

**Department of Energy**

**Ohio Field Office
Fernald Closure Project
175 Tri-County Parkway
Springdale, Ohio 45246
(513) 648-3155**



MAR 4 2005

Mr. James A. Saric, Remedial Project Manager
United States Environmental Protection Agency
Region V, SR-6J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

DOE-0181-05

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

**REQUEST FOR APPROVAL TO DISPOSE OF SURROGATE MATERIALS FROM
THE AWR PROJECT AND SILOS 1 AND 2 TREATMENT FACILITY TESTING
OPERATIONS TO THE ON-SITE DISPOSAL FACILITY**

This letter is to request your approval to dispose of the surrogate materials used in the testing operations for the AWR Project and Silos 1 and 2 Treatment Facility into the On-Site Disposal Facility (OSDF). This material is currently located in the swale due west of the Biodenitrification Surge Lagoon and consists of approximately 2,500 tons of a mixture of crushed rock, flyash, Portland cement, and bentonite. Samples were collected of this material and analyzed for the primary radiological constituents as well as technetium-99. The results demonstrated that this material is above-final remediation level for thorium-232, but well below the OSDF waste acceptance criteria for uranium and technetium-99. No significant thorium-232 was detected in fresh crushed rock but it was detected in the bentonite. Therefore, it is believed to be background natural thorium contained in materials used to produce bentonite. Additionally, Radiological Control Technicians surveyed this material with both an alpha survey meter and a beta/gamma survey meter, which produced readings from the beta/gamma meter up to 3,600 disintegrations per minute/100 cm² direct on materials in the swale. All alpha results were non-detectable due to the moisture in the materials. Enclosed is a summary of the analytical results.

Mr. James A. Saric
Mr. Tom Schneider

Upon your approval, this material will be excavated and placed as impacted material in the OSDF. The initial excavation will be performed to within 6 inches of the soil surface to ensure that soil from this area is not commingled with the surrogate material. The remaining surrogate will be removed during final remediation of this area. By removing most of this material at this time will allow the swale to regain it's capacity and functionality.

If you have any questions or require additional information, please contact Johnny Reising at (513) 648-3139.

Sincerely,



for William J. Taylor
Director

FCP:Reising

Enclosure: As Stated

cc w/enclosure:

D. Pfister, OH/FCP
J. Reising, OH/FCP
T. Schneider, OEPA-Dayton (three copies of enclosure)
G. Jablonowski, USEPA-V, SR-6J
F. Bell, ATSDR
M. Cullerton, Tetra Tech
M. Shupe, HSI GeoTrans
R. Vandegrift, ODH
AR Coordinator, Fluor Fernald, Inc./MS78

cc w/o enclosure:

K. Alkema, Fluor Fernald, Inc./MS01
J. Chiou, Fluor Fernald, Inc./MS64
F. Johnston, Fluor Fernald, Inc./MS52-5
C. Murphy, Fluor Fernald, Inc./MS77
ECDC, Fluor Fernald, Inc./MS52-7

Summary of Analytical Result for Surrogate Material

Boring ID	Sample ID	Date	Parameter	Result	Qual	Units
A7-SM-1	A7-SM-1^R	2/8/2005	Radium-228	0.148	NV	pCi/g
A7-SM-1	A7-SM-1^R	2/8/2005	Technetium-99	0.113	UNV	pCi/g
A7-SM-1	A7-SM-1^R	2/8/2005	Thorium-228	0.0212	UNV	pCi/g
A7-SM-1	A7-SM-1^R	2/8/2005	Thorium-228	0.145	NV	pCi/g
A7-SM-1	A7-SM-1^R	2/8/2005	Thorium-232	0.106	UNV	pCi/g
A7-SM-1	A7-SM-1^R	2/8/2005	Thorium-232	0.148	NV	pCi/g
A7-SM-1	A7-SM-1^R	2/8/2005	Uranium, Total	2.2	NV	mg/kg
A7-SM-2	A7-SM-2^R	2/8/2005	Radium-228	1.77	NV	pCi/g
A7-SM-2	A7-SM-2^R	2/8/2005	Technetium-99	0.0994	UNV	pCi/g
A7-SM-2	A7-SM-2^R	2/8/2005	Thorium-228	1.68	NV	pCi/g
A7-SM-2	A7-SM-2^R	2/8/2005	Thorium-228	1.83	NV	pCi/g
A7-SM-2	A7-SM-2^R	2/8/2005	Thorium-232	1.77	NV	pCi/g
A7-SM-2	A7-SM-2^R	2/8/2005	Thorium-232	1.9	NV	pCi/g
A7-SM-2	A7-SM-2^R	2/8/2005	Uranium, Total	8.66	NV	mg/kg
A7-SM-3	A7-SM-3^R	2/8/2005	Radium-228	1.54	NV	pCi/g
A7-SM-3	A7-SM-3^R	2/8/2005	Technetium-99	0.312	UNV	pCi/g
A7-SM-3	A7-SM-3^R	2/8/2005	Thorium-228	1.49	NV	pCi/g
A7-SM-3	A7-SM-3^R	2/8/2005	Thorium-228	1.79	NV	pCi/g
A7-SM-3	A7-SM-3^R	2/8/2005	Thorium-232	1.54	NV	pCi/g
A7-SM-3	A7-SM-3^R	2/8/2005	Thorium-232	1.82	NV	pCi/g
A7-SM-3	A7-SM-3^R	2/8/2005	Uranium, Total	8.77	NV	mg/kg
A7-SM-4	A7-SM-4^R	2/8/2005	Radium-228	1.51	NV	pCi/g
A7-SM-4	A7-SM-4^R	2/8/2005	Technetium-99	0.834	UNV	pCi/g
A7-SM-4	A7-SM-4^R	2/8/2005	Thorium-228	1.42	NV	pCi/g
A7-SM-4	A7-SM-4^R	2/8/2005	Thorium-228	1.94	NV	pCi/g
A7-SM-4	A7-SM-4^R	2/8/2005	Thorium-232	1.51	NV	pCi/g
A7-SM-4	A7-SM-4^R	2/8/2005	Thorium-232	1.66	NV	pCi/g
A7-SM-4	A7-SM-4^R	2/8/2005	Uranium, Total	8.65	NV	mg/kg
A7-SM-5	A7-SM-5^R	2/16/2005	Thorium-228	0.113	UNV	pCi/g
A7-SM-5	A7-SM-5^R	2/16/2005	Thorium-232	0.135	NV	pCi/g
A7-SM-6	A7-SM-6^R	2/16/2005	Thorium-228	0.22	UNV	pCi/g
A7-SM-6	A7-SM-6^R	2/16/2005	Thorium-232	0.0314	UNV	pCi/g
A7-SM-7	A7-SM-7^R	2/17/2005	Thorium-228	2.81	NV	pCi/g
A7-SM-7	A7-SM-7^R	2/17/2005	Thorium-232	2.61	NV	pCi/g