



Program Update

April–June 2017

Welcome to the April–June 2017 issue of the U.S. Department of Energy (DOE) Office of Legacy Management (LM) Program Update. This publication is designed to provide a status of activities within LM. Please direct all comments and inquiries to lm@hq.doe.gov.



David Shafer accepts the Federal Small Business Achievement of the Year Award on behalf of LM.



Goal 5

LM Receives Small Business Achievement Award

On May 16, 2017, Acting Director Christy Jackiewicz of the U.S. Department of Energy (DOE) Office of Small and Disadvantaged Business Utilization (OSDBU) presented the DOE Office of Legacy Management (LM) with a Federal Small Business Achievement of the Year Award (Non-Facility Management Contractor Program Office) at the 16th Annual DOE Small Business Forum & Expo in Kansas City, Missouri. David Shafer, LM director of the Office of Business Operations, accepted the award on behalf of LM.

This year’s award was based on fiscal year-end 2016 prime small business achievement data from DOE’s iPortal OSDBU Scorecard.

LM was recognized for its increase in small business procurement during the 2016 fiscal year, as well as for its policies, programs, and procedures that promote small business utilization. DOE Secretary Rick Perry, who provided keynote remarks at the award ceremony, lauded LM for its innovative approach toward the utilization of small businesses during his address. Navarro Research and Engineering Inc., a small business, is LM’s prime contractor for products and services. ❖

Inside this Update:

- LM Receives Small Business Achievement Award 1
- LM Director Visits Sites and Meets with Tribal Officials 2
- LM Staff Joins LM Director at Spring Tribal Energy Meetings 3
- LM Director Appoints Requirements Working Group 4
- LM Releases *Site Management Guide* Update 4
- LM Releases *2016 Annual Historical Summary* 4
- LM Presents to Consolidated Group of Tribes and Organizations 5
- How Much Is an Ounce of Prevention Worth? 6
- FUSRAP Collaboration Between LM and USACE 7
- LM Shares Information at Shiprock, New Mexico, Open House and Site Tour 8
- Revising LM’s Beneficial Reuse Program 9
- Preservation Assessment of Historic Cabin in Los Alamos, New Mexico 10
- Exhibit Depicts African-American Life During Manhattan Project-Era 11
- Local Students Visit the Tuba City, Arizona, Disposal Site 12
- LM Participates in Earth Day Events 13
- Fernald Preserve Hosts 2017 Envirothon 14
- Engaging the Next Generation of Geoscientists 16
- Environmental Justice Activities 19
- Anticipated LM Sites Through FY 2025 22
- User-Friendly Update for LM Website 23
- LM Goals 23



Goal 1

LM Director Visits Sites and Meets with Tribal Officials

Carmelo Melendez, the director of the U.S. Department of Energy Office of Legacy Management (LM), took an extensive tour of the Navajo Nation (NN) and the Hopi Tribe on May 7 through 13, 2017, focusing on the four Uranium Mill Tailings Radiation Control Act (UMTRCA) sites located on the NN. The trip included meetings with community members and NN and Hopi tribal officials. Melendez met with Jonathan Nez, vice president of the NN; Bidtah Becker, the director of the NN Division of Natural Resources; and Madeline Roanhorse, the program director of the Navajo Abandoned Mine Lands Reclamation/Uranium Mill Tailings Remedial Action (AML/UMTRA) Department, to discuss the status of NN sites and the importance of institutional controls (ICs) for the sites. ICs are an important part of meeting LM's goal of protecting human health and the environment from residual contamination in groundwater following surface remediation. LM will submit recommendations on the establishment of ICs at the four UMTRCA sites to the NN Division of Natural Resources (Water Resources and Land departments) for review and approval.

Melendez met with Clayton Honyumptewa, the director of the Hopi Tribe Department of Natural Resources, and Norman Honie, the program director for the Office of Mining and Mineral Resources. He also attended a meeting sponsored by the Hopi Tribal Council. In both meetings, Hopi officials expressed concerns about possible groundwater contamination from the Tuba City, Arizona, Disposal Site. Richard Bush, LM senior technical staff, and the Tuba City site manager, gave an in-depth presentation on the results of technical studies and computer models, which show contamination will not reach the Moenkopi Wash, or the community of Moenkopi. Earlier in the afternoon, Hubert L. Lewis, Sr., governor of the Upper Village of Moenkopi, led a tour of the Moenkopi Spring. Melendez and members of the tour drank from the Hopi spring, an act appreciated by the Hopi council members. Melendez committed to having more meetings in the community, with more clear and comprehensible technical presentations and community outreach to improve understanding of the groundwater contamination situation. Melendez expressed his support for education in the local communities and schools in the areas of science, technology, engineering, and mathematics. ❖



Carmelo Melendez visits a seep near the Mexican Hat, Utah, Disposal Site where signage includes wording in English and Navajo.



Left to right, April Gil (LM), Norman Honie (Hopi Tribe), Carmelo Melendez, and Moenkopi Upper Village Governor Hubert Lewis. The Moenkopi Spring is in the background.



Goal 5

LM Staff Joins LM Director at Spring Tribal Energy Meetings

From May 1 through May 4, U.S. Department of Energy (DOE) Office of Legacy Management (LM) staff and senior leadership participated in the 2017 National Tribal Energy Summit and concurrent State and Tribal Government Working Group (STGWWG) spring meetings in Washington, DC. The meetings provided state, DOE, and tribal government representatives an opportunity to address challenges to tribal energy development, share best practices and solutions, and identify and foster new collaborative partnerships.

During the energy summit, LM Director Carmelo Melendez participated in a roundtable discussion alongside representatives from the DOE Office of Environmental Management, the National Nuclear Security Administration, the Office of Nuclear Energy, and several tribal government leaders. Melendez provided a brief overview of LM's mission and goals, dialogued with tribal leaders about their environmental stewardship concerns, and reaffirmed LM's commitment to stakeholder communication and outreach.

On May 4, Melendez gave a more in-depth presentation on LM's educational, intergovernmental, and outreach activities with Native American and Alaska Native governments. Specifically, he addressed LM's long-term surveillance and maintenance activities and continued support of science, technology, engineering, and mathematics-related activities at the Navajo Nation's Diné College. He also discussed LM's participation in the Navajo Nation Five-Year Plan, which was developed by five federal agencies in 2008, and updated in 2014, to address uranium contamination issues on the Navajo Nation. In his closing remarks, Director Melendez stressed LM's commitment to protecting cultural resources on tribal lands and reiterated LM's commitment to engaging in dialogue with tribal governments to listen, consult, and collaboratively solve work issues.

In addition to Melendez's presentation, LM Environment Team leaders April Gil and Gwen Hooten provided remarks on LM's long-term stewardship and outreach activities at Formally Utilized Sites Remedial Action Program and Uranium Mill Tailings Radiation Control Act sites. On the last day of the conference, Tracy Atkins, DOE's principal representative for the Manhattan Project National Historical Park (MAPR), briefed conference attendees on LM's achievements at each of the three MAPR sites in



Carmelo Melendez addresses STGWWG attendees.



April Gil (second from right) and Gwen Hooten (right) participate in an STGWWG panel.

Hanford, Washington; Oak Ridge, Tennessee; and Los Alamos, New Mexico; and provided information on future plans at the sites.

Information provided by LM staff was well received, and LM's leadership received positive feedback from conference attendees.

"I was impressed with the level and the quality of information exchanged at the National Tribal Summit and STGWWG spring meeting," said Melendez. "LM values feedback from all our stakeholders, including tribal and state governments, and we consistently review that feedback to determine how the organization can better carry out our mission going forward." ❖



Goal 5

LM Director Appoints Requirements Working Group

To ensure the U.S. Department of Energy (DOE) Office of Legacy Management (LM) successfully carries out its mission to fulfill DOE’s post-closure responsibilities and protect human health and the environment, LM relies on assistance from a support services contractor. The current LM support services contract is set to expire May 31, 2020. In order to meet DOE Office of Management (MA) procurement requirements associated with acquisition of a follow-on contract, LM Director Carmelo Melendez created an LM Requirements Working Group (RWG) on July 6, 2017.

The RWG is composed of eight employees from across LM, including Debbie Barr, who will serve as management sponsor, and Christina Pennal, who will serve as RWG lead. RWG members will be responsible for developing,

coordinating, and collecting documents for the Requirements Package due to MA by December 7, 2018. Group members will also be required to provide assistance and respond to questions from the MA contracting officer during early stages of the acquisition planning phase. Once the Acquisition Plan enters the final phase, the RWG will dissolve and a Source Evaluation Board (SEB) will be established. At that time, it is likely that some RWG members will serve on the SEB.

“The RWG is the first step in achieving a successful procurement process,” stated Director Melendez. “The management team is thankful to RWG members for their willingness to take on this extra task and for their commitment to this important process.” ❖



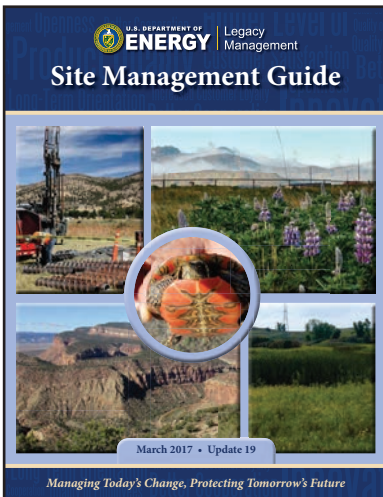
Goal 1

LM Releases Site Management Guide Update

A new edition of the U.S. Department of Energy Office of Legacy Management (LM) *Site Management Guide* (SMG) was posted to the LM website April 11, 2017.

The SMG provides general information for sites that are already in LM custody and sites that LM will receive in the future. Primary data includes site names and locations,

transfer dates, planned transfer dates of non-LM sites, regulatory types, and links to site transition policies. The SMG can be found at <https://energy.gov/lm/downloads/site-management-guide>. ❖



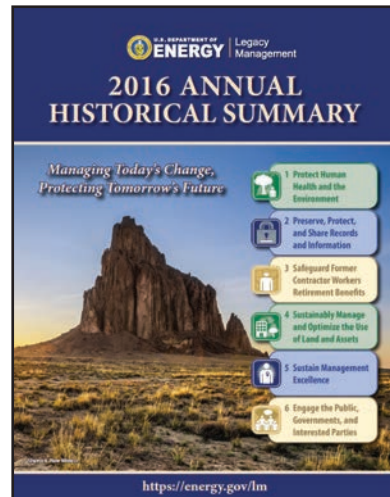
Goal 1

LM Releases 2016 Annual Historical Summary

The U.S. Department of Energy Office of Legacy Management (LM) *2016 Annual Historical Summary* was posted to the LM website May 24, 2017.

The report is an account of LM’s activities and accomplishments during the calendar year. Future historians and researchers can use the summaries to

place LM activities into an overall context. Primary data includes accomplishments arranged by LM strategic goal, staff changes, site map, and an index to 2016 LM *Program Update* articles. The 2016 summary can be found at <https://energy.gov/lm/downloads/2016-annual-historical-summary>. ❖





Goal 1

LM Presents to Consolidated Group of Tribes and Organizations

On April 18, 2017, Mark Kautsky, site manager with the U.S. Department of Energy (DOE) Office of Legacy Management (LM) Environment Team 1, was an invited speaker at the annual meeting of the Consolidated Group of Tribes and Organizations (CGTO) in Las Vegas, Nevada. The meeting was organized by the DOE National Nuclear Security Administration (NNSA) Nevada Field Office and CGTO, and was designed to identify approaches for establishing regular, frequent communication between NNSA and CGTO.

CGTO comprises 17 tribes and organizations from Arizona, California, Nevada, and Utah, including members from the Southern Paiute, Western Shoshone, and Owens Valley Paiute and Shoshone tribes. The spokesperson for the group is Richard Arnold, a Southern Paiute, who also serves as the chairman of the Pahrump Paiute Tribe in southern Nevada.

One recommendation from the previous NNSA and CGTO meeting was to learn more about LM's activities in its long-term stewardship mission at the Central Nevada Test Area (CNTA) and the Shoal Project Area (Shoal), both of which are former underground nuclear test sites in Nevada. Kautsky, site manager for CNTA and Shoal, briefed the group on current activities at the two sites.

LM obtained conditional closure for CNTA in 2016. Pending completion of an expanded land withdrawal, CNTA will be closed, subject to long-term stewardship responsibilities, to protect the public from potential migration of radionuclides in the groundwater. These responsibilities include long-term groundwater monitoring and site inspections. CGTO is interested in the archaeological resources collected by the U.S. Bureau of Land Management near CNTA prior to nuclear testing and the repatriation of those resources to the area (consistent with the Native American Graves Protection and Repatriation Act of 1990). At the meeting, Kautsky agreed that LM will collaborate with CGTO within the framework of the process.

Kautsky described the nuclear test site at Shoal, which is in Nevada's Sand Springs Range about 30 miles southeast of Fallon. An underground nuclear test was conducted at the Shoal site in 1963 as part of the



CNTA site, Warm Springs, Nevada.



Project Shoal site, Sand Springs Range, Nevada.

Continued on page 15



Goal 2

How Much Is an Ounce of Prevention Worth?

In the early hours of Friday, May 12, 2017, starting in Asia, a malicious ransomware cryptoworm known as WannaCry began what would become one of the largest worldwide cyberattacks in recent history. Using an attack vector known as “phishing,” the malicious software (malware) infected targeted computers then spread by emailing the target’s contact list. The malware would lock the targeted computer and claim to encrypt all information contained on it, demanding that a ransom be paid via Bitcoin—an international digital currency. Within 24 hours, WannaCry had infected more than 230,000 computers in at least 150 countries, including Great Britain’s National Health Service and a number of international banks. WannaCry was a known vulnerability, and the patch to protect computers from its effects had been available for two months. Many users and organizations simply had not installed the patch.

The U.S. Department of Energy Office of Legacy Management (LM) cyber security program is in place to protect the confidentiality, integrity, and availability of LM data. Malware attacks such as the WannaCry cyberattack can impact any or all of these data protection standards. LM monitors for vulnerabilities, secure configurations, and published patches that need to be applied. This is usually done automatically and requires that users merely reboot their computers on a routine basis. LM provides training, such as phishing awareness, to inform users of the dangers of malware and the techniques used to trick users into allowing their systems to become infected. If patching and training efforts fail, LM is prepared to respond quickly to infection, ensuring that the infection does not spread to the rest of the organization.

The benefits of LM’s cyber security program were evident during the WannaCry event. LM users did not click on links within the unsolicited email. However, the LM Cyber Security Team took preventative measures by aggressively scanning LM systems for the most recent security patches and quickly isolated a small handful that were vulnerable to this attack.



Ransom note screenshot from a WannaCry infected system. Users who patched their software were not affected by this cyberattack.

Stakeholders can also benefit by following the simple security practices in use by LM:

- **Use caution with email attachments and untrusted links.** Malware is commonly spread by people clicking on an email attachment or a link that launches the malware. Don’t open attachments or click on links unless you’re certain they’re safe, even if they come from a person you know. Some malware sends itself through an infected computer. While the email may appear to come from someone you know, it really came from a compromised computer. Be especially wary of attachments with sensational names, emails that contain misspellings, or emails that try to entice you into clicking on a link or attachment.
- **Use caution when providing sensitive information.** Some email or webpages that appear to come from a legitimate source may actually be the work of an attacker. An example is an email claiming to be sent from a system administrator requesting your password or other sensitive information, or directing you to a website that requests that information. While internet service providers may request that you change your password, they will never specify what you should change it to or ask you what it is.

Continued on page 14



Goal 6

FUSRAP Collaboration Between LM and USACE

A collaborative approach is taken between the U.S. Army Corps of Engineers (USACE) and the U.S. Department of Energy (DOE) Office of Legacy Management (LM) to ensure a seamless transfer of Formerly Utilized Sites Remedial Action Program (FUSRAP) sites from USACE to LM. The approach focuses on three areas: expanded face-to-face interaction, increased LM/USACE dialog as partners, and teamwork through focused working groups.

Program Overview

LM sites fall under a variety of programmatic framework or functional categories, one of which is FUSRAP. The U.S. Atomic Energy Commission (AEC) established FUSRAP in 1974 to remediate sites where radioactive contamination remained from USACE Manhattan Engineer District (MED)—or Manhattan Project—and early AEC operations. A Memorandum of Understanding between USACE and DOE was established in 1999 to define each agency's role in administering and executing FUSRAP. USACE has responsibility for FUSRAP site designation and remediation. USACE retains responsibility for the site for a two-year transition period after cleanup. DOE is responsible for identifying the eligibility of new FUSRAP sites and for long-term stewardship of the remedy after the transition period.

USACE has transferred long-term stewardship responsibilities for six FUSRAP sites to LM since it was established in 2003. It is anticipated that in the next five years USACE will complete remedial activities and transfer stewardship responsibilities for eight additional FUSRAP sites to LM; Colonie Interim Storage Site (Colonie, New York), Combustion Engineering Site (Windsor, Connecticut), DuPont Chamber Works (Deepwater, New Jersey), Iowa Army Ammunition Plant (Middleton, Iowa), Middlesex Sampling Plant (Middlesex, New Jersey), Shpack Landfill (Attleboro, Massachusetts), St. Louis Downtown Site (St. Louis, Missouri), and W.R. Grace at Curtis Bay (Baltimore, Maryland). Stewardship responsibilities for many of these incoming sites will be greater than sites currently under LM stewardship.

Expanded Face-to-Face Interaction

In October 2015 LM and USACE attended a joint program meeting in Omaha, Nebraska. This event set the cornerstone for increased LM and USACE collaboration.



LM Environment Team 2 Lead Gwen Hooten views the Luckey, Ohio, Site administrative record at a public library during her site visit in May 2017.

It was at this meeting that newer LM FUSRAP team members began fostering relationships with USACE project managers and the formation of working groups was discussed. Following this meeting, LM and USACE have had routine meetings at the site, district, and program level. A program-wide meeting is scheduled for October 2017.

Collaboration is critical with 55 FUSRAP sites—23 active sites being remediated by seven USACE districts, and 31 completed sites and one MED/AEC legacy site under LM stewardship—spread across 16 states. Located across the country, LM and USACE project managers have limited

Continued on page 17



Goal 6

LM Shares Information at Shiprock, New Mexico, Open House and Site Tour

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) held an open house at the Shiprock Chapter House and a site tour at the Shiprock, New Mexico, Disposal Site on March 25, 2017. Working with the Navajo Nation Abandoned Mine Lands Reclamation (AML)/Uranium Mill Tailings Remedial Action (UMTRA) Department, LM federal and contractor staff also hosted a fun run and walk. More than 100 community members participated. The open house and site tour offered a great opportunity to share information with the community on the continuing cleanup work at the Shiprock site.

From 1954 to 1968, uranium and vanadium ores were processed at the Shiprock site, creating mill-related wastes. During 14 years of mill site operations, 7.9 million pounds of uranium and 35.4 million pounds of vanadium were produced. In November 1973, the Navajo Tribal Chairman asked the U.S. Environmental Protection Agency (EPA) and other federal agencies for assistance in stabilizing the tailings and in developing procedures for site decontamination. EPA removed contaminated soil from areas surrounding the piles, placed the materials on the piles, and placed an interim 6-inch stabilization cover on the lower pile. In 1985 and 1986, DOE conducted surface remedial actions to remove windblown and water-transported contaminated soils and tailings, and placed the contaminated materials in an on-site disposal cell. DOE prepared a site-specific Long-Term Surveillance Plan in 1994, and in September 1996 the Shiprock disposal site was included under the U.S. Nuclear

Regulatory Commission (NRC) general license for Uranium Mill Tailings Radiation Control Act Title I sites, to be managed by DOE.

“The open house and Shiprock site tour is a good opportunity for DOE to interact with the community and learn more about their concerns, as well as provide information on our work at the site,” said Mark Kautsky, LM’s Shiprock site manager. Along with LM, other agencies including EPA, NRC, Indian Health Service, and the U.S. Agency for Toxic Substances and Disease Registry/Centers for Disease Control participated in the open house as part of a multi-agency coordination to address uranium issues within the Navajo Nation. Twenty students from the Navajo Shonto Preparatory School also participated in the open house and site tour.

Introductory presentations on uranium were provided by the Navajo Nation Superfund Program, followed by presentations on hydrogeology from LM support contractor (LMS) staff. “Many call the model we use to teach hydrogeology and groundwater contamination concepts and terms ‘The Ant Farm,’” said an LMS hydrogeologist. “The kids really loved seeing how groundwater flows and how contaminants are removed from groundwater by extraction wells.”

Continued on page 16



David Dander (LMS), pointing at left, demonstrates a groundwater flow model to Navajo students from Shonto Preparatory School. LM Site Manager Bernadette Tsosi, at left, answers questions from students.



LM Site Manager Mark Kautsky (second from right) and Dave Miller (LMS) discuss the Shiprock disposal cell with Shonto Middle School students.



Goal 4

Revising LM's Beneficial Reuse Program

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) is currently revising its Beneficial Reuse Program. The program, which was created to identify productive uses of LM sites after they have been cleaned up, supports LM's goal of maintaining environmental remedies and managing federal land in a manner that is protective of human health and the environment. The program also fulfills LM's obligations to the public for long-term stewardship of legacy sites.

Under the Beneficial Reuse Program, land identified for reuse must be consistent with LM's long-term surveillance and maintenance (LTS&M) responsibilities and obligations and shall protect the remedies in place.



Conservation and site reuse has reduced threats to greater sage-grouse populations.

The two main reuse considerations are:

1. **Protective.** Activities are compatible with long-term maintenance and ensure protection of public health and the environment.
2. **Environmentally sound.** Activities promote and retain good stewardship of natural resources.

The Beneficial Reuse Program uses a holistic approach to assessing potential activities, considering the economic, social, and environmental benefits to LM and local communities. Revitalization of closed DOE sites has provided communities with jobs and new tax bases. Some sites may also spur additional economic revitalization in affected communities. Communities benefit by being involved in the revitalization process, whether through planning and zoning or by obtaining expertise from local nonprofits and other organizations to explore available alternatives. LM is able to facilitate good land stewardship, such as protecting remedies, deterring vandalism and trespassing, and utilizing and maintaining effective land-use controls. Ecological revitalization of LM sites may lead to enhanced habitat areas for threatened or endangered species, and opportunities for recreational use and partnerships with organizations, benefiting regional habitat preservation efforts.

Since most LTS&M activities go on for decades, LM periodically reassesses potential reuse at sites as LTS&M progresses and as the market and communities change. LM insists on good land stewardship and regular engagement with the public, local governments, and interested parties when initiating, developing, and sustaining reuse opportunities at its sites. Presently, LM is reevaluating all of its sites—including those transitioning within the next five years—and creating a baseline of all current site reuses and screening sites based upon the types of reuses, to determine whether other opportunities exist.

Initially, beneficial reuse opportunities are assessed at the time a site transitions to LM. Several beneficial reuse activities have been successfully implemented at LM sites.

Continued on page 15



Goal 6

Preservation Assessment of Historic Cabin in Los Alamos, New Mexico

The U.S. Department of Energy (DOE) has engaged the U.S. National Park Service (NPS) to help preserve a 103-year-old log cabin, called the “Pond Cabin,” in Los Alamos, New Mexico, that is part of the Manhattan Project National Historical Park (MAPR). The unique facility has deteriorated over the past century.

The cabin, named after Detroit, Michigan, businessman Ashley Pond, was built in 1914 to serve as an office for the Pajarito Club, a private guest ranch. A few years later, Pond established the Los Alamos Ranch School nearby to provide a rugged educational environment for the sons of affluent easterners. World War II brought significant change to the area. After visiting the isolated school grounds with American theoretical physicist Robert Oppenheimer, U.S. Army Brigadier General Leslie R. Groves selected Los Alamos to serve as the site for the Manhattan Project’s scientific laboratory for designing atomic bombs.

Given the scarcity of available buildings and its remote location, Emilio Segre and his team used the Pond Cabin for plutonium fission research. An émigré from Italy, Segre would go on to win the Nobel Prize in Physics after the war. Discoveries made by his team resulted in the discontinuing of work on the “Thin Man” plutonium gun-type weapon. Subsequently, Los Alamos shifted its research to developing a plutonium-based, implosion-type weapon. An implosion device set off the world’s first nuclear explosion during the Trinity test on July 16, 1945. The United States dropped another implosion device, code-named “Fat Man,” on Nagasaki, Japan, on August 9, 1945.

After MAPR was established in 2015, DOE recognized that the Pond Cabin was deteriorating and that they did not have the expertise to assess and preserve the log structure. DOE also realized that preserving the cabin provided an opportunity to collaborate with NPS. The two organizations established an interagency agreement to engage historic preservation crews from nearby Bandelier National Monument to work on the cabin. The Bandelier staff has particular expertise in log and adobe structures, and DOE welcomed their assistance in the assessment and preservation efforts. There may be future opportunities to work with Bandelier staff, such as making minor changes to the cabin to protect it for public access. Such work would be in consultation with the New Mexico State Historic Preservation Office.

MAPR is managed through a collaborative partnership by NPS and DOE to preserve, interpret, and facilitate access to key historic resources associated with the Manhattan Project. NPS provides administration, interpretation, education, and technical assistance supporting resource preservation efforts. DOE is responsible for management, operations, maintenance, access, and historic preservation activities of Manhattan Project sites that are currently included in the park.” ❖



“Pond Cabin” in Los Alamos, New Mexico.



Goal 6

Exhibit Depicts African-American Life During Manhattan Project-Era



DOE and NPS staff discuss the “Atomic Integration” photograph exhibit at the Oak Ridge Federal Building in Tennessee.

Throughout this summer the Federal Building in Oak Ridge, Tennessee, will be hosting “Atomic Integration,” a photography exhibition focusing on African-American life, experiences, and contributions during the Manhattan Project-era in Oak Ridge. The lobby of the Federal Building is open to the public.

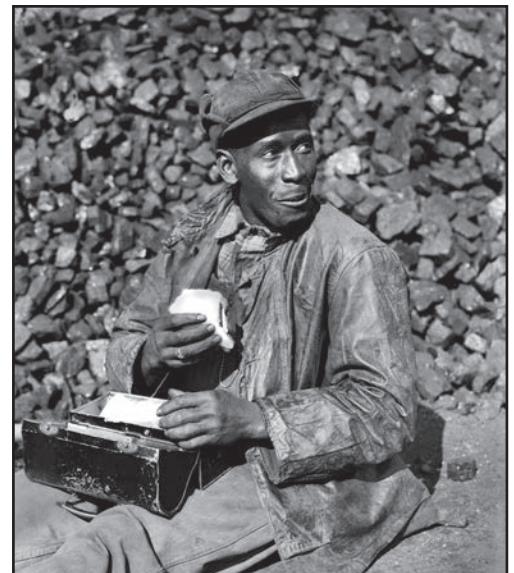
The contributions of African Americans are too often left out of accounts of the United States race to build the world’s

first atomic bombs during World War II. Despite facing severe discrimination, they were instrumental in the success of the Manhattan Project and its world-changing mission.

The photographs in the exhibit were taken by James Edward Westcott, a renowned photographer who worked for the U.S. government in Oak Ridge during the Manhattan Project and the Cold War. Westcott was one of the few people permitted to have a camera in Oak Ridge government facilities during the Manhattan Project.

The U.S. Department of Energy Office of Legacy Management (LM) and the U.S. National Park Service (NPS) co-manage the Manhattan Project National Historical Park and the exhibit is a great example of collaboration between two organizations, as well as with their community partners. NPS, DOE, the Oak Ridge Chamber of Commerce, and the city’s convention and visitors bureau (Explore Oak Ridge) sponsored the exhibit. NPS and DOE Oak Ridge Office employees were instrumental in developing the exhibit.

This past February, the Oak Ridge Chamber of Commerce hosted the exhibit in honor of African American History Month. After its run at the Federal Building, the exhibit will be hosted by Scarboro Community, a historically African-American community in the Oak Ridge area. ❖



Photographs included in the “Atomic Integration” exhibit, depict African-American life in Oak Ridge, Tennessee, during the Manhattan Project-era.



Goal 6

Local Students Visit the Tuba City, Arizona, Disposal Site

In April, U.S. Department of Energy Office of Legacy Management (LM) federal and contractor staff at the Tuba City, Arizona, Disposal Site conducted four tours for middle school students from the Navajo communities of Shonto, Arizona, and Tuba City. The tours were arranged with the help of Senior Program Coordinator Mansel Nelson, with the Institute for Tribal Environmental Professionals at Northern Arizona University, James Hanlon from the Tuba City Unified School District, and Orleta Slick at Shonto Preparatory School. Coordination and tour support also came from Program and Projects Specialist Leon Spencer, with the Navajo Abandoned Mine Lands Reclamation/Uranium Mill Tailings Remedial Action (AML/UMTRA) Department, and LM support technical staff.

Prior to the site visits, Nelson spoke with the students about both man-made and naturally occurring environmental risks, stressing the importance of testing their homes for radon. Nelson's classroom work also covered the basics of radiation science and common methods for protection from exposure to radiation and uranium. An underlying theme for the site visit and classroom instruction was to inform Navajo students about the various fields of study involved in environmental remediation work. The teachers' goals for the students included gaining an understanding of environmental risks and benefits caused by human interactions with the environment.

The student tour groups were the largest to ever visit the site, with more than 40 students in each group. Tours included poster sessions covering the history of milling operations and the surface and groundwater contamination that resulted, the laws and regulations to address the environmental problems left at the site, and the ongoing cleanup work. Following the poster sessions, students were led on tours to gain a better understanding of how the groundwater treatment system (monitoring wells, extraction



Middle school students learn about the Tuba City, Arizona, disposal cell during a tour of the site.

wells, and the evaporation pond) protects the community from contaminated water, and how the disposal cell protects the community from potential radiation and radon exposure. The students were keenly interested in the site's solar energy equipment—the photovoltaic panels and the solar hot water system. LM Site Manager Richard Bush stated, "For the Department of Energy, these student site visits are important for community engagement and supporting educational opportunities for tomorrow's Navajo scientists and engineers."

Despite surface cleanup work being completed at the site in 1990 and groundwater cleanup beginning in 2002, there are misconceptions within the community that the site is still milling uranium, and that there was a uranium mine at the site in the past. By interacting with the students and providing educational information about the site's history and environmental cleanup, events like these help address local concerns and lend support to the important community engagement component of LM's mission. ❖



Goal 6

LM Participates in Earth Day Events

During the month of April, the Office of Legacy Management (LM) participated in U.S. Department of Energy's (DOE or Department) annual Earth Day events. This year's theme was "Earth Day—There is No Planet B!" The two-week event ran from April 10 through 21 and included a multitude of fun and educational activities.

LM employees in the Washington, DC, Forrestal Building had a chance to test drive fuel-cell cars from DOE's vehicle fleet on the L'Enfant Plaza Promenade, as well as attend tours of the Enid Haupt Garden at the Smithsonian "Castle" and the National Mall grounds. The tour of the Enid Haupt Garden was led by a Smithsonian horticulturalist who provided a brief history of the garden and an explanation of the various plant and flower species there. The National Mall tour, led by U.S. National Park Service (NPS) Turf Management Specialist Mike Stachowicz, centered on recently completed irrigation and water storage infrastructure work.

Public Participation Specialist Krystyna Frolich represented LM on this year's DOE Earth Day planning committee. Frolich attended several events, including the National Mall tour. "A highlight of the tour was going beneath the mall to view a new water pump system that is installed in an area not normally accessible to the public. It was interesting to learn about how stormwater is collected, pumped, and reused for irrigation right under the mall," stated Frolich.

In addition to the Earth Day activities held at DOE Headquarters, the Department also held its annual Earth Day photo contest, which provided DOE employees nationwide with an opportunity to participate in the event. Several LM employees submitted contest entries, but with 229 photos submitted this year, competition was tough. Although none of the LM submissions were chosen as winners, the contest afforded an opportunity to showcase some of the natural beauty on LM's legacy sites.

DOE's Earth Day event provides LM with an opportunity to raise awareness of LM's mission within the DOE community. ❖



A view of the new grass panels that cover the National Mall.



A water pump system that sits underneath the National Mall.



Goal 6

Fernald Preserve Hosts 2017 Envirothon

The Fernald Preserve, Ohio, Site was alive with learning on April 25, as more than 500 high school students and teachers descended upon the site for the 2017 Region IV Envirothon. The annual event is for high school students who participate in competitive testing on a myriad of natural resource topics.

Eighty-seven teams, each composed of five students and an advisor, participated in this year's Envirothon, which encourages group problem solving and team building

among student competitors who are poised to become the next generation of environmental leaders. The competition was sponsored by the Ohio Federation of Soil and Water Conservation Districts and the Ohio Department of Agriculture, Division of Soil and Water Resources.

The Fernald Preserve was honored to serve as the host site for this regional natural resources event that attracted participants from 18 counties. ❖



Envirothon students hike from one testing station to another.



A team of students discuss their answers to questions about natural resources.

Continued from page 6

How Much Is an Ounce of Prevention Worth?

- **Create strong passwords.** Passwords that have eight or more characters, use a variety of uppercase and lowercase letters, and contain at least one special character and number are best. Don't use passwords that people can easily guess, such as your birthday or your child's name. Password detection software can conduct dictionary attacks to try common words that may be used as passwords or conduct brute-force attacks where the login screen is pummeled with random attempts until your password is determined. The longer and more complex a password is, the harder these tools have to work. Also, when setting security verification questions, choose questions for which an internet search would not likely be able to yield the correct answer.

Source – United States Computer Emergency Readiness Team (<https://www.us-cert.gov/>)

Personal computer users can eliminate many vulnerabilities by simply ensuring all their devices are running the latest software version (or "patch"). Some programs (or "apps") patch frequently, so enabling automatic updates is recommended, unless you have the discipline to monitor for all the possible updates on a daily basis. Further, restarting your device at least weekly will assist with keeping your machine current and free from vulnerabilities and may improve performance.

WannaCry is known to be one of many malware programs that was released in a bundle. This means that there are other similar vulnerabilities that have yet to be exploited. Regular patching and following simple security practices can help prevent malware from causing you to lose access to your data. ❖



Continued from page 5

LM Presents to Consolidated Group of Tribes and Organizations

Vela Uniform Program, which was administered by the U.S. Atomic Energy Commission. LM is working with the Nevada Division of Environmental Protection to develop a closure strategy for Shoal. Work remaining in this effort includes demonstrating that the monitoring well network addresses all potential flow paths from the site, developing a defensible set of long-term performance boundaries for the site, and executing the long-term post-closure monitoring strategy. ❖



Native vegetation reestablished at CNTA.

Continued from page 9

Revising LM's Beneficial Reuse Program



Las Colonias Park in an early construction phase (above) and after completion of the amphitheater.



One recent example is the Gunnison, Colorado, Disposal/ Processing Site where LM supported conservation by finalizing a right-of-way grant with the U.S. Bureau of Land Management that contains stipulations that not only protect the Gunnison sage-grouse, but also ensure weed management and revegetation.

Another example of LM's beneficial reuse is the 130-acre Las Colonias Park within the Greater Downtown Plan for the River District in Grand Junction, Colorado. The plan identifies the River District as a critical community area connecting the riverfront to several underserved neighborhoods. Climax Corporation operated a uranium mill in the area from 1950 to 1970. The mill site has since been cleaned up by DOE. It was turned over from the State of Colorado to the City of Grand Junction in 1997 for public use. The city's plan for the land includes revitalizing a neglected riverfront area with a native arboretum, trail connections, riparian restoration, shelters, wetlands, parking, boat launch, and an outdoor amphitheater. The ambitious plan for the park will restore and enhance the banks of the Colorado River, celebrate the history of the area, and help revitalize the local economy.

By taking steps like these, LM is making great strides toward reaching and potentially exceeding agency goals, while adding value to impacted communities. ❖



Goals 1 and 6

Engaging the Next Generation of Geoscientists

On March 28, Dr. Raymond H. Johnson, a senior geochemist and hydrogeologist with the U.S. Department of Energy Office of Legacy Management (LM) support contractor in Grand Junction, Colorado, delivered a presentation to the Colorado Mesa University (CMU) applied geochemistry class. Dr. Johnson explained how LM applies geochemistry principles to the real world settings of environmental remediation and compliance. Material included a combination of geochemical and hydrogeologic interpretations from field investigations at the former uranium mill site in Riverton, Wyoming. Students were responsive to Dr. Johnson's presentation and appreciated how he demonstrated geochemical concepts as they apply to the Riverton groundwater system. "He had piqued the students' interest in geochemistry and they had a lot of insightful follow-up questions in the days following the presentation," stated Dr. Cassandra Fenton, CMU professor.



Dr. Raymond H. Johnson presents to an applied geochemistry class in Grand Junction, Colorado.

Educational outreach supports and strengthens LM's long-standing commitment to science, technology, engineering, and mathematics education. Through this initiative, LM is providing students with valuable insight into how the latest innovations in environmental science, geochemistry, geology, and hydrology are leveraged to

solve real-world problems. LM plans to continue collaborating with CMU through future presentations by scientists that allow CMU undergraduates to learn about the environmental sciences and can raise their enthusiasm for their chosen field(s) of study. ❖

Continued from page 8

LM Shares Information at Shiprock, New Mexico, Open House and Site Tour

The success of the day's activities wouldn't have been possible without close coordination with the Navajo Nation AML/UMTRA Department. The tribal department works closely with LM to monitor and coordinate cleanup efforts at four former uranium mill tailings processing sites within the Navajo Nation. Additional tribal agencies that participated in the day's events were the Navajo Nation EPA, the Abandoned Uranium Mines Environmental Response Trust, Office of Navajo Uranium Workers, and the Navajo Birth Cohort Study. ❖



Mark Kautsky discusses the Shiprock, New Mexico, disposal cell with Shonto Preparatory School students.



Continued from page 7

FUSRAP Collaboration Between LM and USACE

opportunities to meet in person. One approach toward increasing face-to-face interaction is through attendance at conferences such as the RadWaste Summit and the Waste Management Conference. In 2016, LM and USACE co-authored a paper for the Waste Management Conference entitled *Transition and Transfer of Remediated FUSRAP Sites from USACE to US DOE for Long-Term Surveillance and Maintenance*, which discussed the close coordination between LM and USACE throughout the transition process. A second approach has been LM attendance at USACE public meetings for individual FUSRAP sites ready to transfer in the near term. The most recent USACE public meetings attended by LM were for FUSRAP sites located in St. Louis, Missouri; Colonie, New York; and Luckey, Ohio. LM attendance at these meetings provided the opportunity to gain insight on the community viewpoint and to begin fostering existing stakeholder relationships at each FUSRAP site.

LM/USACE annual site visits to selected active FUSRAP sites create other face-to-face meeting venues. In May 2017 LM visited the Latty Avenue Properties, the St. Louis Airport Site, the St. Louis Airport Vicinity Properties, the St. Louis Downtown Site, the Colonie Site, the Maywood Site, the Middlesex Sampling Plant, and the Wolff-Alport eligible sites.

Site visits enable LM to see firsthand the current status of remedial activities being performed, and provide an opportunity to meet with USACE and discuss site-specific details that LM can use for future long-term surveillance and maintenance planning.

Increased Dialog as Partners

With communication a key factor for success, LM management has increased the frequency and scope of conference calls between LM site managers and USACE

Continued on page 18



FUSRAP sites.



Continued from page 17

FUSRAP Collaboration Between LM and USACE

project managers. Regularly scheduled conference calls are jointly attended by LM and USACE. When needed, calls with subject matter experts are used to promote discussion and transfer of information on specific topics at the site or USACE district level. Additionally, quarterly calls between the USACE national program manager and LM FUSRAP Team lead are conducted to discuss strategic objectives, and program goals.

Teamwork Through Focused Working Groups

LM recognizes that close collaboration with our USACE partners is essential to accomplishing our mission in an effective and efficient manner. This collaborative environment is most notable with the formation of joint working groups. Each working group addresses a specific topic by following these steps:

1. Exchange subject information
2. Arrive at a consensus
3. Define a path forward

Since their inception in 2016, there have been two specific working groups formed, with more anticipated in the future. The Real Property Working Group has successfully completed its objectives to develop a common understanding about real property issues as they apply to FUSRAP programmatic documents for site transition and transfer, and to develop real property site checklists for all active FUSRAP sites. The Data Management Working Group has just begun to meet and has goals to establish a common understanding of LM and USACE district-specific data, records practices, and requirements as they apply to FUSRAP programmatic documents for site transition and transfer, as well as to establish methods to ensure accurate data transfer. A successful outcome is anticipated through the joint commitment between LM and USACE.

Joint efforts to expand opportunities for face-to-face interaction, increase dialog as partners, and work successfully as a team through focused working groups has resulted in open lines of communication and a better understanding of each other's needs as they pertain to site transition and transfer. Expanded working group topics, quarterly conference calls, and continuing attendance at conferences, public meetings, and site visits are planned to further USACE and LM collaborative efforts and execute common mission goals. ❖



Left to right, Carl Young (LM support staff), Bud Sokolovich (LM), Darina Castillo (LM), Helen Edge (USACE), John Hackett (LM support staff) during a 2017 Middlesex site visit.

LM support staff perform a condition assessment with assistance from USACE support contractor at the Maywood, New Jersey, site.



Goal 6

Environmental Justice Activities

DOE and the Medical University of South Carolina Sponsor Community Leaders Institute

The U.S. Department of Energy and the Medical University of South Carolina sponsored a Community Leaders Institute (CLI) May 19 and 20, 2017, in Columbia, South Carolina. A critical factor in the success of community development programs is a well-informed community. Action occurs when those with authority assume an informed and active leadership role. The purpose of the CLI is to help those leaders know how to access and obtain the information necessary for making good decisions and communicating that information to the citizenry.

The focus of this institute was the unique relationship between environmental protection, human health, environmental justice, and economic development.

CLI sessions included:

- The Role of Federal, State, and Local Governments
- Youth Issues and Challenges
- Economic Development, Housing, Transportation, and Community Development
- Health Disparate/Health Issues

The CLI helps leaders guide their communities toward becoming healthy and sustainable. Technical Assistance Workshops (TAW) that follow CLIs—like the one held June 3 in Columbia—emphasize essential how-to skills needed for preparing and managing a good grant application. The TAW is a classroom session focusing on:

- Terms and techniques of grant writing
- Developing a proposal and budget
- Finding available grant funding agencies

Continued on page 20



Left to right, Dr. David Rivers, Dr. Hembree, Dr. Ernest McNealey, Mr. Robinson, Melinda Downing (DOE Environmental Justice Program Manager), Dr. Latecia Abraham, and Dr. Oluwole Ariyo at the May 2017 CLI.



TAW classroom.



Left to right, CLI session panel members Teresa Wilson, Gerald Seals, Karen Sprayberry, Sheryl Good, and Benjamin Maulden.



Continued from page 19

Environmental Justice Activities

10th Annual National Conference on Health Disparities

U.S. Department of Energy Office of Legacy Management Environmental Justice Program Manager Melinda Downing provided remarks at the 10th Annual National Conference on Health Disparities (NCHD), “Reducing Health Disparities Through Sustaining and Strengthening Healthy Communities,” which was held May 3 through 6, 2017, in New Orleans, Louisiana. This conference is the outgrowth of a health disparities conference held in Charleston, South Carolina, July 30, 2007, sponsored by the Medical University of South Carolina and the National Center on Minority Health.

The conference looks at ways to reduce health disparities in our nation. Over the years this conference has attracted additional sponsors and supporters to look at ways to reduce health disparities, with a keen focus on social determinants, such as education, environmental quality, housing, poverty, air and water quality, gun violence, and drug abuse.

This year’s conference focused on policies, research interventions, programs that address social determinants, and personal responsibility in reducing health disparities and promoting health equality. Conference participants and presenters discussed solutions, reviewed programs that work, and recommended policies to strengthen and enhance the current healthcare system through diverse, multi-disciplinary partnerships and perspectives. Conference participants were offered the chance to interact in a variety of settings, including a student forum with poster presentations and panel sessions on specific topics. A conference summation declared that this is the time for bold action and consensus that brings together scientists, lawmakers, philanthropists, clergy, and more to find solutions to critical issues.

Continued on page 21



Members of the U.S. House of Representatives and Congressional Black Caucus.



Left to right, NCHD participant panel
Dr. Mark A. Mitchell, Mr. Milton Bluehouse Jr.,
Dr. Scott A. George II, and Dr. LeVerne Register.



Continued from page 20

Environmental Justice Activities

Mentors for Environmental Scholars Holds Orientation at Training Center

June 1 through 3, 2017, Pre-College University Inc. and the U.S. Department of Energy (DOE) conducted a three-day orientation for 14 students from Minority Serving Institutions (MSIs) to intern at DOE laboratories. Mentors for Environmental Scholars (MES) is a 10-week, paid summer internship that provides exposure to laboratory research in the areas of science, technology, engineering, and mathematics (STEM) to underrepresented college students. MES actively recruits qualified undergraduates from Historically Black Colleges and Universities, Tribal Colleges and Universities, Hispanic Serving Institutions, and other MSIs for extensive training that will pilot them

toward gainful employment in various STEM and management positions within DOE.

The goal of the orientation and boot camp is to provide interns with an opportunity to meet each other prior to going out to the DOE laboratories, to introduce students to DOE and its laboratories, and to provide them with professional development training.

The final outcome of the event was the presentation of a personal strategic plan to facilitate the successful enrollment of each intern at their prospective laboratories. ❖



MES classroom instruction.



Trust activity during MES training.



Anticipated LM Sites Through Fiscal Year (FY) 2025



LM is continually seeking opportunities to protect the environment and conserve natural resources. One simple step we can take toward improving environmental consciousness is to distribute the *Program Update* newsletter by email instead of sending a printed copy.

Please send your email address and your first and last names to lm@hq.doe.gov so that we can update our database.

Thank you for your assistance.





Goal 6

User-Friendly Update for LM Website

After more than one year of analysis, preparation, and implementation, the U.S. Department of Energy (DOE) launched an updated design of its parent website, energy.gov, on June 5, 2017.

The DOE Office of Legacy Management (LM) is one of the sites hosted by energy.gov that has benefited from the new format, which includes enhancements that provide LM better ways to communicate with stakeholders.

Features of the new design include:

- A modern design emphasizing large-format visuals, such as photos and charts
- A scalable, mobile-device-ready design
- Reordered navigation tabs for easier access to content
- Placement of the site map in a more intuitive location



Post launch of the updated design, LM continues to review content and make improvements. User engagement will continue to improve as increased social media and video capability enhancements are integrated.

Email comments and questions on the new website design to lm@hq.doe.gov. ❖

LM Goals



1 Protect Human Health and the Environment



2 Preserve, Protect, and Share Records and Information



3 Safeguard Former Contractor Workers Retirement Benefits



4 Sustainably Manage and Optimize the Use of Land and Assets



5 Sustain Management Excellence



6 Engage the Public, Governments, and Interested Parties



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

1000 Independence Avenue, SW
Washington, DC 20585



U.S. Department of Energy
Office of Legacy Management

Please help reduce mailing costs. Please provide your current contact information, including your email address, so that we can update our files and provide documents and other LM information electronically. To remove your name from the *Program Update* mailing list, send your request to the address or fax number specified below. Thank you.

LM Public Information Update

Name _____
Organization _____
Position _____
Street Address _____
City, State, and Zip Code _____
Phone Number _____
Fax Number _____
Email Address _____

Documents Requested

1. _____
2. _____
3. _____
4. _____

Mail: Krystyna Frolich
U.S. Department of Energy
Office of Legacy Management
1000 Independence Avenue, SW
Washington, DC 20585

Fax: (720) 377-3829
Email: lm@hq.doe.gov
Website: <https://energy.gov/lm>