

**ENVIRONMENTAL
RESTORATION
PROJECT**

Los Alamos National Laboratory/University of California
Risk Reduction & Environmental Stewardship (RRES)
Environmental Restoration (ER) Project, MS M992
Los Alamos, New Mexico 87545

Date: June 24, 2002
Refer to: ER2002-0422



TA-21

Mr. John Young, Corrective Action Project Leader
Permits Management Program
NMED – Hazardous Waste Bureau
2905 Rodeo Park Drive East
Building 1
Santa Fe, NM 87505-6303

SUBJECT: SAMPLING NOTIFICATION FOR PRE-VOLUNTARY CORRECTIVE MEASURE (VCM) SAMPLES FOR SOLID WASTE MANAGEMENT UNIT (SWMU) 21-011(k)

Dear Mr. Young:

During the week of July 8, 2001, the Los Alamos National Laboratory (LANL) Environmental Restoration (ER) Project is planning to collect pre-VCM samples from SWMU 21-011(k) in accordance with Revision 1 of the VCM Plan for SWMU 21-011(k) (LA-UR-02-3807). Specifically, six grab soil, sediment and/or tuff samples will be collected from areas of the site with gross gamma count rates less than the 150,000 counts per minute (cpm) level as defined by the in-situ gamma survey map to ensure accuracy of the screening within the range of activities from background to the target cleanup level of 150 pCi/g of cesium-137 (See Figure 1). Samples will be screened in the field with a gamma-screening instrument to ensure that the samples collected represent a range of count rates. All six samples will be submitted to the American Radiation Services (ARS) laboratory for gamma spectrometry and gross alpha, beta and gamma radiation screening for Department of Transportation (DOT) shipping purposes. Three of the six samples will be sent to an offsite fixed laboratory for analysis of strontium-90 (Sr-90), isotopic plutonium (Pu), and americium-241 (Am-241) and cesium-137 (Cs-137) by gamma spectroscopy. The three samples for offsite fixed laboratory analysis will be selected based on field screening and ARS results to ensure that a range of concentrations is represented. The samples analyzed for DOT shipping purposes will be returned to the site from ARS and used as benchmarks for the validation of on-site measurements during the VCM.

Due to the lack of data points within the western drainage, additional samples will be collected from nine locations distributed throughout the length of the western drainage (see Figure 2). Samples will be collected from every one-foot interval until auger refusal or a total depth of 5 feet is reached. The auger holes will be advanced to a



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depth greater than 5 ft bgs if field screening and ARS data do not indicate a decreasing trend in activity levels. The samples will be screened with a PG-2 analyzer in the field trailer to identify areas of elevated activity (i.e., greater than 150,000 cpm) in sediments in the drainage. Aliquots of the samples will be sent to ARS for gamma spectroscopy analysis, and to an offsite fixed laboratory for analysis of Cs-137 and Am-241 by gamma spectroscopy, isotopic Pu, and Sr-90.

The ER Project will verbally confirm and/or notify New Mexico Environment Department Hazardous Waste Bureau (NMED-HWB) staff of any changes to the schedule. Results from the sampling will be provided to NMED-HWB staff prior to implementation of VCM excavation activities and presented in the VCM Completion Report for SWMU 21-011(k). The sampling approach is described in Sections 4.2.2 and 4.2.3 of the "Voluntary Corrective Measures Plan for Solid Waste Management Unit 21-011(k) Revision 1," (LA-UR-02-3807) and summarized in the following table, which indicates the minimum number of samples to be collected:

Applicable Plans/Documents	Location	Number of Samples	Sample Type	Analyses
1. Voluntary Corrective Measures Plan for Solid Waste Management Unit 21-011(k) Revision 1, (LA-UR-02-3807)	TA-21, SWMU 21-011(k)	45 - from the western drainage	Sediment, soil and/or tuff samples	Field screening for Am-241 using a PG-2 detector
		6 - from the southern slope and near the northern fence line	Grab sediment, soil and/or tuff samples	Field screening for Cs-137 using a gamma detector
		12 - (6 from the western drainage and 6 within the fenced area of the SWMU)	Grab sediment, soil and/or tuff samples	Gross alpha, beta, gamma, and Am-241 and Cs-137 by gamma spectroscopy at ARS
		6 - (3 from the western drainage and 3 within the fenced area of the SWMU)	Grab sediment, soil and/or tuff samples	Fixed lab analysis of Am-241 and Cs-137 by gamma spectroscopy, Sr-90, and Iso-Pu

If you have any questions or concerns, please contact John Hopkins at (505) 667-9551.

Sincerely,



Paul Schumann
Environmental Restoration Project

DM/PB/vn

- Enclosures: 1) Figure 1 – Proposed grab sample locations for pre-VCM screening and characterization
2) Figure 2 – Proposed pre-VCM sample locations in western drainage

Cy: (w/enclosures)

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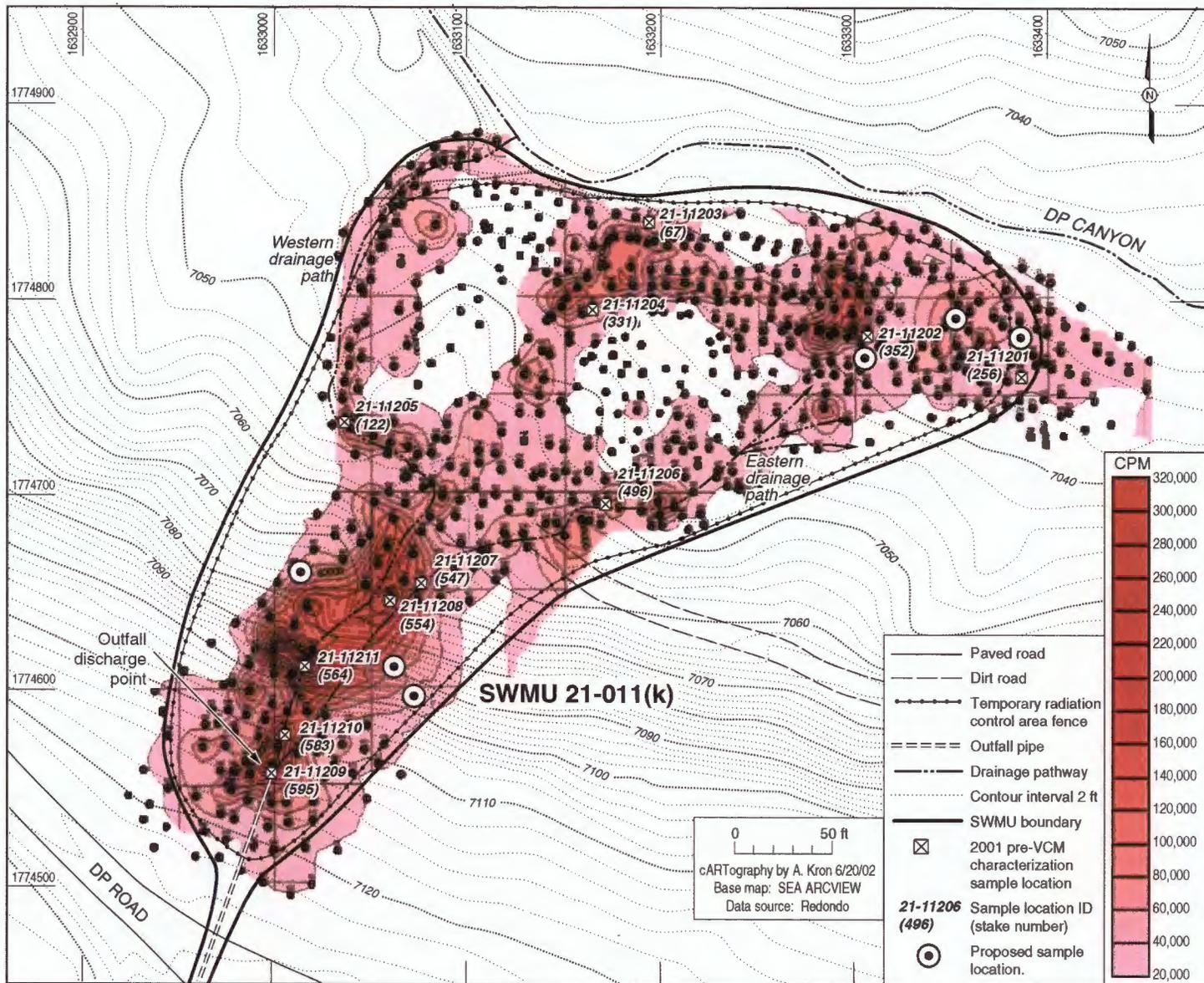


Figure 1. Proposed sample locations for pre-VCM screening and characterization. Locations are approximate and may change based on field screening.

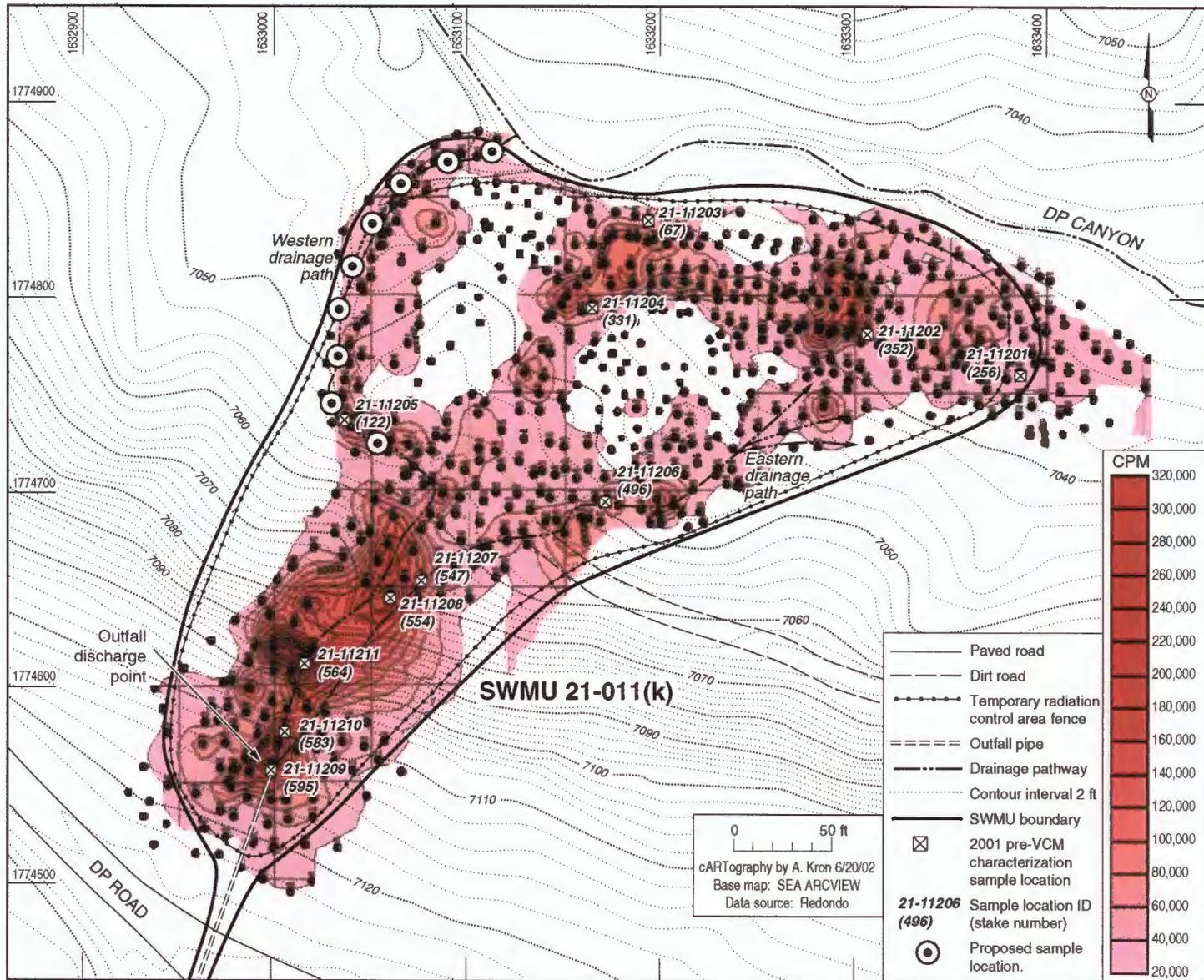


Figure 2. Approximate locations for collection of pre-VCM screening samples in the western drainage. Locations may change slightly based on field screening results.