Trip Report
Site Visit to the Ludeman Project Site and Stakeholder/Agency Meetings
August 6-9, 2012

The U.S. Nuclear Regulatory Commission (NRC) received an application from Uranium One Americas (Uranium One) on December 5, 2011, to amend its Source Material License Number SUA-1341 to construct and operate an in situ uranium recovery (ISR) facility at its Ludeman Project site in Converse County, Wyoming. The NRC notified Uranium One that the license amendment application for the Ludeman facility was accepted for technical and environmental review on May 16, 2012. The proposed Ludeman Project is located in the southern portion of the Powder River Uranium District of Wyoming, approximately 10 miles northeast of Glenrock, Wyoming. The proposed Ludeman Project would consist of three satellite areas (i.e., Leuenberger, Peterson, and North Platte), several ISR recovery wellfields, and related infrastructure.

From August 6th through August 9, 2012, NRC staff and its environmental-review contractor conducted a site visit to the Ludeman Project area and met with several State and local agencies as well as one local stakeholder group (the Powder River Basin Resources Council). This group was composed of three NRC staff: Ms. Kellee Jamerson (Technical Project Manager of the Ludeman Project), Mr. James Park (Co-Technical Project Manager), and Ms. Amy Hixson as well as four members of the NRC's environmental-review contractor (Attenuation Environmental Company [AEC] Team): Ms. Doris Minor, Ms. Kelly Hranac, and Dr. Kathryn Johnson, all of AEC, and Mr. Scott Kindred, of Aspect Consulting LLC. Ms. Johari Moore, a NRC staff member, also attended several of the agency and stakeholder meetings. The purpose of this site visit and the agency and stakeholder meetings was for these key environmental-review personnel to see the locations of the proposed facilities and the surrounding areas as well as to understand the concerns of local regulatory agencies and stakeholders so that they can be addressed during the development of an *Environmental Assessment* for the Ludeman Project.

Each day of the site visit and meetings is summarized below, including information regarding those who attended, locations visited, and topics discussed.

Site Visit to Ludeman Project Area
Near Glenrock, Converse County, Wyoming
August 6, 2012

Site Visit Participants:

Ms. Amy Hixon, NRC
Ms. Kellee Jamerson, NRC
Mr. James Park, NRC
Ms. Elise Striz, NRC
Ms. Kelly Hranac, NRC Contractor
Dr. Kathryn Johnson, NRC Contractor
Mr. Scott Kindred, NRC Contractor
Ms. Doris Minor, NRC Contractor
Mr. Scott Shiermen, Uranium One
Mr. Bill Kearney, Uranium One
Mr. Jon Winter, Uranium One

Kickoff Meeting
Uranium One Office
Casper, Wyoming

The meeting began with the attendees introducing themselves, their affiliations, and their primary position on the Ludeman Project. Mr. Park then stated that the NRC team was visiting the Ludeman Project to see where the facilities would be developed and to observe the surrounding areas. Mr. Winter gave a brief overview of the three areas that would be developed as ISR satellite facilities: Leuenberger, Peterson, and North Platte. Each satellite area will have two wellfields that feed the ion-exchange (IX) columns that will also be constructed at each satellite area. The uranium-loaded IX resins would be transferred from the proposed satellite areas to the Willow Creek central processing plant (CPP), which is owned by Uranium One, via tanker truck.

Mr. Winter stated that Uranium One had held a targeted public meeting in May 2012 to update the local community on its progress toward receiving an amendment to its NRC license and its construction of the satellite facilities. This meeting was attended by State senators, Natrona and Converse County officials, Glenrock municipal officials, Pacific Power representatives, and local landowners. Overall, Uranium One believes its information was received in a positive light.

Mr. Winter also described the issues related to surface and mineral-rights ownership of properties within the Ludeman Project boundary and buffer zone. The U.S. Bureau of Land Management (BLM) manages a small portion of the land (300–400 acres) within the Ludeman Project boundary. Uranium One does not plan to disturb any of this land. Mr. Winter represented that the State of Wyoming wants Uranium One either to exclude the BLM lands from the permit's boundary or to obtain a permit from the BLM. It is likely that Uranium One will exclude the BLM land from the Project area. Chapman University also has several oil and gas leases in the Ludeman Project area and two active wells. Uranium One does not have permission to develop the University's land in the area, but it has no plans to develop that area either.

Site Visit
Ludeman Project Area
Near Glenrock, Wyoming

The NRC team entered the Ludeman Project area from Highway 95 on the Project's northeast corner. On this corner, Highway 95 runs between the Project area and the Negley Subdivision. A conversation among NRC staff indicated there are 12 residences in the subdivision and several of the landowners are currently using wells installed during Uranium One's previous exploration of the Leuenberger area. It was also noted that the surface elevations for some of the wells used by Uranium One for interpreting ground-water levels and constructing the cross-sections in the Application documents were in error. The correct elevations and interpretations are contained in Uranium One's responses to questions during the NRC's license-application completeness review. Ms. Striz stated that irrigation in the area comes from the North Platte River near the southern boundary of the Project area and that there are no irrigation wells.

Ms. Striz also summarized some of the NRC's concerns related to the Ludeman Project as follows:

- Wells in the Negley Subdivision are very close to the Leuenberger uranium-recovery wells, which could cause an excursion.
- All wells in the Subdivision were sampled by Uranium One; the analytical results indicated that, in 22 wells, the U.S. Environmental Protection Agency's (EPA's) gross alpha maximum contaminant level (MCL) was exceeded; these results were provided to the Subdivision residents.
- Uranium One will not conduct a pump test in the Leuenberger area until it has received an NRC license. Therefore, the effect(s) of pumping the uranium-recovery wells on the Subdivision's wells has not been evaluated.
- Sand Creek has the highest concentrations of uranium in the surface waters of the area, possibly from the evaporation ponds constructed in the Sand Creek drainage during previous research and development (R & D) in the area.
- The uranium-bearing sand lenses in this area are not very permeable and are quite thin; this would lead to a very large cone of depression in the uranium-bearing aquifer and could lead to unconfined conditions (i.e., an excursion).

Stop #1, Leuenberger Satellite Area: The first stop was on a road heading south approximately 0.5 miles into the Ludeman Project area for the NRC team to view the proposed location of a satellite IX column. The proposed Leuenberger wellfields would extend from the valley's floor to the ridge line on both sides. The northern end of the wellfields would be visible from the Negley Subdivision. The IX column would be situated on the low, relatively flat area between the ridges and would not be visible from the Subdivision. Mr. Winter stated that Uranium One had abandoned the evaporation ponds (in the Sand Creek drainage) and the R & D wells in this area.

The line of wind turbines extending northwest to southeast on the ridge within a couple of miles from the Ludeman Project was plainly visible to the southwest. Uranium One personnel explained that the wind farm was constructed on the reclaimed Dave Johnston open-pit coal mine. Ms. Striz stated that area residents complained about the wind mills because their red lights were visible in the night sky.

Stop #2, Leuenberger R & D Project: The second stop to view the former Leuenberger R & D project was on the same road approximately 0.25 miles to the north of Stop #1. The site of the 1980 R & D operations was 0.25–0.5 miles west of this road. The metal building used for processing during the R & D project was intact and appeared to be in use (likely by the adjacent landowner [see below]). There was no visual indication of the reported surface impoundments from that operation. Mr. Winter indicated that the monitoring wells between the Ludeman Project wellfields and the Negley Subdivision would follow the road to the north.

Stop #3, Oil and Gas Well: The third stop was on the road near a currently pumping oil/gas well located 0.25 miles to the east of the Leuenberger R & D project, which was visible. Uranium One personnel explained that the well was owned by Chesapeake Energy and that it had been drilled relatively recently. The well was drilled to approximately 8,000 feet below the ground surface, then the drilling continued horizontally. The borehole was then hydrofracked to increase production. The petroleum-bearing Niobrara Formation is deeper than the Fort Union Formation, which contains the uranium-bearing sands.

Stop #4, Smith Ranch: The next stop was Smith Ranch, which is the only residence within the Ludeman Project area. There is a well at this Ranch. There was also evidence of erosion from

surface water near the property. Uranium One personnel pointed out the location of its air sampler (behind the corrals) at the southwest corner of Ranch. A stock well was observed on the ridge north of the Ranch.

Stop #5, North Platte Pilot Project: Stop 5 was on the road in the northeast corner of the Project to observe the location of the North Platte pilot project. Uranium One personnel explained that the pilot project used several five-spot well patterns and included a processing facility. This structure was still standing, but it appeared to be in disrepair. Uranium One stated that the pilot project had had issues with well casing and grout integrity in the past, which resulted in leakage into the upper aquifers. The leakage began in 1988, and it has not yet been cleaned up. Well No. 75R2 is still in operation.

In response to a question about Uranium One's proposal to use Class I Underground Injection Control (UIC) disposal wells for waste process solutions, Uranium One personnel explained that it has not yet submitted an application to the Wyoming Department of Environmental Quality (WDEQ). It has pending applications with WDEQ for deep-injection disposal of waste process solutions (e.g., brines) into the Lance Formation at approximately 6,500 feet below the ground surface (below the Fort Union Formation) and are waiting for those permits to be approved. Uranium One would prefer deep-well injection of waste into the Lance Formation over disposal into the Teckla (or Tekla) and Teapot Formations, because the Lance Formation has a higher permeability and porosity.

Stop #6A, North Platte Satellite Area. The sixth stop that the NRC team made was on a trail leading off of the main road to the proposed North Platte wellfields. Uranium One personnel explained that the IX equipment was proposed to be located approximately 0.25–0.5 miles north of the wellfields. Uranium One has started drilling wells in the North Platte satellite area.

Stop #6B, Peterson Satellite Area (Wellfields): Looking south, the area of the proposed Peterson satellite area was visible. The area of the proposed Peterson satellite facility would be located on a flat terrace that drops to the North Platte River floodplain. The uranium-bearing sands at the proposed Peterson satellite area are very shallow, and they crop out in the North Platte River. Ms. Striz expressed concern that once uranium recovery starts, the resulting cone of depression in the ore-bearing zone will extend to the North Platte River and begin to pull river water into the formation. This is a concern because water rights in the North Platte River have all been allocated, and Uranium One does not have a water right to take water from the river.

The Platte Pipeline Booster Station and an above-ground station for the buried pipeline running north-south in the eastern portion of the Project area were visible on the road.

Stop #7, Peterson Satellite Area (IX). Stop 7 was on a trail leading off of the Tank Farm Road along the southeast corner of the Project area to the proposed Peterson satellite area where IX equipment would be located. The NRC team passed the entrance to the Lisco Ranch on the south side of Tank Farm Road. The condition of the road did not allow access to the proposed Peterson area.

Meeting with Wyoming State Historic Preservation Office
Cheyenne, Wyoming
August 7, 2012

Meeting Participants:

Ms. Amy Hixon, NRC
Ms. Kelly Jamerson, NRC
Ms. Johari Moore, NRC
Mr. James Park, NRC
Ms. Lauren Evans, NRC Contractor
Ms. Kelly Hranac, NRC Contractor
Mr. Scott Kindred, NRC Contractor
Ms. Doris Minor, NRC Contractor
Mr. Brian Partington, NRC Contractor
Mr. Richard Currit, Wyoming State Historical Preservation Office (SHPO)
Ms. Mary Hopkins, Wyoming SHPO

The purposes of this meeting were to gain information from the SHPO regarding cultural resources in the Ludeman Project area and to understand the SHPO's concerns related to the proposed ISR satellite facilities.

After introductions, Ms. Jamerson and Mr. Park gave a brief overview of the proposed activities at the Ludeman Project. Mr. Park and Ms. Hopkins discussed a Class III Cultural Resources Survey of the entire Ludeman Project area, which Uranium One reported it completed in 2008 and then submitted to the SHPO. Uranium One has indicated that it received concurrence from the SHPO regarding this report. Ms. Hopkins stated that SHPO has not been able to locate this report in hard copy nor in its electronic database of documents that have been submitted to SHPO. Additionally, SHPO could not have "concurred" with Uranium One regarding this report, as it can only concur with Federal agencies.

Ms. Hopkins stated that there are six sites that need further investigation to determine National Register of Historic Places (NRHP) eligibility. Mr. Park stated that the NRC will ultimately provide a letter of NRHP eligibility for these sites, if appropriate. Ms. Hopkins said that she does not see any red flags for the Ludeman Project, although the Project area is close to the Glenrock Buffalo Jump and a NRHP-listed section of the Bozeman Trail, which appears to run through the Project area. Ethnoscience (of Bozeman, Montana) has reported some sites in the Project area; however, SHPO has not received the report. Ms. Hopkins did not think that Section 106 tribal consultations will be difficult.

Meeting with Wyoming Department of Environmental Quality
Cheyenne, Wyoming
August 7, 2012

Following the meeting with the SHPO, the NRC team met with the WDEQ in Cheyenne, Wyoming. The Cheyenne WDEQ office is responsible for permitting and oversight of the Ludeman Project.

Meeting Participants:

Ms. Amy Hixon, NRC
Ms. Kelly Jamerson, NRC
Ms. Johari Moore, NRC
Mr. James Park, NRC

Ms. Lauren Evans, NRC Contractor
Ms. Kelly Hranac, NRC Contractor
Mr. Scott Kindred, NRC Contractor
Ms. Doris Minor, NRC Contractor
Mr. Brian Partington, NRC Contractor
Mr. Steve Dietrick, WDEQ, Air Quality Division (AQD)
Mr. Kevin Frederick, WDEQ, Land Quality Division (LQD)
Ms. Carolyn McAdams, WDEQ, Water Quality Division (WQD)
Ms. Julie Powell, WDEQ, LQD
Ms. Pam Rothwell, WDEQ, LQD
Mr. Lowell Spackman, WDEQ, LQD

After introductions, Mr. Park and Ms. Jamerson gave brief overviews of the status of the Smith Ranch and Ludeman Projects. The representatives of the different WDEQ divisions then discussed the status of the Ludeman Project with respect to WDEQ's oversight.

Ms. McAdams, Water Quality Division, stated that Uranium One has not applied for a Class I deep-injection UIC permit for the Ludeman Project. The WDEQ staff discussed their concern that in the future, deep-well waste disposal could tap into the same formations that the oil and gas companies do (i.e., the Teckla, Teapot, and Parkman Formations as well as the underlying Shannon Formation), since hydrofracking techniques have been further refined of late. The Parkman Formation has produced some oil and gas in some areas. WDEQ is considering this as a reason to stop issuing UIC permits in these Formations.

Mr. Spackman, Land Quality Division, stated that WDEQ received Uranium One's Permit-to-Mine application for its Class III injection and recovery wells in November 2011. The agency sent technical comments to Uranium One on February 1, 2012, and Uranium One responded in June. WDEQ sent additional comments to Uranium One on June 30, 2012, and Uranium One representatives plan to meet with WDEQ on August 9, 2012, to discuss the second round of WDEQ comments. Once all of the comments are satisfactorily addressed, the draft Permit-to-Mine will have a 30-day public-notice period and a 30-day public-comment period. EPA has a 45-day comment period that runs concurrently with the public notice and comment periods. Mr. Spackman stated that any land application of waste water would also fall under the Permit-to-Mine. Another concern that Mr. Spackman mentioned was the selenium loading to soils if land application is selected for waste-water disposal.

Mr. Detrick, Air Quality Division, stated that WDEQ had not received an application from Uranium One for an air-quality permit; however, he thought the Ludeman Project activities would not involve any new major source(s). Once an air-quality permit is issued, the permittee has 24 months to start construction.

Meeting with Converse County Commissioners
Douglas, Wyoming
August 8, 2012

Meeting Participants:

Ms. Kellee Jamerson, NRC
Ms. Amy Hixon, NRC
Ms. Doris Minor, NRC Contractor

Converse County Commissioners: Mr. Major Brown, Mr. Michael Colling, Mr. Richard Grant, Mr. Anthony Lehner, Mr. James Willox

The NRC staff and Ms. Minor met with the Converse County Commissioners during a regularly scheduled County Commissioners' meeting, which was attended by members of the public as well. Ms. Jamerson, the NRC's Technical Project Manager for the Ludeman Project, provided background on the Ludeman Project, including maps, to the Commissioners. She then asked whether any of the Commissioners had any concerns regarding the Ludeman Project.

Mr. Willox indicated that Converse County "was excited about the project" and asked about the timeline for its licensing. Ms. Jamerson explained that it would be approximately 18 to 24 months before the license would be issued. Mr. Willox continued that he believes that the Project's economic benefits to Converse County would be great and that he hoped that any analyses of the Project take those positive economic impacts into account. He indicated that the Cameco Project (i.e., the Smith Ranch Project) has been a "huge" asset to Converse County. He further indicated that Converse County has been specifically developing itself as a "multiple-use county," and it supports all land uses in the County. He noted that the environmental review regarding prairie dogs drove many ranchers out of business.

Mr. Brown asked about drinking-water supplies and whether any drinking-water wells might be impacted. Ms. Minor discussed the relative depths of the injection and recovery wells of the Ludeman Project with respect to the local drinking-water wells and the fact that they are generally positioned in different aquifers. Mr. John Winter (from Uranium One), who was in the audience, elaborated further on the respective well depths. Mr. Brown also asked where the IX resins ("beads"), which have been loaded with uranium at the Ludeman Project, would go. Mr. Winter indicated that trucks would take the uranium-loaded resins to the Willow Creek facility for elution and drying to yellowcake.

Mr. Willox asked about receiving a draft of the NRC's EA for the Ludeman Project and indicated that the County Commissioners would very much like an opportunity to comment on the Draft EA. Ms. Jamerson indicated she would discuss this with her colleagues at the NRC. Mr. Willox stated that if the State agencies are provided a copy, then the County should also receive one. He mentioned that all communications should be addressed to Ms. Lucille Taylor, County Clerk.

Mr. Winter, of Uranium One, also discussed the *Generic Environmental Impact Statement* (GEIS, NUREG-1910) and how it will be used during the development of the EA. Ms. Jamerson closed out the meeting with the County Commissioners by indicating that a notice requesting scoping comments will be published soon in the local newspaper.

Meeting with Converse County Conservation District Manager
Douglas, Wyoming
August 8, 2012

This meeting was canceled at the request of Ms. Michelle Huntington, the Converse County Conservation District Manager. Ms. Huntington was present during the County Commissioner's meeting described above. After that meeting, she indicated to Ms. Jamerson that she had no further questions or concerns regarding the Ludeman Project.

Meeting with Glenrock Municipal Officers
Glenrock, Wyoming
August 8, 2012

Meeting Participants:

Ms. Amy Hixon, NRC
Ms. Kellee Jamerson, NRC
Ms. Doris Minor, NRC Contractor
Ms. Linda Care, Glenrock Mayor
Mr. Thomas Sweet, Chief of Glenrock Police
Mr. David Andrews, Glenrock Public Works Director
Ms. Donna Geho, Resident of the Negley Subdivision

Ms. Jamerson described the background of the Ludeman Project and discussed the NRC's process of environmental review. Ms. Care and Mr. Andrews indicated that they had both attended an informational dinner hosted by Uranium One on the Ludeman Project and that their questions had been answered at that opportunity (May 2012). City officials indicated that Glenrock's population was 2,750 at the last census.

Mr. Andrews indicated that he was skeptical that there would be no communication between aquifers, such as the local drinking-water aquifer and the uranium-bearing aquifer. He described how all of the surrounding rock (i.e., aquitards) has been cracked over time and penetrated many, many times. He said that hydrofracking is currently occurring near the Ludeman Project area, but didn't specify an exact site other than on "the other side of the Negley Subdivision." His first concern was the potential for ground-water contamination as a result of the *in-situ* uranium recovery.

Another concern Mr. Andrews mentioned was the potential traffic patterns that the uranium-loaded-resin trucks might use. If they don't pass through Glenrock itself, however, that concern is moot, stated Mr. Andrews and Ms. Care. They both indicated that they hoped that the route taken by trucks carrying resins would be as direct as possible. Mr. Sweet mentioned the potential need for spill response and management, but again, only if the trucks' route is through Glenrock itself, otherwise the Glenrock Police Department has no jurisdiction. Based upon the Uranium One dinner that Mr. Andrews and Ms. Care attended, they believe that the trucks will not enter Glenrock.

Ms. Care indicated that she has already asked Uranium One for some public involvement funds, such as sponsorships of local sports teams and so forth.

Ms. Jamerson asked Ms. Geho for her concerns as a local and very nearby resident (in the Negley Subdivision) adjacent to the Ludeman Project area. Ms. Geho was standing nearby in this meeting, as she is the Town Clerk and Treasurer. She indicated that she had no real comments or concerns, although she has heard some of her neighbors complaining that they will not receive a portion of the respective revenues of the Ludeman Project. (Ms. Geho's address is 53 Negley Road.)

Ms. Geho also recalled that the U.S. Environmental Protection Agency (EPA) had come out to the Ludeman Project area about ten years ago, which was prompted by a complaint of a nearby neighbor that her children were not "normal." The EPA collected water samples during this visit and Ms. Geho may still have the results of those samples in her files. She said the complaint

was in response to the R & D activities conducted at the Ludeman Project in 1980 and decommissioned in the late 1980s. She also questioned whether the two old surface impoundments used by the R&D operation were decommissioned according to the proper and current standards.

There was some discussion that Uranium One had done due diligence by establishing background water quality in the Negley Subdivision. Water sampling has been conducted by oil and gas companies as well. Core Labs/Energy Labs in Casper may have the water testing results.

Ms. Minor asked Mr. Sweet how many officers are employed in Glenrock; he responded seven are, but that their territory is in Glenrock itself and not the Ludeman Project area. He indicated that there are approximately 20–25 volunteer firefighters in Glenrock and a volunteer Emergency Medical Technician. The nearest hospital to Glenrock is either in Douglas or Casper, which are approximately equidistant, and there are two medical clinics in Glenrock itself. Additional emergency-management information may be available from Mr. Russ Dalgarn, Converse County's Emergency Management Coordinator. Ms. Cheryl Swartzkopf is the County Weed and Pest Coordinator. Finally, environmental concerns for Converse County are managed by the County Health Department.

There was some final discussion of concerns related to the cumulative effects of all the drilling for natural gas and oil near the Ludeman Project area. Ms. Geho indicated that there is a gas well being installed near her home (on the "other" side from the Ludeman Project area). She indicated that the Niobrara Shale was being deliberately fractured "24/7 for three weeks" to extract wet gas and some oil from the well. Mr. Andrews indicated that this was the phenomenon he had been describing earlier in the meeting—that the Karst Formation is no longer intact nor continuous. He wondered what would happen if the deep and horizontal gas wells were installed above or below the uranium-bearing zone at the Ludeman Project area and there was not a continuous aquitard to protect those wells from radioactive gases.

Review of IX-Resin Transportation Route
From Casper to Willow Creek Central Processing Facility
August 9, 2012

Trip Participants:

Ms. Amy Hixon, NRC
Ms. Kellee Jamerson, NRC
Ms. Lauren Evans, NRC Contractor
Ms. Doris Minor, NRC Contractor
Mr. Scott Kindred, NRC Contractor

The NRC staff and its contractors traveled the approximate route that the trucks would take when transporting the uranium-loaded resins from the Ludeman Project to the CPP at Willow Creek. The route the NRC team traversed started north on I-25 from Casper, exiting I-25 at Exit 210, and turning onto WY 259. The NRC team traveled approximately 17 miles on this road at 65 miles per hour (mph), passing the following landmarks:

- Shamrock Ranch
- One private residence
- Teapot Creek (dry)

- Historical marker for “Oil Boom Towns”
- Rocky Mountain Oil Field Testing Center
- TIC (a company)
- Rimrock Bar
- Salt Creek and
- Historical marker for Salt Creek Oil Field (and museum).

The NRC team then turned right onto WY 387, through Edgerton (population 195). The speed limit was 65 mph, but dropped to 35 mph in Edgerton. The road was a two-lane highway with a passing lane in some stretches. Features noted along this road included Black Bear Energy and Meadow Creek Ranch.

At WY192, the NRC team turned right toward Linch. Along this road two residences (one was Linch Ranch) as well as sheep, horse, and cattle pastureland were noted. The speed limit was 65 mph.

At Streeter Road (may also be Bozeman Trail), the group turned right and continued approximately 21 miles to the Willow Creek CPP. Uranium One stated that Streeter Road was private and the company pays for access. The road was dirt and gravel with open range on both sides. There were three residences, including the Streeter Ranch, along this road. The Streeter Road becomes the Irigaray Road for the last 8–9 miles to the Willow Creek CPP. The drive time from Casper to Willow Creek CPP was approximately two hours.

Meeting and Tour of Willow Creek CPP

The NRC team met with the operators of the Willow Creek CPP, who provided the following information:

- The Willow Creek CPP currently accepts one truck carrying uranium-loaded resins per day; however, this rate will increase to three trucks per day when the Ludeman Project comes on line.
- The Willow Creek CPP ships one truck carrying yellowcake per month; however, this rate will increase to three to four per month after the Ludeman Project comes on line.
- The CPP has three managers, eight operators, and one maintenance worker.
- Processing components at the CPP include two eluant lines, four precipitation tanks, storage for 15,000 gallons of waste solutions, evaporation capacity of 15 million gallons (in surface impoundments), and a yellowcake press and dryer.

The group then donned safety equipment and toured the CPP.

Meeting with Powder River Basin Resource Council
Sheridan, Wyoming
August 9, 2012

The NRC and its contractors met with the Powder River Basin Resource Council (PRBRC) to better understand their concerns related to ISR activities in the Powder River Basin.

Site Visit Participants:

Ms. Amy Hixon, NRC
Ms. Kelly Jamerson, NRC
Ms. Johari Moore, NRC
Mr. James Park, NRC
Ms. Lauren Evans, NRC Contractor
Ms. Kelly Hranac, NRC Contractor
Ms. Doris Minor, NRC Contractor
Mr. Brian Partington, NRC Contractor
Ms. Shannon Anderson, PRBRC
Mr. Kevin Lynd, PRBRC

Mr. Park made introductions and provided the PRBRC with background information on the Smith Ranch Project and the NRC's licensing process. Ms. Jamerson then gave an overview of the status of the Ludeman Project. The group then discussed PRBRC's concerns regarding these projects.

Ms. Anderson stated that water is a scarce resource in Wyoming and its availability is a primary concern of the PRBRC. It is concerned about ground-water impacts due to oil and gas drilling and ISR activities. She stated that hydraulic fracturing was becoming a very big issue and is leading to increased exploration activities and traffic.

Ms. Anderson asked if the environmental-review process would yield an EA or EIS with respect to both Projects; Mr. Park confirmed that it would produce an EA for the Ludeman Project. She then asked how the environmental-review process will follow the NRC's GEIS. Mr. Park responded that it is expected that the GEIS will apply to the Ludeman Project more than it will to the Smith Ranch Project.

Ms. Anderson summarized PRBRC's general concerns as follows:

- Permitting of disposal wells in drainages, as at Willow Creek CPP, and the spills that may occur.
- Leaking wells at ISR facilities.
- Mechanical integrity testing (MIT) of equipment, test failures, excursions, and spills.
- Evaporation surface-impoundment leaks.
- Surface application of waste water, which can cause selenium loading in soils. PRBRC is interested in alternatives to land application and would like these alternatives thoroughly addressed in the EA.
- Financial-assurance funds for ISR facilities in general may be set too low.

Ms. Anderson stated that the PRBRC is concerned that NRC licenses are getting larger and larger, while at the same time, the uranium-processing facilities are growing farther and farther away. She was concerned that the NRC may not be able to regulate these facilities adequately and effectively. Mr. Park stated that the new facilities would be inspected in accordance with regulations as well as in accordance with any mitigation measures required by the resulting NRC license. Although the NRC usually announces inspections, it is not required to do so. The

NRC can fine a facility, remove workers, or prevent the company from operating if it believes such actions are necessary.

Ms. Anderson then asked if the NRC would be inspecting the entire license area. Mr. Park stated that technical specialists are brought to look at specific areas, which can be inspected at any time. Mr. Park also stated that if the NRC finds occupational hazards, they have the authority to report those to the Occupational Safety and Health Administration (OSHA).

Mr. Park also stated that there are requirements that a given ISR facility must designate a disposal facility to accept any radioactive wastes generated at the facility. Ms. Anderson asked about the spills at the Willow Creek CPP, and Mr. Park responded that such matters are handled by a different group within the NRC.

Ms. Anderson asked what the process was moving forward. Mr. Park stated that after this information-gathering trip, a scoping-comment opportunity notice would be published by the end of the month, so that public issues can be addressed. A Draft EA would then be issued. Ms. Anderson asked if there would be a public comment period for the EA, and Mr. Park stated that there generally was not a public comment period for this type of EA. The WDEQ would be asked to comment on the Draft EA; the NRC must address all of the State's comments.

Ms. Jamerson stated that the NRC's Requests for Additional Information (RAIs) for the Ludeman Project will be sent out in December; the RAIs, and Uranium One's responses will be publicly available. Mr. Park confirmed that the license applications, RAIs, and RAI responses are all public information, and that he will provide the PRBRC with the address of the Ludeman and Smith Ranch licensing websites. Mr. Park also indicated that he will provide PRBRC the list of local newspapers in which the NRC will advertise scoping-comment opportunities. Finally, he stated that the environmental reviews for the two ISR projects would be completed by the end of 2013.