Fluor Fernald, Inc.
P.O. Box 538704
Cincinnati, OH 45253-8704

(513) 648-3000

FLUOR

May 13, 2005

Fernald Closure Project
Letter No. C:PROJ:2005-0043

Mr. Johnny W. Reising
U. S. Department of Energy
Ohio Field Office - Fernald Closure Project
175 Tri-County Parkway
Cincinnati, Ohio 45246

Dear Mr. Reising:

CONTRACT DE-AC24-01OH20115, STATEMENT OF COMPLETION FOR THE SOUTHERN WASTE UNITS NATURAL RESOURCE RESTORATION PROJECT

This letter documents completion of the Southern Waste Units (SWU) Natural Resource Restoration Project. The SWU consisted of several contaminated areas encompassing approximately 25 acres. Impacted areas included the Active and Inactive Flyash Piles, the South Field, and the Carolina Area. The SWU was the first extensive soil remediation project completed at the Fernald Closure Project (FCP). Ecological restoration commenced following remediation and certification of the area.

The restoration goals for the SWU were to expand the riparian corridor along Paddys Run, create several open water areas, and establish the early stages of an upland forest community. An accelerated Natural Resource Restoration Design Plan (NRRDP) was submitted to the Fernald Natural Resource Trustees and the agencies in April 2002. Field work commenced in spring 2002 and continued in several stages until spring 2003. The sequence of restoration activities is provided below:

- Soil amendment and seeding of the Active Flyash Pile was conducted in spring 2002. The Carolina Area and a portion of the Active Flyash Pile were planted as well.
- Slope stabilization, surface water control, and access paths were established in summer 2002.
- Planting in the Active Flyash Pile and riparian areas continued in fall 2002.
- Floodplain expansion activities, installation of wildlife amenities and all planting and seeding efforts were completed in spring 2003.
- Additional seeding was conducted in 2004 following the installation of groundwater remediation infrastructure within a portion of the project area.

Floodplain expansion required the construction of an earth berm, installation of two water control structures, and the removal of a riprap berm in order to permit Paddys Run to flood the riparian area one or two times a year. An expanded floodplain along Paddys Run allows for some dissipation of water during periods of high flow, thereby potentially reducing the amount of incisement and bank erosion downstream and upstream of the SWU project area. A one to two-year flood interval was chosen because this is the "channel forming flow" that has the biggest impact on stream channels. Paddys Run has overflowed into the SWU floodplain area three times since grading was completed in 2003.

Implementation monitoring of the SWU restoration project was conducted in summer 2003. Data were presented in the 2003 Consolidated Monitoring Report. In general, woody vegetation survival was between 66 and 79 percent, with mortality attributed primarily to deer browsing. Plant survival within fenced areas was over 90 percent, while plants protected by plastic deer tubes showed higher rates of mortality. These findings have led to the expanded use of deer exclosure fencing in ecological restoration projects at the FCP.

Herbaceous cover data showed that native vegetation is successfully establishing across the SWU project area. All seeded areas had greater than 50 percent native species composition and relative frequency. Cover estimates were similar to findings in other restoration projects across the FCP. Acceptable cover was achieved only in slope stabilization and erosion control areas. This was attributed to increased seeding rates and extensive use of jute and coir mats, which serve as a mulch cover for seeded areas. It is expected that herbaceous cover will increase in the next several years once the extensive root systems of native grasses and forbs establish.

Attached please find a current photograph of the SWU project areas with the final topography overlaid. Although the requirements of the NRRDP have been completed, Fluor Fernald will continue to conduct necessary maintenance in this area until Site Closure. Additional seeding may be required following a road upgrade along the northern portion of the project area. In addition, forest restoration components of the SWU will be monitored as part of the functional monitoring program in 2005.

Any questions on this matter should be directed to me at (513) 738-2834 or Eric Woods at (513) 648-7500.

Sincerely,

Jyh-Dong Chiou
Project Manager

JDC:JH:ldt
Enclosure

c: Helen E. Bilson, MS1
Frank Johnston, MS99
Ralph E. Holland, DOE Contracting Officer, DOE/EMCBC
John Homer, MS90
Marc Jewett, MS1
Uday A. Kumthekar, MS88
Don A. Pfister, DOE/OH-FCP
M. D. Powell, MS64
Dennis Sizemore, Fluor Fernald, Inc. Prime Contract, MS1
Harold Swiger, MS90
W. Eric Woods, MS90
Pete Yerace, DOE/OH
AR Coordinator, MS78
DOE Records Center
Letter Log Copy, MS1
SDFP Library, MS88
Project Number 20400

c: Ken Alkema, MS1
Reinhard Friske, MS52-3
Shelby Kawa, DOE-EMCBC
Con Murphy, MS77
Dennis Nixon, MS1
Gary Stegner, DOE/OH
William J. Taylor, DOE/OH-FCP
DSDP Letterlog, MS88

DRAFT LETTER

To: James Saric, USEPA
Tom Schneider, OEPA

From: William Taylor, DOE-FCP

TRANSMITTAL OF STATEMENT OF COMPLETION FOR THE SOUTHERN WASTE UNITS NATURAL RESOURCE RESTORATION PROJECT

This letter documents completion of the Southern Waste Units (SWU) Natural Resource Restoration Project. The SWU consisted of several contaminated areas encompassing approximately 25 acres. Impacted areas included the Active and Inactive Flyash Piles, the South Field, and the Carolina Area. The SWU was the first extensive soil remediation project completed at the Fernald Closure Project (FCP). Ecological restoration commenced following remediation and certification of the area.

The restoration goals for the SWU were to expand the riparian corridor along Paddys Run, create several open water areas, and establish the early stages of an upland forest community. An accelerated Natural Resource Restoration Design Plan (NRRDP) was submitted to the Fernald Natural Resource Trustees and the agencies in April 2002. Field work commenced in spring 2002 and continued in several stages until spring 2003. The sequence of restoration activities is provided below:

- Soil amendment and seeding of the Active Flyash Pile was conducted in spring 2002. The Carolina Area and a portion of the Active Flyash Pile were planted as well.

- Slope stabilization, surface water control, and access paths were established in summer 2002.

- Planting in the Active Flyash Pile and riparian areas continued in fall 2002.

- Floodplain expansion activities, installation of wildlife amenities and all planting and seeding efforts were completed in spring 2003.

- Additional seeding was conducted in 2004 following the installation of groundwater remediation infrastructure within a portion of the project area.

Floodplain expansion required the construction of an earth berm, installation of two water control structures, and the removal of a riprap berm in order to permit Paddys Run to flood the riparian area one or two times a year. An expanded floodplain along Paddys Run allows for some dissipation of water during periods of high flow, thereby potentially reducing the amount of incisement and bank erosion downstream and upstream of the SWU project area. A one to two-year flood interval was chosen because

this is the "channel forming flow" that has the biggest impact on stream channels. Paddys Run has overflowed into the SWU floodplain area three times since grading was completed in 2003.

Implementation monitoring of the SWU restoration project was conducted in summer 2003. Data were presented in the 2003 Consolidated Monitoring Report. In general, woody vegetation survival was between 66 and 79 percent, with mortality attributed primarily to deer browsing. Plant survival within fenced areas was over 90 percent, while plants protected by plastic deer tubes showed higher rates of mortality. These findings have led to the expanded use of deer exclosure fencing in ecological restoration projects at the FCP.

Herbaceous cover data showed that native vegetation is successfully establishing across the SWU project area. All seeded areas had greater than 50 percent native species composition and relative frequency. Cover estimates were similar to findings in other restoration projects across the FCP. Acceptable cover was achieved only in slope stabilization and erosion control areas. This was attributed to increased seeding rates and extensive use of jute and coir mats, which serve as a mulch cover for seeded areas. It is expected that herbaceous cover will increase in the next several years once the extensive root systems of native grasses and forbs establish.

Attached please find a current photograph of the SWU project areas with the final topography overlaid. Although the requirements of the NRRDP have been completed, Fluor Fernald will continue to conduct necessary maintenance in this area until Site Closure. Additional seeding may be required following a road upgrade along the northern portion of the project area. In addition, forest restoration components of the SWU will be monitored as part of the functional monitoring program in 2005.

Please contact Johnny Reising at (513) 648-3139 with any questions regarding this matter.

cc:
D. Pfister, DOE-OH/FCP
J. Reising, DOE-OH/FCP
G. Stegner, DOE-OH
P. Yerace, DOE-OH
T. Schneider, OEPA-Dayton (three copies of enclosures)
G. Jablonowski, USEPA-V, SR-6J
D. Bidwell, FCAB
D. Sarno, FCAB
F. Bell, ATSDR
M. Cullerton, Tetra Tech
M. Shupe, HSI GeoTrans

R. Vandegrift, ODH
AR Coordinator, Fluor Fernald, Inc./MS78

cc:
K. Alkema, Fluor Fernald, Inc./MS1
H. Bilson, Fluor Fernald, Inc./MS1
J. Chiou, Fluor Fernald, Inc./MS88
J. Homer, Fluor Fernald, Inc./MS90
D. Nixon, Fluor Fernald, Inc./MS1
T. Poff, Fluor Fernald, Inc./MS88
D. Powell, Fluor Fernald, Inc./MS64
E. Woods, Fluor Fernald, Inc./MS90

FERNALD CLOSURE PROJECT
SOUTHERN WASTE UNITS
NATURAL RESOURCE RESTORATION PROJECT

PHOTO DATE: MARCH 14, 2005