

## RE: Aquifer Protection Permit No. P-100514

August 5, 2010

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Dear Mr. Vevang,

Thank you for the opportunity to comment on the draft Aquifer Protection Permit (APP) for the Johnson Camp Mine. On behalf of the Coalition itself, we submit in a timely fashion the following comments on the draft permit.

The **Arizona Mining Reform Coalition** works in Arizona to improve state and federal laws, rules, and regulations governing hard rock mining to protect communities and the environment. We work to hold mining operations to the highest environmental and social standards to provide for the long term environmental, cultural, and economic health of Arizona. Members of the Coalition include: The Grand Canyon Chapter of the Sierra Club, Earthworks, Save the Scenic Santa Ritas, The Dragoon Conservation Alliance, the Groundwater Awareness League, Concerned Citizens and Retired Miners Association, the Center for Biological Diversity, and the Sky Island Alliance.

Unfortunately, we did not learn about the comment deadline for this action until very recently and have not had time to adequately review the draft permit, the fact sheet or the underlying files. We have requested the files, but the request could not be accommodated in a short timeframe. Therefore, we are doing our best to provide these comments by the deadline, but would like to request an extension to the comment deadline. Whether or not an extension is granted, we reserve the right to augment these comments at a later date should we get a chance to review the file and/or more information comes to light about this application. We would also like to request a hearing on the draft APP. One of our member groups, the Dragoon Conservation Alliance, has made a request for a hearing (attached), and we incorporate by reference their request into these comments. A hearing would allow local residents a better chance to comment and to learn more about the draft APP.

We would suggest to ADEQ in general that the agency create a listserv that would automatically send out notices for comment to the public to better help citizens of Arizona meaningfully take part in the review of these permits.

### **Background**

The Arizona Department of Environmental Quality (ADEQ) proposes to issue a Permit (Aquifer Protection Permit (P-100514) to Nord Resources Corporation (Nord). The Johnson Camp Mine has been operated on and off by a variety of operators for at

least 50 years. The mine has a history of non-compliance with Arizona state mining laws and regulations. Nord Resources, the current owner of the mine wishes to enlarge the mine by digging a new open pit and a new leach pad and other facilities to mine copper and to conduct a secondary business selling aggregate and decorative rock from the mine. Now, the Arizona Department of Environmental Quality is proposing to grant a new APP for the life of the mine, including closure and post closure activities. According to the fact sheet provided by ADEQ, the permit application was first submitted by Nord in 1993. It is unclear why there is now a sudden rush to grant this permit.

ADEQ asserts that it has no choice but to deliver these permits in an expeditious manner to Nord. However, according to the ADEQ website, the mission of ADEQ is to protect and enhance public health, welfare and the environment in Arizona and likewise A.R.S. §49-104 (A) states:

The department shall:

1. Formulate policies, plans and programs to implement this title to protect the environment.

ADEQ administers a variety of programs to improve the health and welfare of our citizens and to ensure that the quality of Arizona's air, land and water resources meet health-based standards that also protect natural resources. ADEQ indicates that it is committed to leading Arizona and the nation in protecting the environment and improving the quality of life for the people of our state. Nowhere in its mission, does it state that ADEQ should allow a company's bottom line to override the interests of the health and welfare of our environment and our citizens. It is clear that, as written, this permit is inconsistent with ADEQ's mission. Therefore, we ask that ADEQ rewrite the APP and require the company to meet standards and include provisions in the permit that fully protect the environment and the health and welfare of our citizens, and that are consistent with the provisions of the Clean Water Act and A.R.S. §49-241-244 and §49-255.

Arizona's Aquifer Protection Permit program was a landmark program when passed in 1986 as part of the Environmental Quality Act. Rather than focus on remediation – trying to clean up a mess after the fact – and enforcement, it focuses on prevention. The program is aimed at keeping pollutants out of our precious aquifers. This is both more environmentally responsible and cheaper in the long run. It is especially important as it is often the public (the taxpayers) that has to pick up the tab for clean up. Arizona also decided at that time that all of its aquifers are important and should be designated as drinking water aquifers – that is to protect their quality for the future. See §49-224 (B).

### **Comments**

For ease in writing these and hopefully for the agency, the following comments will start with the APP fact sheet and then the permit itself.

As we mentioned above, the factsheet says that Nord first submitted an application for this APP to ADEQ in 1993. What is the history of why it took so long to get to this point and what is the rush now to complete the process? As we understand, Nord has recently laid off most of its mine employees and there appears to be a real concern as to both the longevity and financial capability of Nord. It would not be a good idea to rush though a permit to a company that either winks out of existence or is broke. There is a pattern to this mine of short term owners stopping and starting mining operations. Under the best of circumstances this does not bode well for a mine operation to protect the environment and ADEQ should look seriously at whether Nord can follow through on its commitments before a permit is granted. (Page 1)

The APP would allow Nord to conduct a secondary aggregate/decorative rock business at the mine site presumably to market mine tailing and/or overburden to the public. It is not clear in the permit or the fact sheet how Nord will make sure that material sold from this secondary business will not contain toxic materials. It is also not clear how ADEQ will make sure that Nord is not selling contaminated rock and tailings to the public. What assurances do we have that the material being sold through this secondary business is truly inert and will not create further contamination problems once it is sold?

The permit assumes that the mine will act like a sink and collect all stormwater passing through the mine. It assumes that this water will be collected in ponds for evaporation. Are the ponds and impoundments large enough to contain the waters from some of our more recent violent storms? Now with climate change upon us, the frequency of 100 year and great storm events is much greater. Can the facility hold the water from more frequent, larger, and more violent storms on site as planned? Would it not be better to treat stormwater for other uses rather than simply let it evaporate?

The fact sheet says that Nord currently plans to mine only the oxide ore on the Burro and Copper Chief pits. If the company later decides to begin mining the sulfide ore below the oxide ore would a new permit be required? Would ADEQ need to approve the move into sulfide ore mining? What opportunities would there be for citizen involvement in this decision? (Page 5)

ADEQ mentions the possibility that mine operations in the past have caused “numerous wells” to go dry. This is a serious situation here in the desert to have a mining company sucking wells dry. What authority does ADEQ have to assure that the approval of this permit will not cause additional wells to go dry? Will Nord be required to replace these dry wells and if so, where would the water come from? Does the permit require Nord to maintain the normal water balance in the area? If so, is that water balance based on current conditions, pre-mining conditions, or post-mining conditions? (Page 5)

ADEQ Seems to indicate that the Johnson Camp mine has created a cone of depression (hydrological sink) in the area water table around the mine. ADEQ further seems to indicate that this cone of depression will contain all groundwater contamination and keep it from moving off-site. ADEQ indicates that they do not know the extent of the cone of depression. We recommend that ADEQ should not grant the permit until it has a better understanding of this cone of depression. ADEQ should determine the final size of the cone of depression. Once mining ceases, this cone of depression would slowly refill as the region’s water table returns to equilibrium. If ADEQ’s theory that pollutants would be “trapped” within the cone is correct, what would happen to these pollutants as the cone of depression disappears? Would they move offsite? It seems to us that rather than rely on entrapment as a method of pollution prevention, that collection and treatment would be a much better solution. (Page 6)

### **Problems with Best Available Demonstrated Control Technology (BADCT)**

Of the two key requirements of the APP program, mining companies are required to comply with BADCT standards. However, those standards were created mostly by the industry itself and are, at best, the bare minimum that is required to protect communities and the environment surrounding a mine. Compliance with BADCT standards in the permit is generally based on the honor system. There does not seem to be any verification by ADEQ that these standards are actually met on the ground. In addition, there does not seem to be any inspection requirements by ADEQ to actually get out on the ground and see if BADCT was actually employed correctly and then to insure that the mine’s systems are operating as designed under the standards. This combination of the bare minimum standards coupled with no oversight or enforcement from ADEQ and an almost complete reliance on self-

reporting by Nord, is a recipe for real problems. The permit needs to reflect oversight by ADEQ as the facilities are being build and periodic inspections by ADEQ to ensure compliance by the company.

The Johnson Camp mine has existing facilities that clearly do not meet BADCT standards. New facilities will (or already have been) build to BADCT standards. This mix of old technology and new is at best a challenge. Are the old facilities at the mine site being held to the same standards as the new facilities? If not, what assurances do we have that the old facilities will not get a free pass from enforcement?

ADEQ requires mitigation measures for the non-BADCT structures and features, but these mitigation measures are not required to be in place at the time the permit is granted. For example, on page 9, the individual BADCT for the Expanded Waste Rock Dump (Facility number 004) says, “Combined with a quarterly water quality monitoring program checking Action Levels ... at respective POC wells, these evaluations will provide ongoing verification of BADCT effectiveness for this facility.” Yet the permit does not require the POC well to be drilled until some point long after the permit is granted. In addition, the Action Levels will also not be set until some point in the future. How can pollution from this facility be prevented if there is no baseline and the pollution limits are not set until long after the permit is granted. **There must be a solid baseline, all facilities for compliance testing must be in place, and pollution levels must be set before the permit is granted.** While we are using facility 004 as an example, this must be true for all facilities permitted by this APP.

Page 21 lists a number of proposed POCs. However, these will not be built (if at all) until long after the permit is granted, in addition, the permit does not specify exactly where these wells would be located. All of this must be done and the POC’s must all be in place before the permit is granted. Presumably, ADEQ is banking on the good will of Nord to follow through with all of these conditions. However, Nord has demonstrated that it is not financially well off. The first thing a company in financial trouble will do is cut corners on things like compliance with environmental regulations that do not immediately affect the company bottom line. ADEQ is perennially short staffed and there is great political pressure on the agency to not enforce its requirements. In addition, once the permit is granted, the opportunities for citizen involvement to make sure the company follows the rules are greatly diminished. Given what we’ve just outlined, it is far better to require that all pollution control and monitoring facilities and equipment is in place **before** the permit is granted. This is also a better fit for ADEQ’s mandate to prevent pollution.

The compliance schedule (pages 22, 23) lists a number of facilities and studies that need to be completed long after the permit is granted. Due to the short length of time that we have had to review this permit, we can only presume that this compliance schedule would be effective if built, operated, and used according to the permit, however, as mentioned above, all of these facilities should be in place and reports and studies should be complete before the permit is granted.

#### Financial Capability

As mentioned above, we understand that Nord has recently laid off a number of their employees and there are rumors circulating that the company is contemplating bankruptcy. Yet, according to the permit and fact sheet, Nord has demonstrated the financial responsibility to carry out the requirements of the permit. How have they demonstrated they have the finances to meet the requirements of the permit? How recent was this demonstration? The permits also says that Nord has give ADEQ an irrevocable letter of credit (in July of 2007) for \$432,476. Is this letter of credit still good? What happens to the money committed through this letter if the company declares bankruptcy or the company is sold? Who

determined that this amount is an adequate bond for clean up, closure and post-closure monitoring should the company close up shop and disappear?

**List of compliance requirements, facilities, studies, reports, and plans that are required in the permit, but will not be in place or completed before the permit is granted**

- Quality control plan to identify that the portion of the waste rock that can be classified as inert material to be crushed and transported off-site.
- Drainage system for the Heap Leach Facility
- Discharge limitations for the future pit lake
- Waste rock characterization
- Collection of representative fluid samples from the PLS and Raffinate Ponds.
- Six Point of Compliance Wells (CW-1, CW-2, CW-5, CW-6, CW-3, CW-4)
- Alert Levels (AL) for point of compliance wells
- Aquifer Quality Limits (AQL) for the POC wells
- Compliance groundwater monitoring at the POCs
- Passive containment capture zone around the Burro and Copper Chief open pits.
- Post audit of the approved groundwater flow model.
- Waste Rock Sampling plan
- Closure Plan
- Water Balance Report
- Material Characterization and Sampling Plan
- Waste Rock Management Plan for Waste Rock Dump and Expanded Waster Rock Dump
- Leach Pad #4 Final Design Report
- PLS Pond #1 Secondary Containment #1 As Built Report
- PLS Pond #1 Secondary Containment #2 As Built Report
- Non-Stormwater Facilities As Built Report
- Main Laboratory Pipeline Report
- Crushing/Agglomeration Plant Final Design Report
- Aggregate Business Operations Plan
- Leach Pad #5 Final Design Report
- Leach Pad #5 Ponds Final Design Report
- Updated Closure and Post-Closure Strategy and Costs
- Complete Discharge Characterization for the storm water ponds east of the Waster Rock Pile
- Initial Water Quality Monitoring for Durham, Hill and Saddle Wells
- Alert Levels and Aquifer Quality Limits for The Durham, Hill and Saddle Wells
- Installation of CW-1, CW-2, CW-5, CW-6 wells
- Initial Water Quality Monitoring for CW-1, CW-2, CW-5, CW-6 wells
- Alert Levels and Aquifer Quality Limits for CW-1, CW-2, CW-5, CW-6 wells
- Installation of CW-3 and CW-4 wells
- Initial Water Quality Monitoring for CW-3 and CW-4 wells
- ALs and AQLs for CW-3 and CW-4 wells
- Passive Containment Demonstration Investigation

This long list of items needs to be completed before the permit is granted to fulfill ADEQ's mission of preventing pollution. As the permit is written, the horse will have long since left the barn before ADEQ shows up to close the doors.

Page 12 of the draft permits states that Nord is responsible for determining which contaminants shall be tested and for setting the ALs and AQLs for these contaminants long after the permit is granted. This is truly the fox guarding the henhouse. ADEQ should set these limits themselves and this should be done before the permit is granted.

The Alert Levels for Pollutants with Numeric Aquifer Water Quality Standards (2.6.2.3.2) are far too lenient toward the company and will do little or nothing to prevent pollution from the mine.

It is inconceivable that this permit does not require a closure plan to be completed before the permit is granted. In fact, the permit does not require a closure plan until 90 days following notice of closure! How can ADEQ possibly determine the financial assurance for closure without seeing the plan? How can pollution be prevented at the mine without knowing what closure will look like?

Pages 51 and 52 of the permit contain a table listing inspections and operational monitoring of the facility to be done by Nord itself. While we appreciate the time and money it would take for ADEQ to do these inspections and monitoring itself, it is not feasible to expect the company to do adequate job of self monitoring and inspection. At the very least, ADEQ should do periodic inspections on the ground. A better solution would be for Nord to Pay ADEQ to come out and monitor. In general the reporting and monitoring time frames are far too infrequent. In general, it would be better to see monthly rather than quarterly, quarterly rather than yearly monitoring, especially at the POCs.

Tables 3 and 4 on pages 54 and 55 of the permit list a series of contaminants that Nord is required to test for. However, there are no limits set by ADEQ. These limits must be set by ADEQ before the permit is granted.

### **Conclusion**

The Johnson Camp Mine has been an existing mine for the past 50 years with a long history of changes in ownership and lack of compliance with environmental laws and regulations. Now ADEQ is fast tracking a permanent APP to Nord to operate a mine at a time when the company's solvency is in question. ADEQ must determine that the company is financially capable of operating and successfully closing the mine before permits are granted. The permit itself would be granted before a great deal of the work is completed to assure compliance with ADEQ rules. The existing rules are the bare minimum for a successful mine and almost all of the compliance with ADEQ regulations are done "on the honor system" by the company. This is a recipe for water pollution. Nord and ADEQ should complete its homework before the permit is granted and ADEQ should inspect and monitor the mine directly on a regular basis. After all, the permit has been in the works since 1993, why not take the time to do it right? Please rewrite the permit taking into consideration the comments and suggestions listed above.

We appreciate the opportunity to comment on this permit.



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Attachment: Dragoon Conservation Alliance Request for a Hearing (August 4, 2010 via email)

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Dear Mr. Vevang:

On behalf of the member of the Dragoon Conservation Alliance, I am requesting a public hearing to be held locally (either in Dragoon or Benson) to allow oral public testimony to be taken regarding the abovementioned draft Aquifer Protection Permit. In addition, we request that the date for public comment be extended until after the hearing to allow additional public testimony to be considered.

It would be extremely helpful to have ADEQ staff available before in an "open house" setting before the hearing to help us understand what the permit means and how Nord Resources would be required to operate in a manner that would protect our community and the environment.

It is difficult for our members and the public to have input in this decision without a public hearing and open house. The permit is difficult to understand and having staff available to assist us in understanding it would be helpful in allowing us to make meaningful and helpful comments to improve the draft APP.

We are concerned about the financial viability of Nord resources and want to make sure that if they are allowed to operate that they have the financial resources to stick to the permit and clean up after themselves. This concern is based on recent published reports about layoffs and financial problems at Nord.

We want to learn what new things they want to do on the site and what potential problems may arise. We want to make sure they protect our water and air while they mine and that they can clean up after mining ceases.

We want to make sure they clean up any previous mess made by previous operators before they are allowed to continue.

**Dragoon Conservation Alliance Rick Bishop, Chairman**