

Meeting #12

November 14, 2013 Meeting

MEETING SUMMARY

Meeting Attendees

Community Working Group members present:

Nancy Vogler – LOST Trail & Superior Copper Alliance
Bill Vogler – LOST Trail & Superior Copper Alliance
Fred Gaudet (for Matt Nelson) – Arizona Trail Association
Pam Bennett – Queen Valley HOA
Bruce Wittig – Queen Valley Water Board
Cecil Fendley – Queen Valley Water Board
Roy Chavez – Retired Miners & Concerned Citizens
George Martin – JF Ranch
Lynn Martin – JF Ranch
Martin Navarrette - Superior Little League
Jeff Bunkelmann – Central Arizona College

Community Working Group members not present:

Lynn Heglie – Superior business
Pam Rabago – Superior Chamber of Commerce
Mark Siegwarth – Boyce Thompson Arboretum
Steven Byrd – Superior Junior Senior High School
Dominic Perea - Superior Junior Senior High School

Resolution Copper:

Vicky Peacey - senior manager of approvals, communities & environment
Melissa Rabago – community outreach coordinator

Guests:

John Craig

Guest Speakers:

Nancy Wrona, Arizona Department of Environmental Quality
Don Gabrielson, Pinal County

Facilitators - Godec, Randall & Associates (GRA):

John Godec
Debra Duerr

Housekeeping

John Godec said that we have two new additions to the group, but they weren't able to make the meeting tonight. They are Steven Byrd and Dominic Perea of Superior Junior-Senior High School. We are also working with Cobre Valley Medical Center to find a replacement for Frank Stapleton.

Godec introduced our guest speakers for the evening, Ms. Nancy Wrona from ADEQ and Mr. Don Gabrielson from Pima County. He asked the group members to introduce themselves as well, and mentioned those who aren't able to be here tonight.

Pam Bennett shared a few observations from the Queen Valley Homeowners Association meeting last night, at which Resolution staff were guest presenters. She said that people were very interested in the information presented, and many complimented her afterward. She read two emails she received from residents that expressed thanks for hosting the meeting. A couple of CWG group members who attended the meeting observed that a few attendees were rude, which they didn't feel was appropriate. A discussion among members acknowledged that there are differences of opinion in the broader community about the project, and everyone is entitled to express his or her views. The NEPA process should address many of these concerns. There was also some discussion about the status of the land exchange bill, on which there were some developments in Congress this week that were generally not known to the group members or to the community.

Godec responded to comments he had heard expressed at the Queen Valley meeting last night, and tonight, that implied that this group was formed to support the project. He said this is not true, and the purpose of the group is to help the community understand the project and to help Resolution understand the community. Several members reinforced that they do not consider themselves "tools" or representatives of Resolution.

Presentation of Water Quality & Air Quality Issues and Regulations for the Project

Presenters: Nancy Wrona, ADEQ

Don Gabrielson, Pinal County

Godec introduced Nancy Wrona of the Arizona Department of Environmental Quality (ADEQ), who has spent many years as a manager with the agency and is currently ombudsman for ADEQ. Wrona has an extensive background in air and water quality permitting for the state. She told of some personal experiences in the mining arena. She introduced Don Gabrielson, who is the director of Pinal County Air Quality Department, saying she has worked with him for many years. She explained the difference in

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jurisdiction between the state and the counties for air quality regulation. The state regulates large industrial facilities like smelters, lime plants, coal-fired generating stations and the like. The counties have authority over many other types of activities, but some have been ceding authority back to the state in recent years due to budget constraints. Wrona noted that in the water quality arena, no other state has our type of standards-based aquifer protection program; Arizona is the leader in this area.

Air Quality

Don Gabrielson talked about the Pinal County air quality permitting process. The program has been developed to comply with several regulatory frameworks including U.S. Environmental Protection Agency rules, state legislative rules for counties, and the federal Clean Air Act ambient air quality standards, with which locales may be 'attainment' or 'nonattainment'. For nonattainment areas, an action plan must be prepared to address problems. He outlined the regulatory responsibilities of counties (stationary sources, construction, burning and nuisances), ADEQ (vehicles), and the Agricultural Best Management Practices Committee (agriculture).

The Resolution mine would most likely be considered a stationary source; Vicky Peacey verified that there will be a number of stationary sources associated with the project, including various underground operations that are vented to the outside. She showed drawings illustrating these. Gabrielson noted that if these were completely encased underground, they may not need stationary source permits, but if they are vented permits would apply wherever there would be emissions escaping. Emissions would include PM₁₀ and PM_{2.5}, which are sizes of dust particles. Dust control plans will apply to trucks operating on site as well. Peacey explained that Resolution is in the process of conducting an emissions inventory as part of the mine plan and NEPA process.

Gabrielson said that the county would not characterize mine tailings as toxic; there are trace amounts of metals that might be toxic if ingested, but not from an air quality perspective. Peacey confirmed that Resolution follows the EPA toxic inventory list.

Gabrielson explained that Pinal County approaches permitting by being conservative in estimating emissions, and requiring that applicants must demonstrate their methods for calculating emissions. He showed a map of PM₁₀ nonattainment areas in Pinal County and explained the concept of air quality attainment versus nonattainment of EPA standards. Peacey noted that the mine site is located in the PM₁₀ nonattainment area. Resolution has air quality monitors that were approved by the county, including one in Queen Valley; all monitored elements are in attainment except ozone.

Water Quality

Nancy Wrona explained how the Aquifer Protection Program (APP) program works in Arizona. It started in the 1980s when water companies had to start sampling for organic and inorganic compounds in groundwater. When chemicals started to be found, there was a high level of public concern. At the time there were no statutory requirements to protect groundwater, but only surface water under the Clean Water Act. While environmental groups called for protection, there were other concerns about the effects of increased regulation on economic development. Under Governor Babbitt, the Environmental Quality Act was enacted in 1986. It established ADEQ and the Aquifer Protection Program. This is a technology-based program, unique among states, that includes a requirement to use Best Available Demonstrated Control Technology, known as BADCT. Demonstrated technologies may include ways of monitoring the quality of effluent, maintenance practices, assessing site-specific conditions, conservation methods, and others. One requirement of the law is that in areas of existing contamination, discharge to groundwater may not cause further degradation. APP applicants must demonstrate that they have the technical capability to implement permit conditions as well as proving financial capability to do so.

Because of the tailings pile, Resolution will need an APP permit because they will be discharging to groundwater. In the application, they must quantify emissions, determine the point of compliance, propose what the discharge limitation will be, how and where they will monitor quality, and also outline contingency provisions if the permit is violated and commit to remediation methods. They will need a closure and post-closure plan as well, and need to post a performance bond or similar guarantee of financial responsibility.

Group Discussion & Questions on Water and Air Quality

The group's comments and questions included the following. Questions noted with an

- (arrow) are action items for which additional answers or information will be provided in future.
- Has there ever been a mine shaft permitted (for air quality) in Pinal County?
 - They are considered vents, and have to apply for permits.
- Who would have jurisdiction of the tailings site?
 - Tailings and the mill would probably be considered a single source, assuming there is a conveyance between the two. So the county permit would include the mine, the mill, and the tailings site.

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- What happens if Resolution doesn't follow their permit requirements, for example with dust?
 - Civil and/or criminal penalties could apply. The problem is how to assess the severity of the violation. The tailings site, for example, is more difficult to address, since significant emissions may be caused by wind, and these are impossible to quantify. One approach is to do an opacity calibration, which is somewhat subjective. Wrona pointed out that there will be conditions in the permit for control measures Resolution will need to implement and maintain.
 - Ray Mine was monitored for many years, and there was never an exceedence of dust at the base of the tailings. This may indicate that these types of facilities can be managed effectively.
- A member observed that Ray Mine tailings facility is active, which is easy to control. Tailings piles near Tucson are inactive and harder to control.
- Will there be chemicals in the tailings slurry? Is there any concern about these evaporating in to the air?
 - Peacey said that it's possible there will be chemicals in the tailings processed at the mill, where volatile organic compounds (VOCs) will be monitored. Once the processed tailings get to the disposal site, the VOCs should be evaporated.
- Would a permit condition include a provision that work would need to stop if dust was being kicked up? This could affect production.
 - The county did an emissions inventory in the western part of the county to determine the sources of dust. They found that about 2/3 is from windblown dust, which isn't generated by an activity but by how much disturbed area there is. This would need to be carefully monitored for an area as large as the tailings.
- What is in the tailings that could be characterized as "toxic"?
 - Peacey explained that the EPA has a toxic release inventory, in which all companies must participate. Tailings aren't listed on EPA's lists of toxic materials. They do contain small amounts of metals like zinc, arsenic, and lead. Moving this material then becomes a potential "release". The amount of tailings moved per year is reported to comply with this inventory.
- Would the county evaluate this?
 - Hazardous air pollutants (HAPs) regulations would only apply if the cumulative emissions become a major source. The county would look at downwind impacts, particularly for people and communities.
- A member said that tailings are not sand, even though they look like sand and that tailings do contain toxic material.
 - Officials and Peacey responded that tailings are not classified as toxic.

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- Will the old tailings site in Superior be fenced off? A doctor at the Queen Valley meeting last night said children were playing in it. Why was this allowed to happen in the first place?
 - Yes, it will be fenced off. These issues were the result of old historic mining practices that aren't used anymore.
- What kinds of metals are picked up in monitoring from the natural environment? What about silica, which can be harmful?
 - Gabrielson said that he doesn't know, offhand, what trace elements there are, but can research this.
- What HAPs (Hazardous Air Pollutants) is Resolution concerned about?
 - Resolution has done an inventory of the mine plan to determine total emissions, but hasn't yet estimated specific components.
- Is there a requirement for Resolution to set up monitoring devices around town? What do you do with the air monitor filters when you change them?
 - Historically, it's the agencies that monitor ambient air quality. As for the filters, they are studied to characterize the nature of the particulates and compounds captured. More modern monitoring is done electronically in real time, and uses much smaller filters – this makes it more difficult to do a chemical analysis on them.
- Will Resolution need to monitor metals of concern, especially from tailings? Many people in the area are concerned about this, and it would be good to be able to demonstrate what's happening to the community.
 - This could possibly be a permit requirement, although not typically done. However, it's difficult to monitor on a continual basis. It's preferable to control the source rather than to try to monitor it after the fact.
- Are standards the same for emissions from the mine as from the tailings?
 - Yes
- Would water quality assurance bonds be required to be posted before permits are issued?
 - Yes
- Is there a time limit on post-closure stewardship requirements?
 - Wrona said she does not know, but will find out the answer.
- Is well monitoring based on the honor system, or does the state get involved in that?
 - The permittee takes the sample and sends it to an independent laboratory. The results are reported to ADEQ, but must demonstrate that they are using an approved laboratory.

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- A CWG member said that he has heard of situations in which entities have cheated on monitoring results. He mentioned that the state has licensed subcontractors to do some monitoring now – this is for drinking water mainly.
 - Wrona noted that the attorney general's office has a criminal enforcement division for this type of thing.
 - Resolution said that they had involved communities in selecting monitoring entities on other projects, and offered to do so here as well.
- How will acid rock drainage be addressed by Resolution for the tailings site?
 - Peacey explained that the tailings are 85% sand, and the remainder is iron pyrite. When this is combined with air it produces a weak solution of sulfuric acid that may leach into the ground. Resolution will use a sulfide separation system in the concentrator that will remove the sulfides from the tailings before it is transported. The waste material from this process (sulfide tailings) will be kept in a separate area of the tailings pile that is kept wet and sealed from contact with the air. Also, recovered water will be used to keep the pile saturated. Therefore, there will be no acid drainage from this project, in contrast to how this was handled in previous mining projects in the Superior area.
- Can you prepare a handout for this group summarizing what you just said about acid rock drainage?
 - Yes, Resolution will do this.
- Also, please provide copies of the drawing of the tailings site showing how these two materials will be separated (as shown at the last meeting from the mine plan).
 - Yes, these will also be provided.
- Is the requirement for post-closure financial plans a new one?
 - No, financial assurance has been in place for a long time.
- Has an underground mine ever been permitted under an APP?
 - Wrona said that she couldn't find one in her records but will check further.
- Is the process being proposed by Resolution a reasonable, known, and typical one?
 - Yes
- Will ADEQ be involved in proposing BADCT?
 - Generally, the applicant proposed control measures, but ADEQ will need to verify their effectiveness.
- Have there been permitted tailings impoundments with liners?
 - Yes
- What types of liners have been used?
 - Wrona did not know the answer to this but will research further.

Public Comments

A visitor asked Resolution to verify that the acid tailings must remain saturated. Peacey said that is true, and they will also be progressively covered to seal them from air both during and after mining operations.

Final CWG Comments and Next Meeting Agenda

The next meeting will be on Thursday, December 12, when we hope to have a guest from the Arizona State Land Department.

Future meeting topics that have been suggested include:

- Cultural resources
- What's the next step and timeline for a tailings site selected for the mine plan?
- Public health issues – particularly BHP and community cancer issues
- State Lands issues
- A field trip of the mine and tailings sites. Newer members have not seen the mine site, and we have not visited the tailings location, which was identified after our last field trip.
- Suggested at the meeting tonight, an open forum for the group to discuss community concerns and differences of opinion among both members and the community at large.