

RECORD# 3863

LATA: 052695

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DAILY ACTIVITY LOG

ENTERED
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6 pgs

DATE: 03 May, 1995

Technical Area: 4, 5 Operable Unit: 1129

Site Work Plan: Aggregate A, B, Q, R, SWMU No.: 4-001, 4-002, 5-001(a,b,c), 5-002, 4-003(b), 5-005(b), 5-006(c)

Signature:

Name:

Richard J. Koch

Title: Geologist

SUBJECT:

Engineering Survey and Environmental Survey for High Explosives (HE) at TA-4 and TA-5 SWMUs associated with firing pits and possible HE contamination

Personnel:

Richard Koch, Peggy Froelich, Leslie Sontag, Dami Stafford, Chris Smith(OU 1129) Mr. Roger Goldie, HE Safety Specialist, ESH-5

Time:

1:30 pm to 4:00 pm

Work Description:

Mr. Roger Goldie, HE Safety Specialist, ESH-5, accompanied the OU 1129 field team to the TA-4 and TA-5 SWMUs that could contain potential HE contamination. The purpose of the environmental survey was to inspect the SWMU sites for potential HE contamination and to determine the need for using an HE spot test kit to confirm the presence of HE. Mr. Goldie had previously inspected most of the firing sites for this purpose within the past 5 to 8 years, and showed the field team what weathered HE might look like, so the team could assist in the survey. Mr. Goldie stated that using an HE spot test kit at random sites would not be useful in detecting HE contamination, but that the test kit should only be used on suspected HE materials. Ms. Froelich surveyed the areas for possible radioactive contamination.

SWMU Nos. 4-001, and 4-002

The TA-4 firing pit and associated canyon-side disposal area were surveyed for possible HE contamination. The firing pit area has been D&D, and several dozer push-piles near the edge of the mesa north of the former firing pit site were inspected. A probable dozer cut extends north-south to the edge of the mesa from a point about 50' west of the firing pit site. The old dozer trench contains low berms on the west and east sides, and is adjacent to a large dead Ponderosa Pine tree that is about 40' from the edge of the mesa. Mr. Goldie and the field team searched the area for possible HE materials, but no potential HE was found. Numerous pieces of wire, metal, and other debris were noted in the area.

SWMU Nos. 5-006(c), and 5-005(b)

The former calibration-shop-darkroom building site TA-5-5 (SWMU No. 05-006(c)), and the associated pipeline outfall (SWMU No. 05-005(b)) were surveyed for potential HE contamination. Mr. Goldie recanted the procedure for dealing with wooden structures that were contaminated with HE, and said that burning was an efficient method for eliminating the contamination. The possible location of the outfall was investigated, and at least 2 channels for surface runoff drain away from the former building site. A berm of tuff boulders is present at the south edge of the mesa south of the former building site that appear to have been dozed into place, probably when the site was cleared prior to construction of the building in 1944. The berm extends along the edge of the mesa for about 150' and is about 40-50' south of the former building TA-5-5. The location of the outfall



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Name:

Richard J Koch Title: Geologist

Work Description, Continued:

was not established with certainty, and additional engineering surveys of the site will be needed to locate the outfall. No potential HE contamination was noted by Mr. Goldie.

Mr. Smith located a piece of shrapnel that was surveyed for radioactivity by Ms. Froelich. The shrapnel was scanned at 5360 cpm beta-gamma radiation, and 209 cpm gamma radiation (measured from the back-side of the pancake probe). The shrapnel was located about 150' southeast of the former building site and about 30' below the rim of the mesa on the south facing mesa edge slope. The soil material adjacent to the shrapnel was at background levels. An orange-painted wooden stake was driven into the ground next to the shrapnel to mark the site. The shrapnel appeared to be a gray metal that has oxidized on the upper surface. Soil stains were present on the lower surface, but the metal has not rusted. The oxidized surface is a dark gray-brown. The object was twisted, bent, and contorted, and appeared to be quite heavy and dense. The shrapnel debris is not considered to be associated with SWMU Nos. 5-005(c) or 5-005(b), but may be associated with the TA-4 or TA-5 firing pit SWMUs.

Melted metal resembling lead (and somewhat resembling the shrapnel in color, but not in shape) at the burned building site contained 244 cpm beta-gamma. Other debris is present at the former building site, including many rusted nails, wooden and burned wood (charcoal) fragments, melted glass, pieces of wire and rubber, etc.

SWMU No. 5-003

The former underground calibration facility site was surveyed by Mr. Goldie for potential HE materials. The white material in the area west and south of the 35' deep shaft were surveyed, and Mr. Goldie said that the color resembled a type of HE, but the weight of the material was too light to be HE. Mr. Goldie applied heat to a small piece of the white material, which melted but did not burn, supporting the determination that the material is probably some kind of paraffin wax material.

SWMU Nos. 5-001(a, b) and 5-002

The TA-5 firing pit sites and the associated canyon-side disposal sites were surveyed for potential HE contamination. Mr. Goldie reported that 5-8 years ago he had surveyed the sites for possible HE contamination, and that Ms. Fatty Mahoney (sp?), and others at the laboratory had previously investigated the site for contamination (possible soil gas survey?), and high school students had been employed at the site to pick up trash at about the same time. Mr. Goldie and the field team did not find any HE material.

Ms. Froelich surveyed the previously observed hot spot at the northeast corner of preliminary geophysical grid #1, near rad grid site 05-6035. The soil at site 05-6035 contained 470 cpm beta-gamma, and soil in the area of a piece of shrapnel located about 4' southeast of site 05-6035 contained 379 cpm beta-gamma. The soil-gravel material at the site of a purple pin flag contained 642 cpm beta-gamma. Tuff background in the area varies between 200-300 cpm beta-gamma.

SWMU No. 5-001(c)

The site of the far firing pit #3 was surveyed for potential HE materials. Mr. Goldie agreed that firing pits on the edge of the mesas at TA-16(?) are similar to the site at the east edge of the mesa, and concurred that the site was probably the far firing pit. Fluted metallic shrapnel in the base of the

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firing pit and in the erosional channel below the firing pit contained 257 and 182 cpm beta gamma, and two gravel piles at the edge of the mesa above the firing pit contained 191 and 176 cpm beta-gamma. The circular depression east of the firing pit site was surveyed for potential HE, but Mr. Goldie concluded that the site was probably an Anasazi structure. No HE material was located at SWMU No. 5-011(c)

Mr. Goldie concluded that no materials that would compel using an HE spot test kit were located, but that during the course of the investigations personnel should remain observant for potential HE materials, and to contact him if any unusual materials are located.

