

## **Implementation of the principles for environmental management in the West: the Enlibra Process and reclamation of the Atlas Uranium Mill tailings**

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### **The Enlibra Process**

In 1999, the Western Governors' Association adopted a resolution titled "The Principles of Environmental Management in the West" (Western Governors' Association 1999). The purpose of this resolution was to launch a new process to address increasingly complex environmental issues facing the western USA and the polarization that oftentimes accompanies these issues. The process was termed "Enlibra," emphasizing a balanced, open, and inclusive approach to environmental and natural resources stewardship. As spelled out in the resolution, the principles of the Enlibra doctrine include the following:

- National standards, neighborhood solutions—assign responsibilities at the right level;
- Collaboration, not polarization—use collaborative processes to break down barriers and find solutions;
- Reward results, not programs—move to a performance-based system;
- Science for facts, process for priorities—separate subjective choices from objective data-gathering;
- Markets before mandates—pursue economic incentives whenever appropriate;
- Change a heart, change a nation—environmental understanding is crucial;
- Recognition of benefits and costs—make sure all decisions affecting infrastructure, development, and environment are fully informed; and
- Solutions transcend political boundaries—use appropriate geographic boundaries for environmental problems.

Since 1999, the Enlibra process has been applied to a number of environmental and natural resource issues facing the West. Examples include the Western Regional Air Partnership, the Wyoming Open Lands Initiative, trail and recreational access in Alaska, the Oregon Coastal Salmon Restoration Initiative, desert tortoise habitat conservation planning, Texas regional water planning, and a strategy to address water pollution from animal feeding operations in Utah. More information on Enlibra and its application to these and other issues may be obtained at the Western Governors' Association Web site (WGA 2001).

### **Enlibra and reclamation of the Atlas Uranium Mill tailings**

In late 1999, the Utah Department of Environmental Quality and Grand County, Utah, decided to engage the Enlibra process in order to foster a decision with respect to final reclamation of the Atlas Uranium Mill tailings located three miles northwest of Moab, Utah. The site is also immediately adjacent to the Colorado River and Arches National Park, and is upstream of Canyonlands National Park and Glen Canyon National Recreation Area.

Atlas Minerals Corporation operated a uranium mill at this site from 1956 to 1984. The mill generated 10.5 million tons of tailings, which were deposited in an

unlined disposal facility southwest of the confluence of Moab Wash and the Colorado River. The tailings pile covers approximately 130 acres and reaches a height of approximately 100 ft.

Following closure of the mill, the Nuclear Regulatory Commission (NRC) began an assessment of how the site should be stabilized and reclaimed. A final Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) was completed in 1999, and the preferred alternative called for stabilization and reclamation of the pile in its current location. During the EIS process, the National Park Service (NPS) raised concerns associated with potential catastrophic failure of the pile (due to flooding or an earthquake), water quality impacts (both to groundwater and surface water), related effects on endangered fish in the Colorado River, and air quality impacts (particularly the release of fugitive dust and radon). Of particular concern to NPS were elevated concentrations of ammonia, barium, manganese, molybdenum, vanadium, and gross alpha in groundwater under the pile, and associated impacts to the Colorado River (particularly to the endangered Colorado pikeminnow, which spawns in backwater areas of the river immediately adjacent to and down-gradient of the pile).

NPS raised these concerns in its review of various technical reports and NEPA documents. NPS also continued to stress that all other uranium tailings piles along the Colorado River, under the control of the U.S. Department of Energy (DOE), had been relocated away from the river to engineered disposal sites overlying impermeable materials. It should also be noted that in 1998 Atlas Minerals Corporation filed for bankruptcy. PricewaterhouseCoopers LLP was ultimately designated as trustee for the site.

In October 1999, the state of Utah and Grand County engaged the Enlibra process to provide a mechanism to enhance information exchange and collaboration and to attempt to work out a solution for this long-standing issue. As a first step, a stakeholder meeting was convened to begin a dialogue on the issue. Attendees included representatives of the Utah Department of Environmental Quality (UT-DEQ), Grand County, the city of Moab, NRC, U.S. Environmental Protection Agency (EPA), DOE, U.S. Fish and Wildlife Service (USFWS), NPS, the Office of the Solicitor in the U.S. Department of the Interior, the Utah Congressional delegation, the Utah State Legislature, PricewaterhouseCoopers, the Grand Canyon Trust, and private citizens. Since there was ongoing litigation among some of the stakeholders in regard to this issue, an agreement was reached at the outset that dialogue at stakeholder meetings would be informal and not part of “discovery” in any legal proceeding.

In a subsequent meeting in January 2000, the stakeholders group established a groundwater subcommittee since it was realized that whether the tailings remain in place or are relocated, degraded groundwater at the site must be cleaned up. The subcommittee was charged with enhancing information-sharing and exchange and working directly with PricewaterhouseCoopers to develop a better understanding of groundwater conditions at the site and to evaluate various remediation measures. Members of the subcommittee included UT-DEQ, Grand County, EPA, DOE, USFWS, NPS, PricewaterhouseCoopers, and the Grand Canyon Trust. NRC opted not to be a member since it did not believe it was appropriate for NRC to work with PricewaterhouseCoopers in developing remediation strategies for addressing groundwater contamination at the site. NPS chairs the subcommittee.

Since January 2000, the subcommittee has evaluated a dewatering plan for the tailings and reviewed a geohydrology and geochemical characterization plan for the site. The subcommittee has also assessed various measures that could be carried out on an interim basis to address elevated levels of ammonia detected in the Colorado River—levels that are lethal to endangered fish in backwater areas adjacent to the pile (USGS 2000). It should be emphasized that the focus of the subcommittee has been on information-sharing and exchange, not on forging consensus positions on various

groundwater issues. Future work of the subcommittee will include further assessments of interim measures to control ammonia in the Colorado River and review of a groundwater corrective action plan for the site.

Another recent development was the passage of the 2001 National Defense Authorization Act (Public Law 106-398) in October 2000. This law mandates the transfer of title to the site to DOE no later than October 2001, provides an innovative mechanism to fund final reclamation of the pile, directs DOE to develop a remediation plan (including groundwater restoration) for the site, and directs the National Academy of Sciences (NAS) to evaluate and make recommendations with respect to various remediation alternatives. This law also encourages relocation of the pile to a site in Utah off the floodplain of the Colorado River. As such, the groundwater subcommittee plans to review DOE's remediation plan and possibly assist NAS in its evaluations as well.

#### **Observations on Enlibra**

As indicated above, application of the Enlibra process to reclamation of the Atlas Uranium Mill tailings situation is currently underway. Based on experience to date, the following observations on the Enlibra process are offered:

1. The Enlibra process is capable of providing a forum for effective collaboration, communication, and cooperation;
2. The Enlibra process is not a substitute for standard regulatory processes (e.g., consultation under Section 7 of the Endangered Species Act);
3. Since non-governmental parties are oftentimes involved, care should be taken to assure that the requirements of the Federal Advisory Committee Act are adhered to;
4. It would appear that the Enlibra process has a better probability for success when issues are of limited scope and there are a manageable number of stakeholders involved; and
5. The Enlibra process appears to provide a mechanism to assist NPS in addressing significant environmental and natural resource issues facing units of the National Park System (e.g., energy development near parks, fire management in the urban interface area, and recreational uses in parks).

#### **Conclusions and recommendations**

Based on the Atlas Uranium Mill tailings experience and other applications to date, the Enlibra process, as developed and espoused by the Western Governors' Association, provides an approach to address and (one hopes) resolve environmental and natural resource issues facing the West, including a number of issues facing NPS. The collaborative and cooperative mechanisms established under the Enlibra process (e.g., stakeholder forums) provide constructive, working venues in this regard. Further, while the potential for the Enlibra process to find solutions to highly contentious environmental and natural resource issues is promising, it should be recognized that the Enlibra process faces many challenges in light of the complexities, polarization, and litigation oftentimes associated with these issues. It is recommended that, on a case-by-case basis, NPS consider the utilization of the Enlibra process to address environmental and natural resource issues of concern and that the agency also take advantage of opportunities to participate in the Enlibra process in cases where environmental and natural resource issues facing units of the National Park System are to be addressed.

***Note: Opinions expressed in this paper represent the opinions of the author and do not necessarily represent the position of the National Park Service or the U.S. Department of the Interior.***

**References**

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