
*U.S. Department of Energy
Office of Legacy Management*

Shiprock, New Mexico

September 2010



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

Shiprock, New Mexico

Update Topics

- Monitoring
- Remediation system
- Evaporation pond
- Many Devils Wash
- Floodplain
- Other activities
- Documents



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Monitoring

March 2010 results

- There is a continuing trend of decreasing concentrations for several constituents on the floodplain
- All river locations were below background benchmark values
- Since 2008, all seeps have been dry except location 949 and Many Devils Wash
- Automated sampler in Many Devils Wash has been activated once
 - Results indicate possible high river flow during a rain event

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Monitoring (continued)

Upcoming activities

- Semiannual data collection in September (water sampling, water level measurements, and download of data loggers)
- Radon monitoring has been completed
 - Navajo UMTRA/AML will distribute a summary report

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Remediation System

Results as of August 2010

- Terrace averaging 233,000 gallons per month to the pond; 22,558,571 gallons since beginning of remediation
- Floodplain averaging 728,000 gallons per month to the pond; 69,623,490 gallons since beginning of remediation
- The total volume of terrace groundwater in the alluvium has been reduced by 50 percent
 - Based on 2003 estimates

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Evaporation Pond

- Evaluating approaches for studying migratory bird use
 - DOE will consult with U.S. Fish and Wildlife Service
- Began using dye in pond in June 2010 to control and reduce algae
 - Limits the food source to discourage use by wildlife
- Trench 2 on the floodplain was shut down during spring runoff to reduce water levels in the pond



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Many Devils Wash

- Study in East Fork branch of the wash has been completed
 - Geologic mapping of structural contacts
 - Sampling of shallow groundwater
- Report of initial findings will be posted to the website following review
- Warning signs were placed along the fence line
- Received a letter from the U.S. Army Corps of Engineers agreeing with the high water mark delineation

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Many Devils Wash (continued)

Planned activities

- Further characterization of source in East Fork may be discussed in the future
- Fence repair and fence enhancements pending resolution of grazing issue
- Continue monitoring automated sampler



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Floodplain

Recent activities

- Completed instrumentation in Trench 1 and the well 1089 area
- Replaced vandalized electrical panels and equipment at Trench 2
- Well redevelopment completed



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Floodplain (continued)

Planned activities

- Installation of an additional stilling well in the area of well 1089 along the river
- Study area around well 1089 to better evaluate water exchange with the San Juan River
- Study area around Trench 1 to evaluate the effectiveness of the trench for remediation
- Complete new well and water elevation surveys



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Other Activities

- Phytoremediation pilot study nearing completion and will be evaluated in the near future
- DOE completed review of historical data related to disposal cell construction
- Removal of trash (yearly activity) and weed burning planned for this fall

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Documents

- Annual Performance Report for 2010 is currently being prepared
- Data Validation Package for March 2010 sampling event will be posted to the Internet in September 2010
- Distribution of final draft of Evaluation Report will be sent out following DOE review