U.S.NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

NOTE TO FILE: Regarding Document Date

DATE: October 19, 2009

Name : Behram Shroff, Project Manager **/RA/**
Department: Environmental Review Branch
Division: DWMEP

Summary: Following documents should be added to ADAMS with a date of October 19, 2009.

Letter from Wyoming Game and Fish Department on "Sage Grouse Habitats"

WYOMING GAME AND FISH DEPARTMENT

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September 3, 2009

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Andrea

WER 329
Nuclear Regulatory Commission
Request for Information Regarding Sage Grouse Habitats
for the Proposed License Application for Uranium One Inc.
Moore Ranch Uranium Recovery Project
Docket No. 040-09073

U. S. Nuclear Regulatory Commission
Attention: Ms. Andrea L. Kock
Mail Stop T8F05
Washington, DC 20555

Dear Ms. Kock:

The staff of the Wyoming Game and Fish Department has reviewed the request for information regarding Sage Grouse Habitats for the proposed license application for Uranium One Incorporated's Moore Ranch Uranium Recovery Project. We offer the following comments for your consideration.

Terrestrial Considerations:

The proposed project area lies within the Pumpkin Buttes and North Converse Pronghorn Herd Units, as well as the and Pumpkin Buttes and North Converse Mule Deer Herd Units. Pronghorn use the areas in question for yearlong and winter/year-long habitat. No crucial winter range for pronghorn is contained within the project area. Mule deer in the region also utilize local habitats as yearlong habitat. Any removal of sagebrush habitats will reduce overall forage for both pronghorn and deer. If sagebrush habitats are disturbed during the uranium extraction process, restoration projects that strive to restore sagebrush and associated native plant species are recommended.

The area also provides winter, breeding, nesting, and brood-rearing habitat for sage grouse, sharp-tailed grouse, and a variety of other sage-dependent non-game birds and small mammals. The project area does not lie a sage grouse Core Area. Currently there are no known leks within the proposed project area. WGFD encourages Uranium One, Inc. to conduct annual sage grouse lek surveys to identify any unkown leks that may occur. Should sage grouse leks be discovered within the project area, WGFD recommends proper steps be taken to avoid disturbance within a

2-mile buffer of any active breeding areas (leks) used by sage grouse from March 15 to July 1. In addition, permanent structures should not be placed within ¼ mile of a sage grouse lek.

We recommend that additional wildlife surveys be performed to detect the presence of sensitive or threatened species prior to mining activities that disturb new areas. A winter bald eagle survey should be conducted to document any local roost locations. Surveys should also be conducted to document active nests of other raptor species present on the mine. Listed below are recommended dates that raptor nest sites should be free of disturbance. A 1/2 mile buffer around each nest should be maintained. Exceptions may be granted based on topography or other site-specific factors.

Osprey: April 15-August 1
Bald Eagle: February 15-August 15
Northern Harrier: April 1-July 31
Sharp shinned hawk: May 1 -August 31
Cooper's hawk: April 15 -August 15
Northern goshawk: April 1-August 15
Swainson's hawk: May 1-August 31
Red tailed hawk: March 15-July 31
Ferruginous hawk: April 1- July 31
Golden eagle: February 1-July 31
American kestrel: April 1-August 15
Merlin: April 1-August 15
Peregrine falcon: March 15-August 15
Prairie falcon: March 1-August 15

We recommend contacting and coordinating with the Bureau of Land Management and/or the U.S. Fish and Wildlife Service regarding locations of active raptor nest sites they may be aware of within the project area.

The WGFD recommends that all topsoil be saved and spread over disturbed areas as soon as possible after disturbance to accelerate reclamation. Native plants suitable for wildlife most dependent upon the disturbed site should be planted.

Finally, we encourage the Moore Ranch and Uranium One, Inc. to allow access to properties for the purpose of hunting big game species. Allowing such access would contribute greatly to the successful management of both deer and pronghorn to meet population objectives.

Aquatic Considerations:

This project will not have direct impacts to the aquatic resources of Ninemile Creek. However, we are concerned with the indirect and cumulative impacts to aquatic resources associated with this project. The construction of roads and pads will change how water will run off the landscape. This change will affect the infiltration rate of water, increase the velocity and quantity of water running across the landscape, and potentially could increase erosion and sediment deposition into nearby waterways. Roads have the potential for having the most

profound impact on hydrology. Changes in hydrology across the landscape will then be reflected in changes in the geomorphology of perennial streams downstream of the project area. Ultimately, changes in geomorphology will directly influence aquatic habitat which may impact fish populations.

Currently, we do not have information regarding the effects this in-situ mining on aquatic habitats. Much is known, however, about the effects of increased sediment in streams. Stream channels respond to increased sediment supply by adjusting their pattern (sinuosity) and dimensions. These changes may result in decreased pool depths, decreased riffle area, less diversity in channel substrate and increased lateral instability marked by eroding banks. These changes along with direct effects from increased sediment loading can affect macroinvertebrate populations and diversity and decrease fish habitat. A common impact is a decrease in gravel and cobble used by spawning fish.

Additional information is needed regarding the effects of this project on aquatic habitat. It is recommended the monitoring of cumulative impacts from culverts and roads with 5% slope or greater be conducted.

The following is a protocol that we have developed for the monitoring of culverts and roads with 5% slope or greater. We are more than willing to work Uranium One, Inc. to discuss this protocol and adapt the protocol if needed.

Culverts

The purpose of monitoring culverts is to determine the cumulative impacts of changing the upland surface hydrology, erosion and deposition, and to ensure that they are functioning as designed and they are being maintained.

All culverts installed as part of this project will be monitored by a minimum of the following practices:

- Collect GPS coordinates for each culvert site
- Collect pre-construction photographs of the culvert site; upstream and downstream
- We recommend that several preconstruction photographs be taken overtime/ to record the relative change pre-construction. We recommend that photographs be taken three times between April and November.
- Collect post-construction photographs of the culvert site; upstream and downstream.
- Place a graduated fence post upstream and downstream of each culvert. The posts should have visible markings every 2" to provide a visual reference within each photograph. Fence posts should be placed within 50 feet of the culvert openings. Posts should be placed outside of the mainflow channel so they are not directly affected by storm flow events. Each fence post location will be referenced by GPS.
- GPS the site where photographs will be taken for the upstream and downstream view.
- Culverts and accompanying fence posts will be monitored/photographed three times a year (spring after snow melt, summer, and fall) and after rainfall events accumulating

greater than ½ inch of precipitation as measured at the nearest National Weather Service Monitoring point (if within 10 miles of the site) or at the Facility operations and maintenance building. The summer monitoring period can include a thunderstorm event as long as the monitoring occurs within seven days after the thunderstorm.

- Photographs will be provided to WGFD for review within 45 days. We recommend that a website or ftp site be developed.

If the photographs reveal observable changes from erosion or deposition, consultation between WGFD and industry will occur.

Roads with 5% or greater slope

The purpose of monitoring roads with 5% or greater slope is to determine the cumulative impacts of changing the upland surface hydrology, erosion and deposition, and to ensure that the long-term BMPs that were installed are still functioning and are being maintained.

- Place a graduated fence post midway down the slope and at the bottom of the slope. If a drainage ditch occurs on both sides of the road, post will also needs to be placed on both sides of the road. The posts should have visible markings every 2" to provide a visual reference within each photograph. Posts should be placed outside of the mainflow channel so they are not directly affected by storm flow events.
- Each fence post location will be referenced by GPS.
- GPS the site where photographs will be taken.
- Fence posts will be monitored/photographed three times a year (spring after snow melt, summer, and fall) and after rainfall events accumulating greater than ½ inch of precipitation as measured at the nearest National Weather Service Monitoring point (if within 10 miles of the site) or at the Facility operations and maintenance building. The summer monitoring period can include a thunderstorm event as long as the monitoring occurs within seven days after the thunderstorm.
- Photographs will be provided to WGFD for review within 45 days. We recommend that a website or ftp site be developed.

If the photographs reveal observable changes from erosion or deposition, consultation between WGFD and industry will occur.

If you have any questions or concerns, please contact Mr. Rick Huber, Staff Aquatic Biologist, at 307-777-4558.

Thank you for the opportunity to comment. If you have any questions or concerns, please contact Heather Obrien, Wildlife Biologist at 307-682-1579.

Sincerely,

John Emmerich
Deputy Director

JE: MF: gfb

cc: USFWS
H. Obrien, L. Jahnke- WGFD, Sheridan
Paul Mavrakis, Sheridan Region Fisheries Supervisor