

Project/Activity Title: Construction of Grade Control Structures in Pueblo and DP Canyons		Accession No. 15573	Date: August 31, 2009
Location: DP Canyon (TA-73) and Pueblo Canyon (TA74)		Schedule: FY09-10	Cost: \$1M to \$5M
DOE Program: EP-LWSP		Non-DOE Sponsor:	
Project Contact: Danny Katzman - ADEP Program Management 7-6333 katzman@lanl.gov			

1. DESCRIPTION OF PROPOSED ACTION:

Low-level PCB contamination is widely distributed in the sediment deposits of the Pueblo and DP Canyon watersheds. In order to reduce the potential for transport of these contaminated sediments from within DP and Pueblo Canyons, grade-control structures would be installed. The grade-control structures would result in reduced flow velocities and peak discharge during flood events and should reduce erosion of contaminated deposits downstream of the structures. These two grade-control structures are included in the *Supplemental Interim Measures Work Plan to Mitigate Contaminated Sediment Transport in Los Alamos and Pueblo Canyons* (LA-UR-08-6588, October 2008). This work plan was approved by the New Mexico Environment Department (NMED) on February 20, 2009, to address requirements in the March 2005 LANL Compliance Order on Consent. Moreover, these drainages eventually reach the Rio Grande, upstream of where the Buckman Direct Diversion Project plans to use the river as a drinking water source by the City of Santa Fe.

The proposed grade-control structure in lower Pueblo Canyon would be in the vicinity of the NM 4–NM 502 interchange, approximately 230 m (755 ft) down canyon of the current E060 gauging station. The planned design would be similar to that of the nearby Los Alamos Canyon low-head weir; specifically, above-grade rock-and-mesh gabions spanning the width of the active channel. In addition, extending to the north from the rock-and-mesh gabion structure is an earthen berm to divert flood flows from the floodplain and adjacent abandoned channels back behind the structure. The height of the structure would be designed to allow the currently incised channel to backfill with sediment and establish a new grade, which would eventually bury the upstream headcut and reverse progressive wetland loss. To quicken grade establishment, soil deposition from below the structure will be moved to fill in behind the structure to an elevation close to that of the upstream headcut. A defined channel would be replaced with a broad aggraded wetland surface where floodwaters would spread and further increase sediment deposition.

The proposed DP Canyon grade-control structure would be located down canyon from the Solid Waste Management Unit (SWMU) 21-011(k) outfall at Technical Area 21 and near the site of the current E039 gauging station at the east end of reach DP-2. The structure would be designed so that aggradation within the channel would minimize or eliminate erosion of contaminated stream banks during frequent floods. The sediment-filled channel would cause floods to spill overbank more frequently, which would reduce channelized conveyance of flood energy downstream. Overbank floods would also deposit sediment derived from reaches upstream of SWMU 21-011(k) and bury existing contaminated floodplain deposits.

The proposed construction of these two grade-control structures would take place during the fall of 2009, and would include site staging and restoration. Geotechnical work was performed in late summer 2009 to support design of the anchoring system for the structures. Work would be done by the Department of Energy (DOE) Los Alamos Site Office in conjunction with the U.S. Army Corps of Engineers and their subcontractors. The lower Pueblo Canyon site requires access through DOE land leased to the New Mexico Department of Transportation for a winter road maintenance yard. Both proposed grade-control structures would be located in or near wetlands and other sensitive environmental sites. The National Environmental Policy Act DOE Implementing Regulations in 10 CFR Part 1021 Subpart D, Appendix B (4), provides for consideration as categorical exclusions those classes of actions where the proposed action would not adversely affect environmentally sensitive resources such as wetlands and floodplains.

2. PROJECT REQUIREMENTS:

The following project concerns and requirements have been identified that would be integrated into the Pueblo and DP Canyon grade-control project to mitigate and/or avoid adverse effects on sensitive resources such as wetlands. Mitigation requirements are provided for each of the sensitive resource areas.

Protection of migratory bird nestlings and eggs: Under the Migratory Bird Treaty Act, LANL is prohibited from killing migratory bird nestlings or destroying their eggs. Construction of these structures is not planned during the peak migratory bird nesting season (1 June through 31 July), and therefore would not have any impact on this resource.

Mitigation 1: If activities are delayed and construction activities are projected to extended past 1 June, DOE should be notified no later than 15 May so that appropriate action can be taken.

Noise disturbance of federally-listed threatened or endangered species (DP Canyon Only): Under the Federal Endangered Species Act (ESA), LANL is required to consult with the U.S. Fish and Wildlife Service on any action that falls outside of the guidelines of the LANL Threatened and Endangered Species Habitat Management Plan (HMP). Activities fall outside guidelines if they raise noise levels more than 6 A-weighted decibels [dB(A)] in core habitat for federally-listed species during their breeding season. The DP Canyon construction site is located in habitat for the ESA threatened Mexican spotted owl (*Strix occidentalis lucida*); however, construction of the DP Canyon structure is not planned during the breeding season (1 March to 15 May), and therefore would not have any impact on this resource.

Mitigation 2: If activities are delayed and construction activities are projected to extended past 1 March, DOE should be notified no later than 15 April so that appropriate action can be taken.

Large Areas of Ground and Vegetation Disturbance: Under the LANL HMP, actions disturbing more than five acres of undeveloped land require submission of a biological

assessment to NNSA/DOE. Estimates of disturbed area for the two projects are less than five acres combined and will not require a biological assessment.

Mitigation 3: Work areas should be periodically monitored for expansion of disturbed areas, and if activities are projected to exceed five acres at any time during construction, DOE should be notified immediately for further instruction.

Work in 100-year floodplain: The project will be working within a 100-year floodplain. DOE regulations require that flood hazards and floodplain management are considered for any action taken in a floodplain.

In order to meet DOE requirements, the following actions must occur:

Mitigation 4: The Los Alamos Site Office (LASO), supported by Los Alamos National Security (LANS), must prepare a Floodplain/Wetland assessment and notice in accordance with 10 CFR Parts 1022. The U.S. Army Corps of Engineers (USACE) or their contractor must receive notice (by email) from LASO that the Notice requirement for the Floodplain/Wetland assessment are completed prior to commencement of construction activities.

Mitigation 5: The USACE or their contractor shall prepare a permit in accordance with Section 404 of the Clean Water Act. The permit shall be provided to LASO for review and comment prior to submittal to the regulatory authority. No work will commence until regulatory approval has been granted.

Mitigation 6: The USACE or their contractor shall prepare a Stormwater Pollution Prevention Plan (SWPPP) for construction permit in accordance with Section 402 of the Clean Water Act. The SWPPP shall be provided to LASO for review and comment prior to submittal to the regulatory authority. No work will commence until regulatory approval has been granted. A Certified Notice of Intent needs to be submitted by DOE and the construction contractor at least seven days in advance of projected project startup.

Mitigation 7: The USACE or their contractor will include the following Best Management Practices in their Section 404 Permit Application and SWPPP, as appropriate:

- Minimize disruption of the integrity of the stream bank for wet or dry channels. This includes actions such as driving across stream channels off-road.
- Work shall not occur in a floodplain when soil is too wet to adequately support equipment.
- Equipment staging areas shall not be located within the floodplain.
- Refueling of equipment shall be at least 100 feet from any drainage, including dry arroyos.
- Hazardous materials, chemical, fuels, and oils shall not be stored within a floodplain.

- Revegetate immediately following soil disturbances using a LANL approved native seed mix or plants.
- Revegetation shall be repeated after one year if a satisfactory stand (> 15% cover) has not been established (to be included in monitoring and maintenance plan implemented by LANS).
- Minimize off-road travel that may disturb vegetation within the floodplain and initiate erosion.
- Remove all debris (vegetation, construction material) from floodplains; however, all soil and vegetation shall remain within the boundaries of the Area of Concern (AOC). Trees and larger vegetation removed for construction activities within the floodplain will be kept within the AOC boundary and 100 feet from the wetland. The Contractor will coordinate with LANS biological resource personnel to determine the best method of debris management.

Work in or near a wetland: The Pueblo Canyon project will include work near a wetland. DOE regulations require that wetlands protection is considered in project planning and that the potential impacts of any new construction proposed in a wetland are evaluated.

Mitigation 8: The project must ensure that activities will comply with the following Wetland Best Management Practices:

- Equipment staging areas shall not be located within a wetland or within 100 ft of a wetland.
- Refueling of equipment shall be at least 100 ft from any drainage or wetland.
- Hazardous materials, chemical, fuels, and oils shall not be stored within a wetland.
- No off-road travel will be permitted through a wetland.
- Revegetate immediately following soil disturbances using a LANL approved native seed mix or plants.
- Revegetation by the Contractor shall be repeated after one year if a satisfactory stand (> 15% cover) has not been established (to be included in monitoring and maintenance plan implemented by LANS once established).

Cultural Resources: The Homestead era Mattie Brooks trail originally crossed through the project area proposed for the DP Canyon Grade-Control Structure. A portion of the trail includes the access road for the project, which has been previously used for maintenance activities within DP Canyon. LANL is in the process of evaluating the integrity of the trail and plans on consulting with the Historic Preservation Officer (SHPO) prior to completion of the project. Based on the engineering design for the proposed action, no disturbance to the road is projected and further National Historic Preservation Act Section 106 review is not required.

Mitigation 9: If disturbance to the access road for the project is required during final design or during construction activities, the USACE or their contractor must notify LASO immediately. No disturbance to the road may occur without approval from LASO.

3. NUMBER AND TITLE OF THE CATEGORICAL EXCLUSION BEING APPLIED:

10 CFR 1021.410, Subpart D, B6.1, which includes small-scale, short-term cleanup actions, under RCRA, Atomic Energy Act, or other authorities, less than approximately 5 million dollars in cost and 5 years duration, to reduce risk to human health or the environment from the release or threat of release of a hazardous substance other than high-level radioactive waste and spent nuclear fuel, including treatment (e.g., incineration), recovery, storage, or disposal of wastes at existing facilities currently handling the type of waste involved in the action. These actions include, but are not limited to (i) Drainage controls (for example, run-off or run-on diversion) if needed to reduce offsite migration of hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum or natural gas products or to prevent precipitation or run-off from other sources from entering the release area from other areas.

4. REGULATORY REQUIREMENTS IN 10 CFR 1021.410 (B):

1. The proposed action fits within a class of actions that is listed in Appendix B to Subpart D.

For classes of actions listed in Appendix B, the following conditions are integral elements; i.e., to fit within a class, the proposal must not:

- a. Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including DOE and/or Executive Orders;
 - b. Require siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities, but may include such categorically excluded facilities;
 - c. Disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; or
 - d. Adversely affect environmentally sensitive resources (including but not limited to those listed in paragraph B. (4)).
2. There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal; and
 3. The proposal is not "connected" to other actions with potentially significant impacts, is not related to other proposed actions with cumulatively significant impacts, and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211.

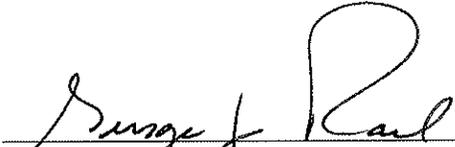
5. NEPA DETERMINATION BASED ON ABOVE DESCRIPTION:

- Covered by prior NEPA review:
- Requires EIS:
- LANL recommended CX: 10 CFR 1021, Appendix B 6.1 (i) Small-scale short-term clean up actions under RCRA (drainage controls)
- CX exception - Prepare EA (refer to appropriate sections of 10 CFR 1021 for full definition (check all that apply) :
 - extraordinary circumstances (410(b)(2): _____
 - threaten violation of regulation (Subpart D, Appendix B (1)): _____
 - uncontrolled release of hazardous substance (Subpart D, Appendix B (3)): _____
 - connected action (410(b)(3): _____
 - siting or expansion of waste TSD facility (Subpart D, Appendix B (2)): _____
 - adverse effect sensitive resource (Subpart D, Appendix B (4)): _____
- None of the above: Prepare EA. [If applicable :10 CFR 1021, Subpart D, Appendix C ____]
- Other:

6. NCO CLASSIFICATION/DETERMINATION:

This proposal is be covered by a NEPA categorical exclusion in accordance with Appendix B to Subpart D of 10 CFR 1021.

If changes are made to the scope of action so that it is no longer bounded by the action described in this memo, or it is changed to encompass other actions, NEPA requirements for the action will need to be reassessed at that time and further analysis may again be required.

Signature:  Date: Oct 28, 2009
George Rael, LASO NEPA Compliance Officer