



Grants Mining District Draft Five-Year Plan

New Mexico

August 2010

This fact sheet will tell you about:

- Background information
- Current activities
- Questions/comments and answers
- What happens next?
- For more information

Background information

The Grants Mineral Belt (Belt) was the primary focus of uranium extraction and production activities in New Mexico from the 1950's until late in the 20th century. The Belt extends along the southern margin of the San Juan Basin in Cibola, McKinley, Sandoval, and Bernalillo Counties as well as on Tribal lands, and includes the Shiprock and the Grants Mining District.

Containment associated with historical uranium mining activities in the Shiprock District (and part of the Ambrosia Lake subdivision) are under the jurisdiction of the Navajo Nation and is being addressed by Environment Protection Agency (EPA) Region 9. The three mining subdivisions located within the Grants Mining District – Ambrosia Lake, Laguna, and Marquez – contain former mines that are under the jurisdiction of New Mexico Environment Department (NMED) and EPA Region 6.

Current activities

Community meetings were held in Grants, New Mexico in October 2009 and April 27, 2010. At the meetings, the community members were asked to assist the federal, state and local partners in gathering information and providing input for the Uranium 5-Year Plan planning activities. The 5-Year Plan sets out the goals, objectives, and tasks proposed to be undertaken by multiple agencies to assess and address health risks and environmental impacts resulting from the

extraction, processing, disposal, and releases from legacy uranium mining and milling activities. The NMED, EPA, and their partners are seeking community input as we move forward with this comprehensive effort.

Questions/comments and answers

The following questions and/or comments were generated from community input at the October 2009 and April 2010 community meetings, and from a number of other organizations involved with the uranium mining and milling study investigation in New Mexico.

1. How is the 5-year plan going to speed up the clean-up of the water and eliminate the related health hazards?

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.

2. 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.

3. 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.

4. 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.

5. 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 Nuclear Regulatory Commission (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 emphasize the importance of community involvement.

6. 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.

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.

7. Could Department of Energy (DOE) describe the covers/caps on the piles?

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.

8. How quickly does uranium pass through a person's body? Does it stay there and cling to some parts of the body?

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 olds, 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.

9. Does NMED plan to sample any wells in the Murray Acres and Broadview area? What wells are being sampled north of Homestake?

The 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.

10. 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?

All NRC documents associated with the Homestake site are currently available to the public through the Agency wide 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.

11. 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.

Congress passed 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.

12. Please make sure our community members are involved in every step of the process in the cre-

ation, 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.

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

As for the remediation of the Homestake site, local individuals and community groups have been included as stakeholders in the Remedial System Evaluation.

13. 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.

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>).

14. 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.

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.

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) will be pursued under the Plan. Any responsible party(ies) identified will be responsible for cleanup.

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.

15. 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.

Radon is, and will continue to be, an issue for residents in the Grants Mining District due to 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.

EPA is planning on conducting risk assessment sampling around the Homestake area and radon will be considered as part of the overall risk posed.

16. The New Mexico Department of Health 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.

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.

17. 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.

NMED/EPA sampled some wells more than once in this area. Reports with ground water 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 New Mexico State University, Grants Campus Library.

<http://www.nmenv.state.nm.us/gwb/NMED-GWQB-SOS-GrantsMiningDistrict.htm>

http://www.epa.gov/earth1r6/6sf/newmexico/grants/nm_grants_index.html

18. Is the agencies' intention to eventually address abandoned mines on private lands in the Plan?

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.

19. 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 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.

20. 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.

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.

Assessments performed under CERCLA evaluate all media (air, soil, surface water and ground water) and exposure pathways.

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.

21. Geochemical characterization of the regional groundwater must be included in the assessment of water sources for contamination.

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.

What happens next?

In late-fall 2010, there will be a community engagement meeting in Grants, New Mexico. At the meeting, information will be presented about:

- EPA’s radon/uranium structures assessment
- Progress of the Technical Assistance Grant awarded to the Bluewater Valley Downstream Alliance

It is anticipated that the first progress report on the 5-Year Plan’s activities progress will be shared with the community in December 2010.

For more information

Lisa Price

Grants Mining District Coordinator
U.S. EPA Region 6 (6SF-TR)
214.665.6744 or 1.800.533.3508 (toll-free)
price.lisa@epa.gov

John Meyer

Chief, Risk and Site Assessment Team Leader
U.S. EPA Region 6 (6SF-TR)
214.665.6742 or 1.800.533.3508 (toll-free)
meyer.john@epa.gov

LaDonna Turner

New Mexico Site Assessment Manager
U.S. EPA Region 6 (6SF-TR)
214.665.6666 or 1.800.533.3508 (toll-free)
turner.ladonna@epa.gov

Dana Bahar

New Mexico Environment Department
Ground Water Quality Bureau
Superfund Oversight Section
1190 St Francis Drive, Ste N2312
Santa Fe, NM 87505
Tel: 505.476.3777, Fax: 505.827.2965
dana.bahar@state.nm.us

Stephen Harper

Community Involvement Coordinator (SEE)

U.S. EPA Region 6 (6SF-VO)

214.665.2727 or 1.800.533.3508 (toll-free)

harper.stephen@epa.gov

All news media personnel should contact the Region 6 Office of External Affairs at 214.665.2200.

Repository

New Mexico State University, Grants Campus

1500 Third Street

Grants, NM 87020