



DEPARTMENT OF THE ARMY
ST. LOUIS DISTRICT, CORPS OF ENGINEERS
8945 LATTY AVENUE
BERKELEY, MISSOURI 63134

REPLY TO
ATTENTION OF:

March 29, 2005

Formerly Utilized Sites Remedial Action Program

Subject: Radiological Status of 8854 Frost Avenue, St. Louis Airport Site Vicinity Property-10 (VP-10)

Mr. Kevin R. Farrell
Great Ledge Development
8820 Ladue Road, Suite 201
St. Louis, MO 63124

Dear Mr. Farrell:

Under the Formerly Utilized Sites Remedial Action Program (FUSRAP), the U.S. Army Corps of Engineers (USACE) has collected soil samples from the subject property for radiological analysis. FUSRAP is a federal environmental cleanup program administered by the U.S. Army Corps of Engineers, St. Louis District. This program was created to address contamination generated by activities of the Manhattan Engineer District / Atomic Energy Commission (MED/AEC) in support of our nation's early atomic energy program.

Enclosed is a report summarizing the utility support response of FUSRAP personnel and preliminary radiological evaluation for property improvements at 133 McDonnell Boulevard in Hazelwood, Missouri. This report provides a summary of the following information: property/site description; soil removal, verification, radiological evaluation; and the dose assessment for personnel at the work site. After soil removal, soil sample results from the removal were compared to the cleanup criteria identified in the 1992 Engineering Evaluation/Cost Analysis for Properties in the Vicinity of the Hazelwood Interim Storage Site.

These samples have been evaluated. The results of that analysis demonstrate that radiological parameters fall within the acceptable risk range. However, final release of this property designated as VP-10 cannot be formally evaluated and documented until after the Record of Decision for the North St. Louis County Sites is issued. The USACE has been working with the U.S. Environmental Protection Agency and State of Missouri to finalize the Record of Decision, which will fully identify the final selected remedy. This document is expected to be released in the spring of 2005.

If you need any additional information or have any questions regarding this report, please contact Ms. Jacqueline Mattingly at (314) 260-3924.

Sincerely,

Sharon R. Cotner
FUSRAP Program Manager

Enclosure

1.0 INTRODUCTION

This report documents the soil removal, verification and risk evaluation of North County Vicinity Property 10 (VP-10) located at 133 McDonnell Boulevard in Hazelwood, Missouri.

VP-10 is located on the north side of McDonnell Boulevard between Coldwater Creek and Lindbergh Boulevard and is owned by St. Louis Steel. It is approximately 35,628 meters in total size. (See Figure 1-1). At the time of the removal, the features on the property included one warehouse/manufacturing facility, three small outbuildings, adjacent driveways, parking lots, and sidewalks.

VP-10 is a haul road property that was potentially contaminated by spillage from transport vehicles during the transfer of uranium-bearing residuals from St. Louis Airport Site to HISS in the 1960's. On October 30, 2003, contaminated soil was removed from three locations to facilitate the plans of the property owner.

This evaluation is being conducted with un-validated laboratory data in an effort to facilitate making timely decisions. Once all validated data has been received, VP-10 is expected to be combined with neighboring properties to complete a formal evaluation and documented in a Post Remedial Action Report (PRAR) after the Record of Decision (ROD) for the St. Louis North County sites is issued.

2.0 SOIL REMOVAL

Three areas identified during the characterization process and bounded during the delineation process underwent a removal action. The excavations covered an area of approximately 54 m² and approximately 34 yd³ were excavated. See Figure 2-1 for excavation boundaries.

3.0 VERIFICATION

After the removal action on the three identified areas, a verification survey was performed to confirm that Engineering Evaluation/Cost Analysis (EECA) criteria had been achieved.

Guidance provided in MARSSIM (DoD, 2000) was the basis for the final status survey. The MARSSIM process was developed collaboratively by the Nuclear Regulatory Commission (NRC), U.S. Environmental Protection Agency (EPA), U.S. Department of Energy (DOE), and Department of Defense (DoD) for use in designing, implementing, and evaluating radiological surveys.

Field activities for the final status survey consisted of:

- Surface gamma scans to identify potential locations of elevated contamination

- Sampling of surface soil
- Sampling of subsurface soil
- Surveys of concrete driveway that was in contact with potentially contaminated soil

The data generated by these field activities were used to compare the residual radiological conditions to remedial goals.

4.0 EVALUATION

The initial evaluation of VP-10 was conducted using un-validated data in an effort to facilitate making timely decisions. VP-10 will be combined with neighboring properties to complete a final evaluation that will be documented in a Post Remedial Action Report (PRAR) after the Record of Decision (ROD) for the St. Louis North County sites is issued.

A dose and risk assessment was performed to a residential receptor due to the residual contamination present at VP-10. The results of the dose and risk assessments were compared against 10 CFR 20 Subpart E dose criteria (25 mrem/yr), and the CERCLA risk criteria (1E-04 to 1E-06) in order to determine whether the residual dose and risk exceeded the regulatory dose and risk criteria.

The results of the dose and risk assessment showed that the maximum dose to the residential receptor was 0.4 mrem/yr at approximately year 361. The maximum risk for the site is 6E-06. [The residual dose and risk present at VP-10 comply with all anticipated requirements as defined by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)].

5.0 REFERENCES

40 CFR 300 *Comprehensive Environmental Response, Compensation and Liability Act*, U.S. Environmental Protection Agency.

10 CFR 20 Subpart E, *Radiological Criteria for License Termination*, U.S. Nuclear Regulatory Commission, July 31, 1997.

DoD 2000 *Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)*, NUREG-1575, EPA 402-R-97-016, Revision 1, August.

USACE 1999 *Radiological Final Status Survey for the St. Louis North County Vicinity Properties*, November

U:\GPS\North\VP10\Projects\Delinecton\Projects\Figure 2-1 VP-10 Excavation Boundaries.mxd

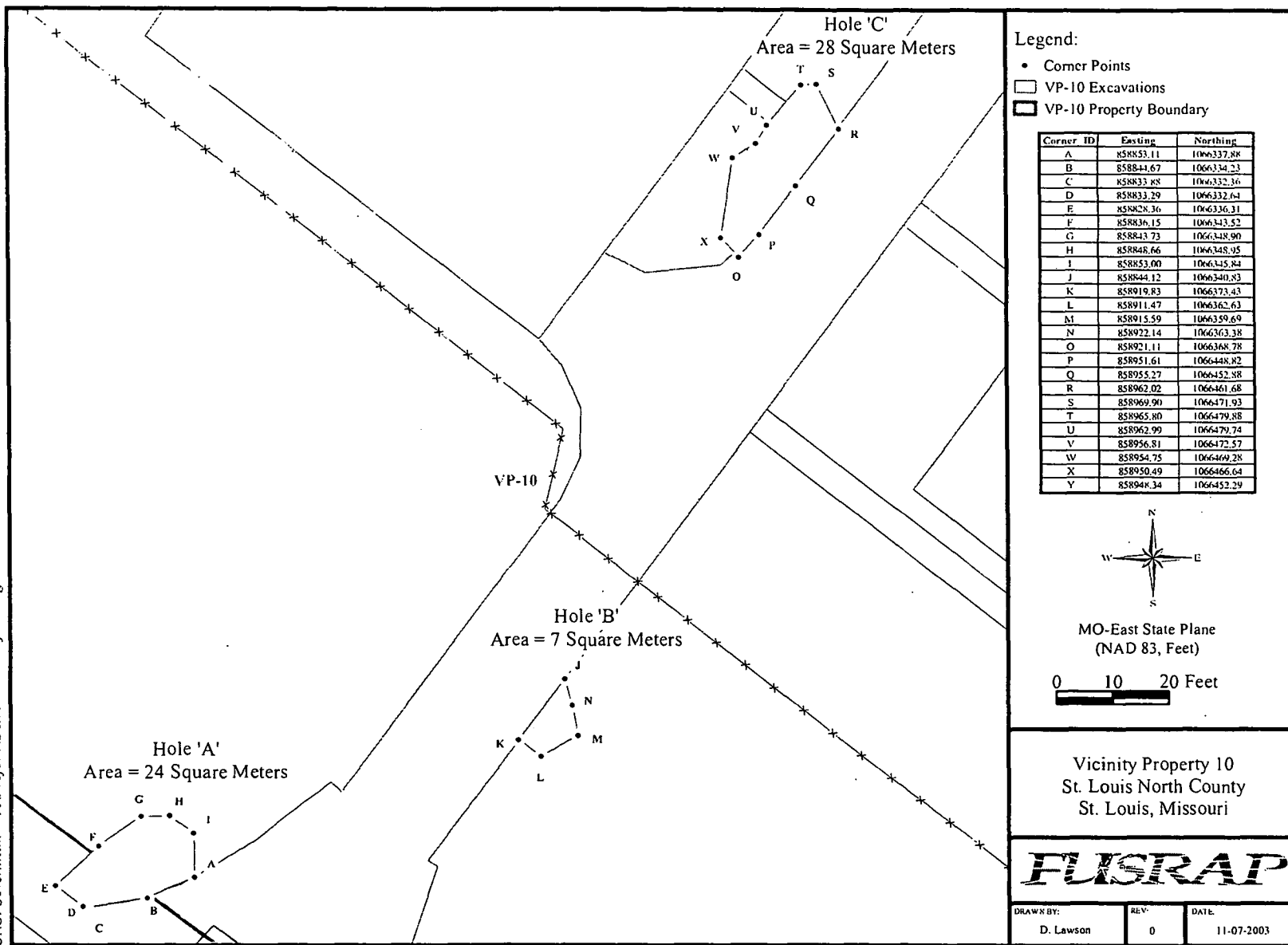


Figure 2-1. VP-10 Excavation Boundaries

U:\GPS\NorthCo\VP 10\Projects\Delinication\Projects\Figure 1-1 VP-10 Overview.mxd

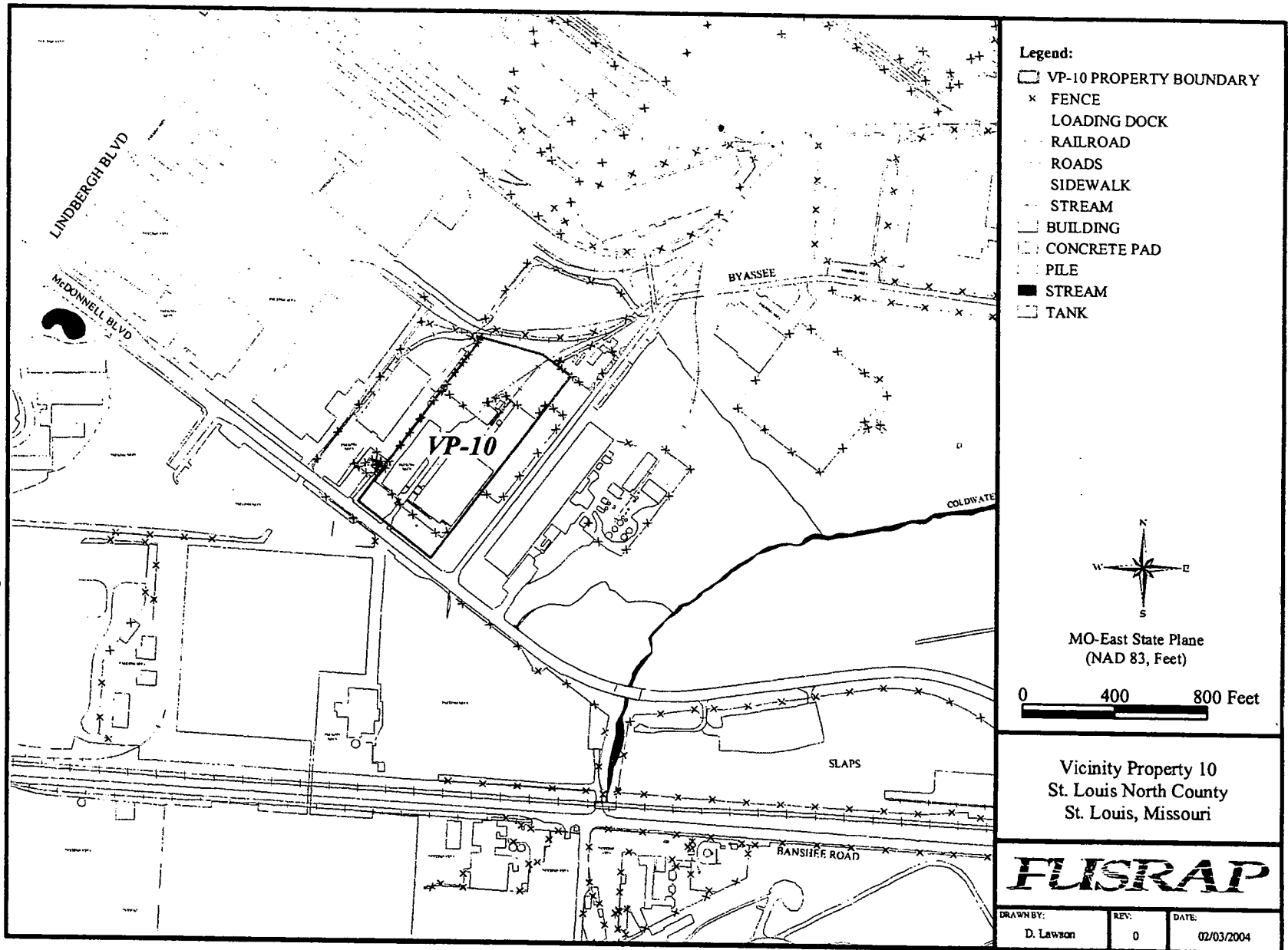


Figure 1-1. VP-10 Property Overview

Table 1- Vicinity Property 10 Analytical Results

StationID	Sample	Easting	Northing	Startdepth	Enddepth	DateSamp	Type	Th-230G	Th-230N	Ra-226G	Ra-226N	Th-232G	Th-232N	Ra-228G	Ra-228N	U-238G	U-238N
SVP79671	SVP79671	858852.31	1066337.96	0	0.5	10/30/03	class1	1.09	0.00	1.30	0.15	0.68	0.00	0.92	0.00	3.22	1.95
SVP79672	SVP79672	858846.02	1066345.38	0	0.5	10/30/03	class1	5.93	4.10	1.61	0.46	1.27	0.12	0.96	0.00	3.08	1.81
SVP79673	SVP79673	858840.73	1066335.38	0	0.5	10/30/03	class1	2.06	0.23	1.26	0.11	1.24	0.09	0.88	0.00	0.53	0.00
SVP79674	SVP79674	858832.33	1066339.13	0	0.5	10/30/03	class1	2.04	0.21	1.27	0.12	0.80	0.00	0.93	0.00	0.72	0.00
SVP79675	SVP79675	858820.90	1066368.56	0	0.5	10/30/03	class1	3.47	1.64	1.19	0.04	1.29	0.14	0.84	0.00	0.14	0.00
SVP79676	SVP79676	858921.50	1066361.39	0	0.5	10/30/03	class1	2.19	0.36	1.06	0.00	0.75	0.00	0.83	0.00	0.31	0.00
SVP79677	SVP79677	858913.71	1066363.41	0	0.5	10/30/03	class1	1.30	0.00	1.06	0.00	1.08	0.00	0.80	0.00	0.90	0.00
SVP79677	SVP79685	858913.71	1066363.41	2	2.5	10/30/03	class1	2.16	0.33	1.08	0.00	0.91	0.00	0.73	0.00	0.98	0.00
SVP79678	SVP79678	858972.06	1066472.28	0	0.5	10/30/03	class1	2.35	0.52	1.59	0.44	0.96	0.00	1.01	0.00	0.98	0.00
SVP79679	SVP79679	858959.99	1066477.09	0	0.5	10/30/03	class1	2.18	0.35	1.50	0.35	1.16	0.01	1.06	0.02	1.34	0.07
SVP79680	SVP79680	858962.63	1066469.07	0	0.5	10/30/03	class1	3.07	1.24	1.60	0.45	1.06	0.00	1.01	0.00	1.14	0.00
SVP79681	SVP79681	858953.69	1066467.34	0	0.5	10/30/03	class1	1.81	0.00	1.69	0.54	1.37	0.22	1.18	0.14	1.49	0.22
SVP79682	SVP79682	858957.85	1066459.57	0	0.5	10/30/03	class1	3.20	1.37	1.66	0.51	0.85	0.00	1.00	0.00	1.36	0.09
SVP00766	SVP00766	858787.21	1066386.22	0	0.5	01/24/00	class2	11.93	10.10	0.84	0.00	1.50	0.35	0.95	0.00	0.80	0.00
SVP00767	SVP00767	858796.02	1066457.99	0	0.5	01/24/00	class2	3.09	1.26	0.74	0.00	1.11	0.00	1.03	0.00	0.93	0.00
SVP00770	SVP00770	858853.72	1066414.62	0	0.5	01/24/00	class2	2.87	1.04	0.77	0.00	1.03	0.00	1.01	0.00	1.93	0.66
SVP00771	SVP00771	858857.61	1066478.01	0	0.5	04/04/00	class2	3.98	2.15	0.97	0.00	0.86	0.00	1.02	0.00	0.14	0.00
SVP00772	SVP00772	858871.33	1066558.17	0	0.5	01/24/00	class2	2.47	0.64	0.79	0.00	1.05	0.00	0.92	0.00	1.48	0.21
SVP00773	SVP00773	858902.60	1066299.47	0	0.5	01/24/00	class2	7.23	5.40	0.91	0.00	0.76	0.00	0.86	0.00	1.76	0.49
SVP00775	SVP00775	858913.02	1066434.95	0	0.5	04/04/00	class2	5.88	4.05	1.08	0.00	0.97	0.00	1.47	0.43	2.36	1.09
SVP00776	SVP00776	858929.23	1066514.78	0	0.5	04/17/00	class2	1.75	0.00	0.96	0.00	0.94	0.00	1.22	0.18	0.77	0.00
SVP00777	SVP00777	858960.29	1066256.10	0	0.5	01/24/00	class2	5.49	3.66	0.81	0.00	0.71	0.00	0.89	0.00	1.45	0.18
SVP00778	SVP00778	858969.10	1066327.88	0	0.5	01/24/00	class2	5.08	3.25	0.71	0.00	0.97	0.00	1.03	0.00	1.94	0.67
SVP00779	SVP00779	858974.95	1066398.51	0	0.5	04/04/00	class2	6.36	4.53	0.98	0.00	1.12	0.00	0.99	0.00	-0.04	0.00
SVP00780	SVP00780	858979.45	1066483.96	0	0.5	04/04/00	class2	7.40	5.57	0.99	0.00	1.00	0.00	1.05	0.00	0.23	0.00
SVP00781	SVP00781	859017.99	1066212.73	0	0.5	01/24/00	class2	4.89	3.06	0.77	0.00	0.99	0.00	0.91	0.00	1.59	0.32
SVP00782	SVP00782	859026.80	1066284.50	0	0.5	01/24/00	class2	3.49	1.66	0.87	0.00	1.25	0.00	0.96	0.00	0.85	0.00
SVP00783	SVP00783	859035.05	1066352.37	0	0.5	04/04/00	class2	2.64	0.81	0.89	0.00	1.00	0.00	0.97	0.00	2.19	0.92
SVP00785	SVP00785	859084.49	1066241.13	0	0.5	01/24/00	class2	2.22	0.39	0.76	0.00	0.88	0.00	0.90	0.00	2.34	1.07
SVP00786	SVP00786	859093.30	1066312.91	0	0.5	04/04/00	class2	4.80	2.97	1.09	0.00	1.52	0.37	0.90	0.00	2.36	1.09
SVP01200	SVP01200	858920.22	1066443.02	0	0.5	04/17/00	class2	2.5	0.67	0.89	0.00	1.01	0.00	1.08	0.04	2.02	0.75
SVP00816	SVP00816	858974.75	1066679.13	0	0.5	01/25/00	class3	2.36	0.53	0.79	0.00	0.96	0.00	0.94	0.00	1.08	0.00
SVP00817	SVP00817	859146.86	1066727.89	0	0.5	01/25/00	class3	1.88	0.04	0.62	0.00	0.51	0.00	0.20	0.00	1.14	0.00
SVP00820	SVP00820	859287.31	1066679.13	0	0.5	04/17/00	class3	1.46	0.00	0.81	0.00	1.01	0.00	0.63	0.00	1.18	0.00
SVP00821	SVP00821	859352.29	1066792.18	0	0.5	04/17/00	class3	1.86	0.03	0.64	0.00	0.17	0.00	1.19	0.15	1.18	0.00
SVP00822	SVP00822	859356.27	1067057.78	0	0.5	01/25/00	class3	2.28	0.45	0.80	0.00	0.48	0.00	0.94	0.00	1.49	0.22
SVP00824	SVP00824	859416.51	1066679.13	0	0.5	01/25/00	class3	1.59	0.00	0.83	0.00	1.09	0.00	0.95	0.00	0.88	0.00
SVP00826	SVP00826	859525.51	1067017.62	0	0.5	01/25/00	class3	1.76	0.00	0.82	0.00	0.98	0.00	1.08	0.04	2.53	1.26
HTZ00089	HTZ00089	859077.00	1066548.00	0	0.5	12/27/00	htspt	2.21	0.38	0.64	0.00	0.79	0.00	0.82	0.00	0.13	0.00
HTZ00090	HTZ00090	859066.00	1066336.00	0	0.5	12/27/00	htspt	2.88	1.05	0.63	0.00	1.06	0.00	0.89	0.00	1.98	0.71
HTZ00091	HTZ00091	859171.00	1066825.00	0	0.5	12/27/00	htspt	1.69	0.00	0.59	0.00	0.92	0.00	0.84	0.00	1.10	0.00
HTZ00092	HTZ00092	859157.90	1066801.20	0	0.5	12/27/00	htspt	4.19	2.36	0.72	0.00	1.06	0.00	0.91	0.00	0.62	0.00
HTZ00094	HTZ00094	859287.60	1066921.60	0	0.5	01/04/00	htspt	4.22	2.39	0.75	0.00	1.53	0.38	1.01	0.00	1.82	0.55
HTZ00095	HTZ00095	859391.60	1066747.70	0	0.5	01/04/00	htspt	1.60	0.00	0.70	0.00	1.45	0.30	0.91	0.00	0.92	0.00
HTZ00103	HTZ00103	858948.29	1066449.21	0	0.5	01/12/00	htspt	8.20	6.37	1.08	0.00	0.98	0.00	0.89	0.00	1.81	0.54
HTZ00104	HTZ00104	858938.74	1066452.80	0	0.5	01/12/00	htspt	7.71	5.88	0.99	0.00	1.43	0.28	0.89	0.00	2.00	0.73
HTZ00105	HTZ00105	858944.44	1066464.54	0	0.5	01/12/00	htspt	9.84	8.01	1.02	0.00	1.03	0.00	1.01	0.00	0.85	0.00
HTZ00106	HTZ00106	858954.26	1066473.09	0	0.5	01/12/00	htspt	7.53	5.70	1.04	0.00	1.74	0.59	0.98	0.00	1.39	0.12

StationID	Sample	Easting	Northing	Startdepth	Enddepth	DateSamp	Type	Th-230G	Th-230N	Ra-226G	Ra-226N	Th-232G	Th-232N	Ra-228G	Ra-228N	U-238G	U-238N
HTZ00107	HTZ00107	859418.00	1067024.00	0	0.5	01/12/00	htspt	2.64	0.81	0.82	0.00	0.65	0.00	0.94	0.00	1.67	0.40
SVP00849	SVP00849	858974.10	1066441.73	0	0.5	02/08/00	rnd1	5.24	3.41	0.96	0.00	1.31	0.16	0.99	0.00	2.15	0.88
SVP00854	SVP00854	858845.24	1066355.82	0	0.5	02/08/00	rnd1	4.51	2.68	1.02	0.00	1.31	0.16	1.06	0.02	1.69	0.42
SVP00926	SVP00930	858851.07	1066350.51	1.0	2.0	03/02/00	rnd2	5.66	3.83	1.00	0.00	1.17	0.02	0.86	0.00	2.03	0.76
SVP00927	SVP00931	858855.72	1066340.14	1.0	2.0	03/02/00	rnd2	12.61	10.78	1.08	0.00	0.93	0.00	1.00	0.00	0.46	0.00
SVP00929	SVP00933	858835.45	1066349.45	1.0	2.0	03/02/00	rnd2	1.77	0.00	1.15	0.00	1.44	0.29	1.11	0.07	2.11	0.84
SVP00929	SVP00929	858835.45	1066346.45	1.0	1.0	03/02/00	rnd2	1.92	0.09	1.11	0.00	1.29	0.14	0.98	0.00	1.74	0.47

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Further Info?

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