New Mexico Abandoned and Inactive Uranium Mine Site Assessment & Reclamation Progress

Navajo Uranium Stakeholders Workshop
Gallup, New Mexico
November 4, 2009

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New Mexico Mining & Minerals Division
Inactive / Abandoned Uranium Mine Inventory Project Phases

- Literature review & data collection
- Field surveys & site assessments
- Site prioritization
- Reclamation design
- Leveraging resources & partnerships
- Remediation, reclamation & clean-up
New Mexico
Grants Uranium Belt and State-wide Distribution of Abandoned Uranium Mines (AUM)

- AUM
- Major Cities
- Grants Uranium Belt
- Counties
- Interstate Hwys
- Major Roads

NAD83 UTM Zone 13
Scale 1 : 3,000,000

Created by New Mexico Mining & Minerals, New Mexico Energy, Minerals & Natural Resources
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<table>
<thead>
<tr>
<th>Category</th>
<th>All AUMs</th>
<th>All AUMs, No Documented Reclamation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of mines</td>
<td>259</td>
<td>137</td>
</tr>
<tr>
<td>Production (lbs. U₃O₈)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;20 million</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2 million-20 million</td>
<td>24</td>
<td>3</td>
</tr>
<tr>
<td>200,000-2 million</td>
<td>28</td>
<td>10</td>
</tr>
<tr>
<td>20,000-200,000</td>
<td>35</td>
<td>19</td>
</tr>
<tr>
<td>&lt; 20,000</td>
<td>131</td>
<td>85</td>
</tr>
<tr>
<td>Included with other mines</td>
<td>40</td>
<td>20</td>
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<tr>
<td>Surface ownership</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal</td>
<td>68</td>
<td>48</td>
</tr>
<tr>
<td>Private</td>
<td>78</td>
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<td>State</td>
<td>9</td>
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<tr>
<td>Tribal, trust</td>
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</tr>
<tr>
<td>Tribal, allotment</td>
<td>17</td>
<td>16</td>
</tr>
<tr>
<td>Mixed</td>
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</tr>
</tbody>
</table>
Field Surveys

- **Project assessment and maintenance of previous New Mexico Abandoned Mine Land (AML) projects.**
  Surveyed 14 mines in the Poison Canyon area north of Milan and 1 mine southeast of Gallup.

- **Reconnaissance of mines for possible inclusion in future New Mexico Abandoned Mine Land (AML) projects.**
  Surveyed 14 mines on federal and private lands located throughout New Mexico.

- **2008 federal and state lands field survey.**
  Industry-sponsored survey of 22 mines on Federal and State lands located throughout New Mexico.

- **2009 survey and engineering design contract.**
  AML professional services contract for surveying, site assessment and reclamation design for 7 mines in the Poison Canyon area.

- **2009 field survey contract.**
  Finalizing contract for preliminary site assessment and field survey work for approximately 30 mines located throughout New Mexico.
Site Prioritization

- Limited resources require prioritizing abandoned uranium mine sites.

- Multi-agency involvement on federal, state and tribal levels.

- Priority based on site factors.
  - Radiological hazards
  - Physical safety hazards (open shafts & adits, subsidence, high walls)
  - Proximity to homes
  - Proximity to domestic wells
  - Proximity to water drainages
Reclamation Design

Joint project of the New Mexico Abandoned Mine Land & Navajo Nation Abandoned Mine Land Reclamation Programs
Leveraging Resources & Partnerships
Remediation, Reclamation & Clean-Up

- Continued coordination with federal, state and tribal agencies.
- Perform further site assessment and radiological surveys.
- Prioritize sites.
- Establish reclamation standards and criteria.
- Promote public participation.
- Secure funding sources for cleanup work: federal, state, tribal and private sources.