

HISTORY OF THE MOTOR POOL AREA

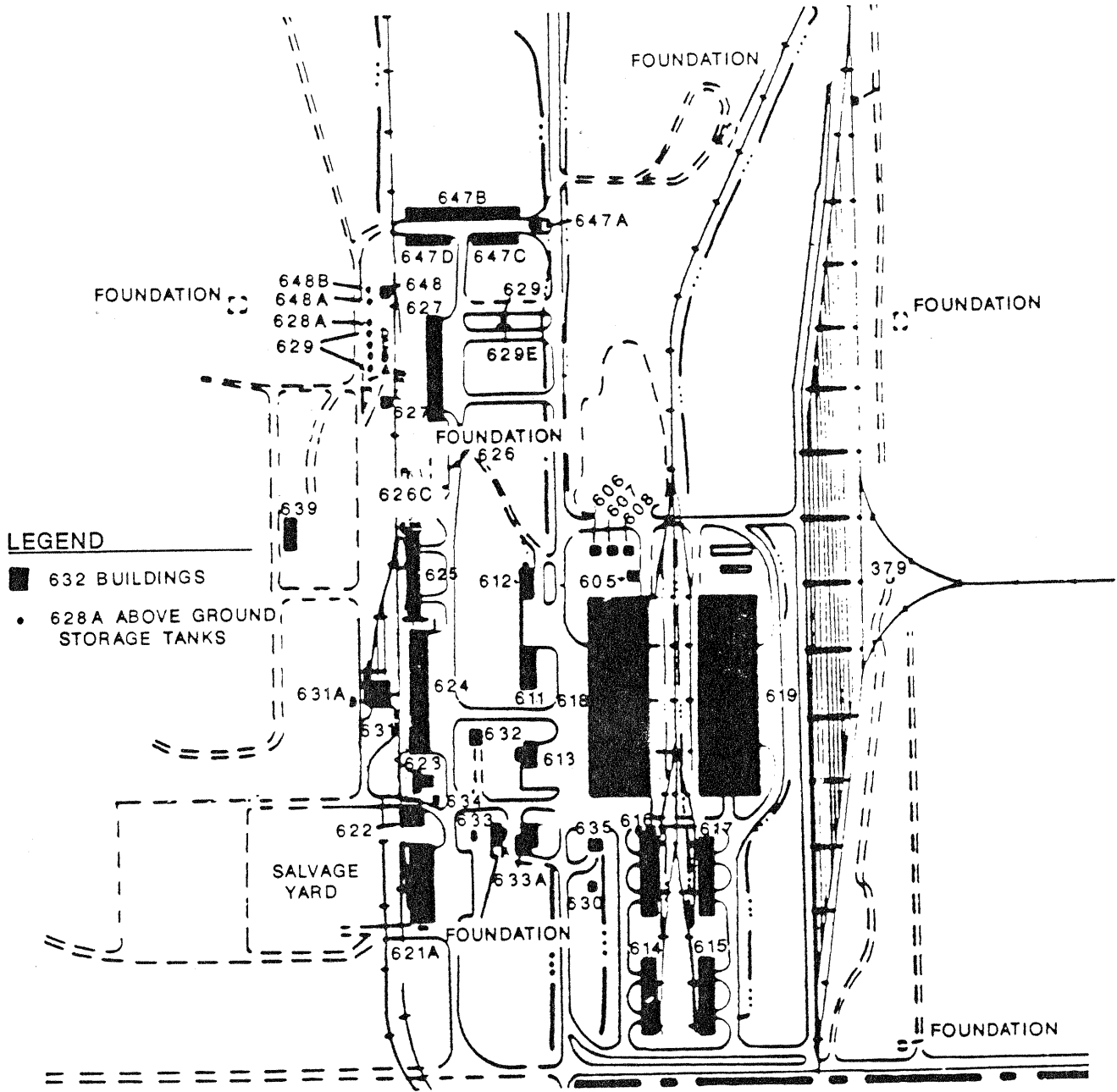
Rocky Mountain Arsenal (RMA) occupies more than 17,000 acres (approximately 27 square miles) in Adams County, directly northeast of metropolitan Denver, Colorado (Figure 2-1). The property was purchased by the U.S. government in 1942 for use in World War II to manufacture and assemble chemical warfare materials, such as mustard and lewisite, and incendiary munitions. Starting in the 1950s, RMA produced the nerve agent GB (isopropyl methylphosphonofluoridate) until late 1969. A significant amount of chemical warfare materials destruction took place during the 1950s and 1960s. Since 1970, RMA has primarily been involved with the destruction of chemical warfare materials. The last military operations at RMA ended in the early 1980s. In November 1988, the RMA was reduced to inactive military status reflecting the fact that the only remaining mission at the Arsenal is contamination cleanup. In addition to these military activities, major portions of the plant facilities were leased to private industries, including Shell Oil Company, for the manufacture of various insecticides and herbicides between 1947 and 1982.

The Motor Pool Area is located in the southeastern corner of Section 4 on the RMA. The site was acquired by the U.S. Army in 1942 as part of RMA, and it has been used since the 1940s for servicing equipment, vehicles, and railroad cars, as well as for storing fuel, road oil, and flammable liquids. Figure 2-2 shows the Motor Pool Area.

An aboveground storage tank farm in the northern part of the Motor Pool Area has been used since the early 1940s for storage of diesel fuel, gasoline, road oil, and drain oil. There is a record of a break in an underground line connecting these tanks to the service station to the east, creating a diesel fuel spill. Other spills related to piping from underground tanks and tanker truck leaks have also occurred in the service station area (Ebasco 1989).

In the early 1950s, several buildings in the northern part of the Motor Pool Area were used for pesticide and herbicide storage. During this same period, Julius Hyman and Company operated laboratories for the study of insecticides and plant pathology near the southern part of the Motor Pool Area. Shell Oil Company took over these facilities in 1953 and maintained an agricultural research and bioassay laboratory there until 1957 (Ebasco 1989).

The site was surveyed in 1986 for recent trichloroethylene (TCE) use because TCE had been found in groundwater monitoring wells near the Motor Pool Area and in downgradient Adams County water supply wells in 1985; however, no TCE use was found during the 1986 survey. Records indicated, however, that solvents probably were used for cleaning and repairing equipment and vehicles in buildings surrounding the Motor Pool

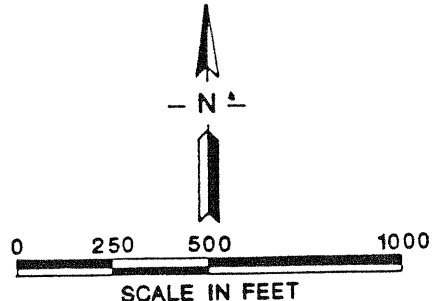


- LEGEND**
- 632 BUILDINGS
 - 628A ABOVE GROUND STORAGE TANKS

RMA

	23	24	19	20
27	26	25	30	29
33	34	35	36	31
4	3	2	1	6
9	11	12	7	8

KEY MAP



SOURCE: EBASCO, MOTOR POOL AREA CONTAMINATION ASSESSMENT REPORT, 1988

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MOTOR POOL AREA VICINITY MAP
Figure 2-2

Area from the early 1940s until at least 1985. Caustics, rust inhibitors, fuel, oil, and grease were also used, and metal surfaces of the equipment and vehicles were stripped and sanded there. Some of the buildings were known to discharge water and other liquids and residues from these maintenance operations through floor drains and pipes into unlined ditches. The Motor Pool Area is still in use for motor vehicle and railcar maintenance (Ebasco 1989).

Two soil gas surveys were conducted in the Motor Pool Area in 1986 to aid in defining any plumes of TCE contamination in the groundwater. The studies defined an apparent TCE soil gas concentration in the area north of the roundhouse (Building 631) and a soil gas plume extending to the northwest (Ebasco 1988). However, no specific source was identified.

Another soil gas survey conducted in July 1989 traced the TCE source to an area adjacent to Building 624 where a pipe from a floor drain was found to discharge into an unlined ditch (WCC 1989). Historical records have been found that indicate that TURCO® (a TCE-based solvent) was used to clean equipment in Building 624. Figure 2-3 shows the soil gas plume that was used to define the source area. Concentrations of TCE in the soil gas samples ranged from less than 0.01 ug/l soil gas at the edges of the plume to greater than 600 ug/l soil gas at the source. For evaluation purposes, the extent of contamination has been considered to be a 60 foot by 100 foot source area bound on the north and south by Buildings 624 and 625, respectively; on the east by the walkway between Buildings 624 and 625; and on the west by the rail spur. It was estimated that approximately 4,500 cubic yards of soil would be addressed by this IRA, for the purposes of the alternatives assessment. The soil gas plume extends approximately 2,500 feet north of the source area.

In addition to the apparent TCE soil contamination, a TCE groundwater plume has been identified emanating from the Motor Pool Area (Figure 2-4).

On February 1, 1988, a proposed Consent Decree was lodged in the case of United States vs. Shell Oil Company with the U.S. District Court in Denver, Colorado. The proposed Consent Decree was revised after public comments were received, and a modified proposed Consent Decree was lodged with the Court on June 7, 1988. In February 1989, a Federal Facility Agreement was entered into between five federal agencies: the Environmental Protection Agency, the Army, the Department of the Interior, the Department of Health and Human Services, and the Department of Justice, which established procedures for implementing the Arsenal cleanup program as specified in the Technical Program Plan and incorporates many provisions of the modified proposed Consent Decree. The Army and Shell Oil Company agreed to share certain costs of the remediation to be developed and performed under the oversight of the U.S. Environmental Protection Agency, with opportunities for participation by the State of Colorado. The long-term remediation is a complex task that will take several years to complete. The Federal Facility Agreement specifies 13 Interim Response Actions (IRAs) determined to be necessary and appropriate. The "Remediation of Other Contamination Sources" is one of the