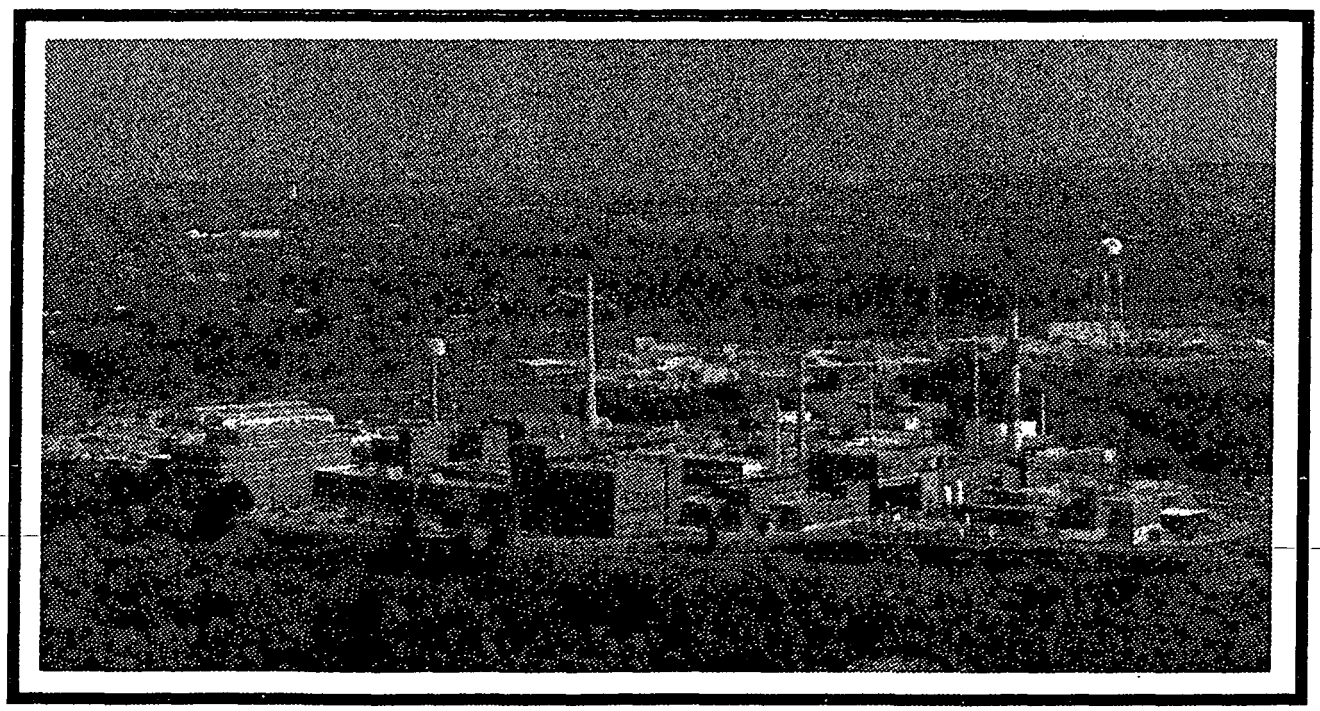
EG&G MOUND-30-04-01---9611140001

MOUND

Environmental
Restoration
Program

MOUND PLANT
Potential Release Site Package
PRS # 111



PRS 111

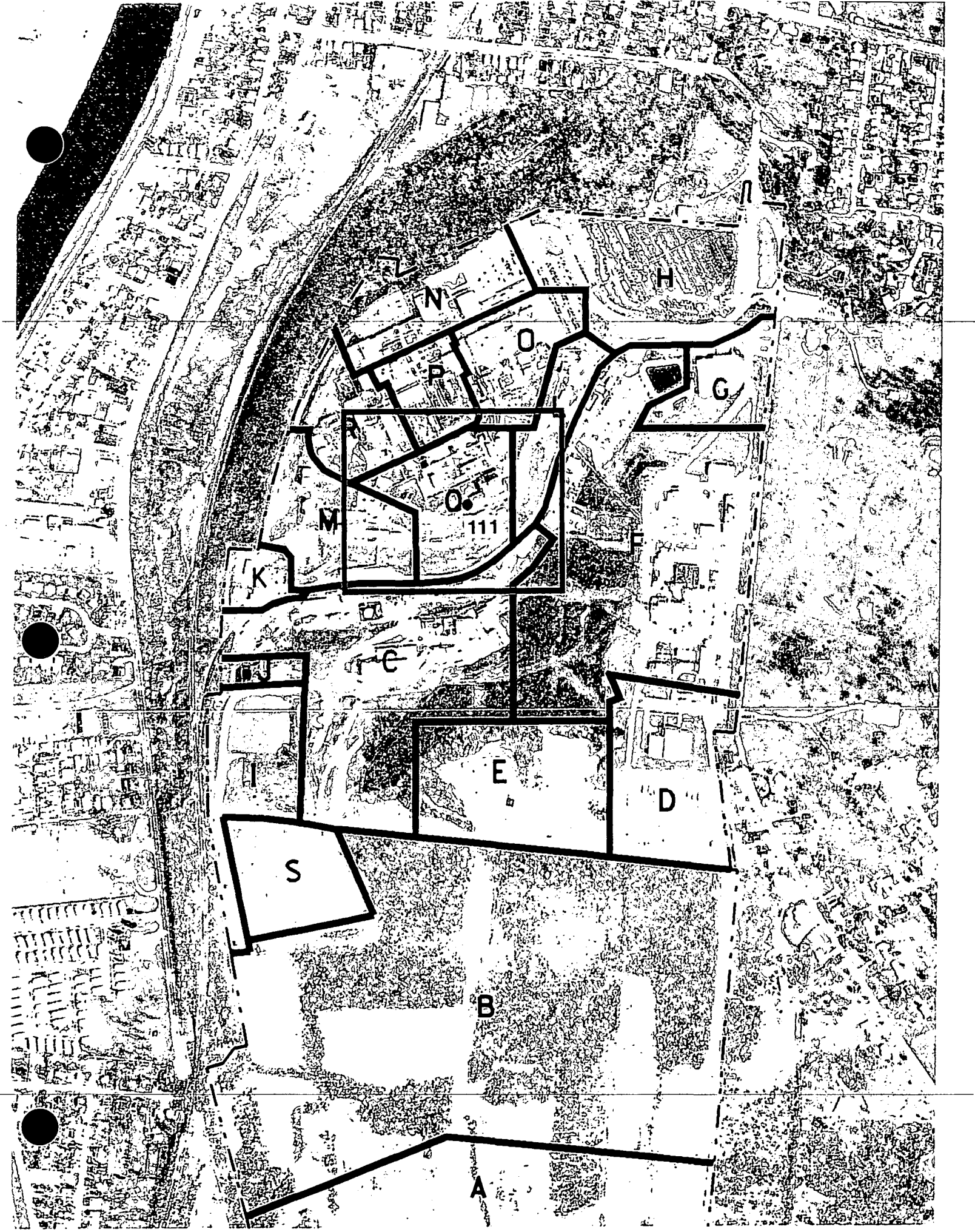
REV		DESCRIPTION	DATE
0	PUBLIC RELEASE	Available for comments.	Mar. 14, 1996
1	FINAL	Comment period expired. No comments. Recommendation page annotated.	Oct. 10, 1996

MOUND PLANT

Release Block Q

Potential Release Site

PRS 111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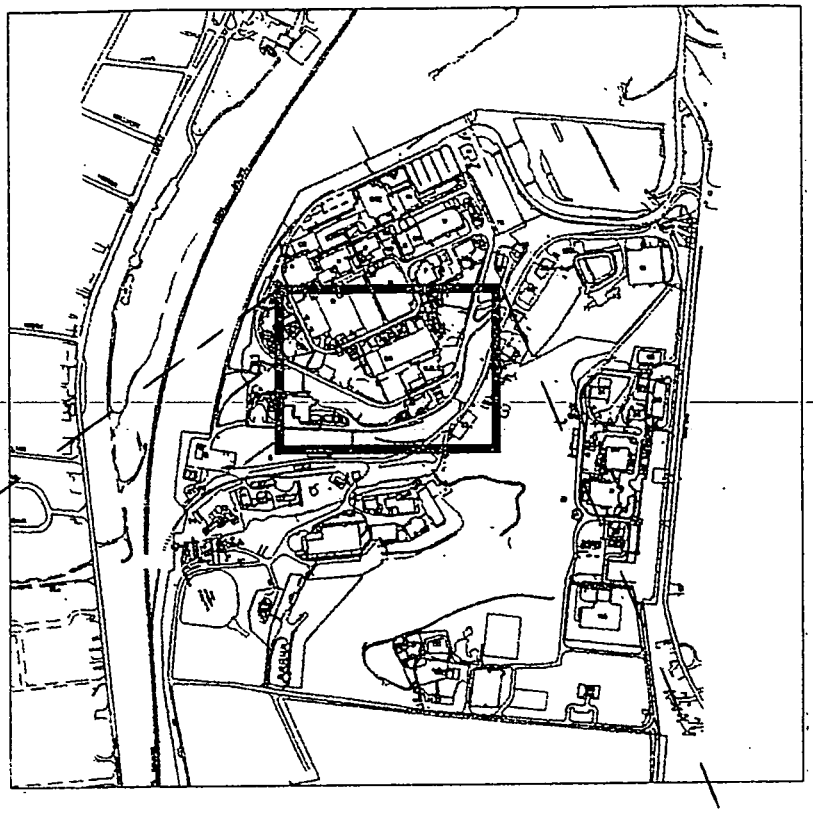
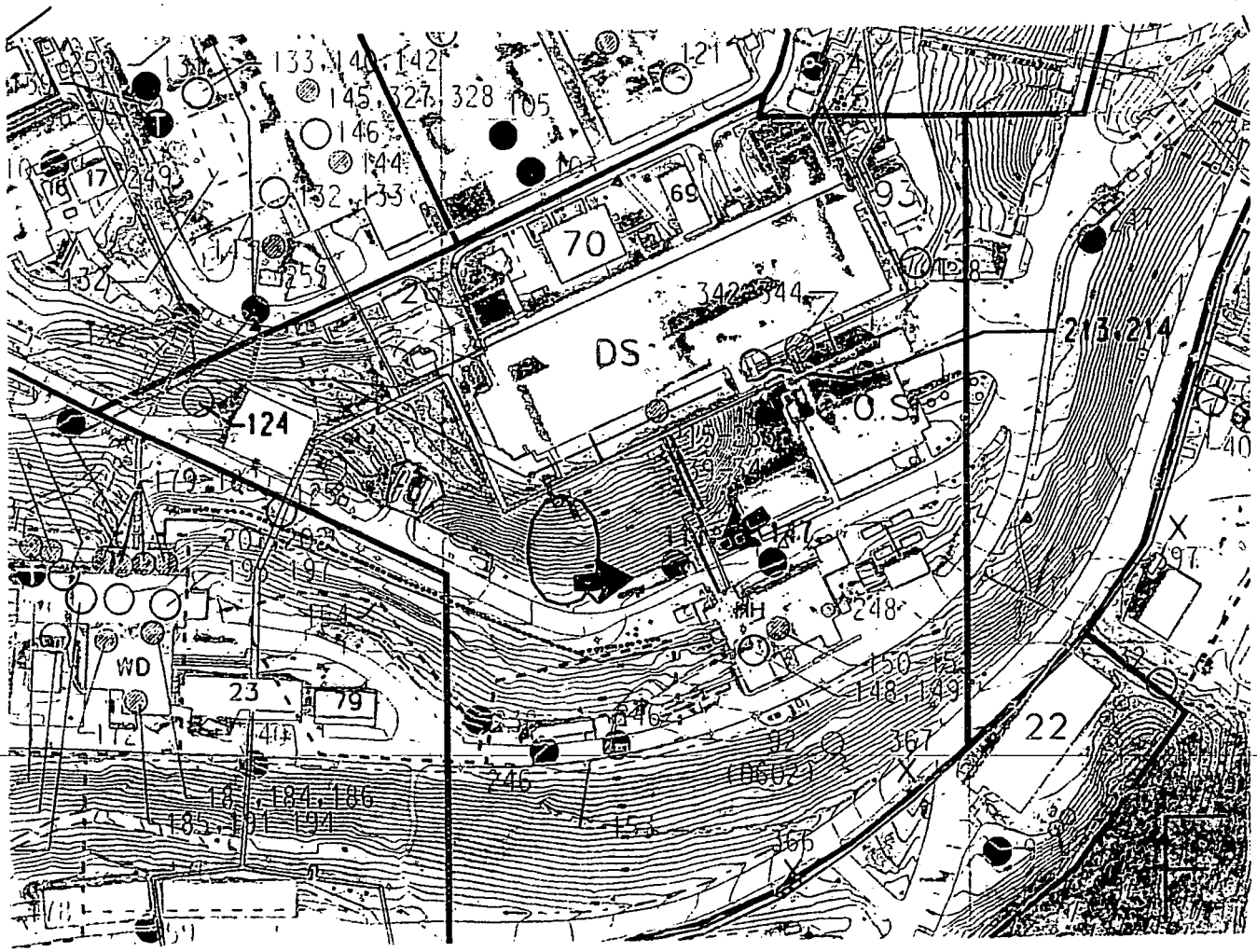
MOUND PLANT

Release Block Q

Potential Release Site

PRS 111





MOUND PLANT
PRS 111

PRS HISTORY:	Monitoring Well 0034 was identified as a potential release site as a result of visual inspection during the Comprehensive Environmental Assessment and Response Program - Phase II.[3] The monitoring well is located west of the COS Building substation.
PROCESS DESCRIPTION:	The monitoring well was installed in 1976 during the Potable Water Project.[5] Tritium was the only contaminant that was analyzed during this project. The Potable Water Project utilized this well until 1980. In 1986, an oily substance was discovered in the well. Because the well was not properly secured, the oily substance is suspected to have been placed in the well.
CONTAMINATION:	The Comprehensive Environmental Assessment and Response Program - Phase II Report[3] indicated that oily substance was discovered during surveillance activities. The limited analytical chemical data does not confirm the presence of oil. This chemical data indicates no other contamination concern. Tritium has been detected in the range of 16,000 to 91,000 pCi/L.[4]
READING ROOM REFERENCES:	1) OU9, Site Scoping Report, Vol. 12, Site Summary Report Final, December 1994. (pages 5-7) 2) Remedial Investigation/Feasibility Study, OU9, Site-Wide Work Plan. (pages 8-11) 3) Monitoring Well Survey, OU2, Main Hill Phase I Tech Memo, February 1995. (pages 12-16) 4) Comprehensive Environmental Assessment and Response Program - Phase II, Installation Plan - Stage 2 Supplement, September 1987. (pages 17-18)
OTHER REFERENCES:	5) Mound Environmental Information Management System (MEIMS) OU1, December 1987. (pages 19-22) 6) Potable Water Standards Project: Final Report, April 1981. (pages 23-27)
PREPARED BY:	Richard Bauer, Member of EG&G Technical Staff

MOUND PLANT
PRS 111
GROUNDWATER MONITORING WELL
LOCATION 0034

RECOMMENDATION:

Potential Release Site (PRS) 111 was initially identified as a result of a visual inspection of Monitoring Well 0034 which discovered an oily substance during surveillance activities in 1986. The chemical data does not confirm the presence of oil and indicated no other contamination. Although the limited existing analytical data does not confirm the presence of oil, the visual observation of an oily substance requires that the substance be removed and characterized, therefore PRS 111 will undergo a RESPONSE ACTION. Once the substance has been removed, the well will be monitored to determine if the oily substance returns. If the oily substance does not return, and groundwater contamination is not indicated, the well will be properly abandoned. If the substance returns, further assessment will be required to identify and address the source.

CONCURRENCE:

DOE/MB: Arthur W. Kleinrath — 3/12/96
Arthur W. Kleinrath, Remedial Project Manager (date)

USEPA: Timothy J. Fischer — 3/11/96
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: Brian K. Nickel — 3/14/96
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from 4/15/96 to 5/15/96.

☒ No comments were received during the comment period.

☐ Comment responses can be found on page_____ of this package.

REFERENCE MATERIAL
PRS 111

Document Control No. _____

Environmental Restoration Program

OPERABLE UNIT 9 SITE SCOPING REPORT: VOLUME 12 – SITE SUMMARY REPORT

MOUND PLANT
MIAMISBURG, OHIO

December 1994

Final

U.S. Department of Energy
Ohio Field Office

EG&G Mound Applied Technologies

Description of History and Nature of Waste Handling						Hazardous Conditions and Incidents			Environmental Data		
No.	Site Name	Location	Status	Potential Hazardous Substances	Ref	Releases	Media	Ref	Analytes[a]	Results	Re
109	G Building Gasoline Tank (Tank 204)	E-7	Historical	(Cont.)	(Cont.)	(Cont.)		(Cont.)	(Cont.)		
110	I Building Soils	E-6 F-6	Grounds	Toluene, acetone, Freon	4	Indicated by Soil Gas Survey	S	12	1 14, 16	SGS[b] Table B.4 Locations 1075, 1227, 1228 Table B.9 RSS Locations S0171, S0178, S0181, S0183, S0186, S0187, S0190, S0193, S0195, S0255 (Appendix E in Ref. 6)	12 6
111	Monitor Well 0034	F-7	Surplus	Waste oil	5, 18	Suspected	GW	5	No Data		
112	Paint Shop Area	E-7	In service	Paints, Thinners, Solvents (including toluene and methylene chloride) Lead, Chromates	1, 4, 5, 18	Suspected, confirmed lead	S	5	3, 4, 5, 6, 16	Tables B.6, B.7, B.8, and B.9	7
113	Powerhouse Soils	E-7	Grounds	Calcium chloride, magnesium chloride, zinc chromate, PCBs	4	Indicated by Soil Gas Survey	S	12	1 14, 16	SGS[b] Table B.4 Location 1052 Table B.9 RSS[c] Locations S0155, S0156, S0158, S0253 (Appendix E in Ref. 6)	12 6
114	Powerhouse Fuel Oil Storage Tank (Tank 113)	E-7	In service	Fuel oil	1, 3, 5, 7, 18	Fuel Oil, confirmed EPH	S	10, 7	3, 4, 5, 6, 8	Tables B.6, B.7, and B.8	7
115	Powerhouse Fuel Oil Storage Tank (Tank 114)										
116	Powerhouse Fuel Oil Storage Tank (Tank 115)										
117	Powerhouse Fuel Oil Storage										

A.

				Operational Jurisdiction				Historic Activities			
No.	Site Name	Location	Status	Regulated Units	Regulatory Authority	Spill Response	SWMU	Evidence Of Release	Response Authority	Further Action Recommended	FFA OU
93	Main Hill Seep 0603	D-8	NA		NA			Yes	CERCLA	Yes	2
94	Main Hill Seep 0604	D-6	NA		NA			Yes	CERCLA	Yes	2
95	Main Hill Seep 0605	D-6	NA		NA			Yes	CERCLA	Yes	2
96	Main Hill Seep 0606	D-7	NA		NA			Yes	CERCLA	Yes	2
97	Main Hill Seep 0607	C-7	NA		NA			Yes	CERCLA	Yes	2
98	Main Hill Seep 0608	D-6	NA		NA			Yes	CERCLA	Yes	2
99	Area 6, WD Building Filter-Cleaning Waste	D-8	Historical		NA			No	CERCLA	Yes	2
100	Area F, Chromium Trench	D-8	Historical		NA		SWMU	No	CERCLA	Yes	2
101	Cooling Tower Basins	E-7 E-8	In Service	Discharge to plant drainage ditch	RCRA	RCRA	SWMU	Yes	CERCLA	Yes	2
102	Cooling Tower Drum Storage Area	E-7 E-8	In Service	PBR	RCRA	RCRA	SWMU	No	NA	OM	
103	E Building Soils	E-6 E-7	Grounds		AEA			Yes	CERCLA	Yes	2
104	Scintillation Vial Storage Area	E-6	In Service	PBR	RCRA	RCRA	SWMU	No	NA	OM	
105	E Building Solvent Storage Shed	F-7	Historical		NA		SWMU	Yes	CERCLA	Yes	2
106	G Building Soils (AKA Garage Area)	E-7	Grounds		AEA	AEA		Yes	CERCLA	Yes	2
107	G Building Gasoline Tank (Tank 202)	E-7	Historical		NA			Yes	CERCLA	Yes	2
108	G Building Gasoline Tank (Tank 203)	E-7	Historical		NA			Yes	CERCLA	Yes	2
109	G Building Gasoline Tank (Tank 204)	E-7	Historical		NA			Yes	CERCLA	Yes	2
110	I Building Soils	F-6	Grounds		AEA	AEA		Yes	CERCLA	Yes	2
111	Monitor Well 0034	F-7	Surplus		NA		SWMU	Yes	CERCLA	Yes	2
112	Paint Shop Area	E-7	In Service		AEA	AEA		Yes	CERCLA	Yes	2
113	Powerhouse Soils	E-7	Grounds		AEA	AEA		Yes	CERCLA	Yes	2
114	Powerhouse Fuel Oil Storage Tank (Tank 113)	E-7	In Service					Yes	CERCLA	Yes	2
115	Powerhouse Fuel Oil Storage Tank (Tank 114)				AEA	CWA		Yes	CERCLA	Yes	2
116	Powerhouse Fuel Oil Storage Tank (Tank 115)							Yes	CERCLA	Yes	2

A.2

ENVIRONMENTAL RESTORATION PROGRAM

REMEDIAL INVESTIGATION/FEASIBILITY STUDY
OPERABLE UNIT 9, SITE-WIDE
WORK PLAN

MOUND PLANT
MIAMISBURG, OHIO

April 1992

DEPARTMENT OF ENERGY
ALBUQUERQUE FIELD OFFICE

ENVIRONMENTAL RESTORATION PROGRAM
TECHNICAL SUPPORT OFFICE
LOS ALAMOS NATIONAL LABORATORY

FINAL

The Buried Valley aquifer underlies the Great Miami River valley with contiguous, unconsolidated deposits, extending into tributary valleys. Groundwater flow follows the course of the river, generally north to south. The tributary tongue that extends onto the plant, through Area B, is a potential preferential pathway of contaminant migration. Groundwater flow along this tongue is primarily northeast to southwest, toward the Great Miami River. The Great Miami River partially penetrates the unconsolidated materials that comprise the aquifer, but has not been shown to be a hydraulic discontinuity in the aquifer. Therefore, the river may act as a partial but not complete barrier to groundwater flow to the southwest. Discharge of contaminated groundwater would be diluted by mixing with the surface water in the river. Also, upon entering the surface water, VOCs may volatilize into the air rather than remaining in the water.

The most likely off-plant receptors of groundwater contamination are several domestic wells south of Area B, on the east bank of the Great Miami River. The Mound Plant monitors water quality from samples collected at these wells and has found tritium and low concentrations of volatiles. Trichloroethene, tetrachloroethene, and 1,2-dichloroethene (total) were not detected in any other off-plant monitoring wells from January to July 1990. Extremely low concentrations of 1,1,1-trichloroethane (0.3-1.4 µg/L) were detected in both on-plant and off-plant wells during this time period. However, the MCL for 1,1,1-trichloroethane is 200 µg/L, indicating that this is not currently a contaminant of concern. Other potential off-plant groundwater receptors are as follows:

- the Miamisburg municipal production wells, which are along the opposite, west bank of the Great Miami River and northwest from Area B;
- the Hutching Power Station industrial supply wells, which are along the opposite, west bank of the Great Miami River and 1.5 miles south of Area B; and
- private wells at homes and businesses east and west of the Great Miami River. Except for a single residence that refused municipal water services, the closest homes and businesses, directly west, are supplied with municipal water; the wells supply water for miscellaneous uses, such as lawn irrigation, not requiring potability. Domestic wells to the southwest and approximately 1,400 ft from Area B are still used for potable water.

3.2. MAIN HILL SEEPS, OPERABLE UNIT 2

The Main Hill Seeps, Operable Unit 2, addresses groundwater perched in the bedrock and potential source terms on the Main Hill. The Main Hill has been the central operating portion of Mound Plant since the plant opened in 1948. The Main Hill includes eight potential sites: Area 15, crane tracks and shielding from the old SW cave; Area 6, WD Building filter cleaning wastes; Area F, chromium solution disposal trench; the cooling tower basins; Building E, solvent storage shed; Building G, garage area; Monitoring Well 0034; and the Main Hill seeps (Figure 3.3). The seeps are believed to be the expression of groundwater discharge

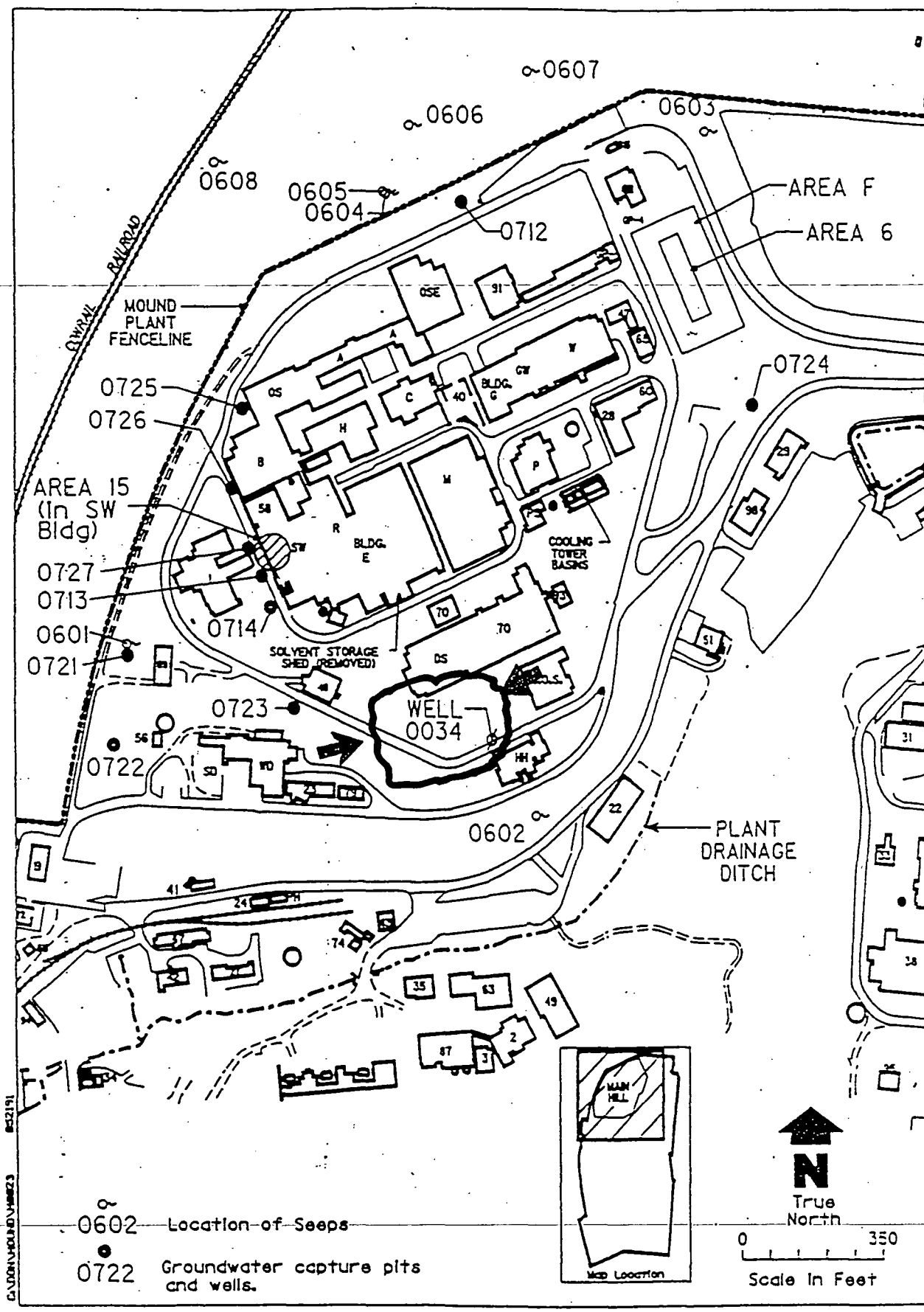


Figure 3.3. Main Hill Seeps and potential release sites. Operable Unit 2.

~~from the indurated bedrock on or adjacent to the Main Hill and have a history of VOC and tritium~~ contamination (Table III.1).

The characterization of the tritium migration in the groundwater on Main Hill and subsequent tritium migration pathways is based on data generated by the routine monitoring program and by the Mound tritium groundwater assessment program (DOE 1989d). There are approximately five seeps located off Mound Plant property (Figure 3.3), but only two have significant flow (≤5 gallons per minute [gal/min]). It has been concluded that the tritium in the seeps originates from tritium in the soil moisture below the SW Building. See section 2 of this Work Plan for information on previous investigations and results. Low concentrations of volatile organic chemicals have also been found in all the seeps on the Main Hill.

Conceptually, the Site hydrogeology can be divided into two hydrostratigraphic units--the Buried Valley aquifer and the bedrock system. The Buried Valley aquifer consists of glacial sands and gravels associated with the Great Miami River. The bedrock system comprises the hills on which the Mound Plant is situated. The degree of hydraulic interconnection of this system with the Buried Valley aquifer is unknown at this time. Although several seeps discharge along the hillsides, it is possible that fractures also transmit water directly to the Buried Valley aquifer or that hidden seepage discharges below the hillside colluvial veneer. Whether the seeps are the result of an underlying impermeable shale that restricts the downward movement of groundwater or are the point at which the water table intersects the hillslope is unclear at this time.

Previous investigations have identified SW Building as the most likely source of tritium contamination. SW Building has been the principal tritium facility at the Mound Plant since the early 1960s (DOE 1989d). In 1977, Dames and Moore collected soil samples from under Buildings SW and R and analyzed soil moisture distillate for tritium. Based on their calculations, as much as 1,300 Ci of tritium was present in the soil moisture beneath SW Building (Dames and Moore 1977a). Even considering the tritium decay since 1977 (half-life = 12.3 years), the activity in 1990 would be about 625 Ci. Assuming no additional tritium was added to this inventory after 1970, there may be a sufficient quantity present (625 Ci) to explain the present levels of tritium observed in the seeps (DOE 1989d).

Sources for the VOCs are less certain. Six areas on the Main Hill are potential chemical release sites: Building E (solvent storage shed), Building G (garage area), monitoring well 0034, Areas F and 6, the cooling tower basins, and the drum storage area. One of these sites has handled solvents (Building E Solvent Storage Shed), and soil cleanup was performed when the building was dismantled in 1988 (RFA 1988). Building G and Monitoring Well 0034 may be contaminated with fuel and/or waste oils. The cooling tower site may be contaminated with waste oils, ethylene glycol, and various cooling water additives. The presence and extent of VOC contamination at any of the sites is not known.

Environmental Restoration Program

MONITORING WELL SURVEY
OPERABLE UNIT 2, MAIN HILL
PHASE I TECHNICAL MEMORANDUM

MOUND PLANT
MIAMISBURG, OHIO

February 1995

FINAL

(Revision 0)

Department of Energy
Ohio Field Office

Environmental Restoration Program
EG&G Mound Applied Technologies

Protection Agency (EPA) that became effective in October 1990 (Administrative Docket Number V-W-90-C-075).

In response to being placed on the NPL, an Environmental Restoration (ER) Program was initiated by Mound to fulfill its obligation under the FFA. The site was divided into Operable Units (OUs) to simplify the investigation and program management (DOE 1992). The Main Hill of the Mound Plant (Figure 1.2) is OU-2 and comprises the portion of the site where the majority of the research and manufacturing took place. As part of the remedial investigation/feasibility study (RI/FS) being conducted under CERCLA, the Ohio Environmental Protection Agency requested that the DOE conduct an evaluation of existing monitoring wells to ensure compliance with standards for aquifer protection against cross contamination.

1.2. OBJECTIVE

The objective of the OU-2 RI/FS is to define the nature and extent of the contamination found on Main Hill, characterize the risks to human health and the environment posed by exposure to the various affected medium, to evaluate the potential remedies that could reduce these risks to acceptable levels, and to determine the affect of potential releases of contaminants to groundwater, particularly where groundwater flows from the Main Hill at the Hillside Seeps. The objective of this evaluation of existing monitoring wells is to assess which wells can potentially be used in the RI/FS, which wells, with rehabilitation, can potentially be used in the RI/FS, and which wells should be abandoned. The evaluation will include all existing monitoring wells within OU-2, and selected monitoring wells outside of OU-2 for their use strictly in the analysis of groundwater flow within OU-2.

1.3. EXISTING MONITORING WELLS

A total of 33 monitoring wells have been installed within the OU-2 area over the last 19 years. For the purpose of this technical memorandum, any well from which an environmental sample or water level measurement has, or can be, collected is considered a monitoring well. The evaluation of existing monitoring wells is based on well construction information from the following documents:

- "Operable Unit 9, Site Scoping Report: Volume 2 - Geologic Log and Well Information Report [FINAL]." U.S. Department of Energy, Albuquerque Field Office, Albuquerque, New Mexico. May 1992.

- "Operable Unit 9, Site Scoping Report: Volume 2 Addendum - Stratigraphic and Lithologic Logs [FINAL]." U.S. Department of Energy, Albuquerque Field Office, Albuquerque, New Mexico. May 1992.

- "Operable Unit 9, Site-Wide Well Decommissioning and Abandonment Program Plan [DRAFT]." U.S. Department of Energy, Albuquerque Field Office, Albuquerque, New Mexico. October 1992.

- "Remedial Investigation/Feasibility Study, Operable Unit 9, Hydrogeologic Investigation Well Information Report [DRAFT]." U.S. Department of Energy, Albuquerque Field Office, Albuquerque, New Mexico. June 1993.

There have been four groundwater investigations that resulted in the installation of the 33 monitoring wells within OU-2. A potable water standards project was conducted during 1975 and 1976 to characterize the tritium contamination of groundwater at the Mound facility (Dames and Moore 1976a). The potable water standards project resulted in the installation of eight monitoring wells between 1975 and 1976. There is little to no documentation for the monitoring wells installed during 1975. The wells installed during 1976 were installed in boreholes drilled by either mud rotary or auger techniques; they generally consisted of 3-inch inside diameter PVC casing with 2-foot long steel well screens at the bottom. There is no information about the backfill around the well screen. A 2-foot thick layer of bentonite pellets was installed in the annulus above the well screen. The annulus was then backfilled with drill cuttings, a second bentonite seal placed at the ground surface, and soil was mounded around the casing to induce runoff. Protective casings were installed around some of the wells, but they were apparently not locked. There is no documentation regarding whether the wells were developed.

A Buried Valley aquifer evaluation was conducted in 1976 to characterize the tritium groundwater contamination off of the Mound facility (Dames and Moore 1976b). Two monitoring wells were installed within OU-2 using mud rotary drilling techniques as part of the study. The wells were constructed of 3-inch PVC casing with 2-foot long steel well screens on the bottom. The boreholes were backfilled with gravel to within three feet of the ground surface and sealed with bentonite pellets to the surface. A 6-inch nominal diameter locking steel casing was grouted in place for protection. There is no documentation regarding whether the wells were developed.

As part of two ER Program field investigations, 13 monitoring wells have been installed within OU-2 between 1987 and 1993. These wells were located, installed, and developed according to specifications in the DOE work plans (DOE 1987, 1989) and ER Program Standard Operating Procedures (SOPs). The SOPs are based on regulations and guidelines by RCRA and CERCLA (DOE 1988; EPA 1986; EPA 1988). The depth of wells and length of well screens varies, however all wells are constructed with stainless steel screens and riser pipe. All of the wells except two, have 4-inch nominal diameter risers and screens; the other two wells have 2-inch nominal diameter risers and screens.

Table IV.1. Summary of OU-2 RI/FS Existing Monitoring Well Use (Page 1 of 4)

	Monitoring Well Use for OU-2 RI/FS			
Well ID	Water Levels	Water Quality Samples	Rationale	Further Action
0020	Yes	No	Does not meet TEGD/ASTM criteria for water quality samples. Screen is close to water table - water elevation data will be useful in establishing water table contours.	Redevelopment to remove sediment. Surface seal/concrete pad. Replace protective casing.
0028	Yes	No	Does not meet TEGD/ASTM criteria for water quality samples. Screen is nearly 30 feet below water level in well - water elevation data may be useful in establishing deeper piezometric contours.	Redevelopment to remove sediment. Surface seal/concrete pad. Replace protective casing.
0033	No	No	Does not meet TEGD/ASTM criteria for water quality samples.	Not recommended for use in RI/FS. Evaluate in Phase III for possible abandonment.
0034	No	No	The contamination in this well will be investigated as a separate task in Phase 2 of the OU-2 RI/FS. Consideration of the use of this well will be determined at the end of that task.	To be evaluated as a separate task in Phase II.
0042	No	No	Only 0.11 feet of water in well. Screen is apparently above the saturated zone.	Collection of monthly water level measurements for one year to further evaluate this well.
0111	Yes	No	Currently not accessible. Well construction meets TEGD/ASTM criteria - may be useful for water elevation data once access has been gained.	Reevaluate upon access.
0112	Yes	Yes	Well construction meets TEGD/ASTM criteria for water quality samples. Screen intersects water table.	Redevelopment to remove sediment.
0113	No	No	Well has two screens; the upper 3-foot screen is approximately 17 feet above the bottom of the well and approximately 13 feet above the water table. The double screens provide a potential pathway for cross contamination.	Consider for abandonment.

~~therefore, the depths to water and the bottom of the well could not be measured. No water was detected~~ in "offsite" monitoring well 0385.

The difference between the well depth shown on the well construction log and the field measured well depth is an indication of the amount, if any, of sediment collecting in the well. In general, the wells have a few tenths, to a little over one foot, of sediment in the bottom. Monitoring well 0033 has over eight feet of silt in the bottom of the well. The difference between reported well depths and measured well depth at monitoring well 0033, however was over eight feet. This indicates either a typical sediment accumulation in the well or an error in reporting well depth or a problem with the well integrity.

3.2. VIDEO INSPECTION SURVEY

The following provides brief observations made from the video inspection survey for the monitoring wells. All measurements are reported from the top of the well casing.

~~3.2.1. Well Number 0033~~

The depth to water was observed at approximately 20 feet. The depth to the top of sediment was 24.8 feet. The bottom of the well, based on video camera refusal, was 25.2 feet deep (the boring log indicates that the bottom of the well is 33.5 feet). The top of the well screen was not observed. At 21.9 feet a dark material was noted on the left side of the well casing. At 23.2 feet the water became very dark and it was difficult to see any details. The depth to the top of the sediment and bottom of the well (video camera refusal) were noted from the response of the cable rather than observations made from the video.

3.2.2. Well Number 0034

The depth to fluid was observed at approximately 16.1 feet. At 9.4 feet some staining/discoloration was noted on the right side of the well casing. At 13.0 feet the staining/discoloration was on all sides of the well casing. Just before the camera entered the fluid, a few drops of fluid fell onto the water surface, but beaded up, indicating that the fluid seen by the video was not water, but some type of floating product. The video was stopped and the camera pulled from the well. The end of the camera was coated with what appeared to be unused motor oil.

COMPREHENSIVE ENVIRONMENTAL ASSESSMENT

AND

RESPONSE PROGRAM

PHASE 2

INSTALLATION GENERIC MONITORING PLAN/ REMEDIAL INVESTIGATION PLAN - STAGE 2 SUPPLEMENT

MOUND

SYNOPSIS

September 1987

DEPARTMENT OF ENERGY

ALBUQUERQUE OPERATIONS OFFICE

ENVIRONMENT AND HEALTH DIVISION

ENVIRONMENTAL PROGRAMS BRANCH

DRAFT

~~Radiological Characterization of Mound". Depending on the results of the Site Survey~~ Program, the ~~results of already~~ planned remedial ~~actions, and the~~ results of the DOE Headquarters ~~Environmental~~ Survey, a decision ~~will be~~ made on whether to in~~clude some radioactively contaminated sites in the GEARP Remedial Investigation.~~

2.4. EVALUATION OF EXISTING DATA

2.4.1. Site Hydrogeology

The Stage 1 investigation identified problems with the existing monitor wells and monitor well network. Because of these problems, some of the characterization of site hydrogeology planned for Stage 1 was not completed. The monitor well network needs to be upgraded to permit the completion of site characterization goals for Stage 1 and Stage 2. The locations, specifications, and purposes of monitor wells to be installed during Stage 2 of the Remedial Investigation are described in the Sampling Plan of this IGMP/RIP.

One problem was that the onsite monitor wells were not locked, and there had been no control over access to them by Mound employees and outside contractors working at Mound. This problem is highlighted by the fact that one well (see DOE 1987a, Figure 2.8, well 34-1) has apparently been used to receive waste oil. Because it is impossible to determine if waste materials have been dumped down any other onsite wells, this unsecured monitoring network should be replaced.

~~One offsite well (OW 3) was unsecured and apparently had some materials dumped~~ into it, including glass. This well has indications of having contained volatile organic compounds. Because the well was unsecured for a period of time, the sampling and analysis results for it are useful only for reconnaissance.

Another problem involved construction and development of some of the monitor wells. Some of the wells sited in the Buried Valley Aquifer do not produce water as freely as they should, according to calculations of hydraulic conductivity from pumping tests of the Mound production wells. This lack of production is probably caused by inappropriate drilling techniques and inadequate well development procedures, making it difficult to establish the representativeness of water samples taken from these wells.

Data from the Mound Environmental Information Management System (MEIMS)

Operable Unit 1 - Well 0034

SAMPLE NUMBER	MOUND SAMPLE NUMBER	DATE COLLECTED	TYPE ANALYSIS	ELEMENT NAME	RESULTS	UNITS	LAB QUALIFIER	VALIDATION QUALIFIER
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Heptachlor Epoxide	0.056	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Endosulfan Sulfate	0.11	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Aroclor-1260	1.1	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Aroclor-1254	1.1	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Aroclor-1221	0.56	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Aroclor-1232	0.56	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Aroclor-1248	0.56	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Aroclor-1016	0.56	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Aldrin	0.056	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Alpha-BHC	0.056	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Beta-BHC	0.056	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Delta-BHC	0.056	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Endosulfan II	0.11	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	4,4'-DDT	0.11	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Alpha Chlordane	0.56	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Gamma Chlordane	0.56	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Aroclor-1242	0.56	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Endrin Ketone	0.11	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Gamma-BHC (Lindane)	0.056	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Dieldrin	0.11	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Endrin	0.11	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Methoxychlor	0.56	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	4,4'-DDD	0.11	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	4,4'-DDE	0.11	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Heptachlor	0.056	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Toxaphene	1.1	UG/L	U	U
0034-0001	MND01-0034-0001	08-Dec-87	ORPPB	Endosulfan I	0.056	UG/L	U	U

U- Not Detected at the associated value

B - Blank

J - Estimated

* - Laboratory Contamination

0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Ethylbenzene	5	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Styrene	5	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	1,3-cis-Dichloropropene	5	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	1,3-trans-Dichloropropene	5.0	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	1,2-Dichloroethane	5.0	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Vinyl Acetate	10	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	4-Methyl-2-pentanone	10	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Toluene	5	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Chlorobenzene	1	UG/L	JB		
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	2-Chloroethylvinylether	10	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Dibromochloromethane	5.0	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Tetrachloroethene	5	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Xylenes, Total	5	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	1,2-trans-Dichloroethene	5.0	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Carbon Tetrachloride	5.0	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	2-Hexanone	10	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Acetone	10	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Chloroform	5.0	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Benzene	5	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	1,1,1-Trichloroethane	5.0	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Bromomethane	10	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Chloromethane	10	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Chloroethane	10	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Vinyl Chloride	10	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Methylene Chloride	610	UG/L	*		
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Carbon Disulfide	5.0	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Bromoform	5	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Bromodichloromethane	5.0	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	1,1-Dichloroethane	5.0	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	1,1-Dichloroethene	5.0	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	1,2-Dichloropropane	5.0	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	2-Butanone	10	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	1,1,2-Trichloroethane	5	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	Trichloroethene	5.0	UG/L	U		U
0034-0001	MND01-0034-0001	08-Dec-87	ORVOA	1,1,2,2-Tetrachloroethane	5	UG/L	U		U

0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Ethylbenzene	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Styrene	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	1,3-cis-Dichloropropene	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	1,3-trans-Dichloropropene	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	1,2-Dichloroethane	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Vinyl Acetate	100	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	4-Methyl-2-pentanone	100	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Toluene	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Chlorobenzene	12	UG/L	JB		
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	2-Chloroethylvinylether	100	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Dibromochloromethane	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Tetrachloroethene	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Xylenes, Total	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	1,2-trans-Dichloroethene	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Carbon Tetrachloride	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	2-Hexanone	100	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Acetone	200	UG/L	B		
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Chloroform	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Benzene	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	1,1,1-Trichloroethane	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Bromomethane	100	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Chloromethane	100	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Chloroethane	100	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Vinyl Chloride	100	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Methylene Chloride	710	UG/L	B		
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Carbon Disulfide	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Bromoform	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Bromodichloromethane	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	1,1-Dichloroethane	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	1,1-Dichloroethene	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	1,2-Dichloropropane	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	2-Butanone	100	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	1,1,2-Trichloroethane	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	Trichloroethene	50	UG/L	U		U
0034-0002	MND01-0034-0002	08-Dec-87	ORVOA	1,1,2,2-Tetrachloroethane	50	UG/L	U		U

MLM-2819

Potable Water Standards Project: Final Report

Clarence E. Styron and

Herbert E. Meyer

April 7, 1981

MOUND FACILITY
Miamisburg, Ohio 45342

operated by
MONSANTO RESEARCH CORPORATION
a subsidiary of Monsanto Company

for the
U. S. DEPARTMENT OF ENERGY
Contract No. DE-AC04-76-DP00053

Monsanto

POTABLE WATER STANDARDS PROJECT - MOUND FACILITY
CONCENTRATION OF TRITIUM (NCI/LITER) IN SELECTED WELLS

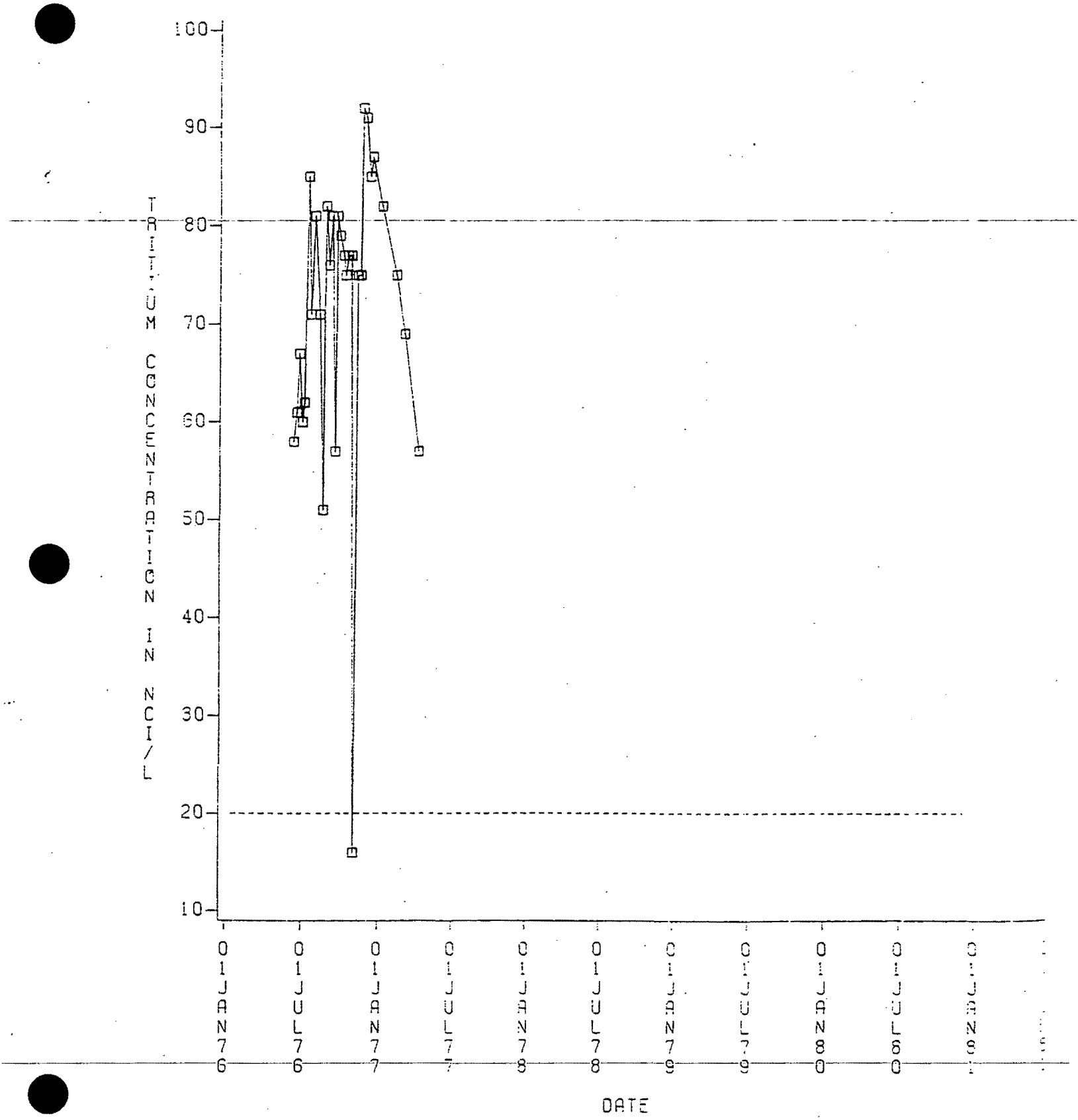
DATE	WL 1-4	WL 2-1	WL 2-7	WL 2-8	WL 3-3	WL 3-4	WL 3-4	WL 3-5	WL 3-5	WL 3-6	WL 3-6	WL 3-7	WL 4-2	WL 4-2	WL 4-3	WL 4-3	WL 4-5	WL 4-6	WL 4-6	WL 5-2	WL 5-5	WL 5-5	WL 5-5	WL 5-5	WL 6-3
25DEC75	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
15JAN76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
17JAN76	.	72	.	44	.	.	.	.	.	175	54	.	133	.	.	.	.	.	.	.	.	.	.	.	.
24JAN76	.	61	.	42	.	.	.	.	.	161	54	.	.	.	140	.	.	.	.	.	.	.	.	.	.
14FEB76	.	65	.	32	.	.	.	.	.	177	55	.	121	.	.	.	.	.	.	.	.	.	.	.	.
21FEB76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
28FEB76	.	.	.	.	.	.	.	.	.	190	.	.	119	.	.	.	.	.	.	.	.	.	.	.	.
06MAR76	.	.	.	.	.	.	.	.	.	187	.	.	118	.	.	.	31	.	8	.	54	32	32	127	.
10MAR76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
13MAR76	.	63	.	37	.	.	.	.	.	192	31	.	121	.	.	.	31	52	7	.	63	28	31	136	32
20MAR76	.	.	.	.	.	.	.	.	.	199	.	.	120	.	.	.	28	.	7	.	63	30	28	138	.
27MAR76	.	.	.	.	.	.	.	.	.	198	.	.	118	.	.	.	30	.	8	.	70	42	28	138	.
01JUN76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
11JUN76	2442	.	71	.	94	58	12	1	13	167	.	40	95	45	12	6	.	54	.	13	.	.	.	.	38
18JUN76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
19JUN76	.	.	73	.	75	61	28	1	13	181	.	42	120	45	12	7	.	57	.	13	.	.	.	.	38
25JUN76	2431	.	77	.	88	67	40	1	14	186	.	.	124	46	12	7	.	58	.	13	.	.	.	.	44
26JUN76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
03JUL76	2026	.	68	.	92	60	64	0	14	179	.	41	99	41	12	7	.	50	.	12	.	.	.	.	37
07JUL76	1572	.	58	.	84	62	58	0	11	143	.	41	87	32	11	5	.	46	.	9	.	.	.	.	32
10JUL76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
16JUL76	2247	.	81	.	114	85	80	1	16	198	.	48	129	50	12	8	.	59	.	14	.	.	.	.	37
17JUL76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
22JUL76	2045	.	78	.	110	71	46	1	17	203	.	49	127	49	5	8	.	60	.	13	.	.	.	.	37
23JUL76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
29JUL76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
30JUL76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
31JUL76	2055	.	79	.	118	81	11	3	16	192	.	.	126	49	5	9	.	62	.	14	.	.	.	.	37
13AUG76	.	.	71	.	95	71	49	2	18	170	.	48	108	47	14	8	.	61	.	14	.	.	.	.	35
20AUG76	899	.	55	.	66	51	52	0	10	123	.	28	80	30	3	6	.	55	.	13	.	.	.	.	37
20AUG76	899	.	55	.	66	51	52	0	10	123	.	28	80	30	3	6	.	55	.	13	.	.	.	.	37
27AUG76	1822	.	82	.	120	82	29	3	18	189	.	.	127	49	8	9	.	65	.	15	.	.	.	.	42
03SEP76	1744	.	76	.	96	76	46	3	16	.	.	48	108	44	8	9	.	61	.	14	.	.	.	.	39
04SEP76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
09SEP76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
10SEP76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

37	11SEP76	.	.	76	.	120	81	.	.	.	177	.	.	.	.	.	.	.	.	.	14	.	.	.	.	.
38	12SEP76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
39	13SEP76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
40	14SEP76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
41	15SEP76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
42	16SEP76	1693	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
43	17SEP76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
44	18SEP76	.	.	60	26	92	57	58	.	.	113	.	30	.	32	.	.	.	45	.	.	.	.	.	.	.
45	23SEP76	1618	133	81	41	127	81	92	.	.	181	.	.	124	48	.	.	.	61	.	.	.	.	.	.	.
46	24SEP76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
47	29SEP76	1763	121	76	38	121	79	24	.	.	162	.	43	110	44	.	.	.	51	.	.	.	.	.	.	.
48	01OCT76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
49	02OCT76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
50	06OCT76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
51	08OCT76	1628	110	74	34	110	77	8	.	.	163	.	41	102	43	.	.	.	54	.	.	.	.	.	.	.
52	09OCT76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
53	11OCT76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
54	12OCT76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
55	13OCT76	1509	116	76	30	115	75	17	.	.	168	.	.	101	46	.	.	.	56	.	.	.	.	.	.	.
56	14OCT76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
57	15OCT76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
58	16OCT76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
59	17OCT76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
60	18OCT76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
61	19OCT76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
62	20OCT76	.	100	106	37	40	77	60	.	.	156	.	.	89	55	.	.	.	.	.	.	.	.	.	.	.
63	21OCT76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
64	22OCT76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
65	23OCT76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
66	27OCT76	.	99	74	23	106	77	3	.	.	156	.	.	86	42	.	.	.	.	.	.	.	.	.	.	.
67	28OCT76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
68	30OCT76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
69	03NOV76	.	.	73	26	101	16	4	.	.	156	.	.	82	43	.	.	.	.	.	.	.	.	.	.	.
70	04NOV76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
71	05NOV76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
72	06NOV76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
73	11NOV76	1036	.	74	23	99	75	9	.	.	153	.	.	72	42	.	.	.	61	.	.	.	.	.	.	.
74	12NOV76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
75	13NOV76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
76	17NOV76	1487	.	74	27	100	75	25	.	.	152	.	.	72	42	.	.	.	57	.	.	.	.	.	.	.
77	19NOV76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	24NOV76	1332	.	82	24	109	92	36	.	.	169	.	.	83	46	.	.	.	72	.	.	.	.	.	.	.
	25NOV76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	27NOV76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	29NOV76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	02DEC76	1557	.	.	26	111	91	82	.	.	175	.	.	94	44	.	.	.	.	.	.	.	.	.	.	.
	10DEC76	1455	.	82	29	103	85	18	.	.	168	.	.	107	44	.	.	.	.	.	.	.	.	.	.	.
	16DEC76	1711	.	78	24	106	87	91	.	.	168	.	.	112	44	.	.	.	.	.	.	.	.	.	.	.
	22DEC76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	29DEC76	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	05JAN77	1625	.	83	30	108	82	73	.	.	164	.	.	121	.	.	.	.	.	.	.	.	.	.	.	.
	10JAN77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

POTABLE WATER STANDARDS PROJECT - MOUND FACILITY
CONCENTRATION OF TRITIUM (PCI/LITER) IN SELECTED WELLS

	DATE	WL 1-4	WL 2-1	WL 2-2	WL 2-3	WL 3-1	WL 3-2	WL 3-3	WL 3-4	WL 3-5	WL 3-6	WL 3-7	WL 4-2	WL 4-3	WL 4-4	WL 4-5	WL 4-6	WL 4-7	WL 5-2	WL 5-3	WL 5-4	WL 5-5	WL 5-6	WL 6-3
89	10JAN77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
90	15JAN77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
91	20JAN77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
92	20JAN77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
93	20JAN77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
94	22JAN77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
95	29JAN77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
96	12FEB77	1529	.	83	25	107	75	75	.	.	166	.	.	118	.	.	.	.	.	.	.	.	.	.
97	19FEB77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
98	05MAR77	1683	.	80	38	113	69	17	.	.	170	.	.	88	.	.	.	.	.	.	.	.	.	.
99	19MAR77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
100	09APR77	2099	.	80	31	111	57	10	.	.	162	.	.	78	.	.	.	.	.	.	.	.	.	.
101	16APR77	1492	.	73	32	102	.	35	.	.	162	.	.	86	.	.	.	.	.	.	.	.	.	.
102	16APR77	1492	.	73	32	102	.	35	.	.	162	.	.	80	.	.	.	.	.	.	.	.	.	.
103	18APR77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
104	23APR77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
105	23APR77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
106	30APR77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
107	07MAY77	1494	.	.	33	95	.	1	.	.	155	.	.	77	.	.	.	.	.	.	.	.	.	.
108	11MAY77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
109	14MAY77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
110	16MAY77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
111	16MAY77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
112	21MAY77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
113	04JUN77	1577	.	82	33	105	.	34	.	.	175	.	.	96	.	.	.	.	.	.	.	.	.	.
114	18JUN77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
115	30JUN77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
116	05JUL77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
117	09JUL77	1608	.	86	34	97	.	14	.	.	176	.	.	94	.	.	.	.	.	.	.	.	.	.
118	21JUL77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
119	06AUG77	1541	.	81	38	90	.	12	.	.	177	.	.	95	.	.	.	.	.	.	.	.	.	.
120	19AUG77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
121	23AUG77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
122	24AUG77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
123	02SEP77	1474	.	75	34	97	.	18	.	.	164	.	.	74	.	.	.	.	.	.	.	.	.	.
124	20SEP77	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

POTABLE WATER STANDARDS PROJECT – MOUND FACILI
CONCENTRATION OF TRITIUM IN WELL 34 1



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LEGEND: --- EPA STANDARD, ⌑ – ⌑ WELL 34 1