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Molycorp

Mr. James Webb
Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop T-7E-18
Washington, D.C. 20555-0001

February 2, 2007

Former Canton Township VFW Post
Site Characterization Summary and Remediation Plan
Molycorp Washington, PA Decommissioning Project

Dear Mr. Webb:

Enclosed is the Site Characterization Summary and Proposed Remediation Plan for the former Canton Township VFW Post. This plan is submitted to both the U.S. Nuclear Regulatory Commission (NRC) and the Pennsylvania Department of Environmental Protection, Bureau of Radiation Protect (PADEP BRP) for review, comment and approval prior to the execution of any remedial activities at the former VFW Site. The contents of the Site Characterization Summary and Proposed Remedial Approach are consistent with the December 21, 2006 teleconference discussions between Molycorp, NRC, and PADEP BRP representatives.

Please do not hesitate to contact me should the NRC need any additional information or have any questions.

Sincerely,

MOLYCORP, INC.

John C. Wright, Jr.
Project Manager

Attachment

cc John Nickolson, NRC Rgn I
Robert C. Maiers, P.E., PADEP BRP
Dwight A. Shearer, P.E., PADEP BRP

Former Canton Township VFW Post
Site Characterization Summary and Remediation Plan
Washington, PA Decommissioning Project
Molycorp, Inc.

Purpose

The Veterans of Foreign Wars property (VFW Site) near the Molycorp Inc, (Molycorp) Washington, PA Decommissioning Site appears to contain slag material imported from the former Molycorp Washington Plant. Some of this slag material contains levels of uranium (U) and thorium (Th) above background levels typical of the surrounding area. The purpose of this plan is to describe the methods of surveying, sampling, and equipment used to characterize the VFW Site and to present the remedial actions required to achieve background radiation levels at the VFW Site.

Background

United Steelworkers (USW) Union Local 1031 (Molycorp's former Union) reportedly used the Canton Township VFW Post as a meeting location for a period of time while the building was in use. During this time, imported slag material from the Molycorp Washington Plant may have been used as subbase fill in driveways and parking areas of the facility. A visual inspection reveals that portions of the unpaved roadways leading up to and surrounding the former VFW Post building contain slag mixed with red dog (material produced from oxidized coal refuse).

The VFW Site consists of an approximate 12,000 square-foot area of interest surrounding the VFW building and approximately 2,200 lineal feet of roadways. The former VFW Post building, approximately 4,000 square feet in size, is not included in the characterization or remediation. Photographs of the VFW Site are provided in Figures 1 through 3.

Location

The VFW Site is located at the west end of Valley View Drive, Canton Township, near Washington, PA. This property is located less than ½ mile from the Molycorp Washington, PA Decommissioning Project Site. The location of the VFW Site is shown in Figure 4. The property is currently owned by the Washington, PA VFW Post 927.

Summary of Characterization

Characterization of the roadways and parking areas proximate to the VFW Site was performed in two phases: gamma radiation survey, followed by sampling and analysis.

On November 2, 2006 Malcolm Pirnie performed the gamma radiation survey phase of the VFW Site characterization. A push cart-mounted Mobile Radiation Mapping System (MRMS) (Figure 5) was used to scan the VFW roadways and the area surrounding the VFW Building. The MRMS is a gamma scanning system mounted on a wheeled device with a global positioning system (GPS) attached. Gamma count rates (cpm) and x, y, and z coordinates were collected by the MRMS.

The gamma radiation survey data were evaluated using a cumulative frequency distribution (CFD) method. This method allows the evaluation of the graphical representation of large quantities of related data (Figure 6). The determination of data populations was based on charted data properties and was independent of the Molycorp Washington, PA Decommissioning Site Derived Action Levels. The populations were assigned as follows:

- The lowest population, selected as the Background (BKG) population, included all data from the lowest value up to the inflection point of the curve (Figure 6).

- The second population, selected as the Middle (MID) population, extended from the inflection point of the curve to the point where the first noticeable gap in the data occurred.

- The third population, selected as the HIGH population, consisted of all remaining data above the MID population.

Table 1 shows the data population breakdown. Each data population count range was then assigned a color for mapping purposes. Subsequently, a color-coded map of the VFW Site displaying gamma radiation survey data was created (Figure 7).

On November 13, 2006 Malcolm Pirnie returned to the VFW Site to perform the sampling phase of the characterization. A systematic set of sampling locations was initially established along the roadway and around the former VFW Post building. Additionally, the surface gamma map was used to guide selection of additional sampling locations where elevated gamma measurements were observed. A total of 33 soil borings (Figure 8) were advanced along the roadways approximately every 100 feet, and in the graded area surrounding the VFW Building. Roadway borings were advanced to a depth of 2 feet or penetration of native soils. Boring location VFW-26 was sampled from 0-2 feet and 2-4 feet to reach native soils and at boring location VFW-02, samples were obtained in the 0-2 feet, 2-4 feet and 4-6 feet intervals before penetrating native soils. Table 2 shows the net Th-232, U-238, and excess Radium-226 (Ra-226) concentrations measured in the soil boring sample materials. The soil boring concentrations were background corrected using Molycorp Site background concentrations.

Remedial Plan

The MRMS gamma radiation survey indicated two occurrences of elevated concentrations above background. Soil borings VFW-17 and VFW-33 also indicated elevated concentrations above background for materials from those boring locations. Areas identified as having elevated concentrations above background radiation by either method will be remediated using a shallow surgical excavation technique. Gamma scans will be utilized to guide remedial excavations. Remediation will be complete when conditions are indistinguishable from background. Following the surgical excavation the remediated areas will be re-scanned with the ATV-mounted MRMS (Figure 9) and final status survey samples will be collected. The ATV-mounted MRMS was a recent safety

upgrade (to help prevent slips, trips and falls for the operator) that has demonstrated essentially identical gamma radiation survey results as the cart-mounted MRMS. The ATV-mounted MRMS is currently the only gamma radiation survey method used at the Molycorp Washington, PA Decommissioning Site.

Excavated areas will be backfilled with imported 2B stone, in accordance with the Access Agreement between the Washington, PA VFW Post 927 and Molycorp. Afterwards a comprehensive one (1) meter walkover dose rate survey will then be performed at the VFW Site. A survey instrument calibrated and standardized to report micro-rem per hour dose rates will be used for the final walk over dose rate survey. A final report will be prepared and issued to the U.S. Nuclear Regulatory Commission (NRC), the Pennsylvania Department of Environmental Protection, Bureau of Radiation Protection (PADEP BRP), and the Washington, PA VFW Post 927 detailing the methods of remediation, amount of material removed from the site for disposal, amount of clean 2B stone backfill used, and results of the final status survey.

Equipment to be used during excavation includes a backhoe and dump truck. Excavated materials above background radiation levels will be transported to the Molycorp Washington, PA Decommissioning Site and placed on the Transshipment Area pad for eventual rail shipment and disposal at the U.S. Ecology Grand View, Idaho disposal facility. It is estimated that less than one truck load of subbase slag material will require excavation and disposal from the VFW Site.

This remedial plan is consistent with the NRC approved decommissioning plan protocols of the Molycorp Washington, PA Decommissioning Project. The existing Molycorp Washington, PA Decommissioning Project Health and Safety Plan (HASP) and radiation protection procedures will be utilized at the VFW Site. The personnel to perform the remedial actions and final dose surveys will be those already performing similar tasks at the Molycorp Washington, PA Decommissioning Project. The PADEP BRP will be requested to provide oversight during the remediation and final status surveys, as they currently do for the Molycorp Washington, PA Decommissioning Project.

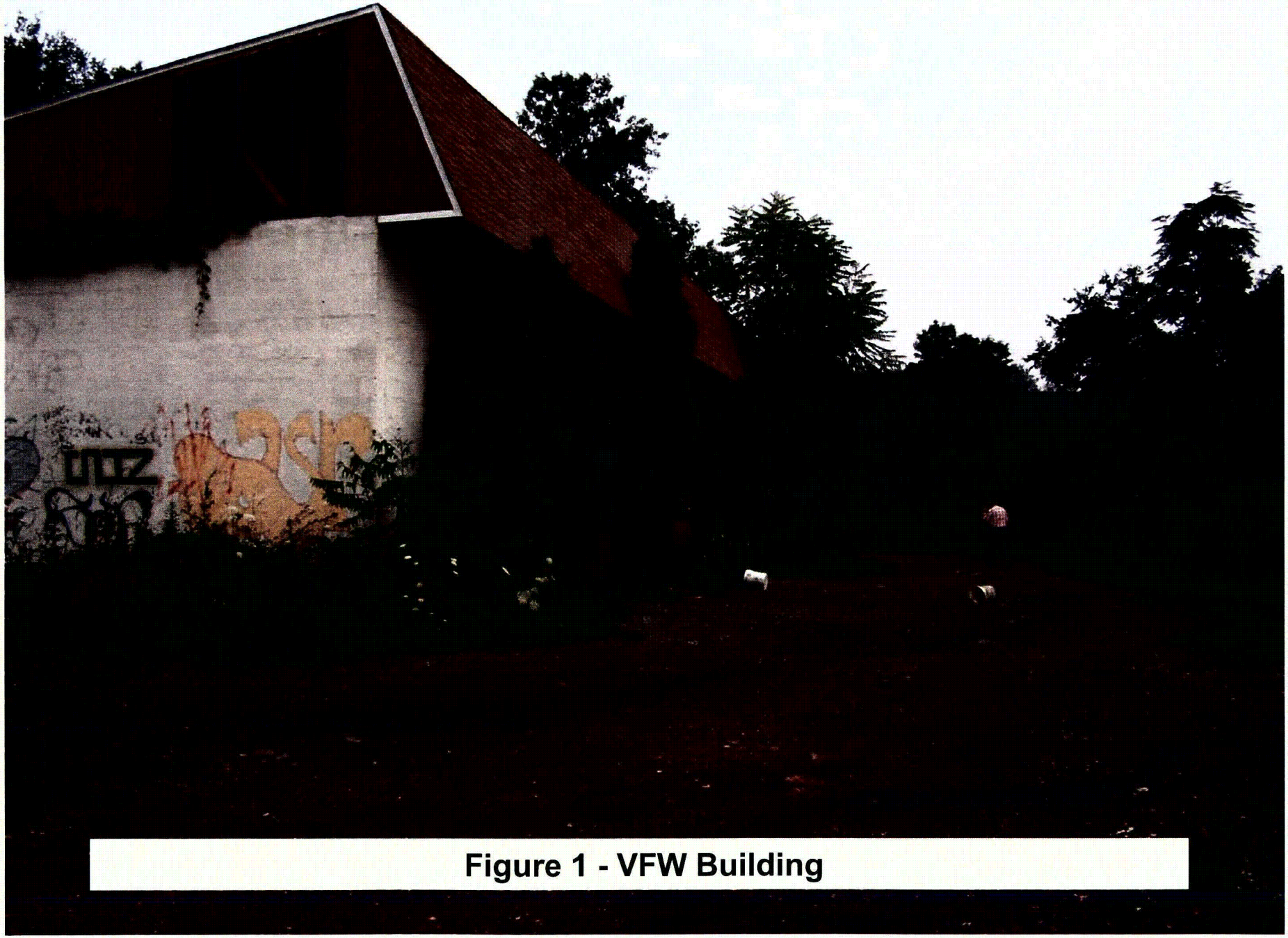

Figure 1 - VFW Building

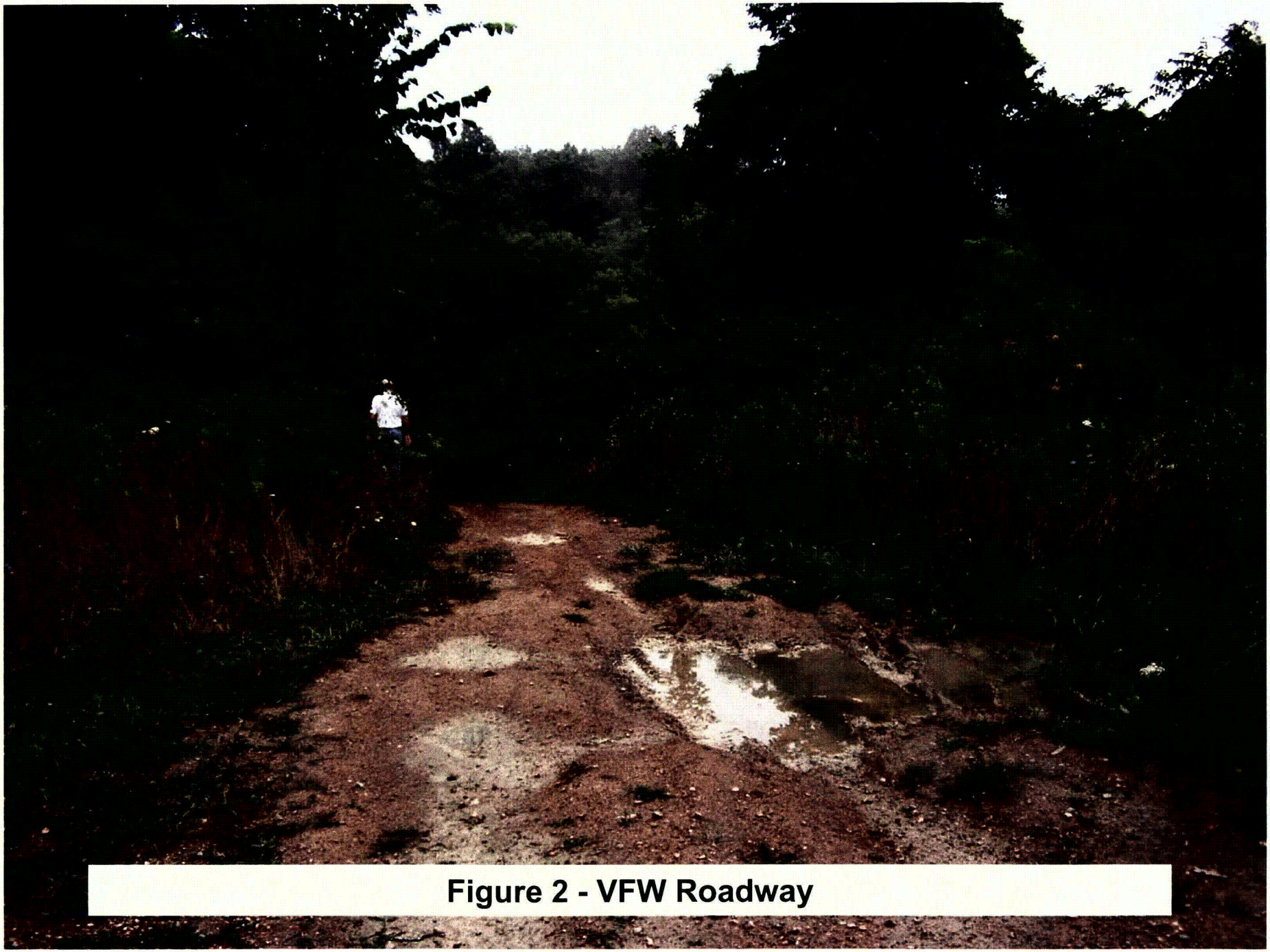

Figure 2 - VFW Roadway

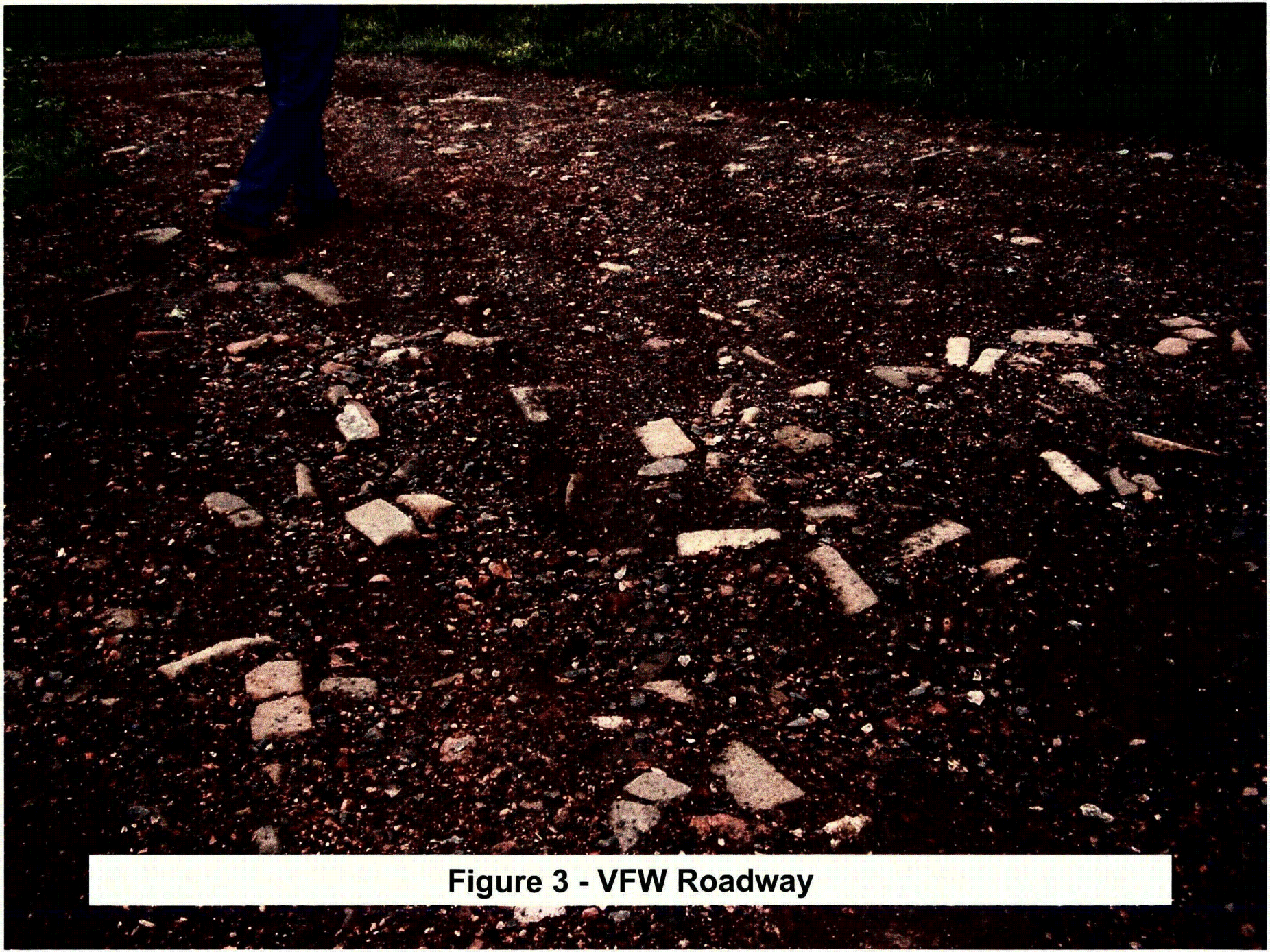

Figure 3 - VFW Roadway

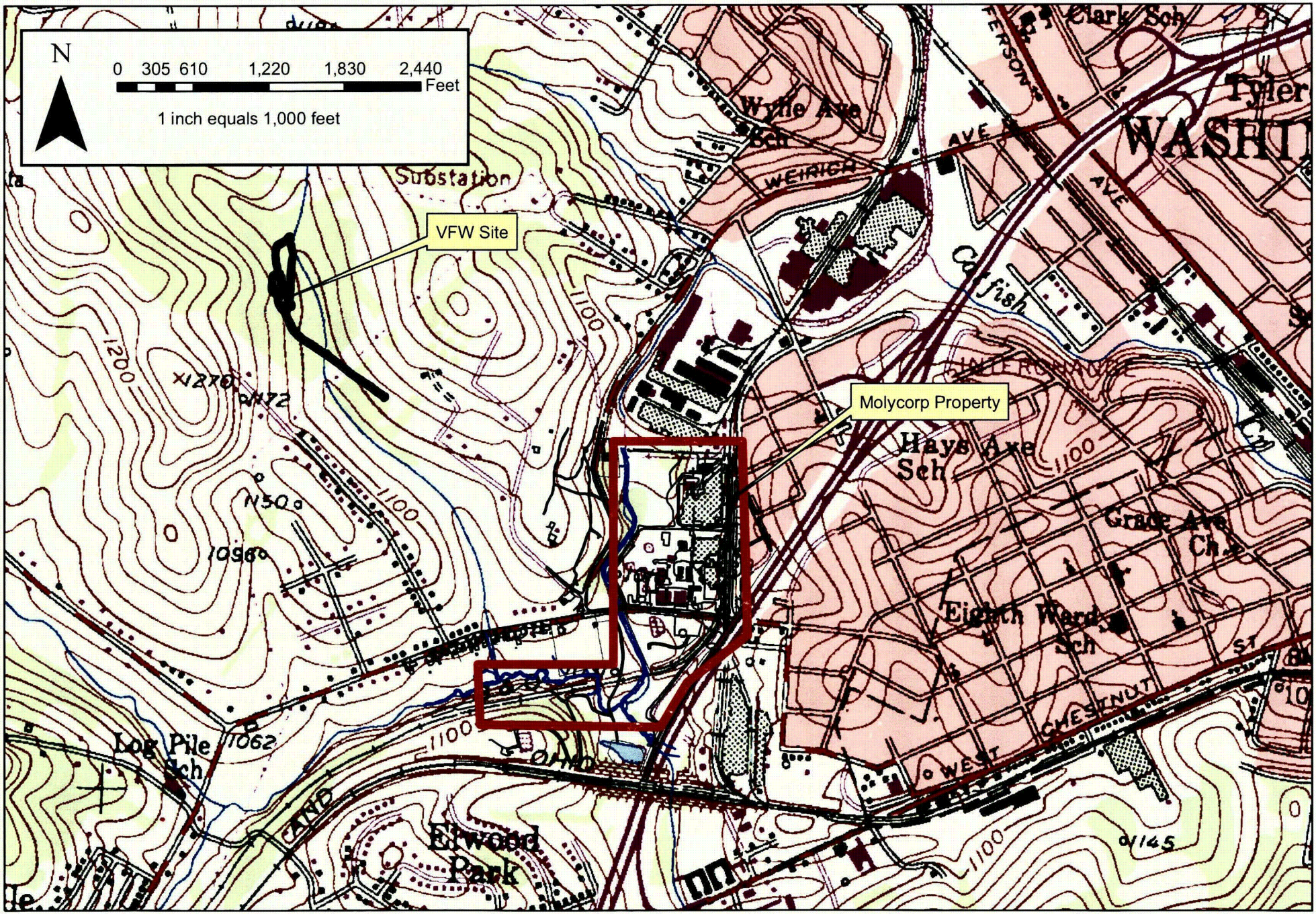

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Figure 4
Location of VFW

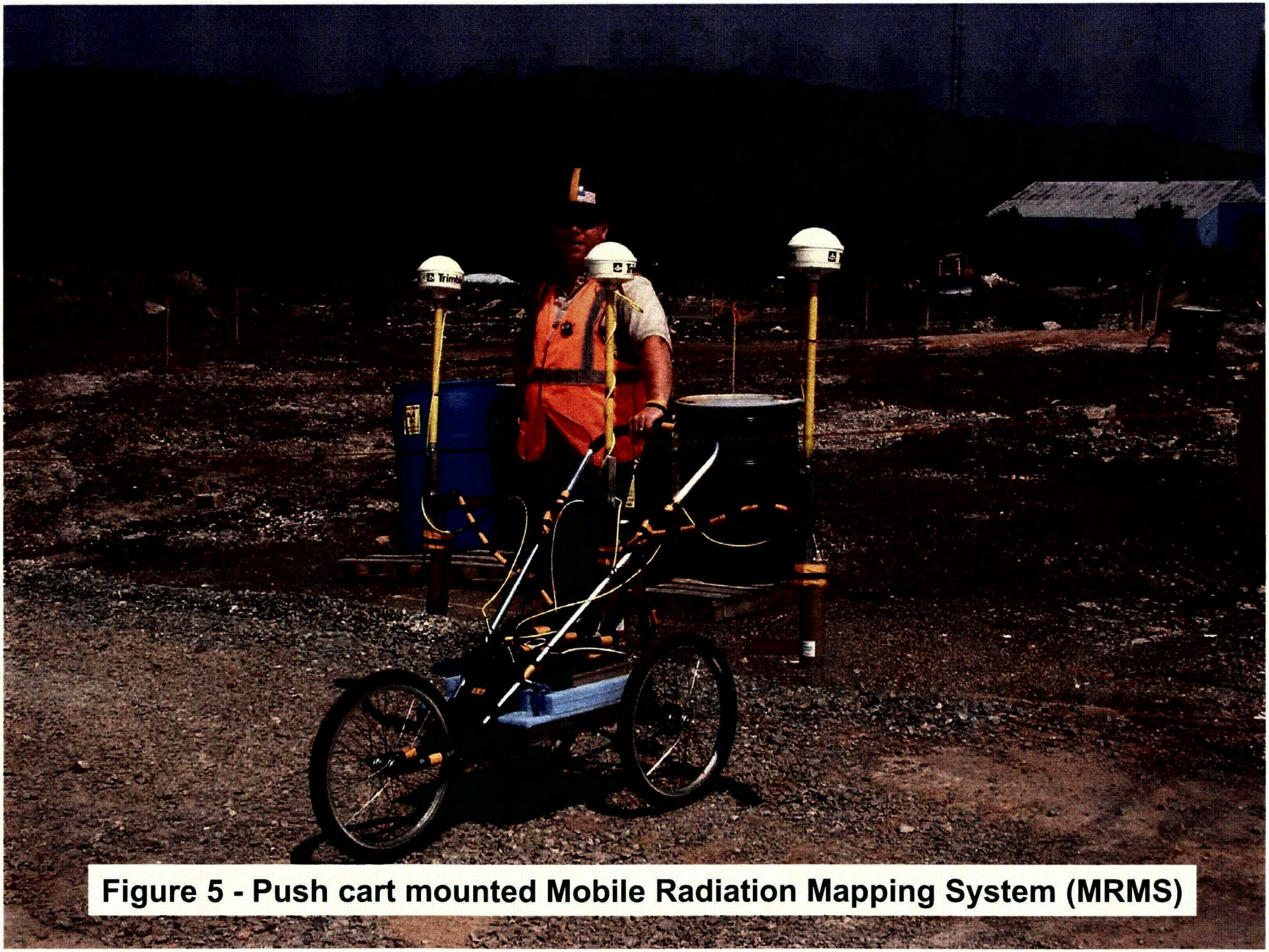
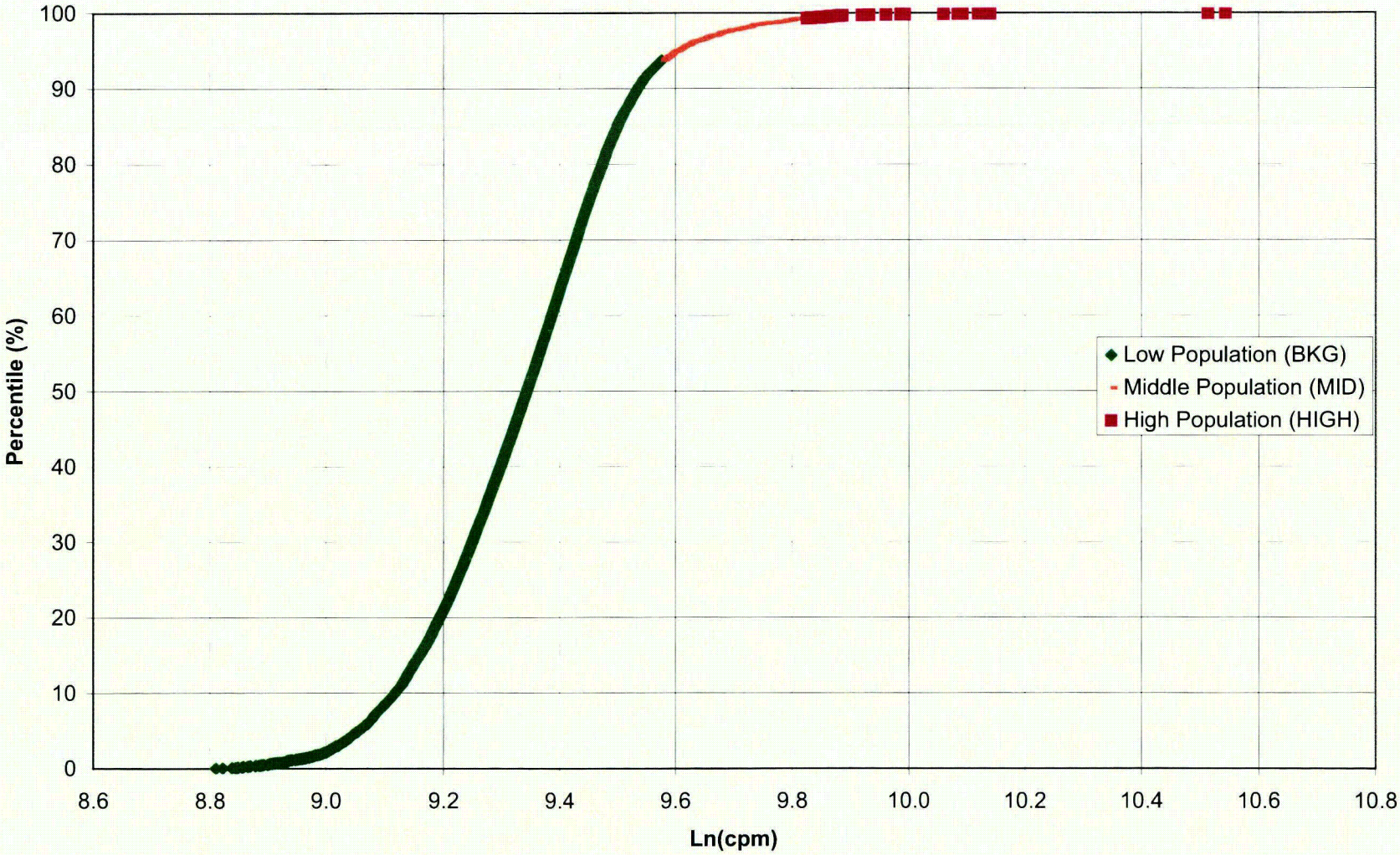


Figure 5 - Push cart mounted Mobile Radiation Mapping System (MRMS)

Figure 6 - Cumulative Frequency Distribution of Gamma Radiation Survey Data



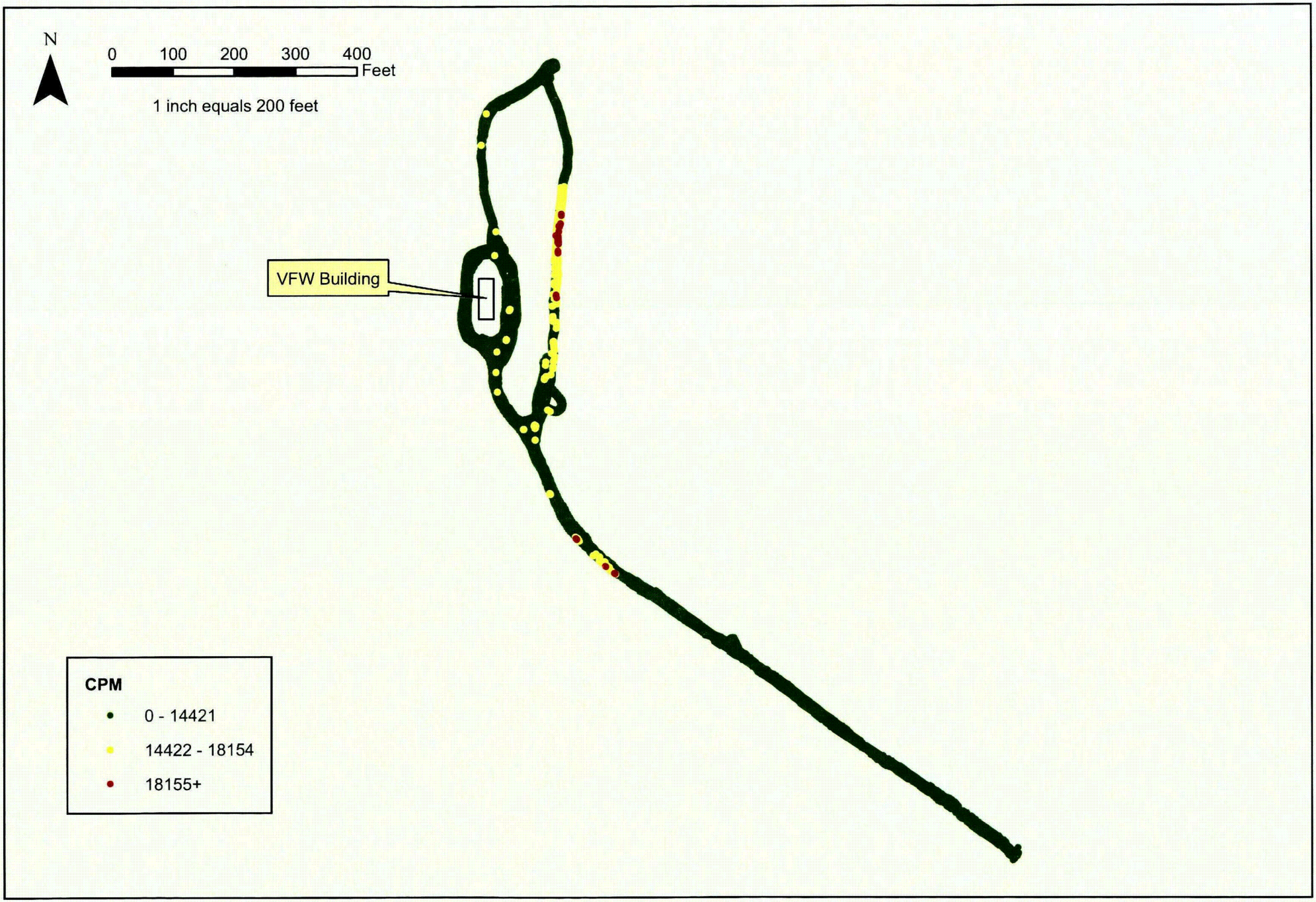


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Figure 7
MRMS Gamma Radiation Survey

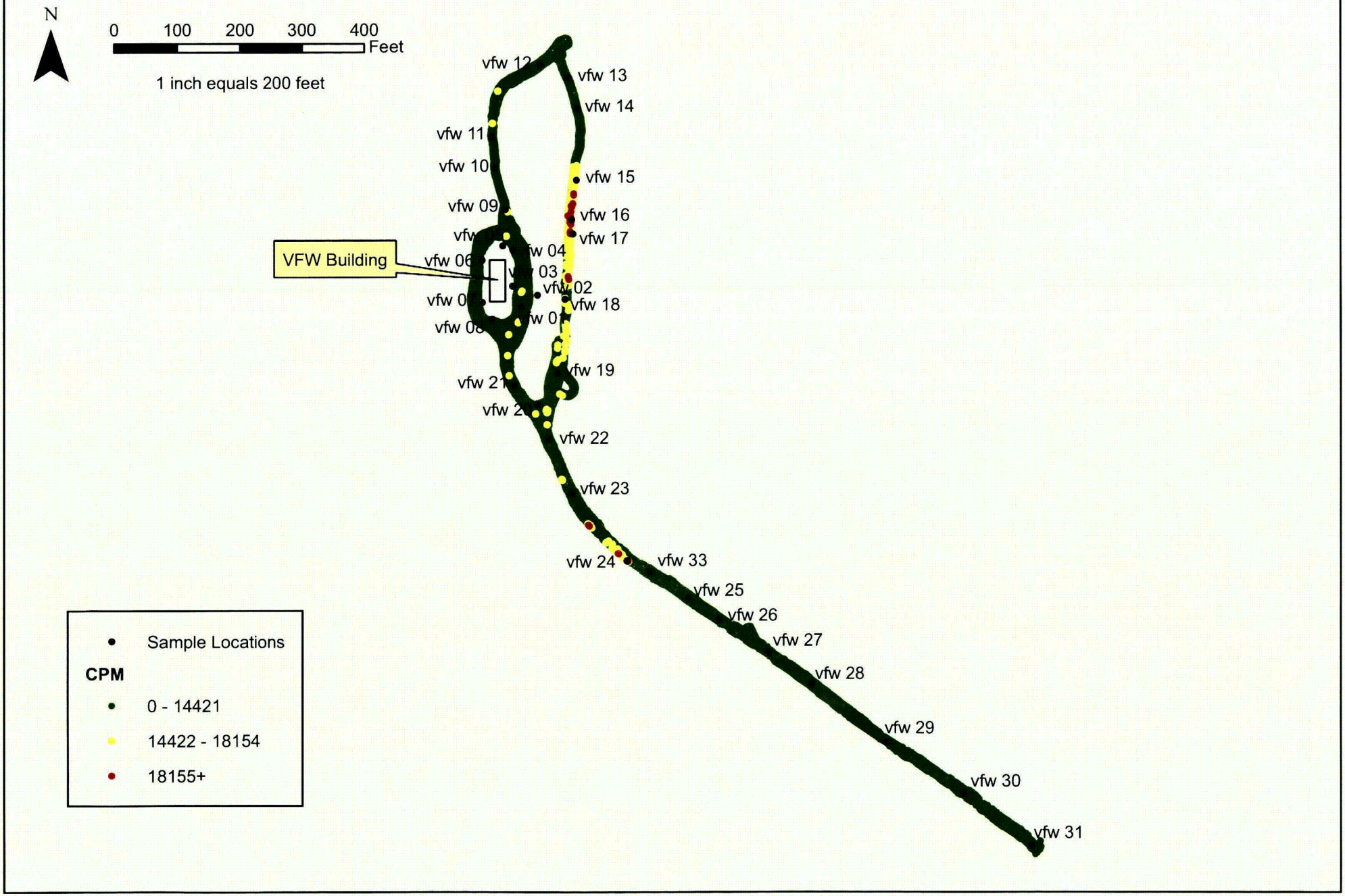

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Figure 8
Soil Borings

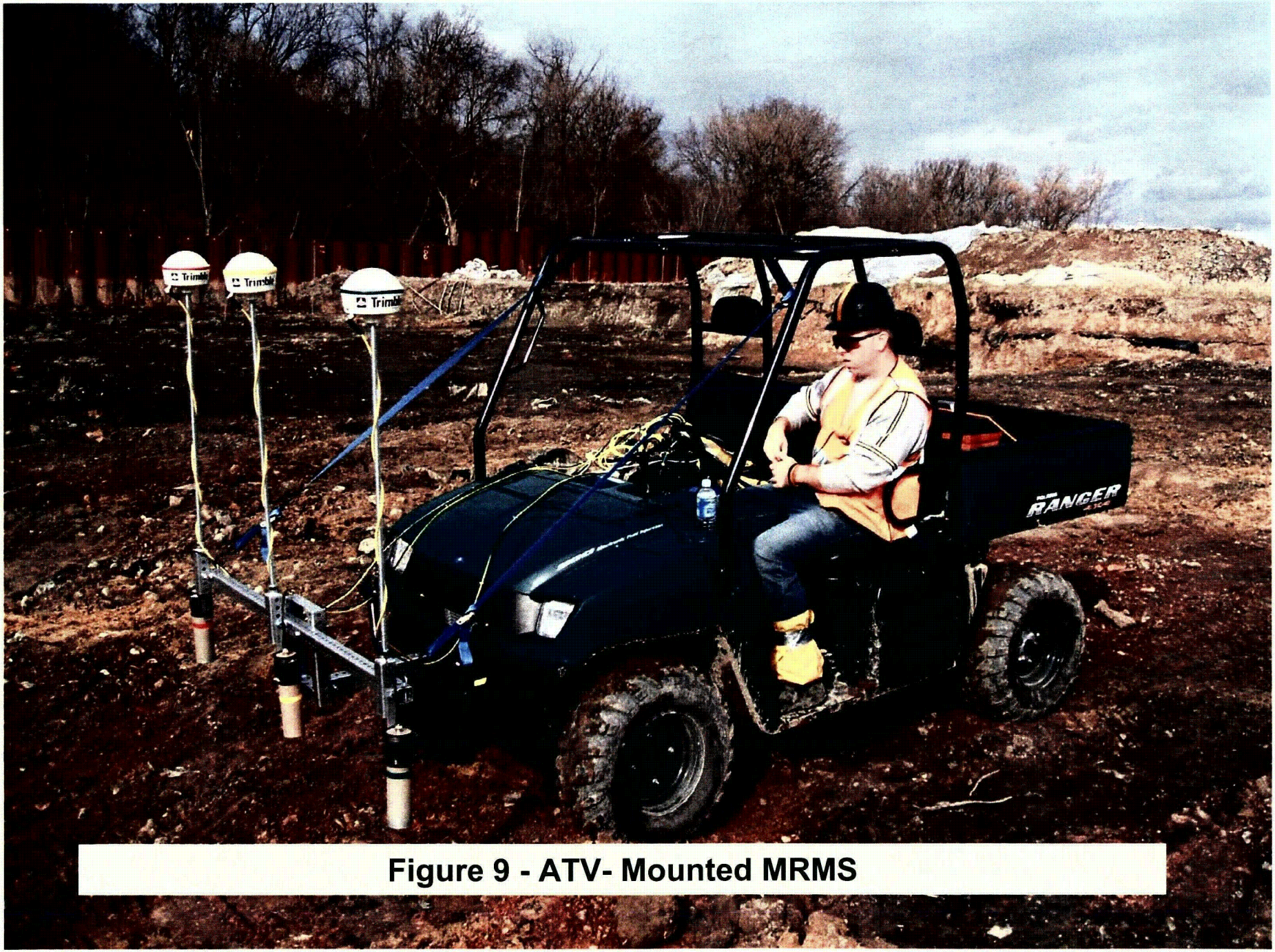

Figure 9 - ATV- Mounted MRMS

Table 1 - CFD Data Population Breakdown

Population	# Datapoints	Average (cpm)	STDEV (cpm)	%STDEV
BKG	9,266	11,301	1,349	12%
MID	262	15,685	1,047	7%
HIGH	34	21,328	4,514	21%

Table 2 - VFW Soil Boring Sample Results

SAMPLENAME	Net Th-232 (pCi/g)	Net U-238 (pCi/g)	Net excess Ra-226 (pCi/g)
VFW-01-SS1	0.06	0.00	0.48
VFW-02-SS1	0.00	0.00	0.30
VFW-02-SS2	0.00	0.00	0.00
VFW-02-SS3	0.00	0.00	0.25
VFW-03-SS1	0.00	0.00	0.46
VFW-04-SS1	0.35	1.97	0.00
VFW-05-SS1	0.05	0.00	1.08
VFW-06-SS1	0.00	0.00	0.87
VFW-07-SS1	0.00	0.19	0.79
VFW-08-SS1	0.00	0.00	0.33
VFW-09-SS1	0.16	2.37	0.00
VFW-10-SS1	0.15	1.67	0.00
VFW-11-SS1	0.00	0.00	1.42
VFW-12-SS1	0.00	0.82	0.00
VFW-13-SS1	0.01	1.18	0.00
VFW-14-SS1	0.00	1.32	0.18
VFW-15-SS1	1.97	2.44	0.00
VFW-16-SS1	3.57	0.00	1.45
VFW-17-SS1*	1378.50	140.41	0.00
VFW-18-SS1	0.15	0.00	1.33
VFW-19-SS1	0.00	0.00	0.00
VFW-20-SS1	0.00	0.00	1.51
VFW-21-SS1	0.02	1.27	0.00
VFW-22-SS1	0.00	0.50	0.68
VFW-23-SS1	0.33	0.52	0.63
VFW-24-SS1	1.21	1.58	0.18
VFW-25-SS1	0.03	0.79	0.28
VFW-26-SS1	0.26	2.81	0.00
VFW-26-SS2	0.00	0.00	1.03
VFW-27-SS1	0.00	0.05	0.67
VFW-28-SS1	0.00	1.45	0.00
VFW-29-SS1	0.00	1.42	0.00
VFW-30-SS1	0.00	0.86	0.00
VFW-31-SS1	2.01	1.62	0.00
VFW-32-SS1	No Sample Recovery		
VFW-33-SS1	10.70	155.41	0.00

Key: SS1 = 0-2 ft sampling interval
SS2 = 2-4 ft sampling interval
SS3 = 4-6 ft sampling interval

*Typical of Molycorp Ferrocolumbium slags