



Department of Energy

Ohio Field Office
Fernald Area Office

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MAY 24 2000

Mr. James M. Raab
Hydrologist/Supervisor
Technical Services Unit
Water Resources Section
Division of Water
Fountain Square
Columbus, Ohio 43224-1387

DOE-0700-00

Dear Mr. Raab:

TRANSMITTAL OF PLUGGING AND ABANDONMENT INFORMATION FOR OCTOBER 1998 THROUGH OCTOBER 1999

- References: 1) Letter, J. M. Raab (ODNR) to K. Nickel (DOE-FEMP), dated March 4, 1996
- 2) Letter, J. A. Saric (U.S. EPA) to J. Reising (DOE-FEMP), "Well Abandonment," dated June 28, 1996
- 3) Letter, T. A. Schneider (OEPA) to J. Reising (DOE-FEMP), "DOE FEMP MSL 531-0297 Hamilton County Approval: Well Abandonment Letter," dated May 30, 1996

This letter transmits information regarding monitoring well plugging and abandonment activities for October 1998 through October 1999 for the Fernald Environmental Management Project (FEMP). This letter fulfills Ohio revised Code 1521.05(B) requirements for submittal of well abandonment documentation and is based on correspondence (Reference 1). During the period, 24 monitoring wells were plugged and abandoned using a number of previously approved (References 2 and 3) abandonment methods. Abandonment methods used were chosen based on well-specific considerations such as screen depth, casing material, or well location. A list of wells plugged and abandoned and the method used are provided in Enclosure 1 and described in detail in Enclosure II. An Ohio Department of Natural Resources (ODNR) Water Well Sealing Report has been completed for the deepest well for each of the abandonment methods and is included in Enclosure III.

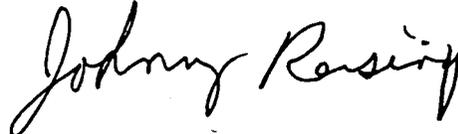
MAY 24 2000

Mr. James M. Raab

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If you have any questions or comments concerning this documentation, please contact Kathleen Nickel at (513) 648-3166.

Sincerely,



Johnny W. Reising
Associate Director
Environmental Management

FEMP:Nickel

Enclosures

cc w/enclosures:

J. A. Saric, USEPA-V
M. Proffitt, OEPA-SWDO, Dayton
T. A. Schneider, OEPA-Dayton
R. Vandegrift, ODOH
D J. Brettschneider, Fluor Fernald, Inc./52-2
T. Hagen, Fluor Fernald, Inc./65-2
W. A. Hertel, Fluor Fernald, Inc./52-5
M. A. Jewett, Fluor Fernald, Inc./52-2
F. L. Johnston, Fluor Fernald, Inc./52-2
T. A. Poff, Fluor Fernald, Inc./65-2
K. S. Voisard, Fluor Fernald, Inc./12
AR Coordinator/ Fluor Fernald, Inc./78

cc w/o enclosures:

A. Tanner, OH/FEMP

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ENCLOSURE I

**WELL PLUGGING AND ABANDONMENT
SUMMARY INFORMATION OCTOBER 1998 THROUGH OCTOBER 1999**

The plugging methods used are described below:

Method 1: Fill the screened interval with sand and cap with a 2 to 5-foot thick bentonite seal. Cut the riser 5 feet below the base of the glacial overburden and remove. Inject expansive cement grout or bentonite grout into the remaining riser and hole bringing grout flush to the surface.

Wells plugged using Method 1:

P5-13	1041	4008*
11120	3008	

Method 2: Pull riser and screen from the ground. Inject expansive cement grout or bentonite grout into the resultant hole, bringing grout flush to the surface.

Wells plugged using Method 2:

1029	11081	1940
1158	1153	11119
1607	1606	1613
1608	1610	1149
1612	1611	1161
1778	1148	3003*
1838		

NOTE: Asterisk (*) indicates the deepest well per method.

ENCLOSURE II

**WELL PLUGGING AND ABANDONMENT SUMMARY INFORMATION
OCTOBER 1998 THROUGH OCTOBER 1999**

Well/ Lysimeter	Coordinates NAD83 N	Coordinates NAD83 E	Diameter (In)	Depth (Ft)	Riser Material	Sealing Date
Method 1						
P5-13	482125	1346688	2	20.0	PVC	3-2-99
1041	480579.54	1348329.67	4	22.5	STAINLESS	4-5-99
3008	480691.53	1347751.39	4	120.0	CARBON STEEL	10-15-98
4008	480690.62	1347746.49	4	180.0	CARBON STEEL	10-14-98
11120	480310.08	1348794.57	2	21.25	PVC	4-8-99
Method 2						
1029	480855.3	1346928.9	4	31.0	STAINLESS	3-2-99
1148	480454.05	1350186.94	4	19.0	PVC	5-10-99
1149	480404.32	1350214.2	4	15.0	PVC	5-10-99
1153	480331.36	1349772.62	4	11.0	PVC	4-6-99
1158	480239.94	1349760.21	4	10.5	PVC	4-6-99
1161	480148.26	1350235.85	4	12.0	PVC	4-20-99
1606	480404.27	1350161.21	4	20.0	STAINLESS	4-12-99
1607	480333.17	1350167.74	4	20.0	STAINLESS	4-8-99
1608	480278.82	1350167.23	4	20.0	STAINLESS	5-10-99
1610	480309.6	1350204.15	4	20.0	STAINLESS	5-12-99
1611	480452.56	1350264.27	4	17.0	STAINLESS	5-10-99
1612	480409.46	1350262.05	4	19.6	STAINLESS	4-14-99
1613	480312.56	1350244.77	4	20.0	STAINLESS	4-13-99
1778	480334.59	1350203.29	4	20.0	STAINLESS	4-29-99
1838	481202.37	1347071.68	2	20.0	PVC	5-12-99
1940	480487.1	1348056.11	2	19.2	STAINLESS	3-25-99
3003	481660.07	1346409.47	4	92.5	CARBON STEEL	10-7-98
11081	478686.13	1349197.03	4	13.5	STAINLESS	3-8-99
11119	480310.02	1348791.92	2	25.0	PVC	4-7-99

ENCLOSURE III

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WATER WELL SEALING REPORT
(For Abandoned or Unused Wells)
OHIO DEPARTMENT OF NATURAL RESOURCES
Division of Water, Ground Water Resources Section
1939 Fountain Square Drive
Columbus, Ohio 43224-1360

LOCATION Fernald Environmental Management Project (FEMP)

County Hamilton Township Crosby Section 6
Property Owner United States Department of Energy

Address of Property 7400 Willey Road, Fernald, OH 45013
Location (NAD83 State Planar Coordinates) N480690.62 E1347746.49

ORIGINAL WELL

ODNR Well Log Number NA Copy attached? Yes or No (circle one) FEMP ID# 4008

MEASURED CONSTRUCTION DETAILS Date of Measurements 10-14-98

Depth of Well 180.0 feet Static Water Level 57.96 feet
Size of Casing 4 inch ID Length of Casing 175.0 feet
Well Condition Fair; some corrosion (surface) on casing and riser.

SEALING PROCEDURE

Method of Placement Poured sand and bentonite pellets. Tremied bentonite grout.

Placement:	From	To	Sealing Material	Volume
	<u>180.0 feet</u>	<u>40.0 feet</u>	<u>Sand (Global #5)</u>	<u>12.9 ft³</u>
	<u>40.0 feet</u>	<u>19.0 feet</u>	<u>bentonite pellets</u>	<u>1.83 ft³</u>
	<u>19.0 feet</u>	<u>0.0 feet</u>	<u>bentonite grout</u>	<u>1.65 ft³</u>

Was Casing Removed? Yes (circle one) or No Amount Removed 48 feet (partial well removed)

Condition of Casing fair

Perforations: From NA To NA
From NA To NA

Date Sealing Performed 10-14-98

Reason(s) for Sealing Abandoned in advance of excavation and construction remediation activities.

CONTRACTOR

Name Moody's of Dayton ODH Registration # _____
Address 4359 Infirmary Road P.O. Box 509
City/State/Zip Miamisburg, OH 45343

FEMP Geologist Signature Henry T. Becker

Henry T. Becker

NOTE: Length of casing does not include length of screen.
NA: Not Applicable or Not Available.

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WATER WELL SEALING REPORT
(For Abandoned or Unused Wells)
OHIO DEPARTMENT OF NATURAL RESOURCES
Division of Water, Ground Water Resources Section
1939 Fountain Square Drive
Columbus, Ohio 43224-1360

LOCATION Fernald Environmental Management Project (FEMP)

County Hamilton Township Crosby Section 6
Property Owner United States Department of Energy

Address of Property 7400 Willey Road, Fernald, OH 45013
Location (NAD83 State Planar Coordinates) N481660.07 E1346409.47

ORIGINAL WELL

ODNR Well Log Number NA Copy attached? Yes or No (circle one) FEMP ID# 3003

MEASURED CONSTRUCTION DETAILS Date of Measurements 10-7-98

Depth of Well 92.5 feet Static Water Level 38.52 feet
Size of Casing 4-inch ID Length of Casing 72.5 feet
Well Condition poor; much corrosion (surface) on steel riser, brass screen tarnished.
No indication of breach in riser, however.

SEALING PROCEDURE

Method of Placement Formation allowed to collapse naturally to 40.0 feet. Poured sand and bentonite pellets. Tremied bentonite pellets.

Placement:	From	To	Sealing Material	Volume
	<u>92.5 feet</u>	<u>40.0 feet</u>	<u>natural formation</u>	<u>NA</u>
	<u>40.0 feet</u>	<u>36.0 feet</u>	<u>Sand (Global #5)</u>	<u>4.38 ft³</u>
	<u>36.0 feet</u>	<u>33.0 feet</u>	<u>bentonite pellets</u>	<u>3.29 ft³</u>
	<u>33.0 feet</u>	<u>0.0 feet</u>	<u>bentonite grout</u>	<u>11.3 ft³</u>

Was Casing Removed? Yes or No (circle one) Amount Removed 92.5 feet

Condition of Casing poor

Perforations: From NA To NA
From NA To NA

Date Sealing Performed 10-7-98

Reason(s) for Sealing Abandoned in advance of excavation and construction remediation activities.

CONTRACTOR

Name Moody's of Dayton ODH Registration # _____
Address 4359 Infirmary Road P.O. Box 509
City/State/Zip Miamisburg, OH 45343

FEMP Geologist Signature Henry T. Becker
Henry T. Becker

NOTE: Length of casing does not include length of screen.
NA: Not Applicable or Not Available.