BEFORE THE STATE OF NEW MEXICO
MINING AND MINERALS DIVISION

IN THE MATTER OF RIO GRANDE RESOURCES
CORPORATIONS’ APPLICATION TO CHANGE
THE STATUS OF ITS EXISTING MINE PERMIT
FROM STANDBY STATUS TO ACTIVE STATUS;
PERMIT REVISION 13-2 (PERMITCI002RE)

STATEMENT OF WILLIAM PAUL ROBINSON
ON BEHALF OF MULTICULTURAL ALLIANCE FOR A SAFE ENVIRONMENT
(MASE) AND AMIGOS BRAVOS (AB)

Introduction

This statement has been prepared by William Paul Robinson, Research Director at Southwest Research and Information Center, Albuquerque, NM on behalf of Multicultural Alliance for a Safe Environment (MASE) and Amigos Bravos (AB). A resume of my experience and education is attached to this statement as EXHIBIT 1.

This statement provides comments regarding the application of Rio Grande Resources Corporation, the operator of the Mount Taylor Mine, for changing the status of the mine from standby to active, and update the closeout plan and required amount of financial assurance for Permit CI002RE, Revision Application 13-2 (RA). The RA is available at: http://www.emnrd.state.nm.us/MMD/MARP/documents/2013-11RGRMtTaylorApplication_Revision13-2_CI002RE.pdf.

This statement has been prepared on behalf of the Multicultural Alliance for a Safe Environment (MASE) and Amigos Bravos (AB), organizations that requested a public hearing on the application with a May 10, 2013 letter to the Director of the Mining and Minerals Division (MMD) of the New Mexico Energy Minerals and Natural Resources Department (EMNRD).

Mining and Minerals Division has identified the purpose of the hearing is to give the public an opportunity to learn about and comment on the requested return of the Mount Taylor Mine to active status including the updated closeout plan and financial assurance.

RA 13-2 provides very little information regarding the changes in uranium market conditions that support the proposed change from stand-by to active status for the Mt. Taylor Mine.

Regarding “Return to Operating Status,” the RA at p. 2 states:
“"In accordance with 19.10.5.505 and 19.10.7.701 NMAC, RGR is submitting
this application to return the Mt. Taylor Mine permit #C1002RE to operating (also known as active) status by not later than October 12, 2014 before the end of the second standby renewal period. The following information is provided in support of this application as well as modification of DP-61.”

The New Mexico Mining Act Regulations are available at http://164.64.110.239/nmac/title19/T19C010.htm.

Regarding the Project Description and History, the RA at p. 2 states:
“At the time of this application, the mine remains on standby after mining operations were suspended in 1990 due to the depressed uranium market. RGR acquired the mine in 1991; the mine has been in standby since RGR purchased the property.”

And, at p. 3:
“Upon return to operating status, and before production of ore can resume, the mine will have to be dewatered again.

“The wells used to depressurize (dewater) the mine have remained during standby and will be reactivated for this purpose. The water will be treated to reduce uranium and radium concentrations to current regulatory limits.”

RA states that,
“The functions and overall dimensions of the Mt. Taylor Mine units described in the Mine Permit Application of December 1994 remain unchanged. The existing mine units will be reactivated and upgraded as necessary to meet current regulatory standards.”

MMD requirements for return to active status are summarized in the RA as:
“As required by 19.10.7.701 H NMAC, RGR is applying to MMD to revise mine permit #C1002RE for the Mt. Taylor Mine to return to operating status from standby status before the end of the second standby renewal period. This application also responds to the requirements of 19.10.5.505 NMAC for existing mine permit modifications or revisions. Submitted under separate cover with this application is the Closeout/Closure Plan (CCP), Revision 1, required by 19.10.5.506 NMAC, modified from the 1998 Closeout Plan and incorporating relevant upgrades to current best practices as well as changes in the post-mining land uses.”

Key provisions of the Mining Act Regulation pertaining to stand-by and active status are found at 19.10.7 NMAC – “Standby”.

19.10.7.701.A provides that
“If, due to a temporary cessation of mining operations exceeding 180 days, a permittee desires to suspend reclamation pursuant to a permit for an
existing or new mining operation, the permittee shall submit an application for a permit revision for standby status pursuant to this Part and 19.10.5.505 NMAC or 19.10.6.608 NMAC.”

19.10.7.701.b.6 NMAC requires applicants for revision of Standby status permits to, “provide an analysis of the anticipated future economic viability of the units proposed for standby status.”

701.F.5 provides that such an analysis is required for MMD Director approval of the proposed permit revision.

701.H. states, “Standby status will end upon revision or modification of the permit to return to operating status or expiration of the permit term or renewal period.”

Regarding the Schedule for Mt. Taylor Mine reactivation, the RE at Section 8, p.42 says:

“RGR intends to initiate reactivation of the Mt. Taylor Mine upon approvals of the mine permit revision to active status and the modification and renewal of DP-61, both of which are expected in 2014. When these approvals are received, RGR will begin the procurement process for long-lead equipment, specifically the shaft hoists and the depressurization pumps. RGR will also begin the detailed design and procurement for mine water treatment pond liners, hydraulic control upgrades, and site drainage and storm water controls (culverts and manholes).

“Mine water pumping and treatment facilities will be the first to be placed in operation. Design and procurement for these facilities will begin upon obtaining a mine permit revision and a discharge permit modification, and construction will begin within one year of those approvals. Dewatering sufficient to enable access to the underground workings is expected to take 2-3 years.

“When the shafts are accessible, RGR will begin rehabilitation of the shafts and activation of the hoisting and ventilation systems. One to two years of this work will overlap the initial dewatering period so that the mine should be ready for entry and rehabilitation of shaft stations and primary drifts approximately 4-5 years after permit revision/ modification. Ore production will begin as soon as possible thereafter.”

Regarding the Closeout and Closure Plan that would be implemented the stand-by status end without demonstrable reactivation. The RA provides Section 9, at p. 43:

“The Closeout/ Closure Plan (CCP) submitted in July, 2012 (RGR 2012) has been revised to incorporate the ultimate buildout configuration, described in the original closeout plan (RGR 1998), with the existing conditions and updated technical and regulatory requirements represented in the July 2012
submittal.

“This revised CCP (RGR 2013b) was prepared under separate cover and has been submitted with this revision application.”

The New Mexico Mining Act Regulations, at 19.10.1.7.5 states, "Standby status" means the permitted temporary cessation of a mining operation which is expected to resume.”

Based on this information, it is my opinion that if standby status occurs after “temporary cessation of mining operations exceeding 180 days,” then operational status should be understood as the conduct of mining activities by the Permittee without cessation exceeding 180 days.

“Anticipated future economic viability”, the term found in 19.10.7.701.b.6, is not defined in the New Mexico Mining Act regulations at 19.10. 1- 14 NMAC. A plain language definition of viable is provided below.

“Viable,” at http://www.merriam-webster.com/dictionary/viable, is defined as:

1: capable of living;
especially : having attained such form and development as to be normally capable of surviving outside the mother’s womb <a *viable* fetus>

2: capable of growing or developing <*viable* seeds> <*viable* eggs>

3a : capable of working, functioning, or developing adequately <*viable* alternatives>

b : capable of existence and development as an independent unit <the colony is now a *viable* state>

c (1) : having a reasonable chance of succeeding <a *viable* candidate> (2) : financially sustainable <a *viable* enterprise>.

**Summary of Uranium Market Conditions**

The RA states that "the mine remains on standby after mining operations were suspended in 1990 due to the depressed uranium market," however RA provides no “analysis of the anticipated future economic viability” of the Mt. Taylor Mine that would support a change from stand-by to active status. The regulations require the economic viability analysis as part of the determination whether the mine is eligible for stand-by or active status.

This Statement provides an analysis of the uranium market that reflects the long-term “depressed” condition that have affected the economic viability of the Mt. Taylor Mine, other uranium deposits in New Mexico and the uranium industry in the US.

“Depressed uranium market” conditions, the basis for Rio Grande Resources standby status provided in the RA, continue in the US. “Depressed” conditions in the
uranium market are reflected in low uranium market prices relative to the cost of uranium production. The “depressed uranium market” is also reflected in the as low production of uranium relative to total licensed uranium production capacity in the US. These relationships are discussed below and illustrated in the Slide Presentation attached as EXHIBIT 2.

Low uranium prices relative to the cost of uranium production can be demonstrated by the comparison of uranium market prices to the cost of profitable production of uranium reported.

This relationship is demonstrated by a comparison of current published market prices for uranium with the price of uranium necessary for profitable uranium production published for proposed uranium mines. A Technical Report on the Roca Honda mine west of the Mt. Taylor mine site is good source of uranium mine production cost information.

The Roca Honda uranium mine project, proposed for a site west of the Mt. Taylor is the subject of a February 27, 2015 Technical Report and Preliminary Economic Analysis that was prepared in conformance with Canadian Securities Guideline NI43-101. The Report is available at: http://www.energyfuels.com/_resources/technical-reports/Roca_Honda_Feb27-2015.pdf. Uranium market prices and the uranium price necessary for profitable mining at Roca Honda are presented in Exhibit 2 – Slides 1 and 2.

No NI43-101 Technical Report or Preliminary Economic Analysis is available to the public for the Mt. Taylor Mine. Therefore the Roca Honda Technical Report is the most recent economic analysis of a proposed underground uranium mine in New Mexico.

The 2015 Roca Honda Technical Report lists “$65/lb U3O8 cut-off” as one of the economic criteria for uranium resource analysis at Table 1-1. p. 1-3.

Regarding “Economics”, the Technical Report states, at p. 1-6:

“The uranium prices used in the PEA are higher (US$65.00 per pound) than the current uranium price (February 24, 2015) of US$37.15 per pound. The prices are based on independent, third-party and market analysts’ average forecasts for 2015, and the supply and demand projections are from 2011 to 2015. In RPA’s opinion, these longterm price forecasts are a reasonable basis for estimation of Mineral Resources.” at p. 1-6

Figure 1-2 of the 2015 Roca Honda Technical Report at p. 1-17, presents a “COMPARISON OF 2015 ROCA HONDA PEA AT DIFFERENT URANIUM PRICES TO 2012 ROCA HONDA PEA AT US$75/LB” that shows the “Internal Rate of Return” (IRR) and “Pre-tax Net Present Value (NPV)” for the project at a range of possible uranium prices. This Figure illustrates that the project has negative Internal Rate of Return and negative Net Present Value for uranium prices below $65/lb. This figure
Published uranium market price charts are also included in EXHIBIT 2. The charts show uranium market prices for the past five years and the past 20 years collected from http://www.infomine.com/investment/metal-prices/uranium-oxide/all/.

The uranium market price charts are annotated to identify the $65/lb uranium price needed for profitable operations at Roca Honda. The uranium market price charts show that the uranium prices has only exceeded $60/lb for brief periods, less than six months, in 2007 and in 2011 and remain below $50/lb since mid-2012.

Based on these data, it is clear that the uranium market prices remain depressed relative to the cost of uranium production for underground uranium mines in New Mexico where published economic analysis is available.

It is my opinion that, since commercial mining requires that the price paid for the commodity exceed the cost of mining, uranium mines with cost of production exceeding available prices, are not able to operate at a profit and are therefore not economically viable.


2014 US uranium production reported by the DOE EIA was 4,912 million pounds, as shown at Table 2, p. 5, Table 3, p. 6 and illustrated at Figure 5 at p. 13.

Licensed US uranium production and operating capacity is available from Table 4 at p. 7 and Table 5 at p. 8 that identify the location, owner, location, capacity and operating status of uranium mills (Table 4) and in situ leach plants (Table 5). These tables are included in the attached slide presentation.

Table 4 shows that just one uranium mill, Energy Fuels-White Mesa, was operating in 2014 (and for any period since 2010) with licensed ore processing capacity of 2,000 tons per day and is capable of producing 8,000,000 pounds (4,000 tons) of uranium per year according to Energy Fuels at http://www.energyfuels.com/uranium_production_centers/white_mesa_mill/.
Table 5 shows six operating (or producing) licensees and their operating capacity in pounds of uranium per year:

- Cameco – Crow Butte – WY – 1,000,000
- Lost Creek LLC – WY – 2,000,000
- Mestena Uranium – Alta Mesa – TX – 1,500,000 (Producing)
- Power Resources (Cameco) Smith Ranch-highland – WY – 5,500,000
- South Texas JV – Hobson – 1,000,000
- South Texas – La Palangana – TX - 1,000,000
- Uranerz – Nichols Ranch – WY - 2,000,000 – Producing (new in 2014)
- Uranium One USA – Willow Creek – 1,300,000.

These in situ facilities are licensed to produce 15.3 million pounds of uranium per year in total.

Total US licensed uranium production capacity is 15.3 million pounds from in situ facilities plus 8.0 million pounds from the one licensed and operating conventional mill for a total licensed production capacity of 23.3 million pounds of uranium per year.

As 2014 US uranium production was 4.912 million pounds, US licensed uranium production facilities operating at 4.912/23.3 = 0.21% of licensed capacity. Therefore, 79% of US uranium production capacity was unused. This low use of production capacity is a second indication of a depressed uranium market.

US uranium production has remained below 5.0 million pounds per year for more than two decades (US DOE EIA Figure 5. EXHIBIT 2 – SLIDE 4). Long-term low production versus capacity conditions for the US uranium industry is an indication of longterm depressed conditions in the US uranium market.


While the US is the world’s largest uranium consuming nation, large and continuing supplies of uranium have been and continue to be available from countries that produce more uranium than they consume to meet that demand.

On a global level, world uranium production capacity has exceeded world uranium demand since 2008, according to the 2014 Uranium Red Book, and Organization for Economic Cooperation and Development (OECD)- Nuclear Energy Agency (NEA0 report prepared every two years for more than forty years. It is available at https://www.oecd-nea.org/ndd/pubs/2014/7209-uranium-2014.pdf

As illustrated in EXHIBIT 2 – SLIDE 8, The excess uranium production capacity in the US reflects the oversupply of uranium production capacity versus uranium
demand on around the world. Projections of world uranium supply and demand through the year 2035 are included in the 2014 Uranium Red Book as shown in Table 2-11, included in EXHIBIT 2 – SLIDE 8. These projections show that the capacity of existing and committed uranium production sites exceeds project uranium demand through 2035 for the low uranium demand scenario. Uranium capacity at existing and committed uranium production sites exceed the current high uranium demand scenario through the year 2024.

The longterm excess of uranium production capacity versus demand around the world is likely to limit opportunities for new high cost production facilities, such as conventional mines and mills in the US like Mt. Taylor.

Rio Grande Resources has recognized the depressed uranium market that impact on the potential to operate the Mt. Taylor Mine in the RA and other sources for many years. The continuation of longterm depressed conditions in uranium market can be demonstrated through:

1) uranium prices depressed below the cost of uranium production and
2) US uranium production rate depressed as licensed facilities operate at only one-fifth of capacity.

**Demonstrated Performance of Mine Reactivation Activities**

The RA identifies a series of activities that must be conducted for reactivation of the Mt. Taylor Mine. To demonstrate that operating status is being maintained if a permit for Active Status is issued, Rio Grande Resources should be required to demonstrate that it is progressing on reactivation of the mine without cessation of more than 180 days.

Progress on reactivation activities can be assessed by review of Rio Grande Resources performance of the tasks identified in the RA as necessary to reactivate the Mt. Taylor Mine.

As noted above, RA Section 8 – “Schedule” identifies tasks necessary for reactivation of the mine, if active status is permitted by MMD. Performance of these tasks would be an indication whether reactivation is proceeding or not.

Milestones related to the task identified in Section 8 could include the following demonstrations:

1) “When these approvals are received, RGR will begin the procurement process for long-lead equipment, specifically the shaft hoists and the depressurization pumps.”

RGR should demonstrate the procurement process has begun and that procurement activities are proceeding in timely manner.
2) “RGR will also begin the detailed design and procurement for mine water treatment pond liners, hydraulic control upgrades, and site drainage and storm water controls (culverts and manholes).”

RGR should demonstrate that detailed design and procurement have begun and are being sustained.

3) “Mine water pumping and treatment facilities will be the first to be placed in operation.”

RGR should establish and implement a schedule for mine water pumping and treatment and demonstrate that milestones in that schedule are being met.

4) “Design and procurement for these facilities will begin upon obtaining a mine permit revision and a discharge permit modification, and construction will begin within one year of those approvals. Dewatering sufficient to enable access to the underground workings is expected to take 2-3 years.”

RGR should delineate and meet a schedule for reactivation beginning upon the issuance of a permit for operating status demonstrating that milestones will be established to initiate construction within one year and enable access to the underground workings within 2-3 years.

To demonstrate reactivation, demonstrable milestones for implementation of the reactivation activities in RA Section 8 - Schedule should be identified and scheduled with activities beginning no later than 180 days after a permit to return to active status is issued.
Rio Grande Resources does not explicitly include the modifications to the existing South Waste Pile and Ore Pad mentioned in the RA at p. 20 – 23. The RA at p. 20 states,

“Upon reactivation of the mine and before ore production resumes, the existing waste pile will be reshaped”

and adds at p. 21,

“During reactivation, uranium- and radium-contaminated sediments from cleanout of the water treatment ponds and storm water ponds will be removed and deposited in a clay-lined cell within the south waste pile.”

Regarding the Ore Pad, the RA states,

“The existing soil cover will be removed; contaminated soil in the cover will be disposed of on the south waste pile, and clean soil will be returned to the borrow area east of the ore pad. Once the soil cover has been removed, the ore will be removed and shipped off site for milling, and any remaining contaminated soil in the pad will be excavated and placed in the waste pile. The pad will be rebuilt to include a liner and a truck wash facility (Drawings MT13-AC-12 and -13). These upgrades will be made to provide
additional protection against release of solid or liquid contaminants from the ore pad, in accordance with BPT per 40 CFR 440.”

The actions to upgrade the South Waste Pile and Ore Pad should be initiated upon activation of mining activities that should be understood to occur upon the issuance of the return to active status or implementation of the Closure and Closeout. Schedules for the contracting, design and implementation of the South Waste Piles and Ore Pads.

To demonstrate reactivation, demonstrable milestones for implementation of the South Waste Pile and Ore Pad upgrades should be identified and scheduled with activities beginning no later than 180 days after a permit to return to active status is issued.

**Demonstration of Reactivation of Uranium Mill License Application Process**

Decades ago when the Mt. Taylor Mine was constructed, operations were projected to reach 4,000 tons per day yielding 7-8,000,000 pounds of yellow cake per year. [http://westernmininghistory.com/mine_detail/10012896](http://westernmininghistory.com/mine_detail/10012896). As this production rate would exceed the production capacity of the single operating uranium mill in the US, Rio Grande Resources would require a new uranium mill to process the ore from the Mt. Taylor Mine at the rate of uranium ore extraction, or near the rate of ore extraction, for which the mine was designed.


That update, available as NRC ADAMS Document ML 15322A125, is attached to this statement as EXHIBIT 4.

The Update is a series of email between Rio Grande Resources and NRC staff that was initiated November 10, 2015 by NRC Project Manger Ron Linton who asked Joe Lister, Mine Manager-Mt. Taylor Mine at Rio Grande Resources:

“Joe:
Can you provide NRC with an update to your plans for the Mt. Taylor Mill application? The mill application only, not the mine site. We would like to take the Mill application off our “applications list” if it is not expected in the near future (3 yrs out). It can always be added back on with an updated letter of intent. Since it is a conventional, we don’t expect it in anytime soon. We
currently don’t have an expected application date on the list, it is just listed as TBD and we would like to show a specific date.”

Joe Lister responded on November 18, 2015:

“Ron,
Good morning.
In response to your inquiry of the mill I provide the following:
The Mt. Taylor Mine has received the DP-61 Mine Water Discharge Permit from the State of New Mexico as of a couple of weeks ago and we are scheduled to have a Public Hearing on December 04, 2015 of the mine standby permit to active status.
We anticipate receiving the active mine permit in the first quarter of 2016, the mill project will be accelerated once we receive the revision of the current standby permit to active status. The mill application is targeted for late 2019 to first quarter 2020.”

Progress on development of a uranium mill license application would be an indication that Rio Grande Resources is re-activating its efforts to mine uranium from its Mt. Taylor Property. Progress on a mill license application beyond the past series of updated “letters of Intent” would be indicated by investment in the technical analyses required for submittal of such an application.


This paper describes the very complex NRC uranium mill license application process as:

“A critical path, which can vary from one project to another, is defined through the six tasks. The critical path is set by time critical baseline data collection activities through Task 1, but it is more variable and site-specific through Tasks 2-5 until it tracks the regulatory approval path through Task 6. In the best-case scenario, Task 1 requires 15 months and the total time from beginning of Task 1 through issuance of a mill license is approximately four years. Many factors can cause the time-line to extend beyond four years.”

The authors note:

“While some of these factors are beyond the applicant’s control, the licensing time-line can be shortened by several measures, [as illustrated in Figure 2 in the paper]:"
· Consulting early and frequently with the regulatory agencies
· Initiating time-critical baseline data collection as early as possible
· Performing tasks in parallel
· Taking the initiative in proposing courses of action to the regulators
· Implementing a pro-active public involvement program

The most optimistic timeline in the paper for issuance of a mill license application is “approximately four years” however the paper does not identify or address the effects that preparation of an Environmental Impact Statement pursuant to the National Environmental Policy Act would have on the timeline for the period between filing of the application and the completion of the NEPA process.

As is clear from the Kuhn and Bridges paper – EXHIBIT 5, the mill application timeline may be able to be shortened by early consulting with regulatory agencies, initiation of time critical baseline data collection as early as possible and performing tasks in parallel, and taking initiative with regulators and public involvement.

Rio Grande Resources demonstration of these actions would be a clear indication of activation of the uranium mill licensing application process, a much more substantial than the brief Letter of Intent filed at NRC prompting.

Demonstration of reactivation of mill licensing activity such as minutes of working meetings with agencies and detailed work plans and signed performance contracts associated with application preparation and subsequent completion of data collection reports and site designs necessary to comply with specific licensing application requirement in the areas noted by Kuhn and Bridges would show that mill license application efforts are reactivated and proceeding on a schedule.

Rio Grande’s mention of a possible uranium mill license application filing data is a significant demonstration of re-activation of its interest in filing the application on the timeline mentioned. Demonstration of specific actions to initiate that application process, and demonstration that the actions to prepare a license application are proceeding in a timely manner would be a much more convincing demonstration that Rio Grande is reactivating its Mt. Taylor uranium mine than the simple statement in the recent Letter of Intent prompted by the NRC.

As part of the demonstration of reactivation, demonstrable milestones for initiating license application development should be identified and scheduled with activities beginning no later than 180 days after a permit to return to active status is issued.

Conclusion

The RA does not include an analysis of anticipated future economic viability of the Mt. Taylor mine. Such an analysis is a requirement for ending “Standby” status, as identified at 19.10.7.701.F.5 NMAC.
In the event operational status is approved, it is reasonable and necessary for the approval to require demonstrations that verify that the reactivation efforts are being conducted in a timely manner and that a new period of extended temporary cessation beyond 180 days has not begun.

Milestones demonstrating reactivation activities associated with the Mt. Taylor Mine and a Rio Grande Resource uranium mill necessary to process the ores it would generate are proposed in this Statement that would insure that operational status, if permitted, is proceeding towards reactivation and not a new phase of temporary, or long-term cessation of operations.

If performance of reactivation efforts in a timely manner is not demonstrated, then it is reasonable to assume that reactivation activities has either not begun or put on hold, and Rio Grande Resources has returned to a condition of temporary cessation of operation beyond 180 days or “Standby” status.

As “Standby” status occurs when mine operations, including reactivation activities, have ceased for 180 days then lack of reactivation efforts for 180 days should be considered a demonstration of a return to Standby status. As Standby status opportunities have been exhausted for Permit CI002RE, prompt implementation of the CCP should be required.