ROCKY FLATS SITE
REGULATORY CONTACT RECORD

Purpose: Discussion and approval of soil disturbance for Phase III road improvement work involving the construction of roadside drainage ditches that will not return excavation to preexisting grade.

Contact Record Approval Date: August 17, 2007

Site Contact(s)/Affiliation(s):

Jeremiah McLaughlin, S.M. Stoller
Rick DiSalvo, S.M. Stoller

Regulatory Contact(s)/Affiliation(s):

Carl Spreng, CDPHE

Discussion

The engineering design for the Phase III road repair/maintenance work to be conducted in August 2007 includes four areas where drainage ditches are to be constructed alongside the roads. When they are completed, the center of the ditches will be 1 foot below the existing grade with an approximately 3:1 taper up to the existing grade. The design for one other area, the road leading to the Mound Treatment System, calls for four water bars (a shallow depression bordered by a hump similar to a speed bump) to be constructed across the road to channel runoff. The water bar depressions are 9 inches below the existing grade, and the hump is 9 inches above the existing grade. The ditches and water bars facilitate drainage to minimize the effects of heavy precipitation on these areas of the roads.

Attached is a Central Operable Unit aerial photograph showing the locations where ditches are to be constructed.

The Rocky Flats Legacy Management Agreement (RFLMA), Attachment 2, Table 4, Institutional Control (IC) Number 3, stipulates that soil disturbance must be in accordance with the CDPHE-approved Erosion Control Plan (ECP) and that the soil surface must be restored to the preexisting grade after any soil-disturbance activity has occurred. Work will be done in accordance with the ECP, but of necessity, soil will not be restored to the preexisting grade where the ditches and water bars are to be constructed.

The ditches and water bars are needed to meet the design objective to facilitate drainage, and the construction is a field modification. DOE may implement field modifications that are consistent with the intent of the approved action (in this case, IC Number 3) upon approval by CDPHE, in accordance with RFLMA, paragraph 34. This contact record is to document CDPHE approval.

The objective of the IC is to maintain the current depth to subsurface contamination or contaminated structures. This IC also results in achieving compliance with the CDPHE risk management policy of ensuring that residual risks to the site user are at or below 1x10-6. Based on a review of the areas where ditches and water bars are to be constructed, and based on the limited aerial extent, the minor change in depth to subsurface contamination does not impact compliance with the risk management policy.

CDPHE has requested that the following information be included in contact records for soil excavation related to this IC that will not return soil to the preexisting grade:

1) Provide information about any remaining subsurface structures in the vicinity so that the minimum cover assumption will not be violated (or state that there are none if that is the case).

A portion of the Original Process Waste Line (OPWL), IHSS 000-121 (for more information on IHSS 000-121, see item 2, below), runs under the road at approximately the center of the ditch planned for Area AA, which is along former Central Avenue. The portion is identified as P11, a 3-inch rubber pipe inside a 4-inch fiberglass pipe. This pipe is located at approximately 5.5 feet below the surface.

A portion of the sanitary sewer system, IHSS 000-500 (for more information on IHSS 000-500, see item 2, below), runs under the road (former Central Avenue), with two intersecting lines from the south of the road joining at approximately the eastern and western ends of Area AA. In Area AA, two manholes were completely removed, three manholes were removed to 4 feet below the surface, and any remaining piping is at least 3 feet belowground.

None of the other areas where ditches or water bars are planned to be constructed have remaining subsurface structure in the vicinity.

2) Provide information about any former IHSSs/PACs or other known soil or ground water contamination in the vicinity (or state that there is no known contamination).

Only Area AA is in the vicinity of IHSSs/PACs or other known soil or ground water contamination. Portions of the following IHSSs/PACs in the vicinity of the ditch planned for Area AA and their disposition are as follows:

IHSS 000-121 (OPWL): The OPWL system was a network of underground pipelines and tanks used to transport and store aqueous chemical and radioactive process wastes for subsequent treatment. Site wide, all OPWL was tapped, drained of any residual liquid, and grouted to the extent possible. Approximately 17,000 feet of OPWL were removed, and approximately 14,700 feet were grouted and left in place, which includes line P11 running under and perpendicular to the road in Area AA. Soils adjacent to OPWL were sampled, contaminated soils were removed in accordance with Rocky Flats Cleanup Agreement (RFCA) accelerated action decision document requirements, and excavations were backfilled with clean soils. No Further Accelerated Action was approved by CDPHE in 2005.

IHSS 000-162 (Radioactive Site, 700 Area): This area was at approximately the central portion of Area AA, and it was identified based on ground water monitoring results in 1974 and air monitoring results in January 1981, which indicated the presence of residual radioactivity in the area. This IHSS essentially coincided with the OPWL in this area and was considered part of the OPWL (IHSS 000-121) characterization work. No Further Accelerated Action was approved by CDPHE in 2005.

IHSS 000-190 (Caustic Leak [a.k.a. Central Avenue Ditch]): In 1978 1,000 to 1,500 gallons of 2.5 Normal NaOH leaked into the Central Avenue Ditch. The NaOH was adequately neutralized after the spill, and subsequent storm water flows in the ditch flushed away any remaining NaOH. No Further Accelerated Action was approved by CDPHE in 2005.

PAC 000-500 (Sanitary Sewer System): The sanitary sewer system was used for the transport, storage, and treatment of sanitary waste throughout the operating history of Rocky Flats. Sanitary sewer lines and connecting lines from buildings ran under and alongside Central Avenue. There were several releases to the system over its operating life, and for many years, normal discharge to the system included radioactively contaminated laundry water. All of the major discharges occurred prior to 1990, and significant volumes of sewage, and the jet washing of lines to remove sludge served to subsequently flush the lines. The contamination of soil by leaking pipes was unlikely because ground water infiltrated the system rather than sewage leaking out of it. The system was closed by removing any lines to at least 3 feet below grade, removing manholes completely or to at least 4 feet below grade, and grouting open ends resulting from building disconnection. Lines and bedding material were disrupted at various locations to eliminate the possibility of preferential ground water flow paths. No Further Accelerated Action was approved by CDPHE in 2005.

PAC 000-503 (Solar Pond Water Spill along Central Avenue): A tanker truck transporting water from the Solar Evaporation Ponds to the former Building 374 storage tanks spilled about 35 gallons over a half-mile stretch of asphalt on Central Avenue in 1994. The spilled water was cleaned up from the asphalt. No Further Accelerated Action was approved by CDPHE in 2002.

PAC 000-505 (Storm Drains): The storm drains provided site drainage from roads, parking lots, and other areas throughout the operating history of Rocky Flats. Sanitary sewer lines and connecting lines from buildings ran under and alongside Central Avenue. There were eight specific contaminant-release areas associated with PAC 000-505, and these were identified as IHSSs or PACs and individually dispositioned in accordance with RFCA. Storm drains were removed or disrupted at various locations to eliminate the possibility of preferential ground water flow paths. Characterization did not indicate that subsurface soil removal was necessary. In Area AA, the storm drains were removed. No Further Accelerated Action was approved by CDPHE in 2005.

More detailed information on these PACs/IHSSs and the disposition of these areas is in the *Historical Release Report*, RI/FS, Appendix B.

3) Resurvey any new surface established in subsurface soil, unless sufficient existing data is available to characterize the surface (or state that the excavated soil will be replaced and the original contours restored).

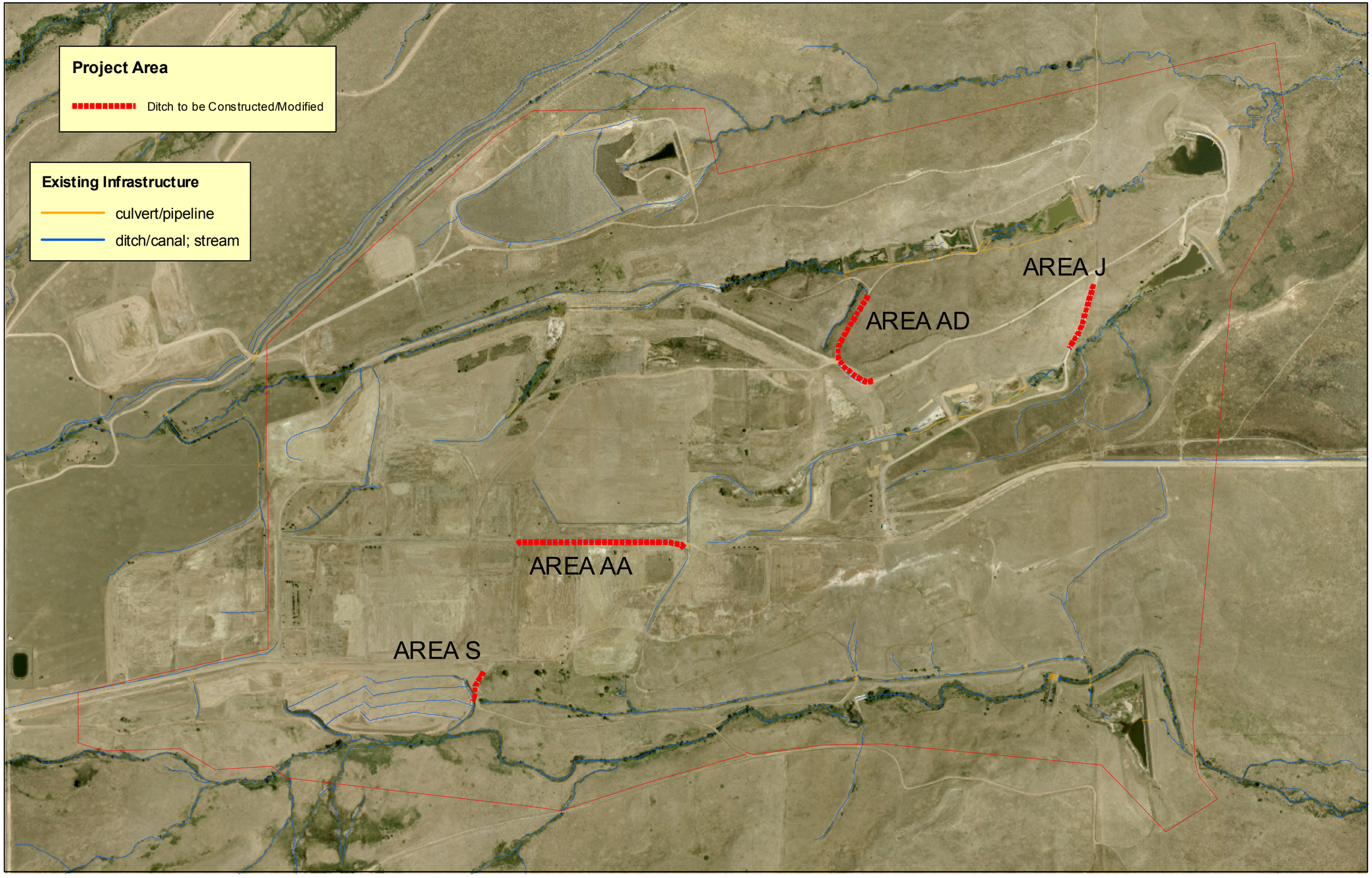
When completed, the center of the ditches will be 1 foot below the existing grade with a 3:1 taper up to the existing grade. The water bar depressions are 9 inches below the existing grade, and the hump is 9 inches above the existing grade.

Resolution

Carl Spreng, CDPHE, approved the placement of the ditches and water bars as described in this contact record.

Contact Record Prepared by: Jeremiah McLaughlin and Rick DiSalvo

Distribution:
Carl Spreng, CDPHE
Scott Surovchak, DOE
Linda Kaiser, S.M. Stoller
Rocky Flats Contact Record File


Project Area
Ditch to be Constructed/Modified
Existing Infrastructure
culvert/pipeline
ditch/canal; stream
AREA J
AREA AD
AREA AA
AREA S