Stoller
Fernald Office

established 1959

May 29, 2007

Task Order ST07-110
Control Number 1000-T07-0964

Ms. Jane Powell
Fernald Site Manager
Office of Legacy Management
U.S. Department of Energy
10995 Hamilton-Cleves Hwy.
Harrison, OH 45030

SUBJECT: Contract No. DE-AC01-02GJ79491, Stoller
Task Order Number ST07-110, LM Fernald LTS&M
Transmittal of the March 22, 2007 Fernald Site Inspection Checklist for the On-Site Disposal Facility

Dear Ms. Powell:

Reference: Geosyntec Consultants, 2007, "Memorandum, "Response to OEPA's Concerns About Cell 8 Fernald Closure Project, Fernald, Ohio, April

The purpose of this letter is to transmit the completed checklist for the March 22, 2007 inspection of the On-Site Disposal Facility (OSDF) for your review. Photographs of the disposal facility and the surrounding area were taken to accompany the inspection and are included with this report. The March 2007 inspection was initiated on March 22. Rain prevented the inspection from being completed in one day; therefore, the inspection was completed the following week on March 27. The inspection was conducted with participation from the Ohio Environmental Protection Agency (OEPA), Tetra Tech, Geosyntec Consultants, the Ohio Department of Health, and the S. M. Stoller Corporation. The inspection was the 15th conducted on the Cell 1 Cap, the 11th conducted on the Cell 2 Cap, the 7th conducted on the Cell 3 Cap, the 4th conducted on the Cell 4 Cap, the 6th conducted on the Cell 5 Cap, the 4th conducted on the Cell 6 Cap, and the second complete inspection for the Cell 7 and 8 caps.

In general, establishment of the vegetative cover is progressing well. Cells 1 through 6 had full stands of grass, and previously-repaired areas have recovered nicely. There are portions of Cells 7 and 8 that do not yet have a well established vegetative cover. This may be due to some difficulties that were encountered during seeding in the late fall of 2006. Erosion is primarily limited to the west side of Cell 7 and the west and south sides of Cell 8 where seeding late in the fall of 2006 did not permit an adequate stand of grass to be established (see attached photographs). Thistle is sprouting on Cells 1 – 6. It is heavy on Cell 1 and a portion of Cell 2, but is mostly scattered on Cells 3 – 6. Small mammals have burrowed holes across Cell caps 1 through 6. Rocks and other debris were identified on several of the cell caps, as is identified on

the inspection checklist. The attached inspection checklist details where repairs and other attention are needed.

There continued to be some concern regarding the uneven surface that was observed along the south side of Cell 8. This same issue was raised following the December 2006 inspection. The uneven surface is a result of the seedbed preparation process, when a soil stabilizer is used to break up compacted soil. Tire tracks from the stabilizer left a series of depressions at a 45-degree angle to the slope. Geosyntec Consultants re-evaluated the slope following the March 2007 inspection. It was determined that the proper course of action was to continue monitoring for erosion and make any repairs that are necessary. In addition, the extent of seed germination on the south side of Cell 8 will be re-evaluated in May. Re-seeding of some areas may be necessary (Reference 1). As stated above, some erosion repair is needed for the west slope of Cells 7 and 8 and minor repairs are needed on the south side of Cell 8. Some additional seeding may be required for the south face of Cell 8 as well.

The next OSDF Cell Cap inspection is scheduled for June 2007. Upon your concurrence, please forward to the EPA, OEPA, and the remainder of the inspection team. A draft transmittal letter is attached.

If you have any questions or require additional information, please contact John Homer at (513) 648-7519.

Sincerely,

Frank Johnston
Fernald Project Site Manager

FJ:LM:dsm

Enclosures

c: J. Boylan, Stoller,
J. Homer, Stoller
J. Fleck, Geosyntec
T. L. Jones, DOE Contracting Officer, DOE/EMCBC
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H. Swiger, Stoller
Project File FER 115.02.05(A), (Thru W. Sumner)
Correspondence Control File (Thru C. Weston (e)

OSDF Cell Cap Post Closure Inspection Checklist

Date of Inspection: March 22, 2007 | Weather Conditions: Partly cloudy, cool,

Time of Inspection: 9:00 AM | Temperature: 59 °F | Wind Speed (Miles per hour) and Direction:

Inspection By: SM Stoller, Tetra Tech, OEPA, ODH, Geosyntec | Transect Direction**: East/West

Inspection Component	Condition for Each Cell Cap A* or U*								Comments	Addressed
	1	2	3	4	5	6	7	8		
1. Entrance Road/Monitoring Access Road										
1A. Verify entrance gate, lock and signage are intact and in good working order.	A							A		
1B. Verify that access gates are locked to prevent unauthorized entry.	A							A		
1C. Visually observe condition of access road for signs of erosion, ruts, standing water, proper drainage and excess vegetation.	A	A	A	A	A	A	A	A		
1D. Verify that access road surfacing, cross slope, reflectors, and signage are intact and in good condition.	A	A	A	A	A	A	A	A		
2. Chain Link Fence and Signage										
2A. Walk length of fence and ensure fence, posts, etc. are intact and in good condition. Ensure that gates are closed/locked to prevent unauthorized entry.	A	A	A	A	A	A	A	A		
2B. Verify that the proper signage is intact and in good condition at the following locations: Restricted Access; Certified Area; and Restored Area. (Some signs not installed at this time).	A	A	A	A	A	A	A	A		
2C. Check for vegetation growing over fences, barricades, signs and any noxious vegetation per State of Ohio Regulations (attached) and invasive plants growing on or around OSDF perimeter.	A	A	A	A	A	A	A	A		
3. Surface Water Management										
3A. Check integrity of drainage channels around OSDF for erosion or debris restricting water flow (see attached map). Build up of debris/sedimentation in drainage ditch is not to exceed 6 inches.	A	A	A	A	A	A	A	A		
3B. Visually check the integrity of rip-rap in drainage channels for signs of deterioration or removal of rock.	A	A	A	A	A	A	A	A		
3C. Visually check for the presence of woody vegetation growing in drainage channels and in rip-rap	A	A	A	A	A	A	A	A		
3D. Visually check the integrity of run-on and run-off control features including: Ditch checks, Gravity Inlet structures, and Culverts.	A	A	A	A	A	A	A	A		

***A** = Satisfactory ***U** = Unsatisfactory (comments required) ***N** = Not inspected

** Transect Direction should alternate each inspection (North to South & East to West)

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4. (A) Final Cover										
4A. Walk cover and side slopes in 25-ft (+/- 5-ft) transects and visually inspect for the following items:**										
4A1. Inspect erosion rills/channels. Flag any observable rills/channels greater than 3 inches wide and 6 inches deep or excessive erosion.	A	A	A	A	A	A	U	U	Cell 8, west, east and south 6:1, several large rills/holes need to be filled in with soil and re-seeded.	
4A2. Any observable depressions, settlement/subsidence, slumping or desiccation cracks. Flag any observable depressions, slumps, settlement/subsidence or dessication cracks.	A	A	A	A	A	A	A	U	Cell 8, west near top. There appears to be a shallow depression where water may stand for short periods of time.	
4A3. Any ponding or standing water. Flag any standing water.	A	A	A	A	A	A	A	A	None observed. See 4A2.	
4A4. Evidence of burrowing animals or other bio-intrusion. Flag any observable evidence of bio-intrusion.	U	U	U	U	U	U	A	A	The presence of moles or similar burrowing animals is evident over cells 1-6. Cell 1 east - hole that needs filled in Cell 2 top, east - hole that needs filled in Cell 2 east – ground hog hole Cell 5 west toe – ground hog hole	 5/15/07 5/15/07 5/15/07
4A5. Evidence of vehicle traffic on the OSDF cap.	A	A	A	A	A	A	A	A		
4B. Walk toe of slope and visually inspect for the following:										
4B1. Evidence of settlement/subsidence, erosion, and seepage. Flag any observable evidence of settlement/subsidence, erosion, or seepage.	A	A	A	A	A	A	U	U	East toe of Cells 7 and 8 has large "wash-outs" right at rip rap.	
4B2. A 20-ft corridor at the toe for the presence of woody vegetation, siltation, and/or biointrusion. Flag any woody vegetation, siltation, and/or biointrusion.	A	U	A	A	A	A	A	A	Woody vegetation at the west toe of Cell 2.	
4B3. Condition of rip-rap. Flag any observable abnormalities.	A	A	A	A	A	A	A	A		
4C. Inspect toe at final cover for evidence of freezing or siltation. Flag any observable abnormalities.	A	A	A	A	A	A	A	A		
4D. Walk cover and side slopes in 25-ft (+/- 5-ft) transects and visually check vegetative cover for the following:										
4D1. General health of grass cover and signs of stressed										

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Inspection Component	Condition for Each Cell Cap A* or U*								Comments	Addressed
	1	2	3	4	5	6	7	8		
or dead grass should be noted.	A	A	A	A	A	A	A	A		
4D2. Adequate grass coverage/density with no bares spots greater than 3-ft in diameter. Flag any bare spots greater than 3-ft in diameter. Any areas with questionable vegetative coverage will be sampled for percent cover and type of vegetation using meter-square quadrats.	A	A	A	A	A	A	U	U		
4D3. Inspect the cover for the presence of woody vegetation (i.e., trees or shrubs) or noxious/invasive plants growing. Flag any woody and/or noxious/invasive vegetation for removal/herbicide.	U	U	U	U	U	U	A	A	On cells 1-6, thistle is sprouting. Cell 1 is heavily covered in some areas. Cell 2 has a dense patch on the west toe.	
4E. Visually inspect locations where Cell 1 monitoring equipment and infrastructure has been removed. Check for settling of fill material. Check for adequate vegetative cover.	A									
5. Groundwater Monitoring Wells										
5A. Visually inspect all groundwater wells for damage and integrity of well infrastructure.	A	A	A	A	A	A	A	A		
5A1. Groundwater Monitoring Wells	A	A	A	A	A	A	A	A		
5A2. Horizontal Monitoring Wells	A	A	A	A	A	A	A	A		

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6. Miscellaneous										
6A. Visually inspect the integrity of survey benchmarks. Flag/note any abnormalities.	A	A	A	A	A	A	A	A		
6B. Visually inspect the integrity of the perched water interceptor trench. Note any abnormalities.	A	A	A	A	A	A	A	A		
6C. Visually observe/inspect the corridor 50-ft outside of OSDF for signs/evidence of land use changes, settlement/subsidence, erosion, standing water, encroachment, livestock grazing or noxious vegetation. Note any changes/abnormalities.	A	A	A	A	A	A	A	A		
6D. Visually inspect all infrastructure for any act of vandalism.	A	A	A	A	A	A	A	A		
6E. List any other observations not listed above.	U	U	U	U	A	A	A	U	Cells 1, 2, 3, 4 and 8 – various locations where there are rocks and other debris that need to be removed.	5/15/07 (cells 1-4)

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REFERENCE SOURCES FOR POST CLOSURE OSDF INSPECTIONS

1. Post-Closure Care and Inspection Plan, On-Site Disposal Facility
2. On-Site Disposal Facility Technical Specification #'s 02831, 02270, 02271, and 02930
3. On-Site Disposal Facility Drawing #'s 90X-5500-E-00851 and 90-5500-G-00577
4. Construction Drawing # 90X-6000-G-00073
5. Phase III Drawing #'s 90X-6000-G-00302 and 90X-6000-G-00310

On-Site Disposal Facility Inspection Report

March 2007

Stoller
Legacy Management Team
Stoller • Battelle • SAIC • Source One

Office of Legacy Management

East Face Cell 1

West Face Cell 1

North Face Cell 1

North Drainage (looking west)

East Face Cell 2

West Face Cell 2

East Face Cell 3

West Face Cell 3

East Face Cell 4

West Face Cell 4

East Face Cell 5

West Face Cell 5

East Face Cell 6

West Face Cell 6

East Face Cell 7

West Face Cell 7

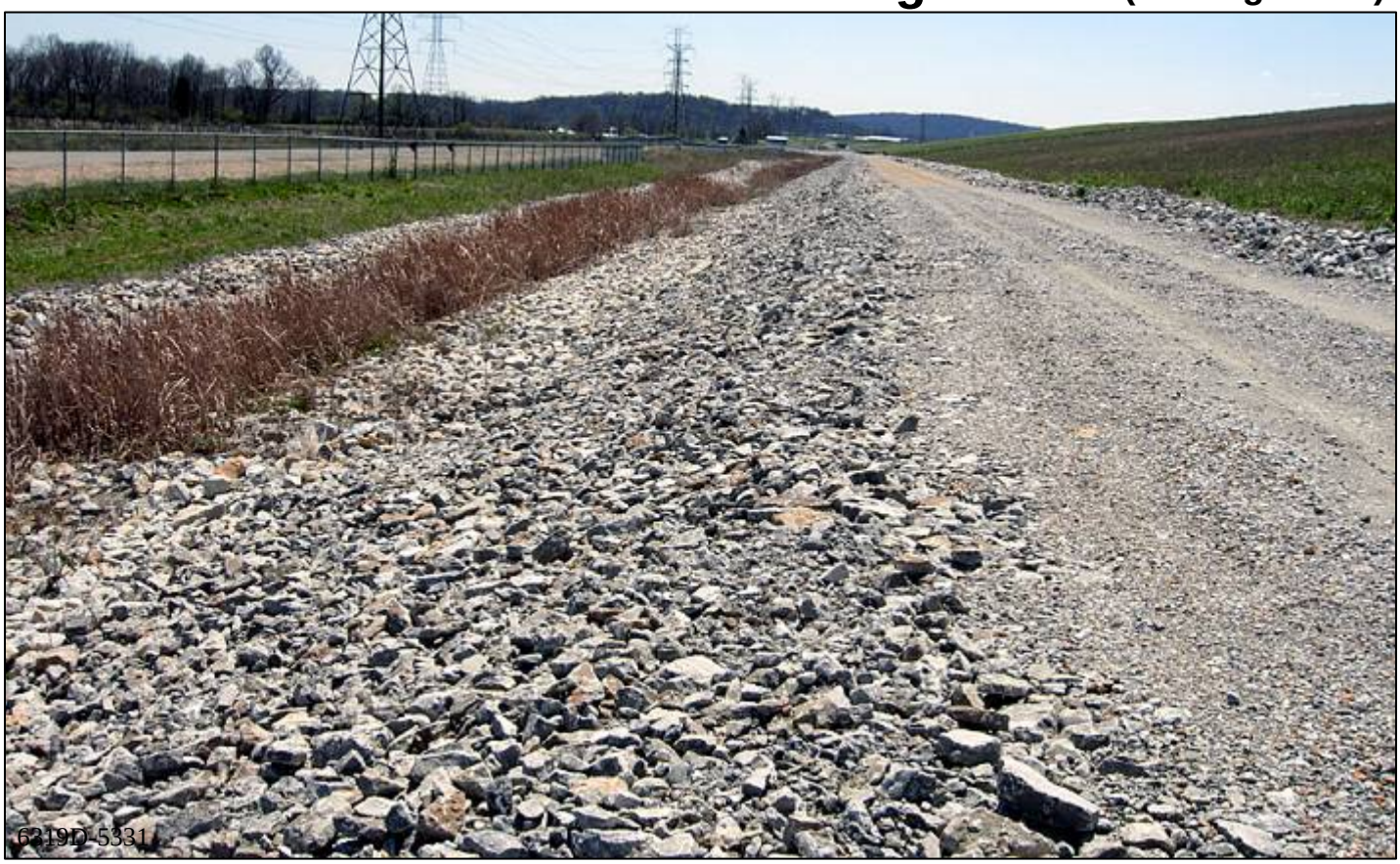
East Face Cell 8

West Face Cell 8

South Face Cell 8

South Drainage (looking west)

East Drainage Cell 7 (looking south)



East Drainage Cell 4 (looking south)

East Drainage Cell 1 (looking south)

West Inner Drainage Cell 7 (looking south)

West Inner Drainage Cell 4 (looking south)

West Inner Drainage Cell 1 (looking south)

West Outer Drainage Cell 1 (looking south)