

Grants Mining District Draft Five-Year Plan Response to Comments

This response to comments summarizes information about the views of the public about the Grants Mining District Five-Year Plan made at the April 27, 2010 community meeting and submitted during the April 15, 2010 to May 26, 2010 comment period.

Questions	Answers
How is the 5-year plan going to speed up the clean-up of the water and eliminate the health hazards out there?	The state and federal agencies understand that it's been a long time that the community here has been dealing with these issues. An objective of the 5-Year Plan is to ensure the resources available to the appropriate government agencies are maximized efficiently and effectively. Information sharing and coordination of activities amongst the agencies is intended to minimize duplication and direct resources to the tasks as prioritized for the group. Government agencies recognize that the issues associated with legacy uranium mining and milling are high priorities for maintaining public safety. The agencies intend on pooling resources and setting priorities, starting initially with addressing the immediate health threats to people, and working through each of the objectives identified in the plan. This coordinated and focused effort should result in addressing cleanup and reducing or eliminating health hazards in the area more quickly.
If the alluvial water comes down and hits the Milan outcropping, and moves underneath the water that furnishes Milan and Grants and neighbors to the east, how are we going to prevent that long-term?	<p>The 5-Year Plan is intended to collect information to develop a conceptual site model which will include a better understanding of water flow and contaminant migration. Until these are understood, it is premature to develop a plan to address such a scenario.</p> <p>The New Mexico Environment Department's Drinking Water Bureau has increased the sampling frequency of the Milan Public Water supply system in response to the community's concerns about potential impacts from historic mining and milling activities up gradient of the supply wells.</p>
Has NRC changed their position on using ACLs or do you think their position will change? Is NRC going to look at them differently than what (Mr. VonTill) stated in 2005?	The NRC position on alternate concentration limits (ACLs) has not changed. 10 CFR Part 40, Appendix A, Criteria 5 and 13 provide the basic groundwater protection standards imposed by the Environmental Protection Agency (EPA) in 40 CFR Part 192, Subpart D and E, which apply to uranium mills during operations and prior to the end of closure. Criterion 5B(5) states that at the point-of-compliance, the concentration

	of a hazardous constituent must not exceed: (1) Commission approved background concentration of that hazardous constituent; (2) the maximum concentration values given in Table 5C; or (3) ACLs established by the Commission. The Commission establishes ACLs as described in Criterion 5B(6).
Is there anything the Health Service is going to do to address the RECA Post 1971 people? Is this going to be addressed in the 5-year plan?	Issues regarding the RECA Post 1971 people are not part of this 5-Year Plan.
Who is going to come up with the funding to implement some of these procedures under the 5-year plan?	Although monies (state and federal) have not been specifically allocated for the implementation of the plan, the agencies are committed to working together in order to make meaningful progress. Each agency is working under their current program funding to address their respective work under the 5-Year Plan.
The scope of the 5-year plan is very narrow and may leave current proposals meant to address water and cultural resources unaddressed.	The agencies acknowledge that there is a lot of work not accounted for in this 5-Year Plan. The reason for that is that the agencies cannot commit to do something that they don't have funding to do. However, as part of public outreach, we have asked the public to identify areas that are not addressed by the plan.
The agencies need to develop a comprehensive database.	EPA is developing the Uranium Legacy Environmental Portal (ULEP) as an electronic data storehouse for both historic and on-going environmental data collected by federal, state, tribal and local organizations. The portal is being designed to be a secure web-based data management tool that will allow authorized users seamless data sharing amongst the agencies within the Grants Mineral Belt.
The aerial surveys are not comprehensive. Jackpile and Homestake are outside of the areas surveyed.	The aerial surveys were a screening tool to identify unknown "hot spots" and affected structures. Information about the nature of Homestake and Jackpile areas is already known.
The agencies are not making the time to build public communication program and a fact-finding program that invests in the people in these communities.	The public has been provided copies of all NRC, EPA, and NMED documents. Multiple meetings have been held, and will continue in the future to ensure public is represented and involved at all stages. The agencies are committed to building a relationship with the community and specific tasks are being added to the 5-Year Plan to emphasis the importance of community involvement.
A one-month passive comment period is not effective public involvement.	An electronic copy of the Grants Mining District Draft 5-Year Plan was placed on the EPA web page at www.epa.gov/earth1/6sf/newmexico/grants/nm_grants_index.htm and hard copies of the draft Plan were made available in the site repository in Grants, New Mexico, beginning on April 15, 2010. While the formal comment period ran from April 15, 2010 to May 26, 2010, EPA informed the community at the April 26, 2010

	<p>meeting with the MASE group and again at the April 27, 2010 community meeting that comments would continue to be taken into consideration after the end of the formal comment period. It has also been stressed that the document is intended to be a living document; therefore, changes and revisions will be made as needed.</p>
<p>DOE does inspections at various mill tailings sites within their jurisdiction and they tell the community if there is abnormal data. We want a stronger investment from DOE, like education of scientists and the public about how the cover and cap systems age.</p>	<p>In an effort to further clarify cover and cap system design, the basic design philosophy is stated in various DOE and NRC documents, including DOE's Technical Approach Document, Revision II, December 1989 and NRC's Final Standard Review Plan, Revision 1, June 1993. DOE's cover design is documented in the Remedial Action Plan (RAP) for each site. The RAP provides the models and calculations used to demonstrate compliance with EPA standards. All of this information is available to the public through DOE's Office of Legacy Management webpage (http://www.lm.doe.gov/). In addition, DOE is currently conducting research on cover performance, in collaboration with other agencies. As this research progresses, DOE intends to share the findings with stakeholders.</p>
<p>Whose water is it, how much do they get, what's in the water and where it's from? Unless we know this information, you're not looking at the issues that affect the communities and the local government and other sectors.</p>	<p>By New Mexico Statute "All natural waters flowing in streams and watercourses, whether such be perennial, or torrential, within the limits of the state of New Mexico, belong to the public and are subject to appropriation for beneficial use." The amount of water is determined either by permit from the State Engineer or by declaration of ownership and continuous use of water for a specific purpose of use, place of use, etc.</p>
<p>Could DOE describe the covers/caps on the piles?</p>	<p>The existing disposal cells in the Grants area (Bluewater, Ambrosia Lake, and L-Bar) have covers comprised of natural materials. A typical cover is comprised of a clay radon barrier, frost barrier comprised of different soils, bedding layer of gravel, and rock rip rap on top and side slopes. Storm water diversion channels are placed around the cell to handle the largest probable maximum storm event. Caps are designed to control radon emissions, minimize infiltration, and resist erosion. Fact sheets on each site's design are available on the Legacy Management website at http://www.lm.doe.gov/. The Office of Legacy Management is responsible to maintain the cell to be protective of human health and the environment, in accordance with regulations. Details of DOE long term surveillance and maintenance activities can also be found on the Legacy Management website.</p>
<p>How is this working in tandem with the proposed new uranium permits that are ongoing all the way from the Mt. Taylor Rio Grande Resources Corporation, to the Roca</p>	<p>The process for obtaining permits and approvals for new or restarting uranium mines is separate from the 5-Year Plan, however, any new proposed uranium mining operation will have to take into account existing legacy contamination. Any proposed mine operation will have to address the potential to remobilize existing contamination and a</p>

<p>Honda project, to Laramide, others that are out there?</p>	<p>contingency plan if existing contamination is mobilized.</p>
<p>I think that some of the proposals for research studies that were made at that very first meeting are missing, like air quality research?</p>	<p>The plan summarizes on-going or planned activities by the participating agencies. As work progresses, evaluation of other media may be developed if releases are identified.</p>
<p>How quickly does uranium pass through a person's body? Does it stay there and cling to some parts of the body?</p>	<p>The deposition of uranium in the body is a complicated process. Computer models and human data are used to estimate the amount of time a radioactive material will stay in the body. In the case of uranium, the models suggest that depending on the chemical form of the uranium, newborn infants absorb about 4% of the uranium ingested; whereas, 1 year old, teens, and adults absorb about 2% of the ingested amounts. About 40% of the ingested uranium is excreted via the feces within ten days of its ingestion. However, the remaining 60% is stored in the body, mostly in the skeletal system. This stored uranium is very slowly released back to the bloodstream and is eliminated.</p>
<p>Regarding the urine sampling with NMDOH, is there a plan to address sampling for the range of radionuclides associated with uranium and heavy metals and body sources other than urine, or is it limited to uranium and urine?</p>	<p>It is limited to analyzing urine for total uranium. The legislation that provided funds for this project only provided funding for analysis of uranium in urine.</p>
<p>Does NMED plan to sample any wells in the Murray Acres and Broadview area? What wells are being sampled north of Homestake?</p>	<p>NMED performed a comprehensive sampling of operational private wells south of Homestake, which includes Murray Acres and Broadview Acres. Subsequently, NMED sampled additional wells near Bluewater and into the middle of the San Mateo Creek basin, which are both north of Homestake. NMED will continue to identify and sample additional wells within the San Mateo Creek Basin.</p>
<p>Is the NRC evaluation of the effectiveness of the Homestake site going to be included in the working documents to the plan and provided to the public?</p>	<p>All NRC documents associated with the Homestake site are currently available to the public through the Agencywide Documents Access and Management System (ADAMS) at http://www.nrc.gov/reading-rm/adams.html. In addition, the Bluewater Valley Downstream Alliance (BVDA), Multicultural Alliance for a Safe Environment (MASE), and the Pueblo of Acoma are on the distribution list for all NRC documents. Any progress at the Homestake site will be reflected in updates to the 5-Year Plan.</p>

<p>Can DOE talk about the Federal Incentives for Renewable Energy Development on Contaminate Lands and provide web link?</p>	<p>One of DOE's main objectives is to re-use sites for effective use to the maximum extent possible while protecting the remedy for the site. DOE has surveyed and evaluated 87 sites across the country for re-use. The evaluations look at various re-use scenarios including solar energy and agricultural uses, such as grazing.</p> <p>Of the three sites that DOE presently manages in the area (L-Bar, Bluewater and Ambrosia Lake) Bluewater has been evaluated for re-use. It is not only a good resource not only from a solar-index standpoint but also from the infrastructure that's available. The study is available to the public at http://www.lm.doe.gov/Office_of_Site_Operations/Property_Team_Functions/Property_Management/Property_Reuse.aspx</p>
<p>We are not aware of any information suggesting that the villages of Seboyeta, Moquino or Bibo are "built on top of a large uranium body" as stated on page 26 of the Plan. We question the accuracy of this statement and the source of this information.</p>	<p>The agencies are only aware of anecdotal information that there is uranium-containing rock in the area. The text of the plan will be revised to reflect this.</p>
<p>In a similar manner, we dispute the statement made on page 19 of the Plan that "it is unclear if it was ever operated" with reference to the mill constructed by Bokum Resources on the Juan Tofoya Land Grant... A copy of the NRC letter terminating the license is attached for your review.</p>	<p>The 5-Year Plan will be revised to reflect this information.</p>
<p>Our demands are the right to participate as equal partners at every level of decision-making including needs assessment, planning, implementation, enforcement and evaluation.</p>	<p>The agencies are committed to working with the community to provide meaningful involvement in all aspects of the 5-Year Plan. Specific tasks are being added to the 5-Year Plan to emphasize the importance of community involvement.</p>
<p>Grants Wal-Mart customers are pelted with sand ("no doubt, Uranium filled" from two (2) sandy lots when the wind blows. "Wal-Mart has absolutely refused to do anything about</p>	<p>The NMED Air Quality Bureau does not have any authority to regulate uranium or other associated pollutants from uranium mining according to state regulation 20.2.78 NMAC; the EPA has retained this authority under federal Clean Air Act regulations (40 CFR Part 61, Subparts B, H, I, K, Q, R, T & U). However, these regulations generally</p>

<p>these 2 lots on the west and south side.</p>	<p>deal with specific and active facilities (such as mines and mills) rather than potential off-site contamination from historic inactive facilities.</p> <p>The commenter may also want to check with their local authorities (such as the Grants City Council or Public Works office) about whether a local dust ordinance exists and if such an ordinance could address the dirt lot next to Wal-Mart.</p>
<p>The plan is filled with loopholes that allow the industry to slip by without really cleaning up, i.e. alternate standards, vague background levels, vaguely described monitoring systems and then long term management and oversight by DOE, and the NRC, agencies which have been a part of the same nuclear industry culture.</p>	<p>Congress passed UMTRCA (Uranium Mill Tailings Radiation Control Act) to provide for the disposal, long-term stabilization, and control of uranium mill tailings in a safe and environmentally sound manner. EPA set the standards for the design of the systems to control the tailings for 1000 years, and if not reasonably achievable, for at least 200 years. Establishment of these standards included involvement of the public. DOE consulted with affected states and tribes to develop the Remedial Action Plans for each site. The NRC reviewed each Remedial Action Plan and concurred that they complied with EPA standards. Each site also had NEPA documentation prepared, typically in the form of an Environmental Assessment that involved public comment. DOE currently manages the sites under a NRC license and Long-Term Surveillance Plan, which is required by federal regulations.</p>
<p>Please make sure our community members are involved in every step of the process in the creation, planning, and implementation of the NM 5 year plan. In particular, local individuals should be included in assessing legacy problems as well as helping to evaluate the success of the remediation of the Homestake Superfund Site.</p>	<p>The agencies are committed to working with the community to provide meaningful involvement in all aspects of the 5-Year Plan. Specific tasks are being added to the 5-Year Plan to emphasis the importance of community involvement</p> <p>As for the remediation of the Homestake site, local individuals and community groups have been included as stakeholders in the Remedial System Evaluation.</p>
<p>All water sources need to be thoroughly tested for uranium and other heavy metals contamination. In Milan, near the Homestake/Barrick Gold tailings pile, people can no longer use their wells. These wells need to be tested to confirm or deny the success of the 30 year remediation attempt. The San Andres aquifer has been affected and needs to be tested as well.</p>	<p>All public supply water systems are monitored in accordance with the Safe Drinking Water Act. Private well owners are responsible for their wells. Under certain circumstances, NMED does conduct private well samples such as the effort performed south of the Homestake Mining Company Superfund site and the on-going effort in the San Mateo Creek Basin, as outlined above. Homestake Mining Company routinely monitors the water quality in many wells in the alluvial, Chinle, and San Andres aquifers. The results are submitted to EPA, NMED and NRC annually and are available to the public through ADAMS (http://www.nrc.gov/reading-rm/adams.html).</p>
<p>The comprehensive water study should</p>	<p>The 5-Year Plan is intended to collect information to develop a conceptual site model</p>

<p>require USGS to do resistivity to determine the characteristics of the aquifers in our area- where they actually are, depths, where they rise up, dip, etc. This will help to ensure all waters are cleaned and all responsible parties are identified and held responsible. For instance, there was no water in alluvial before Kerr-McGee started discharging into that aquifer.</p>	<p>which will include a better understanding of water flow and contaminant migration. The agencies will use available resources as funding allows to characterize the project area.</p>
<p>Our water needs to be returned to a pre-mining condition. Current remediation standards are unacceptable. We will only accept our water being returned to the condition it was in prior to mining conditions. Responsible companies need to cover the costs of cleanup. Community members in the Homestake area have information about background standards that should be included when discussing background levels. On page 10, it says, "background water quality data reflecting pre-milling and/or pre-mining conditions do not exist," but this is incorrect.</p>	<p>At sites where ground water has been contaminated above standards, the remediation goal is restore ground water either to meet federal and state standards or background concentrations if they are higher than the applicable standard. Remediation standards (e.g. drinking water standards) are intended to protect specific uses.</p> <p>In the case of the Homestake site, contamination from off-site has trespassed onto the site. The source of this contamination and any responsible party(ies)(ies) will be pursued under the Plan. Any responsible party(ies) identified will be responsible for cleanup.</p> <p>In general, ground water data from the period preceding the inception of mining were limited to single-event sampling of isolated windmills for general chemical characteristics, such as sulfate and TDS, and no trace element or radionuclide data are available in the San Mateo Creek and the Arroyo del Puerto drainages or the area south of the Homestake Mining Company Superfund site. This type of data is not reliable to give the complete picture of the quality of pre-mining water. The State is trying to identify responsible party(ies) for legacy contamination in the Grants Mining District. All data provided will be assessed for inclusion into the background determination.</p>
<p>The attempts at public health studies need more advance notice to residents. The testing of private wells people are using for drinking water won't happen - no one is using private wells for drinking anymore. Once again this should have been done 30 years ago.</p>	<p>The timing of the project was tight since The New Mexico Department of Health had to wait until after the legislative session to ensure that there was still funding available, and the project had to be finished by the end of the state fiscal year (June 30th). However, given sufficient funds, this is expected to be an ongoing project and more advanced notice can be provided in the future. The testing of uranium in urine will detect current exposure to uranium even if this is not through drinking water. The survey that was administered can help to determine where exposure (if any) is coming</p>

	from.
<p>Issues of radon exposure from tailings piles need to be analyzed. We are very concerned about radon. The communities need to be notified of testing and published in the local papers. The public health service knew of our problem in 1960 and the community members didn't know until 1975.</p>	<p>Radon is, and will continue to be, an issue for residents in the Grants Mining District due natural uranium and legacy issues. As an NRC licensee, Homestake Mining Company is required to demonstrate that the site meets the established air emission standards required in 10 CFR 20.1101 and public radiation dose standards in 10 CFR 20.1301.</p> <p>EPA is planning on conducting risk assessment sampling around the Homestake area and radon will be considered as part of the overall risk posed.</p>
<p>Since the presumption is that scientific and other data must still be compiled in order to fully determine any potential harmful impacts of past uranium mining and milling activity in the Grants Mineral District, the five-year plan (“the Plan”) could state up front under the Purpose section (Section 1.1) that specific steps are necessary to make this determination, such as:</p> <ul style="list-style-type: none"> - Conduct proper assessments - Identify specific problems - Determine what is necessary to remediate the problems 	<p>The purpose section clearly states that assessing contamination is the primary objective of the 5-Year Plan.</p>
<p>The term, “legacy contamination” is used on pages 3, 5, 7 and 47 of the Plan. For similar reasons stated above, it would be more appropriate to use the term, “potential legacy contamination,” until more conclusive data is compiled.</p>	<p>There is little doubt that legacy contamination exists. However, at this time we do not know the extent of the contamination, what risk it poses, or what action is required.</p>
<p>Similar to the comment above, the terms “removal action(s)” and/or “remedial action(s)” are used throughout the Plan</p>	<p>The 5-Year Plan does not commit to taking actions until assessments have been conducted and risk has been determined.</p>

<p>(See Pages 13 and 15, 17 and the Table on Page 32 respectively). Only in some instances does the Plan qualify these term(s) by indicating such actions “may” be conducted or if “warranted.” (See Page 6 and Table on Page 33). These terms should be qualified where used throughout the Plan to avoid suggesting that imminent health hazards exist (without confirmation by studies contemplated by the Plan).</p>	
<p>The Plan describes six objectives, seemingly in order of priority, beginning with the “Assessment of Water Sources for Contamination.” An option to consider is to make the “Public Health Surveillance” described in objective #6 the first priority. Results of this survey should determine the priority for the remaining action items.</p>	<p>The 5-Year Plan will be revised to state that the objectives are not in order of importance/timing.</p>
<p>There have also been several existing environmental characterization and monitoring efforts initiated by various companies or agencies over past decades on the nature and extent of historic releases and associated environmental impacts from both regulated and un-regulated sites/ activities that should be considered for inclusion in the Plan.</p>	<p>The 5-Year Plan was not meant to be a comprehensive compilation of existing studies and evaluations. During the course of implementing the activities associated with the 5-Year Plan’s objectives, those past studies and evaluations may be used a frame of reference. Past information will be reviewed to determine if it is valid and to determine what new information needs to be collected to adequately characterize contamination in the Grants Mining District, to identify responsible party(ies), and to evaluate if further action is needed.</p>
<p>Please also consider obtaining, reviewing</p>	<p>The New Mexico Department of Health can provide a brief synopsis of past uranium studies that have been conducted in Grants, but the focus of the effort is on the current</p>

<p>and incorporating pertinent data from some of the credible, peer-reviewed epidemiology studies performed in the Grants region that may be relevant and valuable to the current research objectives, such as Dr. John Boice’s 2008 publication on a long term cohort study of uranium miners and millers in the Grants area.</p>	<p>exposure of residents to uranium in the area and providing information to both residents and physicians on ways to minimize elevated exposure in order to prevent health outcomes.</p>
<p>The NMDOH recently conducted a Five-Year Study that revealed that residents in Rio Arriba County had some of the highest body levels of uranium on record in the U.S. The results of this study should be taken into consideration for inclusion in the Plan. It should also be confirmed whether testing was done in Cibola County as part of this study.</p>	<p>These statements are inaccurate. The New Mexico Department of Health participated in a Center for Disease Control and Prevention-sponsored project. Sampling was not designed to be able to characterize exposure by county. Therefore, the New Mexico Department of Health can only say that those who volunteered from Rio Arriba County tended to have higher than average urine uranium concentrations compared to the US (provided by the National Health and Nutrition Examination Survey 2003-2004). The New Mexico Department of Health has not evaluated all data sources about uranium, and therefore, cannot say where the highest body levels of uranium on record in the US occur.</p>
<p>The NMDOH did a survey in 1983 about the health of residents near the HMC mill site that did not reveal any alarming results. It seems logical that exposures would have been higher when the mills and mines were operating than after they have been at least partially reclaimed. The agencies might consider reviewing this study and incorporate any relevant findings into the Plan.</p>	<p>The New Mexico Department of Health is aware of this survey, but has not yet been able to obtain a copy of the results and original instrument. The New Mexico Department of Health has conducted searches of the State archives and made attempts to contact individuals who may have known about the survey, but have not come up with the survey or the results at this point. The New Mexico Department of Health would like to review these in order to respond to this comment.</p>
<p>The Plan does not appear to adequately</p>	<p>The agencies chose the term “legacy” to be an inclusive term for all uranium mines with recorded ore production. There is an ongoing effort to identify the status of each</p>

<p>distinguish between regulated and unregulated activities or sites, and, instead lumps all past mining and milling activities referenced in the Plan under the term, "legacy." (See Pages 3, 5-17, 19, 23-25, 29-30, 32 and 34). This approach may be misleading to the public and send a message that sites closed under UMTRCA or currently undergoing remediation under CERCLA actions are not subject to further regulatory actions, including further remediation or source control, if warranted. It could be clarified in the Plan which facilities or sites are already subject to considerable regulatory agency oversight (e.g. Homestake, Phillips, Rio Algom, St. Anthony, Church Rock, etc.) from those that are not (e.g. uranium mines that were not permitted or abandoned without undergoing proper closure). One way to clarify this point is to omit the term "legacy" and, instead, identify sites more specifically as "regulated" mines "abandoned" mines.</p>	<p>of the mines in the district. In future updates to the 5-Year Plan, we will include this information.</p>
<p>Further, a table would be extremely helpful that includes: the name of each known facility, its location, the name of the regulating authority (or identified "abandoned," if this is the case), the status of the site (i.e., under assessment, abatement and/or reclamation) and what the</p>	<p>Good suggestion. EPA will not make the development of such a table part of the finalizing of the 5-Year Plan, but the 5-Year Plan can be revised to, as a result of the 5-Year Plan's implementation, the generation of such a table.</p>

<p>likelihood is of public exposure to or from the site/facility. Such a table would be a useful visual tool and would also serve to more easily discern sites or facilities that pose the greatest potential concern to protection of human health and the environment, along with future actions anticipated at each site.</p>	
<p>With regard to potential radiological exposure, it is implied throughout the Plan by the use of the word “exposure” that the existence of a source is equivalent to a dose. (See “Assessment of water sources for contamination” on Page 5, the “Public Health Surveillance” sections on Pages 7-8, 29-30, and 33, the Homestake Mining Co. Section 4.1 on P. 35 and on the Fact Sheet). This representation is inaccurate. Waste rock from uranium mines may be a source of elevated levels of radioactivity, however, there may not be an actual or even potential dose to humans from that rock. Radiological dose is a function of residence time and distance from a site or source. If a site is so remote that no human would ever pass it, or if it is so uninhabitable that no one would remain at a site for a lengthy period, then no human could ever receive a significant dose. These factors should be clarified where exposure as it</p>	<p>The 5-Year Plan states that exposure will be assessed. Exposure, as defined by CERCLA for the assessment of risk, is assessed for any contaminant from a site or naturally-occurring background concentrations. Risk is evaluated with respect to receptors’ exposure. Obviously, if there are no receptors, there is not quantifiable risk.</p>

<p>relates to dose is discussed in the Plan.</p>	
<p>Further, it seems appropriate to put exposure data cited throughout the Plan into a perspective that is more easily understood by the general public—and that might distinguish ubiquitous elevated radiation levels due to naturally occurring ore bodies in the area from those potentially created by past uranium mining and milling activity. The DOE, NRC and ATSDR certainly have readily accessible information that outlines such perspectives. If not, the following graph was found on NEI’s website—perhaps it could be incorporated into the Plan for this purpose.</p>	<p>The New Mexico Department of Health would be happy to assist with making the exposure data more easily understood. Additionally, ATSDR has prepared fact sheets that address radiation exposure and radiation dose. The agency also has produced documents that place these doses in perspective with other doses individuals might receive from normal activities. ATSDR will be glad to work with the state to make these available.</p>
<p>There appear to be incomplete statements and/or unsubstantiated claims in various places throughout the Plan, for example:</p> <ul style="list-style-type: none"> - On Page 8, where “cone of depression” is discussed, the Plan states that the cone is allowing more oxygen in to liberate uranium. This point should be expanded to explain that the cone of depression also provides containment and, therefore, no individual is currently threatened, even if utilizing the aquifers of interest. - On page 11, the Plan states that few of the legacy mine sites have undergone reclamation. This statement is only true if 	<p>The cone of depression discussion was included in the background portion of the 5-Year Plan. Because of the complex hydrogeology and the current state of the agencies understanding of the hydrogeology, it would be inappropriate to suppose that the cone of depression is acting to completely contain all groundwater with elevated levels of contamination.</p> <p>The agencies chose the term “legacy” to be an inclusive term for all uranium mines with recorded ore production. The 5-Year Plan states, correctly, that “(f)ew of the legacy uranium mine sites have undergone surface {emphasis added} reclamation...”</p>

“legacy” in this case is referring to abandoned mines. If the sites are more specifically identified, this confusion will be alleviated.

- On Page 19, the Plan states that the Bokum Mill located within the Marquez sub-district was permitted but “it is unclear if it was ever operated.” A check of U.S. NRC records would confirm that the source material license (SUA 1474) was terminated in 1988 following multiple NRC site inspections, which confirmed that no ore was ever produced or processed at the site.

- On Page 26, the Plan states that on-ground radiological surveys were (are) a top priority in the villages of the Cebolleta Land Grant (“CLG”) because they “are built on top of a large uranium ore body.” Neutron Energy has an exclusive mineral lease with the CLG to develop land grant minerals and possesses a very extensive database of exploration drill results on the CLG that encompasses several decades of work by multiple companies. There is nothing in this data set to suggest that the villages of Moquino, Seboyeta or Bibo are built “on top of a large uranium ore body.” This statement in the Plan should be corrected or deleted, and similar alarming statements should be avoided unless there is substantial, credible information to back them up.

Comment noted and the 5-Year Plan will be revised.

The agencies are only aware of anecdotal information that there is uranium-containing rock in the area. The text will be revised to reflect this.

<p>With regard to ongoing remedial actions at Superfund sites, there may be a misperception that any actions occurring under CERCLA are being paid for solely by the U.S. government. The U.S. government pays for the percentage share of tailings created under government contracts, and responsible parties that are currently cleaning up or have cleaned up such sites, pay the remaining share. This point could be made in Section 2.3. of the Plan.</p>	<p>The agencies disagree with the comment, as the 5-Year Plan clearly indicates who is responsible for addressing (thus funding) the assessments and cleanups at milling sites.</p>
<p>Based on the prior two public meetings (Oct. 20, 2009 and April 27, 2010), the agencies agreed to go back and re-test wells and take additional water samples where they have already been tested and/or sampled. It may be useful to all stakeholders to publish report results of previous sampling and testing.</p>	<p>NMED/EPA have sampled some wells more than once in this area. Reports with groundwater data have been and will continue to be completed and made available to the public. Select reports have been posted on the following websites and may be requested from the agencies. Additionally, a Grants Mineral Belt repository has been established at the Grants Public Library.</p> <p>http://www.nmenv.state.nm.us/gwb/NMED-GWQB-SOS-GrantsMiningDistrict.htm http://www.epa.gov/earth1r6/6sf/newmexico/grants/nm_grants_index.html</p>
<p>The Plan omits any details with regard to methods to be used for urine sampling and testing that will be conducted as part of the “Public Health Surveillance,” i.e., whether they will be conducted randomly, under strict controls, etc. It would be helpful to include this information in the Plan.</p>	<p>The New Mexico Department of Health has these methods and can provide them. Points of contact are included in the 5-Year Plan.</p>
<p>The map provided in the draft Plan appears to depict that everything just west and south</p>	<p>The agencies have detailed maps; however, for purposes of the 5-Year Plan, the Navajo boundary is intended to show the demarcation of sites in this 5-Year Plan versus the Health and Environmental Impacts of Uranium Contamination in the Navajo</p>

<p>of the Rio Algom mill is Navajo land. Is it possible to provide a more accurate map?</p>	<p>Nation Five-Year Plan.</p>
<p>Is the agencies' intention to eventually address abandoned mines on private lands in the Plan?</p>	<p>It is the agencies intent to screen all mines on all lands (federal, state, tribal and private), identify issues, further assess higher priority mines, prioritize actions, and address contamination at all mines. If responsible parties are identified at particular mines, it is the agencies intent to require these parties to address these sites. For legacy uranium mines located on private lands, the landowner must provide access to the agencies for assessment and reclamation activities.</p>
<p>The scale of the sites depicted on the aerial photo on the cover page does not appear accurate. If this photo remains a part of the Plan, it should be modified.</p>	<p>The photo will be removed from or replaced in the 5-Year Plan.</p>
<p>With regard to Section 1.1: - The first sentence states that "The five-year plan compiles all activities...." Since not "all activities" are currently compiled into the Plan, it may be more appropriate to state instead that "It is the goal to compile into the five-year plan all activities contributing to..." - With regard to the issue of radiological hazards, this section of the Plan suggests that all risks require mitigation and that such mitigation would be possible in all cases. The Plan appropriately notes the difficulty in establishing pre-mining and/or milling water quality because such data was not collected prior to operations and due to the presence of naturally occurring radioactive material (NORM). Obviously, among the "natural resources" in the Grants Mining District is an</p>	<p>The sentence will be modified to make it accurate.</p> <p>The 5-Year Plan does not assume that mitigation will be required in all cases. The 5-Year Plan is focused on assessment to understand the scope of contamination and risk.</p>

<p>abundance of large uranium deposits, much of which remain to be developed. However, these deposits will persist as potential “contaminant sources” unless they are removed from or somehow isolated from the environment (e.g. contact with groundwater). It would be useful to also note in the Plan more clearly that whatever health risks may be posed by technologically enhanced NORM, or TENORM, they are no different than those posed by NORM. Radiation is radiation whether the source is naturally occurring or “technologically enhanced.”</p>	
<p>With regard to Item #2.1, “Assessment of Water Supply Sources for Contamination,” it might be noted under “Previous and ongoing regulatory actions” that all private water well users in the Bluewater subdivision area have been offered public water supply hook-ups at no cost to them, regardless of their well water quality.</p>	<p>Incorporation of the comment into the 5-Year Plan is not necessary.</p>
<p>Also with regard to Item #2.1, one option to consider going forward would be to determine and explain which water sources could potentially be impacted by the mining activity at Ambrosia Lake, both past and future, and whether there is any hydrological connection between any historical flow and the Rio San Jose, for example.</p>	<p>The agencies do not have enough information at this time to make these conclusions.</p>

With regard to Item #2.2, "Assessment and Clean-up of Legacy Uranium Mines:"

- The Mining and Minerals Division ("MMD") had previously identified 137 abandoned mines with some record of prior production and no record of clean-up. The Plan references 111 legacy uranium mines. It should be clarified whether the 111 sites noted in the Plan are part of the 137 sites initially identified by MMD. Is the focus in the Plan on 111 sites because 26 of the original 137 identified have now been surveyed?

- The Plan should distinguish between actions that have been completed, are underway or planned for the future.

- This section presents ideas for addressing legacy uranium mine sites and notes that the cost of doing so "could vary widely" due to differences in size and aerial extent of contamination. One option to consider going forward would be to now identify 10 of the surveyed sites as "priority sites" and expend any available funding on developing engineering design/and detailed cost estimates to remediate those 10 priority sites, including radiological remediation, if warranted. Such an approach would

The MMD developed an inventory of legacy uranium mines with recorded production across the entire state of New Mexico, including private, tribal, state, and federal land. A portion of those mines are located within the area encompassed by the Grants Mining District 5-Year Plan. The 96 mines within the 5-Year Plan area include all uranium mines from the EMNRD inventory regardless of clean-up status. The 5-Year Plan will be revised, accordingly, and the agencies apologize for the confusion about the number of mines that will be assessed.

As a result of the 5-Year Plan's implementation, a table will be generated to address this issue.

This may be done as part of the ongoing prioritization of sites as they are assessed.

<p>provide a meaningful basis for all stakeholders to assess the extent of potential contamination at these mine sites, the cost of remediation and acceptable design standards for the remainder of the 137 abandoned mines (if this is the accurate number identified).</p>	
<p>In order to comprehensively address the protection of human health and preserve natural and cultural resources of the region, the Plan for the Grants Mining District should include an assessment of air quality impacts and traditional cultural property impacts to regional Indian tribes.</p>	<p>The 5-Year Plan summarizes on-going or planned activities by the participating agencies. As work progresses, evaluation of other media may be developed if releases are identified.</p> <p>Assessments performed under CERCLA evaluate all media (air, soil, surface water and ground water) and exposure pathways.</p> <p>The Pueblos are invited and have participated in the development of the 5-Year Plan and consultations with the Pueblos will be held to identify impacts and traditional cultural property impacts.</p>
<p>Geochemical characterization of the regional groundwater must be included in the assessment of water sources for contamination.</p>	<p>The agencies agree. Isotopic analysis of select wells has been conducted; a report has been drafted and has been distributed for peer review. Additional isotopic analysis may be conducted if results are favorable.</p>
<p>Monitoring for legacy contamination of groundwater needs to occur both up-gradient and down-gradient.</p>	<p>The agencies intend to address all groundwater contamination throughout the Ambrosia Lake and Laguna mining sub-districts once groundwater flow and contaminant migration is better understood.</p>
<p>Radiological testing of public water supplies under the Safe Drinking Water Act should occur annually and the information made available to the public.</p>	<p>The NMED Drinking Water Bureau program annually samples the water systems for Milan for many constituents, including radiological constituents. The water systems in the rest of the Grants Mineral Belt are sampled, pursuant to a 3-year schedule as established by EPA and the State of New Mexico, unless changes are detected.</p>

<p>Health surveillance activities can include coordination with existing Indian Health Service data and RECA health data.</p>	<p>The New Mexico Department of Health would want to know what data elements the commenter is referring to in order to be able to comment on how these data sources could be used.</p>
<p>The 5-Plan should include an environmental justice analysis. The traditional cultural practices of tribes residing near the Mining District must be included in this analysis.</p>	<p>The agencies have an ongoing consultation with the tribes to ensure that issues are addressed.</p>
<p>The ongoing groundwater remediation efforts being undertaken at the Homestake/Barrick Gold Superfund site should also be addressed in the Plan.</p>	<p>The 5-Year Plan does reflect the ongoing work at the Homestake site in Section 4.</p>