

PDO_KIRKMPO, BLM_AZ <blm_az_pdo_kirkmpo@blm.gov>

Mining and Reclamation Plan of Operations Supporting Text Kirkland Mining Company

1 message

Tue, Jun 27, 2017 at 11:04 AM





Kirkland High Quality Pozzolan Mine Draft Mining and Reclamation Plan of Operations

Environmental Assessment DOI-BLM-AZA 3712

OPEN HOUSE COMMENT FORM

July 11th, 2017, 6 pm to 8 pm Skull Valley Community Center, 3150 Old Skull Valley Rd., Skull Valley, Arizona

The Bureau of Land Management (BLM) would like to obtain your input regarding social, economic, and environmental issues and/or concerns associated with this project. Please list your name and address below.

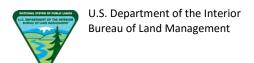
CONTACT INFORMATION (Optional* – Please Print)

EMAIL ADDRESS (or Mailing Address if no email address is available):
Representing Self Representing Organization Name of Organization:
1. Please provide any comments and/or concerns regarding the proposed project: After reviewing the Draft Reclamation and Mining Plan of Operations, I am concerned there is not any mention to what the mine will be doing to reduce the noise level. My property is adjacent to
BLM and I am concerned how far the noise will carry. Has there been a study to show what the decibel level of the equipment being used and the noise generated while mining and crushing the mater
I also see that the mine will be running 40 to 80 hours a week, is that including weekends or will we be getting a break from the number of trucks on Iron Srings for the weekend? If not this will get old
in less than a year much less than 40 years.
I respect the rights of the company mining the land as long as they respect my rights. We moved to Skull Valley to be a way from the pollution and traffic. I cannot wait to be behind a slow truck going up hill.
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Public input is an important part of the project development process. Comments are requested by **July 25th**, **2017** in order to ensure timely consideration, but are welcome at any time. Please submit your comments or concerns to Shelby Cave, PhD, Project Manager, BLM, Hassayampa Field Office, 21605 N. 7th Avenue, Phoenix, AZ 85027; via fax at (623) 580-5580 Attn: Shelby Cave; or via email at KIRKMPO@BLM.GOV

Privacy notice: Before including your address, phone number, email address, or any other personal identifying information in your comments, be advised that your entire comment(s), including personal identifying information, may be made publicly available at any time. While individuals may request that the BLM withhold personal identifying information from public view, the BLM cannot guarantee it will be able to do so. If you wish to withhold your personal information, you must state this prominently at the beginning of your comment(s). We will make all submissions from organizations and businesses available for public disclosure in their entirety.

Project information is available http://bit.ly/2rRYTII





3809 (AZP010) AZA-37212

1 message

Thu, Jun 29, 2017 at 4:08 PM

Dear Sir,

My name is , a property owner in Kirkland, AZ., who plans to attend the BLM public meeting in Skull Valley on July 11, 2017. There are several items I would like the meeting to address as follows:

- 1 Depth of pit and possible ground and surface water contamination at mine site.
- 2 Excessive truck traffic with up to 85 loads being moved daily on mountain roads. Will material from mine be completely contained (covered) during travel.
- 3 Possibility of Eironite in similar deposits as close as Peeples Valley being present at Skull Valley, and the health hazards created for local residences if toxic materials are present during mine operations. Also the testing and continual monitoring for such materials.
- 4 Hours of operations of mine and noise levels expected.

Thank You,



Draft Mining and Reclaminations Operations

1 message

Thu, Jun 29, 2017 at 8:52 PM

First let me say, that I have yet to receive a letter on this project though I have been in Kirkland for 5 years. I obtained the information because my daughter, who is just starting to build in Phase One of Ruger Ranch received it. I have a home and property in Ruger Ridge.

I am strongly against this project for the following reasons:

- 1. Iron Springs Road is not built for this type of traffic. It already is very busy with commuters from Kirkland to Prescott; Prescott to Bagdad; and, is a major route to California.
- 2. There are frequent bicycle races on this road. Recently it included a cross country that the race continued after dark.
- 3. Due to the speed limit, limited opportunities to pass, dump trucks, tractor/trailer rigs, RVs, etc., I'm frequently seeing drivers passing on double yellow lines. This will naturally increase with poteneally more accidents.
- 4. The road was just resurfaced and this type of traffic would undoubtedly require it to be done again within a short period of time. This would then provide more frustration for area residents with construction. We already experienced this for well over a year, which resulted in travel time being doubled.
- 5. I am only one person, but I travel from Kirkland to Prescott 2-3 times a week on a regular basis. I live on 39 acres, but I have family who also live on the acreage and almost daily someone travels to Prescoĥ.
- 6. At 30 trucks a day it puts almost 4 per hour on the road and at 85 trucks a day we are looking at almost 11 truck per hour. This is a road that services residences and ranches, it is not intended for heavy commercial transportation of this magnitude.
- 7. It is a rare case to travel behind any trucks on this road who travel over 40 miles an hour. This project alone would double residents travel time, not including the already busy traffic that uses the road.

Submission Successful Your Submission ID is: KIRK SCOP 1-1-58032

Email Address: Day Phone: **Evening Phone:** Fax Number: Other Phone: Agency:

Comments

Comment ₁

Comment Tufa mine in Kirkland, Az. Title:

I am a resident of Yarnell and have lived here 33 years. The mine site has been a beautiful landmark of our area and contains an environmentally sensitive riparian area. As you may know water is not readily available to our wildlife here. The air pollution will be of great detriment to the health of those who live here and will impact our Comment: property values. The tuck traffic involved will be a very disturbing impact on all communities involved in the

transport of the product. I believe this mine should not be permitted to proceed.

Submission Classification

Response Type: Front Office Submission Form **Delivery Type:** Front Office Submission Form

Receipt Date: 06/28/2017 Status: **ACTIVE**

Agreements

Yes - Withhold personally identifying information from future publications on this project?

Yes - Please include me on the mailing list for this project?



Proposed Tuff Mine

1 message

Thu, Jun 29, 2017 at 9:48 PM

Dear Sirs,

To put it quite simply, this mine would ruin the lovely little town of Skull Valley. Increased traffic and pollution would negatively impact quality of life for the residents, both human and wild.

I know mines are all about money, but surely you can locate another source for this material, preferably a source in the middle of nowhere.

I live in Prescott but have friends who live in Skull Valley on a little ranch. I would hate to see them lose everything they've worked so hard for.

Please listen to the residents and the environmental report, and don't open this mine.

Sincerely,

Sent from my Verizon 4G LTE smartphone

Submission Successful Your Submission ID is: KIRK_SCOP_1-1-58286

Comment ₁

Comment No Mining in Skull Valley Title:

Please do not permit mining in Skull Valley. The increase in traffic and dust will be devastating to this area which is Comment. dry desert. Furthermore, dust from the mining will impact negatively the nearby community of Prescott which as worked hard at dust abatement. And the use of the scarce resource WATER, for dust mitigation will impact the ability of local ranchers, farmers, and vintners to continue their livelihood. Please say NO!

Submission Classification

Response Type: Front Office Submission Form Front Office Submission Form **Delivery Type:**

06/30/2017 Receipt Date: Status: **ACTIVE**

Agreements

No - Withhold personally identifying information from future publications on this project?

Yes - Please include me on the mailing list for this project?

Submission Successful Your Submission ID is: KIRK_SCOP_1-1-58381

Comment ₁

Comment Tuffa mine between skull valley and kirkland Title:

Comment: Please consider all public comments regarding environmental concerns and quality of life of nearby residents when deciding on this mine approval. Thank you for this opportunity.

Submission Classification

Front Office Submission Form Response Type: Front Office Submission Form Delivery Type:

Receipt Date: 07/02/2017 Status: **ACTIVE**

Agreements

Yes - Withhold personally identifying information from future publications on this project?

Yes - Please include me on the mailing list for this project?



Please listen closely to community on July 11

message

Sun, Jul 2, 2017 at 11:50 AM

Dear BLM staff...

Thank you so much for the opportunity to reflect and share my thoughts on the Kirkland Mine Proposal. I moved to Kirkland in 2006, with the understanding that the communities in both Kirkland and Skull Valley are a safe and toxic free location for the remainder of my retirement. I studied **Environmental Politics at Colorado State** University in Fort Collins, Colorado, and earned my Masters Degree in Environmental Education, in 1977.

I have taught at both Kirkland and Skull Valley Schools.

Please closely consider the implications and results, and impact

of the mining that is proposed: the quantities of minerals hauled on a weekly basis....for five years or more; the residual harm on wildlife and humans, on both local residents and incoming traffic from out of

state, and impact on Prescott residents as well.

Also critical to the issues are the federal policies that have recently changed in the new Administration in the White House. This is NOT an environmentally concerned administration.

I hope to find a fair and well conducted meeting to occur on July 11, and to observe officials who will take seriously the comments of families who have lived in the Skull Valley/Kirkland areas. This is their home. This is their lives. Respectfully Submitted,

Submission Successful Your Submission ID is: KIRK_SCOP_1-1-58432

Email Address: Day Phone: Evening Phone: Fax Number: Other Phone: Agency:

Comments

Comment ₁

Comment 3809 (AZP010) AZA-37212 Title:

> As a long-time pozzolan expert and consultant, I can say, without reservation, that the Kirkland natural pozzolan (NP) deposit is one of the highest quality pozzolanic materials I have ever tested. In an era where concrete infrastructure is falling apart due to various forms of chemical attack (mainly Alkali-Silica Reaction (ASR), sulfate attack, and chloride ingress) the construction world now knows - through vigorous research and development of the last several decades - what it must do to protect concrete from chemical attack. Pozzolan is the most effective means of inoculating concrete from the ravages of the aforementioned concrete maladies. Fly ash - an artificial pozzolan - has been effectively used for decades for this purpose. Departments of Transportation (DOT) around the country now mandate a certain amount of pozzolan in each yard of concrete to protect infrastructure and to achieve the required 50 or 100 year life-span of all new construction. Extending the life of infrastructure is a huge environmental goal worldwide. The longer a massive concrete structure lasts, the less materials (and carbon footprint) are needed to repair or replace it. Furthermore, pozzolan not only protects concrete from chemical attack,

it makes the concrete less permeable and much stronger that concrete without pozzolan. In other words, it creates a very strong, very resilient, and very durable concrete for the ages. As the availability of fly ash has rapidly decreased in the last few years, DOTs are scrambling to meet their construction needs in an era of pozzolan rationing. The only rational replacement for fly ash is the original pozzolan - Natural Pozzolan. The KMC deposit is a very high grade of pozzolan that does 3 things at once in concrete: 1. increases the strength/hardness/durability; 2. decreases permeability (a permeable concrete will be less strong and allow ingress of chlorides and other chemicals into the concrete matrix which degrades the strength and resilience of the concrete); 3. protects the concrete from ASR and Sulfate attack - an absolute necessity for longevity. Lastly, the KMC pozzolan has a lower water demand than most natural pozzolans, averaging 100% of cement - or the same water demand as cement - a very useful property which insures the workability of plastic concrete. In summary, the KMC pozzolan deposit will be coming on line (hopefully in the next 12 months or so) just in time to help meet the demands of the concrete industry as the supply of fly ash continues to dwindle.

Submission Classification

Response Type: Front Office Submission Form **Delivery Type:** Front Office Submission Form

Receipt Date: 07/03/2017 **ACTIVE** Status:

Agreements

No - Withhold personally identifying information from future publications on this project?

Yes - Please include me on the mailing list for this project?

Submission Successful Your Submission ID is: KIRK_SCOP_1-1-58481

Email Address:
Day Phone:
Evening Phone:
Fax Number:
Other Phone:
Agency:

Comments

Comment ₄

Comment Kirkland Mining Co, Pozzolan Mine Proposal Title:

I suppport the proposed mining operation of high-quality pozzolan at the Kirkland project site. The project as described will result in minimal impact in a location that is already disturbed by previous mining and adjacent to a railroad. No processing will occur on public land, there will be no blasting, and no use of chemicals. Reclaimation following mining is included in the proposal. If there was ever a proposed mining project that would have less impact on public land while providing for the common good, I'd like to know about it!

Comment: This project will NOT have a significant impact on the human environment. An Environmental Impact Statement would not be warranted.

Sincerely,

Submission Classification

Response Type: Front Office Submission Form **Delivery Type:** Front Office Submission Form

Receipt Date: 07/05/2017 **ACTIVE** Status:

Agreements

No - Withhold personally identifying information from future publications on this project?

Yes - Please include me on the mailing list for this project?



PDO_KIRKMPO, BLM_AZ <blm_az_pdo_kirkmpo@blm.gov>

Kirkland Mining Company | Proposed Mining of Pozzolan | Statement of Support | 1 message

Wed, Jul 5, 2017 at 1:47 PM

ATTENTION:
Shelby Cove, Geologist
BLM, Hassayampa Field Offices
RE: Kirkland Mining Company's Proposed Mining of Pozzolan
Dear Shelby,
This is to express my support of the proposed pozzolan mining operations near Kirkland, Arizona.
Why? Because there exists a strong demand/need in the American marketplace for these valuable materials. And it appears that the proposed operations will have only a minimal (but reparable) impact to the local environment.
Please let me know if you have any questions. Thank you for accepting my comments!
Sincerely,

Submission Successful Your Submission ID is: KIRK SCOP 1-1-58533

Comment 1 ID:

I have reviewed the documents related to the Kirkland HQP permit. The plan appears to be well prepared and comprehesive and indicates the property will be mined in a responsible manner. My only reservation is that I have NOT visited the site in person, which could change my opinion.

The mine is quite similar to a large sand and gravel operation. It is highly unlikely to produce any acid mine Comment:drainage such as that associated with metal mines. The most likely impacts are noise and dust associated with production, and truck traffic associated with transport of the product. Truck traffic is addressed in section 2.3.5. Air quaility (dust) is addressed in section 4.5. Noise is not specifically addressed but it is stated that the mine will conform to MSHA regulations (section 4.10), which limit exposure of workers to excessive noise. It would be appropriate to address truck traffic, dust, and noise in more detail, perhaps in a subsequent permit document.

Submission Classification

Response Type: Front Office Submission Form
Delivery Type: Front Office Submission Form

Receipt Date: 07/05/2017 Status: ACTIVE

Agreements

Yes - Please include me on the mailing list for this project?

No - Withhold personally identifying information from future publications on this project?

Submission Successful Your Submission ID is: KIRK_SCOP_1-1-58534

Comment ₁

Comment DOI-BLM-AZ-P010-2017-0017-EA

Title:

I am in support of the proposed Kirkland Pozzolon mine plan. It is a well considered plant that both protects the

comment: environment and allows necessary minig activity.

Mining this pozzolon material will allow a valuable material to be readily available to markets in the SW U.S. to make

high quality and durable concrete for construction, highways, etc.

Submission Classification

Response Type: Front Office Submission Form Front Office Submission Form **Delivery Type:**

Receipt Date: 07/05/2017 **ACTIVE** Status:

Agreements

Yes - Please include me on the mailing list for this project?

Yes - Withhold personally identifying information from future publications on this project?



PDO_KIRKMPO, BLM_AZ <blm_az_pdo_kirkmpo@blm.gov>

Public Comments on Kirkland Mining Company

1 message

Thu, Jul 6, 2017 at 12:42 PM

2 attachments





To whom it may concern:

I would like to comment on the *re*-opening of the mine that is on the border of Kirkland and Skull Valley. This mine operated for years as a kitty litter plant. There never seemed to be any concerns or complaints while this mine was in full operation. I realize that K.M.C. will be a larger scale operation. It is my opinion that this will be a huge boost for our local economy. In the past few years, we have had numerous businesses go bust; Skull Valley Store, Skull Valley Cafe, Skull Valley gas station and Kirkland has been stagnant. I am happy to hear that there will be no blasting at the mine. I understand that the trucks will travel north and south of the mine. As most of the plants are most likely located to the south, the traffic between Kirkland and Prescott should not be a major issue. I am excited to see how K.M.C. will improve our community economy and perhaps bring in more local businesses.

Respectfully,

I would like to begin my comments regarding Kirkland Mining Company by stating that I have lived and worked in the Kirkland/Skull Valley area For well over 50 years. I have already had the opportunity to do some work For K.M.C. using my company's heavy equipment. Areta Zouvas has been very professional and knowledgeable when it comes to preparation for opening a pozzolan mine in our community. She has done due diligence regarding mine business. Ms. Zouvas has put forth a great deal of time, effort and money to ensure that this operation will run smoothly and with integrity. I look forward to doing business with K.M.C. in the future.

Respectfully,



Kirkland Mine questions

1 message

Thu, Jul 6, 2017 at 2:13 PM

Hi all.

I am anticipating some questions will arise at the July 11 Public Scoping meeting that are directed at Yavapai County, so this is a heads-up.

- 1. The Mine is located on BLM land, plus 4 acres of private land. According to the Mining Plan of Operation (attached as a .pdf file), the private land will have J Johns and a few storage and temporary buildings — in short, not much. Since Yavapai County General Fund, and our local Skull Valley school are funded by property tax only, citizens are interested in understanding how much tax money might the County and school district expect? The issue here is the potential for large impact on the County vs very small tax revenue.
- 2. The Mining Plan of Operation calls for 30 85 truckloads of material per day, plus 8 15 water trucks, plus ancillary trucks. Assuming a M-F operation, this could amount to a truck every 3 minutes on Iron Springs road. Trucks heading North would then presumably turn onto Williamson Valley road, etc. Trucks heading South would travel through Yarnell. Lots of people and homes affected. What, if anything, can the County do to address this? The Plan also calls for 40 - 80 hour per week daylight operations, not just 8:00- 5:00.
- 3. Does the 4 acre private parcel need to be re-zoned for commercial operation? What is this process for this, and is this the mechanism by which the County can have a "say" in things? The Mining Plan of Operation calls for a 10,000 gallon diesel storage tank and a 2,500 gallon wastewater storage tank.

No doubt there will be more, but I thought it would be nice for you guys to be prepared to address these type of things. Also, I suspect Supervisor Craig Brown should be "in the loop"?

Thanks for all you do for the citizens of Yavapai County!

Best regards,

Submission Successful Your Submission ID is: KIRK SCOP 1-1-58781

Email Address: Day Phone: Evening Phone: Fax Number: Other Phone: Agency:

Comments

Comment ₁

Comment support of the Mine coming into Kirkland Title:

> I wanted to send a letter and let you know how much we support Kirkland Mining Co coming to this area. My children are 7 generation Yavapai County. Hove this area and all it stands for. My past was from here, we are living in this area now and my future generations will be here also. For the smaller towns, Kirkland, Skull Valley, Hillside, Wilhoit and Yarnell we need this type of business to be in our community. Kirkland Mining Company is a company that wants to be a part of this area. They want to support the community.

> I think it is wonderful to have a company such as Kirkland Mining Company that is willing to be good stewards of the land and make material known as a "natural Pozzolan" used to replace some of the cement content in concrete mixtures (to better it and make it stronger). It can also be used for water filtration and soil enhancement, to name just a few things this product can be used for. They are a company that cares about the environment, and wants to provide a product that is an improvement to our society. Kirkland Mining Company has made available information regarding the company which was an EXISTING mine known as the Kitty Litter Mine. They have done extensive

Comment. testing to make sure it is a safe product for the environment. I grow up in the area when it was operating right next to the mine we rode horses, hike and swim in the creek. The area was not damaged or a threat to wild life or to us. I am confident that will remain the same.

I think it is exciting to see it moving towards operations. I am proud that the material used on our State Capital Building and also for Kirkland School is the material that is from this area.

Best wishes to Kirkland Mining Company, and God Bless them for their perseverance to make this happen, it is truly needed.

Submission Classification

Front Office Submission Form Response Type: **Delivery Type:** Front Office Submission Form

Receipt Date: 07/07/2017 **ACTIVE** Status:

Agreements

No - Withhold personally identifying information from future publications on this project?

Yes - Please include me on the mailing list for this project?



Kirkland Mining Company Plan of Operations

1 message

Sat, Jul 8, 2017 at 8:40 AM

To whom it may concern.

I live in Prescott, AZ, and travel Iron Springs Road often enough that I am familiar with location of the proposed mine.

I read the MPO and other associated documents.

The property has been mined off-and-on for about 100 years and is an existing disturbed site. It appears that KMC have legal ownership of the mineral rights, and that the HQPM is not a "common variety".

The operation of this mine will have several benefits:

- 1. Employ local people.
- 2. Pay taxes to Yavapai County and Arizona,
- 3. Produce an environmentally friendly material.
- 4. Partially offset the decline in availability of flyash that will occur as coal fired power plants are phased out.

After reviewing the documents, I am in favor of granting KMC the operating permit that it requests.

I am a Mining professional, and a Professional Engineer in Arizona. I have no business or personal relationship with KMC or any of its Principals.

Thank you for considering my comments.

Sincerely



PDO_KIRKMPO, BLM_AZ <blm_az_pdo_kirkmpo@blm.gov>

Geologist Shelby Cave

1 message

Sat, Jul 8, 2017 at 11:09 AM

Comments on the Kirkland Mining Company I have enclosed my concerns in the following attachment.

2 attachments





I have been employed by the mining industry in various jobs, from Humboldt, Az (Iron King Mine, ore counter) Kirkland (Zonia Mine, mining Superdient) Bagdad ((Bagdad Copper Mine.). Mining is a valuable part of Arizona's growth and I'm proud to be a part of the mining operations.

The Pozzolae Mine in Kirkland is needed. It is a natural resourse and is a much needed additive to cement that will make it stronger.

I am in favor of the opening of the mine. Being sure that the mine will spark economic growth, which is much needed in our area. Arizona is a mining state and has a lot of watchdogs to protect our enviorment.

Traffic in and out of the mine poses no problems as we now have the State taking care of the road rather than Yavapai County.

Count on a yes from me to the opening of the mine. Can't make the meeting due to a bad back but I vote YES.



PDO_KIRKMPO, BLM_AZ <blm_az_pdo_kirkmpo@blm.gov>

Public comment on Skull Valley Mining - Attn: Shelby Cave

1 message

Sat, Jul 8, 2017 at 10:48 AM

Shelby Cave, Geologist,

Unable to attend meeting so am e-mailing comments t am in favor of the Kirkland Mine re-opening. Please open the attachments for my comments and thoughts. Thank you.



Kirkland Mining Company.rtf 2K

I can only see positive results this mine would have on our community, the area of Skull Valley and Kirkland has seen small growth since we moved here 61 years ago.

Being secretary at two copper mines (Zonia Mine 5 years, clerk at Bagdad Mine 2 years) co-owner of Kirkland Bar 25 years, serving as school board member, working as a clerk in Skull Valley and Postmaster in Kirkland for 25 years, I feel that I have the knowledge regarding the social, economics and enviormental issues of the community that I love, have grown up in and been a part of for generations.

Opening of the mine would give us more growth both social and economic growth. the cafe, gas station, store and Chucks Mechanic's have all closed down in the past 5 years. The school in Skull Valley is struggling with fewer students. We need this mine to help by paying taxes and bringing more growth into a dying community. I personally know the owners and know they are caring and will be a asset to our community.

As to the environmental issues, BLM, EPA. State Mine Inspection, Office of Surface Mining will take care of everyones concerns. Having worked for two copper mines in the area, I know for a fact they moninter, inspect and enforce any and all laws pertaining to mining. Therefore it is a needless concern of the public to worry about any environmental issues. These agencies are very knowledgable of their jobs and keep up to date on everything.

Good luck, Kirkland Mining Company! We need you!

I have been employed by the mining industry in various jobs, from Humboldt, Az (Iron King Mine, ore counter) Kirkland (Zonia Mine, mining Superdient) Bagdad ((Bagdad Copper Mine.). Mining is a valuable part of Arizona's growth and I'm proud to be a part of the mining operations.

The Pozzolae Mine in Kirkland is needed. It is a natural resourse and is a much needed additive to cement that will make it stronger.

I am in favor of the opening of the mine. Being sure that the mine will spark economic growth, which is much needed in our area. Arizona is a mining state and has a lot of watchdogs to protect our enviorment.

Traffic in and out of the mine poses no problems as we now have the State taking care of the road rather than Yavapai County.

Count on a yes from me to the opening of the mine. Can't make the meeting due to a bad back but I vote YES.



Kirkland Mining Company

1 message

Sun, Jul 9, 2017 at 9:53 PM

I am writing to voice my strong opposition to Kirkland Mining Company, or any other mining company, from operating the claim situated on public land in Kirkland/Skull Valley Arizona. Yavapai County spent millions of dollars resurfacing South Iron Springs Road in the last few years to make it safer. How will the pavement hold up under a major increase in truck traffic? As someone who drives curvy South Iron Springs Road often, I can tell you impatient drivers take dangerous risks all the time. Sometimes these risks prove fatal. Imagine adding 85 gravel-filled trucks per day going back and forth, north and south! The infrastructure of the small, rural communities in Kirkland, Skull Valley, Yarnell, Peeples Valley and Williamson Valley cannot safely handle the amount and type of commercial traffic that the Kirkland Mining Company, or any company that the KMC might sell their operation to in the future, will be adding to the 2lane highway going through their towns. Allowing mining in the middle of established neighborhoods in this beautiful and unique valley puts lives in danger. A commercial mine puts everyone who commutes, attends school, or merely travels through these communities at risk. I implore you to consider the deadly impact the mine will create and disallow mining in Kirkland, Arizona.



Kirkland mine

1 message

Sun, Jul 9, 2017 at 9:02 AM

I oppose the mine reopening because of the traffic traffic hazard it will cause along the 25 mile stretch of road to prescott. This two lane narrow road is dangerous now. Three motorcyclist have been killed since February. 30-80 more trucks a day will surely raise that statistic.

This road will require widening to four lanes all the way to Williamson valley road (25 miles) with pullout lanes at the mine entrance before the mine begins operations.

Sent from my Verizon Wireless 4G LTE smartphone



Skull Valley mine concerns

1 message

Sun, Jul 9, 2017 at 11:03 PM

Please take a moment to consider the area residents and wildlife that will be drastically effected by the Kirkland mine if it is allowed to start in the area. There are Indian ruins and untouched land that will be damaged. As a resident of Yavapai Co I am proud of how clean and beautiful the area is. Please help preserve this area!



Kirkland Mining Company

1 message

Mon, Jul 10, 2017 at 3:21 PM

To Whom it May Concern.

I am a resident of Skull Valley, very near to the proposed mining area. The impact the mine will have on our community will be devastating and irreparable. The aguifer in our neighborhood will not support industrial mining. The water levels in the past decade have shown evidence of lowering and already seem to be taxed by the present lack of rain. Please do not allow Kirkland Mining Company to operate a mine in this valley, dehydrating and polluting our wells.



PDO_KIRKMPO, BLM_AZ <blm_az_pdo_kirkmpo@blm.gov>

Arizona mining

1 message

Tue, Jul 11, 2017 at 8:59 AM

Please no mining.

Sent from my iPhone



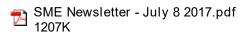
Kirkland Mining

1 message

Tue, Jul 11, 2017 at 8:59 AM

Responding on behalf of the Arizona State Land Department (ASLD) to your June 26, 2017 Notice of Public Scoping, since no Arizona State Trust land will be impacted by the Kirkland Mining Company's proposed Draft Mining and Reclamation Plan of Operation, the ASLD will not be attending the Public Scoping Meeting tonight in Skull Valley, nor will we be providing any comments. We appreciate being informed of the project.

Also thought you might find the attached interesting. It is from the national daily newsletter of the Society of Mining Engineers seeking support from the Arizona mining community for the Kirkland Mining project,



From:

Sent:

To:

Subject:



SME Community

Post New Message
SME Home Page UCA of SME Mining Jobs Mining Engineering magazine

Jul 7, 2017

started 18 hours ago, Heather A. Gravning (0 replies)

1. Kirkland Mining Company seeking comments on a project

Reply to Group

Reply to Sender



Friends and Colleagues,

Arizona ranks second in the nation in the value of production of nonfuel mineral commodities and is one of the leading states in the west in the production industrial minerals. We are asking for your support in developing another unique industrial mineral deposit that will contribute significantly to the local and Arizona economy and help Arizona maintain its rightful rank as a leading mining state.

Kirkland Mining Company (KMC) has received an uncommon variety determination from the U.S. Bureau of Land Management (BLM) for a deposit of high quality natural pozzolan near Kirkland, Arizona. Natural pozzolan is a very effective supplementary cementitious

material used in mortars, cement, and concrete to enhance concrete density, strength, durability, and chemical resistance. This high quality natural pozzolan will supplement the dwindling supply of quality fly ash in expanding concrete markets throughout the southwest. This tuff deposit was mined intermittently during the 20th century for dimension stone and for use as an absorbent. KMC continues to explore markets for use of the material in specialized applications as an absorbent, water filtration medium, waste remediation material, and highly specialized uses in ceramics, bioplastics, and geopolymers.

A mining plan of operations for development of the deposit was filed with the BLM on April 18, 2017. KMC intends to begin operations in 2018 and will eventually produce up to 500,000 tons per year of high quality natural pozzolan. The operations will benefit the local community by creating jobs, benefit other parts of the state and region by providing jobs and increasing the availability and supply of high quality pozzolan for the cement and concrete industries, provide significant taxes for local and state governments, and benefit the nation as it moves forward to rebuild an ageing infrastructure. KMC is dedicated to developing the deposit to maximize economic benefit to the local community and to minimize the impact to the environment. Production of the high quality natural pozzolan will help to reduce the amount of cement that has to be manufactured and improve the durability of concrete, helping to increase longevity of concrete structures and reduce the amount of carbon dioxide emissions.

KMC asks for your support in development of Arizona's first, sustainable high quality natural pozzolan deposit. BLM has begun the public scoping period in the environmental review process and issued a public notice on its website at www.blm.gov/press-release/... A public open house will be held in Skull Valley, Arizona, on July 11, 2017.

The comment period for public scoping runs from June 26 through July 25, 2017. The proposed mining plan can be viewed and comments can be submitted through the following internet address: bit.ly/2rRYTII.

KMC greatly appreciates your support and asks for your comments on this beneficial, start up mining operation.

Areta Zouvas - President

Kirkland Mining Company

9694 E Chuckwagon Lane

Scottsdale, AZ. 85262
619-846-4671
areta@kirklandmining.com
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Reply to Group Online View Thread Recommend Forward

WARNING: Auto-Login is enabled! If you forward this email, the person who clicks on these links in the forwarded message will assume the login of the original recipient. You are subscribed to "SME Community" as jdixon@azland.gov. To change your subscriptions, go to My Subscriptions. To unsubscribe from this community discussion, go to Unsubscribe.



PDO_KIRKMPO, BLM_AZ <blm_az_pdo_kirkmpo@blm.gov>

sign 1 message

Tue, Jul 11, 2017 at 10:37 AM

The mine is ruining the Rogue River in Oregon, Slug and waste is sliding down the mountain and into to river in full view of campers and vacationers wanting to use the river. There are less vacationers each year. Do we want the clean vacationers dollars or do we want the slug and slime. And that will be your Fiat too.



PDO_KIRKMPO, BLM_AZ <blm_az_pdo_kirkmpo@blm.gov>

Kirkland Mine Comments

1 message

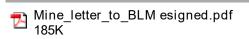
Tue, Jul 11, 2017 at 11:22 AM

Dear Ms. Caves,

Attached are my comments relative to the Kirkland Mining Companies Plan of Operations.

Because of the extreme importance of this issue would you please confirm receipt of my email?

Thanks,



To: Shelby Cave

Hassayampa Field Office,

21605 N. 7th Ave.

Phoenix, Arizona 85027

Dear Ms. Cave,

"It is the mission of the Bureau of Land Management to sustain the health, diversity and productivity of the public lands for the use and enjoyment of present and future generations."

The Residents of Skull Valley, Kirkland, Wilhoit and Ruger Ranch as well as those other communities who will be impacted by the Kirkland Mining Companies Plan of Operations pray that the BLM will abide by their mission statement.

I am writing this letter to voice my opposition to the mining permit application by the Kirkland Mining Company. (KMC) The beautiful area proposed to be mined is a place where residents can escape the noise and busyness of the city and relax in the tranquility of their properties. We bought property here 13 years ago because of the peaceful rural lifestyle in which we wanted to raise our family and eventually retire.

The proposed mining operation in the heart of our community would be devastating and ruin the quality

of life that we and our neighbors enjoy so much. I beseech you to hear our concerns and to take into careful consideration the enormous negative impact such an operation would have on the community and the environment in which we live. While the mining operation may be economically feasible for KMC, the trucking company, and a few local workers, it will be devastating economically for the taxpayers visa vi excessive road deterioration, expense of hiring and training deputies to work commercial enforcement, a major economic impact on property values discussed below, future medical costs associated with lung disease and the potential for death and injury as a result of increased truck traffic.

My first concern is traffic and public safety. The Iron Springs Rd. is a narrow, winding road, with blind corners, and several school bus stops with very little room on the shoulder to park. Additionally there are very few pull outs to enable slow traffic to move aside for faster traffic. What this results in is motorists becoming frustrated, then consequently using poor judgement, leading to unsafe passes This is a serious issue at present, and will be significantly enhanced with the up to 85 additional commercial vehicles travelling mostly uphill to Prescott and beyond.

Coming back from Prescott is downhill and the trucks will take advantage of the situation since "time is money."

Many residents, and their children walk, run or bike on these roads at all times of the day. Additionally this is a popular route for tourists, bike enthusiasts and motorcyclists.

Two elementary schools are within close proximity to the mine (Kirkland Elementary 1.5 miles and Skull Valley Elementary 5 miles), the increased traffic, blowing dust from trucks constitute both a traffic safety issue as well as a health safety issue for the young children attending these schools.

With the proposed amount of material being extracted, the significant influx of commercial traffic traveling on these same roads will increase congestion, pollution, more wear and tear on the roads, and a greater potential for accidents. Furthermore, the Yavapai County Sheriff's Dept. doesn't have a commercial enforcement unit to monitor and take enforcement action against these large trucks.

Unfortunately, history has shown that without aggressive enforcement truck companies, especially owner operators, many times running on a shoestring budget, run amok and forgo routine maintenance,

drive at excessive speed to get their product to market, drive long hours in violation of logbook rules resulting in injury and fatal accidents. I am not sure of the destination of the materials, but have heard it was possibly the Drake Cement Plant near Paulden, Az. There have been rumors that the material will be transported south from the mine to an unknown location, but that hasn't been verified by my sources.

My second concern is noise, dust and pollution. Skull Valley, Kirkland, Wilhoit and Ruger Ranch are unique in their topography with many mountains and valleys. The proposed mine is located in the side of in the heart of one of these valleys and adjacent to Iron Springs Road. The noise, dust and pollution created by this proposal would adversely affect the entire community as wind travels through the valleys of Skull Valley, Kirkland, Wilhoit and Ruger Ranch every day. I can only imagine what the decibel level will be if this Mine is allowed to operate in such close proximity to residential properties! A number of residences are within 1000' of the Mine, with many more homes such as the Windmill Development ¾ mile away and less than 1 mile from the 2000 acre Ruger Ranch development with approximately 55 home sites at risk. The community of Wilhoit with a population of 868, is only 6 miles from the Mine. While they will be less impacted by traffic, they will be subjected to the

dust and other airborne particulates especially during windy conditions.

My third concern involves the use of water. The applicant proposes to excavate material which would be close to the water table and would have a negative impact on neighboring wells that are fed by the aquifers that flow through the property in underground streams. Water always follows the path of least resistance and any single, multiple or successive development or site alteration activities and would have an irreversible negative impact on community wells and important wetlands.

My next concern is for wildlife. The proposed mine property contains an abundance of birds, such as the once endangered red tail hawk, dove, quail, roadrunner and larger animals, such as mule deer, fox, elk, and other wildlife. The mining operation will make their environment sterile and force them to relocate or die. (Most are territorial and most will die)

A mine adjacent to this very important piece of nature would have an enormous negative impact by adding to the sediment washing into the soil from run off on the property. Airborne particulates, as well as toxic emissions from trucks, equipment and machinery may seep into the ground and contaminate groundwater, which flows into the waterways and

into neighboring wells. And my concern doesn't even factor in the very real possibility that the material may contain <u>Eronite</u> which has been found to run in a strain from Wikieup to 4.5 miles south of Kirkland Junction.

In closing, I would like to say that a mining operation in the Skull Valley, Kirkland, Wilhoit, and Ruger Ranch areas would drastically affect our ability to enjoy our properties that we have invested so much money and time into, decrease our property values by as much as 30%, and destroy the quiet, peaceful community in which we live.

Below is information from the Arizona Dept. of Real Estate concerning required disclosures for sale of real estate. Those wishing to sell their homes impacted by the Mine operations will have to document it on the Sellers Property Disclosure Statement. The loss of value to their homes coupled with the fear of fraud or misrepresentation only adds to the cumulative stress to the property owners

•

[&]quot;If you violate the disclosure law by misrepresenting or not disclosing required information, the buyer may pursue legal action against you for failure to disclose, fraud, or misrepresentation (intentional or negligent). A buyer who is successful in such a lawsuit may be awarded substantial monetary damages. Or, in unusual cases, a court may void the contract and return all property or money back to the original parties, as if the purchase never occurred. So remember, if in doubt, to avoid litigation, make sure to disclose <u>all</u> information about the property."

If this application is granted, the negative impact that this mine would have on the environment and its inhabitants is irreversible. It would compromise the health and safety of our community and ruin the character of this unique place forever. Hopefully BLM will stand by and honor its mission statement by disapproving this application.

I thank you, and hope you will take my concerns seriously when making your decision about the future of our community.

Sincerely,

CC: Congressman Gosar

Senator Jeff Flake

Senator John McCain

Yavapai County Board of Supervisors

Yavapai County Sheriffs Dept.

Prescott Police Dept.



Kirkland Mine Proposal

1 message

Tue, Jul 11, 2017 at 11:47 AM

To Whom It May Concern:

I own property in Kirkland, AZ and I am receipt of correspondence regarding mining between Kirkland and Skull Valley. I do not feel this is appropriate for the area. I am concerned for the safety of my family and neighbors given the effects on water and air quality. We live away from a large city to breath clean air and have clean well water. I do not look kindly on the destruction of that for any reason including profit.

In addition, we suffered through months of repairs to Iron Springs Rd, which will occur again due to the damage heavy truck traffic will cause in a short period of time. We also travel the route proposed for the truck traffic in order to reach town. Due to the level of traffic proposed, we will always be behind a truck on a two lane road, which will slow traffic, increasing our gas consumption and travel time. It will also increase the number of accidents due to passing and make it a hazardous route.

Kirkland is a beautiful area. Wildlife is prevalent. Mining will destroy their habitats and move them from our area.

Mining is not appreciate for Kirkland, AZ. It will destroy the environment that we enjoy, devalue our properties, and endanger our lives.

Sincerely,

Get Outlook for Android



Kirkland High Quality Pozzolan Mine Draft Mining and Reclamation Plan of Operations

Environmental Assessment
DOI-BLM-AZA 3712

OPEN HOUSE COMMENT FORM

July 11th, 2017, 6 pm to 8 pm

Skull Valley Community Center, 3150 Old Skull Valley Rd., Skull Valley, Arizona

The Bureau of Land Management (BLM) would like to obtain your input regarding social, economic, and environmental issues and/or concerns associated with this project. Please list your name and address below.

CONTACT INFORMATION (Optional* - Please Print)

NAME:
EMAIL ADDRESS (or Mailing Address if no email address is available):
Representing Self Representing Organization Name of Organization:
1. Please provide any comments and/or concerns regarding the proposed project:
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MINE OWNERS AND THOSE AUGNED WITH THEM
ALSO WHO WILL BE PESPONGIBLE FOR MONITORING
THE AIR MUALITY; PARTICLES & TUST.

Public input is an important part of the project development process. Comments are requested by July 25th, 2017 in order to ensure timely consideration, but are welcome at any time. Please submit your comments or concerns to Shelby Cave, PhD, Project Manager, BLM, Hassayampa Field Office, 21605 N. 7th Avenue, Phoenix, AZ 85027; via fax at (623) 580-5580 Attn: Shelby Cave; or via email at <a href="https://kirchard.org/kirchard-new-comments-by-concerns-by-line-pi-chard-new-comments-b

Privacy notice: Before including your address, phone number, email address, or any other personal identifying information in your comments, be advised that your entire comment(s), including personal identifying information, may be made publicly available at any time. While individuals may request that the BLM withhold personal identifying information from public view, the BLM cannot guarantee it will be able to do so. If you wish to withhold your personal information, you must state this prominently at the beginning of your comment(s). We will make all submissions from organizations and businesses available for public disclosure in their entirety.

Project information is available http://bit.ly/2rRYTII



U.S. Department of the Interior Bureau of Land Management

-	
-	
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MEETING	FEEDBACK
Please take a moment to answer the following questions, v	which will assist BLM with future meetings:
1. How did you hear about this meeting?	
Letter Newspaper Website	
tetter 2 Newspaper 1 Website	
2. Was the meeting presentation easily visible and audible?	3. Were the meeting presenters clear and informative?
Yes No No	Yes No No
4. Was the length of the meeting appropriate?	5. Was the meeting venue satisfactory?
Yes No 12	Yes No No

Project information is available http://bit.ly/2rRYTII



U.S. Department of the Interior Bureau of Land Management



Iron Springs project

1 message

Tue, Jul 11, 2017 at 6:21 PM

Please do not allow this mine to spoil one of our beautiful drives! The road has just recently been resurfaced.

This is a mine the BLM wants to put in towards the border of Skull Valley and Kirkland. The mine would add between 30 and 85 large trucks a day on Iron Springs Road carrying pozzalon; traveling a round trip between Skull Valley to north of Paulden. So far this year there have been two fatal accidents between Contreras Road and Tonto Road. This stretch of Iron Springs between Williamson Valley road and Kirkland Junction (and loops back to Prescott) is a popular bicycle route, bicycle race route and has been used for long distance runs. The current traffic on Iron Springs Road includes school buses, recreational vehicles, cattle haulers, semi hay trucks, tourists, traffic from the Bagdad mine, semi trailer trucks, traffic avoiding White Spar Road and the residents of the area going about their normal business.

Sent from my iPhone from



CONTACT INFORMATION (Optional* - Please Print)

Kirkland High Quality Pozzolan Mine **Draft Mining and Reclamation Plan of Operations**

Environmental Assessment DOI-BLM-AZA 3712

OPEN HOUSE COMMENT FORM

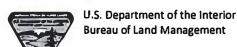
July 11th, 2017, 6 pm to 8 pm

Skull Valley Community Center, 3150 Old Skull Valley Rd., Skull Valley, Arizona

The Bureau of Land Management (BLM) would like to obtain your input regarding social, economic, and environmental issues and/or concerns associated with this project. Please list your name and address below.

EMAIL ADDRESS (or Mailing Address if no email address is available):
1. Please provide any comments and/or concerns regarding the proposed project:
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Public input is an important part of the project development process. Comments are requested by July 25 th , 2017 in order to ensure timely consideration, but are welcome at any time. Please submit your comments or concerns to Shelby Cave, PhD, Project Manager, BLM, Hassayampa
Field Office, 21605 N. 7th Avenue, Phoenix, AZ 85027; via fax at (623) 580-5580 Attn: Shelby Cave; or via email at KIRKMPO@BLM.GOV
Privacy notice: Before including your address, phone number, email address, or any other personal identifying information in your comments, be

advised that your entire comment(s), including personal identifying information, may be made publicly available at any time. While individuals may request that the BLM withhold personal identifying information from public view, the BLM cannot guarantee it will be able to do so. If you wish to withhold your personal information, you must state this prominently at the beginning of your comment(s). We will make all submissions from organizations and businesses available for public disclosure in their entirety.



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12		Mala atwitting for 2 familia near good fooder	
13		Male strutting for 3 females near seed feeder	
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20		Sherry saw mature perched on Granite boulder	
21	_	Sherry saw mature perched on Granite boulder	
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28		seen w nesting materil in bill yesterday & today in mesquite near of	door.
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30		found dead Collision with shop window. Gave to Tomoff. Present m	id Mays
31		Barbara's group saw one @ Allen Place Ferguson valley	
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33			
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38		male @ feeder; saw 10 @ one time! biggest concentrwtion that i recall ever seeing.	
39			
40		adult Male with bright red bib, white belly & black head, white spot	near dors
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44		Barbara earlier	
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	Hawk, Gray	×									
	Hawk, Marsh(Harrier)	~	х	X							11/14
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45	Hawk, Swainson's	~									
46	Hawk, Zone-tailed	≈									
47	Heron, Great Blue	~	X	X	Х	Х	х	x			
48	Heron, Green	≈									
49	Hummingbird, Anna's	~	X	X	X	X	X	X			X

Deccomments/notes Spring Bird Tour 4 May 2014. Jenner lower pond- almost dry 1st1/10 e seed feeder. 8 9 10 11 12 13 Seen on hopper feeder - red eye & red spot onside of neck 14 15 16	
Jenner lower pond- almost dry 1st1/10 6 @ seed feeder. 7 8 9 10 11 12 13 Seen on hopper feeder - red eye & red spot onside of neck 14 15 16	
1 st1/10 6	
5 1st1/10 6 @ seed feeder. 7 8 9 10 11 12 13 Seen on hopper feeder - red eye & red spot onside of neck 14 15 16	
6 @ seed feeder. 7 8 9 10 11 12 13 Seen on hopper feeder - red eye & red spot onside of neck 14 15 16	
7 8 9 10 11 12 13 Seen on hopper feeder - red eye & red spot onside of neck 14 15 16	
8 9 10 11 12 13 Seen on hopper feeder - red eye & red spot onside of neck 14 15 16	
9 10 11 12 13 Seen on hopper feeder - red eye & red spot onside of neck 14 15 16	
10 11 12 13 Seen on hopper feeder - red eye & red spot onside of neck 14 15 16	
11 12 13 Seen on hopper feeder - red eye & red spot onside of neck 14 15 16	
Seen on hopper feeder - red eye & red spot onside of neck 14 15 16	
Seen on hopper feeder - red eye & red spot onside of neck 14 15 16	
14 15 16	
15	
16	
11371 O hird good fooder & heard parlier in Cattonwood tree near	
@ bird seed feeder & heard earlier in Cottonwood tree near	house.
18	
19	4
20	
Sixe appeared right, but tail color looked like Redtail?	
22	1 1
23	
24	
25	
2/14 prob of it pecking wood off soffett vent holes in Mobile	e overroot
Here & at Bochat's	
28 Here & at Bochat's	
23 seen flying North up valley on 2/16 & heard on 2/18	1
31	
32	
34	
35	
36 @ seed feeder.	
37 near entrance	
38	
39	
40	
41 one seen 2/21/2015	
42	
43	
7/1/14 Fledling just barley flying -house area	
45	
46	
at least 5 active nests on Jenner Rookery	
48	
49	

	A	В		D	E	F	G	H	-	J	K	L	М
122		##	Jan	Feb	Mar	Apri		June	July	Augı	Septe	Octo	Nov
2			##			•				_	- · -		
3	Blackbird, Redwinged	Х			X	X						X	x
4	Blackbird, Brewers												
5	Bluebird, Western	х											
6	Bunting, Lazuli	X				12th							
7	Bushtit	X				1201							X
8	Dustreit	^											^
9	Cardinal, American	x			7.446		vvv.	xxx	~~				x
	Chat, Yellow-breasted	X			24th	XX		^^^	^^				^
11	Coot, American	^	X	x	x	x	XX						
12		V	^	^	^		VVV	~~~	v				
13						13th		XXX	X				
		X					5th	X		0 /1			
14	Cuckoo, Yellow-Billed	X					3			8/1		II =	
	Dove, Eurasian Ringed		X	X	X	XX			XXXX			XX	XX
	Dove, Mourning	X		X	X	X						XXXX	XXXX
17		X					XXX	XXX	XXXX	xxxx	X		
		X	X	X	X	Х							
19	Duck, Ruddy		X	X	X	X							
1	Eagle, Bald												
21	Eagle, Golden							X					
	Falcon, Peregrine							*					
	Falcon, Prairie												
	Finch, Cassins	X											
	Finch, House	X	Х	Χ	X	X	X	X	X	X	X	X	X
	Flicker, Northern		X	X	X	X	X	X	X	X	X	X	X
27	Flycatcher, Ashthroate	X				1@	5/20	X					
	Flycatcher, Br-crested												
29	Flycatcher, Vermillion	Χ			29th	7th	х	X	X				
30	Goldfinch, Lesser	X	X	Х	Х	X	X	X	X	X	X	X	X
31	Goldfinch, American	Χ	X	Χ	Х	X							
32	Grackle, common	Х					х	X			X	X	Х
33	Grackle, Greattailed	X											
34	Grebe, Pied-billed					25th							
35	Grosbeak, Blackheaded	Х				14th	X	х	X	X	X		
36	Grosbeak, Blue	Х					5th		X	X			
37	Gull, sp												
	Hawk, Black												
	Hawk, Cooper's	Х	X	x	Х	х	X	X	X	Х	X	X	x
40	Hawk, Ferruginous	X	X	x	. •				ıİ ı	-			-
41	Hawk, Gray	X											
42	Hawk, Marsh(Harrier)		x										X
43	Hawk, Redtail	X		x	x	x	x	*	X	x	x	X	X
44	Hawk, Swainson's	~`		~	^	3rd	^		^	^		, =	X
45	Hawk, Zone-tailed												^
46	Heron, Great Blue	х		x		29th X	X	Х	v .	x	x	_	x
47	Heron, Green	^		^		^	^	^	X	^	^	X	^
48	Hummingbird, Anna's	Х	_	~	v	~	V	_	V	v	v	_	~
49	Hummingbird, Blk-chin		^	X	X	X	X	X	X		X	X	X
1 43	ridiningbild, bik-chin	Α			X	X	X	X	X	X	X	X	×

SINST	N	O P Q R	S T
93.120		comments/notes	
2	1.00		
3	х		
	<u> </u>		
4	4		
5			4 /0.0 \ 1.0.0T .CTE\ 1.0.0\ ET .TU.T.O. ET
6]		4/26 MOST SEEN @ ONE TIME@ FE
7	<u>I</u> X		
8			
9	X		
10		calling from Big Cottonwood @ entr	rance
11		Ti i i i i i i i i i i i i i i i i i i	
12			
13			
14		Heard calling @ home	
15	x	3	
16	x		
17	l e		
18			
19	H20		
20	= ====	Commission was a dealer to the Fig.	611 #10 2 5 : 6
21		Coggins rept: crippled Golden E. alo	
22	_	Pair took quail off my road near ga	rden & flew it to Bochart's prope
23			
24			
25	Х		
26	X		
27	Element .	1@Scotts	
28			Pair near East Apricot tree
29		seen @ Bochat's (Nature tour)	
30]x		
31			
32		Downtown S.V. area	
33			
34	The second second	Seen @ pond SW of Gherings	
35		frequents feeder & fruit trees	
36	= = = =		
37	1		
38	1	[1	Seen overhead today
		<u> </u>	Seen Overnead Loudy
39]X]12/2/2\	T	
40	12/2(3)		11-
41			
42	X	Variable fields to the first transfer of the second	
43	X	Young fledglinig squalling for food in	n our cottonwoods & seen flying
44	X	Coyote Spr area	
45			×
46	Х		1 Flying South over property
47			
48	х	Noted decline in HB #'s @ feeders	1st week of Sept
49	<u></u>		
4 Party - Tarrier - Tarrie			

Centenial Bird list 2012

_11	Date	Species	Location	Comments
11 1	Α	В	C	D
1	Jan 6, 201	2 Finch, House	# Bird Feeder near house	
2	Jan 6, 201	2 Junco, Darkeyed	# Bird Feeder near house	
3	Jan 6, 201	2 Cardinal	# Bird Feeder near house	
4	Jan 6, 201	2 Goldfinch, Lesser	# Bird Feeder near house	
5	Jan 6, 201	2 Sparrow, White Crowned	# Bird Feeder near house	t man of the state
6	Jan 6, 201	2 Woodpecker, Gila	# Bird Feeder near house	
7	Jan 6, 201	2 Jay, Scrub	# Bird Feeder near house	1.00
8	Jan 6, 201	2 Wren, Bewicks	on windmill platform	The state of the s
9	Jan 6, 201	2 Hummingbird, Anna's	near site of summer feeder now missing	since Nov20 2011.
10	Jan 6, 201	2 Towhee, Spotted	In yard	
11	Jan 6, 201	2 Roadrunner	In yard	
12	Jan 6, 201	2 Raven	Flying over yard & in Pecon tree	
13	Jan 6, 201	2 Hawk, RedTail	Cottonwood Tree	
14	Jan 6, 201	2 Starling, European	Power line near entrance	
15	Jan 6, 201	2 Meadowlark, Western	Neighbor's field	in systamic form
16	Jan 6, 201	2 Thrasher, Chrisal's	in yard	11 (0.00)
17	Jan 6, 201	2 Quail, Gambles	in yard	
18	Jan 6, 201	2 Dove, Eurasian ringed	in yard	
19	Jan 6, 201	2 Flicker, Northern	in yard	the event
20	Jan 6, 201		South of Store in Skull Valley, AZ	
21		2 Towhee, Brown	Turkey shed	
		2 Hawk, Coopers	Circling yard : bird feeder	
		2 Junco. Grey-headed	Under Bird Feeder near house	
	THE RESIDENCE OF THE PROPERTY OF THE PERSON	2 Hawk, Ferrouginous	Above Peavine Ranch	Circling high overhead w
25	Jan18, 201	2 Sparrow, Lark	Under Bird Feeder near house	

annelle.	Α	В	С	D	Ē	F	G	Н	Ιı	1.1	K	
1	70		Jan	1	4				July	Aug		Octo
2	= = = = =	2010	Juii	. 00	riai	, .p.,	May	54110	July	, lug	COOPC	. 00.0,
3	Blackbird, Redwinged	Х	х	x	X	X	x		X	x	x	x
4	Blackbird, Brewers	^	^	^	^	^	^		^ =	^	^	^
5	Bluebird, Western	v =	V	v								
6	•	X	X	X								
	Bunting, Lazuli	X	.,	.,		17th						
7	Bushtit	X	X	X								
8	Conding! Amonicon										i i	
9	Cardinal, American	X				15th	Х	X	X	X	X	
10	Chat, Yellow-breasted	X										
11	Coot, American					X						
12	Cowbird, Brown-headed	X										
13	Cowbird, Bronzed	X					5/11		X	X		
14	Cuckoo, Yellow-Billed	X						6/18	X	X	X	
15	Dove, Eurasian Ringed	X	X	X	X	X	X	X	X	X	X	X
16	Dove, Mourning	X	X			X	X	X	X	X	X	X
17	Dove, White-winged	X				20th	X	X	X	X	X	
18	Duck, Mallard	X										
19	Duck, Ruddy					X						
20	Eagle, Bald		14tl	า								- 1
21	Eagle, Golden											
22	Falcon, Prairie											
23	Finch, Cassins	Χ										- 1
24	Finch, House	Χ	X	X	X	X	X	X	x	X	X	X
25	Flicker, Northern	Χ	Χ	X		Χ	X	X	Х	X	X	x
26	Flycatcher, Ashthroate	ιX										
27	Flycatcher, Br-crested											
	Flycatcher, Vermillion	Х			20th			X	X	Х		1
29	Goldfinch, Lesser	Х	Х	Х	X	Х	Х	X	X	X	x	x
30	Goldfinch, American	х	Х		Х	X	Х					
31	Grackle, common	X			X	X	X		X	X	x	x
32	Grackle, Greattailed	Х				X	Х		X	v i		
33	Grosbeak, Blackheaded	X				23rd		X	X	X	X	x
34	Grosbeak, Blue	X				2514	5/18		X	X	X	
35	Gull, sp	-					37.10				. =	
36	Hawk, Black					4/4						
37	Hawk, Cooper's	X	X	X		x .	x	x	X	x	Х	x
38	Hawk, Ferruginous	X	X	X		^	^	^	^	^	^	^
	Hawk, Gray	X	^	^								
	Hawk, Marsh(Harrier)	x	х	х								10/15
	Hawk, Redtail	X	X	X	х	X	v	X	X	x	x	10/15 X
	Hawk, Swainson's	^	^	^	^	^	x 5/6		^	^	^	^
	Heron, Great Blue	x	V			v			x*	v	v	v
44	Heron, Green	^	X			X	X		۸	X	X	X
45		v	v	v		V	v	v	v	v	v	
	Hummingbird, Anna's	X	X	X		X	X	X	X	X	X	X
46	Hummingbird, Blk-chin	X				X	X	X	X	X	X	X
47	Hummingbird, Calliope										110	
48	Hummingbird, Rufous	X				X		X	.,	X	X	
49	Humbird, Broadtailed	X				X	Х	X	X	X	X	X

	М	N	O P Q R	ST
1	Nov	Decemb	comments/notes	
2	I A TOTAL			
3		X	2/24 photo	
4			i	
5	x	X		
6	100			
7	1			
8				
9	x	X		
10				
11				
12				
13			pairin yard.	
14			Heard calling in main part of town	
15	x	X	= = ',	
16	х	X	v i	
17				
18				
19	1.112			
20			@ Bob Scott"s flying by	
21	P. IV		, , ,	
22	43/11			
23				
24	x	X		
25	x	X		One collided with South windows-
26				
27				
28			Male on Garden fence @ noon Sun	day
29	х	X		
30	1			
31	x	X		
32	M.		@ Museum 5/14	
33	х	X		
34			pair in visitor's pickup-window coll	lision f died
35				
36			didn't notice white tail edging or u	inderwing edging
37	х	X		
38				
39				
40	1	X	1st (female) seen this Fall.	
41	x	X		
42	1		Chino Valley- Perkinsville Road.	
43	х	X		reported 3 young
44	1			, , , , , , , , , , , , , , , , , , , ,
45	х	X	working forsythia flowers in feb	
46	х	X		
47				
48	1			
	х			

	Α	В	С	D	E	F	G	Н	1	J	K
1		12/08	2009	2010	Jan	Feb	Mar	April	May	28th	5/29
2											Tour
3	Blackbird, Redwinged	X	X	X		Х	X	X	XX		
4	Blackbird, Brewers		X								
5	Bluebird, Western	X	X	X	X	Х	х				
6	Bunting, Lazuli		Х	X				4/9x	хx		
7	Bushtit	X	X	X	X	х	Х	1,5%			
8						**					
9	Cardinal, American	X	x	x	X	х		xx	xx		
	Chat, Yellow-breasted		X	X				,,,,	5/6		
11			X						3, 0		
12			X	x				x	XX		-
13			X	X				,,	~~		
	Cuckoo, Yellow-Billed		X	X				x	XX		
	Dove, Eurasian Ringed	x	X	X	X	Х	x	XXXX			
	Dove, Mourning	X	X	X	X	x	x	XXXX			
17	Dove, White-winged	^	X	X	^	^	^	4/18			
	Duck, Mallard		X	X	X	X		4/10	^^		
19	Duck, Ruddy		X	^	^	^					
	Eagle, Golden		X								-
	Falcon, Prairie		^								
	Finch, Cassins		V	v		V	V	VV			
	Finch, House	v	X	X	V	X	X	XX	V V		-
		X	X	X	X	X	X	XXXX			
	Flicker, Northern	Υ	X	X	X	X	X	XXXX			
	Flycatcher, Ashthroate	u	X	X					5/12		
	Flycatcher, Br-crested		v						5/5		
	Flycatcher, Vermillion	· ·	X	X		1			5/5		
28	Goldfinch, Lesser	X	X	X	X	X	X	XXXX	XX		
29	Goldfinch, American		X	X		X					
	Grackle, common	X	X	X				XX			
	Grackle, Greattailed		X	X					XX		
32	Grosbeak, Blackheaded		X	X				4/21			
33	Grosbeak, Blue		X	X					5/8		
34	Gull, sp										
	Hawk, Black		X								
	Hawk, Cooper's	X	X	X	X	X	X	XXXX	XX		
	Hawk, Ferruginous	X	X	X	X	X	X	4/17		.	
	Hawk, Gray	i		X					5/5	TITST	recor
	Hawk, Marsh(Harrier)	X	X	X	X	X	X				
-	Hawk, Redtail	X	X	X	X	X	X	XXXX	XX		
41											
	Heron, Great Blue	X	X	X	X	X	X	X	X		
	Heron, Green		X								
	Hummingbird, Anna's	X	X	X	X	X	X	XXXX			
	Hummingbird, Blk-chin		X	X			X	XXXX	XX		
	Hummingbird, Calliope		X								-
47	Hummingbird, Rufous		X	X				XXX			
48	Humbird, Broadtailed		X	X			X	XXXX	XX		
49											

Jaker works		8.4	l M				months 2	
ASSESSED FOR	luna	M	August	Conto	P	Q	R	S S
1	June	July	August	Septe	octobe	inovemi	December	comments/notes
2								
3	Х						X	
4								
5								
6	x-	X	x					8/15/10 Male @ birdbath.
7	x	X					X	
8								
9	×	xxxx						
10	X	XX						Heard in Cottonwoods in B
1.1	-							
12	X	xx						
	XX	XX						on 6/12
14		X	v	v				on 6/12
	X		X	X			v	UII U/ 12
15		XXXX	XXXX	XXXX			X	
		XXXX		xxxx			X	
17		XXXX	XXXX					
18	×							
19								
20								
21								
22	X						X	a few this winter
23	XXXX	XXXX	XXXX				X	Big decline @ feeder4/1
24	X	XX					X	
25		XX						
26	-337-6						Prescott (College Ornothology class-To
27	MUL	xx		9/23-24	here			Cottonwood Lane-jenner's
28	xxxx	xxxx	XXXX				x	
29							x	
	х	x						Downtown SV
	x	X						Downtown SV
	XXX	XX					vouna w s	tubby tail @ feeder 5/17
33		XXXX					young it o	@ feeder
34	~~	AAAA						Crecuci
35	=11=							
	v_v_	xxxx	VVVV					
	^-^-	AAAX	****			flow fr-	X m Bower n	ole clong Old Bood North
37	H No-	th of	Hoooyan	no Dro	0051/0			ole along Old Road North.
	h 1401	ui oi	Hassyan	ipa Pre		rrescot	-	Ornothology class-Tomoff
39					10/11(1f)		X	female hunting our field.
	XXXX	XXXX	XXXX				X	
41	19=							
42	Х	XXXX	XXXX				X	
43								
44	XXXX	XXXX	XXXX				X	
45	xxxx	xxxx	XXXX					
46	ilin,							
47		xx	xxxx					
	xxxx							
49	1							

	Α	В	С	D	E	F	G	Н		970
1		12/ 08		Feb					r 5/29	tour
2		,				, .p	,	111	. 0, 20	
3	Blackbird, Redwinged	X		xxx	x	xxxx	-x	Y	X	
4	Blackbird, Brewers	^			tt's 3/2		_^	^	^ _	-
5	Bluebird, Western	X	x xx	X	11 3 3/2	0	_			= 1
6	Bunting, Lazuli	^	^ ^^	4/6		-xxx	хx	Х		
7	Bushtit	X		ч, о Х	VV			^	v	
8	Dustitit	^		X	XX	xx-x	XX		X	
9	Cardinal American	v	V	V	V VVV	VVVV				
	Cardinal, American	X	X ② Pook		X XXX	XXXX	XX			=
	Chat, Yellow-breasted		@ BOCI	nat's on	3/13		-X			
	Coot, American		@ Coot		o			X	X	
	Cowbird, Brown-headed		@ Scot	TS 3/2	8 x		XX		X	
	Cowbird, Bronzed				5/19	pair	-X	Х	X	
	Cuckoo, Yellow-Billed									
	Dove, Eurasian Ringed		X	X	XXXX	XXXX	XX	X	X	
	Dove, Mourning	X	X	X	XXXX	XXXX	XX	Х	X	
	Dove, White-winged			4/13		-xxx	XX	X	X	
	Duck, Mallard								X	
	Duck, Ruddy							Х	X	
	Eagle, Golden							X		
	Falcon, Prairie									
	Finch, House	Χ	X	X	XXXX	XXXX	XX	X	X	
	Flicker, Northern	X	X	X	XXXX	XXXX	XX	Х		
24	Flycatcher, Vermillion							X		
	Flycatcher, Ashthroate	d							X	
26	Goldfinch, Lesser	X	X	X	XXXX	XXXX	XX	X	X	
27	Goldfinch, American		X	X		xx				
	Grackle, common	Х						X	X	
29	Grackle, Greattailed							Х		
30	Grosbeak, Blackheaded			4/23	oair	xx	ХX	X	X	
	Grosbeak, Blue			•			ХX	X	X	
32	Gull, sp									
	Hawk, Black							Х		
	Hawk, Cooper's	X	X	X	хх	XXXX	ХX			
	Hawk, Ferruginous	X	X	X						
	Hawk, Marsh(Harrier)	X	-							
	Hawk, Redtail	X	X	X	xxxx	xxxx	ХX	x		
38	112111111111111111111111111111111111111		,,	**	~~~~	*******	~~~			
	Heron, Great Blue	Х				x			4 x	
	Heron, Green					^			1	
41	Hummingbird, Anna's	X		X	xxxx	xxxx	xx	X	. = =	-
	Hummingbird, Blk-chin			^	XX	XXXX	XX	X	x	
	Hummingbird, Calliope		3/28:		X	~~~	^^	^	^	= =]
	Hummingbird, Rufous		3/28:	3nm	X	xxx-				
	Humbird, Broadtailed		3/25	Shiii			VV	X		
46	Transitu, broautaneu		3/ 23		XX	XXX-	XX	Х		-
47	lbis, White					====				
	ibio, vvince					X				
48	lay Scrub	v	V	V V		N.V.				
49	Jay, Scrub	X	X	хх	XX	XXXX	XX			

	J	K	L L	М	N	0	Р		Q	R
1	June	July	August	Sente	Octobe	Novemb	Decembe	r	<u> </u>	
2	Julie	July	August	ocpic	OCTOBE	1140VCITE	Decembe			
3				X						
4										
5										
6	1111									
7										
8										
9	x	X	X							
10		riain r								
3117										
12	1									
	1									
13	=		H.,	0/15		L	0/14 0 0	/O1		
	Х	X	X		seen @	Museum	8/14 & 8	/21		
15	X	X	X	X						
-	X	X	X	X						
17	X	X	X							
18										
19										
20										
21										
22	V	X	X	v						
	^	^	^	X						
23				X						
24										
25	-									
	X	X	X	X						
27										
28	1		X	X						
29	1									
30	x	X	X							
	x	X	X	X						
32	1		11							
33										
34	V	X	X	X						
35	^ -	^	^	^						-
	1		1st fem	0/20						
36	ļ.,									
	Х	X	X	X						
38	l									
	х	X	X							
40										
41	x	X	X	X						
42	x	X	X	X						
43	1									
44	i		X	x						
-	х		X	**						
46	1^		^							
	=									
47										
48										
49	000		L	X						

	Α	BCD	E F	ĪĠĪ	Н		J	K	L
1		Jan Feb Mar A	oril May	June	July	August	Septem	l October	Novemb
2			•		•		ı .		
3	Blackbird, Redwinged		x						
4	Bluebird, Western								
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6	Bushtit		x						
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8	Cardinal, American		xxxx						
9	Cowbird, Brown-headed								
10	Cuckoo, Yellowbilled			x					
	Dove, Eurasian Ringed		xxxx						
12	Dove, Morning		xxxx						
13	Dove, White-winged		xx						
	Falcon, Prairie								
	Finch, House		xxxx						
	Flicker, Northern		xxxx						
17	Flycatcher, AshThroated		5/17						
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19	Goldfinch, Lesser		xxxx						
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Kirkland Mine

1 message

Tue, Jul 11, 2017 at 4:09 PM

To whom it may concern:

As requested, I am emailing my comments in regard to this mining project. First, let me establish that I believe whole heartedly that this mining operation benefits no one within this community. Nor does it benefit the environment in any possible way. It will create additional heavy traffic, a high level of noise, pollution, it will upset the equilibrium of the natural habitat of the indigenous species of plant and animal. Furthermore, it concerns me greatly that this material being proposed to be mined will be traveling through largely undisturbed communities that encompass two schools creating a potentially hazardous environment for children. Additionally, this is a ranching community with multiple types of livestock that would also be affected. Every community that this material travels through will be harmed. I feel you should carefully consider the greater good of the community versus that of the mine owner and her profit. The benefits do not outweigh the negative effects and loss that will be felt by everyone in the community. We live within 1000 feet of the access point to the mine. We will be negatively impacted by this endeavor in multiple ways.

Sincerely,



Kirkland High Quality Pozzolan Mine Draft Mining and Reclamation Plan of Operations

Environmental Assessment DOI-BLM-AZA 3712

OPEN HOUSE COMMENT FORM

July 11th, 2017, 6 pm to 8 pm

Skull Valley Community Center, 3150 Old Skull Valley Rd., Skull Valley, Arizona

The Bureau of Land Management (BLM) would like to obtain your input regarding social, economic, and environmental issues and/or concerns associated with this project. Please list your name and address below.

CONTACT INFORMATION (Optional* – Please Prin	it)
NAME:	
	ddress îs available):
	, 7
Representing Self 🗹 Representing Organization	n 🔲 Name of Organization:
1. Please provide any comments and/or concerns	regarding the proposed project:

Public input is an important part of the project development process. Comments are requested by July 25th, 2017 in order to ensure timely consideration, but are welcome at any time. Please submit your comments or concerns to 5helby Cave, PhD, Project Manager, BLM, Hassayampa Field Office, 21605 N. 7th Avenue, Phoenix, AZ 85027; via fax at (623) 580-5580 Attn: Shelby Cave; or via email at KIRKMPO@BLM.GOV

Privacy notice: Before including your address, phone number, email address, or any other personal identifying information in your comments, be advised that your entire comment(s), including personal identifying information, may be made publicly available at any time. While individuals may request that the BLM withhold personal identifying information from public view, the BLM cannot guarantee it will be able to do so. If you wish to withhold your personal information, you must state this prominently at the beginning of your comment(s). We will make all submissions from organizations and businesses available for public disclosure in their entirety.

Project information is available http://bit.ly/2rRYTII



Re: Skull Valley Mining Operation

I have been a resident of this area for 30 years and moved here because of its scenic beauty, healthy air and water away from heavy industry.

This proposed mine threatens all who live here for miles around. It threatens to destroy a cherished landmark and riparian area frequented by wildlife and enjoyed by those traveling on the highway to and from Prescott.

It threatens to impact our property values. Forget putting your place up for sale. No one will want to move here once this mine is operating and we will be forced to stay or give our properties away at a pittance. This operation is to extract a total of ONE BILLION tons of material and this will take many years.

Heavy continuous truck traffic projected to be between 35 to 85 trucks a day, will make it difficult to travel at a reasonable speed on two lane steep mountain grades.

It threatens our health by producing dust which will be carried for miles by the prevailing winds.

Dust from this operation contains crystalline silica. Prolonged inhalation of silica can cause silicosis, a seriously disabling and fatal lung disease. Silicosis may also be associated with increased incidence of several autoimmune disorders. Silicosis increases the risk of tuberculosis.

These are just a few of the health risks we will be exposed to.

Many people in this area suffer from COPD and moved here to get away from industry.

I do not believe that the profit of one company and a few jobs should put all of us here at risk and destroy a beautiful scenic landmark

I feel that further testing of the material to be mined needs to be done. Specifically for the presence of erionite. Reviewing maps from the CDC it seems highly likely that erionite will be present at the Kirkland mine. It has already been identified in a nearby location of Kirkland junction (NE1/4SW1/4sec.5,T.11N.,R.4W). I've attached a copy of the CDC map that shows a definite orientation of the known erionite. Erionite is a carcinogen when disturbed and made airborne. Our prevailing winds through Skull Valley are from south to north. Since the mine is on the south end of the valley, the airborne particles would be a danger to all the residents. Mesothelioma is one of the lung diseases associated with exposure. Please protect all of us and require that they test for erionite.

Concerned Resident

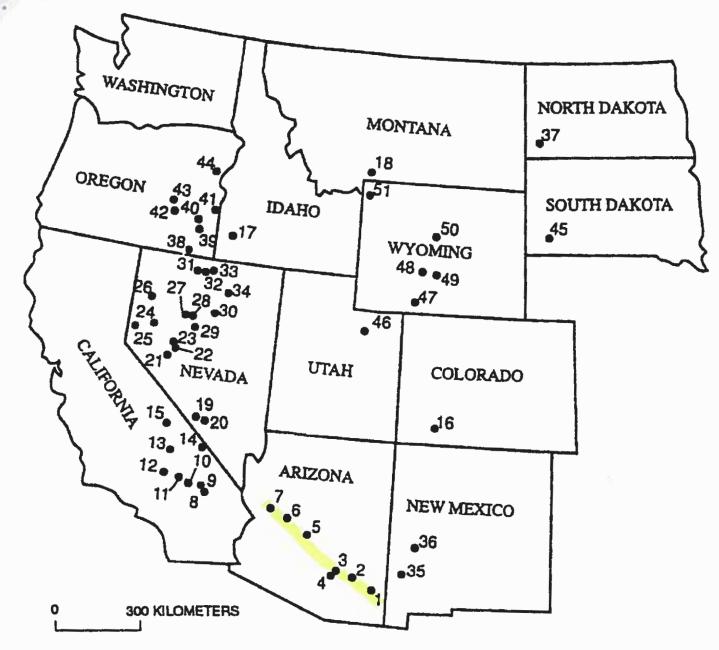


Map: Occurrences of Erionite

Posted on November 22, 2011 by Administrator

From Sheppard R. <u>Occurrences of erionite in sedimentary rocks of the western United States</u>
(http://pubs.usgs.gov/of/1996/0018/report.pdf) . Denver, CO: US Department of the Interior, US Geological Survey; 1996. Open File Report 96–018.

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(http://blogs.cdc.gov/niosh-science-blog/files/2011/12/erionite-map.png)

Arizona

- 1. Along the San Simon River, north of Bowie, Graham and Cochise Counties (NW1/4SE1/4 sec. 27, T. 11 N., K. 27 E.)
- 2. Near Bear Springs, Graham County (NW1/4SE1/4 sec. 4, T. 7 S., R. 23 E.)
- 3. Along Dripping Spring Wash, north of Christmas, Gila County (NWI/4sec. 1,T. 4 S., R. 15 E.)
- 4. Near Kearny, Pinal County (NW1/4NW1/4 sec. 11,T. 5S., R. 14 E.)
- 5. Horseshoe Reservoir, Maricopa County (Unsurveyed, about 1 km west of the Horseshoe Dam)
- 6. Near Kirkland Junction, Yavapai County (NE1/4SW1/4 sec. 5, T. 11 N., R. 4 W.)



KIRKLAND MINE

1 message

Tue, Jul 11, 2017 at 3:52 PM

Shelby Cave;

I AM AGAINST THE PROPOSED MINE. There are health concerns for families in area. This is silica--made air born by the crushing operations. No permit should be granted without a major health account to be funded by mining company--needs to be guaranteed by funds in place to protect against company filing bankruptcy.....leaving us all holding the bag.

I see Kirkland Mine does not own the land.....they propose using county roads to deliver product and the volume/weight suggested will take a heavy toll on our limited roadways. Deaths on route to Prescott already high per mile. I'm scared.

Don't laugh. I've been resident in Yavapai County 35+ years--half my life. This plan is not healthy for locals. Respectfully,



ATTN: Shelby Cave

1 message

Wed, Jul 12, 2017 at 5:48 PM

Good evening.

I am writing to ask how is the Kirkland Mining Company is going to control the respirable particles of Silica dust that employees and members of the community will be exposed to? Citing OSHA, "it takes a very amount of silica dust to create a health hazard". (29 CFR 1926.1153) Erionite, found in Volcanic Tuff deposits has been tested for and documented to be present in seven locations of the same chain of deposits running from Bowie, AZ in the southeast to the northwest up to Wikieup, AZ. The Wikieup location is number 7 on the map of documented sites. Number 6 is 4.2 miles from Kirkland Junction in Peeples Valley. The Kirkland Mine deposits are between these two documented locations. There is a high possibility that this mineral might be in the tuff to be mined here in Kirkland. Has the mine site been tested using a Scanning Electron Micrope equipped with an energy dispersive X-ray analyzer that can discriminate fibrous Erionite from Mordenite, Chababzite, and Clinoptiloite? Erionite is known to coexist with these minerals.

Please don't allow the Kirkland Mining Company to poison me, my pets and my community. Sincerely,

REFERENCES; 1. IRAC- Crystalline Silica 2. OSHA- Airborne Silica Dust 3. 29 CFR 1926.1153 Cristalline Silica Dust 4. *Occurrences of Erionite in Sedimentary Rocks of the Western United States, by Richard A. Shepppard Open-File Report 96-018 Denver, CO !996 (pp. 4, 15, 16, Table 1) 5. "Locals flush proposed kitty litter mine", Feb.7, 2005 (Washoe County, NV)

Sent from Windows Mail



Kirkland Mining Company

1 message

Wed, Jul 12, 2017 at 4:40 PM

ATTN: Shelby Cave

There is a possible cultural site near my home and the mining area. I do not know if it has been documented by the BLM, or anyone else yet. I am enclosing pictures and will be available to take a BLM representative or to see if it follows under the Section 106 of the National Historic Preservation Act.

3 attachments



20150512_171100.jpg 3805K



20150512_172935.jpg 2816K



20150512_173116 1.jpg 4051K



Skull Valley Mine

1 message

Wed, Jul 12, 2017 at 11:42 AM

Dear Sir:

I attended the Public Scoping Meeting, but few of my questions were answered. They are as follows:

- 1 Why is not the Railroad being used for transport of materials when 500,000 tons is expected to be moved? Tens of millions are going to be made by mine developers and they want to use trucks? Build a siding and put some conveyer belts under the road to load the rail cars.
- 2 Is a truck trip a round trip or just one way with the return not counted?
- 3 Is the mine site going to be contained to mitigate noise, dust, diesel exhaust and scenic value of the area by a high fence and if not why not?
- 4 Where is the material being transported to?
- 5 Is a bypass around Skull Valley being considered to mitigate truck traffic and diesel exhaust a known cancer cause?
- 6 Will passing lanes be constructed on mountain climbs to go around slow heavy trucks? There are miles of double yellow lines on the way to Prescott which will be ignored by impatient drivers risking head on collisions on opposite lanes.
- 7 Will air and water quality and impact be monitored for the life of the mine?

Thank You,



Kirkland MIne

1 message

Wed, Jul 12, 2017 at 9:03 PM

To Whom It May Concern,

I'm writing on behalf of our beautiful communities of Peeples Valley and Yarnell, Az. My husband and I have lived in Peeples Valley for 5 years full time, coming up here for 8 years previously to build our home ourselves. This community is the best thing that has ever happened to us after living and working in Phoenix for over 30 years.

There are so many wonderful things that take place here and will take place in the future because of hard work by many involved citizens. These people enjoy the closeness and peacefulness of the area and moved here for that very reason. As you know the town has gone through trials of epic proportions in the last 4 years and to everyone's credit and unbelievable dedication it's being rebuilt.

Just a few things to mention that take place here: The Yarnell Regional Community Center and all their fantastic programs (Meals on Wheels, Thrift Store, lunches served 5 days a week). Club Yarnell who host fun and educational programs for our citizens, The Blue Barn that host classes in fused glass art and personal transformation, the lovely shops and restaurants, Petey's Playground who work tirelessly to keep seniors and their pets together and has a feral cat program, our wonderful vet clinic, and we even have a Dollar General now! The Community Garden allows folks to get down in the dirt and grow their own veggies and flowers and have a formal garden party every summer.

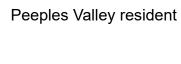
Tai Chi, Yoga, painting classes, a bakery, and a opportunity to choose what church you would like to attend.

The fire departments in Peeples Valley and Yarnell are first class! And they have proven that over and over again. The departments have been through so much in the past 4 years and they have never failed to reach out to the community in hosting EMT classes, CPR classes, fuel abatement programs, blood pressure checks once a week at the Community Center and distribution of timely information.

What I'm trying to relate to you in this email is that to disrupt this area with 85 truckloads going through our little towns per day would be the worst fate imaginable. Our lives and everything we have all worked for during our life time would change beyond belief. This area is one of the most beautiful in the state and to have that ruined would be horrible. There are groups of people here working on keeping this area tourist worthy, clean, attractive for people to move to, and to raise children here. All of this would fade and be the saddest thing ever.

I ask that your panel reconsider your plan for us, the people of Yarnell/Peeples Valley and the quality of our lives and the hard work that goes into these towns everyday.

You may contact me anytime. Thank you so much,





Mine in Kirkland

1 message

Wed, Jul 12, 2017 at 1:44 PM

BLM is wanting and taking comments about the proposed opening of the Pozzolan mine. The mine owners didn't deny the 30-to 85 trucks a day and actually admitted later, that it will be up to 170 trucks because you have to include the return trip. That is 1 truck every 3 minutes through these little towns and Iron Springs road in Prescott.

My friend George talked to the man in charge of transportation for the company about putting in a railroad spur since the track is 1/4 mile from the mine, and his response was that it was much more expensive to do that than to run trucks.

It seems our quality of life, values of our homes and our safety, doesn't seem to be worth cutting into their profits.

The small towns this project will effect are jewels in the middle of these lovely high deserts. It cant possibly bring a significant number of jobs to justify doing this.

We treasure our quiet peaceful lifestyle. We are invested in these sweet communities and the trucks, noise and dust will devastate us.

Please stop the Pozzolan Mine in Kirkland!



Project link

4 messages

Wed, Jul 12, 2017 at 2:37 PM

Shelby, the link they put on last night for the project does not work.

Sent from my Verizon Wireless 4G LTE DROID

Wed, Jul 12, 2017 at 2:41 PM

It all depends on how you type in the link, here is is again.

http://bit.ly/2rRYTII

[Quoted text hidden]

Wed, Jul 12, 2017 at 3:26 PM

Thanks Shelby. This opens now. I typed it just that way and it wouldn't open. Saved the link now.

Sent from my Verizon Wireless 4G LTE DROID [Quoted text hidden]

Wed, Jul 12, 2017 at 3:43 PM

Shelby, since according to the info sent out, they are required to have a public meeting that is like a town hall, when are they planning to do that? I know it kinda turned into that last night, though they tried to keep it from happening. Interesting that the National website has a survey on it which speaks to how can they have better transparency. I would suggest that is a problem here. No transparency.

Sent from my Verizon Wireless 4G LTE DROID
On Jul 12, 2017 2:42 PM, "PDO_KIRKMPO, BLM_AZ"

[Quoted text hidden]



Kirkland Mining Company Scoping comments

1 message

Wed, Jul 12, 2017 at 5:48 PM

No name was given for me to address this to:

"Depending on market demands during the first five years, there could be between 30 and 85 truck trips per day."

Who is responsible for repairing the damage this increase in heavy truck traffic will cause to our roads?

For my two businesses located in Yarnell, the Ranch House Restaurant and The Painted Lizard, the increased truck traffic will be detrimental to our normal traffic flow that allows people to stop and shop or eat. FYI, I am a full me resident of Yarnell having moved here in 2005 with no plans to ever leave.

Because we have two lanes each north and south, the faster traffic will be speeding to pass the slower haul trucks through town. These poten al customers will pass us by and con nue on their travel because they don't want to be stuck behind a slower moving vehicle.

These roads are traveled as recrea on for hundreds of motorcycle enthusiasts and others, weekly. This crucial business poten al will likely be dras cally reduced if the contemplated truck trips reach the 85 per day count as they won't be experiencing the peaceful, beau ful drive up and down Yarnell Hill that they remember fondly.

The businesses in Yarnell are s II recovering from the loss of business since the Yarnell Hill Fire of 6-30-2013. I just don't see our businesses being able to survive this burden.

A few questions:

What is the 'cultural site' that will be impacted by the future mine?

What are the hours of opera on of the proposed mine?

What are the hours of the day that the trucks will be traveling to and from the mine?

How much product may escape the 'covered haul trucks'?

How much water usage is expected?

What is the source of the water usage?

What impact will this mine have on our air and water quality?

Thank you,

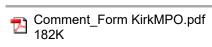


Kirkland Mine Comment

1 message

Wed, Jul 12, 2017 at 2:39 PM

I am submitting my comment on the KirkMPO as attachment to this email.





Kirkland High Quality Pozzolan Mine Draft Mining and Reclamation Plan of Operations

Environmental Assessment DOI-BLM-AZA 3712

OPEN HOUSE COMMENT FORM

July 11th, 2017, 6 pm to 8 pm Skull Valley Community Center, 3150 Old Skull Valley Rd., Skull Valley, Arizona

The Bureau of Land Management (BLM) would like to obtain your input regarding social, economic, and environmental issues and/or concerns associated with this project. Please list your name and address below.

CONTACT INFORMATION (Optional* – Please Print)		
Representing Self Representing Organization Name of Organization:		
1. Please provide any comments and/or concerns regarding the proposed project: Groundwater protection is critically important in this area and protection of both the quantity a		
quality is a high priority for area residents and land owners. Therefore, it is important to understand a		
predict water flow and where contaminants will migrate and if they will reenter from the new surface		
environment (the bottom of the mine pit).		
How will hydraulically active fractures that currently exist be identified? What controls will be used		
to control the hydraulically active fractures following the onset of mining?		
What method or procedure will be employed for predicting future flow and transport expected		
after mining starts and following closure of the mine? The flow and transport behavior of fracture		
systems can be perturbed by natural processes or by activities of people (mining activities). Extraction		
fluids (withdrawal of water to support operations) can lower the fluid pressure, which will increase the		
effective stress (the stress transmitted directly from particle to particle) in the rock, thereby causing the		
fractures to close disrupting flow. Temperature-induced stresses resulting from changes exposure to		
sunlight at the ground surface can also cause disruption to fracture flow and transport.		

The impact of operating machinery over the area causing additional stress and vibrations can lead to either mineral precipitation, compaction or mineral dissolution on the fracture walls. In general, any change in the void geometry of a fracture system will alter the flow and transport behavior and potentially after ground water quality and supply.

Public input is an important part of the project development process. Comments are requested by July 25th, 2017 in order to ensure timely consideration, but are welcome at any time. Please submit your comments or concerns to Shelby Cave, PhD, Project Manager, BLM, Hassayampa Field Office, 21605 N. 7th Avenue, Phoenix, AZ 85027; via fax at (623) 580-5580 Attn: Shelby Cave; or via email at KIRKMPO@BLM.GOV

Privacy notice: Before including your address, phone number, email address, or any other personal identifying information in your comments, be advised that your entire comment(s), including personal identifying information, may be made publicly available at any time. While individuals may request that the BLM withhold personal identifying information from public view, the BLM cannot guarantee it will be able to do so. If you wish to withhold your personal information, you must state this prominently at the beginning of your comment(s). We will make all submissions from organizations and businesses available for public disclosure in their entirety.

Project information is available http://bit.ly/2rRYTII



U.S. Department of the Interior Bureau of Land Management



Second letter of WHYs...

1 message

Thu, Jul 13, 2017 at 3:51 PM

July 13, 2017

Shelby Cave Hassayampa Field Office BLM 21605 N. 7th Ave. Phoenix, AZ 85027

Re: KIRKMPO Mining Permit Application/Skull Valley

Dear Shelby,

You received my first letter, and I wanted to add a few things here. First, the meeting in Skull Valley was not acceptable because you did not provide the Traffic Engineer Report KMC was told to produce, nor the BLM Environmental Report. In addition, to only mail people within 2 miles of this gigantic proposed site is totally unacceptable when their proposal will be sending multiple trucks all day every day in a 350 mile radius they have said. People up and down Iron Springs Rd. will be effected all the way to Prescott by the pollution, dirt, dust, traffic, and so on under "trucks" in Letter 1. People within 5 miles as a radius is more like it to mail to.

We must reschedule the deadline on this issue until you provide the above materials and proper mailings and have another meeting set up to correct these issues. There should be a one month period AFTER that next meeting to be able to respond to such a complicated proposal of such enormous size. In addition, KMC must propose a proper assurance bond for 100% Reclamation at the close of the mine.

You gave us NO information about Kirkland Mining Company Corporation that you seem to be pushing on us. I found they are a privately owned corporation consisting of eight or more ZOUVAS Family members who are part of the Family Trust that owns KMC. They show NO assets, NO liabilities, and issue 1000 shares of stock with NO par value. Their business is to excavate minerals "and any other lawful purpose", which means they can do almost anything.

This mysterious San Diego company has only existed for ELEVEN years Shelby, and they show NO MINING EXPERIENCE, not in Areta Zouvas' Investment Group either. KMC shows NO income, NO employees, NO contacts, and "non-classifiable establishments" as industries under their corporate business. What they DO have is a free lawyer, Luke C. Zouvas, one of the Family Trust owners. Eight of the Zouvas family members bought 320 acres each in Yavapai County in 1998 (2560 acres total). They own land adjacent to the projected mine proposal on BLM land, and intend to use it in conjunction with the Mining Operation, building buildings, storage, a 10,000 gal. diesel tank. There is NO provision for any reclamation on that private property after the mining is finished, and it can be abandoned as a junk heap without reprisal, so they must be getting another bond of financial assurance paid in advance for this private property to be reclaimed just like the adjacent BLM acres.

Reading TAXPAYERS COMMON SENSE Fact Sheets, March 19, 2010 article: "Arizona Public Lands in Mining Company Hands" (www.taxpayer.net/library/article/arizona-public-lands-in-mining-company-hands) which states:

"Under the 138 year old Mining Law of 1872, valuable taxpayer lands and minerals are virtually given away to international mining conglomerates that then amass enormous profits from mining......often abandoning their mines once they are no longer profitable or declare bankruptcy, sticking taxpayers with the costly tab for mine cleanup.....the EPA estimates that some of these mines will cost taxpayers more than \$50 million EACH to clean up."

This KMC company that has no assets and no liabilities, no bonds and a free lawyer fits the description. What's more, the comment in 2015 by Steven Mauk that he MAY be able to compel KMC to mitigate any impact their trucks may have, "but these are public roads, we cannot restrict use." So who pays for all their trucks ruining the roads, polluting the 350 mile radius they travel with dirt, dust, diesel, noise, traffic? The taxpayers, the same ones who pay for the clean-ups...where is your Moral Compass?

I was told you said the incoming responses to this project were 50/50 for and against it. I want you to prove that Shelby, tell me where I can see all these as public records for myself. I have no idea WHY the BLM would support such a proposition that will cost this community so dearly for NO GOOD REASON. I am asking you WHY, now that I have given you mine.

Very truly yours,



Kirkland mine

1 message

Thu, Jul 13, 2017 at 12:15 PM

I'm opposed to the mine opening

The aquifer that feeds my well will also be use by kirkland mine operations.

This aquifer has limited use now. It will not hold up under industrial use. Will we just be left without water when the mine runs us dry?

Can the mine insure us our wells will not dry up. Will they be obligated to help us when our wells won't pump water. Kirkland mine must supply there water needs from another source as to not effect their neighbors small residential well systems.

Sincerely,

Sent from my Verizon Wireless 4G LTE smartphone



Kirkland Mining Co.

1 message

Thu, Jul 13, 2017 at 12:01 PM

BLM, Hassayampa Field Office

To Whom It May Concern,

My husband and I were not able to attend the public meeting held at the Skull Valley Community Center on July 11th, but would like to give our thoughts and opinion concerning the Kirkland Mining Co.'s plans to develop a pozzolan mine nearby. This is an excellent idea and opportunity for our area. We are aware of this company's research into all the aspects of mining this material including the environmental concerns that they have addressed. My husband and I have lived in the Skull Valley area for many years (he owned and operated a ranch in Skull Valley) and presently we own ranches in the Hillside area, approximately 20 miles from the Kirkland Mining Co. site. I was at Skull Valley for and have a great deal of interest in the betterment of opportunity for our friends and neighbors living in our community.

Unfortunately, there are a few people, and I should underline <u>few</u> that do not want to see any kind of advancement of industry for the area. Those opposing this venture came from different states and from large cities. They have made their fortunes elsewhere and apparently do not want to let our community change in any way. However, we need jobs for those who live here and this is an excellent possibility for many .

Please do not be swayed by a few protesters. Every one that we have spoken with are excited about this mining venture and welcome it. As you well know, the silent majority rarely come to meetings. We certainly welcome the Kirkland Mining Co. and wish the best for their success.





Erionite 1 message

Thu, Jul 13, 2017 at 12:14 PM

I am writing to voice my concern over the proposed mining of pozzolan In Kirkland, as every other pozzolan deposit in the state has contained erionite, which, as I'm sure you know, is 200-800 times more deadly than asbestos. I am certainly no geologist, but very minor research shows how widespread cancer becomes in the presence of erionite, and there is every reason to believe that this pozzolan will be just like the rest: poisonous.

Can you shed any light on this?

Signed,

Concerned Citizen



Please clarify

1 message

Thu, Jul 13, 2017 at 5:07 PM

Hi Rem and Shelby,

I suspect you are rather busy these days, so perhaps email is better than expecting a phone call....

Here are some items I hope you can respond to quickly:

- 1. The Mining Plan of Operation, Section 2.3.3, "Chemical analysis to show that the material is inert could be provided upon the request of BLM". Can you please request this analysis and share it with the public?
- 2. Determination of Locatable vs Saleable. What were the criteria used, and what data was evaluated vs the criteria. This seems like a somewhat unusual determination, and really a judgement call.......
- 3. The Mining Plan of Operation, Section 2.3.5, Is the 85 truck trips per day round trips or one way? In other words, would it really be $85 \times 2 = 170$ trucks per day?
- 4. What is the name and contact information for the Hydrologist working on this project?

Thank you, and best regards,



Kirkland Mine (Skull V alley Impact statement)

1 message

Thu, Jul 13, 2017 at 8:06 AM

Greetings Ms. Shelby Cave & BLM Staff,

Please note the specific following CONCERNS regarding this proposed Mining Operation in Kirkland.

ALL these concerns come the own Mine's Operations & Information sheet.

1. Heavy truck traffic on Iron Springs Road, Williamson Valley Road, Outer Loop, Highway 89 through Peeples Valley and Yarnell. Up to 85 truckloads loaded with mine material PLUS 85 returning empty trucks PLUS up to 18 trucks of water PLUS ancillary support trucks are expected to travel North and South on Iron Springs road PER DAY. This means a truck roughly every 3 minutes, some heading North to Williamson Valley and others heading South through Yarnell.

(Pg 25-Referenceing Mine Operation FAQ). The Plan of Operation provides no further detail on truck routes, or how many go North vs South, etc. Much will depend on where the secondary processing facilities and ultimate markets are located, which could change over time. It should be noted that the

Yavapai County Sheriff has no training or capability to monitor or enforce commercial trucking regulations.

- 2. Operation is planned for 40 to 80 hours per week during daylight hours (Pg 13 -Referencing Mine Operation FAQ), and is expected to operate for 40 years. This is an issue because the Noise and Traffic problems are not limited to a Mon Fri 40 hour schedule.
- 3. The Plan calls for 35,000 gallons of water to be used PER DAY for dust control. Some water will be pumped from a well on adjacent private property (20 gallons per minute), and some will be trucked in from other private wells. The Plan of Operation does not specify location of the "other wells". The private homes immediately adjacent to the Mine have, over the past 20 years, experienced severe problems with wells dropping production and even going dry.
- 4. The crushed rock material being extracted in this Open Pit mine is primarily composed of silica and alumina. Fine particles of silica and alumina are hazardous.
- 5. The Mine will need a permit from AZDEQ for air quality, but does not need a permit for pumping the water (Pgs 13, 19, and 20-Referencing Mine Operation FAQ)
- 6. The Mine includes a 10,000 gallon diesel tank on BLM land, and a 2,500 gallon waste oil container on the adjacent private land (Pg 17 -Referencing Mine Operation FAQ)
- 7. The Skull Valley Volunteer Fire Department is mentioned in the Plan for emergency response services. Though staffed with dedicated volunteers, this organization has does not have capability

to respond to accidents at the Mine.

Please DO NOT ALLOW this Mine Operation to RE-open. The last Mine Operator's had a MESS out there. I have seen it 1st hand, when it was open previously. Dusty-dirty Mine Operation!!

Please respect the Land, the Local People and DO NOT ALLOW this to happen!

Best Regards,

Skull Valley Resident & Prescott Native.



Kirkland Mine Open House Comments

1 message

Thu, Jul 13, 2017 at 1:24 PM

Shelby Cave, pHD Project Manager

I am attaching my comment form. I have also mailed the original. My contact information is:

Mailing address:





Kirkland High Quality Pozzolan Mine Draft Mining and Reclamation Plan of Operations

Environmental-Assessment DOI-BLM-AZA 3712

OPEN HOUSE COMMENT FORM

July 11th, 2017, 6 pm to 8 pm

Skull Valley Community Center, 3150 Old Skull Valley Rd., Skull Valley, Arizona

The Bureau of Land Management (BLM) would like to obtain your input regarding social, economic, and environmental issues and/or concerns associated with this project. Please list your name and address below.

CONTACT INFORMATION (Optional* - Please Print)

EMAIL ADDRESS (or Mailing Address if no email address is available):
Representing Self X Representing Organization Name of Organization:
1. Please provide any comments and/or concerns regarding the proposed project:
AS A CONCERNED RESIDENT I WOULD LIKE TO VOICE
MY CONCERNS REGARDING THE PROPOSED MINE -
MY FIRST AND MOST PRESSING CONCERN IS THE
DELITERIOUS EFFECT THAT INCREASED TRUCK TRAFFIC
WILL HAVE ON OUR ROADS, OUR PROPERTY IS RIGHT ON
HIGHWAY 89 IN PERPLES VALLEY AND I BELIEVE THAT
THE LEVEL OF TRUCK TRAFFIC MOVING THROUGH OUR
COMMUNITY ON HIGHWAY 89 WILL RESULT IN DINCREASED
NOISE, 2 CONGESTION AND TRAFFIC PROBLEMS AS CARS
VIE WITH LARGE TRUCKS TRYING TO GO TO PRESCOTT
OR DOWN YARNELL HILL, (3) INCREASED DUST (4) DAMAGE
TO OUR ROADS WHICH ARE NOT BUILT TO HANDLE THIS
TYPE OF USE AND THE POTENTIAL OF DECREASED
TOURIST TRAFFIC AND AT A TIME WHEN OUR SMALL

Public input is an important part of the project development process. Comments are requested by **July 25**th, **2017** in order to ensure timely consideration, but are welcome at any time. Please submit your comments or concerns to Shelby Cave, PhD, Project Manager, BLM, Hassayampa Field Office, 21605 N. 7th Avenue, Phoenix, AZ 85027; via fax at (623) 580-5580 Attn: Shelby Cave; or via email at KIRKMPO@BLM.GOV

Privacy notice: Before including your address, phone number, email address, or any other personal identifying information in your comments, be advised that your entire comment(s), including personal identifying information, may be made publicly available at any time. While individuals may request that the BLM withhold personal identifying information from public view, the BLM cannot guarantee it will be able to do so. If you wish to withhold your personal information, you must state this prominently at the beginning of your comment(s). We will make all submissions from organizations and businesses available for public disclosure in their entirety.

Project information is available http://bit.ly/2rRYTII



COMMUNITY IS STILL TRYING TO	RECOVER FROM THE YARNELL	
FIRE.	· · · · · · · · · · · · · · · · · · ·	
· (CC)		
I AM ALSO VELY CONCE	RNED ABOUT THE AMOUNT	
OF WATER USE ASSOCIATED WITH THE MINE. I WAS		
TOLD THAT THE EXPECTATION WAS FOR 20,000 - 40,000		
GALLONS PER DAY, ALL OF IT IN THE FORM OF		
GROUDWATER. ARE THERE STUDIES ALREADY PERFORMED		
OR TO BE PERFORMED T	HAT WILL ADDRESS THE	
	2 DEPLETION OR WATER	
TABLE LOWERING : EVERYO	NG NEAR THIS PROPOSED MINE	
RELIES ON THEIR WELLS	for their water needs.	
SHOULD THE AGUIFER BE	DRAWN DOWN TO LEVELS	
BELOW WHERE THESE RE	SIDENT'S WELLS ARE	
EFFECTUE, THEIR PROPE	2TY BECOMES ESSENTIALLY	
WORTHLESS	i e	
1) N JP		
THESE ARE TWO OF MY	CONCERNS . I HAVE OTHERS	
	A DECISION ON THE MINE	
CAN BE MADE THATS TAKES IN THE COMMUNITY AND NOT JUST MEETING	POTENTIAL PROFIT OF A MON-LOCA FEEDBACK CORPORATION.	
Please take a moment to answer the following questions, w	hich will assist RIM with future meetings:	
riease take a moment to answer the following questions, w	mich will assist between future meetings.	
1. How did you hear about this meeting?	Company of any	
Letter Newspaper Website	TV Other: LEADERS	
2. Was the meeting presentation easily visible and	3. Were the meeting presenters clear and informative?	
audible? Yes No X	Yes No 🔀	
4. Was the length of the meeting appropriate?	5. Was the meeting venue satisfactory?	
Yes No M TIME TO HUNT DOWN "EXPERTS" TO ASK A	Yes No M WORK, PEOPLE NEED TO BE ABLE TO ASK THER	
QUESTION, AND THEN MOVE ON TO ANOTHER. Project information is available.		





Proposed T ufa mine in Skull V alley

1 message

Thu, Jul 13, 2017 at 3:26 PM

Attn: Shelby Cave,

I cannot believe the BLM would approve such a disastrous undertaking that will be detrimental to so many lives in Skull Valley and surrounding areas. I don't understand why the state of Arizona would allow such a thing.

Never mind that mining the tufa rock would have a huge negative impact for wildlife and destroy this natural beauty in our state. The quality of air around here will be destroyed and the impact of 30 to 85 trucks a day will ruin

the roads. Iron Springs Rd. was upgraded awhile ago. Now the truck traffic will destroy it if approved. And the truck traffic encompassing a large area will be awful in this quiet corner of the state.

Please think long and hard on this proposal and the people who will be hurt by this project.

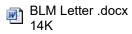
Sincerely,



Kirkland Mine

1 message

Fri, Jul 14, 2017 at 4:11 PM



To Whom It May Concern,

MY husband and I own a home in Yarnell Arizona. It was our retirement dream after leaving the corporate world to live in God's country. It is little slice of heaven in a beautiful quiet neighborhood with a temperate climate. We love the strong sense of community in Yarnell and its slow paced lifestyle. Yarnell is an old fashioned community where we can walk to the post office, hardware store, antique shops and grocery without fear of excessive traffic. This little gem of a community with clean air and quiet tree lined streets. We share this lifestyle with many of our contemporaries who chose Yarnell for the very same reasons.

This resilient little community has recently withstood two fires, floods and recessions which caused the closure of many businesses in town. Yarnell is just beginning to blossom after healing from so many disasters. We are very distressed with the news BLM (Kirkland Mining Company) is planning on opening a mining operation in the Skull Valley area which crush Yarnell and the surrounding communities with noise, air pollution and excessive traffic. The roads will be congested and become unsafe. Streets will be prematurely worn out and damaged form the numerous huge trucks with heavy loads of material. Businesses will close as tourist traffic dries up, the mainstay of Yarnell's economy. Property values will plummet and Yarnell will likely become another statistic on the list of dead American small towns. All of the wonderful attributes that drew us to Yarnell will be gone for decades. We implore you to rethink the means of transporting materials from the mine.

This is not an antibusiness or anti corporation kind of letter. My husband and I believe in the free enterprise system but ask that an alternative method of transporting the mine materials be seriously considered. The idea of a railroad spur was rejected due to cost. This would be a very short spur and thousands of dollars, if not more, would be saved in truck expenses, gasoline costs and especially time. We welcome business that can add to the national, state and local economy. We plead that you understand what the traffic and noise will do to the local economy so dependent on tourism. Please take the thoughts and wishes of the local population into consideration.

Sincerely,



Public Input regarding Kirkland T uff Mine

1 message

Fri, Jul 14, 2017 at 8:34 AM

As a resident of Prescott's Williamson Valley I am very concerned about the potential impact of the Kirkland Mine in terms of greatly increased heavy truck traffic seven days per week.

It is anticipated that up to 85 truckloads loaded with mine material, plus 85 returning trucks, plus up to 18 trucks of water for dust mitigation, plus ancillary support trucks are expected to travel North and South on Iron Springs Road per day. As Williamson Valley Road is the most direct route to the concrete plant in Drake, we anticipate a great deal of that traffic to pass through our residential corridor.

This is problematic for a number of reasons:

- 1) Abia Judd Elementary School and Granite Mountain School (grades 5-6) are both located at the junction of Iron Springs Road and Williamson Valley Road. Traffic tends to bottle neck at the entry and exits to these elementary schools, especially during morning drop off and afternoon pick up of children. Adding significant heavy truck traffic to the mix will exacerbate the bottleneck at best and increase the potential for accidents at worst.
- 2) As much of Williamson Valley Road is patrolled by The Yavapai County Sheriff Department, there are limited patrol officers to monitor this additional traffic for safety and law enforcement. Also, the YCSO has no training or capability to monitor or enforce commercial trucking regulations.
- 3) Much of Williamson Valley Road is 2 lanes only with dozens of road access points from residences onto Williamson Valley Road. Adding heavy truck traffic and ancillary support vehicles will make ingress and egress for residents in this residential corridor more difficult and increase the potential for serious accidents which would clog this vital vehicle artery.
- 4) There are not sufficient patrol officers to assure that trucks are adequately covered to prevent silica dust from leaving the truck beds and polluting our schools and homes in our residential corridor. Silica dust is a known carcinogen.

My second concern about this mine is the amount of water that will be needed for dust mitigation. It is estimated 35,000 gallons per day will be used for dust control. The influence of pumping water from an aquifer that all Skull Valley residents share will dramatically impact those residents. The draw-down of ground water may well require residents to drill new and deeper wells at great expense. It is not clear that the ground water aquifer can sustain 40 years of such use for dust abatement without seriously depleting ground water stores.

Water is our gold, our limiting factor in northern Arizona. Ground water mining is already occurring in most areas in northern Arizona, with inadequate recharge yearly due to drought conditions.

I strongly urge you to do a thorough Environmental Impact study and consider the impact of this mine on safety and quality of life for all area residents.



Kirkland mine

1 message

Fri, Jul 14, 2017 at 7:47 PM

I oppose the mine

We did not have enough time to respond to the BLM scoping period. It started on Monday 6-26-2017 the up coming weekend

Saturday 7-1-2017 was Prescott 's biggest weekend of the year. rodeo, parade, street festival, then the 4th of July. Your press release was ignored. By design. it's clear this is your intentions all along. Act like you put the info out there and when nobody response your in the clear.

You owe us minimum 1 week to respond to this atrocities Sincerely

Sent from my Verizon Wireless 4G LTE smartphone



Kirkland Mining Company

1 message

Fri, Jul 14, 2017 at 3:16 PM

ATTNC: Shelby Cave

I'm writing with additional concerns about the 12 sensitive species listed in the Kirkland Mining Company's Plan of Operations biological Survey. The Biological Evaluation of the area was obviously just a snap-shot because I have viewed many species of bat, including I believe the Pale Townsend's Big-eared Bat and the Cave Myotis Bat in the mine site area and seen roosting spots in the rock crevices. Perhaps the survey took place at the wrong time of year. A spring down stream of the mine area contains many fish and amphibian species, including the Arizona Toad, which seems in conflict to the survey's findings that Arizona Toads may be present in Skull Valley Wash and tributary canyons around the edges of the Study Area. No suitable habitat, such as temporary pools, are likely to be present away from these tributaries in the Study Area

By the surveyor's own notes, "Survey results reflect the general conditions but do not provide complete coverage of the Study Area." More study needs to take place and cannot be completed in the projected time frame between now and early 2017. I suggest, to mitigate and prevent irreparable damage to sensitive species, the environmental assessment period be extended so that further data can be collected and an independent surveyor, not paid by the Kirkland Mining Company, can more effectively compete a correct survey. Sincerely,

Sent from Windows Mail



Skull Valley Mine Proposal

1 message

Fri, Jul 14, 2017 at 8:20 AM

Attention Shelby Cave:

I emailed in questions, I filled out a comments card after the July 11 meeting, I left a call back message at 623-580-5580 with no acknowledgments of receipt of anything. I can see where the public stands in the hierarchy of importance when big money makes a proposal to degrade Skull Valley. I am disappointed in BLM's response and service to the public.

Land Owner



Fwd: Kirkland Mine POA

1 message

Sat, Jul 15, 2017 at 8:31 AM

FYI. Let's chat Monday. I wasn't sure, but I didn't want to give your direct contact info.

Hi

It was nice meeting you at the meeting earlier this week. Thanks for the email.

I'll be sure to share the news release for the next public meeting with you once it is released. Thanks for offering your help to ensure information is posted to community boards and for relaying the locations in town that have given consent for information to be posted. It might be me personally who heads out there to post the information.

The National Environmental Policy Act (NEPA) Specialist in our Phoenix District Office is Brian Buttazoni. He monitors the project email account at KIRKMPO@blm.gov. If you address your email to him, I will connect with him to make sure he is in touch with you.

Lastly, I don't have the specific information you're asking for but I can certainly look into it and get back to you. Many of the folks in our office are busy with fire season so please bear with me. I'll be in touch.

Again, thanks for reaching out. Trust that I hope to be a positive link between your community and the BLM.

Best,

Hi

I spoke to you at the meeting in Skull Valley regarding the press release and helping update your contact list so those of us in the affected communities are actually being notified as to the progress and dates leading to the re-opening of the mine.

We have a few meetings set up within the Weaver Mountain Region and with ADOT and AZ Parks so I'd really appreciate it if you could send me the info asap so we can get you the feedback you were in Skull Valley to solicit.

As per our conversation, I'd also like the contact information for the alternative BLM Environmental Specialist that was in attendance- many of us in this area have had direct or indirect contact with Shelby Cave and are uncomfortable having her field our questions.

Also, I was wondering if you, as BLM PA Officer, are able to provide details included in the NOI submitted by Kirkland Mining Co.; i.e. bond amount requested/accepted by the BLM (exploratory permit should have included a bond as well), truck schedule and route, weight of cargo, type of truck being used, proposed hours of operation etc., or if there is someone else responsible for those specific enquiries.

We are having a community meeting on Saturday so I will have all the permissions from the Chamber, Schools, and news outlets for this area so I can start sending you that information soon. We also have community boards in each area throughout the entire region- when you send me the press release I can make sure they are posted. The Community Centre, Library, Dollar General and each Post Office have given consent to post information as well so that should help you to.

It was so nice to meet you and I look forward to hearing from you.



Re-opening the mine

1 message

Fri, Jul 14, 2017 at 4:50 PM

I'm a resident of Glen Ilah in Yarnell and I am against reopening the mine. Yarnell is a very quiet community and having the trucks from the mine passing thru Yarnell would greatly disrupt the community with the constant noise. I believe it will discourage people from wanting to live here and have a very negative affect on property values. People come and live here in Yarnell because it is a quiet, peaceful community.

Sincerely,

Sent from my Verizon, Samsung Galaxy smartphone

Scoping Notification Letter

Submission Successful Your Submission ID is: KIRK_SCOP_1-1-59082

Names & Addresses

United States
Email Address:
Day Phone:
Evening Phone:
Fax Number:
Other Phone:

Agency: Public Web Page

Comment ID: 1

Comment Title: Kirkland Mine Public Scoping Comments

Comment: Please see the attached document for a list of Issues related to the Kirkland Mine

Attachment: <u>deGrenade Public scoping comments.docx</u>

Submission Classification

Response Type: Front Office Submission Form
Delivery Type: Front Office Submission Form

Receipt Date: 07/14/2017 Status: ACTIVE

Agreements

Yes - Withhold personally identifying information from future publications on this project?

Yes - Please include me on the mailing list for this project?

Original Submission Files

Kirkland Mine Public Scoping

In regards to the proposed Kirkland Mine, I have several issues of concern that I would like to see addressed in the forthcoming Environmental Assessment contracted to Westland Resources.

Biological Resources

Issues of Concern:

- 1. Skull Valley has unique biological resources because of its natural, year-round wetlands and special aquatic sites, its riparian vegetation, and contiguous riparian habitat along Skull Valley wash and several of the associated tributaries. Washes on the Mine property have surface water and shallow pools most of the year and serve to host metapopulations of riparian obligate species. While these pools may seem small, riparian areas in Arizona are unique and provide valuable functions and services to species and ecosystems.
- 2. Yellow-billed cuckoos have been recorded by local bird biologists in this valley. While habitat on the project area does not provide the habitat primary constituent elements of riparian woodlands 200 or more acres in extent and dynamic riverine processes, the riparian habitat on the project area could provide valuable stopover habitat. Surveys have not been conducted in the valley to determine if the recorded yellow-billed cuckoos were migrant or nesting individuals; if they do nest in Skull Valley, direct impacts of the Mine could include noise and dust generation.
- 3. Nesting birds utilize the riparian habitat along the drainage features of the project area. Noise and dust generation would deter these species from nesting or decrease the likelihood of successful reproduction.
- 4. Migratory birds may use the project area washes as stopover habitat, and these would be affect by the destruction of the drainage feature beneath the proposed Mine footprint and the noise and dust generation that may deter them from using washes proximate to the Mine footprint.
- 5. Bald and Golden Eagle Act. Bald and golden eagles have been seen in Skull Valley. Bald eagles are migratory, and golden eagles occasionally establish nests in the area. The cliffs may provide potential nesting habitat for golden eagles.

Proposed mitigation/design features:

1. Kirkland Mine could choose to conduct on-site mitigation of its tributary drainage features to increase riparian habitat. Other possibilities exist of working with AGFD to develop in-lieu fee projects within the same HUC 12 (i.e. there are properties in the valley currently under conservation easements that could be restored; or new properties could be identified, purchase, donated to the AGFD for the purposes of conservation in perpetuity. Kirkland Mine could also conduct extensive biological surveys both on site and in the surrounding wetlands to

- determine the degree of connectivity between surface water pools on the property and in the valley.
- 2. Kirkland Mine should conduct summer surveys (by a permitted biologist, according to USFWS protocol) for yellow-billed cuckoo along Skull Valley wash to determine if recorded cuckoos are migratory or nesting in Skull Valley. Surveys could be conducted prior to the start of Mine operations to determine direct effects on these individuals, and yearly thereafter as long as the Mine is operating to see if Mine operations are impacting the behavior of the birds.
- 3. Nesting bird surveys should be conducted prior to the start of Mine operations if they begin during the nesting season, and if nests are located, appropriate buffers should be established during operations.
- 4. Migratory bird surveys should be conducted before the start of Mine operations, and if birds are detected, off-site mitigation measures should be implemented—such as property purchased and provided a conservation easement (in perpetuity) for bird habitat.
- 5. Bald and golden eagle surveys should be conducted prior to the start of Mine operations both on site and at other key locations in Skull Valley. If eagles are detected, off-site habitat for restoration/conservation could be acquired and additional measures should be implemented on site to preserve nesting and foraging areas.

Air Quality

Issues of Concern:

- 1. Dust generation is the primary concern of community members. Temporary dust abatement measures are included in the Mine plan of operations, specifically using water to keep areas of Mine operations moist. There are two problems with this approach—1.) the use of groundwater to reduce dust and 2.) the long-term impacts of micro-particle generation. Groundwater in the upper alluvium is limited, even if deeper groundwater is excessive—see more under groundwater resources below. Micro-particles generated through the scraping and crushing processes may be temporarily abated by spraying water, but after they dry, the wind will cause these to be airborne as long as the Mine is in operation and for decades thereafter. These will affect people, wildlife, and livestock in the broader vicinity downwind of the project area as winds can be very strong and carry these particles long distances.
- 2. Pollution from heavy equipment and from trucks in this valley also increase air pollution. The amount of pollution generated, while not significant in terms of other populated areas, will increase local air contamination by many times. Wind patterns in the valley will carry this pollution along the valley; and thus impact the people, livestock and wildlife in the entire project vicinity.

Proposed mitigation/design features

1. Air monitors should be in place throughout Mine operations and monitored by Mine operators and BLM agents. The crushers can be covered instead of open. Trucks must be covered. Vacuum mechanisms may be employed during operations to capture dust from the crushing. Surface sealants can be applied to dirt roadways on Mine property, as long as these do not contaminate local waterways. In terms of

- water, a deeper well should be drilled into the aquifer beneath instead of using a shallow well that will decrease general groundwater quantity for local residents.
- Mine operations should be limited so that fewer trucks and heavy equipment are operating, and thus limit the amount of pollution that is generated in the area. All equipment should be kept in good operating conditions to reduce the amount of pollution generated. Travel distances should be assessed to limit total pollution by trucks.
- 3. As a general consideration, vegetation absorbs CO₂. The Kirkland Mine could be required to plant cottonwoods and willows in the washes that will be undisturbed by the mining operations to increase local vegetation and restore riparian habitats. This will have the secondary function of absorbing excess CO₂ in the immediate area.

Noise

Issues of Concern

- 1. Several sensitive noise receptors (residential areas, schools, churches) are located near the Mine property.
- 2. Heavy equipment used to extract and crush the equipment will generate substantial noise impacts for residents, livestock, and wildlife.
- 3. Increased truck traffic will impact residents along the transportation route from the Mine site to the destination towns.

Proposed mitigation/design features

- 1. Efforts should be made to identify and reach out to residents, churches, and schools near the Mine and along the transportation routes.
- 2. Noise barriers such as berms, walls, vegetation soundbreaks, and other features can be established or put in place to reduce noise pollution from leaving the project area. Operations should be limited to normal working hours.
- 3. Truck traffic should be limited to a minimum number of trips per day. Trucks should have adequate mufflers to reduce traffic sounds. Traffic should be limited to normal working hours.

Surface Water

Issues of Concern

- 1. Creeks in the immediate project area vicinity have relatively permanent flow and are thus jurisdictional waters of the U.S. There are also springs, wetlands, and special aquatic sites in the project area vicinity that will be directly and indirectly affected by Mine operations, not limited to discharge of fill into waters of the U.S., airborne particulate contamination, and a change in functions and services related to Mine operations, traffic, noise, increased personnel, ground disturbance, and alterations of wildlife corridors and other biological connectivity such as species genetics between upgradient perennial waters and downgradient perennial waters. Springs in the project vicinity may hold unique species and provide special functions and services to the surrounding environment; these springs may be affected by changes in groundwater quantity due to groundwater extraction by the Mine. These springs may also be affected by airborne dust pollution.
- 2. Drainage features on the project area are likely to be jurisdictional waters of the U.S. and have a significant nexus to downstream traditional navigable waters. Local

wetland areas and special aquatic sites in Skull Valley trap pollutants, filter stormwater, provide habitat and support the ecological, biological, and chemical characteristics of downstream traditional navigable waters on the Colorado River. If the Corps determines that drainage features on the project area do not have a significant nexus with the downstream TNW, then as a community, we will have the option of appealing using the federal appeals process.

- 3. Micro-particles may contaminate surface water in the on-site and surrounding drainages, and affect water quality and local riparian species.
- 4. Mine operations may disrupt biological corridors that are dependent on surface water.
- 5. Project area waterways may be polluted by spilled fuels.

Proposed mitigation/design features

- All wetland areas, springs, and areas of relatively permanent flow should be identified on the project area and within a 5-mile radius of Mine operations. These springs and wetland areas should be surveyed for T&E and BLM sensitive species. Their functions and services should be assessed in relation to the Skull Valley watershed.
- On-site mitigation should be conducted to restore and enhance project area riparian
 areas and/or local areas should be selected for off-site mitigation. AGFD should be
 contacted to consider local opportunities for in-lieu fee and mitigation banking
 projects that will preserve Skull Valley wetlands and their associated functions and
 services in perpetuity.
- 3. Appropriate stormwater pollution prevention measures should be established and monitored throughout the life of the Mine. Reclamation measures should address potential contamination after Mine closure. Dust abatement measures should be implemented and monitored closely.
- Biological corridors should be identified, and restoration measures implemented on and off-site to maintain biological connectivity between upgradient springs and areas of relatively permanent flow and downgradient wetlands, streams, and riparian areas.
- 5. Move the fueling station farther from project area waterways.

Groundwater

Issues of Concern

1. The current well on Mine property is drawing shallow groundwater from the local alluvium. This groundwater is limited, and a drawdown would affect the wells of local residents as well as springs in the area.

Proposed mitigation/design features

1. Kirkland Mine should be required to drill a deeper well into the underlying fossil aquifer for use on Mine property. This underlying water has a potential for high levels of arsenic, and these effects should be evaluated for short-term and long-term contamination of soil and surface water if they are used in dust abatement, but this may provide an alternative water source and alleviate concerns of local residents over groundwater impacts. The idea of using water trucks to supplement groundwater shortages only increases traffic and externalizes the water footprint of the Mine.

Health and safety

Issues of Concern

- 1. Local residents are concerned about the silica content in the dust and its related health impacts.
- 2. Air contamination from heavy equipment and trucks will impact people along the valley and transportation route.
- 3. Increased traffic on Iron Springs Road will cause more accidents and is a danger for local people (especially children), livestock and wildlife.
- 4. Fire at the Mine site is a very real potential and danger.
- 5. Skull Valley has a volunteer fire department that respond to accidents in the Mine vicinity and on Iron Springs Rd. These local residents are already taxed with the amount of traffic incidences and local medical emergencies. They know the rural area and are able to respond more quickly than emergency medical responders from Prescott.

Proposed mitigation/design features

- 1. Dust should be analyzed for potential dangers to health and dust abatement measures practiced to the fullest extent.
- 2. Heavy equipment and haul truck use should be minimized.
- 3. Fire prevention practices should be implemented and monitored.
- 4. Kirkland Mine should compensate the local volunteer fire department through financial support for the members, additional mechanical support for the fleet of trucks, and/or pay for professional emergency response services while the Mine is in operation.

Traffic

Issues of Concern

- 1. Increased traffic due to the Kirkland Mine on Iron Springs Road (estimated at 85 truck trips per day—but it is not clear if this is one way trips or round trips) will impact local residents and tourists with noise, dust, air pollution and traffic congestion.
- 2. The increased traffic will impact residents who live along Iron Springs Road, Copper Basin Road, Williamson Valley Road, and Highway 89 as well as communities who use these roads to access Prescott, not limited to Ruger Ranch, Rancho Diamante, Long Meadow Ranch, Las Vegas Ranch, as well as rural residents from Yarnell to Bagdad to Ash Fork who use these access roads to come into Prescott.
- 3. Loaded haul trucks, travelling slowly on the steep grade will slow traffic going uphill so that travel times to and from work, school, shopping, entertainment, and emergency facilities are longer and more dangerous.
- 4. Increased traffic and traffic congestion will damage roadways, generate more air pollution, and ultimately cost taxpayers money.
- 5. Traffic going into Prescott is already dangerous because of limited passing zones, steep grades, sharp curves, and high speed motorists.
- 6. The local volunteer fire department has responded to many accidents in this area, including several fatalities, and slow haul trucks will increase the amount of traffic incidences along the two-lane road for twenty+ miles in both directions.
- 7. This increased traffic will also impact the ability of emergency personnel to respond to local non-Mine related emergencies by slowing traffic conditions in general between Skull Valley and Prescott.

- 8. The danger and accidents will eventually force Yavapai County to widen Iron Springs Road on taxpayer funds.
- 9. The increased traffic will cost residents time and people's lives, and cause frustration and anger.

Proposed mitigation/design features

- 1. Haul truck trips should be limited; water trucks should be limited.
- 2. An additional lane should be constructed for twenty miles in each direction, or a passing lane constructed to relieve traffic congestion.
- 3. Rail transport of the crushed material from Skull Valley or Kirkland should be assessed as a viable option.
- 4. Kirkland Mine operations should reduce the number of trucks and the hours of operation to the window outside of heavy traffic hours, such as 10:00 am until 3:00 p.m. Haul truck traffic should be restricted during dawn and dusk hours because of high wildlife incidences, and general noise disturbance. Hauk trucks should not travel at night.
- 5. The Kirkland Mine should provide support the volunteer fire department equivalent to the degree that they are increasing local traffic-related accident potential.
- 6. The Kirkland Mine should fund all helicopter responses to local accidents because of delayed/slowed traffic conditions along Iron Springs Road.
- 7. The Kirkland Mine should be held responsible for road improvements prior to the start of operations, from Highway 89 to Prescott.

Socioeconomic Impacts

Issues of Concern

- 1. Valley residents are concerned that the benefits of the Mine will not be shared among community members—who are the ones to bear most of the costs. These rural people are marginalized in that they have reduced access to health care, legal expertise, financial power to confront environmental justice issues, and may not be able to access or respond to public engagement efforts by the BLM and Mine during scoping and public response periods.
- 2. The Mine will generate few jobs in the community.
- 3. The Mine will decrease property values, not just in the immediate vicinity, but in areas along the transportation routes.
- 4. The Mine and BLM have not adequately involved the public in the surrounding area in the public process.
- 5. At the public scoping meeting, a woman expressed concern that the involved agencies were not going to conduct a "feelings" assessment—that is an assessment of emotions that do not fall into traditional Issues categories in an Environmental Assessment under the National Environmental Policy Act. How will the BLM, Mine and economic consultant address public emotion, emotional stress, related health consequences, negative feelings and interactions generated among neighbors who may disagree on the Mine (which have already caused public damage in the general vicinity), and other "feelings" not related to the aforementioned categories?

Proposed mitigation/design features

1. The Kirkland Mine and BLM should increase their efforts to hear and respond to concerns of local residents through better advertising of public events, and holding annual forums to hear and respond to people's concerns.

- 2. The Kirkland Mine should increase efforts to support local businesses by sponsoring local events, participating in the volunteer fire department efforts, supporting the local school, and providing opportunities for residents to benefit from their operations.
- The Mine should compensate for lost property value in the immediate vicinity and reduce its impacts to the greater community by limiting operations to normal working hours, and limit traffic to windows between normal travel times for local and nonlocal residents who use these roads to access Prescott.
- 4. The Mine and BLM should make an effort to reach out to everyone within a 20-mile radius in both directions to avoid or reduce hard feelings, potential law suits, and future Mine vandalism, traffic incidences, road rage, and other negative impacts to the community and Mine property and personnel. The public process for all scoping meetings should involve a white board or large pad of paper where the BLM, Mine personnel and environmental contractor personnel (Westland Resources) can write down peoples' questions instead of refusing to respond to people's immediate concerns by deflecting them to "experts" who may not understand the nature of the community, the distances and difficulties involved in accessing community meetings, peoples' general education levels, and the wide variety of concerns—for example it was unclear of socioeconomic, air quality, noise, and traffic specialists were present at the meeting. This very simple and proven technique demonstrates that the agencies involved are interested in people's concerns related to the proposed project.
- 5. The Mine, BLM, and environmental consultant should strive to include additional impacts in the EA by speaking with a wide array of people in the area and asking how they may involve them in the decision-making process as well as alleviate concerns about the potential damaging effects of the Mine, and in addition, assess the true costs and benefits of the Mine in the context of the communities, environment, plants and animals who will bear the cost and the people (owners, public at large) who will benefit. The Mine, BLM and consultant should design an alternative, with relevant design features that reduces costs to the communities in the general vicinity as well as the environment—such as reduced working and hauling hours, highway improvements, community sponsorship and support, and environmental protection measures for water, soil, vegetation, wildlife, and air resources.



Proposed Kirkland Mine

1 message

Fri, Jul 14, 2017 at 8:41 PM

Shelby Cave

I enjoyed speaking to you at the meeting. As promised; here are some thoughts on the proposed Kirkland Mine.

TRAFFIC

Traffic Congestion:

No real surprise here. Trucks that admittedly will have contracted drivers on narrow curvy roadways with multiple elevation changes is a recipe for disaster. There will be (not may be) a direct increase in traffic fatalities.

Additionally these large, heavy, and slow vehicles will severely restrict the residents of Skull Valley, Kirkland, and Yarnell from traveling on the only route that connects them to each other and the outside.

Iron Springs is an alternate route to get to Prescott when I-17 closes. This happens regularly. The plan to allow these trucks on Iron Springs potentially cuts off Prescott from Phoenix. This by itself should be an automatic stop to the idea of adding regular truck traffic to Iron Springs Road.

Emergency services to residents and businesses that need it are at high risk of being delayed. As we all know, time is the single largest factor in an emergency, whether medical, fire, or criminal. Planning a delay such as adding several large, slow, and heavy trucks is simply irresponsible.

Much of Iron Springs has limited shoulder areas, making every issue a close the road issue. There will be a substantial increase in issues.

Road Damage:

Iron Springs Road was not designed nor built to offer constant and regular heavy truck traffic. Make no mistake, we are talking about regular heavy truck traffic that will cost the state and county additional millions to keep maintained and useable.

There will be regular maintenance issues that arise, and a substantial increase of road debris (from edge deterioration to potholes.) There will be more road issues for local vehicle from increased claims for vehicle damage to additional accidents.

Keep in mind that every time someone stops for a tire or vehicle issue, they are at risk of injury or death due to limited stopping areas.

Environmental Damage:

Simply put, additional support will be required to keep the area maintained. There will be delays (which seem to always cause an increase in trash,) an increase in vehicles parts, and an increase in vehicle pollution.

Native vegetation will suffer and will need to constantly be monitored. Both wildlife and livestock will be dramatically impacted, by not just the physical damage, but by the dramatic increase in noise as well.

ENVIRONMENT

Biology:

Having read the woefully inadequate biologic report, I suggest that an actual legitimate biological report be required. A report must specifically include the following:

A comprehensive biological assessment of the site itself, not a limited area assessment.

A reasonable biological assessment of the surrounding area based on migration and other movement patterns. This should extend at least 5km for land based migration and 10km for air based migration. This assumes additional issues such as air or water changes do not exist. In the event of such changes (as we know there will be,) additional corridors should be assessed.

At least two assessments, each at a time when there are likely to be protected or critical species on site or in area (if they exist.) Not in March where there is limited plant visibility, many species of bats are in hibernation, and raptors are not migrating.

Raptors and bats, many species of which are protected or critical, should be specifically assessed. Migrating patterns should not be altered in any way for protected species. This area is known to have both eagles and falcon species regularly visit, as well as being home to a few species of bat.

The Arizona Toad was specifically mentioned as being just outside of the study area. This specific habitat must be studied to insure that no mitigation is required.

Air Quality:

Generally speaking there is always concern that contaminants may be released into the air. Some of these may create health issues.

Almost all dust creates respiratory issues, this is no secret, ask any medical doctor.

Dust mitigation is extremely important in Arizona and is absolutely required. In an area that already has water availability issues, this mitigation must be waterless. I personally am not sure what "dry" methods are available, but in the proposed location I see no alternative.

Water:

The proposed area has limited water availability currently, with some wells already gone dry. The proposed water, up to 36k gallons a day simply does not exist.

This represents a very significant issue for all other properties in a fairly large area, as this mining activity will deplete their resources. New and deeper wells will have to be drilled and/or water trucked into these communities, all at the expense of the land owner.

Livestock and other yard and farm animals will suffer, as there will be potentially no reasonable way to water them.

Much of the vegetation that calls this area home will also die. As water dries up, so will much of the natural beauty of the area, a prominent reason why so many chose to live or work here.

Land:

As mentioned above, water is a serious issue. Many plants will die as well as dust cover creating large erosive issues if this mine is allowed to produce as currently planned.

Wash vegetation will be dramatically affected both by lack of water and increase in the silicate moving down stream. This will also affect all biology in a potentially profound way.

Waste:

The plan calls for a large water holding tank and a fairly large oil holding tank onsite. I have concerns about the oil tank.

What is the plan to deal with any waste? Even standard trash will put more vehicles on the road.

ECONOMICS

Immediate Area:

There are several residences in the immediate area that will have an increase in noise, dust, and a decrease in water, potentially skyrocketing their cost and decimating their property value. As with all NIMBY issues, these are serious to the residents who live there. The difference here is that there appears to be no mitigation for this issue, and the owner of Kirkland Mine made it clear that she could care less.

Local Area:

With the increased traffic, difficulty in travel to small local businesses, noise from traffic, and degeneration of roadways, this project will have a direct and profoundly negative effect on area businesses and homes. We can expect a reduction in property values and commercial revenue – both affecting the taxes paid.

Outlying Area:

Many people travel Iron Springs Road for the beauty of it. There is a substantial amount of recreational uses in the area directly affected by this plan. Many people enjoy hiking, four wheeling or dirt biking, camping, hunting, motorcycle riding, and many other uses. This plan will certainly curtail many of those activities, with the traffic, noise, constant movement, etc...who wants to ride a horse (for example)

Bird watchers, hikers, and motorcyclists will find some other place where there hobbies and passions can be appreciated. This will have a direct impact on Prescott, and will potentially wipe out Kirkland and Yarnell. Kirkland will be in the middle of the traffic, noise, and closed roads that will certainly occur. Yarnell has been weakened following the fire a few years ago. Skull Valley and Peoples Valley have extremely limited retail operations. There is a real potential that this plan could wipe out four separate communities, as well as all of the ranches and farms that exist here. Residents will be forced to drive 40 or 50 miles for basic needs further impacting values and tax base.

Area Benefits:

The mine owner/operator made it very clear there would be no benefits for the local area.

CONCLUSION

It would be nice to be able to extract HQP from this previously mined site. This is not critical infrastructure material nor is it a national security need. Given that it is entirely unrealistic that most if the issues can be reasonably mitigated; there is no reason to even consider this plan.

The cost alone to reasonably mitigate the known existing issues, as well as the need to plan to mitigate several more potential issues is not economically viable.

The mine owner would like to make money while everyone around her suffers. Again, even she made it clear in the meeting that there would be no actual benefit to the area.

I cannot in any way support the current plan, although in general I support mining – especially on a site that has been historically used for mining.

For me to support this, the following requirements would have to be met:

Water would have to be brought in, not pulled from an already critical aquifer

No mining trucks on Iron Springs...all material would have to be moved via rail

Waterless or nearly waterless dust mitigation

An accurate, honest, and complete biological and environmental evaluation, with reasonable proposed mitigation for any issues or potential issues (if they exist)

Some kind of bond or insurance for losses of immediate area land owners

Some kind of reasonable plan for any waste.

Please keep in mind the above is not a complete list, simply a starting point to indicate what I believe are realistic approaches to opening the Kirkland Mine.

Thanks for your time,

Skull Valley



Tufa mine near skull valley

1 message

Fri, Jul 14, 2017 at 8:32 AM

I would like object to the large scale proposed mine in our area. Particularly the transportation plan.

Too many trucks, that are too large filled with materials that are somewhat hazardous.

Living in a rural area means that we use those roads for most everything—it is our connection to food, medical care, supplies of all kinds. We travel frequently out of necessity. Increased traffic, especially large semi-s, will cause increased congestion, delays and ruin the scenic by-way plan laid out by ADOT.

All those roads that are planned as the scenic route have recently been re-paved by ADOT and the county. The extra wear and tear will wear them out sooner.

Try shipping on the railway!

I am also concerned about the land when you are finished taking out 500,000 tons—what will it look like, what will be left? It is all too big and out of scale.

Very disruptive to our rural way of life.

I strongly object.

Yarnell



Kirkland mine concerns

1 message

Fri, Jul 14, 2017 at 8:12 AM

Issues regarding the mine

Construction has been going on in different areas for several years to improve the condition of Iron Springs road. This road is the one all people from Skull Valley must use to get to Prescott and beyond, Phoenix and beyond. We lived through all this construction and just very recently the roads were finished. They are nice now and I ride my motorcycle all over them whenever I can. I don't think the construction was done with 80 mining trucks a day driving on them In mind. They are rural country roads not highways.. This will effectively jam up traffic all day for us residents. We will have to defer to the large mining trucks spewing their loads all over thus destroying our cars and making motorcycle riding impossible. All the large trucks running up Iron Springs to Prescott slow to a crawl at the top of the hills. I leave for work an hour early already and this will cause us all to have to leave even earlier as we will be stuck behind endless trucks doing 30 mph. The physical damage to the road that was just reconstructed for cars will be horrendous. I can't wait to see how many mining trucks fail to navigate the corners up by the Kirkland Steakhouse in the winter. Every accident will effectively close off that section for long periods of time making it impossible for Skull Valley residents to go anywhere south without long detours. I must speak of my love of riding my motorcycle up here. This mine and the 80 trucks a day will effectively kill that for me. No one wants to ride behind a truck spewing dust, dirt and whatever else as it lumbers down the road. Plus these will be outside drivers making navigating the roads all the more dangerous as we will have to dodge unknown people driving huge heavy dangerous trucks who may or may not know what they are doing. You will take that joy completely away from me and any one else who loves to ride the mountains up here.

Skull Valley is lush and green and we don't have massive amounts of dust in the air. We will now. You can talk about dust mitigation all you want but I lived near Silverbell for 20 years and saw "dust mitigation" first hand. There is no such thing and if there is it requires water which is an issue all on it's own.

I have a private well and it's a good one We have a nice aquifer here and we all enjoy relatively clean water. This mine is going to tap into our water and use it for themselves. Millions of gallons of water for one family to mine their claim taking that water from the rest of us who grow gardens or have livestock. We will receive no compensation for the use of the water and this mining family will not have to pay anyone for it either and if it gets depleted all the home owners in Skull Valley will be the ones who no longer have water. This nine will use so much water that I am very concerned about our local aquifer drying up. Water is a big issue up here and I will not be forced to have water hauled in and stored-I bought my house and land partly because of the well. I have as much right to the water as the mine but the mine will get to use all our water free of charge. Again-we will be the ones who are left with no water. How is this going to affect all the cottonwood trees and other vegetation that grows here simply because there is water?

I moved here 4 years ago for my husband's health. We had some issues with toxic mold and needed fresh clean air to heal. Now you want to fill our clear clean air with mining dust and debris and who knows what else. All for one family to mine their claim.

You will completely destroy the quaint rural landscape of this area. Gone will be all the activities we enjoy-evening walkstruck noise and dust and pollution will settle into our valley and become the norm. This isn't why any of us live here.

This mine will not even produce jobs locally. There will be no profit for any of the residents who own land and live here. The destruction of our rural country lifestyle will be taken from us completely. No more walks, bike rides or peace and quiet-and we will not even be compensated by way of jobs.

This is the first home I have ever owned. What is this mine going to do to my property values? You will be destroying property values for all so one family can make themselves and the BLM money.

On a personal note-my name is . My husband was ___ and he spent many hours at BLM meetings in Pima county so some of you there might recognize his name. We managed a ranch that got completely engulfed in the Ironwood Forest National Monument. His battle was in vain. We also had extensive dealings with the rangers who used our ranch as their playground chasing illegals around. Often times we would be awakened in the middle of the night because your rangers were hovering over our yard in helicopters shining spotlights into our bedroom windows. Chasing illegals who might be hiding under our bed I suppose. I intend to oppose this mine because it will ruin

this area where I am a first time homeowner but I am also realistic and I know that if the BLM has decided to side with the mining family-the rest of us don't matter at all to the BLM. You will ruin the lives of all the other families in this area-most of us home owners-in favor of making a few bucks off some "high quality" material this one family wants to mine.

So to sum it up-my concerns are:

Road congestion
Road destruction
Who will be driving these 80 trucks a day?
Dust
Dirt
Noise pollution
WATER
WATER

All the cottonwood trees the destruction of our lifestyle so one family can mine NO JOBS??!!

Property values

BLM destroying lives like it always does when it claims it's in the best interest of all involved when in reality it's a way for the BLM to make a few bucks at the expense of many private land owners-again.



3809 (AZP010) AZA-37212

1 message

Fri, Jul 14, 2017 at 4:29 PM

July 14, 2017<?xml:namespace prefix = "o" ns = "urn:schemas-microsoft-com:office:office" />

Reference: # 3809 (AZP010) AZA-37212

Thank you for the opportunity to comment on the Dra Mining` and Reclama on Plan of Opera ons submi ed by Kirkland Mining Company (Kirkland) to develop a high quality pozzolan mine on approximately 76 acres of public lands, located at the following:

Secon 28, Township 13 North, Range 4 west, Gila and Salt River Meridian, Yavapai County, Arizona (east of Iron Springs Road, south of Skull Valley and one mile north of Kirkland, Arizona).

I own , Ruger Ranch Subdivision, Phase III, , Peeples Valley, AZ. I am very concerned about the pot en al damage done by this mining ac vit y , such as the following:

- There could be Increased 24-hour per day heavy-truck traffic causing noise, road damage, windshield damage, and air polluon.
- Car accidents will occur more frequently due to impaence-passing on the two o-lane road or when heavy-truck traffic causes flying debris from uncovered loads, slow-downs, and other road hazards. Highway 89A is a main artery for local cizens and tourists who commute to and from school, work, recreaon, shopping, etc., in Presco, Presco Valley, Chino Valley, the Grand Canyon, Flagstaff, Interstate 40, and so on.
- Scenic destrucon from dust, smoke, fumes, all along the road to the processing plant.
- Erionite exposure at the mine, near the mine, all along the roads where the pozzolan is transported, and in the area where the pozzolan will be processed. Erionite is a highly toxic substance known to cause cancer and already found in Arizona.
- Potenal in terrupon or damage e to surface and ground water.

Thank you for taking my concerns into consideraon as you process this mine plan. As you can tell from the above list, I am opposed to this mine plan.



Kirkland Mine Comments

2 messages

Tue, Jul 11, 2017 at 11:22 AM

Dear Ms. Caves,

Attached are my comments relative to the Kirkland Mining Companies Plan of Operations.

Because of the extreme importance of this issue would you please confirm receipt of my email?

Thanks,

Mine_letter_to_BLM esigned.pdf

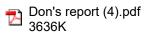
Sat, Jul 15, 2017 at 3:31 PM

Dear Ms. Caves, It was nice meeting you the other night.

Attached ____ comments for your review. You can see from his resume that he knows what he is talking about.

Please acknowledge receipt of his comments and mine also. I never did receive any acknowledgement from you that you received mine.(see thread below)

Thanks in advance for your help.



OPEN HOUSE COMMENT FORM

NAME:			
EMAIL ADDRESS (or M	ailing Address if no email address	s is available):	 .,
Representing Self	Representing Organization	Name of Organization:	

July 11th, 2017, 6 pm to 8 pm Meeting Follow Up

Skull Valley Community Center, 3150 Old Skull Valley Rd., Skull Valley, Arizona

The Bureau of Land Management (BLM) would like to obtain your input regarding social, economic, and environmental issues and/or concerns associated with this project. Please list your name and address below. I did not personally attend the meeting due to illness, but later heard from those concerned citizens who did, that the meeting did not go well, with minimal opportunity by the BLM and Yavapai County, for presentation of Public Comments, as had been planned.

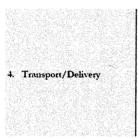
NAME: Donald Richards

EMAIL ADDRESS:

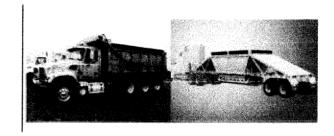
Representing Self

- My first concern about the mine, is that I am human, and want to maintain that status without contamination from a new mine that appears to not have any particular rules to follow during mine operation. I have some technical qualifications, including a BS and MS in Civil Engineering from ASU with a career specialty in the geologic aspects of underground construction 45+ years of industry experience; plus a year of graduate studies in Mining Engineering from the Colorado School of Mines. Also, I spent 2 years in the testing of physical properties of tuff in the materials laboratory of Holmes & Narver for the Atomic Energy Commission at the Nevada Test site in the early 1970s, for characterizing each site before an underground nuclear test could take place thus I also have similar site related experience.
- My second concern is that I was born and raised in Yavapai County, and do not want to see it ruined by an
 out-of-towner, who just wants to make more money for themselves with little or no apparent consideration
 of the Public; e.g. all the new houses in the mine area that were not present when it was previously
 operated. Although some nearby houses were present during the previous mine operation, the planned
 production is significantly greater than before
- My third concern, is the likely impacts upon the local area and its residents. I live in Kirkland, and would have to deal with any mine related ramifications along with all the other local residents, including those along all anticipated truck haul routes.

- My 4th concern is a variety of technical concerns, which are outlined below in detail in order to justify the individual concerns - no order of importance.
 - a. Road & traffic impacts the mine operation plan (https://eplanning.blm.gov/epl-front-office/projects/nepa/80330/110723/135592/Kirkland_MRPO_Revised_Draft_062217.pdf), on page 18 lists the proposed mining equipment, but includes no information on the haul trucks to be used to haul materials away from the mine, nor how many. The Mine Process and Equipment document notes the use of either 4 or 5 axle trucks see belpow (https://eplanning.blm.gov/epl-front-office/projects/nepa/80330/112331/137401/Mine_Process_& Equipment.pdf).



Covered haul trucks



The FHWA Guidelines for Flexible Pavement Design:

(https://flh.fhwa.dot.gov/resources/design/pddm/Chapter 11.pdf).

FHWA Guidelines would categorize this anticipated axle loading as Category 7 (Truck Factor of 1-0 -2.0) for the Single 4-axle truck with no trailer (left image above), or as Category 9 (Truck Factor 2.0 -2.3) for 5-axle single trailer trucks (right image above). If multipole trailers were used, the Categories 11-13 would apply, with the Truck Factor increasing to 3.0. This does not account for the number of trucks.

The proposed 85 trucks day crawling up the hills on Iron Springs road to Prescott at 35 mph will present a traffic hazard to "normal" traffic trying to drive the speed limit, not to mention the frequent bicycle riders frequently encountered along the road that even cars (much less large tractor trailer trucks) cannot safely get around without crossing the center line.

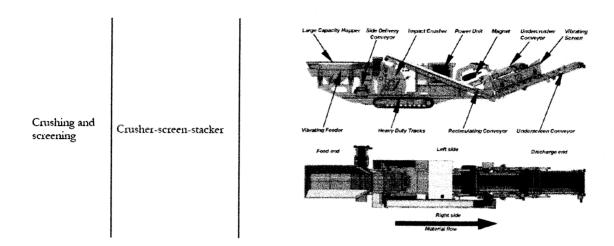
Before Final Mine Operation is approved, it should be demonstrated to the public by BLM, Yavapai County, and/or the Kirkland Mining Company, that all roads to be used by Kirkland Mining Company as haulage routes have <u>existing</u> pavement structures that will handle these loading conditions (in addition to having as many as 85 trucks per day) with no structural wear or distress to the pavement beyond that which would have been anticipated for pre-mining conditions. In essence, that the mine truck usage should require no more than "normal" wear and tear and maintenance on the pavement, with associated increased maintenance cost to Yavapai County, City of Prescott, or State of Arizona – i.e. the taxpayers.

Exhibit 11.2-A FHWA VEHICLE CLASSIFICATIONS AND TRUCK FACTORS FOR FLEXIBLE PAVEMENTS

FHWA Class	Description	Truck Factor ¹	
1	Motorcycles. This class includes all two or three wheeled	n/a	
	motorized vehicles.		

FHWA Class	Description	Truck Factor ¹
2	Passenger cars. This class includes all sedans, coupes, and station wagons manufactured primarily for the purpose of carrying passengers.	0.0004 to 0.0008
3	Pickups, Vans. This class includes all 2-axle, 4-tire single unit vehicles other than passenger cars.	0.0004 to 0.004
4	Buses. This class includes all vehicles manufactured as passenger-carrying buses. These vehicles will typically have a 2-axle, 6-tire configuration or 3 or more axles.	0.75 to 1.75
5	2-Axle, 6-Tire Single Unit Trucks. Vehicles with a single frame that have 2-axles and dual rear tires characterize this class. Typical vehicle types include recreation vehicles, motor homes, and delivery vehicles.	0.3 to 0.7
6	3-Axle, Single Unit Trucks. All vehicles with a single frame and 3-axles make up this class. Typical vehicle types include large recreation vehicles and motor homes, garbage trucks, and dump trucks.	0.5 to 1.5
7	4-Axle or More, Single Unit Trucks. This class includes all vehicles on a single frame with 4 or more axles. This is a relatively uncommon vehicle class.	1.0 to 2.0
8	4-Axle or Less, Single Trailer Trucks. This class includes all vehicles with 4 or less axles consisting of two units (tractor and trailer). Typical vehicle types include freight hauling trucks.	1.5 to 2.0
9	5-Axle Single Trailer Trucks. This class includes all 5-axle vehicles consisting of two units (tractor and trailer). This class represents a very common truck on highways. It includes freight hauling trucks and logging trucks.	2.0 to 2.3
10	6 or More Axle Single Trailer Trucks. This class includes all vehicles with 6 or more axles consisting of two units (tractor and trailer).	2.0 to 2.3
11	5 or Less Axle Multi-Trailer Trucks. This class includes all vehicles with 5 or less axles consisting of three or more units.	3.0+
12	6-Axle Multi-Trailer Trucks. This class includes all 6-axle vehicles consisting of three or more units.	3.0+
13	7 or More Axle Multi-Trailer Trucks. This class includes all vehicles with seven or more axles consisting of three or more units.	3.0+

b. **Crushing and Screening** – the Mine Operation Plan (https://eplanning.blm.gov/epl-front-office/projects/nepa/80330/110723/135592/Kirkland MRPO Revised Draft 062217.pdf), shows the equipment indicated below for crushing and screening the excavated materials, with no provisions noted for dust control from this particular (or any other) mine operation.



Before Final Mine Operation is approved, it should be demonstrated to the public by BLM, Yavapai County, and/or the Kirkland Mining Company, what the proposed methods of dust control will be implemented during all stages and processes of the mining operations. As is well known and as reported by Kirkland Mining Company, the mineralogical content of the materials to be mined, include up to nearly 75% silica.

Reference: http://www.kirklandmineforum.org/styled-15/index.html

Kirkland Mining Company provided this information:

"Chemical testing with Evans Analytical Group, Intertek Lab, and Arizona State University confirmed the composition of the deposit as Pozzolan 1 or High Quality Pozzolan"

- SiO2 (silica) 74.83%
- Al2O3 (alumina) 14.90%
- CaO 1.66%
- MgO 1.75%
- Na2O 2.10%
- Fe2O3 0.96%

- TiO2 0.39%
- SO3 0.01%
- K2O 3.39%
- c. **Silica Dust Impacts** -The health impacts of breathing silica dust has been widely studied and reported upon see below for selected extracts
 - i. https://arlweb.msha.gov/illness prevention/healthtopics/HHICC02.HTM



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- Protecting Miners' Safety and Health Since 1978



Your Health Comes First!

MSHA's Occupational Illness and Injury Prevention Program Health Topic

"Silica Exposure of Underground Coal Miners"

MSHA's final rule on dust controls for drilling in rock underground became effective April 19, 1994. The rule is designed to protect miners from exposure to harmful amounts of dust containing crystalline silica while working on and around rock drills such as roof bolting machines. Breathing excessive amounts of crystalline silica during rock drilling can cause a serious and sometimes fatal respiratory disease called "silicosis", according to the National Institute for Occupational Safety and Health (NIOSH).

What is silica (quartz)?

The terms "crystalline silica" and "quartz" refer to the same thing. Quartz is a natural constituent of the earth's crust and is not chemically combined with any other substance.

What is silicosis?

Silicosis is a disease of the lungs due to breathing of dust containing silica particles. Silica dust can cause fibrous or scar tissue formations in the lungs which reduce the lung's ability to work to extract oxygen from the air. There is no cure for this disease, thus, prevention is the only answer.

What are the symptoms of silicosis?

There are several stages of silicosis. Early stages may go completely unnoticed. Continued exposure may result in the exposed person noticing a shortness of breath upon exercising, possible fever and occasionally bluish skin at the ear lobes or lips. Silicosis makes a person more susceptible to infectious diseases of the lungs. Progression of the disease leads to fatigue, extreme shortness of breath, loss of appetite, pain in the chest cavity which all may lead eventually to death. Acute silicosis may develop after short periods of exposure to high levels of quartz. Chronic silicosis usually occurs after 10 or more years of exposure to lower levels of quartz.

Where are miners exposed to silica dust?

The most common exposures underground occur during the drilling of rock, transportation of men or material, and loading of mine material. Miners operating equipment such as locomotives, roof bolters, continuous miners and shuttle cars as well as other miners working downwind of such equipment, have a high probability of exposure. Furthermore, all miners working at underground coal mines are at risk of being exposed to silica- containing dust as a part of the coal mine dust.

How is MSHA addressing exposure to silica dust?

MSHA has published a rule which requires that controls be used when drilling rock to prevent miners from being exposed to dust from the drilling action. This regulation requires that dust from drilling in rock be controlled by use of permissible dust collectors, or by water, or water with a wetting agent, or by ventilation, or by any other method or device approved by the Secretary that is as effective in controlling the dust to prevent dust exposures. Previously MSHA regulated dust from drilling in rock under Section 70.400. MSHA included a provision requiring that dust collectors be maintained in operating condition and recodified the regulation as Section 72.630. In addition, MSHA continues to enforce the 2.0 mg/m3 or lower standard for respirable coal mine dust. Samples are analyzed for crystalline silica (quartz) content to determine if the respirable dust standard should be reduced to control the miner's exposure to silica. If the quartz level exceeds 5%, then the respirable dust standard for that area of the coal mine is reduced to provide for a safe level of exposure.

What can miners do to limit their exposure to silica-containing dust?

Exposure to silica-containing dust at any time posses a potential health hazard. The improper control and disposal of silica- containing dust today not only posses a hazard now, but it can continue to contaminate the work atmosphere as long as miners and equipment work or travel in the area.

Mine operators are required to provide and assure the maintenance and use of appropriate controls for dust while drilling in rock. Miners should use all available engineering controls such as dust collectors, wet drilling, and adequate ventilation when drilling in rock. Roof bolter operators and helpers are encouraged to either bag the dust from dry dust collection boxes and place it in the return or shovel the dust from the box against the ribs to prevent resuspension of the dust during normal mining activities. Miner operators can reduce the amount of silica-containing dust generated by staying in-seam while mining. Cutting sandstone top and/or bottom while mining generates excessive amounts of silica-

containing dust. Mining and bolting on cycle, to limit the number of times the roof bolter works downwind of the miner, is another work practice that can lower exposures to quartz.

How can a person determine if he/she has silicosis?

Mine operators are required to have an x-ray program for the benefit of miners to help protect them from developing lung disease. MSHA encourages all miners employed at underground mines to participate in this x-ray program. All underground mines are required to have posted an approved x-ray plan that affords miners the opportunity to receive a chest x-ray at an approved facility and at the operator's expense. An examination is increasingly important for miners who have worked in areas with a high probability of exposure to silica-containing dust. Roof bolters, transportation workers, roof bolter helpers, miner operators and miner helpers are examples of some occupations that have a high probability of exposure to silica-containing dust.

If an x-ray shows evidence of silicosis, miners should undergo a complete medical examination to determine the existence of silicosis. The medical examination should include: a medical and work history detailing exposure to silica dust, observation of early signs and symptoms of respiratory disease, chest x-ray, pulmonary function test (spirometry -- commonly called a breathing test), and evaluation for tuberculosis.

Mine operators are required to report to MSHA any cases of silicosis or other occupational lung disease for which a medical diagnosis or a notice of an award of compensation is received involving a miner. It is MSHA's policy under 30 CFR 50.20- 6(b)(7)(ii) that a chest x-ray reading of 1/0 or above, using the International Labor Office classification system, is a reportable occupational illness for a miner who has a history of exposure to silica.

If you have any questions about any occupational health matter, feel free to ask us. Our job is to protect your health.

Contact

Mine Safety and Health Administration Coal Mine Safety and Health Division 1100 Wilson Boulevard Arlington, Virginia 22209-3939

Phone: (202) 693-9630

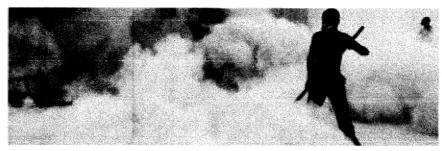
• U.S. Department of Labor | Mine Safety and Health Administration (MSHA) | 1100 Wilson Boulevard, 21st Floor | Arlington, VA 22209-3939

www.msha.gov | TTY | Telephone: (202) 693-9400

ii: https://dangerdust.wordpress.com/2016/05/29/microscopic-polyangiitis-and-silica/

Danger Dust Disease!

Crystalline Silica dust and the diseases it can cause

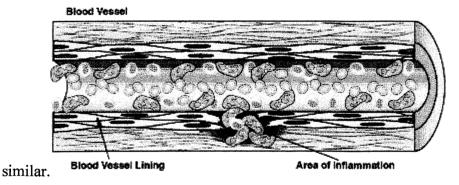


Microscopic Polyangiitis and Silica

May 29, 2016 by dangerdust Leave a comment

What is microscopic polyangiitis?

Microscopic polyangiitis (MPA) is an uncommon disease. It is the result of blood vessel inflammation (<u>vasculitis</u>), which can damage organ systems. The areas most commonly affected by MPA include the kidneys, lung, nerves, skin, and joints. MPA shares many common features with another form of vasculitis called <u>granulomatosis</u> with <u>polyangiitis</u> (<u>Wegener's</u>), and treatment approaches for these illnesses are



What is vasculitis?

Vasculitis is a general term that refers to inflammation of the blood vessels. When inflamed, the blood vessel may become weakened and stretch forming an aneurysm, or become so thin that it ruptures resulting in bleeding into the tissue. Vasculitis can also cause blood vessel narrowing to the point of closing off the vessel entirely. This can cause organs to become damaged from loss of oxygen and nutrients that were being supplied by the blood.

http://my.clevelandclinic.org/health/diseases_conditions/hic_Microscopic_Polyangitis

Microscopic polyangiitis

Specialty rheumatology

Microscopic polyangiitis is an ill-defined autoimmune disease characterized by a systemic, pauci-immune, necrotizing, small-vessel vasculitis without clinical or pathological evidence of necrotizing granulomatous inflammation.

Silica

Although the most common health effect of silica exposure are the lung diseases occupational exposure to respirable crystalline silica is also associated with a number of other diseases, including systemic autoimmune diseases, such as rheumatoid arthritis, scleroderma, systemic lupus erythematosus (SLE), and some of the small vessel vasculitides and with renal diseases i.e. rapid progressive glomerulonephritis, nephrotic syndrome, and end stage renal disease.

http://www.elcosh.org/document/1426/668/d000803/5.html

MICROSCOPIC POLYANGIITIS

No. 14 of 2011

for the purposes of the Veterans' Entitlements Act 1986 and Military Rehabilitation and Compensation Act 2004

Title

1. This Instrument may be cited as Statement of Principles concerning microscopic polyangiitis No. 14 of 2011.

Determination

2. This Statement of Principles is determined by the Repatriation Medical Authority under subsection 196B(3) of the *Veterans' Entitlements Act 1986* (the VEA).

Kind of injury, disease or death

- 3. (a) This Statement of Principles is about microscopic polyangiitis and death from microscopic polyangiitis.
- (b) For the purposes of this Statement of Principles, "microscopic polyangiitis" means a necrotising vasculitis of capillaries, venules or arterioles that typically involves the lungs, kidneys and peripheral nervous system.
- (c) Microscopic polyangiitis attracts ICD-10-AM code M31.7.
- (d) In the application of this Statement of Principles, the definition of "microscopic polyangiitis" is that given at paragraph 3(b) above.

Basis for determining the factors

4. On the sound medical-scientific evidence available, the Repatriation Medical Authority is of the view that it is more probable than not that **microscopic polyangiitis** and **death from microscopic polyangiitis** can be related to relevant service rendered by veterans or members of the Forces under the VEA, or members under the *Military Rehabilitation and Compensation Act 2004* (the MRCA).

Factors that must be related to service

5. Subject to clause 7, at least one of the factors set out in clause 6 must be related to the relevant service rendered by the person.

Factors

- 6. The factor that must exist before it can be said that, on the balance of probabilities, microscopic polyangiitis or death from microscopic polyangiitis is connected with the circumstances of a person's relevant service is:
- (a) being treated with propylthiouracil or hydralazine at the time of the clinical onset of microscopic polyangiitis; or
- (b) inhaling respirable crystalline silica dust, at the time material containing crystalline silica was being:
- (i) produced;
- (ii) excavated:
- (iii) drilled, cut or ground; or
- (iv) used in construction, manufacturing, cleaning or blasting,

for a cumulative period of at least 5000 hours before the clinical onset of microscopic polyangiitis; or

- (c) being treated with propylthiouracil or hydralazine at the time of the clinical worsening of microscopic polyangiitis; or
- (d) inhaling respirable crystalline silica dust, at the time material containing crystalline silica was being:
- (i) produced;
- (ii) excavated;
- (iii) drilled, cut or ground; or
- (iv) used in construction, manufacturing, cleaning or blasting,

for a cumulative period of at least 5000 hours before the clinical worsening ofmicroscopic polyangiitis; or

(e) inability to obtain appropriate clinical management for microscopic polyangiitis.

https://www.legislation.gov.au/Details/F2010L03262

Diagnosis of perinuclear anti-neutrophil cytoplasmic antibody-associated microscopic polyangiitis in silicotics:

case report Ji-Won Lee1,3, Jun-Pyo Myong1,3*, Yeong-Jin Choi2, Seyoung Lee1,3, Bum Seak Jo1,3 and Jung-Wan Koo1,3 Abstract Background:

An association between silica exposure and autoimmune diseases including rheumatoid arthritis, systemic sclerosis, systemic lupus erythematosus, and anti-neutrophil cytoplasmic autoantibody (ANCA)-associated vasculitis has been made. Case presentation: A 56-year-old male presented with silicosis and had an occupational history of precious metal processing for 30 years and a 30 pack-year smoking history. The patient was diagnosed with pneumoconiosis and received compensation. No other complications were reported for pneumoconiosis. The patient suddenly presented with a non-specific headache for several days and microscopic hematuria was identified upon examination in the outpatient clinic. Following several weeks, the patient presented with aggravated dyspnea and hemoptysis, and his Modification of Diet in Renal Disease estimated glomerular filtration rate indicated acute kidney injury. Diagnostic analysis revealed perinuclear ANCA-associated microscopic polyangiitis (p-ANCA-associated MPA). Conclusion: Exposure to silica dust was likely one of the cause of p-ANCA-associated MPA. Possible pathogenic mechanisms of autoimmune diseases in silicotics and emphasis of the necessity for early diagnosis are discussed.

Lee et al. Annals of Occupational and Environmental Medicine (2016) 28:21 DOI 10.1186/s40557-016-0108-1

Microscopic polyangiitis associated with pleuropericarditis, pulmonary embolism and pulmonary hemorrhage as a complication of silicosis

Amjad Al-Rajhi, a,* Elisa Ferreira Brega, b and Neil C. Colmanc

<u>Author information</u> ► <u>Article notes</u> ► <u>Copyright and License information</u> ►

Abstract

Silica (silicon dioxide) occupational exposure has been linked to both pulmonary and extra-pulmonary toxicity. Silicosis is the major pulmonary toxicity, which has also been associated with the development of collagen-vascular disease and with anti-neutrophil cytoplasmic antibody (ANCA)-positive vasculitis, especially perinuclear anti-neutrophil cytoplasmic antibodies (P-ANCA). The most common pulmonary manifestations of microscopic polyangitis (MPA) are interstitial fibrosis and alveolar hemorrhage. We describe a patient who had unusual presentation of microscopic polyangitis, characterized by lung

hemorrhage, rapidly progressive glomerulonephritis, pleuropericarditis and pulmonary embolism that was associated with a history of silica exposure and radiologic evidence for silicosis.

In conclusion, we report a patient with silicosis and complicating microscopic polyangiitis characterized by lung hemorrhage, rapidly progressive glomerulonephritis pleuropericarditis and pulmonary embolism. This report strengthens the evidence supporting the causality of this association and reinforces the need for obtaining a detailed work history in patients who have systemic vasculitis.

Microscopic Polyangiitis Accompanied by Pleuritis as the only Pulmonary Manifestation of Occupational Silica Exposure

Article in Internal Medicine 49(10):925-9 · May 2010 with 4 Reads

Impact Factor: 0.90 · DOI: 10.2169/internalmedicine.49.3046 · Source: PubMed

- 1st Hideki Shibuya
- 2nd Hiroko Sano
- + 23rd Kou Osamura
- Last <u>Tetsuya Hisada</u>

Show 2 more authors

Abstract

A 68-year-old man, who had worked for processing quartz-containing stones for more than 50 years, complained of low-grade fever and arthralgia. Mediastinal lymph nodes were markedly swollen on chest computed tomography. Pathological findings of the lymph node were compatible with silicosis, with a high titer of myeloperoxidase anti-neutrophil cytoplasmic antibody (MPO-ANCA). During follow-up with prednisolone treatment, pleuritis and uveitis developed as manifestations of vasculitis. Thus, he was diagnosed with MPO-ANCA-associated vasculitis with occupational silica exposure, possibly microscopic polyangiitis (MPA). This case is rare, because pleuritis was the only pulmonary manifestation, without interstitial pneumonia, alveolar hemorrhage or glomerulonephritis.

you want to read the rest of this publication?

Access full-text

Case Reports in Nephrology Volume 2014 (2014), Article ID 902089, 3 pages http://dx.doi.org/10.1155/2014/902089

Microscopic Polyangiitis following Silicone Exposure from Breast Implantation

Judy Tan, Fuad Spath, Rakesh Malhotra, Zaher Hamadeh, and Anjali Acharya

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Received 31 July 2014; Revised 29 September 2014; Accepted 29 September 2014; Published 16 October 2014

Academic Editor: Sofia Lionaki

Abstract

We describe a case of a patient who developed microscopic polyangiitis (MPA) in the setting of exposure to silicone after breast implantation. A 57-year-old Hispanic woman was admitted to our hospital with complaints of fever, cough, and hemoptysis. She had undergone silicone breast implantation two years prior to presentation. She was diagnosed as having microscopic polyangiitis (MPA) based on acute progressive renal failure, hematuria, pulmonary hemorrhage, and positivity for myeloperoxidase-anti-neutrophil cytoplasmic antibody (ANCA). A renal biopsy performed showed focal segmental necrotizing and crescentic glomerulonephritis. The patient received high dose steroids, cyclophosphamide, and plasmapheresis with remarkable clinical response. This case report raises the possibility of the development of MPA after silicone exposure from breast implantation.

1. Introduction

There have been a number of reported cases in which autoimmune syndromes have occurred following exposure to various chemicals. In 1964, Miyoshi et al. [1] first coined the term human adjuvant disease in their report of two patients who developed connective tissue-like disease after exposure to silicone-related substances during augmentation mammoplasty. Since this first observation, there have been numerous published cases relating silicone exposure to autoimmune rheumatic diseases. We, herein, report a patient who developed anti-neutrophil cytoplasmic antibody- (ANCA-) associated vasculitis following exposure to silicone from breast implantation.

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Reumatol Clin. 2014 May-Jun;10(3):180-2. doi: 10.1016/j.reuma.2013.04.009. Epub 2013 Jul 23.

Microscopic polyangiitis secondary to silica exposure.

[Article in English, Spanish]

Vega Miranda J1, Pinto Peñaranda LF2, Márquez Hernández JD2, Velásquez Franco CJ3.

Author information

Abstract

There is sufficient evidence of the capacity of silica to induce autoimmunity in patients with some type of genetic susceptibility. There are several autoimmune diseases related to this exposure (rheumatoid arthritis, Sjögren's syndrome, sarcoidosis, systemic sclerosis). Nodular silicosis (clinical expression of this exposure in lungs) generates apoptosis, inflammation, loss of tolerance and a respiratory burst. There is evidence that relates silica with induction of antineutrophil cytoplasmic antibodies, but, until it is better explained, the reports of systemic vasculitis secondary to silica exposure are inconclusive. We describe a case of a patient with a history of occupational exposure to silica who developed microscopic polyangiitis.

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iii. http://mashh.com/node/39

What is Respirable Crystalline Silica (RCS?)

Silica is the name given to a group of minerals composed of silicon and oxygen, the two most abundant elements in the earth's crust. Silica is found commonly in the crystalline state and rarely in an amorphous state. Silica exists in seven different crystalline forms with the three main forms being quartz (by far the most common), tridymite and cristobalite. Quartz is the second most common mineral in the earth's crust.

RCS refers to crystalline silica particles that, when inhaled, are small enough to penetrate the nose and upper respiratory system and reach deep into the lungs where oxygen – carbon dioxide transfer takes place. Because crystalline silica, as quartz, is a major constituent of all rocks, minerals and soils, practically all dust clouds contain some percentage of RCS.

Why is it dangerous?

Unfortunately, respirable silica dust (the silica dust that you can't see) can be hazardous and can cause silicosis, the oldest industrial disease.

As silicosis progresses, shortness of breath begins to occur and clinical tests will reveal a poor exchange of oxygen and carbon dioxide. In later stages the patient may experience persistent coughing, fatigue, extreme shortness of breath and even complete respiratory failure.

While silicosis is progressive, irreversible and incurable, NIOSH and OSHA have taken the position that silicosis is completely preventable.

What you can't see can hurt you

These very small, microscopic dust particles are invisible to the naked eye; yet they are the portion of dust that is dangerous. Visible dust contains RCS. But even when no dust is visible, RCS can still be and often is present when there are dust-generating activities.

The primary health risk from RCS exposure is silicosis. Studies have also identified lung cancer as a potential disease associated with occupational exposure to RCS. Other studies have linked RCS exposure to an increased risk of developing autoimmune disorders, diseases affecting the kidneys, tuberculosis, and other non-malignant respiratory diseases. There is no treatment for the condition: but it is 100% preventable.

Visual Reference: https://www.youtube.com/watch?v=PyX7gX7mjZk&feature=youtu.be; https://www.youtube.com/watch?v=u7sqMZJZ3Tw

In Construction

OSHA has determined that approximately <u>1.85 million workers</u> are currently exposed to respirable crystalline silica (RCS) in construction workplaces



More than 640,000 of these workers are likely being exposed to silica levels greater than OSHA's proposed permissible exposure limit (PEL). These exposures occur during common construction operations such as cutting, grinding, or abrasive blasting of silica-containing materials like concrete. In addition to RCS exposure, there are several areas of construction that also expose workers to dangerous lead dust. This deadly combination of RCS and lead dust exposure occurs frequently during demolition, rehabilitation, or painting of structurally deficient bridges.

iv. https://www.federalregister.gov/documents/2016/03/25/2016-04800/occupational-exposure-to-respirable-crystalline-silica

https://www.osha.gov/silica/

There are too many pages from this Federal Register document to reproduce here – but I suggest that someone at the BLM, Yavapai County, and Kirkland Mining Company should review it carefully and be intimately familiar with it's relatively new requirements, to be implemented in Fall, 2017. Selected extracts are provided below for your information:

OSHA's Final Rule to Protect Workers from Exposure to Respirable Crystalline Silica

OSHA will delay enforcement of the respirable crystalline silica standard for construction until September 23, 2017, to conduct additional outreach and provide educational materials and guidance for employers. See the <u>memorandum</u>.

Rule requires engineering controls to keep workers from breathing silica dust

The Occupational Safety and Health Administration (OSHA) has issued a final rule to curb lung cancer, silicosis, chronic obstructive pulmonary disease and kidney disease in America's workers by limiting their exposure to respirable crystalline silica. The rule is comprised of two standards, one for Construction and one for General Industry and Maritime.

OSHA estimates that the rule will save over 600 lives and prevent more than 900 new cases of silicosis each year, once its effects are fully realized. The Final Rule is projected to provide net benefits of about \$7.7 billion, annually.

About 2.3 million workers are exposed to respirable crystalline silica in their workplaces, including 2 million construction workers who drill, cut, crush, or grind silica-containing materials such as concrete and stone, and 300,000 workers in general industry operations such as brick manufacturing, foundries, and hydraulic fracturing, also known as fracking. Responsible employers have been protecting workers from harmful exposure to respirable crystalline silica for years, using widely-available equipment that controls dust with water or a vacuum system.

Key Provisions

- Reduces the permissible exposure limit (PEL) for respirable crystalline silica to 50 micrograms per cubic meter of air, averaged over an 8-hour shift.
- Requires employers to: use engineering controls (such as water or ventilation) to limit worker exposure to the PEL; provide respirators when engineering controls cannot adequately limit exposure; limit worker access to high exposure areas; develop a written exposure control plan, offer medical exams to highly exposed workers, and train workers on silica risks and how to limit exposures.

- Provides medical exams to monitor highly exposed workers and gives them information about their lung health.
- Provides flexibility to help employers especially small businesses protect workers from silica exposure.

Compliance Schedule

Both standards contained in the final rule take effect on June 23, 2016., after which industries have one to five years to comply with most requirements, based on the following schedule:

Construction - September 23, 2017. OSHA delayed enforcement in order to conduct additional outreach and provide educational materials and guidance for employer.

Background

The U.S. Department of Labor first highlighted the hazards of respirable crystalline silica in the 1930s, after a wave of worker deaths. The department set standards to limit worker exposure in 1971, when OSHA was created. However, the standards are outdated and do not adequately protect workers from silica-related diseases. Furthermore, workers are being exposed to silica in new industries such as stone or artificial stone countertop fabrication and hydraulic fracturing.

A full review of scientific evidence, industry consensus standards, and extensive stakeholder input provide the basis for the final rule, which was proposed in September 2013. The rule-making process allowed OSHA to solicit input in various forms for nearly a full year. The agency held 14 days of public hearings, during which more than 200 stakeholders presented testimony, and accepted over 2,000 comments, amounting to about 34,000 pages of material. In response to this extensive public engagement, OSHA made substantial changes, including enhanced employer flexibility in choosing how to reduce levels of respirable crystalline silica, while maintaining or improving worker protection.

More Information and Assistance

OSHA looks forward to working with employers to ensure that all workers exposed to respirable crystalline silica realize the benefits of this final rule. Please check back for frequent updates on compliance assistance materials and events, and learn about OSHA's on-site consulting services for small business.

OSHA approved State Plans have six months to adopt standards that are at least as effective as federal OSHA standards. Establishments in states that operate their own safety and health plans should check with their <u>State_Plan</u> for the implementation date of the new standards.

For dust control, this OSHA Regulation provides for the following specified mechanisms for dust control for the type of mining equipment proposed by the Kirkland Mining Company.

TABLE 1-SPECIFIED EXPOSURE CONTROL METHODS WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICA

Eguipment/task	Engineering and work practice control methods	Required respiratory protection and minimum assigned protection factor (APF)	
		≤4 hours/shift	>4 hours/shift
(xvi) Crushing machines	Use equipment designed to deliver water spray or mist for dust suppression at crusher and other points where dust is generated (e.g., hoppers, conveyers, sieves/sizing or vibrating components, and discharge points). Operate and maintain machine in accordance with manufacturer's instructions to minimize dust emissions. Use a ventilated booth that provides fresh, climate-controlled air to the operator, or a remote control station.	None	None.
(xviii) Heavy equipment and utility vehicles used to abrade or fracture silica-containing materials (e.g., hoe-ramming, rock ripping) or used during demolition activities involving silica-containing	When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust emissions.	None	None. None.
materials. (xviii) Heavy equipment and utility vehicles for tasks such as grad- ing and excavating but not in- cluding: Demolishing, abrading, or fracturing stlica-containing ma-	Apply water and/or dust suppressants as necessary to minimize dust emissions. OR	None	None.
terials.	When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab.	None	None.

https://www.osha.gov/dsg/topics/silicacrystalline/

Introduction

Crystalline silica is an important industrial material found abundantly in the earth's crust. Quartz, the most common form of silica, is a component of sand, stone, rock, concrete, brick, block, and mortar. Materials containing quartz are found in a wide variety of workplaces.

Silica dust is hazardous when very small (respirable) particles are inhaled. These respirable dust particles can penetrate deep into the lungs and cause disabling and sometimes fatal lung diseases, including silicosis and lung cancer, as well as kidney disease.

Occupational exposure to respirable crystalline silica occurs when cutting, sawing, drilling, and crushing of concrete, brick, ceramic tiles, rock, and stone products. Occupational exposure also occurs in operations that process or use large quantities of sand, such as foundries and the glass, pottery and concrete products industries. OSHA estimates that more than 2.3 million workers in the United States are potentially exposed to dust containing crystalline silica with nearly 90% of those workers employed in the construction industry.

Industries and operations in which exposure to crystalline silica can occur include, but are not limited to:

- Construction
- Glass products
- Pottery products
- Structural clay products

- Concrete products
- Foundries
- Dental laboratories
- Paintings and coatings
- Jewelry production
- Refractory products
- Ready-mix concrete
- Cut stone and stone products
- Refractory installation and repair
- Railroad track maintenance
- Hydraulic fracturing for gas and oil
- Abrasive blasting in
 - Maritime work
 - Construction
 - General industry

These Safety and Health Topics pages offer guidance that may be useful to workers and employers across a number of industries. Resources for general industry and construction are highlighted where appropriate.

Before Final Mine Operation is approved, it should be demonstrated to the public and all residents of Yavapai County, by BLM, Yavapai County, and/or the Kirkland Mining Company, what the proposed methods of dust control will be during all stages and processes of the mining operations. This documentation must confirm that all applicable OSHA and/or MSHA regulations for silica dust control will be properly implemented continuously for the operational life of the mine, during all working hours.

d. Potential presence of Erionoite at the mine site.

It has been documented by the Arizona Department of Mineral Resources, Mineral Report #1 – Zeolites in Arizona, that erionite has been documented to be present in the area south of Kirkland Junction.

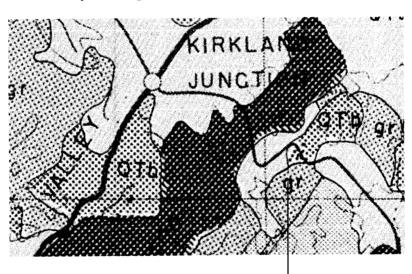
The Kirkland Junction Clinoptilolite - Erionite Occurrence

A four to six foot thick section of vitric tuff beds that are partially altered to clinoptilolite and erionite crop out on the west side of U.S. Highway 89 about 4.2 miles south of Kirkland Junction, Arizona. The tuff section is capped by a basalt believed to be of Tertiary-Quaternary age.

These are part of the tuff materials underlying the basaltic caprock of the QTb unit South of Kirkland Junction that passes across Highway 89.

Reference: http://repository.azgs.az.gov/uri_gin/azgs/dlio/1627

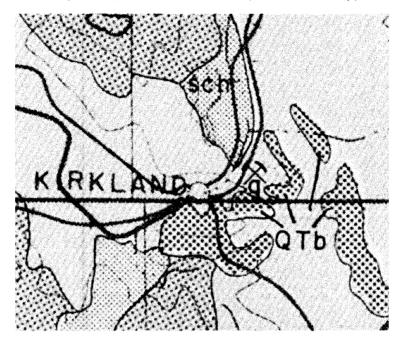
Resource ID: Arizona Bureau of Mines County Geology Series Access Statement: Arizona Bureau of Mines, 1958, Geologic map of Yavapai County, Arizona. Arizona Bureau of Mines County Geologic map series, 1:375,000 map scale.



QTb

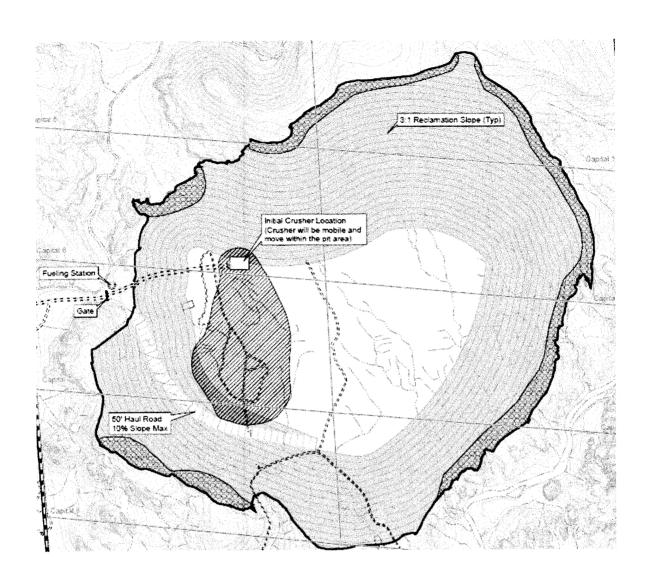
Basalt
Locally includes tuff and agglomerate.

The tuffs present in the Kirkland Mine area are likely from the same volcanic events that produced the Qtb formation exposed south of Kirkland Junction, although the basaltic caprock does not seem to be present in the mine area. This does not however mean that the erionite mapped as part of the Qtb unit is not present at depth within the mine area, it just may not have a surface exposure to be mapped.



Before Final Mine Operation is approved, it should be demonstrated to the public and all residents of Yavapai County, by BLM, Yavapai County, and/or the Kirkland Mining Company, that the hazardous mineral erionite, mapped in the vicinity as part of the Qtb Formation, will not be exposed in the pit to be excavated by mine operations; and the possibility of <u>RESPIRABLE DUST CONTAINING ERIONITE WILL NOT BE PRODUCED</u> by mining operations. This documentation must be confirmed by detailed subsurface geological mapping of the exploratory drill core at the site, that evidence of erionite has not been detected at the mine site.

See proposed open pit mining area below for reference – mining depth can be estimated from the 2 -foot contour intervals along the haul road on the map below, to be about 75 feet in depth. Therefore, there is an unknown depth interval of 75 feet of the tuff deposit in which the 4-6 foot thick zone of **vitric tuff** containing the *erionite* could be present, although not currently exposed at the ground surface.





A stones throw away

1 message

Sat, Jul 15, 2017 at 6:12 PM

To Whom it May Concern,

I have lived in Yarnell for 21 years, and really love this laid back little town. We are able to walk up on main street (route 89) most anytime of day with out any problem, and with out the worry of a lot of traffic. Now this hauling of 170 truck loads of stones through our quiet little town is very disturbing. People are not going to want to go to the dinners and shops, or the hardware store, or even the new dollar store if there is a big truck every three minutes going down 89 though our town. This would really hurt the business and could cause some to go out of business.

Another thing is the roads. Iron Springs road and part of 89 were just redone. With 170 big trucks hauling stones down these newly redone roads, how long do ya think they will last? It takes a lot of taxes to do those roads over.

There is a train track and trains that go right through Skill Valley. I would think it would be much faster, easier, and much better on the environment if this could be done. Please take this into consideration.

Citizen of Yarnell





Kirkland Mine

1 message

Fri, Jul 14, 2017 at 2:15 PM

It's come to my attention that the Kirkland Mine project will cause major disruptions to the environment and people in our area. PLEASE at least consider two things:

- 1) Limit truck / transport use on roads—if it must be during daylight, to 9-to-5.
- 2) Water use necessary is worrisome, causing use of owners' well water, as I understand it. Dig a deeper well, use "your own" water if you must?



TUFF/TUFA Mine/Kirkland Mining Company

1 message

Sat, Jul 15, 2017 at 1:29 PM

Ladies and Gentlemen,

We VEHEMENTLY OPPOSE the proposed mine at Kirkland/Skull Valley, Arizona. Those of us who live up here in the communities of Yarnell, Glen Ilah, Peeples Valley, Walnut Grove, Kirkland and Skull Valley purposely bought up here to get out of the smog, pollution, traffic and poor air quality of the Phoenix Valley. (FYI, Phoenix has one of the 5 worst air qualities in the United States....and our area, including Prescott, currently has one of the 5 best air qualities in the Nation.) Many of us moved out of the Phoenix Valley due to respiratory problems due to that filthy air. Now you want to pollute our area. You are like locusts moving to a pristine location just so you can destroy it. And for what? Profit. Greed. Nothing more.

We vote AGAINST this project. We fear the increased traffic of heavy trucks on our roads will destroy the roads, destroy our air quality, destroy the peace, quiet and serenity of this beautiful land, and will endanger our health with the toxic substances that would be hauled back and forth.

Now, if you were to use the railroad spur at Kirkland instead of using trucks on our scenic highways, the impact to the surrounding communities would be minimal. But we heard you nixed that option because it would cost you money. Well, you haven't even begun to lose money....yet. The increased heavy truck traffic on our roads will result in more accidents and loss of life as other vehicles attempt to pass those slow moving trucks. (Not to mention that the heavy truck traffic will destroy our tourism and will force many businesses in Yarnell to shut down, virtually killing the town.) Should you approve this mining project, our communities intend to launch lawsuits against Kirkland Mining Company, BLM and Yavapai County for every accident and especially for any loss of life on our roadways.

As you should know, Yarnell is struggling to rebuild into a beautiful tourist area after surviving two devastating fires within the past few years. Approving this Mine will almost certainly destroy what is left of the town. Only recently the government built and opened the Granite Mountain Memorial Park on the Yarnell hillside where the 19 firefighters died to save this town. Shame on you if you destroy what those brave men died to protect.

Sincerely,

cc: BLM

Kirkland Mining Company Yavapai County Arizona Department of Environmental Control National Department for the Preservation of the Environment



Public Scoping, Kirkland Mine

1 message

To Shelby Cave, BLM Geologist:

After reviewing the Kirkland Mining Plan of Operations and researching some of the impacts, I am OPPOSED to the proposed Mine. The best "mitigation" is to deny this plan altogether. In the case the BLM is unable to reach that conclusion, I offer the following issues and ideas to mitigate:

1. Transportation

The transportation plan offered in the Mining Plan of Operation is completely inadequate relative to the County-wide impact. A detailed, thorough study, taking into consideration alternative transportation modes and routing must be completed, with appropriate public review and opportunities for input. Relying on Yavapai County Public Works is NOT sufficient as their scoping would be limited to a road study only, without consideration and research into viable alternatives such as the BNSF railroad.

Heavy truck traffic on Iron Springs Road, and beyond:

The Mining Plan of Operation is vague on exact truck routes, but there is no question that Iron Springs road North ONLY goes to Prescott (most likely trucks would turn up Williamson Valley road) and Iron Springs road South ONLY goes to County Road 15, which then goes to Highway 89 and through Peeples Valley, Yarnell, and Congress. The truck route goes past homes, schools, and churches, and through residential neighborhoods. Irons Springs road is a very popular route for bicyclists, car clubs, and motorcycle groups. The Plan calls for operations 80 hours per week "during daylight hours" and up to 85 trucks per day. This could mean trucks starting at 5:00 am and barreling past every few minutes until 8:00 pm seven days per week. Surely people have a right to live, and sleep, in their homes with some level of peace and quiet! Iron Springs road is not designed for commercial truck traffic. There are no passing lanes and no turnouts going up the grade, and curves make passing extremely dangerous. The local volunteer fire department is already stretched thin responding to accidents on this road, and they cannot be expected to bear the burden of the significant increase in traffic accidents, and most likely fatalities, that are sure to occur. The heavy truck traffic issues are Noise, Safety, and the impact on recreation and tourism.

Ideas to mitigate:

- A. Implement a completely different transportation plan, perhaps involving the railroad. 85 trucks per day could be replaced with fewer than 8 additional railroad cars.
- B. Limit operation hours to Mon Fri 8:00 5:00. Let's at least get the kids in school before it starts up!
- C. Require Kirkland Mining Company to pay for passing lanes and turnouts on Iron Springs Road.
- D. Require Kirkland Mining Company to pay for helicopter emergency response for traffic accidents.
- E. Require Kirkland Mining Company to fund a local Fire Department staffed with trained and emergency responders and appropriate equipment.
- F. Traffic noise studies and the affect of noise on residents living along the truck route should be completed and analyzed prior to approval of this Mine.

Various trucks and truck operators:

The Kirkland Mining Company will be selling material onsite to whoever comes to buy it and load into trucks. There is no single point of contact or responsibility for trucks adhering to regulations such as covering loads and driving safely within the speed limit.

Ideas to mitigate:

A. Transporting the material via railroad would be consistent, professional, and safe.

B. Require Kirkland Mining Company to take full responsibility for trucks arriving and leaving their facility. People need to know who to call when violations are observed; those complaints need to be investigated and responded to quickly and effectively.

2. Water usage

The MPO calls for use of 35,000 gallons of water per day for dust abatement. This is roughly the equivalent daily usage of 350 people. Yet homes adjacent to the Mine have experienced wells slowing production, and even going dry over the past 20 years. It is unconscionable that a Mine could be allowed to pump from the same shallow aquifer that these homes depend on. Trucking in water only increases truck traffic, and moves the water issue to another location. Water is precious in Yavapai County!

Ideas to mitigate:

A. Kirkland Mining Company should be required to drill a well to the deep aquifer known to exist in this area.

3. Water quality

Mining activity will create a layer of hazardous silica dust on small drainages feeding the riparian side canyons and Copper Basin Wash. During rainy periods, Copper Basin wash flows BIG. The BLM has not provided a comprehensive study of downstream affects on water quality in the Upper Bill Williams Watershed.

Ideas to mitigate:

A. Involve other agencies, such as the Army Corp of Engineers, in assessing downstream impact. Water is precious!

B. Conduct thorough testing and study of downstream impacts, and establish monitoring sites for ongoing measurement over the expected 40 year operation of the Mine.

4. Air quality

Even with good dust control practices, the Mine will generated silica dust that, in this often very windy area, will blow toward homes and cause health hazards for residents. In addition, trucks departing the Mine will carry silica dust onto the roadway and all along the truck route, passing homes, schools, and through small towns. The BLM has not responded to requests to make public the methods and results of testing for the presence of erionite, an extremely hazardous material that HAS been found in nearby similar rock formations.

Ideas to mitigate:

- A. Require Kirkland Mining Company to control dust 24 hours a day 7 days per week on the site.
- B. Require Kirkland Mining Company to control dust on Iron Springs road for several miles in each direction.
- C. Trucks departing the Mine should be inspected for cleanliness and that the load is thoroughly and tightly covered. Dust on the trucks should be cleaned before departure from the Mine.
- D. Air quality monitors should be set up in various locations, taking into consideration prevailing winds and nearby homes. Air quality reporting should be made available to the public, perhaps through a dedicated website.
- E. BLM must insist on proper and specific testing of the material to be mined for the presence of erionite, and make the results of testing available to the public.

5. Emergency Response

The MPO mentions the local all-volunteer Skull Valley Fire Department as first responders. The Skull Valley Fire Department has no training, equipment, or experience adequate to handle emergencies of any type at the Mine. The Department is operated by a very small group of dedicated volunteers who are already stretched to the point of breaking serving a 400 square mile area. Any fire started at the Mine, with normal prevailing winds and dry brushy conditions, would progress rapidly to the more than 50 homes located in the Windmill area. The Department cannot respond to more than one call at a time. Any emergencies response by this Department resulting from Mine operation, whether at the Mine itself or on Iron Springs road, would shut down the Department's ability to respond to any other call that may come in during that timeframe, including medical emergencies, wild land fires, and structure fires. Mine operation would directly adversely affect public safety, and without question will result in fatalities.

Ideas to mitigate:

- A. Transport material via the BNSF railroad. This would greatly reduce truck traffic and associated accidents.
- B. Limit operation hours to Mon Fri 8:00 5:00.
- C. Require Kirkland Mining Company to pay for passing lanes and turnouts on Iron Springs Road.
- D. Require Kirkland Mining Company to pay for helicopter emergency response for traffic accidents.
- E. Require Kirkland Mining Company to fund a local Fire Department staffed with trained emergency responders and appropriate equipment.

6. Destruction of a rare and beautiful habitat

The mining claims are located in a very uniquely beautiful and peaceful little area. For over twenty years my family and I have enjoyed hiking, horseback riding, and picnicking there. For several years we celebrated Thanksgiving under the golden cottonwoods at this location with a small gathering of neighbors; my husband and I played and sang old-time music (he on guitar and lead voice, me on mandolin and harmonies), and a local fiddle player and young guitarist joined in. We delight to spot wildlife, we enjoy the sound of birds and water trickling, the kids scramble over a natural rock playground and play peek-a-boo thorough the rock arches and holes. When visitors come, we take them there, and when they return they invariably ask to go again. I am not expert in matters of rare species and critical habitat, but I know a natural treasure when I see one!

Ideas to mitigate:

A. The mission of the BLM includes striking a reasonable balance. I suspect that in practice this means sacrificing some areas and protecting others. I believe this area, though tiny (and, in fact, perhaps BECAUSE it is tiny), is worth protecting for future generations. The Mine owner has rights, yes, but so does the public and the future publics. The BLM should deny the Mining Plan altogether.

- B. Require a larger buffer between active Mining areas and the riparian habitat.
- C. Limit hours of operation to Mon Fri 8:00 5:00

Conclusion

The issues detailed above are each individually important, and deserving of careful attention and response by the BLM. It must be recognized, however, that there is a CUMULATIVE impact over the expected 40 years of Mine operation. People, plants, and wildlife living adjacent to the Mine will experience all impacts, and the aggregate is devastating. Those living in neighboring areas will experience many severe impacts. The thousands living along truck routes will experience severe impact. To date, the BLM has not taken into consideration the impact this Mine will have across large swaths of Yavapai County. The public process has been inadequate. The public has a right to be informed and given reasonable opportunity to respond to and, in effect, negotiate, terms of Mine operation. There ARE competing interests here, and the BLM has the responsibility to balance them.

Thank you for your service to the public, and for your informed good judgement,



(no subject)

1 message

Sun, Jul 16, 2017 at 8:06 PM

THANK YOU



Yahoo Mail Stationery



Virus-free. www.avg.com



KIRKLAND MINING CO.

To Whom It May Concern,

Yarnell has recovered from a disastrous fire that took place in 2013. It has taken a considerable amount of time and effort to get this small town back to a more normal state. Friends greeting one another perhaps some small talk over coffee at the diner a relaxed atmosphere throughout the town.

Now it has been thrown into another state of anxiety over the mine in Skull Valley beginning operations. The threat of trucks rolling through Yarnell at one truck every 3 minutes. Even if this is a worst case scenario it is disturbing and scary to have big trucks disturbing our small town atmosphere. Then there is the wear and tear of the just rebuilt and resurfacing of a good part of RT 89. The rail road is so close to the mine somehow could that be utilized as an alternate mode of transportation? Please consider this when you are deciding what is best for all those involved.

A concerned citizen of Yarnell



Proposed Kirkland Mine Plan

1 message

Sun, Jul 16, 2017 at 1:04 PM

Why I Am Against the Proposed Kirkland Mine (particularly the transport of possibly cancerous material through various communities of Yavapai County that are adjacent to Iron Springs Rd, Williamson Valley Rd., Pioneer Parkway, and SR-89 (Chino Valley and Yarnell)

(For more on the issues regarding this project, go to http://www.kirklandmineforum.org/resources/summary-of-major-issues.pdf)

I am writing my comments with full knowledge that I am not an expert in the mining of natural resources and the federal/local laws pertaining to them, or even in environmental and geological sciences (although I have friends who are and on whom I can call). I am a behavioral health facilitator and equine professional who moved with her family nearly a quarter century ago from sprawling Los Angeles to a little piece of paradise called Skull Valley.

At the time we moved here, the mine had not been active for several years and our realtor did not disclose to us any possibility of future mining activity occurring in Skull Valley or its adjacent areas. After our arrival, I heard neighbors refer to the "kitty litter mine," and I even spent some time on horseback viewing the magical "castles" created by the raineroded tuff rock. However, IF I had known that there was a chance of a mining operation of the size and caliber that is currently being proposed by Kirkland Mining Company we would never have bought property and moved here. As a native of Los Angeles, I've had enough noise, traffic, and air pollution for a lifetime. This mine plan proposes to bring all three to the Kirkland-Skull Valley area...in spades.

Road Concerns

In 2010, I opened a business that seemed to be very complementary to its Skull Valley location: I teach horsemanship and riding safety and also co-facilitate equine-assisted psychotherapy groups. My behavioral health clients come to the ranch to learn coping skills and to reset their nervous systems while embarking on a therapeutic journey of healing and recovery. They have included groups and individuals from YC Juvenile Probation, the Yavapai tribe, West Yavapai Guidance Clinic, Arizona's Children (foster care support), Boys to Men, Prescott College, Viewpoint Dual Recovery, and Embark Recovery, among others. I contract with these groups for a specific session length, which includes critical travel time to and from my ranch in Skull Valley.

On at least three occasions in the last three years, extensive road repair on Iron Springs Rd. has resulted in an agency terminating their contract with me due to the length of time it took (including half-hour traffic stops each way) to transport their clients to their sessions and back. In short, the road that Kirkland Mining Company proposes to burden with 85 trucks per day is the life-blood for my business. Any slowdown of normal traffic speeds on Iron Springs Road costs my clients/students time, which costs me in reduced and lost business income.

Lets be honest—we are not talking about a flat freeway with plenty of lanes for accommodating slow-moving vehicles. It is a two-lane road, half of which is curved mountain road. It is unconscionable to subject it to the proposed daily weight of 85 loaded dump trucks, unless your actual plan is to trigger repairs every two years.

Additionally, my husband and countless other residents from Yarnell, Hillside, Kirkland, and Skull Valley make the commute up to jobs in Prescott five days a week. With numerous dump trucks slowly trudging up the mountainous incline that comprises the majority of road into Prescott, he and the other commuters will be required to devote as much as two hours to their round-trip commute, time that they will never be compensated for. Perhaps mitigation should also include paying out remuneration for commuters facing this dilemma.

Commuters won't be the only ones affected by mine production of the caliber proposed. Emergency vehicles will be delayed and worse, individuals who are trying to get their loved ones to the ER by private car (to save having to wait for the local EMT or Lifeline to arrive and transport) will be stuck behind the dump trucks—possibly with dire results. I have personally been involved in four such impromptu trips to the ER, which normally would be a 25-minute drive from my ranch. Unless the dump trucks are instructed to pull over every time someone honks or flashes their lights, anyone in such circumstances will be stuck creeping along Iron Springs Road with the rest of the traffic.

Safety

Others have mentioned the safety aspect of having these trucks on the road at all. As they are bound to slow traffic down, there will be increased attempts to pass them, resulting in a greater potential for traffic accidents. This is why you need to take into consideration the psychosocial aspect of injecting a controversial element such as the proposed mine into the heart of a community. There will be resentment, fear, outrage. Yes, there will be road rage. Anyone who drives Iron Springs Rd. regularly has already felt aggression from cars following behind, particularly through the posted speed reduction areas in downtown Skull Valley, but also further along the route. If the mine puts 85 loaded dump trucks on the road, Yavapai County might need to hire extra deputies to sit in their cars periodically spaced along the route to remind people not to act on their worst impulses. Of course, this would have to be daily...for 40 years...and at what added cost to the county budget?

One more thing about the road. It isn't just a means of egress between the outlying towns of southern Yavapai County and Prescott. It also hosts numerous bicycle and runners marathons, and motorcycle runs, often for charitable causes. Negotiating participants on the road can be pretty harrowing with just regular cars, but if you also include 85 dump trucks per day it is beyond dangerous. Thus, something that is unique to our area, brings in tourism, and promotes healthy multiuse recreation will become a thing of the past.

Noise

As someone who offers a quiet, safe space for clients to focus on dealing with trauma and mental illness, I value the natural quiet of this area. The constant rumble of mechanical engines can have a deleterious effect on both people and animals. Although I don't quite know what the decibel levels that the mine itself will put out, I can only assume that 85 trucks running on Iron Springs Rd. will guarantee a constant rumble of traffic throughout the day, which will detract from the healing atmosphere we are working to create and preserve here. Unfortunately, the impact of noise on the community would probably only be truly known after the mine goes into production. I have no idea how to mitigate the sound of either rocks being crushed and loaded or trucks traveling on the road. However, using the railway, which produces a sound that is at least familiar to the areas animal and human inhabitants, might help mitigate noise pollution. Further noise pollution mitigation might be achieved by transporting by rail one or two times per daily versus continuously by truck.

Air quality

Again, I'm not a scientist but I have read sufficient reports and concerns of knowledgeable people regarding the environmental impact of this proposed mining plan to tell you that I am deeply concerned about the dust from this mine and how it will impact me, my clients, and my animals. I spend about 10-12 hours a day outside breathing. My animals spend 24 hours outside breathing. I'm trying to envision how I could personally mitigate my and my horses' exposure to dust particulate on the inevitable days when 30-40 MPH winds will blow mine dust (largely comprised of SILICA and ALUMINA) in all directions. I can't. What I can say is that I support the mitigation recommendations posted below, particularly for dust. I especially want to support the use of RAILWAY VERSUS ROADWAY FOR ALL TRANSPORTED MATERIALS. However it is transported, the material must be thoroughly cont ained and covered, not just netted .

Final points borrowed from others' comments and supported by this writer:

"This is not critical infrastructure material nor is it a national security need."

Mitigation steps to take:

- -Waterless or nearly waterless dust mitigation
- · -Water would have to be brought in, not pulled from an already critical aquifer that serves local residents
- - No mining trucks on Iron Springs...all material would have to be moved via rail
- -An accurate, honest, and complete biological and environmental evaluation, with reasonable proposed mitigation for any issues or potential issues (if they exist)
- -Some kind of bond or insurance for losses of immediate area land owners
- Financial compensation for residents who experience loss of business or work time due to road slowdown and inevitable repairs (should materials be transported via Iron Springs Road.)

Sincerely,



Kirkland mine

1 message

Sun, Jul 16, 2017 at 6:00 PM

My name is , I bought a ranch in Skull Valley 10 years ago October, it's called million dollars invested in this ranch and I live on it.

, I have over 2.5

I am opposed to the mine for a number of reasons but I will give 2 of the best, I was diagnosed with COPD by the Mayo Clinic 7 years ago and told not to be exposed to any types of dust! This mine using front end loaders would definitely create dust in and around the valley! You see when you live in a valley such as Skull Valley there are Air inversions which traps the air and dust from just blowing away!

The second reason I am opposed is the amount of traffic on iron springs road, with the amount of truck traffic and the diesel fumes and the noise from there jake brakes this would not be a healthy place to be! Plus the danger of the big trucks on the 2 lane road, I don't think Yavapia county built iron springs road for the big trucks and to handle the weight of the trucks!

This project would decimate this community and I don't see the value of this material being more valuable then our health and quality of life we have in this beautiful little valley! Thank you

Sent from my iPad



Proposed Skull V alley Pozzolan Mine

1 message

Sun, Jul 16, 2017 at 7:49 PM

Geologist Shelby Cave Bureau of Land Management Hassayampa Field Office 21605 N. 7th Ave. Phoenix, Arizona 85027

July 16, 2017

Thank you for the opportunity to comment during the scoping period. I have reviewed the on line material and it appears the majority of the items of concern to many are to be included in the environmental assessment. In my review, I did not see mention of the Erionite concern. I respectfully request that the area be tested for Erionite and this concern be addressed.

While my research indicates that no federal regulatory standards exist, I also understand that the Centers for Disease Control and Prevention and the National Institute for Occupational Safety and Health released the first national advisory on occupational erionite exposure and that it is cause for concern.

Thank you

ROC#179097

As a local contractor that has been employed by Kirkland Mining Company for the past two years, we see the re-opening of the mine being positive toward helping our community rebuild its local economy.

Kirkland Mining Company has always hired local contractors to work with and they have taken great care in the work they do. They have been great to work with on a professional base. They care about creating economic growth and jobs in our community.

We have been in the community as local contractors and a ranching family for generations. The old tufa mine has always been a positive addition to the local economy and creating jobs. We look forward to a continued working relationship with Kirkland Mining and having them become a part of our community.

FAX TO SHELBY CAVE, Geologist RE: Kirkland Mining Co. Date: July 10, 2017 at 1:26 PM To:

To: Shelby Cave

Hassayampa Field Office,

21605 N. 7th Ave.

Phoenix, Arizona 85027

Dear Ms. Cave.

"It is the mission of the Bureau of Land Management to sustain the health, diversity and productivity of the public lands for the use and enjoyment of present and future generations."

The Residents of Skull Valley, Kirkland, Wilhoit and Ruger Ranch as well as those other communities who will be impacted by the Kirkland Mining Companies Plan of Operations pray that the BLM will abide by their mission statement.

I am writing this letter to voice my opposition to the mining permit application by the Kirkland Mining Company. (KMC) The beautiful area proposed to be mined is a place where residents can escape the noise and busyness of the city and relax in the tranquility of their properties. We bought property here 13 years ago because of the peaceful rural lifestyle in which we wanted to raise our family and eventually retire.

The proposed mining operation in the heart of our community would be devastating and ruin the quality of life that we and our neighbors enjoy so much. I beseech you to hear our concerns and to take into careful consideration the enormous negative impact such an operation would have on the community and the environment in which we live. While the mining operation may be economically feasible for KMC and a few local workers it will be devastating economically for the taxpayers visa vi excessive road deterioration, expense of hiring and training deputies to work commercial enforcement, a major economic impact on property values discussed below, future medical costs associated with lung disease and the potential for death and injury as a result of increased truck traffic. Bottom line? There is no economic benefit to proposed actions except for KMC, the local rancher who will be doing excavation and a small contingent of local workers.

My first concern is **traffic and public safety.** The Iron Springs Rd. is a narrow, winding road, with blind corners, and several school bus stops with very little room on the shoulder to park. Additionally there are very few pull outs to enable slow traffic to move aside for faster traffic. What this means is that motorists get frustrated by slower moving traffic and decide to make unsafe passes. This is a serious issue presently and will be significantly enhanced with the up to 85 additional commercial vehicles travelling mostly uphill to Prescott and beyond.

Coming back from Prescott is downhill and the trucks will take advantage of the situation since "time is money."

Many residents, and their children walk, run or bike on these roads at all times of the day. Additionally this is a popular route for tourists, bike enthusiasts and motorcyclists.

Two elementary schools are within close proximity to the mine (Kirkland Elementary 1.5 miles and Skull Valley Elementary 5 miles), the increased traffic, blowing dust from trucks constitute both a traffic safety issue as well as a health safety issue for the young children attending these schools.

With the proposed amount of material being extracted, it would entail 35-85 trucks per day traveling on these same roads causing congestion, pollution, more wear and tear on the roads, and a greater potential for accidents. Furthermore, the Yavapai County Sheriff's Dept. doesn't have a commercial enforcement unit to monitor and take enforcement action against these large trucks.

Unfortunately, history has shown that without aggressive enforcement truck companies, especially owner operators, many times running on a shoestring budget, run amok and forgo routine maintenance, drive at excessive speed to get their product to market, drive long hours in violation of logbook rules resulting in injury and fatal accidents. I am not sure of the destination of the materials but have heard it was possibly the Drake Cement Plant near Paulden, Az. There have been rumors that the material will be transported south from the mine to an unknown location but that hasn't been verified by my sources.

My second concern is **noise**, **dust and pollution**. Skull Valley, Kirkland, Wilhoit and Ruger Ranch are unique in their topography with many mountains and valleys. The proposed mine is located in the side of in the heart of one of these valleys and adjacent to Iron Springs Road. The noise, dust and pollution created by this proposal would adversely affect the entire community as wind travels through the valleys of Skull Valley, Kirkland, Wilhoit and Ruger Ranch every day. I can only imagine what the decibel level will be if this Mine is allowed to operate in such close proximity to residential properties! A number of residences are within 1000' of the Mine with many more homes such as the Windmill Development ¾ mile away and less than 1 mile from the 2000 acre Ruger Ranch development with approximately 55 home sites at risk. The community of Wilhoit with a population of 868 is only 6 miles from the Mine. While they will be less impacted by traffic, they will be subjected to the dust and other airborne particulates especially during windy conditions.

My third concern is water. The applicant proposes to excavate material which would be close to below the water table and would have a negative impact on neighboring wells that are fed by the aquifers that flow through the property in underground streams. Water always follows the path of least resistance and any single, multiple or successive development or site alteration activities and would have an irreversible negative impact on community wells and important wetlands.

My next concern is **wildlife**. The proposed mine property contains an abundance of birds such as the once endangered red tail hawk, dove, quail, roadrunner and larger animals such as mule deer, fox, elk, and other wildlife, The mining operation will make their environment sterile and force them to relocate or die.(most are territorial and will die)

A mine adjacent to this very important piece of nature would have an enormous negative impact by adding to the sediment washing into the soil from run off on the property. Airborne particulates as well as toxic emissions from trucks, equipment and machinery may seep into the

ground and contaminate groundwater, which flows into the waterways and into neighboring wells. And my concern doesn't even factor in the very real possibility that the material may contain **Eronite** which has been found to run in a strain from Wikiup to 4.5 miles south of Kirkland Junction.

In closing, I would like to say that a mining operation in the Skull Valley, Kirkland, Wilhoit, and Ruger Ranch areas would drastically affect our ability to enjoy our properties that we have invested so much money and time into, decrease our property values by as much as 30%, and destroy the quiet, peaceful community in which we live.

Below is information from the Arizona Dept. of Real Estate concerning required disclosures for sale of real estate. Those wishing to sell their homes impacted by the Mine operations will have to document it on the Sellers Property Disclosure Statement. The loss of value to their homes coupled with the fear of fraud or misrepresentation only adds to the cumulative stress to the property owners

If you violate the disclosure law by misrepresenting or not disclosing required information, the buyer may pursue legal action against you for failure to disclose, fraud, or misrepresentation (intentional or negligent). A buyer who is successful in such a lawsuit may be awarded substantial monetary damages. Or, in unusual cases, a court may void the contract and return all property or money back to the original parties, as if the purchase never occurred. So remember, if in doubt, to avoid litigation, make sure to disclose all information about the property."

If this application is granted, the negative impact that this mine would have on the environment and its inhabitants is irreversible. It would compromise the health and safety of our community and ruin the character of this unique place forever. Hopefully BLM will stand by and honor its mission statement by disapproving this application.

I thank you for taking the time to hear my concerns and hope you will take them into consideration when making your decision about the future of our community.

Sincerely,

CC: Congressman Gosar

Senator Jeff Flake

Senator John McCain

Yavapai County Board of Supervisors

Yavapai County Sheriffs Dept.

Prescott Police Dept.

11 July 2017

Shelby Cave, Geologist

Hassayampa Field Office

21605 North 7th Avenue

Phoenix, Az 85027

Dear M. Cave:

I picked up one of the flyers announcing a public hearing at the Skull Valley Community Center for the proposed "pozzolan mine" at the site of the now defunct "kitty litter mine" outside of Kirkland, Arizona.

I have lived in this area of Yavapai County for forty-eight (48) years and was attending the Church of Jesus Christ of Latter-Day Saints while the "kitty litter" aka Tufa Rock Quarry was in operation. Our church is directly below where the mining operations took place, and there were no negative issues with the operation during its existence.

I am very much in favor of re-opening the area above our church for any kind of economic activity. Several years ago, I was actively involved in the activities of the Arizona Mining Association and closely associated with executives in the Phelps Dodge Copper Mining Company. Through those associations, I learned that, in our lives, everything around us is either mined or grown. After receiving the flyer, I researched pozzolan (which I had not ever heard of) and found out the following:

♣ It is a volcanic rock, which when crushed to a fine powder and added to other materials, produces extra strength in the making of concrete M. Cave

5 July 2017

Page 2

- Let originally was discovered in the area around Mt. Vesuvius by the Romans, and is credited with the fact that buildings in that area are still standing (like the Coliseum in Rome, for example)
- 4 Pozzolan and tufa rock are virtually the same kind of rock

I have heard that people in both Kirkland and Skull Valley are objecting to the creation of dust and increased traffic on the Kirkland/Skull Valley Road. The dust is always with us in Arizona. So, we in church, will just have to bring a dust rag with us each Sunday. Not a problem. The only problem I see are the haul trucks. The Kirkland Mining Company's plan states that there will be:

Depending on market demand in the first five years, there could be 30 to 85 truck trips a day

(1) The plan does not state which way the haul trucks will be going — to Prescott or to Phoenix? (2) Either way, the route is already heavily travelled by tourists, residents of the Skull Valley/Kirkland/Walnut Grove communities and people on their way from Northern Arizona going to Las Vegas, Nevada, or California. In addition, folks from Hillside, Yava and Bagdad use the route from their residences to Prescott. (3) As a general rule, it seems to me that haul truckers are paid by how many trips they make a day/week or month. It also seems to me that haul trucks

M.Cave

5 July 2017

Page 3

are usually "hauling ____", to use the vernacular, as an incentive to the driver for extra money. Neither of the aforementioned routes were designed for haul trucks. Recently, Yavapai County spent a lot of money removing brush from both sides of the Kirkland/Skull Valley road and re-paving the road. I thought they were going to widen the road, so that the myriad of bicyclists who routinely use the road would be able to ride on the shoulder of the road while traversing the dangerous curves outside of Kirkland as well as the rest of the route. (4) The Kirkland Mining Company's Plan does not mention hours of operation. The bicyclists also like pedaling after dark as part of their cycling adventures. The widening of the Kirkland/Skull Valley did not happen. I can't figure out why all the money was spent on de-brushing the shoulders of both sides of the road and not, at the very least, paving a wider "shoulder" on both sides of the road. Regularly, in the 48 years I have lived here, vehicles have been passing the cyclists on those curves and I have come around the corner, with vehicles, bicycles and the "bicycle follow-up car" all in the middle of a narrow road. This happened to me, at night, just three weeks ago.

My solution for the haul trucks issue, is that the Kirkland Mining Company can avoid a potential litigious situation by paying their drivers M.Cave

5 July 2017

Page 4

a fair salary for a day's work and not give incentives for speeding through the area to make extra money.

All of us who have lived in this area of Yavapai County remember the days before the Arizona Department of Transportation disallowed eighteen-wheelers coming down or going up Highway 89. Now, the truckers coming out of Prescott headed for Vegas or California have to either use I-17 or Iron Springs Road. We had nothing to say about those trucks and how they drive!

In summary, I am hopeful that the residents of the surrounding communities will see the many advantages to opening the Pozzolan Mine outside of Kirkland, Arizona.

Respectfully submitted,

Copy to: file



Kirkland High Quality Pozzolan Mine Draft Mining and Reclamation Plan of Operations

Environmental Assessment DOI BLM-AZA 3712

OPEN HOUSE COMMENT FORM

July 11th, 2017, 6 pm to 8 pm

Skull Valley Community Center, 3150 Old Skull Valley Rd., Skull Valley, Arizona

The Bureau of Land Management (BLM) would like to obtain your input regarding social, economic, and environmental issues and/or concerns associated with this project. Please list your name and address below.

CONTACT INFORMATION (Optional* - Please Print)

NAME: EMAIL ADDRESS (or Mailing Address if no email address is available):
Representing Self Representing Organization Name of Organization:
Please provide any comments and/or concerns regarding the proposed project:
I feel that further testing of the material to be mined
needs to be done. Specifically for the presence of erionite.
Reviewing maps from the CDC it seems highly likely that
crionite will be present at the Kirkland mine, It has
already been identified in a nearby location of Kirkland
Junetion (NE'/4 SW'/4 Sec. 5, T. 11 N., R.4W) I've attached a
Copy of the CDC map that shows a definite orientation
of the Known erionite. Erionite is a carcinogen
when disturbed and made airborne. Our prevailing
winds through Skull Valley are from South to north.
Since the mine is on the South end of the valley, the
airborne particles would be a danger to all the
residents. Mesotheliona is one of the lung diseases
associated with exposure, Please protectall of us and

Public input is an important part of the project development process. Comments are requested by July 25th, 2017 in order to ensure timely consideration, but are welcome at any time. Please submit your comments or concerns to Shelby Cave, PhD, Project Manager, BLM, Hassayampa Field Office, 21605 N. 7th Avenue, Phoenix, AZ 85027; via fax at (623) 580-5580 Attn: Shelby Cave; or via email at KIRKMPO@BLM.GOV

Privacy notice: Before including your address, phone number, email address, or any other personal identifying information in your comments, be advised that your entire comment(s), including personal identifying information, may be made publicly available at any time. While individuals may request that the BLM withhold personal identifying information from public view, the BLM cannot guarantee it will be able to do so. If you wish to withhold your personal information, you must state this prominently at the beginning of your comment(s). We will make all submissions from organizations and businesses available for public disclosure in their entirety.

organizations and businesses available for public disclosure in their entirety.

require that they test specifically for erion ite.

Project information is available http://bit.ly/2rRYTII



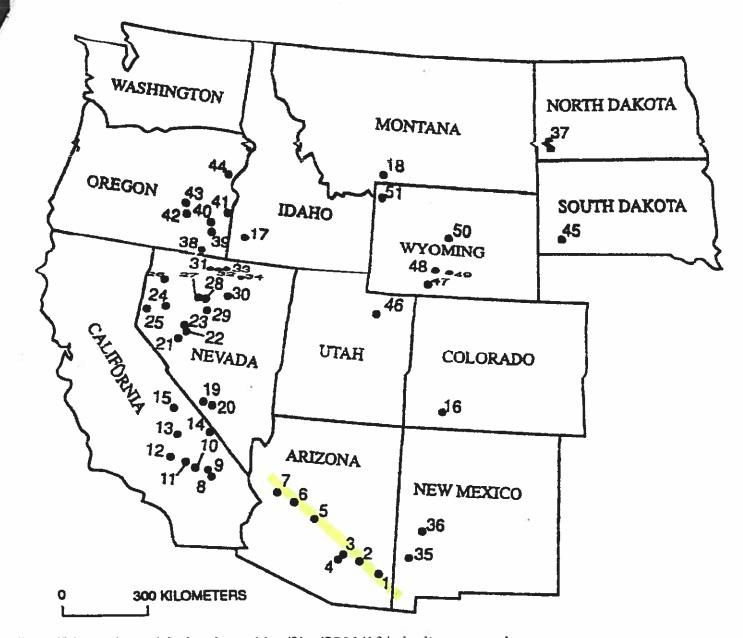


Map: Occurrences of Erionite

Posted on November 22, 2011 by Administrator

From Sheppard R. <u>Occurrences of erionite in sedimentary rocks of the western United States</u> (http://pubs.usgs.gov/of/1996/0018/report.pdf) . Denver, CO: US Department of the Interior, US Geological Survey; 1996. Open File Report 96–018.

» KETURN TO THE DIOS ENTRY (INTTD://DIOSS.COC.SOV/NIOSN-SCIENCE-DIOS/!D=523)



(http://blogs.cdc.gov/niosh-science-blog/files/2011/12/erionite-map.png)

Arizona

- 1. Along the San Simon River, north of Bowie, Graham and Cochise Counties (NW1/4SE1/4 sec. 27, T. 11 N., K. 27 E.)
- 2. Near Bear Springs, Graham County (NW1/4SE1/4 sec. 4, T. 7 S., R. 23 E.)
- 3. Along Dripping Spring Wash, north of Christmas, Gila County (NWI/4sec. 1,T. 4 S., R. 15 E.)
- 4. Near Kearny, Pinal County (NW1/4NW1/4 sec. 11,T. 5S., R. 14 E.)
- 5. Horseshoe Reservoir, Maricopa County (Unsurveyed, about 1 km west of the Horseshoe Dam)
- 6. Near Kirkland Junction, Yavapai County (NE1/4SW1/4 sec. 5, T. 11 N., R. 4 W.)

7. Near Wikieup, Mohave County (NE1/4SE1/4 sec. 7, T. 15 N., R. 12 W.)

California

- 8. Drill hole (Hector 3, about 4.7-5.4 m and 10.7 m depths) near the Hector hectorite mine, San Bernardino County (NWI/4SWI/4sec. 25, T. 8 R, R. 5 E.)
- 9. Southern flank of the Cady Mountains, San Bernardino County (NWI/4SWI/4sec. 6, T. 8 N., R. 5 E.)

And a life mon

- 10. Near Mule Canyon, Calico Mountains, San Bernardino County (NE1/4SW1/4 sec. 24, T. 10 N., R. 1 E.)
- 11. Near Coon Canyon, Mud Hills, San Bernardino County (NW1/4NE1/4 sec. 23, T. 11 N., R. 2 W.)
- 12. Kramerborate mine at Boron, Kern County
- 13. Drill hole at China Lake, San Bernardino County
- 14. Near Shoshone, Inyo County (NE1/4 sec. 12, T. 21 N., R. 6 E.)
- 15. Drill hole at Owens Lake, Inyo County

Colorado

16. Near the Rio Grande, south of Creede, Mineral County

Idaho

ATTACKE DE CONTRACTOR DE CONTR

Montana

18. Hepburn's Mesa in Yellowstone Valley, Park County

Nevada

- 19. Near Beatty, Nye County
- 20. Drill holes (UE-25a#l, about 395.1 m depth; J-12, about 189.0-192.0m depth; USW G-4, about 400.5 m uepth; OSV GO-3, about 302.3 in depth at 1 ucca Modificant, type County
- 21. Gabbs Valley, northwest of Gabbs, Nye County
- 22. Southern Desatoya Mountains, Churchill County
- 23. Near Eastgate, Churchill County (sec. 28, T. 17 N., R. 36 E.)
- 24. Trinity Range, Churchill County (northeast part of T. 24 N., R. 28 E.)
- 25. Near Hungary Valley, Washoe County (SW1/4NW1/4 sec. 22, T. 22 N., R. 20 E.)
- 26. Near Windy Basin, east of Gerlach, Pershing County
- 27 Jersev Valley, Pershing County (sec. 8, T. 27 N., R. 40 E.)

July 13th 2017

Re: Kirkland mine.

I am a resident of Yarnell and Highway 89 is our main street lined with shops, restaurants, galleries and other businesses.

Highway 89 being listed as a scenic highway, our towns merchants are entirely dependent on the tourist industry. Having a stream of traffic of large trucks will impact our livelyhood and real estate values and endanger the lives of all who travel on this highway with steep grades and in most parts two lanes. There is a brand new State Memorial Park for the 19 firemen that perished in the Yarnell Fire and it is popular with people who come from all over the country to visit this park situated halfway down Yarnell Hill. Yarnell Hill descends some 2000 feet to the desert floor and Congress.It has seen many fatalities because of is curves and steep descent. Just last year a semitruck jackknifed because he could not manage a sharp turn.

To expose residents, commuters and tourists on this highway to traffic fatalities and congestion and constant noise is unconscienable. I am asking that you decline the operation of this mine for these reasons.

Sent to:Shelby Cave, Project Manager BLM Hassayampa Field Office 21605 N. 7th Ave. Phoenix, Az 85027

RECEIVED
PHOENIX DIST OFFICE

BURE AU OF LAND MGMT
PHOENIX, AZ

Ms. Shelby Cave Hassayampa Field Office 21605 N. 7th Avenue Phoenix, AZ 85027

Re: KIRKMPO Mining Permit application Skull Valley

Dear Shelby,

We last communicated about the final rejection of the Milkmine Gold Mining application on Wagoner Rd., where I owned property. This Kirkland Mining Co. permit application is 100x worse, and I wanted to list the most important reasons this application must be rejected by the BLM:

1. TRUCKS:

Where is the traffic engineer report Joe Huot (Special Project Mngr, Permit Inspection, Public Works Dept.) instructed KMCo to get???

During "peak production" over 40 years KMCo would add 30-85 truck trips PER DAY, and more for supplies and fuel, etc.

In addition, over 15 more on site trucks and water trucks that must deliver 20-30,000 gallons a day, just for DUST suppression.

These trucks to cover a 350 mile radius and will overwhelm the roads they use every single day. They will create the beautiful drive down Iron Springs Road's demise, a nightmare of trucks leaking dirt and traffic problems for the next 50 years! (40 years mining, 10 to shut it down)

This will effect ALL residents and the right to quiet enjoyment of their property in the area. Residents travel to Prescott for supplies and will have to follow these dirty trucks, covered or not. The loud noise, dust and dirt, traffic, and all the diesel fuel pollution into the environment and backyards for up to 12 hours EVERY DAY (80 hrs) of operation for the next 50 years.

Would you consider sacrificing the community so KMCo can make money selling an additive to cement, one that can be man-made using industrial byproducts, a lot more efficient than digging a gigantic crater?

2. NOISE:

Every day for up to 12 hours, the noise of their transport fleet of dump trucks, large earth-moving equipment, conveyors, crushers, screeners, etc. create HEARING LOSS in miners. There are no trees or buffers for all this unnatural unhealthy mechanical noise that travels far and wide. Noise pollution is just as dangerous as other forms of pollution.

3. WATER:

The 20-30,000 gallons of water per day used for dust suppression alone, from 3-18 trips per day to get it, FROM WHERE? Whether it comes from public or private land, it will deplete the local groundwater in the whole area despite their reserves. How many gallons are wasted making cement filler if you multiply the 20-30,000 gallons x 50 years? Not to mention the unknown effects of disturbing groundwater now and later.

4. RECLAMATION:

Where is KMCo's financial assurance paperwork that is required, to show they will put a bond or deposit to the gov't or community for 100% prepaid remediation, restoration, reclamation and rehabilitation?

What possible "re-use" would fit: garden?, park, farmland, commercial, industrial, recreational, mineral exploration or wildlife habitat? Look up the BAGDAD MINE OVERLOOK photo online to get an idea of what you'll have to work with at the end. A humongous empty dirt crater they sell tickets to.

5. AREA PROPERTY VALUES:

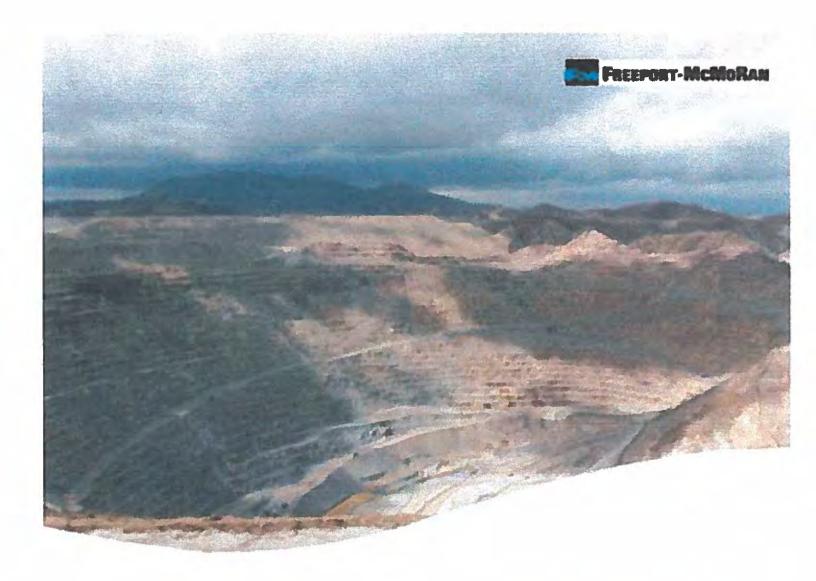
I got my first real estate license in New Jersey in 1967. Fourteen years ago I invested in my Kirkland property because it was so beautiful and quiet and natural. It may be impossible to know how much area real estate will drop if you approve this application, but once again, Bagdad nearby, would make a good comparable since their copper mines closed.

I visited Bagdad to see it and met a retired miner living in a crummy shack the mines offered him for \$100. a month, like most of the other residents.

The Estimated Median house or condo value in Bagdad in 2015 was \$11,492.00. (It was \$55,900.00 in 2000, fifteen years earlier.) The Average Arizona in 2015 was \$195,300.00. compared to Bagdad's \$11,492.00. How bad is that? It's not hard to see where the prices in the area of Skull Valley will be going with this gigantic mining operation over the next 50 years.

BLM's Leon Thomas said "BLM strives to be a good neighbor in the communities they serve." I know that you will see this application must be denied for the sake of the community and the environment in no uncertain terms. Thank you.

eM W



BAGDAD MINE OVERLOOK

Get a bird's eye view of the Bagdad mine

Saturdays & Sundays at 12:30pm

Check in at the mine security gate.

Drive your personal vehicle to the overlook while being escorted by mine personnel.

* No special clothing or age requirements *

* Please note the access route is a smooth dirt/gravel road. *

Nane:

Representing Self

Comments:

I am all for the The old tufa mine in Kirkland Skull Valley area opening. it will help the ecomony in this area.

I was raised in Kirkland, went to school there and care about what is happening. Seems as tho all the people fighting against it are trying to make my home become like wherever they are from(California) and trying to fight progress. They protest without knowledge. The government has so many breaucrats working to protect our environment that we are so tied up in red tape it is almost impossible to anything.

Maybe if it was open the cafe in Skull Valley would re-open and the store. It is a ghost town and needs something to bring more customers and people in.

I am unable to attend the meeting and wanted to give you my thoughts and concerns as a taxpayer and homeowner and voter in Kirkland.

S



Our Concern with Kirkland Mine Development

1 message

Our family has lived in Skull Valley for 12 years. We have a daughter in school in Prescott and are extremely concerned in regards to the proposed development of the old Kirkland Mine for the following reasons.

- 1. Increased traffic due to the Kirkland Mine on Iron Springs Road (estimated at 85 truck trips per day) will impact local residents and tourists with noise, dust, air pollution and traffic congestion.
- 2. The increased traffic will impact residents who live along and drive daily on Iron Springs Road, Copper Basin Road, Williamson Valley Road, and Highway 89 as well as communities who use these roads to access Prescott, not limited to Ruger Ranch, Rancho Diamante, Long Meadow Ranch, Las Vegas Ranch, as well as rural residents from Yarnell to Bagdad to Ash Fork who use these access roads to come into Prescott.
- 3. Loaded haul trucks, travelling slowly on the steep grade will slow traffic going uphill so that travel times to and from work, school, shopping, entertainment, and emergency facilities are longer and more dangerous.
- 4. Increased traffic and traffic congestion will damage roadways, generate more air pollution, and ultimately cost taxpayers money.
- 5. Traffic going into Prescott is already dangerous because of limited passing zones, steep grades, sharp curves, and high speed motorists.
- 6. The local volunteer fire department has responded to many accidents in this area, including several fatalities, and slow haul trucks will increase the amount of traffic incidences along the two-lane road for twenty+ miles in both directions.
- 7. This increased traffic will also impact the ability of emergency personnel to respond to local non-Mine related emergencies by slowing traffic conditions in general between Skull Valley and Prescott.
- 8. The danger and accidents will eventually force Yavapai County to widen Iron Springs Road on taxpayer funds.
- 9. The increased traffic will cost residents time and people's lives, and cause frustration and anger.

We are vehemently AGAINST any development of this mine in Skull Valley/Kirkland! We plead with you NOT to allow this mine to come into our quiet rural community.

PastedGraphic-8.tiff 6K



Kirkland Mining Project

1 message

Mon, Jul 17, 2017 at 8:43 PM

To Whom It May Concern,

I add my voice to this issue of the possibility of the Kirkland Mining Project coming to Skull Valley. Please DO NOT allow this to happen. There is much to much at stake here--I'm a birder and our natural resources are valuable and already diminishing. Please do not hurt this important part of our area. ALSO I'm concerned for the people living in this area of the HUGE impact it will have on their everyday lives. The inconvenience of traffic and noise and pollution and health. PLEASE preserve the quality of life that these people enjoy.

Thank you very much. Sincerely,



OPPOSITION to the Kirkland Mine

1 message

Mon, Jul 17, 2017 at 1:32 PM

I wish to register my opposition to the re-opening of the Kirkland "kitty-litter" mine. It will do too much damage in so many ways to the local community without ANY BENEFIT to these folks. I live in Skull Valley and it will definitely cause more deaths on the roads and lower my property values, from which I will get NO COMPENSATION.

My wife has written many comments which 'i would like to echo. I've attached those herein and will also send this same message via the US Postal system, just to make sure you get this and that it doesn't end up in the bit-bucket.

Thank you for your time.

__

Kirkland_Mine_Issues_Of_Concern_20170714.pdf 37K



Attention Shelby Cave

1 message

Mon, Jul 17, 2017 at 4:53 PM

Please don't let this happen. I'm with a group of motorcycle riders who regularly travel on the scenic 89 Hwy, and this will severely impact the communities and safety of those areas served by this scenic route.

Anticipated/forecasted trucking congestion will cause a significant loss of capitol to all businesses along said route, increase probabilities of traffic related accidents/fatalities, limit EMS/first responder Response times, significantly degrade said hard to reach/tremendously expensive to maintain roads, and pose significant environmental concerns along said route.

I urge you to consider the cost of even one lost life secondary to this bad proposal as a blood on your hands. It's only a matter of time, please rethink this, and do the right thing for the people of Arizona.

2 attachments

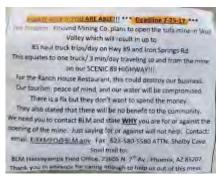


image1.JPG 177K





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Mon, Jul 17, 2017 at 1:32 PM

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My wife has written many comments which 'i would like to echo. I've attached those herein and will also send this same message via the US Postal system, just to make sure you get this and that it doesn't end up in the bit-bucket.

Thank you for your time.

Best regards,

Kirkland_Mine_Issues_Of_Concern_20170714.pdf 37K

A general list of Issues related to the Kirkland Mine

Air Quality

- 1. Dust generation may impact community members in the immediate vicinity and downwind in several directions. Temporary dust abatement measures are included in the Mine plan of operations, specifically using water to keep areas of Mine operations moist. There are two problems with this approach—1.) the use of groundwater to reduce dust and 2.) the long-term impacts of micro-particle generation. Groundwater in the upper alluvium is limited, even if deeper groundwater is excessive—see more under groundwater resources below. Micro-particles generated through the scraping and crushing processes may be temporarily abated by spraying water, but after they dry, the wind will cause these to be airborne as long as the Mine is in operation and for decades thereafter. These will affect people, wildlife, and livestock in the broader vicinity downwind of the project area as winds can be very strong and carry these particles long distances.
- 2. Pollution from heavy equipment and from trucks in this valley also increase air pollution. Wind patterns in the valley will carry this pollution along the valley; and thus impact the people, livestock and wildlife in the entire project vicinity.

Noise

- 1. Several sensitive noise receptors (residential areas, schools, churches) are located near the Mine property.
- 2. Heavy equipment used to extract and crush the material will generate substantial noise impacts for residents, livestock, and wildlife.
- 3. Increased truck traffic will impact residents along the transportation route from the Mine site to the destination towns.

Health and safety

- 1. Silica in the dust has known adverse health impacts.
- 2. Air contamination from heavy equipment and trucks will impact people along the valley and transportation route.
- 3. Increased traffic on Iron Springs Road will cause more accidents and is a danger for local people (especially children), livestock and wildlife.
- 4. Fire at the Mine site is a very real potential and danger.
- 5. Skull Valley has a volunteer fire department that respond to accidents in the Mine vicinity and on Iron Springs Rd. These local residents are already taxed with the amount of traffic incidences and local medical emergencies. They know the rural area and are able to respond more quickly than emergency medical responders from Prescott.

Traffic

1. Increased traffic due to the Kirkland Mine on Iron Springs Road (estimated at 85 truck trips per day—but it is not clear if this is one way trips or round trips) will

- impact local residents and tourists with noise, dust, air pollution and traffic congestion.
- 2. The increased traffic will impact residents who live along Iron Springs Road, Copper Basin Road, Williamson Valley Road, and Highway 89 as well as communities who use these roads to access Prescott, not limited to Ruger Ranch, Rancho Diamante, Long Meadow Ranch, Las Vegas Ranch, as well as rural residents from Yarnell to Bagdad to Ash Fork who use these access roads to come into Prescott.
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- 7. This increased traffic will also impact the ability of emergency personnel to respond to local non-Mine related emergencies by slowing traffic conditions in general between Skull Valley and Prescott.
- 8. The danger and accidents will eventually force Yavapai County to widen Iron Springs Road on taxpayer funds.
- 9. The increased traffic will cost residents time and people's lives, and cause frustration and anger.

Socioeconomic Impacts

- 1. Valley residents are concerned that the benefits of the Mine will not be shared among community members—who are the ones to bear most of the costs. Many rural people are marginalized in that they have reduced access to health care, legal expertise, financial power to confront environmental justice issues, and may not be able to access or respond to public engagement efforts by the BLM and Mine during scoping and public response periods.
- 2. The Mine will generate few jobs in the community.
- 3. The Mine will decrease property values, not just in the immediate vicinity, but in areas along the transportation routes.
- 4. The Mine and BLM have not adequately involved the public in the surrounding area in the public process.

Surface Water

1. Creeks in the immediate project area vicinity have relatively permanent flow and may harbor unique species or provide valuable water resources to plants and animals. There are also springs, wetlands, and special aquatic sites in the project area vicinity that will be directly and indirectly affected by Mine operations, not limited to excavation and stockpiling, airborne particulate contamination, and a change in functions and services related to Mine

- operations, traffic, noise, increased personnel, ground disturbance, and alterations of wildlife corridors and other biological connectivity such as species genetics between upgradient perennial waters and downgradient perennial waters. Springs in the project vicinity may hold unique species and provide special functions and services to the surrounding environment; these springs may be affected by changes in groundwater quantity due to groundwater extraction by the Mine.
- 2. Drainage features on the project area are likely to be jurisdictional waters of the U.S. and have a significant nexus to downstream traditional navigable waters. Local wetland areas and special aquatic sites in Skull Valley trap pollutants, filter stormwater, provide habitat and support the ecological, biological, and chemical characteristics of downstream traditional navigable waters on the Colorado River. If the Corps determines that drainage features on the project area do not have a significant nexus with the downstream TNW, then as a community, we will appeal using the federal appeals process.
- 3. Micro-particles may contaminate surface water in the on-site and surrounding drainages, and affect water quality and local riparian species.
- 4. Mine operations may disrupt biological corridors that are dependent on surface water.
- 5. Project area waterways may be polluted by spilled fuels.

Groundwater

1. The current well on Mine property is drawing shallow groundwater from the local alluvium. This groundwater is limited, and a drawdown would affect the wells of local residents as well as springs in the area.

Biological Resources

- 1. Skull Valley has unique biological resources because of its natural, year-round wetlands and special aquatic sites, its riparian vegetation, and contiguous riparian habitat along Skull Valley wash and several of the associated tributaries. Washes on the Mine property have surface water and shallow pools most of the year and serve to host riparian obligate species. While these pools may seem small, riparian areas in Arizona are unique and provide valuable functions and services to species and ecosystems.
- 2. Yellow-billed cuckoos have been recorded by local bird biologists in this valley. While habitat on the project area does not provide the habitat primary constituent elements of riparian woodlands 200 or more acres in extent and dynamic riverine processes, the riparian habitat on the project area could provide valuable stopover habitat. Surveys have not been conducted in the valley to determine if the recorded yellow-billed cuckoos were migrant or nesting individuals; if they do nest in Skull Valley, direct impacts of the Mine could include noise and dust generation.
- 3. Nesting birds utilize the riparian habitat along the drainage features of the project area. Noise and dust generation would deter these species from nesting or decrease the likelihood of successful reproduction.

- 4. Migratory birds may use the project area washes as stopover habitat, and these would be affect by the destruction of the drainage feature beneath the proposed Mine footprint and the noise and dust generation that may deter them from using washes proximate to the Mine footprint.
- 5. Bald and golden eagles have been seen in Skull Valley. Bald eagles are migratory, and golden eagles occasionally establish nests in the area. The cliffs may provide potential nesting habitat for golden eagles.

Scoping Notification Letter

Submission Successful Your Submission ID is: KIRK_SCOP_1-1-59232

Names & Addresses

Email Address:
Day Phone: 1
Evening Phone:
Fax Number:
Other Phone:

Agency: Public Web Page

Comment ID: 1

Comment Title: Positive impact on local economy

Comment: The proposed project would provide much needed jobs in Kirkland and Yavapai County.

Comment ID: 2

Comment Title: Area has been mined previously

Comment: Are has been mined previously and did not negatively impact the environment.

Submission Classification

Response Type: Front Office Submission Form
Delivery Type: Front Office Submission Form

Receipt Date: 07/17/2017 Status: ACTIVE

Agreements

Yes - Withhold personally identifying information from future publications on this project?

No - Please include me on the mailing list for this project?

Original Submission Files



Kitty Litter Mine

1 message

Tue, Jul 18, 2017 at 7:31 AM

I want to let you know how much I oppose the opening of this mine that was abandoned in 1900.

I live in Yarnell and love the peaceful, easygoing lifestyle here. But now the impact of this Mine will disrupt our daily lives, affect our home values.

We have barely recouped from the 2013 fire and now the BLM is throwing another obstacle right down the center of our town.

I work full time in Wickenburg and the drive adds 10 hours to my work week.

If this goes through and I am behind some mammoth truck going down Yarnell Hill it could double my travel time. Those trucks should not even go down the Hill because they are too large to make the curves easily.

The fact that BLM is preparing to sacrifice our time and our lifestyle to make a few bucks just shows how little they care about the people and their environment.

Sent from my iPhone



Scoping Comments on the Kirkland Mine Proposal

1 message

7/20/17

Hello.

I would like to provide comments to the Scoping Comments for the Kirkland Mine Proposal.

My wife and I are residents of the Escapees North Ranch, a community of 436 deeded parcels about four miles south of Congress on Rt. 89. The majority of these parcels contain stick built, modular or park model homes. In addition, there is a campground with approximately 100 sites for people traveling visiting the area.

My primary concern with the Kirkland Mine Project is the truck traffic to and from the mine. I would like to make the following observations

- 1. In general, I feel none of the roads leading to and from the mine are designed to safely handle the kind of heavy truck traffic that is being projected. In every direction, there are many narrow sections with frequent curves and steep grades. To introduce this heavy truck traffic with the normal flow of cars, small trucks and RVs will create an extremely hazardous situation with serious accidents being inevitable.
- 2. Consider the route through Yarnell down the Yarnell Hill to Congress. First the truck traffic through the town would do great harm to a quiet, peaceful community. Then the treacherous twisting route down the mountain, right by the new Granite Mountain Memorial State Park, which is often crowed with cars in a small parking area. This is not an easy route, even for cars.
- 3. Once reaching Congress on Route 89. a turn west on Route 71 will take you to Route 93. Continuing on Route 89 to the south is a more direct route to Wickenburg and Phoenix. But this is the road that runs directly in front of North Ranch. There are many slower moving RVs on this road. There are also many elderly drivers that don't even drive the speed limit. This is a dangerous situation now. The truck traffic would be unbearable along this section. The noise from the trucks would be extremely unsettling for residents, some living as close as 75 feet of the highway. An additional concern is approximately 5 miles further south of North Ranch where a new traffic circle is to be installed on Route 89 for access to the huge Wickenburg Ranch development. Imagine the problems there.

What are my suggestions?

- 1. <u>Listen closely to the people who live near the mine and hear their con</u> relative to the impact on their lives and sanity.
- 2. Only approve the project if #1 can be reconciled. And then <u>use the existing adjacent railroad to haul the material to market</u>. It has been stated by Kirkland Mining that rail is too expensive. I look at this statement with distain. Kirkland is saying it would reduce their profits, with no consideration of all the people whose lives and safety will be impacted by the truck traffic.
- 3. If trucking is the only answer, ban these trucks from traveling on Route 89 south of Congress

Thank you for hearing my comments relative to the Kirkland Mine. Please do not hesitate to contact me if I can clarify any of the information I have provided.

I would appreciate a return email to confirm you have received my comments



Concerns with the Kirkland Mine

1 message

Wed, Jul 19, 2017 at 9:09 PM

Madam or Sir:

Please be awar e that I (among many others) oppose Kirkland Mining Company's opening of an open pit rock quarry type mine next to Copper Basin Wash in Skull Valley, which would be located on BLM public land. The operation of this mine would have a significantly harmful impact in a large number of different areas, including air quality , noise levels, h ealth and safety concerns, traffic flow , surface water quality and groundwater availability , and survival of local flora and fauna.

If the opening of the proposed mine cannot be averted, please take forceful steps to ensure that the potentially harmful impact of the mine operation will be mitigated. Thank you for your consideration.

Sincerely,

CC:



Skull Valley Mining Comment PEriod

1 message

Wed, Jul 19, 2017 at 4:13 PM

Good afternoon Mariela:

We have taken numerous calls from concerned citizens in the Skull Valley community and surrounding area regarding the Skull Valley mining operation in Yavapai County. Additionally, Yavapai County supervisors have requested assistance to help address these concerns. As the July 25, 2017 comment period draws near, we would ask for your consideration in extending that period to allow additional time to meet with these community members and hear their concerns.

We appreciate your consideration of this request.



Other Erionite references for you.

1 message

Wed, Jul 19, 2017 at 11:14 AM

Dear Shelby Cave,

I have included two other reference for you regarding erionite in Arizona. The reports shows the presence of erionite in formations extending from the Bowie Formation in the southeast (Graham and Cochise Counties) to Wikieup in the northwest (Mohave County), crossing a significant portion of Arizona. In particular, erionite was located in deposits near the Kirkland Junction as indicated in my previous comment.

OCCURRENCES OF ERIONITE IN SEDIMENTARY ROCKS OF THE WESTERN UNITED STATES, Sheppard, Richard, https://pubs.usgs.gov/of/1996/0018/report.pdf pg 16.

ARIZONA ZEOLITES, MINERAL REPORT NO. - 1, STATE OF ARIZONA DEPARTMENT OF MINERAL RESOURCES, http://repository.azgs.az.gov/sites/default/files/dlio/files/nid1602/zeolitesmr1.pdf pg 30.

Please accept these along with my previous comment regarding erionite.

Regards,



Kirkland Pozzolan mine

1 message

Wed, Jul 19, 2017 at 3:27 PM

Thank you for asking for comments. As a person who owns and lives on land adjacent to Iron Springs Rd, I'm against the rock being transported from the mine using Iron Springs Rd. The amount of traffic will be detrimental to the area as well as the noise created by 30-85 trucks/day will ruin the tranquility. I'm assuming this number may also increase as the mine hits its estimated production after 5 years.

I've chosen this area to own private land due to the environment. These trucks will create a great deal of unacceptable noise pollution. Please require the mine owners to utilize the railway that runs in the area. I believe this would be a wiser transportation method. Thank you!

Sent from my iPhone

Sent from my iPhone



Copper Basin W ash Mine Impact

1 message

Wed, Jul 19, 2017 at 10:48 AM

Dear Sirs:

I'm writing to voice my opinion regarding only one issue as the other issues or concerns to the public have already been expressed. With this many heavy haul trucks running on the local roads this will have an adverse affect on the structural integrity of the roads causing failure of the subbase, asphalt, etc. I suggest an impact fee be accessed to be paid directly to the public agencies responsible for road maintenance. This fee should be for the road maintenance only and not for any other purpose. I moved here over 20 years ago from the Phoenix area and I'm still appalled about the poor condition and lack of roads in this county in spite of high taxes.

Sincerely,



Potential for erionite at Kirkland Mine?

1 message

Wed, Jul 19, 2017 at 10:18 AM

Dear Shelby Cave,

I have a question/concern related to the environmental assessment you will perform at the Kirkland High Quality Pozzolan Mine during the evaluation period that is soon to begin. Will you be assessing the presence of Erionite in the formation to be disturbed? If you have done this already, are there results to report?

Erionite is a known causer of malignant mesothelioma. It has a a structure similar to fibrous asbestos and results from water action on volcanic ash formations - similar to the tuff at the proposed Kirkland Mine site. Erionite has been discovered in a formation approximately 8 miles south of the Kirkland Mine just off State Route 89 north of Peeples Valley (NE1/4SW1/4 sec. 5, T. 11 N., R. 4 W.).

Please see some information from a CDC blog that outlines the material and potential problems associated. There is a map identifying the source close to the Kirkland Mine.

https://blogs.cdc.gov/niosh-science-blog/2011/11/22/erionite/

If the proposed 30-85 trucks per day leaving the mine happen to distribute Erionite dust into the atmosphere, do you have a mitigation plan in place to deal with it? Please consider shipment via rail as I outlined in a previous comment.

Thank you for taking this matter into consideration.

Regards,



Proposal to use public land to mine and transport pozzolan in t

he Kirkland/Bagdad

1 message

Thu, Jul 20, 2017 at 9:22 AM

My wife and I are vehemently opposed to a recent notice from North Ranch Escapee's Park regarding the proposal to use public land to mine and transport pozzolan to areas in the Prescott, Wickenberg, and surrounding areas from the Kirkland/Bagdad areas. We are specifically concerned about traffic on highway 89, north and south from Congress to Wickenberg. We live in a senior RV park with a guarter mile of highway frontage that borders this highway 89 route that you are proposing using for your big trucks. There are 450 RV's in that park of which the west when boundary of the park is within approximately 15 feet of that highway right of way. This is a senior park ages 65 to 95 who have been retired here, peacefully, for over 25 years (most of us chose this clean desert air location for all our respiratory problems, peace, quiet, serenity and isolation from industry, traffic, "trucks" and congestion). Furthermore, this is a recipe for disaster for us to enter and exit our park from only one small driveway off and on to highway that has a speed limit of 65 mph. That which I am alluding to is the following: rather than having these big trucks speeding through small towns such as People's Valley, Congress, Wiickenberg and Yarnell's steep, winding, 3,000 foot descent to Congress and Wickenberg we would propose the following: Kirkland through Bagdad to Highway 93 or Kirkland north to the remote east end of Prescott which becomes Iron Springs Road, turn left at the first signal which is Willamson Valley Road then about 2 miles up, at the first signal, turn right on to the very beginning of the Fain Highway which circumvents all of Prescott and Prescott Valley and ends at Highway 69 in Dewey. This gives you 3 major highway options: Highway 89A north through Chino Valley to I-40at Ashfork or northeast off of Highway 69 on to Highway 169 about 15 miles to I-17north or continue on Highway 69 at Dewey to Highway I-17 at Cortez Junction. The last 2 options give you commercial routes, north and south, on I-17.

Please consider this seriously for elderly living in small towns.

Thanks for your consideration,

Sent from my iPad



Kirkland pozzolan mine trucks

1 message

Thu, Jul 20, 2017 at 8:32 AM

Gentlemen:

It has just come to my attention that the proposed pozzolan mine in Kirkland will use the county road that passes by the community of Iron Springs with 35 to 80 trucks per day. I should hope that this is not the case as there is a railroad almost adjacent to the mine that should be used to transport the material. Using trucks is not environmentally reasonable.

I believe this to be a terrible incursion on the tranquility of our community's life style that we have enjoyed for over a 117 years.

I would hope that the BLM would use its best practices by insisting the Kirkland mine use the railroad to transport their mined pozzolan material rather than use trucks on our narrow county road and destroy the now existing tranquility of our Iron Springs community.



Kirkland Mining Company project

1 message

Thu, Jul 20, 2017 at 8:09 AM

To whom it concerns:

I own a cafe on South State Route 89, in Peeples Valley. You might think that I would, therefore, be in favor of the mine expansion in Skull Valley. But, I am not.

I moved to this lovely community, for the same reason that most of my neighbors did: because it is peaceful and beautiful. I am afraid that the Kirkland Mining Company project will have a negative impact on my business and on the quality of my life, as heavy truck traffic will ruin my outdoor dining area with truck exhaust and noise.

Likewise, heavy truck traffic through Skull Valley and Yarnell will ruin gardening and outdoor life for all my neighbors, as well as drastically decrease the local water table, increase air pollution, and hurt wildlife and the riparian environment.

Before granting the use of PUBLIC lands for this ugly project, please put the quality of life of the people you serve before corporate desires to "make a buck" by destroying this beautiful wilderness area.

Sincerely,



Kirkland Mine

1 message

Thu, Jul 20, 2017 at 8:06 AM

I already have sent a message regarding some of my concerns about the Kirkland Mine but I just wanted to add something;

I was talking to someone at work about the mine and my coworker said to me, "Don't you get it? BLM has already decided to let the mine go through".

I was stunned but instantly knew he was probably right. If it is approved, could there be a compromise by shipping output by a railroad spur?

If the mine has 40 year life, I am sure they could still make a sizable profit.

Trucks are really scary and will make our roads more dangerous. Especially on the Yarnell Hill where motorcycle riders love to ride The Hill. In general, people will stop coming to Yarnell and that is sad. Last point...these trucks are going to wear out our roads more quickly. Is it fair to make the taxpayer pay for more maintenance on the roads because the mine company wants more profit?

There needs to be a compromise and that would be the mine paying and using a railroad spur.

Thank you

Sent from my iPhone