

MEMORANDUM

ERM / GOLDER LOS ALAMOS PROJECT TEAM

To: Carl Newton, EES-3

From: Andrew J. Crowder

Date: 30 November 1995

Subject: LOCATIONS OF CHARACTERIZATION SAMPLES WITHIN SOIL STOCKPILES AT THE INACTIVE FIRING RANGE, SWMU 0-016

The following table presents a list of sample locations, their respective height (H) above the ground surface, and the distance (D) that the hand auger was advanced into the stockpile. The actual locations are shown on Figure 1. One grab sample was collected from each of the four quadrants in each section and composited. The quadrants are designated northwest, northeast, southwest, and southeast. Each grab within a section was collected at a different depth within the pile (Figure 1). All boreholes were advanced a minimum of 1-foot into the stockpile. Samples near the bottom of the stockpile were collected by hand-augering horizontally into the side of the stockpile and others were collected by hand augering vertically into the top of the stockpile, as indicated in the list. Some sample locations within the sections deviated slightly from the Soil Stockpile Characterization Plan due to the berm configuration and the consistency of the soils. Because of the abundance of rocks and other obstacles within the stockpiles, hand-augering was very difficult and auger refusal was encountered frequently at very shallow depths. In order to access the desired depths within the stockpiles, the topography of the piles was used to obtain samples from desired locations and depths (e.g., soil samples from the bottom of the pile were collected by hand-augering horizontally into the base of the pile).

Table 1. List of sample locations and depths within soil stockpiles.

Section of Stockpile	Stockpile Description	Quadrant Within Section where Grab Sample Collected	Height of Sample from Ground Surface (feet)	Distance into Soil Pile (feet)	Borehole Orientation
Section 1	Large Pile, Back-Area Material	Northwest	1 to 1.25	1	horizontal
		Northeast	6.75 to 7	2.25	vertical
		Southwest	13.75 to 14	1	vertical
		Southeast	19 to 19.25	1	vertical
Section 2	Large Pile, Original Berm Material	Northwest	1.75 to 2	1	horizontal
		Northeast	5.75 to 6	1	horizontal
		Southwest	8 to 8.5	1.5	vertical
		Southeast	14 to 14.5	1	vertical



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Table 1. List of sample locations and depths within soil stockpiles (continued).

Section of Stockpile	Stockpile Description	Quadrant Within Section where Grab Sample Collected	Height of Sample from Ground Surface (feet)	Distance into Soil Pile (feet)	Borehole Orientation
Section 3	Large Pile, Original Berm Material	Northwest	1.75 to 2	1	horizontal
		Northeast	5.75 to 6	1	horizontal
		Southwest	8 to 8.5	1	vertical
		Southeast	14 to 14.5	1	vertical
Section 4	Large Pile, Original Berm Material	Northwest	1.75 to 2	1	horizontal
		Northeast	5.75 to 6	1	horizontal
		Southwest	8 to 8.5	1	vertical
		Southeast	14 to 14.5	1	vertical
Section 5	Large Pile, Back-Area Material	Northwest	8.75 to 9	1	vertical
		Northeast	19.5 to 20	1	vertical
		Southwest	2.75 to 3	1	horizontal
		Southeast	14 to 14.5	1	vertical
Section 6	Large Pile, Original Berm Material	Northwest	16 to 17	1	vertical
		Northeast	14 to 14.5	1	vertical
		Southwest	5.5 to 5.75	1	horizontal
		Southeast	2.75 to 3	1	horizontal
Section 7	Large Pile, Original Berm Material	Northwest	13 to 13.5	2	vertical
		Northeast	11 to 11.5	4	vertical
		Southwest	5.75 to 6	1.5	horizontal
		Southeast	2.75 to 3	1	horizontal
Section 8	Large Pile, Original Berm Material	Northwest	14 to 14.5	1	horizontal
		Northeast	5.75 to 6	1	vertical
		Southwest	10.75 to 11	1	horizontal
		Southeast	1.75 to 2	1	horizontal
Section 9	Small Pile, Original Berm Material	Northwest	1.5 to 2.5	1	vertical
		Northeast	7.5 to 8.5	1	vertical
		Southwest	10 to 11	1	vertical
		Southeast	17 to 18	1	vertical
Section 10	Small Pile, Original Berm Material	Northwest	10.5 to 11.5	1	vertical
		Northeast	1 to 2	1	vertical
		Southwest	6 to 7	1	vertical
		Southeast	17 to 18	1	vertical

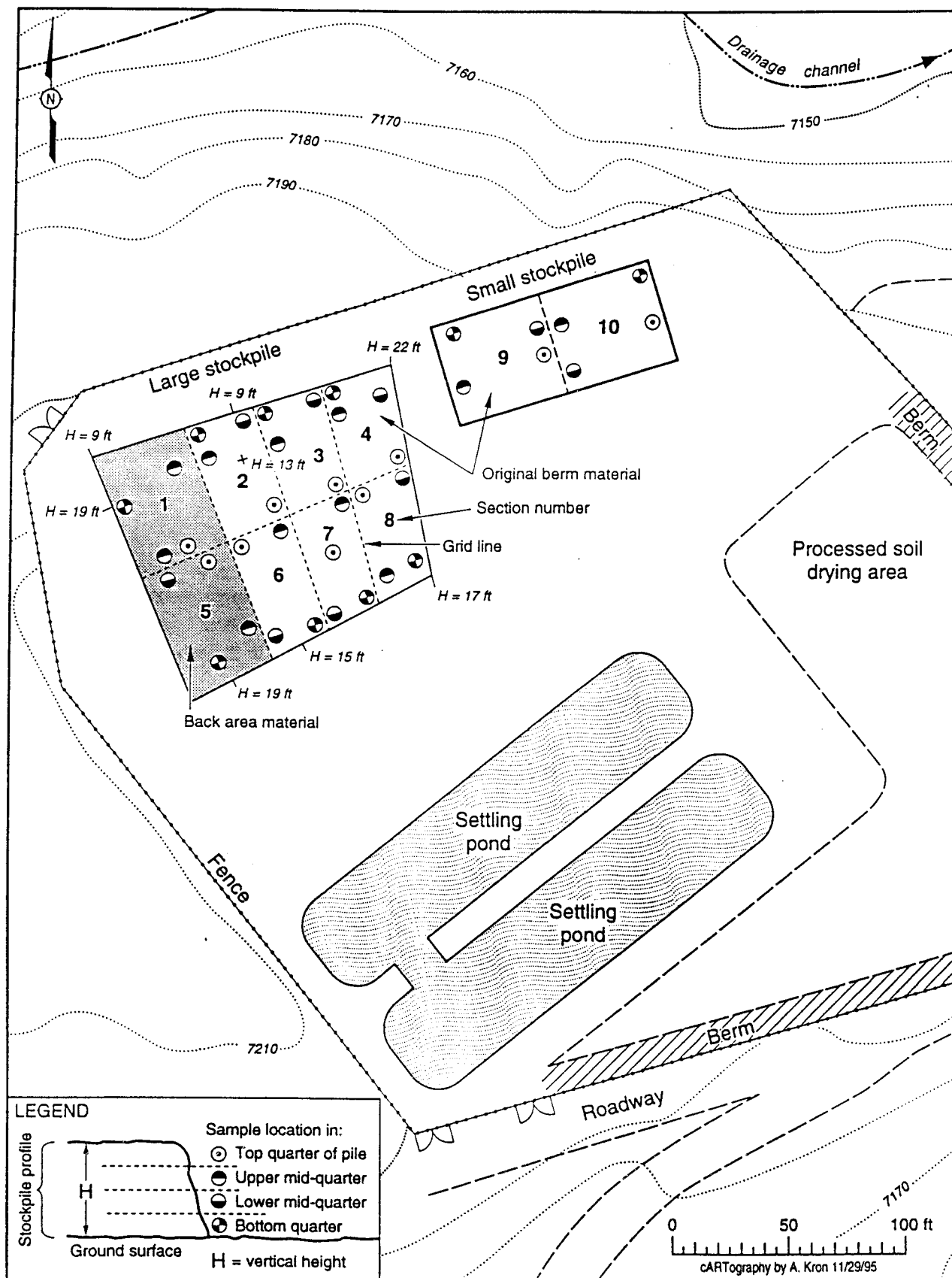


Figure 1. Soil stockpile characterization sample locations, SWMU 0-016.