



Department of Energy
Ohio Field Office
Fernald Environmental Management Project
P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155



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JAN 06 2004

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-0094-04

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

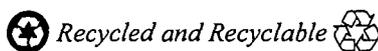
Dear Mr. Saric and Mr. Schneider:

**NOVEMBER 3, 2003 INSPECTION CHECKLIST FOR ON-SITE DISPOSAL FACILITY CELL 1
CAP**

The purpose of this letter is to transmit the completed checklist for the November 3, 2003 inspection of the On-Site Disposal Facility (OSDF) Cell 1 Cap for your review. The inspection was conducted with participation from Tetra Tech, Inc. (supporting United States Environmental Protection Agency), Ohio Environmental Protection Agency, Ohio Department of Health, Department of Energy, Fernald Closure Project and Fluor Fernald, Inc. The inspection was the fourth conducted on the Cell 1 Cap and generally found the cap to be in good condition.

During the November 2003 inspection, the team identified several minor corrective actions that will be required prior to the next inspection as outlined on the enclosed checklist. Several erosion rills were identified that will be filled and seeded. Several additional minor maintenance issues are outlined on the enclosed checklist. Photographs showing the condition of the Cell 1 Cap on the day of inspection are also enclosed for your review.

An informal inspection was also conducted on Cell 2 after the inspection of Cell 1 was complete. At the time of the inspection, the installation of seeding and matting was complete; however, approximately one acre of stapling was still required. A formal inspection was not conducted since work was ongoing on Cell 2. No issues were identified on Cell 2 and the condition of the cap and matting was judged to be very good. The first formal inspection of Cell 2 will occur in January 2004.



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Mr. James A. Saric
Mr. Tom Schneider

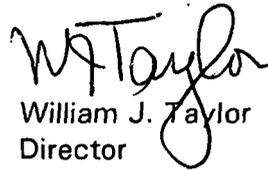
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DOE-0094-04

The inspection reports for the first three inspections completed on the Cell 1 Cap have also been enclosed for your use.

Any questions regarding this matter should be directed to Johnny Reising at (513) 648-3139.

Sincerely,


William J. Taylor
Director

FCP:Reising

Enclosures: As Stated

cc w/enclosures:

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

cc w/o enclosures:

K. Johnson, OH/FCP
J. Reising, OH/FCP
D. Carr, Fluor Fernald, Inc./MS1
J. Chiou, Fluor Fernald, Inc./MS64
D. Goetz, Fluor Fernald, Inc./MS64
T. Hagen, Fluor Fernald, Inc./MS1
U. Kumthekar, Fluor Fernald, Inc./MS64
L. Ludwick, Fluor Fernald, Inc./MS65-2
D. Powell, Fluor Fernald, Inc./MS64
C. Van Arsdale, Fluor Fernald, Inc./MS64
E. Woods, Fluor Fernald, Inc./MS
ECDC, Fluor Fernald, Inc./MS52-7

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OSDF Cell 1 Post Closure Inspection Checklist

Date of Inspection: November 3, 2003

Weather Conditions: Sunny/PtSunny/Cloudy/PtCloudy/Rain/Snow

Time of Inspection: 9:30 a.m.

Temperature: 71°F Wind Speed (Miles per hour) and Direction: 5 mph from West

Inspection By: DOE/EPA/ODH/TetraTech/Fluor Fernald Transect Direction** North/South Other observations _____

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Inspection Component	Condition A* or U*	Comments	Corrective Action(s) Proposed	Reference Source
1. Entrance Road/Monitoring Access Road				
1A. Verify entrance gate, lock and signage are intact and in good working order.	A	N/A	N/A	PCC&IP 20100-PL-010 Rev. 1 July 97
1B. Verify that access gates are locked to prevent unauthorized entry.	A	N/A	N/A	"
1C. Visually observe condition of access road for signs of erosion, ruts, standing water, proper drainage and excess vegetation.	A	N/A	N/A	"
1D. Verify that access road surfacing, cross slope, reflectors, and signage are intact and in good condition.	A	N/A	N/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	N/A	N/A	PCC&IP & OSDF Tech Spec #02831
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	N/A	N/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	N/A	N/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	N/A	N/A	OSDF Tech. Spec. #02270; PCC&IP
3B. Visually check the integrity of Rip-Rap in drainage channels for signs of deterioration or removal of rock.	A	N/A	N/A	See above & OSDF Tech. Spec. #02271
3C. Visually check for the presence of woody vegetation growing in drainage channels and in Rip-Rap	U	Woody vegetation present in drainage channels.	Removal by hand followed by herbicide application in spring	"
3D. Visually check the integrity of run-on and run-off control features including: Ditch checks, Gravity Inlet structures, and Culverts.	U	Engineering evaluation has determined culvert needs to be lowered at NW corner of Cell 1.	Culvert pipe will be lowered followed further evaluation of drainage North of Cell 1.	See above & Construction Drawing # 90X- 6000-G-00073

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*A = Satisfactory *U = Unsatisfactory (comments required)

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

OSDF Cell 1 Post Closure Inspection Checklist

Date of Inspection: November 3, 2003

Weather Conditions: Sunny/PtSunny/Cloudy/PtCloudy/Rain/Snow

Time of Inspection: 9:30 a.m.

Temperature: 71^oF Wind Speed (Miles per hour) and Direction: 5 mph from West

Inspection By: DOE/EPA/ODH/TetraTech/Fluor Fernald Transect Direction** North/South Other observations _____

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Inspection Component	Condition A* or U*	Comments	Corrective Action(s) Proposed	Reference Source
4. (A) Final Cover				
4A. Walk cover and side slopes in 25-ft (+/- 5-ft) transects and visually inspect for the following items:**				PCC&IP
4A1. Inspect erosion rills/channels. Flag any observable rills/channels greater than 3 inches wide and 6 inches deep or excessive erosion.	U	Several erosion rills/channels present on cap – representative photos attached.	Repair erosion rills as needed.	"
4A2. Any observable depressions, settlement/subsidence, slumping or desiccation cracks. Flag any observable depressions, slumps, settlement/subsidence or dessication cracks.	A	N/A	N/A	"
4A3. Any ponding or standing water. Flag any standing water.	A	N/A	N/A	"
4A4. Evidence of burrowing animals or other bio-intrusion. Flag any observable evidence of bio-intrusion.	U	Some new animal burrows present on cap.	Remove animals to degree possible and fill burrows.	"
4A5. Evidence of vehicle traffic on the OSDF cap.	A	N/A	N/A	"
4B. Walk toe of slope and visually inspect for the following:				PCC&IP & Phase III Drwgs #90X-6000-G-00302 & 90X-6000-G-00310
4B1. Evidence of settlement/subsidence, erosion, and seepage. Flag any observable evidence of settlement/subsidence, erosion, or seepage.	A	N/A	N/A	"
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.	U	Woody vegetation present on toe of cap.	Remove by hand followed by herbicide application in spring. One herbicide application has occurred.	"
4B3. Condition of rip-rap. Flag any observable abnormalities.	A	N/A	N/A	"
4C. Inspect toe at final cover for evidence of freezing or siltation. Flag any observable abnormalities.	A	N/A	N/A	"

*A = Satisfactory *U = Unsatisfactory (comments required)

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

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OSDF Cell 1 Post Closure Inspection Checklist

 Date of Inspection: November 3, 2003

 Weather Conditions: Sunny/PtSunny/Cloudy/PtCloudy/Rain/Snow

 Time of Inspection: 9:30 a.m.

 Temperature: 71°F Wind Speed (Miles per hour) and Direction: 5 mph from West

 Inspection By: DOE/EPA/ODH/TetraTech/Fluor Fernald Transect Direction** North/South Other observations _____

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Inspection Component	Condition A* or U*	Comments	Corrective Action(s) Proposed	Reference Source
4. (B) Final Cover — Vegetation				
4D. Walk cover and side slopes in 25-ft (+/- 5-ft) transects and visually check vegetative cover for the following:				OSDF Tech. Spec. #02930
4D1. General health of grass cover and signs of stressed or dead grass should be noted.	A	Cover is good. Dense cover of clover on west slope.	None required	"
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.	U	One bare spot greater than 3 feet in diameter on top of Cell 1 near center.	Reseed bare spot by hand.	"
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.	A	N/A	N/A	"
5. Cover Monitoring System				
5A. Visually inspect the integrity of the cover monitoring system: check Junction boxes, manholes, pressure transducer risers, soil water status nest headers, and settlement plates of the remote monitoring system for evidence of damage (see attached map). Check that lids and caps on enclosures are intact and in good working order.	U	Protective concrete enclosure around Soil and Water Status Nest #2 (SW-2) still requires replacement.	Replace enclosure around SW-2.	OSDF Drwg. # 90X-5500-E-00581 & 90X-5500-G-00577
5B. Visually inspect monitoring system manholes and junction boxes for the presence of animals, insects, rodents or misc. biota. Note the presence or evidence of any biota.	U	Mice nests were present in several manholes/junction boxes.	Remove mice nests as required.	"
5C. Visually inspect manholes and junction boxes and their immediate vicinity for the presence of standing water. Flag all standing water.	A	N/A	N/A	"
6. Groundwater Monitoring Wells				
6A. Visually inspect all groundwater wells for damage and integrity of well infrastructure.	A	N/A	N/A	PPC&IP
6A1. Groundwater Monitoring Wells	A	N/A	N/A	"
6A2. Horizontal Monitoring Wells	A	N/A	N/A	"

*A = Satisfactory *U = Unsatisfactory (comments required)

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OSDF Cell 1 Post Closure Inspection ChecklistDate of Inspection: November 3, 2003Weather Conditions: Sunny/PtSunny/Cloudy/PtCloudy/Rain/SnowTime of Inspection: 9:30 a.m.Temperature: 71°F Wind Speed (Miles per hour) and Direction: 5 mph from WestInspection By: DOE/EPA/ODH/TetraTech/Fluor Fernald Transect Direction** North/South Other observations _____

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Inspection Component	Condition A* or U*	Comments	Corrective Action(s) Proposed	Reference Source
7. Miscellaneous				
7A. Visually inspect the integrity of survey benchmarks. Flag/note any abnormalities.	A	N/A	N/A	
7B. Visually inspect the integrity of the perched water interceptor trench (once installed). Note any abnormalities.	A	N/A	N/A	"
7C. 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	N/A	N/A	"
7D. Visually inspect all infrastructure for any act of vandalism.	A	N/A	N/A	"

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OSDF Cell 1 Post Closure Inspection Checklist

Date of Inspection: November 3, 2003

Weather Conditions: Sunny/PtSunny/Cloudy/PtCloudy/Rain/Snow

Time of Inspection: 9:30 a.m.

Temperature: 71°F Wind Speed (Miles per hour) and Direction: 5 mph from West

Inspection By: DOE/EPA/ODH/TetraTech/Fluor Fernald Transect Direction** North/South Other observations

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7E. List any other observations not noted in the categories above.

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An informal inspection was also conducted on Cell 2 after the inspection of Cell 1 was complete. At the time of the inspection the installation of seeding and matting was complete; however, approximately 1 acre of stapling was still required. A formal inspection was not conducted since work was ongoing on Cell 2. No issues were identified on Cell 2 and the condition of the cap and matting was judged to be very good. A question on the difference in Cell 1 toe and Cell 2 toe was addressed through separate e-mail from Fluor Fernald to the inspection team. The first formal inspection of Cell 2 will occur in January 2004.

None Required.

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*A = Satisfactory *U = Unsatisfactory (comments required)

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OSDF Cell 1 Post Closure Inspection Checklist

Date of Inspection: July 31, 2003

Weather Conditions: Cloudy

Time of Inspection: 10:00 a.m.

Temperature: 82 °F Wind Speed (Miles per hour) and Direction: 5 – 10 mph - SW

Inspection By: Fluor Fernald Inc., DOE, OEPA, Ohio Department of Health, Tetra Tech Inc.

Transect Direction** East/West

Inspection Component	Condition A* or U*	Comments	Corrective Action(s) Proposed	Reference Source
1. Entrance Road/Monitoring Access Road				
1A. Verify entrance gate, lock and signage are intact and in good working order.	A	N/A	N/A	PCC&IP 20100-PL-010 Rev. 1 July 97
1B. Verify that access gates are locked to prevent unauthorized entry.	A	N/A	N/A	"
1C. Visually observe condition of access road for signs of erosion, ruts, standing water, proper drainage and excess vegetation.	A	N/A	N/A	"
1D. Verify that access road surfacing, cross slope, reflectors, and signage are intact and in good condition.	A	N/A	N/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	N/A	N/A	PCC&IP & OSDF Tech Spec #02831
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	N/A	N/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	N/A	N/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	N/A	N/A	OSDF Tech. Spec. #02270; PCC&IP
3B. Visually check the integrity of RipRap in drainage channels for signs of deterioration or removal of rock.	A	N/A	N/A	See above & OSDF Tech. Spec. #02271
3C. Visually check for the presence of woody vegetation growing in drainage channels and in Rip-Rap	U	Woody plants growing in drainage channel.	Herbicide application will be scheduled.	"
3D. Visually check the integrity of run-on and run-off control features including: Ditch checks, Gravity Inlet structures, and Culverts.	U	Evaluation needed to ensure ditches North and West of Cell 1 are functioning properly.	Complete Engineering evaluation prior to October inspection.	See above & Construction Drawing # 90X- 6000-G-00073

*A = Satisfactory *U = Unsatisfactory (comments required)

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

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OSDF Cell 1 Post Closure Inspection Checklist

Date of Inspection: July 31, 2003

Weather Conditions: Cloudy

Time of Inspection: 10:00 a.m.

Temperature: 82 °F Wind Speed (Miles per hour) and Direction: 5 – 10 mph - SW

Inspection By: Fluor Fernald Inc., DOE, OEPA, Ohio Department of Health, Tetra Tech Inc.

Transect Direction** East/West

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Inspection Component	Condition A* or U*	Comments	Corrective Action(s) Proposed	Reference Source
4. (A) Final Cover				
4A. Walk cover and side slopes in 25-ft (+/- 5-ft) transects and visually inspect for the following items:**				PCC&IP
4A1. Inspect erosion rills/channels. Flag any observable rills/channels greater than 3 inches wide and 6 inches deep or excessive erosion.	U	Several erosion rills/channels identified on cap – representative photos attached.	Repair erosion rills as needed. Rills not requiring repair may be tracked.	"
4A2. Any observable depressions, settlement/subsidence, slumping or desiccation cracks. Flag any observable depressions, slumps, settlement/subsidence or desiccation cracks.	A	N/A	N/A	"
4A3. Any ponding or standing water. Flag any standing water.	A	N/A	N/A	"
4A4. Evidence of burrowing animals or other bio-intrusion. Flag any observable evidence of bio-intrusion.	U	Some new animal burrows present on cap. Skunk was observed on cap on morning of inspection.	Remove animals from cap to the degree possible – fill burrows after removal.	"
4A5. Evidence of vehicle traffic on the OSDF cap.	A	N/A	N/A	"
4B. Walk toe of slope and visually inspect for the following:	A	N/A	N/A	PCC&IP & Phase III Drwgs #90X-6000-G- 00302 & 90X-6000-G- 00310
4B1. Evidence of settlement/subsidence, erosion, and seepage. Flag any observable evidence of settlement/subsidence, erosion, or seepage.	A	N/A	N/A	"
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.	U	Woody vegetation present at toe of slope in rip rap	Herbicide application will be scheduled.	"
4B3. Condition of rip-rap. Flag any observable abnormalities.	A	N/A	N/A	"
4C. Inspect toe at final cover for evidence of freezing or siltation. Flag any observable abnormalities.	A	N/A	N/A	"

*A = Satisfactory *U = Unsatisfactory (comments required)

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

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OSDF Cell 1 Post Closure Inspection Checklist

Date of Inspection: July 31, 2003

Weather Conditions: Cloudy

Time of Inspection: 10:00 a.m.

Temperature: 82 °F Wind Speed (Miles per hour) and Direction: 5 – 10 mph - SW

Inspection By: Fluor Fernald Inc., DOE, OEPA, Ohio Department of Health, Tetra Tech Inc.

Transect Direction** East/West

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Inspection Component	Condition A* or U*	Comments	Corrective Action(s) Proposed	Reference Source
4. (B) Final Cover — Vegetation				
4D. Walk cover and side slopes in 25-ft (+/- 5-ft) transects and visually check vegetative cover for the following:				OSDF Tech. Spec. #02930
4D1. General health of grass cover and signs of stressed or dead grass should be noted.	A	N/A	N/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	Generally, grass cover was very good. Several small, isolated areas greater than 3 feet in diameter were identified.	Identified areas will be seeded by hand.	"
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.	A	N/A	N/A	"
5. Cover Monitoring System				
5A. Visually inspect the integrity of the cover monitoring system: check Junction boxes, manholes, pressure transducer risers, soil water status nest headers, and settlement plates of the remote monitoring system for evidence of damage (see attached map). Check that lids and caps on enclosures are intact and in good working order.	U A	During mowing on the morning of the inspection, the protective concrete enclosure around Soil and Water Status Nest # 2 (SW-2) was broken (photo attached).	The concrete enclosure around SW-2 will be replaced.	OSDF Drwg. # 90X-5500-E-00581 & 90X-5500-G-00577
5B. Visually inspect monitoring system manholes and junction boxes for the presence of animals, insects, rodents or misc. biota. Note the presence or evidence of any biota.	U	Mice were present in some junction boxes.	Mice and nests will be removed.	"
5C. Visually inspect manholes and junction boxes and their immediate vicinity for the presence of standing water. Flag all standing water.	A	N/A	N/A	"
6. Groundwater Monitoring Wells				
6A. Visually inspect all groundwater wells for damage and integrity of well infrastructure.	A	N/A	N/A	PPC&IP
6A1. Groundwater Monitoring Wells	A	N/A	N/A	"
6A2. Horizontal Monitoring Wells	A	N/A	N/A	"

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OSDF Cell 1 Post Closure Inspection Checklist

Date of Inspection: July 31, 2003

Weather Conditions: Cloudy

Time of Inspection: 10:00 a.m.

Temperature: 82 °F Wind Speed (Miles per hour) and Direction: 5 – 10 mph - SW

Inspection By: Fluor Fernald Inc., DOE, OEPA, Ohio Department of Health, Tetra Tech Inc.

Transect Direction** East/West

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Inspection Component	Condition A* or U*	Comments	Corrective Action(s) Proposed	Reference Source
7. Miscellaneous				
7A. Visually inspect the integrity of survey benchmarks. Flag/note any abnormalities.	A	N/A	N/A	PPC&IP
7B. Visually inspect the integrity of the perched water interceptor trench (once installed). Note any abnormalities.	A	N/A	N/A	
7C. 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	N/A	N/A	
7D. Visually inspect all infrastructure for any act of vandalism.	A	N/A	N/A	"
7E. List any other observations not noted in the categories above.	A	N/A	N/A	"

*A = Satisfactory *U = Unsatisfactory (comments required)

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OSDF Cell 1 Post Closure Inspection Checklist

Date of Inspection: April 24, 2003

Weather Conditions: Cloudy

Time of Inspection: 9:30 a.m.

Temperature: 45 °F Wind Speed (Miles per hour) and Direction: 5 – 10 mph - SW

Inspection By: Fluor Fernald, DOE, OEPA, Ohio Department of Health, Tetra Tech Inc.

Transect Direction** North/South

Inspection Component	Condition A* or U*	Comments	Corrective Action(s) Proposed	Reference Source
1. Entrance Road/Monitoring Access Road				
1A. Verify entrance gate, lock and signage are intact and in good working order.	A	N/A	N/A	PCC&IP 20100-PL-010 Rev. 1 July 97
1B. Verify that access gates are locked to prevent unauthorized entry.	A	N/A	N/A	"
1C. Visually observe condition of access road for signs of erosion, ruts, standing water, proper drainage and excess vegetation.	U	Ruts on road surface at access point to monitoring well on east side of Cell 1	Repair surface of road	"
1D. Verify that access road surfacing, cross slope, reflectors, and signage are intact and in good condition.	A	N/A	N/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	N/A	N/A	PCC&IP & OSDF Tech Spec #02831
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	N/A	N/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	N/A	N/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	N/A	N/A	OSDF Tech. Spec. #02270; PCC&IP
3B. Visually check the integrity of RipRap in drainage channels for signs of deterioration or removal of rock.	A	N/A	N/A	See above & OSDF Tech. Spec. #02271
3C. Visually check for the presence of woody vegetation growing in drainage channels and in Rip-Rap	U	Woody plants growing in drainage channel	Herbicide application has been scheduled	"
3D. Visually check the integrity of run-on and run-off control features including: Ditch checks, Gravity Inlet structures, and Culverts.	U	Evaluation needed to ensure ditches North and West of Cell 1 are functioning properly	Complete Engineering evaluation and share results with inspection team	See above & Construction Drawing # 90X- 6000-G-00073

*A = Satisfactory *U = Unsatisfactory (comments required)

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

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OSDF Cell 1 Post Closure Inspection Checklist

Date of Inspection: April 24, 2003

Weather Conditions: Cloudy

Time of Inspection: 9:30 a.m.

Temperature: 45 °F Wind Speed (Miles per hour) and Direction: 5 – 10 mph - SW

Inspection By: Fluor Fernald, DOE, OEPA, Ohio Department of Health, Tetra Tech Inc.

Transect Direction** North/South

Inspection Component	Condition A* or U*	Comments	Corrective Action(s) Proposed	Reference Source
4. (A) Final Cover				
4A. Walk cover and side slopes in 25-ft (+/- 5-ft) transects and visually inspect for the following items:**				PCC&IP
4A1. Inspect erosion rills/channels. Flag any observable rills/channels greater than 3 inches wide and 6 inches deep or excessive erosion.	U	Multiple erosion rills/channels identified on cap	Repair erosion rills/channels by hand and reseed. Map and monitor less severe rills	"
4A2. Any observable depressions, settlement/subsidence, slumping or desiccation cracks. Flag any observable depressions, slumps, settlement/subsidence or desiccation cracks.	U	Three areas of slight settlement identified – Evaluated by Engineering – determined to meet specifications	None Required	"
4A3. Any ponding or standing water. Flag any standing water.	A	N/A	N/A	"
4A4. Evidence of burrowing animals or other bio-intrusion. Flag any observable evidence of bio-intrusion.	U	Multiple animal burrows present and flagged on cap	Identify types of animals present and determine if corrective action is needed	"
4A5. Evidence of vehicle traffic on the OSDF cap.	U	Repeated vehicle traffic on southern edge of cap	Restrictions on driving on cap have been implemented	"
4B. Walk toe of slope and visually inspect for the following:	A	N/A	N/A	PCC&IP & Phase III Drwgs #90X-6000-G- 00302 & 90X-6000-G- 00310
4B1. Evidence of settlement/subsidence, erosion, and seepage. Flag any observable evidence of settlement/subsidence, erosion, or seepage.	A	N/A	N/A	"
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.	U	Woody vegetation present at toe of slope in rip rap	Herbicide woody vegetation	"
4B3. Condition of rip-rap. Flag any observable abnormalities.	A	N/A	N/A	"
4C. Inspect toe at final cover for evidence of freezing or siltation. Flag any observable abnormalities.	A	N/A	N/A	"

*A = Satisfactory *U = Unsatisfactory (comments required)

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

0013

5252

OSDF Cell 1 Post Closure Inspection Checklist

Date of Inspection: April 24, 2003

Weather Conditions: Cloudy

Time of Inspection: 9:30 a.m.

Temperature: 45 °F Wind Speed (Miles per hour) and Direction: 5 – 10 mph - SW

Inspection By: Fluor Fernald, DOE, OEPA, Ohio Department of Health, Tetra Tech Inc.

Transect Direction** North/South

Inspection Component	Condition A* or U*	Comments	Corrective Action(s) Proposed	Reference Source
4. (B) Final Cover — Vegetation				
4D. Walk cover and side slopes in 25-ft (+/- 5-ft) transects and visually check vegetative cover for the following:				OSDF Tech. Spec. #02930
4D1. General health of grass cover and signs of stressed or dead grass should be noted.	A	N/A	N/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.	U	Several spots with inadequate grass cover were flagged – Areas identified in 10/02 inspection and reseeded in March 2003	Evaluate results of reseeded effort in June 2003 prior to repairs to erosion rills – seed bare areas as needed	"
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	Thistle present in numerous locations on west side and top of cap in monitoring corridors	Use selective herbicide on portions of cap containing thistle – application has been scheduled	"
5. Cover Monitoring System				
5A. Visually inspect the integrity of the cover monitoring system: check Junction boxes, manholes, pressure transducer risers, soil water status nest headers, and settlement plates of the remote monitoring system for evidence of damage (see attached map). Check that lids and caps on enclosures are intact and in good working order.	A	N/A	N/A	OSDF Drwg. # 90X-5500-E-00581 & 90X-5500-G-00577
5B. Visually inspect monitoring system manholes and junction boxes for the presence of animals, insects, rodents or misc. biota. Note the presence or evidence of any biota.	A	N/A	N/A	"
5C. Visually inspect manholes and junction boxes and their immediate vicinity for the presence of standing water. Flag all standing water.	A	N/A	N/A	"
6. Groundwater Monitoring Wells				
6A. Visually inspect all groundwater wells for damage and integrity of well infrastructure.	A	N/A	N/A	PPC&IP
6A1. Groundwater Monitoring Wells	A	N/A	N/A	"
6A2. Horizontal Monitoring Wells	A	N/A	N/A	"

*A = Satisfactory *U = Unsatisfactory (comments required)

014

5252

OSDF Cell 1 Post Closure Inspection Checklist

Date of Inspection: April 24, 2003

Weather Conditions: Cloudy

Time of Inspection: 9:30 a.m.

Temperature: 45 °F Wind Speed (Miles per hour) and Direction: 5 – 10 mph - SW

Inspection By: Fluor Fernald, DOE, OEPA, Ohio Department of Health, Tetra Tech Inc.

Transect Direction** North/South

Inspection Component	Condition A* or U*	Comments	Corrective Action(s) Proposed	Reference Source
7. Miscellaneous				
7A. Visually inspect the integrity of survey benchmarks. Flag/note any abnormalities.	A	N/A	N/A	PPC&IP
7B. Visually inspect the integrity of the perched water interceptor trench (once installed). Note any abnormalities.	A	N/A	N/A	
7C. 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	N/A	N/A	
7D. Visually inspect all infrastructure for any act of vandalism.	A	N/A	N/A	"
7E. List any other observations not noted in the categories above.	A	N/A	N/A	"

*A = Satisfactory *U = Unsatisfactory (comments required)

000015

5252

OSDF Cell 1 Post Closure Inspection Checklist

Date of Inspection: 10/18/02

Weather Conditions: Sunny

Time of Inspection: 9:30 a.m.

Temperature: 60°F

Wind Speed (Miles per hour) and Direction: 5-10 from SW

Inspection By: DOE;OEPA;FLUOR

Transect Direction: ** East to West

Other observations: Partial Inspection - Cell 1

Inspection Component	Condition A* or U*	Comments	Maintenance Action(s) Proposed/Scheduled	Reference Source
1. Entrance Road/Monitoring Access Road				
1A. Verify entrance gate, lock and signage are intact and in good working order.	A	None	None Required	PCC&IP 20100-PL-010 Rev. 1 July 97
1B. Verify that access gates are locked to prevent unauthorized entry.	A	None	None Required	"
1C. Visually observe condition of access road for signs of erosion, ruts, standing water, proper drainage and excess vegetation.	A	None	None Required	"
1D. Verify that access road surfacing, cross slope, reflectors, and signage are intact and in good condition.	A	None	None Required	"
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	None	None Required	PCC&IP & OSDF Tech Spec #02831
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	None	None Required	"
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.	U	Phragmites (Invasive Plant) in drainage ditch North of Cell 1.	Herbicide application to identified plants only -	"
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.	U	Siltation blocking flow in drainage ditch on East and West sides of Cell 1.	Remove siltation with backhoe -	OSDF Tech. Spec. #02270; PCC&IP
3B. Visually check the integrity of Rip-Rap in drainage channels for signs of deterioration or removal of rock.	A	None	None Required	See above & OSDF Tech. Spec. #02271
3C. Visually check for the presence of woody vegetation growing in drainage channels and in Rip-Rap	U	Woody vegetation growing in ditch on all sides of Cell 1.	Herbicide application to woody seedlings only -	"
3D. Visually check the integrity of run-on and run-off control features including: Ditch checks, Gravity Inlet structures, and Culverts.	U	A. Culvert East of Cell 1 is partially blocked with sediment. B. Flow from culvert on North side of Cell 1.	A. Remove sediment from culvert East of Cell 1 - B. Cut off flow from culvert North of Cell 1 -	See above & Construction Drawing # 90X- 6000-G-00073

*A = Satisfactory *U = Unsatisfactory (comments required) ** Transect Direction should alternate each inspection (North to South & East to West)

0016

5252

OSDF Cell 1 Post Closure Inspection Checklist

Date of Inspection: 10/18/02

Weather Conditions: Sunny

Time of Inspection: 9:30 a.m.

Temperature: 60°F

Wind Speed (Miles per hour) and Direction: 5-10 from SW

Inspection By: DOE;OEPA;FLUOR

Transect Direction:** East to West

Other observations: Partial Inspection - Cell 1

Inspection Component	Condition A* or U*	Comments	Maintenance Action(s) Proposed/Scheduled	Reference Source
4. (A) Final Cover				
4A. Walk cover and side slopes in 25-ft (+/- 5-ft) transects and visually inspect for the following items:**				PCC&IP
4A1. Inspect erosion rills/channels. Flag any observable rills/channels greater than 3 inches wide and 6 inches deep or excessive erosion.	U	Erosion rills are forming in multiple locations as marked on Cell 1 Cap.	Fill erosion rills, reseed and apply new matting -	"
4A2. Any observable depressions, settlement/subsidence, slumping or desiccation cracks. Flag any observable depressions, slumps, settlement/subsidence or desiccation cracks.	U	Slumping is evident on East face of Cell 1 in location of former silt fence.	Regrade or fill slumping while minimizing disturbance to surrounding area -	"
4A3. Any ponding or standing water. Flag any standing water.	A	None	None Required	"
4A4. Evidence of burrowing animals or other bio-intrusion. Flag any observable evidence of bio-intrusion.	A	None	None Required	"
4A5. Evidence of vehicle traffic on the OSDF cap.	A	None	None Required	"
4B. Walk toe of slope and visually inspect for the following:				PCC&IP & Phase III Drwgs #90X-6000-G- 00302 & 90X-6000-G- 00310
4B1. Evidence of settlement/subsidence, erosion, and seepage. Flag any observable evidence of settlement/subsidence, erosion, or seepage.	A	Minor siltation at toe of each of the monitoring corridors on Cell 1 due to lack of vegetation.	Continue to monitor after reseeding - No action required.	"
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.	U	Woody plants growing in rocks at toe in NE corner of Cell 1.	Herbicide identified woody vegetation only at toe -	"
4B3. Condition of rip-rap. Flag any observable abnormalities.	A	None	None Required	"
4C. Inspect toe at final cover for evidence of freezing or siltation. Flag any observable abnormalities.	A	None	None Required	"

*A = Satisfactory *U = Unsatisfactory (comments required)

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

000017

OSDF Cell 1 Post Closure Inspection Checklist

Date of Inspection: 10/18/02

Weather Conditions: Sunny

Time of Inspection: 9:30 a.m.

Temperature: 60°F

Wind Speed (Miles per hour) and Direction: 5-10 from SW

Inspection By: DOE;OEPA;FLUOR

Transect Direction: ** East to West

Other observations: Partial Inspection - Cell 1

Inspection Component	Condition A* or U*	Comments	Maintenance Action(s) Proposed/Scheduled	Reference Source
4. (D) Final Cover — Vegetation				
4D. Walk cover and side slopes in 25-ft (+/- 5-ft) transects and visually check vegetative cover for the following:**				OSDF Tech. Spec. #02930
4D1. General health of grass cover and signs of stressed or dead grass should be noted.	U	Cover crop did not establish in monitoring corridors and on top of Cell 1.	Reseed cover crop in areas noted -	"
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.	U	Bare spots evident in several locations (e.g., NE corner of Cell 1) as marked on Cell 1 Cap.	Reseed bare spots with full seed mix per referenced seeding specification -	"
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.	A	None	None Required	"
5. Cover Monitoring System				
5A. Visually inspect the integrity of the cover monitoring system: check Junction boxes, manholes, pressure transducer risers, soil water status nest headers, and settlement plates of the remote monitoring system for evidence of damage (see attached map). Check that lids and caps on enclosures are intact and in good working order.	U	No lid present on Manhole on East face of Cell 1 Cap.	Replace manhole lid -	OSDF Drwg. # 90X-5500-E-00581 & 90X-5500-G-00577
5B. Visually inspect monitoring system manholes and junction boxes for the presence of animals, insects, rodents or misc. biota. Note the presence or evidence of any biota.	U	Rodent nest present in PT-3.	Remove rodent nest from PT-3 -	"
5C. Visually inspect manholes and junction boxes and their immediate vicinity for the presence of standing water. Flag all standing water.	A	None	None Required	"
6. Groundwater Monitoring Wells				
6A. Visually inspect all groundwater wells for damage and integrity of well infrastructure.	A	None	None Required	PPC&IP
6A1. Groundwater Monitoring Wells	A	None	None Required	"
6A2. Horizontal Monitoring Wells	A	None	None Required	"

*A = Satisfactory *U = Unsatisfactory (comments required) ** Transect Direction should alternate each inspection (North to South & East to West)

00018

5252

OSDF Cell 1 Post Closure Inspection Checklist

Date of Inspection: 10/18/02

Weather Conditions: Sunny

Time of Inspection: 9:30 a.m.

Temperature: 60°F

Wind Speed (Miles per hour) and Direction: 5-10 from SW

Inspection By: DOE;OEPA;FLUOR

Transect Direction: ** East to West

Other observations: Partial Inspection - Cell 1

Inspection Component	Condition A* or U*	Comments	Maintenance Action(s) Proposed/Scheduled	Reference Source
7. Miscellaneous				
7A. Visually inspect the integrity of survey benchmarks. Flag/note any abnormalities.	A	None	None Required	PPC&IP
7B. Visually inspect the integrity of the perched water interceptor trench (once installed). Note any abnormalities.	A	None	None Required	"
7C. 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	None	None Required	"
7D. Visually inspect all infrastructure for any act of vandalism.	A	None	None Required	"
7E. List any other observations not noted in the categories above.	A	Entire area of Cell 1 Cap was not covered in this inspection. Additional inspection will be carried out to identify any erosion rills, bare spots not captured in this inspection.	Any additional repairs will be flagged on Cell 1 Cap.	"

*A = Satisfactory *U = Unsatisfactory (comments required)

000019

5252



Typical Animal Borrow

Inspection

000020

Graphic 7930.10

11/3/03

R252



Animal Borrow

Inspection

000021

Graphic 7930.11

11/3/03 5252



Looking West

West Face Cell 1

000022

Graphic 7930.12

11/3/03

5252



Looking South

North Face Cell 1

00023

Graphic 7930.13

11/3/03

5252



Looking West

North Face Cell 1

00024

Graphic 7930.14

11/3/03

R252