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SUPPLEMENT TO THE UMTRA PROJECT WATER SAMPLING AND ANALYSIS PLAN MONUMENT VALLEY, ARIZONA

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Prepared for
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Environmental Restoration Division
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DISCLAIMER

1.0 INTRODUCTION

This water sampling and analysis plan (WSAP) supplement supports the regulatory and technical basis for water sampling at the Monument Valley, Arizona, Uranium Mill Tailings Remedial Action (UMTRA) Project site in Cane Valley, as defined in the 1994 WSAP document for Monument Valley (DOE, 1994). Further, the supplement serves to confirm our present understanding of the site relative to the hydrogeology and contaminant distribution as well as our intention to continue to use the sampling strategy as presented in the 1994 WSAP document for Monument Valley.

2.0 GROUND WATER AND SURFACE MONITORING

Ground water and surface water monitoring activities are derived from the U.S. Environmental Protection Agency regulations in 40 CFR Part 192 (1991) and 60 FR 2854 (1995). Sampling procedures are guided by the UMTRA Project standard operating procedures (JEG, n.d.), the Technical Approach Document (DOE, 1989), and the most effective technical approach for the site. Additional site-specific documents relevant to the Monument Valley site are the Baseline Risk Assessment for Groundwater Contamination at the Uranium Mill Site Near Monument Valley, Arizona (DOE, 1993), and the Monument Valley Site Observational Work Plan (currently in progress).

3.0 SAMPLING PLAN

The sampling plan, as described in the 1994 WSAP, is to continue periodic (twice a year) monitoring of the site ground and surface water to continue to evaluate site characteristics and water quality changes caused by tailings removal. Sampling events are scheduled to occur during times representational of high ground water levels and low ground water levels. Over the next five years, it is expected that this sampling strategy will continue to be used to increase our understanding of the site. The last sampling event occurred in April 1995, during a period of high ground water levels. The next scheduled sampling event is in November 1995, a time typically characterized by low ground water levels.

The following locations will be sampled at the Monument Valley site in November 1995 (Figure 1):

- DOE monitor wells 650, 662, 606, 609, 659, 614, 618, 619, 657, and 663.
- Domestic wells 616, 617, 640, 613, and 625.
- Surface water locations 623, 624, 626, and 627.

The following constituents will be analyzed for: ammonium, nitrate, strontium, sulfate, vanadium, uranium, calcium, chloride, magnesium, manganese, potassium, and sodium.

Field analyses will be conducted for alkalinity, dissolved oxygen, oxidation/reduction potential, pH, specific conductance, and temperature.

4.0 REFERENCES

DOE (U.S. Department of Energy), 1994. *UMTRA Project Water Sampling and Analysis Plan Monument Valley, Arizona,* final, UMTRA-DOE/AL 6250-122, prepared by the U.S. Department of Energy, UMTRA Project Office, Albuquerque Operations Office, Albuquerque, New Mexico, April, 1994.

DOE (U.S. Department of Energy), 1993. *Baseline Risk Assessment for Groundwater Contamination at the Uranium Mill site Near Monument Valley, Arizona,* DOE/AL/62350-43D, prepared by the U.S. Department of Energy, UMTRA Project Office, Albuquerque Operations Office, Albuquerque, New Mexico, 1993.

DOE (U.S. Department of Energy), 1989. *Technical Approach Document,* UMTRA-DOE/AL-050425.0002, prepared by the U.S. Department of Energy, UMTRA Project Office, Albuquerque Operations Office, Albuquerque, New Mexico.

JEG (Jacobs Engineering Group, Inc.), n.d. *Albuquerque Operations Manual,* standard operating procedures, prepared by Jacobs Engineering Group, Inc., Albuquerque, New Mexico, for the U.S. Department of Energy, UMTRA Project Office, Albuquerque Operations Office, Albuquerque, New Mexico.

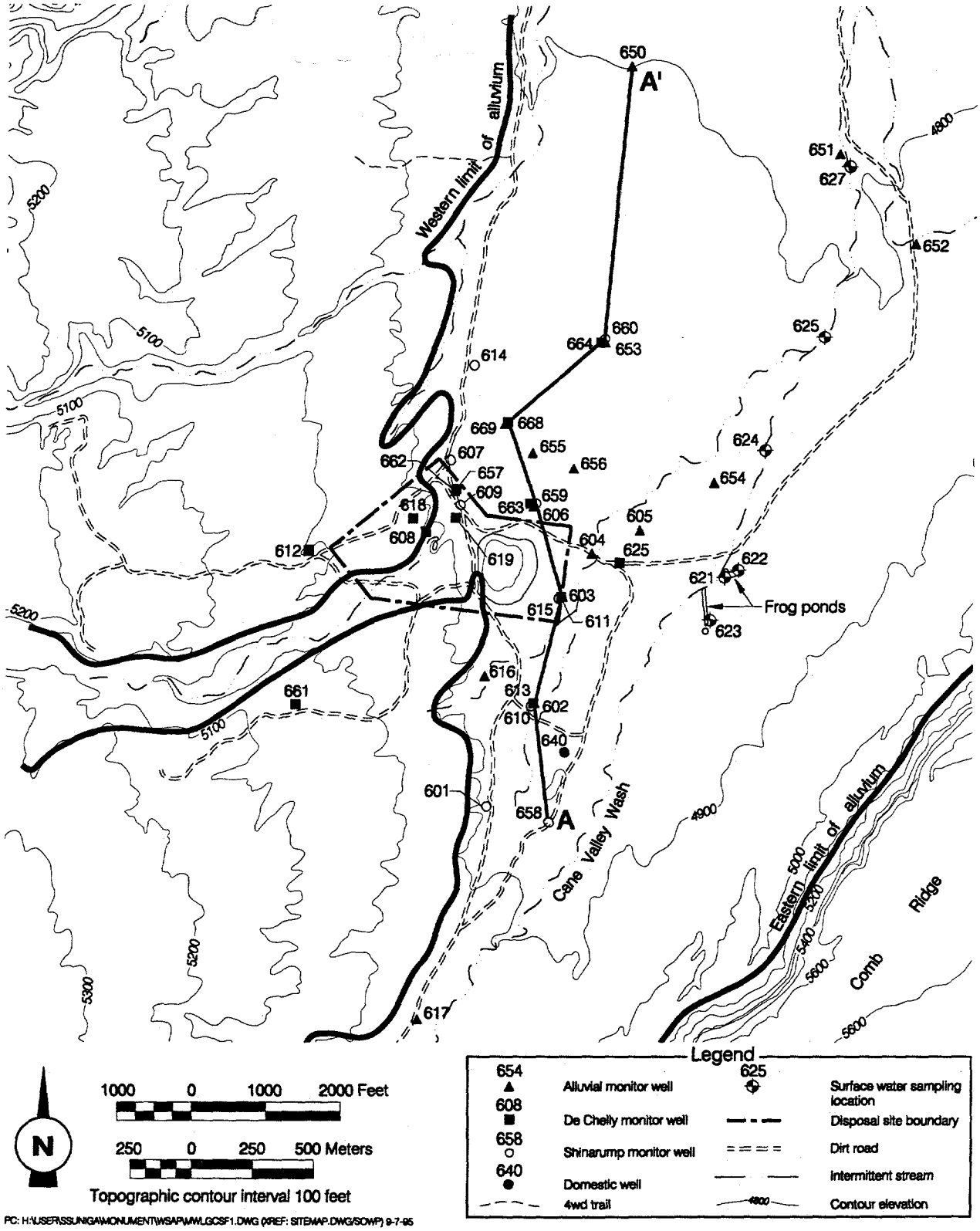
CODE OF FEDERAL REGULATIONS

40 CFR Part 192, *Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings,* U.S. Environmental Protection Agency (1991).

FEDERAL REGISTER

60 FR 2854, *Groundwater Standards for Remedial Action at Inactive Uranium Processing Sites,* Final Rule, U.S. Environmental Protection Agency, 11 January 1995.

Figure 1
Monitor Well and Surface Sampling Locations
And Locations of Geologic Cross Sections
Monument Valley, Arizona, Site



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