

0008

*Incoming  
C/007/003*

**From:** <Nathan\_Darnall@fws.gov>  
**To:** <Nathan\_Darnall@fws.gov>  
**CC:** <Betsy\_Herrmann@fws.gov>, <jimdsmith@utah.gov>, <jimparrish@utah.gov>, <...  
**Date:** 2/24/2009 1:35 PM  
**Subject:** Re: Surface blasting at Lila  
**Attachments:** Decibel v Distance.pdf

*OK*

Joe,

As per our conference call yesterday, I feel reasonable comfortable with allowing the mine to increase the blast poundages. This is based on several factors:

- 1) to date, most blast decibel readings not exceeded ambient conditions and no blasts have exceeded the loudest equipment on site,
- 2) the lower poundages (e.g., 35 lbs) require 3 separate blasts rather than one larger blast, potentially resulting in more disturbance from three blasts,
- 3) blasts with larger poundages are drilled deeper into the rock, likely reducing noise levels
- 4) the loudest blast decibels were recorded with only 16 lbs of explosives,
- 5) eagles have not been seen at the nest or in the area, and
- 6) each portal is now at least 10 feet underground with at least another 15 feet of canopy; this should direct the sound away from the nests.

Rather than specify an upper poundage to use during the blasts, which may necessitate the mine returning to FWS for additional modification to the poundages, the mine may use whatever poundage is necessary (following other policies and regulations) provided that the blasts do not exceed ambient conditions (e.g., 75 decibels). Dosimeter readings can be reduced or eliminated once the mine can be assured that the combination of poundages and distance underground will not result in increased decibel readings above ambient conditions. Biologists should continue regularly scheduled monitoring, but need not be present for every blast provided blasts do not exceed ambient conditions.

Nathan

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02/10/2009 05:10 PM  
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Subject  
Surface blasting at Lila

Jim,

During our January 12, 2009 meeting to discuss exclusionary periods for the Lila Canyon Mine, we agreed that surface blasting would occur prior to February 1st, the start date for the golden eagle exclusionary period. Rather than shutting down the mine for an extended period, the concession to allow sub-surface blasting during the exclusionary period was agreed to based on the understanding that the noise and disturbance (e.g., dust) from the sub-surface blasting would not exceed the existing ambient conditions at the mine (e.g., muffled by the mine shaft). The mine conducted surface blasting at one of the portals prior to Feb 1, but not at two additional portals. On February 6, 2009 representatives from the mine with the Service to discuss the possibility of allowing surface blasting at the two remaining portals after the Feb 1 date. Given the small charges used in the blasting (e.g., 40 lbs), the distance from the nest (>1600 feet), the use of portal canopies to control dust and falling rock, there is a reduced chance of disturbing the birds. While these factors alleviate some concerns, the Service requested that the mine provide actual noise data from mining operations which was agreed to by Jay Marshall. On Feb 10th, Jay provided results from dosimeter readings from a variety of distances and equipment and from sub-surface blasts. The tabular data have been converted to a graphical format (see attached). It appears that the noise from the sub-surface blast is on par with the loudest equipment at the mine site and that the noise levels attenuate with increasing distance away from the mine.

The purpose for requesting that the surface blasting occur prior to Feb 1 was to reduce the chance (due to a possible increase in the level of disturbance) that incubating eagles would abandon their eggs, resulting in a take and violation of the Migratory Bird Treaty Act. We assumed that surface blasting would result in greater levels of noise, dust and surface movement (e.g., rocks) than underground blasting. Based on the discussion Friday, it seemed reasonable that if the mine could show that the noise and disturbance levels associated with the surface blasting would not exceed existing ambient conditions, then the surface blasting might occur. The dosimeter readings suggest that the blasting will not result in a significant increase in existing noise levels. However, the readings were taken from an underground blast and not a surface blast which may be louder. However, the nests are more than 1600 feet from the portals and not within the direct line of the blast sound waves, two factors which may reduce the level of noise and potential impact to birds on the cliff face. The mine is also willing to reduce the amount of explosives used to 35 lbs which may further reduce impacts.

The Service, in consultation with UDWR, would be willing to allow limited surface blasting at the mine with the following stipulations:

1) That the mine follow its own recommendation and only use 35 lbs of explosives for surface blasting. What constitutes surface blasting is not completely clear, but surface blasting is likely to involve more than one round of blasting to get underground. Unless UDOGM has a different definition of "underground" we will assume that surface blasting occurs until the portal is more than 25 feet underground, at which time larger charges (eg., 45 lbs) could be used.

2) That portal canopies be used for surface blasts to contain rock and to focus noise away from the nests. Blast blankets might be advisable.

3) That dosimeter readings be collecting during surface blasts (at a safe distance) to compare sub-surface and surface blasts. If possible, data from one or more distances be collected, such as 100 feet (to compare with the earlier blast measurement), 200 feet (to compare with earlier ambient measurement) and/or greater distances to determine attenuation.

4) That a qualified biologist observe eagle behavior prior to and during the blast. The purpose of this monitoring is to determine if the eagles respond negatively to the blasts (e.g., flight response). If negative responses are observed, the Service and UDWR should be contacted for additional guidance.

5) That surface blasts only occur if eagles are not present at the nest (or nests). If an eagle is incubating eggs and would respond negatively to the blast (e.g., quickly fly away) there is a chance that the eggs could be harmed. To avoid this possibility, blasting should only when the birds are not at the nest. A qualified biologists should monitor the eagles and nests prior to and during blasts.

We appreciate your attention in this matter.

Thank you.

Nathan

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partnerships, and innovation

(See attached file: Decibel v Distance.pdf)

Scatter Plot Section

Decibel vs Distance

