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DAILY ACTIVITY LOG

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ENTERED

DATE: 09 December, 1994

Technical Area: 3505 RIK Operable Unit: 1129

Site Work Plan: Aggregates A, B, R, SWMU No. 04-001, 05-001(1, b, c), 5-005(a, b), 5-008(b, c, e)

Signature: [Signature]
Name: Richard J. Koch Title: Geologist

SUBJECT: Engineering Survey, SWMU Nos. 4-001, 4-003(b), 5-001(a, b, c), 5-005(a, b), 5-008(b, c, e)

Personnel: Richard Koch, Darril Stafford
Time: 11:00 am to 4:00 pm

Work Description:

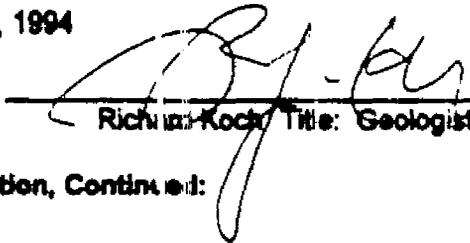
Engineering Surveys were conducted to more accurately ascertain the locations of SWMUs at Aggregates A and B, former TA-4 and TA-5. Additional engineering Drawings of former TA-4 were obtained. ENG-R-70 (1951) and ENG-R-71 were obtained from Engineering Services. The sheets show the former locations of building TA-4-1 (SWMU No. 4-004, Aggregate (1)), and firing pit #1 at former TA-4, SWMU No. 4-001. Also, ENG-R-118 was used to determine the locations of the firing sites. Air photos were checked and scaled, as described below, to check the accuracy of the engineering drawings.

Air photos dated 11/18/60 were reviewed for the location of the former firing site at TA-4. The distance to the firing site from the turn off to Ten Site Canyon, at the location of control monument C5203, was measured from the air photos and compared to measurements on drawings ENG-R-118. The scale of the air photo was determined by measuring the distance from the site of C5203 to C0501, which is at the turn-off to the former building TA-5-1 (where is calibration chamber, TA-5-20 is now located). The distance on the photo was measured to be 4.3", and the distance was determined from FIMAD drawings (distance command in AutoCAD drawing) to be exactly 3176'. This calculator an air photo scale of 1" = 740'. The distance between C5203 and the second turn-off to the firing pit (SWMU No. 4-001), along Puye Road, was determined to be 900 to 920'.

Air photo dated 8/25/60, number 19-16, was also reviewed to determine the locations of the former firing pits. On this photo, the distance between C5203 and C0501 was measured to be 5.27", giving a photo scale of about 1"=600'. The distance on the photo between C5203 and a point south of SWMU No. 4-001 on Puye Road was measured/calculated to be about 960'. The distance from the road to the pit in a north-south line, was determined to be 150' to the center, and 120-180' to the south and north edges of the former pit, respectively.

Map ENG-R-118 was measured for distance from C5203 to the point on the road south of the firing pit. The distance was determined to be between 975' to 990'. This map was digitized onto the FIMAD AutoCAD drawing of TA-52 and TA-5 areas. The results of digitizing the location of the firing pit SWMU 4-001 indicated that the distance from C5203 to a point on Puye Road south of the former firing pit was 150', and the center of the pit was 150' north of the road. More accurately stated, the FIMAD map shows that the center of SWMU No. 4-001 is located 231' N51°W from C5204. Former building TA-4-13 is located 209' N74°W from the center of the former firing pit.

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Air photos dated 8/28/65, numbered 8-14, 8-15, and 8-16) were reviewed for the location of the firing pits at TA-5, SWMU Nos. 5-001(a, b, c). The firing sites are difficult to resolve in these photos, even under stereo viewing, probably because the sites had been D&D prior to the time of taking the photographs. However, the locations of the former firing sites appear as white spots on the photos, and the location of former structure TA-5-17 can be distinguished in relation to the other features at the site. Photo 8-15 was scaled between known points C5203 and C0501, measuring 3.15", for a scale of 1"=1000'. The distance from C0501 to firing pit #1 was measured to be about 1400 to 1420', to firing pit #2, 1560-1600', and to the probable site of former firing pit #3, about 1790'. These distances were measured on drawing ENG-R-118, and the locations of the firing pits were similar, suggesting that the old engineering drawings accurately depict the locations of the former structures and firing sites.

The firing sites were digitized into the FIMAD drawing using AutoCAD and drawing ENG-R-118, and the distances from C0501 to the firing pits were again measured. The distances were found to be comparable to those distances obtained from the air photographs, thereby also corroborating the accuracy of the engineering drawings. The digitized TA-5/FIMAD drawing indicated that SWMU No. 5-001(a), firing pit #1 is located 65' N41°E from C0501, and SWMU No. 5-001(b) is located 193' N71°E from C0503.

The distances from known control points to former firing sites at TA-5, as obtained from engineering drawings digitized into FIMAD drawings, were used to locate the firing sites at TA-4 and TA-5 with the assistance of Darrell Stafford. SWMU No. 4-001 was located and the center of the former firing pit was staked. The area north of this site was investigated for a canyon disposal site, SWMU No. 4-002. A probable dozer push-pile and dozer track is located north of the site of the firing pit.

SWMU No. 4-003(b) is associated with a pipeline and outfall from former building TA-4-13. A trench in the tuff was located that is about 3' wide and trends to the north. The trench is located north of an angle iron stake that is set along the buried electrical line, about 175' west of the firing pit. The trench extends for a distance about 30' toward the edge of the mesa. Several pieces of 4" (?) pipeline that are filled with concrete or other solid material are located between the trench and the firing pit site. The pipe appears to have been cut into short (4") pieces, possibly during D&D of the site. Engineering drawing ENG-R-70 shows a 12" concrete drain pipe at the TA-4 firing site, which was located in the vicinity of these pieces of pipe.

The locations of SWMU Nos. 5-005(b), a former pipeline and outfall, and SWMU No. 5-006(c), potential soil contamination beneath former building TA-5-5, were investigated. The site of the former building was located south of Puye Road about 350' east of water well PM-5. The site is now marked by an angle iron stake (similar to the stake marking former location of building TA-4-13, previously mentioned) into a mound of burned debris. Materials at the site were obviously burned, as evidenced by melted glass and pieces of charred wood remains at the site. A push-pile of tuff rocks and dead trees is present along the south side of the mesa south of the former site. The site has been cleared and bladed in the distant past. The outfall for SWMU No. 5-005(b) was not obvious, however, there is one fill gully channel that drains the site, which would be the obvious natural drainage from the former building site. The mound of debris probably represents the site of former building TA-5-5, and will be the site for collecting samples. Faint signs of the loop driveway

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that served 5-5 from Puye Road are visible north of the site. The driveway must have been bladed and covered with quartz gravel, as 1.5-2" gravel remains along a slightly leveled and cleared area that corresponds with the location of the driveway.

A measuring wheel was used to measure the distance from C0501 east 1460' - 1480' to the location of SWMU No. 5-001(a), the former location of firing pit #1. This site is an open area covered by weeds and debris, with scattered shrapnel. This site was staked, and a brief reconnaissance of the area was performed to investigate the former location of building TA-5-4, the control building. The relative location of the firing pit in relation to the remains of the control building site appear correct. The location of SWMU No. 5-005(a), the French drain from building 5-4, and SWMU No. 5-006(b and c) is now a gently sloping, flat, grassy area that has been D&D. A few wood fragments from the former building or the observation tower adjacent to the building were located. Abundant quartz gravel in the area help denote the approximate location of these structures.

A reconnaissance of SWMU No. 5-002, the canyon side disposal, north of the mesa edge, north of SWMU 5-001(a) and (b) was performed. Several pieces of shrapnel and other debris were located and marked with pin flags. A possible push pile at the edge and on the edge of the mesa north of former firing pit #1 may be present in an area covered with scrub oak bushes. SWMU No. 5-001(a) is located across the road and northeast from control monument C0503. Former structures TA-5-17 and the control building (TA-5-4) are across the road and northwest of control monument C0503.

SWMU No. 5-001(b), former firing site #2, was located about 200' east of SWMU No. 5-001(a). This is a large open area covered with weeds that has been D&D. The area contains some shrapnel and debris. SWMU No. 5-002, the canyon side disposal site north of SWMU No. 5-001(b) was investigated. Directly north of the firing pit site a large piece of metallic shrapnel was located partially buried at the edge of the mesa. A large piece of metal 3'x3'x1" thick was located in a suspected push pile near the edge of the mesa.

About 200' east of SWMU No. 5-001(b) is a site suspected of being the 3rd firing pit, SWMU No. 5-001(c). An open area northwest of control monument C0504 contains a trash pile and debris in a semi-linear pile extending from the road to the north-northwest for about 40'. No obvious firing pit is noted at this site, although scattered trash and shrapnel are located in the area. The trash pile contains gravel and several large pieces of concrete slabs that have been dumped at the site. A bare soil area about 3'x5' is present at the site, which may represent where some piece of wood or concrete had been placed in the past. No vegetation grows on this small area.

Puye road east of control monument C0504 was investigated for the possible location of SWMU No. 5-001(c). No evidence of activity off this road was noted. The mesa becomes a ridge beyond C0504, and room enough for activities along Puye Road for 1000' to the east was not noted.

The small spur road that turns to the southeast from Puye Road east of C0504 was investigated for the possible location of SWMU No. 5-001(c). At the end of this short spur several small piles of quartz gravel were noted, and evidence of possible site leveling during the distant past. One gravel pile has obviously been larger, and has been partially removed. The pile of gravel pile mentioned in the Work Plan for OU 1129 associated with this SWMU may have been located at the end of this

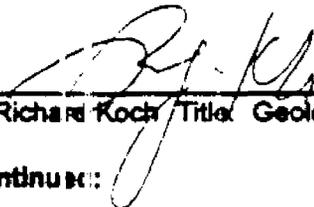
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Name:


Richard Koch Title: Geologist

Work Description, Continue:

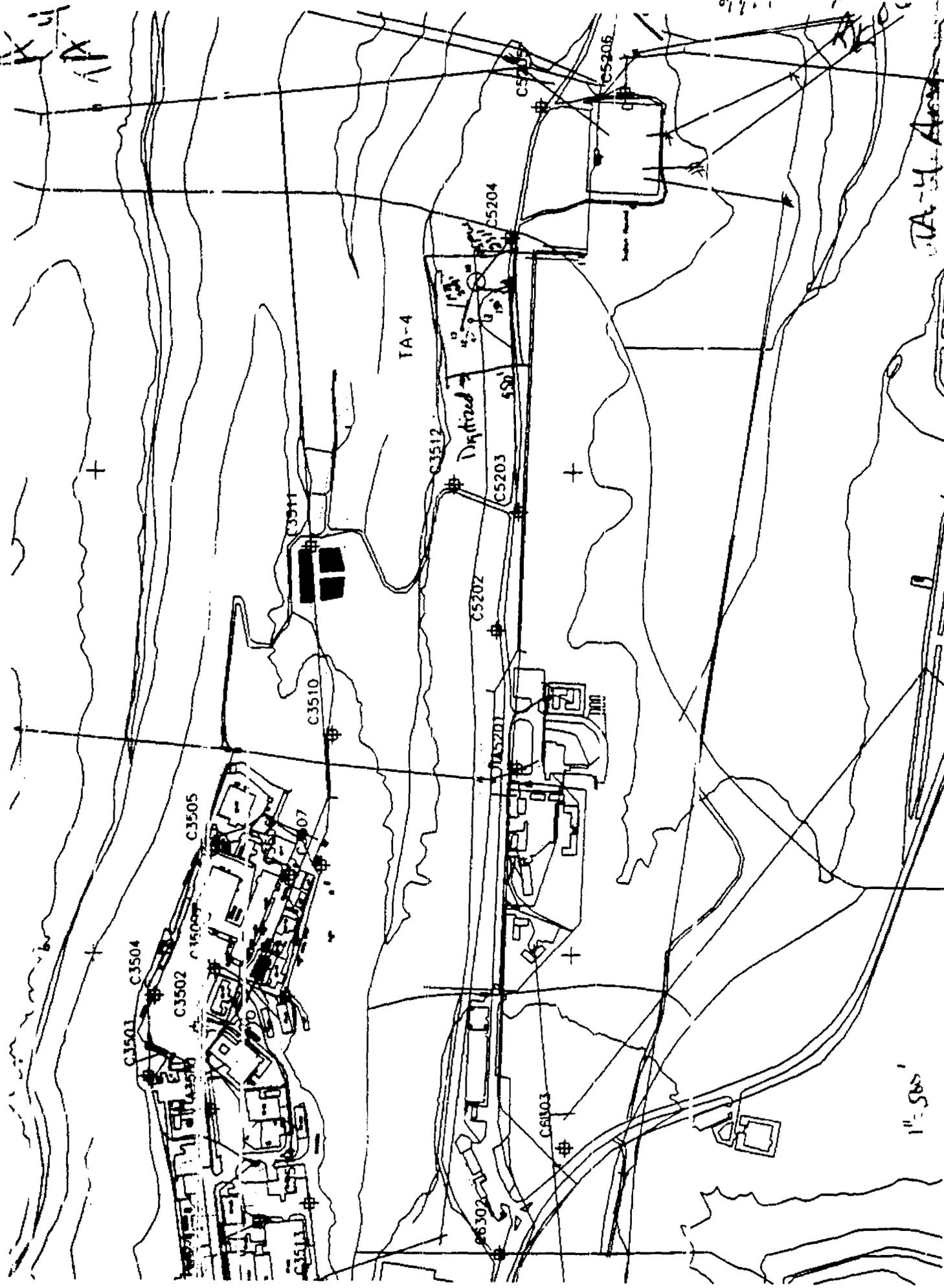
short road. The description being "just off the toe of the mesa" would also fit this location. The small mesa spur in this area has been the site of past environmental monitoring, evidenced by Wenzel signs and other metal stakes and debris scattered about. Abundant Anasazi shard fragments are on the ground south of Puye Road in the vicinity of the former firing pits.

Copies of the TA-4 and TA-5 firing site locations digitized onto the FIMAD map are attached for reference.

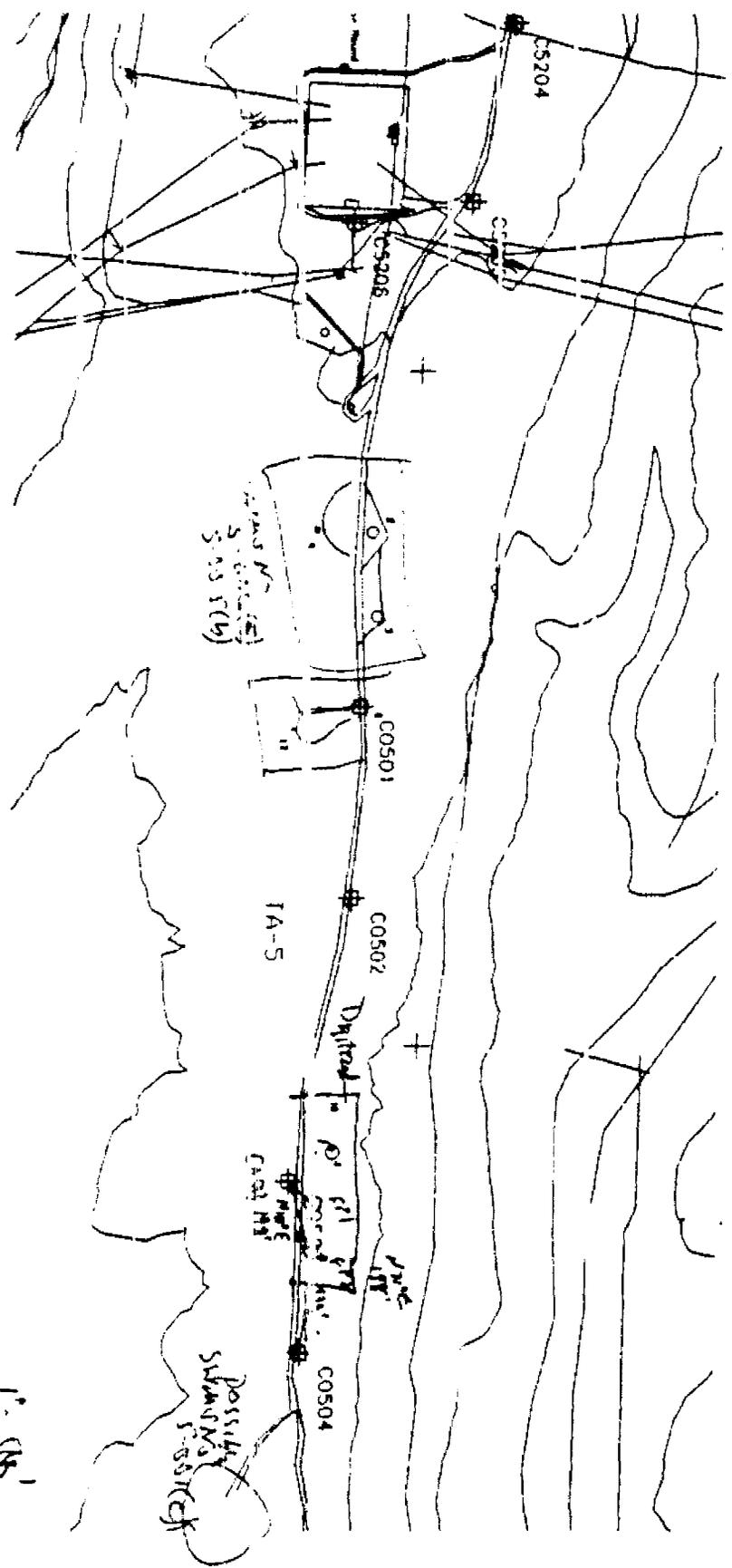
TA-4

97-11

TA-4 Area



1" = 500'



BA

TA-S
Area
1" = 500'

1" = 500'