged into the Arroyo del Puerto in violation of 10 CFR Part 20 effluent limits. In response, RAM contacted NRC headquarters and Region IV and provided data showing that the discharges were treated minewater. The Staff again agreed.

RAM believes the GWCAP program, as operated from the beginning, has been an appropriate course of action, which has been approved by NRC Staff on multiple occasions and which the annual CAP reports demonstrate has been successful. Since 1992, no new threat or hazard has appeared or been identified at the site and most of the original concerns have been minimized or eliminated. The approved groundwater sweep of the alluvial material has performed to its capacity in conformance with the GWCAP. Source terms for contamination of the bedrock aquifers have been eliminated, the aquifers are dry, and, thus, there is no longer a threat of contamination to water in the mine sumps.

Given the numerous NRC approvals of the GWCAP, the precedent set by the so-called *Eight Old Rec. Plans* decision suggests that, in the absence of any significant potential new health, safety or environmental concerns, the GWCAP must be considered final as approved. Any retroactive revision of the GWCAP would be very difficult, if not impossible, for RAM to accept.

Finally, RAM has submitted ACL applications to NRC for its consideration and responded to requests for additional information ("RAIs"). RAM is currently awaiting final approval from NRC staff on its ACL applications. Per our discussions, RAM understands this process is ongoing and will continue until sometime this fall, but, importantly, approval of the ACL applications will make moot any theoretical concerns about the GWCAP and avoid the necessity of becoming embroiled in a host of potentially unsolvable multi-party liability issues. Final approval of ACLs will render any classification of treated minewater as 11e.(2) byproduct material a moot issue since the ACLs effectively will authorize approved levels of 11e.(2) materials, if any, to pass the point of exposure into the mine sumps and/or surface drainages.

July 16, 2003

On the behalf of both Bruce Law and myself, I want to thank you again for the opportunity to discuss these important issues with you and your staff. If you have any questions, please call me at (405) 858-4807.

Sincerely,

A handwritten signature in black ink, appearing to read 'William Paul Goranson', with a long horizontal flourish extending to the right.

William Paul Goranson, P.E.  
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CC: Robert Nelson, NRC  
Maria Schwartz, NRC  
John Lusher, NRC  
Bruce Law, NRC  
Anthony J. Thompson