# **Rio Algom Mining LLC**

40-8905

June 16, 2016

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Matthew R. Meyer Chief, Materials Decommissioning Branch (Acting) U.S. Nuclear Regulatory Commission Two White Flint North, Mailstop T-8F05, 11545 Rockville Pike, Rockville, MD 20852 Docket Number: 40-8905

RE: Notice of Intent to Replace the Radiation Safety Officer at the Ambrosia Lake Facility License Number SUA-1473

Dear Mr. Meyers,

Rio Algom Mining LLC. (RAML) wishes to inform the Nuclear Regulatory Commission of RAML's intent to replace Brad Squibb of Solutient Technologies, the current radiation safety officer (RSO) for radioactive material license number SUA-1473, with Michael Schierman, CHP of Environmental Restoration Group (ERG) effective June 20, 2016.

License condition 11 of SUA-1473 references the minimum qualifications for the designated RSO as those contained in Section 2.4.1 of NRC Regulatory Guide 8.31. Table 1 below lists these requirements and demonstrates how Mr. Schierman meets or exceeds them. In addition, a copy of Mr. Schierman's resume and certification are provided as attachments.

Table 1. Minimal Requirements for an RSO as Listed in NRC Regulatory Guide 8.31

Requirement	Mr. Schierman's Qualifications
Education: A bachelor's degree in the	<ul> <li>Bachelor's degree in Biology-</li> </ul>
physical sciences, industrial hygiene, or	University of Nevada- Las Vegas
engineering from an accredited college or	
university or an equivalent combination of	Master's degree in Health Physics-
training and relevant experience in UR	Colorado State University
racinity radiation protection. Two years of	
considered equivalent to 1 year of	
academic study	
Health Physics Experience: At least 1	Mr. Schierman was the RSO at a uranium
year of work experience relevant to UR	mill site in Colorado (Uravan Site:
operations in applied health physics,	Colorado RML 660-02) from May 1994 to
radiation protection, industrial hygiene, or	January 2006. This work involved
similar work. This experience should	working directly with radiation detection
involve actually working with radiation	and measurement equipment.
detection and measurement equipment,	
not strictly administrative or "desk" work.	

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Table 1 (concluded)	
Specialized Training: At least 4 weeks of specialized classroom training in health physics specifically applicable to uranium recovery. In addition, the RSO should attend refresher training on UR facility health physics every 2 years.	As the RSO at Uravan, Mr. Schierman attended 40 hours of specialized training in health physics applicable to uranium recovery every two years. These certificates can be provided upon request.
Specialized Knowledge: A thorough knowledge of the proper application and use of all health physics equipment used in the UR facility, the chemical and analytical procedures used for radiological sampling and monitoring, methodologies used to calculate personnel exposure to uranium and its daughters, and a thorough understanding of the UR process and equipment used in the facility and how the hazards are generated and controlled during the UR process.	The above education, experience and specialized training demonstrates this requirement has been met. In addition, continued certification by the American Board of Health Physics demonstrates Mr. Schierman's specialized knowledge.

We look forward to the NRC's prompt written acknowledgement that Mr. Michael Schierman has the minimal requirements to serve as the RSO for radioactive material license number SUA-1473.

Please contact me at (209)736-4803 with any questions.

Regards,

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**Rio Algom Mining, LLC** 

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Theresa Ballaine Manager

cc. Document Control Varughese Kurian, NRC (email only) Mike Schierman, ERG Brad Squibb, Solutient Technologies

# Michael J. Schierman, CHP

Senior Health Physicist / Manager

#### **Professional Summary**

Mr. Schierman has 19 years of experience in health physics as it applies to uranium mill license applications, characterization and remediation of radioactively contaminated sites, and radiological dose evaluation. Experience includes: Radiation Safety Officer (RSO) for uranium mill site and Remediation Leader for large chemical manufacturing company; development and implementation of MARSSIM based work plans and production of Final Status Survey Reports (FSSR); development of MARSAME based work plans for the release of materials and equipment (M&E); and development, implementation and management of radiological protection and environmental monitoring programs.

#### **Relevant Experience**

#### Radiological Investigations, Johnny M Mine, San Mateo NM

Mr. Schierman developed and implemented a Site Assessment Plan (SAP) at a legacy uranium mine near San Mateo New Mexico. Implementation of the SAP is complete and a draft of the Site Investigation Report has been submitted to the U.S. EPA. The information obtained from SAP implementation will be used to develop an Engineering Assessment and Cost Analysis (EE/CA) for the site.

Radiological Final Status Survey of Buildings, Former Naval Weapons Station, Concord CA – Mr. Schierman performed QA/QC and occasional advisory role in the sampling and survey effort to support the Final Status

## Years of Experience

- 20 Relevant
- 8 at ERG

#### Education

- MS, 1994, Health Physics, Colorado State University
- BS, 1991, Biology, University of Nevada, Las Vegas

### **Professional Registrations/Affiliations**

- Member, American Board of Health Physics
- Member, Health Physics Society-Plenary

### **Certifications and Licenses**

- OSHA 40-Hour HAZWOPER Training
- RSO Training
- Certified Health Physicist, 2007
- DOT Shipper Training for Radioactive Materials

Survey of several naval buildings. Mr. Schierman assisted in review of Final Status Survey Reports.

**Reconnaissance-Level Characterization of Select Buildings with "Old Town" area of the Lawrence Berkeley National Laboratory, Berkeley CA** – Mr. Schierman performed as the Radiological Sample Manager for the reconnaissance-level characterization of building used primarily for research laboratories and secondary support facilities to the 184-inch cyclotron. Radiological surveys of walls, ceiling, and floors and volumetric sampling of equipment, piping, sumps, and building materials was conducted. Radiological survey data and analytical results were reported in three dimensions, using a combination of ArcView GIS<sup>\*</sup> and Google Sketch Up<sup>\*</sup>.

**Characterization of Above-Grade Structures, DP West, Technical Area 21, Los Alamos National Laboratories, Los Alamos, NM** – Mr. Schierman performed as sample manager and lead work plan author for characterization of approximately 50,000 ft<sup>2</sup> of structures built as part of the world's first large scale plutonium production facility. The data collection effort included an automated low energy photon survey of building floors, using the 3-DISS system appointed with an array of FIDLER detectors. Traditional radiological surveys of walls, ceiling, and equipment and volumetric sampling of equipment, HEPA and HVAC systems, piping, sumps, and building materials were also conducted. A variety of PPE and containments (including HEPA vacuum-controlled) were employed to protect workers and prevent migration of contaminants. Other work included sampling for asbestos and beryllium, XRF screening for lead, and field tests for perchlorate, using methylene blue as an indicator. Radiological survey data and analytical results were reported in three dimensions, using a combination of ArcView GIS<sup>\*</sup>, AutoCAD<sup>\*</sup> and Google Sketch Up<sup>\*</sup>. Contaminants observed included heavy metals and the following radionuclides: tritium, americium-241; and isotopes of uranium and plutonium.

# Michael J. Schierman, CHP

Senior Health Physicist / Manager

**Development of Radiological Remedial Action Work Plan for the Marsulex, Ore Storage, Sulfur and Chloride/Research Areas. National Lead Industries Site. Sayreville NJ** – Mr. Schierman was the primary author of the radiological component of a Remedial Action Work Plan (RAWP) for a radiologically contaminated site. The RAWP was MARSSIM based for the land area and MARSAME based for release of material and equipment (M&E). The plan was approved by the New Jersey Department of Environmental Protection (NJDEP).

#### License Application and Dose Assessment, Bear Lodge Project, Upton WY

Mr. Schierman performed prospective radiation dose assessments, both public and occupational, to support an Environmental Impact Statement (EIS) and USNRC license application for the Bear Lodge Project.

**Baseline Radiological Investigation, Bear Lodge Project, Sundance WY**– Mr. Schierman developed and implemented a Baseline Radiological Investigation at a proposed rare earth mining facility near Sundance Wyoming. The baseline investigation is ongoing and includes an evaluation of soil, ambient external radiation, and ambient radionuclides in air.

**Pipeline Removal Project, Mountain Pass CA** - Mr. Schierman is currently the Radiation Safety Officer (RSO) for a project which involves removing 15 miles of waste water pipe containing pipe scale elevated with naturally occurring radionuclides. Developed the radiation protection program and oversees remedial activities as they relate to radiation protection and soil cleanup.

**Baseline Gamma Survey, Centennial Site, Ft. Collins CO** – Mr. Schierman developed, implemented, and presented the results of a baseline gamma radiation survey at a proposed in-situ uranium facility near Ft. Collins CO. The baseline investigation included evaluation of soil and ambient external radiation.

**Baseline Radiological Investigation, Juan Tafoya Mill Site, Marquez NM** – Mr. Schierman developed, implemented, and presented the results of a Baseline Radiological Investigation at a proposed conventional uranium mill near Marques NM. The baseline investigation included an evaluation of soil, ambient external radiation, biota, and ambient radon-222 in air.

**Baseline Radiological Investigation, Pinon Ridge Mill Project, Paradox CO** – Mr. Schierman developed, implemented, and presented the results of a Baseline Radiological Investigation at a proposed conventional uranium mill near Paradox Colorado. The Baseline Radiological Investigation Report was included as part of license application for a conventional uranium mill. This facility has been issued a radioactive materials license from the State of Colorado.

**Baseline Radiological Investigation, Dewey-Burdock Uranium Project, Edgemont, SD** – Mr. Schierman developed, implemented, and presented the results of a Baseline Radiological Investigation at a proposed uranium in situ recovery (ISR) facility near Edgemont, South Dakota. The baseline investigation included evaluation of soil, air, ambient external radiation and biota. The Baseline Radiological Investigation Report was included as part of license application for a uranium in-situ recovery site.

**Baseline Radiological Investigation, Yuty Uranium Project, Yuty, Paraguay** – Mr. Schierman developed and implemented the Baseline Radiological Investigation at proposed uranium ISR project in Yuty Paraguay. The baseline investigation included evaluation of soil, air, and biota.

# Michael J. Schierman, CHP

Senior Health Physicist / Manager

**License Renewal Application, Shootaring Mill Site, Ticaboo, UT** – Mr. Schierman developed major portions of the Environmental Report including the radiation protection and environmental monitoring programs, environmental effects analysis, site cleanup standard development, and accident scenarios.





AMERICAN ACADEMY OF HEALTH PHYSICS

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December 10, 2015

#### Michael J. Schierman

Env Restoration Group Inc. 8809 Washington St NE Albuquerque, NM 87113

Dear CHP:

It is a pleasure to inform you that your application for renewal of certification by the American Board of Health Physics has been approved and your certification thereby renewed. Enclosed is a seal which you may affix to your certificate to show that you are meeting the obligations of an active Certified Health Physicist.

As a result of this action, you will remain on the roster of active Certified Health Physicists (unless you request a change) until December 31, 2019. During this period, you should take the necessary steps to continue your certification, assuming that you remain active as a health physicist. Many CHPs have found it convenient to set up a file to keep track of the functions they are attending that count toward the Continuing Education requirements. This helps avoid problems at the last minute.

In applying for renewal, you acknowledged your commitment to remain active in the field of health physics and acquainted with scientific, technical, and regulatory developments. Should changing circumstances make it impossible or impractical for you to continue this commitment, please advise the Board so that you may be transferred to the Inactive or Emeritus class as appropriate.

The Continuing Certification Program of the American Board is intended to serve the needs of Certified Health Physicists. If you have any suggestions or comments concerning this program, I would appreciate hearing from you.

Congratulations on your successful application for renewal!

Sincerely,

Mancy K. Johnson

Nancy K. Johnson Executive Secretary & Program Director

Enclosure: Renewal Seal