EDLs addressed by Regional Environmental Scientists

Office of Facilities, Environmental and Cultural Resources

Management Summary

October 2011

INDIAN AFFAIRS

Global BIE Schools Agreement with EPA Aimed at Protecting Student Health

Aimed at protecting student health and improving environmental practices at BIE-owned or -operated schools, and public water systems servicing those schools, the U.S. Environmental Protection Agency (EPA) and Indian Affairs have agreed to a settle-

ment to correct alleged violations and to implement management systems to improve environmental practices at schools and servicing water systems across Indian Country. during compliance inspections and data reviews from 2005 to 2008) were relatively minor and easily corrected with good management practices, such as proper disposal of florescent light bulbs and labeling of chemicals used in chemistry lab

classes. Water quality violations mainly involved naturally occurring arsenic. Some schools failed to monitor for such contaminants.

Grand Canyon solar project is tied to EPA agreement.

See page 3.

Well before the settlement was approved by EPA on August 18, 2011, BIE and the Division of Environmental and Cultural Resources Management (DECRM) began sponsoring environmental management training sessions for administrators and staff at BIE schools and dormitories.

According to news reports, Angela Baranco, EPA regional compliance coordinator, said that many of the violations (discovered

Replacement School Opening

Echo Hawk Opens Rough Rock Community School Just Two Years After the ARRA Project Began

Just two years after he participated in the ground breaking ceremony, Assistant Secretary-Indian Affairs Larry Echo Hawk returned to Rough Rock Community School in Arizona to celebrate the August opening of its new educational facilities.

"Two years ago, I was here to help break ground on the Rough Rock Community School replacement project, and today I am gratified at the results," said Echo Hawk, telling the crowd celebrating the opening that the school was constructed using American Recovery and Reinvestment Act funds.

Right: Assistant Secretary-Indian Affairs Larry Echo Hawk (center) prepares to cut the ribbon to open the Arizona replacement school. Below: Echo Hawk (left) and OFECR Director Jack Rever inspect a Rough Rock dorm room following the August dedication ceremony.



Under the settlement, schools will correct all of the violations and maintain compliance with environmental requirements. DECRM has already established an environmental compliance auditing program and an environmental management system (EMS) to improve environmental practices at all Indian Affairs locations. The Indian Affairs civil penalty of \$234,844 must be spent to correct violations of the Asbestos Hazard Emergency Response Act at its schools.

A K-12 school (on two campuses) for 417 students, including 188 residential students. One campus is an elementary school and two dormitories with a kitchen and dining facility—the K-8 dormitory houses 86 students and the high school dormitory houses 102 students. The other campus is the renovated high school. A bus garage/maintenance shop and transportation office were constructed. A total of 113,382 square feet were added, while about 144,000 square feet of old buildings were demolished.

Visit the OFECR intranet website to see a video report on the Rough Rock opening.

Briefs

Flandreau's July 1 Tornado



No one was injured at Flandreau Indian School in South Dakota during a July 1 tornado. Warning sirens alerted all present to the storm, which caused damage to several buildings (above and below) that are part OFMC's Facility Improvement and Repair project at the residential school.



July Windstorm Damages Tohono O'odham School



Tohono O'odham High School in Arizona suffered building and roof damage (above) during a July 22 wind storm. The gym had the most damage.

Replacement Schools

Community School at Pueblo Pintado Opens; Earns LEED Gold

Residents of Pueblo Pintado, N.M., came to the new OFMC-funded replacement school in August to celebrate the opening of the Pueblo Pintado Community School.

The 71,000 square foot replacement school will serve 387 students in grades K-8. OFMC funded a 21,000 square foot dormitory and another 15,000 square foot dormitory was funded by the American Recovery and Reinvestment Act.

The school has a ground source heat pump, closed loop heating and cooling system. It includes a honeycomb-shaped, roof-top heat recovery unit which captures heat from air leaving the building and uses that heat to warm incoming air.

The school's design received a LEED Gold Award from the U.S. Green Building Council.



OFMC Project Manager Dineh Benally (rear, center) and OFMC Deputy Director Emerson Eskeets (rear, right) share in Pueblo Pintado Community School's August opening.



Attendees enjoy a break in the school's cafeteria.

Bread Springs Staff Welcomes Students to New Location

The Bread Springs Day School replacement campus opened for classes in August amid juniper and pinon trees, one-half mile from New Mexico Highway 602, south of Gallup,

N.M. The 32,192 square foot school will serve 150 students. The OFMC Project Manager is Melvin Tsethlikai of OFMC's Navajo Regional Office. He is a member of Zuni Pueblo.

Visit the OFECR intranet website to see a video report on Bread Springs Day School.



The front entrance of the K-3 day school



Librarian Tech Elsie Roy prepares for students to use the new school library.

Solar Energy Project to Power Remote Arizona School Results From EPA Settlement

OFMC will be installing solar panels on the rim of the Grand Canyon in Arizona to compliment existing power sources in order to provide reliable electric power to Havasupai Elementary School and to potable water pumps in Supai Village on the Havasupai Reservation located at the bottom of the canyon. These Indian Affairs facilities require OFMC operations funding for their electricity.

The solar project will involve a six-acre array of approximately 2,000 photovoltaic (PV) panels atop Long Mesa and is expected to generate 750 KWh. The electricity will feed into an existing 10,000 foot-long overhead power line that descend from Long Mesa to Supai Village. The free-standing PV power units will not employ sun tracking, thus reducing operations and maintenance costs. The

OFMC will be installing so- Canyon Rim: Site for Havasupai Solar Panels



Visit the OFECR intranet website to see a video report on the Havasupai solar project.

Under Two Miles from Panels to Village



This project was undertaken in connection with the settlement of an enforcement action taken by the U.S. Environmental Protection Agency for violations of RCRA, CAA, AHERA, and the SDWA.

power units will be arraigned in rows, and the power generated in a row will make up a branch circuit. The branch circuit will have a dedicated inverter that converts the Direct Current generated by the solar cells to Alternating Current (AC). The AC from each row will then be routed to a transformer and then, via a grid, tie to the transmission line descending into

Supai Village.

An Arizona utility company's 70-mile power line to Long Mesa suffers frequent and sometimes long-term power outages. So OFMC has been considering a self-sustained energy generating facility (wind or solar) on the rim of the Grand Canyon that would decease the reservation's dependence upon the line and deliver more dependable power through the transmission line descending from Long Mesa to the bottom of the canyon.

Southern Plains Indian Museum Renovated by ARRA OJT Worker

At the Southern Plains Indian Museum in Anadarko, Okla., a lone ARRA On-the-Job-Training worker recently completed exterior renovations, such as sealing the block structure, and interior



Southern Plains Indian Museum Aide Terry Taylor samples water from the Oklahoma museum's new water fountain.

renovations such as refurbishing the bathrooms and water fountain. He was subsequently hired full-time by the Kiowa Tribe.



Replacing old wooden windows (above) with energy efficient windows at the Plains Indian Museum may allow for retaining the exterior's ornamental window bars (above).

Indian Arts and Crafts Board Helps Plains Indian Museum Renovation

The OFMC-funded interior and exterior renovation project at the Plains Indian Museum in Browning, Mont., will get a boost from the Department of the Interior's Indian Arts and Crafts Board, which is supplying about a third of the project's funding.



Bathrooms, windows and entry-ways will be improved. Visit the OFECR intranet website to see a video report on the project.

Remediation and Clean Up of Indian Affairs' **Environmental** and Disposal Liabilities (EDLs)

What is an EDL?

An Environmental and Disposal Liability (EDL) is an anticipated future outflow or other sacrifice of resources (e.g., costs) where, based on the results of due care, further study or cleanup is warranted due to past or current operations that have environmental closure requirements or have contaminated Department of the Interior lands.

Indian Affairs environmental program management is responsible for identifying EDLs, generating and reviewing clean-up cost estimates, and maintaining the associated documentation on a site-by-site basis

How is an EDL identified?

Contamination can occur from past or current operations (such as solid waste landfills; treatment, storage, or disposal facilities; ware yards; firing ranges; mine and mill sites) or unsanctioned activities (such as illegal dumping) that result in releases of hazardous substances or petroleum to the environment.

In many circumstances environmental assessment (due care) activities are necessary to confirm the presence of contamination at suspect areas to determine whether further action is warranted. For example, the illegal dumping of solid waste does not in itself mean the area is contaminated. An area containing solid waste with no release of hazardous substances or petroleum to the environment would not be an EDL

Environmental Scientists Seek Reduction of Indian Affairs' EDLs

In 2009, Indian Affairs' regional environmental scientists put together a strategic plan for the remediation and clean up of more than 200 Environmental and Disposal Liabilities (EDL). Beginning with sites that would require only a small investment of effort and financial resources to remediate, they mapped out a course of action for the removal of all sites within their respective regions.

In 2010, the Division of Environmental and Cultural Resources Management (DECRM) saw an unprecedented removal of EDLs from the Indian Affairs list of contaminated sites. A total of 52 sites were removed that year. (Twelve of them were sites auditors had required be placed in the database to "adjust" for what was believed to be the possible understatement of liability for Indian Affairs. For instance, the BIA did not categorize their EDLs consistently from region to region or even within the same region.) In the first two quarters of 2011, five more sites were removed. Only one site has been added so far this year.

There are still 168 sites remaining. These remaining sites will require more work and/or funding. Some will require long-term removal steps and monitoring (See Tar Creek on this page).

To-date, the Great Plains Region is leading the reduction by successfully remediating 18 sites within its area. The Western Region removed a total of eight sites. The Navajo and Northwest regions each removed six sites. The Midwest Region removed four sites. The Southwest Region, which only had three sites, removed them all. The Eastern Oklahoma Region removed two, and the Alaska, Pacific and Rocky Mountain regions each removed one. The Southern Plains Region only had one—an auditor-required site which is no longer listed. The Eastern Region has one long-term site.

To keep a firm hold on the status of existing EDL sites and to prevent future sites from being created, DECRM will audit all Indian Affairs EDL sites on a rotating basis. The audits will be performed by a third party auditor. Also, the Interior Department has developed a handbook to help identify, document and report EDLs.

Indian Affairs is developing a separate guidance document and online training for employees which deal more specifically with

> property belonging to it. This will help regions as they investigate Locations of Concern (LOC). Identifying an LOC—which may be contamination created in everyday work activities—is the first step in recognizing a possible EDL.



DECRM and OFMC's employee housing program funded the lead paint abatement for 41 employee houses in Browning, Mont., allowing the Rocky Mountain Region to eliminate an EDL. The same home today (right)





OFECR Director Jack Rever views Tar Creek near Oklahoma's Quapaw Tribal homelands and upstream from 10 other tribes.

Big Challenges **Massive Tar Creek Remediation Among Remaining 168 EDL Sites**

Extensive soil and water clean-up efforts have been underway since 2008 at the Tar Creek, Okla., EDL site, where some of the tailings (chat) from the 400acre mining site were being sold by tribes for use in federal road construction and encapsulated as an aggregate in road paving. As Indian Affairs' remediation progresses and the chat is removed, the chat footprint will be remediated and restored.

However, elevated blood lead levels above state and national averages have been attributed to the tailings leaching into surface and groundwater and affecting members of several Oklahoma tribes. The Indian Health Service is continuing to inform tribal members of preventative health measures.



Rever examines mine tailings from an abandoned mine that has been a potential source of lead exposure.

Great Plains Region Addresses EDLs and **Stresses Prevention**

The Great Plains Region has remediated 18 Environmental and Disposal Liabilities (EDL) sites. Our approach is twopronged: Remove existing EDL sites and perform proactive environmental work to prevent new EDL sites.

To remove existing EDL sites, our office and the Regional staff-approximately two years ago-put together a detailed list of the existing EDL sites and prioritized them according to the work needed, the potential funding mechanisms and the ability to remove in a timely manner. Each office focused on different projects, splitting the workload and the requests for funding. Now, the majority of the remaining sites are the longer term projects involving remediation of contaminated groundwater from leaking underground storage tanks no longer in use.

The Region has provided a proactive mechanism for removal and properly disposing of wastes prior to becoming potential EDL sites. Training has increased the knowledge base of the proper procedures in handling, storing and disposing of wastes.

> Mark Herman Environmental Engineer Great Plains Region

Focus

OFMC to Cover Familiar Ground with Radon Testing

While the Department of the Interior is currently working with the Environmental Protection Agency and other agencies across the federal government to focus attention on the dangers of radon gas exposure, OFMC has experience with radon testing.

Radon is a naturally occurring invisible and odorless gas that can cause lung cancer. Radon comes from the decay of uranium which is found in soil and rocks all over the United States. Radon travels through the soil and spreads into groundwater. From there it can eventually be inhaled or can build up inside homes, schools and other buildings. One in 15 homes contains high levels of radon, exposing millions of Americans to potential illness.

The federal government is implementing several high-impact actions this year. The goal is to report the number of homes tested for radon and the number of homes and other buildings with high radon levels that have been mitigated as a result of the effort. The goal for Indian Affairs: Test nearly 3,500 employee quarters along with 183 BIE schools and dormitories across Indian Country. Indian Affairs will also work with tribes to increase awareness of the radon risk.

Similar OFMC radon testing in 2005 found dangerous radon gas levels in employee quarters at the Chinle Agency in Arizona. Some 16 homes were subsequently demolished and the fami-Continued on Page 7



School, Dorm Fire Evacuation Videos Available Through OFMC

This summer, OFMC Deputy Director Secretary Jaylene Adakai Sanchez (left) distributes the OFMC Fire Evacuation DVDs for BIE elementary schools, high school and dormitories to Esther Weston, business manager at Hanaa'dli Community School in New Mexico. The DVDs can be obtained by contacting OFMC's Structural Fire Protection Program at (505) 563-5164.

ARRA OJT Project Gives Montana Quarters a Homey Look

Twelve employee quarters were renovated at the Blackfeet Agency in Montana through an ARRA On-the-Job-Training project, following which one worker gained full-time em-

ployment with the Indian Health Service. Exterior work included upgraded insulation, doors and windows. Plumbing was re-routed to accommodate the new cabinets.

Visit the OFECR intranet website to see a video report on the project.





Before and after: Blackfeet Agency Facility Manager Terry Racine shows remodeled kitchen.

Kickapoo Nation School Library and FI&R Project Begins

An architects' rendering (right) shows the addition of a 6,522 square foot library to the front of the Kickapoo Nation School in Kansas. Also, a Facilities Improvement &



Repair project will improve the school's fire sprinklers, water systems, doors and windows, roof, exterior lighting and handicap accessibility. The OFMC Project Manager is Andy Acoya of Laguna Pueblo.

Shonto Gymnasium Readied for This School Year's Start



The Shonto Preparatory School gym is readied (right) this summer for student use following a January 2010 roof collapse (left) due to a winter storm that dumped 24 inches of snow on the Arizona school.

ARRA-funded

Homeland Security and the Colorado River Agency Meet for LMR Project atop Black Peak

The Colorado River Indian Tribes and the Colorado River



Agency in Parker, Ariz., are jointly improving the 25-year-old radio communications equipment and tower atop Black Peak (above). It is currently operating in a 450 MHz band (UHF) analog wide band. OFMC is using ARRA funds for the Land Mobile Radio (LMR) project, while the tribe has received a grant from the U.S. Department of Homeland Security—targeting the prevention of illegal immigration across the nearby Mexican border—to improve law enforcement communications on the reservation. Key to the LMR improvement for the BIA Office of Justice Services and tribal safety services is a new 195-foot Sabre Model S3tl self-supporting radio tower to be erected on a new concrete slab atop Black Peak. The existing block building (above) will be improved and a chain link security fence will be erected. The new radio equipment will likely provide 700/800 MHz systems in populated areas and VHF in more rural areas.

Sherman Indian High School ARRA Renovations Completed





ARRA-funded improvements at Sherman Indian High School in California include dormitory improvements (top left, top right) and metal sheeting for Bennett Hall (above, right), a former gym which is now a multi-purpose facility.





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lies were relocated.

Radon testing for employee quarters and schools will begin in potential problem areas, based on maps (map below can be viewed at http://www.epa.gov/radon/zonemap.html) and recommendations from various states environmental health departments.



For short-term testing, a radon testing canister is placed in each bedroom and near floor openings in employee quarters and at homogeneous areas within school buildings. If the result is lower than 4 pCi/L, radon is not an issue. For 4 pCi/L or higher, a follow-up test will be taken. Concern for radon mitigation should arise if the average of the first and second test is 4 pCi/L or higher. Also, a long-term test takes one year and will provide an average radon level.

Mitigation for the individual quarters and schools will take into consideration the building's foundation and HVAC type. Houses with crawl spaces can install vacuum systems with fans and piping to the roof line.

Note to Reader...

If you live in an area with a high level of radon, it's a good idea to test for its presence in your home. EPA has comprehensive radon testing information for residential homes at http://www.epa.gov/radon/pubs/citguide.html. The site also offers a citizen's guide to radon and tips to test for its presence.

OFMC's New Dorm at Pierre Indian Learning Center Used to House National Guardsmen

made the

With students gone from campus, some 650 soldiers and airmen from the South Dakota National Guard were housed at the Pierre Indian Learning Center in South Dakota this spring and summer while they battled rising Missouri River flood waters in the area (above). Since the school's dormitories—including the



National Guard Humvees on the Pierre campus.

gymnasium available for cots. That doubled the residential capacity, said Pierre Program Coordinator Shirley Gross. "We turned the campus over to the Guard, and they



With donated food, the off-reservation residential school made its OFMC-funded cafeteria available so hot meals could be provided on-site and sack lunches could be distributed to guardsmen while on duty in the Pierre area. "I just felt it was a good way to still help out," said Cheryl Reed (above), who runs the school's kitchen.

made good use of our [OFMC-funded] kitchen facilities, our gymnasium, and all the dorm spaces."

"It was a lot better than we are used to," Sgt. Matthew Hansen told the South Dakota National Guard 114th Fighter Wing Public Affairs Office. "We thought we would be staying in tents, so having something like this was really great."

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Assistant Secretary-Indian Affairs Office of Facilities, Environmental and Cultural Resources

DEPARTMENT OF THE INTERIOR

The Office of Facilities, Environmental and Cultural Resources oversees the Office of Facilities Management and Construction, the Division of Safety and Risk Management, and the Division of Environmental and Cultural Resources Management.