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SECRETARY

LANL TA-11 (NPDES)

MEMORANDUM

TO: *RF* Ralph Ford-Schmid, DOE OB

FROM: *HY* Steve Yanicak, LANL POC

DATE: 28 April 1997

SUBJECT: DOE OB Observations Concerning NPDES Outfalls Scheduled for Deletion Through the Waste Stream Characterization Program at K-Site, TA-11, Los Alamos National Laboratory (LANL).

SITE VISIT: This site visit was conducted on 4-15-97 and requested by ESH-18. A copy of this correspondence will be transmitted to ESH-18 staff.

GENERAL DESCRIPTION: K-Site is located in TA-11 and is geographically situated at the far west area of LANL: it is somewhat encircled by TA-16 which extends west to the Laboratory's boundary. The site has historically been used as a weapons safety testing facility since the mid-1950's, implementing the site's 160 foot drop tower (TA-11-25 & 26: SWMUs 11-004{a-f}), and is currently still active. Simulated weapons packages are brought to a predetermined height and released, frequently resulting in dispersion of shrapnel due to detonation of the HE components. The predominant contamination noted at K-Site has been shrapnel metals (Al, Fe, Be, Cd, Cu, DU, etc.) and HE. These contaminants occur predominantly in the soils and sediments surrounding the perimeter of the drop tower zone. The drop tower is situated on a 130-foot diameter concrete pad, in addition to a larger diameter asphalt pad which encircles the concrete pad. The asphalt pad's perimeter is partially bermed on all down-slope sides to a height of about 8 inches. The berm allows all run-off water to be routed to three (3) concrete sumps during wash-down activities following a drop tower test. The berm was not designed to rout all sheet-flow storm-water to the sumps, and considerable hillside erosion seen at the site was proof of storm-water frequently overflowing the berm. The drop tower zone is situated on an east-trending mesa top. The grade of the bermed pad generally slopes to the north, east, and south. Mesa top drainage at K-Site is provided by a southeast-trending tributary of Water Canyon generally referred to as DropTower Canyon.

PROPOSED WORK DESCRIPTION: The proposed corrective action (CA) at K-Site is to consolidate the run-off paths of two (2) NPDES outfalls scheduled for deletion to one permitted outfall. It should be noted that all these outfalls are not pipes, but open concave asphalt ramps which direct water down the mesa edge to DropTower Canyon. In addition, the CA addresses only run-off water which is generated following a drop test due to washing down the pad with a high-pressure hose. Storm-water is not the focus of this CA, but it was recommended that it be addressed in the

LANL TA-11 (NPDES)



TA-11, K-Site Visit
April 28, 1997
Page 2

Storm-water Pollution Prevention Plan under development for TA-11. The CA scheduled to close two of the three outfalls which drain the drop tower pad will require the in-place abandonment of sump TA-11-50, and the reconstruction of sump TA-11-51. Sump TA-11-51 will be fitted with a filtering system in addition to an above ground 12 inch pipe that will be connected to sump TA-11-52 which drains the southern perimeter of the Drop Tower pad. The outfalls, 05A069 & 05A096, associated with sumps TA-11-50 and TA-11-51 will be by-passed following the completion of the diversion pipe. The south-exiting outfall 05A097 will be up-graded, in addition to being engineered to mitigate any increased flow velocity and erosion potential that will arise due to the re-routing of the two by-passed outfalls. The asphalt berm at the perimeter of the drop tower pad will be repaired and elevated to a height of 12 inches. It is not known if this measure will address the sheet-flow storm-water issue at the site. Additionally, the outfalls proposed for deletion (05A069 & 05A096) will be left in-place and still route overflow storm-water to DropTower Canyon. Due to the likelihood that sump TA-11-50 is contaminated, it was recommended that, prior to abandonment, it be filled with some inert material in order that it does not collect and discharge any run-off or storm-water.

WORK NOT PROPOSED IN THE CA: A key issue not addressed by the CA is storm-water run-on to the drop tower pad from the west. One recommendation mentioned was that the asphalt berm located at the drop tower southern perimeter be extended west to compensate for the run-on. Another recommendation was to install a low-incline speed bump on the drop tower west entrance road to divert storm-water run-on. Other issues discussed included placement strategy of BMPs such as hay bales and jute mats to address the evident historic and current hillside erosion in order help check contamination in the soils and sediments on the mesa sides of the site. Because K-Site is listed as an active HE site, activities which might cause sparks, such as driving steel stakes or manual drilling/augering, are strictly controlled and/or forbidden. These restrictions might limit any future erosion efforts and BMP options by the LANL ER Project and ESH-18 Group.

If you have any questions please call me at 672-0448.

ATTACHMENT

cc: John Parker, NMED, Chief, DOE OB
Tim Michael, NMED, Program Manager, DOE OB
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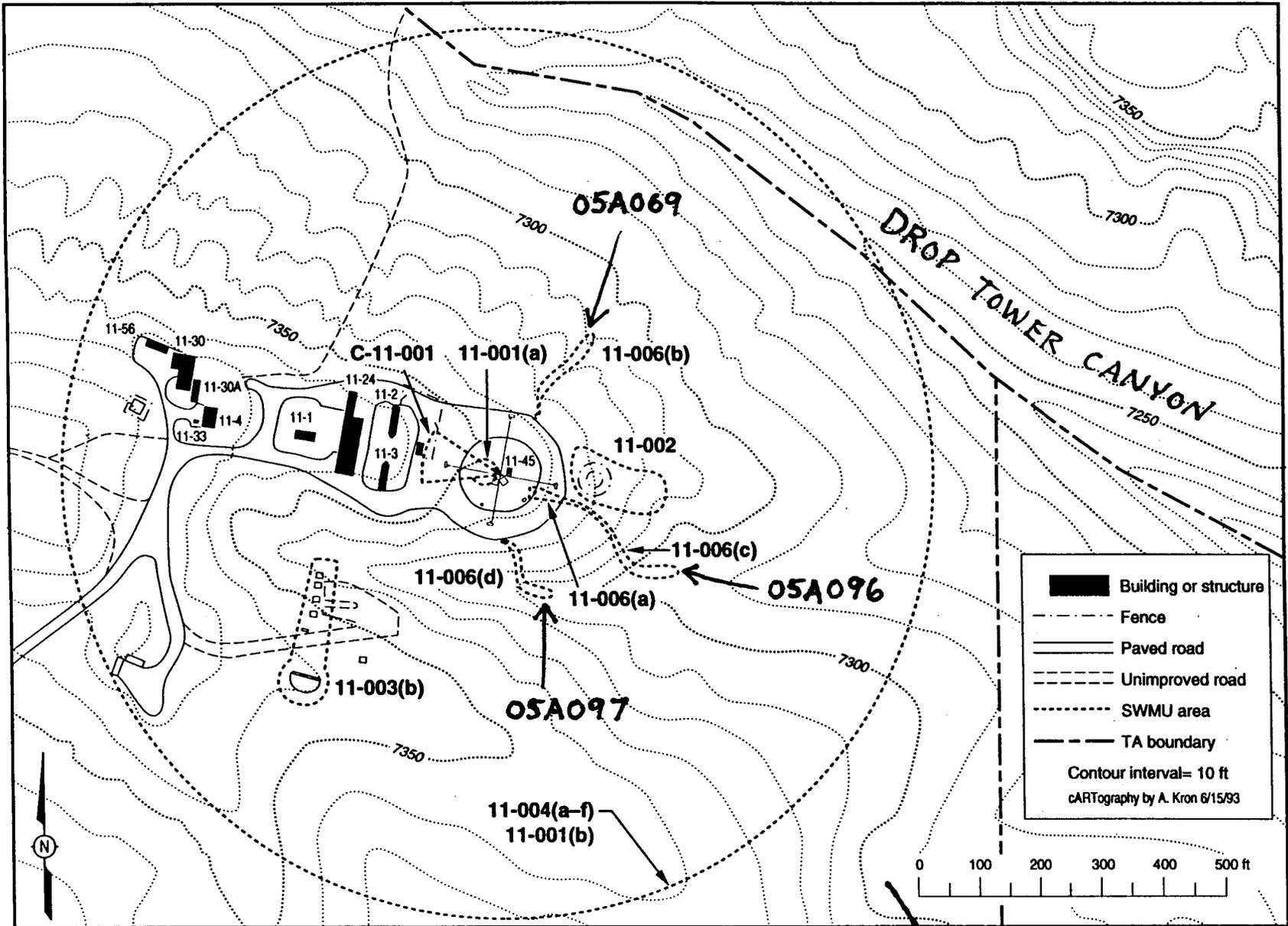


Fig. 5-49. Firing site.

K-Site, TA-11

TO WATER CANYON