Department of Energy

Ohio Field Office
Fernald Area Office
P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155

2345

JUN 28 1999

Mr. James A. Saric, Remedial Project Manager
U.S. Environmental Protection Agency
Region V-SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

DOE-0893-99

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

Dear Mr. Saric and Mr. Schneider:

RESUMPTION OF WASTE PLACEMENT IN ON-SITE DISPOSAL FACILITY CELL 1

The On-Site Disposal Facility (OSDF) Leachate Transmission System (LTS) between Manholes 1 and 2 has been repaired according to the approved Design Change Notices (DCN) 1700-093 and 1700-094. Major changes to the original leachate system as a result of this work include:

1) a new 35-foot section of Standard Dimension Ratio SDR 11 double containment pipe immediately up gradient of Manhole 2,

2) elimination of the clean out pipe by Manhole 2,

3) a back welded electrofusion coupling immediately down gradient of Manhole 1.

Hydrostatic tests for the repaired 6-inch carrier pipe and the 10-inch containment pipe between the two manholes were completed successfully according to the approved procedure on June 24 and June 25, 1999, respectively. The Fluor Daniel Fernald, Inc. (FDF) Quality Assurance/Quality Control test reports and the GeoSyntec evaluation of the repaired LTS are enclosed for your review.

Recycled and Recyclable

The areas excavated during the repair work by the two manholes will be backfilled by June 30, 1999. With the fully functional OSDF LTS and your approval, the Soil and Disposal Facility Project (SDFP) plans to resume waste placement activities in OSDF Cell 1.

Please contact Robert Janke at (513) 648-3124 if you have any questions or concerns.

Sincerely,

Johnny Reising

FEMP:Jalovec

Johnny W. Reising
Fernald Remedial Action
Project Manager

Enclosure

cc w/enclosure:
G. Jablonowski, USEPA-V, SRF-5J
R. Beaumier, TPSS/DERR, OEPA-Columbus
T. Schneider, OEPA-Dayton (three copies of enclosure)
F. Bell, ATSDR
R. Vandegrift, ODH
F. Barker, Tetra Tech
AR Coordinator, FDF/78

cc w/o enclosure:
N. Hallein, EM-42/CLOV
J. Jalovec, OH/FEMP
R. J. Janke, OH/FEMP
K. Nickel, OH/FEMP
A. Tanner, OH/FEMP
D. Carr, FDF/52-2
J. Chiou, FDF/52-0
T. Hagen, FDF/65-2
J. Harmon, FDF/90
R. Heck, FDF/2
S. Hinnefeld, FDF/31
W. Hooper, FDF/52-0
T. Walsh, FDF/65-2
ECDC, FDF/52-7
M. Schupe, HSI GeoTrans

GEOSYNTEC CONSULTANTS
1100 Lake Hearn Drive • Suite 200
Atlanta, Georgia 30342-1523 • USA
Tel. (404) 705-9500 • Fax (404) 705-9400

25 June 1999

Dr. J. D. Chiou, P.E.
Fluor Daniel Fernald
MS: 52-0
P.O. Box 538704
Cincinnati, Ohio 45253-8704

Subject: Interim Construction Certification
Repair of Leachate Conveyance System
North of Manhole No. 2
On-Site Disposal Facility (OSDF)
Subcontract No. 95PS005028

Dear Dr. Chiou:

GeoSyntec Consultants (GeoSyntec) performed the construction quality assurance (CQA) and construction quality control (CQC) monitoring services during the repair of the Leachate Conveyance System (LCS), north of Manhole No. 2, for the On-Site Disposal Facility (OSDF). The repair was conducted in accordance with DCN Nos. 1700-093 and 1700-094. The repair and testing of the dual-containment pipes was performed in accordance with the technical specification, and the repair work is substantially complete.

GeoSyntec CQC personnel have monitored and documented construction and testing of the repair of the piping system for the LCS. Field reports, logs, testing reports and other associated documentation have been reviewed for accuracy and completeness. GeoSyntec is in the process of completing a final certification report including CQA/CQC documentation on the construction of the interim LCS. The CQA/CQC documentation for this repair work will be included in the final certification report for the construction of the interim LCS.

Corporate Office:
621 N.W. 53rd Street • Suite 650
Boca Raton, Florida 33487 • USA
Tel. (561) 995-0900 • Fax (561) 995-0925

Regional Offices:
Atlanta, GA • Boca Raton, FL • Chicago, IL
Columbia, MD • Huntington Beach, CA • San Antonio, TX
Walnut Creek, CA • Paris, France

RECYCLED AND RECYCLABLE

Laboratories:
Atlanta, GA
Boca Raton, FL
Huntington Beach, CA

Based on our observations and documentation, the construction of this repair has been completed in accordance with the technical specifications, drawings, CQA Plan, and DCN Nos. 1700-093 and 1700-094. On the basis of our observations and testing it is anticipated that the dual containment piping system between Manholes No. 1 and 2 will be ready to handle leachate from Cell 1 on 25 June 1999.

If you have any questions, please do not hesitate to contact the undersigned.

Sincerely,

Kwasi Badu-Tweneboah

Kwasi Badu-Tweneboah, Ph.D., P.E.
Certifying Resident Engineer
Ohio P.E. No. E-55354

Copies to: Dennis Carr, FDF
Rick Holbrook, FDF
E. H. Henry, FDF
Warren Hooper, FDF
Jim Jenkins, FDF
R. J. Janke, DOE
Jay Jalovec, DOE
J.W. Reising, DOE
Jay Beech, GeoSyntec
Jim Burnett, GeoSyntec
David Phillips, GeoSyntec

GQ0409-03.1/FDF99011.DOC

RECYCLED AND RECYCLABLE

FDF SURVEILLANCE CHECKLIST

SURVEILLANCE NO.:	START DATE: 6-23-99	ASSESSOR: Muriel K. Vigus

SURVEILLANCE TITLE/DESCRIPTION: HYDROSTATIC TEST PROCEDURE AND RESULTS FOR CARRIER PIPE (FINAL TEST)

Surveiled DIV./DEPT./PROJECT: DIVISION: SOILS AND WATER
DEPARTMENT: ON-SITE DISPOSAL FACILITY
REPAIR OF LEACHATE CONVEYANCE SYSTEM

Page___ of___

Item	Requirements / Results	Sat (✓)	Unsat (✓)
	This test procedure is based on the hydrostatic test procedure that was included in the Leachate Repair Report dated March 31, 1999.		
	Record the pipe size that is being tested: 6" Carrier Record the pipe location: Between Mh-1 and Mh-2 Record the gauge number: ~~RE-13 MKV~~ RE-15 6-23-99 Calibration date: 4-6-99 Record the calibration date: 4-6-00 Record the CQC Consultant who reviewing the test: Rob Teddicord		
1.	Requirement: **PREPARATION FOR TEST** Verify the test gauge used to monitor pressures has been calibrated within (1) year of use. **Result:** GAUGE NUMBER: RE-15 CALIBRATION DATE: 4-6-99	X MKV 6-23-99	

FS-F-4950-RV1 (02/02/98)

RECORD

FDF SURVEILLANCE CHECKLIST

SURVEILLANCE NO.:	START DATE:	ASSESSOR:
	6-23-99	Muriel K. Vigus 2345

SURVEILLANCE TITLE/DESCRIPTION: HYDROSTATIC TEST PROCEDURE AND RESULTS FOR CARRIER PIPE (FINAL TEST)

Surveilled DIV./DEPT./PROJECT: DIVISION: SOILS AND WATER
DEPARTMENT: ON-SITE DISPOSAL FACILITY
REPAIR OF LEACHATE CONVEYANCE SYSTEM

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Item	Requirements / Results	Sat (✓)	Unsat (✓)
2.	**Requirements:** PREPARATION FOR TEST Verify all blind flanges from cleanouts of the section of carrier pipe to be tested are removed. **Results:** Met. No cleanouts	X MKV 6-23-99	
3.	**Requirements:** PREPARATION FOR TEST Verify all necessary blind flanges, low-point drain valve, high-point drain valve, pressure gauge and fill hose connections to the section of containment pipe to be tested are attached. Low-point refers to the end of pipe section being tested with the lowest elevation; while high-point refers to the end with the highest elevation. Note the pressure gauge must be installed up gradient of the low-point drain valve. Position the pressure gauge such that it is in full view of the testing operator when the valve is being turned on or off. **Results:** Gauge up gradient of low point drain	X MKV 6-23-99	
4.	**Requirements:** PREPARATION FOR TEST Verify all high point vent valves of the carrier piping system are opened. Verify the fill hose is attached to the low-point drain valve. **Results:** Met.	X MKV 6-23-99	

000006

RECORD

FDF SURVEILLANCE CHECKLIST

VEILLANCE NO.:	START DATE: 6-23-99	ASSESSOR: Muriel K. Vigus

VEILLANCE TITLE/DESCRIPTION: HYDROSTATIC TEST PROCEDURE AND RESULTS FOR CARRIER PIPE (FINAL TEST)

2345

ssed DIV./DEPT./PROJECT: DIVISION: SOILS AND WATER
DEPARTMENT: ON-SITE DISPOSAL FACILITY
REPAIR OF LEACHATE CONVEYANCE SYSTEM

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Item	Requirements / Results	Sat (✓)	Unsat (✓)
5.	Requirements: **PREPARATION FOR TEST** Verify the **carrier pipe** is slowly filled with water until water flows from the high-point drain valve and over the top of the cleanouts.	X MKV 6-23-99	
	Results: No cleanouts. Watched water run out of high point drain valve.		
6.	Requirements: **PREPARATION FOR TEST** Verify the air in the **carrier pipe** is completely vented. The pipe can be shaked or tapped to aid in removing the air. When all the air is removed, verify the high point drain is shutoff , the vent plugs at the cleanout locations are replaced, the low point drain valve is closed, the water source is shutoff, and the fill hose is removed. Results: Met.	X MKV 6-23-99	
7.	Requirements: **PREPARATION FOR TEST** Verify any low-point drain valves or weep holes in the containment pipe are opened to allow visual leak detection monitoring during the **carrier** pipe testing. Results: Sat.	X MKV 6-24-99	

RECORD

000007

S-F-4950-RV1 (02/02/98)

FDF SURVEILLANCE CHECKLIST

SURVEILLANCE NO.:	START DATE:	ASSESSOR:
	6-23-99	Muriel K. Nigus

SURVEILLANCE TITLE/DESCRIPTION: HYDROSTATIC TEST PROCEDURE AND RESULTS FOR CARRIER PIPE (FINAL TEST)

Surveiled DIV./DEPT./PROJECT: DIVISION: SOILS AND WATER
DEPARTMENT: ON-SITE DISPOSAL FACILITY
REPAIR OF LEACHATE CONVEYANCE SYSTEM

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Item	Requirements / Results	Sat (✓)	Unsat (✓)
8.	Requirements: **PREPARATION FOR TEST** Verify the pressure source is attached to the low-point drain valve of the carrier pipe and verify the low point drain valve is opened. Results: Met.	X MKV 6-24-99	
9.	Requirements: **PREPARATION FOR TEST** Verify the pressure is gradually increased to the ~~50~~ 15 psi test pressure. The ~~50~~ 15 psi pressure is the maximum pressure applied as measured at the low point drain valve and includes the pressure due to the hydrostatic head of water in the pipe. Verify the low point drain is closed and the pressure source connection is removed. Results: REFERENCE FY99-0758	X MKV 6-24-99	
10.	Requirements: **PREPARATION FOR TEST** Allow for 1 to 3 hours for pipe stabilization. Pipe stabilization is achieved if there is no drop in pressure over a one-hour period. Verify the pipe has stabilized prior to starting the test. Stabilized overnight	X MKV 6-24-99	

RECORD

FDF SURVEILLANCE CHECKLIST

SURVEILLANCE NO.:	START DATE:	ASSESSOR:
	6-23-99	Muriel K. Vigus 2345

SURVEILLANCE TITLE/DESCRIPTION: HYDROSTATIC TEST PROCEDURE AND RESULTS FOR CARRIER PIPE (FINAL TEST)

Surveiled DIV./DEPT./PROJECT: DIVISION: SOILS AND WATER
DEPARTMENT: ON-SITE DISPOSAL FACILITY
REPAIR OF LEACHATE CONVEYANCE SYSTEM

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Item	Requirements / Results	Sat (✓)	Unsat (✓)
11.	**Requirements:** **PREPARATION FOR TEST** After the completion of the stabilization period, verify the test is for 1 hour. If the pipe system is not buried the duration of the test is for 3 hours. **Results:** Stabilization overnight.	X MKV 6-24-99	
12.	**Requirements:** **TEST RESULTS** 15 MKV. 6-25-99 Verify the test is evaluated for a (3) hour period at ~~50~~ psi pressure. "ACCEPTANCE CRITERIA" [X] The allowable pressure drop is noted on the attached table. [ ] There shall be no leaks detected during the test duration. Status: [X] PASS [ ] FAIL **Results:** See attached for "Allowance For Expansion Under Test Pressure" sheet	X MKV 6-24-99	
13.	**Requirements:** **PROTOCOLS FOR DROPPING PRESSURE** Verify the pressure in the system is dropped in the following sequence: 1. Verify the pressure is relieved by opening the high point vent. 2. Verify the system is drained at the low point drain. **Results:** Met.	X MKV 6-24-99	

RECORD

000009

FS-F-4950-RV1 (02/02/98)

6-23-99

HYDROSTATIC TEST LOG

2345

TIME	STATUS	TEMPERATURE	PRESSURE	CHANGE	COMMENTS
1700	Fill	DNV	17psi	—	Stabilization overnight
1804	Start	DNV	17psi		
1834					
1904					
					We let the pipe sit
					overnight.
0710	Start test	DNV	15.8psi		Start 3 hr. test
0740			15.5		
0820			15.5		
0900			15.0		
0933			15.0		
1010	Finished		15.0	8 tenths	Will use calculation
					sheet for verification
					of passing.
					filled line back to 15.8
					bled off .8 equals
					48 milliliters WHICH IS
					LESS THAN 3.6 GALLONS
					ALLOWABLE

RECORD

INSTRUMENT CALIBRATION RECORD

Instrument Tag #	Manufacturer	Model #	S/N
00-0A437-PI	ASHCROFT	DURAGAUGE	N/A

2345

Location	Portable ☒ / Stationary ☐	W/O #
BLDG 46 WISE CONST.		PM068941

Instrument Range	Tolerance	Procedure #
0-30 PSI	±2% Full Scale ~~of Reading~~	IPG 001

Calibration Equipment I.D.	Calibration Equipment Description	Cal Date
11-X100-TST	Dead weight Tester	12-21-98
N/A	N/A	N/A

Ambient Conditions	Correction Used (if any)
74°	N/A

INPUT	EXPECTED VALUE	COMMENTS (e.g. meter code, TI-231 also reads 73.8)	AS FOUND	AS LEFT
0 PSI	0 PSI ± 0 PSI	N/A	0 PSI	0 PSI
10 PSI	10 PSI ± .6 PSI	N/A	10 PSI	10 PSI
15 PSI	15 PSI ± .6 PSI	N/A	15 PSI	15 PSI
20 PSI	20 PSI ± .6 PSI	N/A	20 PSI	20 PSI
30 PSI	30 PSI ± .6 PSI	N/A	30 PSI	30 PSI

SYSTEM FUNCTION CHECK

INPUT	EXPECTED VALUE	COMMENTS	AS FOUND	AS LEFT
N/A	N/A ±	N/A	N/A	N/A

GENERAL COMMENTS:

* Due Date 4.6.00

Work performed by	Date
[signature]	4.6.99

Copy #	Distribution
1	Return with Work Package
2	Instrument Shop (MS-56)

RECORD

000011

TABLE 1: ALLOWANCE FOR EXPANSION UNDER TEST PRESSURE*

Allowance for Expansion
(U.S. Gallons / 100 Feet of Pipe)

Nominal Pipe Size (Inches)	1 Hour Test	2 Hour Test	3 Hour Test
3	0.10	0.15	0.25
4	0.13	0.25	0.40
6	0.30	0.60	0.90
8	0.50	1.0	1.5
10	0.75	1.30	2.10
11	1.0	2.0	3.0
12	1.1	2.3	3.4
14	1.4	2.8	3.2
16	1.7	3.3	5.0
18	2.2	4.3	6.5
20	2.8	5.5	8.0
22	3.5	7.0	10.5
24	4.5	8.8	13.3
28	5.5	11.1	16.8
32	7.0	14.3	21.5
36	9.0	18.0	27.0
40	11.0	22.0	33.0
48	15.0	27.0	43.0

* These allowances only apply to the test period and not to the initial expansion phase.

RECORD

NONCONFORMANCE REPORT FORM

2345

RESPONSIBLE ORGANIZATION'S CORRECTIVE ACTION RESPONSE

	Nonconformance Number/Revision	NCR No.: FY99-058 Revision No. 0
20	Root Cause Analysis Provide documentation as attachment. Use additional or separate sheets as necessary	[ ] YES Level 1 Cat. [ ] 1H (human perf.) [ ] 1N (nat. phenom/sabotage [ ] 1E (equip.) [ ] 1Z (other) [X] NO TapRoot Cause Code(s)
21	Corrective Action (CA) Description and Disposition Describe the actions necessary to correct the nonconformance. Corrective actions must be detailed and complete. They must be written in a clear, concise, and verifiable manner. The corrective action plan must also include actions to prevent recurrence. Use additional or separate sheets as necessary. (A disposition of Accept-as-is or Repair REQUIRES a written Technical Concurrence/Justification below).	Hardware: [X] Accept-as-is [ ] Repair [ ] Rework [ ] Reject Non-Hardware: [ ] Other THE PIPE LINING PERFORMED BY CSR BRIDGED A CLEAN OUT OPENING WHICH COULD CAUSE STRESS RUPTURE TO THE POLYMER OF THE NEW LINE. BASED ON THE ATTACHED CALCULATIONS FOR OPERATING HEAD PRESSURE BETWEEN MANHOLES 1 & 3. THE TEST PRESSURE WAS REDUCED FROM 50 PSI TO 15 PSI FOR THREE HOURS. 15 PSI EXCEEDS 1.5 TIMES THE OPERATING PRESSURE.
22	Technical Concurrence/Justification (mark NA if not applicable)	Name: JAMES C. JENKINS Signature: J. C. Jenkins Date: 5/25/99
23	Was a Design Change Notice Required?	[ ] Yes [X] No DCN # Date Issued
24	Was a SBDR Performed? Was a USQD Performed?	[ ] Yes [X] No SBDR # Date Issued [ ] Yes [X] No USQD # Date Issued
25	Actions taken to Prevent Recurrence Use additional or separate sheets as necessary.	THE PIPE LINING SYSTEM WAS A UNIQUE REPAIR TO THE LEACHATE SYSTEM AND IS NOT EXPECTED TO BE DUPLICATED.
26	Proposed Completion Date For CA	Date: NA 5/28/99 – 5/28/99
27	Responsible Team Leader/Coach/Vendor	Name: DAVID WARREN HOOPER Signature: Date: 5/25/99

EVALUATION OF THE CORRECTIVE ACTION RESPONSE BY THE ORIGINATOR/ASSESSOR

28	Response Acceptable?	[X] Yes [ ] No
29	Originator's/Assessor's	5/26/99 (MICHAEL W GODBER)

COMPLETION OF THE CORRECTIVE ACTIONS BY THE RESPONSIBLE ORGANIZATION

30	Date Corrective Action Completed	Date: 5/28/99
31	Responsible Team Leader/Coach /Vendor	Name: NA 5/28/99 Signature: MICHAEL W GODBER Date: 5/28/99

VERIFICATION OF COMPLETED CORRECTIVE ACTIONS BY THE VERIFIER

32	Verification Action (Describe what objective evidence was examined to verify completion of this action and attach documentation to the NCR)	SEE ATTACHED CALCULATIONS NA 5/28/99 000013
33	Verifier	MICHAEL W GODBER 5/28/99

CLOSURE BY THE ASSESSOR'S VERIFIER'S TEAM LEADER/COACH

34	Verifier's Team Leader/Coach	FRANK THOMPSON 5/28/99

FEMP DANIEL FERNALD

NONCONFORMANCE REPORT FORM

		ORIGINATOR/ASSESSOR
1	Nonconformance Number/Revision	NCR No.: FY99-0758 Revision No. 0
2	Dates	Date Discovered: 5/22/99 Date NCR Report Issued: 5/23/99
3	Type of Nonconformance	[X] FINDING [ ] CONCERN
4	Project/Activity @ Fac/Loc/Bldg	LEACHATE REPAIR PROJECT
5	Hazard Category	Nuclear: [ ] 1 [ ] 2 [ ] 3 [ ] Radiological Non-Nuclear: [ ] High Hazard [ ] Moderate Hazard [ ] Low Hazard Industrial: [ ] Hazardous Waste Activity [X] Standard Industrial Hazard [ ] FEMP SIH
6	Assessment	[ ] Internal [ ] External (OEPA, DOE) [X] Supplier/Vendor, CSR HYDOCONDUIT
7	Assessment Type	[ ] Audit [X] Surveillance [ ] Inspection [ ] Other
8	Assessment Number	99-0678
9	Responsible FDF Division/Vendor	[ ] S&WP [ ] WMT&SP [ ] FC&DP [ ] O&PI [ ] PS [x]SUPPLIER/VENDOR
10	Responsible FDF Department/Vendor	CONSTRUCTION/ CSR HYDROCONDUIT
11	Responsible Team Leader/Coach/Vendor (Print Name)	WARREN HOOPER MARKED IN ERROR - JBT 5-28-99
12	Functional Area (NA for Vendors) (choose any that apply) (Ref. RM-0016)	[X] CM [ ] ED [ ] RD [ ] MS [ ] QA [ ] AC [ ] PM [ ] PI [ ] FM [ ] EP [ ] EW [ ] MT [ ] OP [ ] PT [ ] SE [ ] TR [X] CT [ ] HR [ ] PC [ ] EM [ ] FP [ ] NS [ ] SH [ ] RP
13	QA Criteria (choose one that applies Ref. RM-0012) Other Criteria (CONOPS, etc.) (not RM-0012 applicable)	[ ] 1 Program [ ] 2 Training [ ] 3 Quality Improv. [ ] 4 Document/Records [ ] 5 Work process [ ] 6 Design [X] 7 Procurement [ ] 8 Inspect/Test [ ] 9 Management Assessment [ ] 10 Independent Assessment [ ] Other
14	Requirement Description Cite the requirement (clearly, concisely, and completely) and its source, including document identification number, page and paragraph number. A copy of the document (or page of the document) in which the requirement appears may be attached or added to the NCR file. Use additional or separate sheets as necessary.	In accordance to the approved Hydrostatic Pipe Procedure for Dual Containment Pipe the test pressure for the carrier pipe is to be 15 psi. SO MG 5/23/99
15	Nonconformance Description Describe the nonconformance. Include details such as supplier names, container numbers, purchase order, work order, or requisition numbers) and clearly describe the deviation from the written requirement. Use additional or separate sheets as necessary.	Nonconformance Title or Short Description: The U-liner for the carrier pipe was tested at 15 psi pressure. 000014
16	Tagging Required / Number of Tags	[ ] Yes [X] No Number of Tags: N/A
17	Originator/Assessor	Name: MICHAEL W GODBER Signature: [signature] Date: 5/22/99
		ORIGINATOR'S/ASSESSOR'S TEAM LEADER'S/COACH'S REVIEW
18	Originator's/Assessor's Team Leader/Coach	Name: FRANK THOMPSON Signature: [signature] Date: 5/25/99
19	Response Date From Resp. Organ.	6/7/99 (Reply within 20 working days)

GEOSYNTEC CONSULTANTS

FLUOR DANIEL FERNALD

PRESSURE TEST LOG

2345

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ0409 TASK NO.: 4.1

DESCRIPTION: YEAR:

CONTRACTOR: Wise Construction

TEST DESCRIPTION: HYDROSTATIC: ☒ PNEUMATIC (ATTACH WRITTEN AUTHORIZATION): ☐

PASS/FAIL CRITERION:

MATERIAL DESCRIPTION: FORCEMAIN: ☐ CONTAINMENT: ☐ CARRIER ☒ OTHER: ☐

TARGET PRESSURE: TEST DURATION: 3 hrs min GAUGE NO.: RE-15 GAUGE LOCATION: inside MH2

TEST LOCATION: MH 1 to MH 2 TO

FOR CONTAINMENT PIPE TESTING, CARRIER PIPE PRESSURIZED FIRST: ☐ YES ☐ NO

READING NO.	STABILIZATION TEST PERIOD	DATE (day/mo)	TIME	READING	CHANGE IN READING	QA ID
1		24 June	0710	15.8	—	CS
2		↓	0800	15.5	.3 psi	RP
3		↓	0820	15.5	ø	RP
4		↓	0900	15.0	.5 psi	RP
5		↓	0930	15.0	ø	RP
6		↓	1015	15.0	ø	RP
1	1605	23 June	1605	17.0	ø	CS
2	1705	23 June	1705	17.0	ø	CS

PASS: ☐

FAIL: ☐

000015

VISUAL MONITORING: Muriel K. Wise 25-6-99 — CONTRACTOR'S REPRESENTATIVE day/mo/yr; Rob Reddmann 24 June 99 — CQA REPRESENTATIVE day/mo/yr

FINAL APPROVAL: Muriel K. Wise 25-6-99 — CONTRACTOR'S REPRESENTATIVE day/mo/yr; Rob Reddmann 24/6/99 — CQA REPRESENTATIVE day/mo/yr

COPY TO:

FDF SURVEILLANCE CHECKLIST

SURVEILLANCE NO.:	START DATE: 6-25-99	ASSESSOR: Muriel K. Vigus	2345

SURVEILLANCE TITLE/DESCRIPTION: HYDROSTATIC TEST PROCEDURE AND RESULTS FOR CONTAINMENT PIPE (FINAL TEST)

Surveiled DIV./DEPT./PROJECT: DIVISION: SOILS AND WATER
DEPARTMENT: ON-SITE DISPOSAL FACILITY
REPAIR OF LEACHATE CONVEYANCE SYSTEM

Page___ of___

Item	Requirements / Results	Sat (✓)	Unsat (✓)
1.	This test procedure is based on the pneumatic test procedure that was included in the Leachate Repair Report dated March 31, 1999. Prior to pneumatic testing the Construction Manager shall approve of the test method. Requirement: Verify the procedure for hydrostatic testing is approved by the Construction Manager. Result: Bill Edmondson	X MKV 6-25-99	
	Record the pipe size that is being tested: 10" Record the pipe location: Containment between MH1-MH2 Record the gauge number: RE-13 Calibration date: 12-9-98 Record the calibration date: 12-9-99 Record the CQC Consultant who reviewing the test: Rob Peddicord		
2.	Requirement: **PREPARATION FOR TEST** Verify the test gauge used to monitor pressures has been calibrated within (1) year of use. Result: GAUGE NUMBER: RE-13 CALIBRATION DATE: 12-9-98 RECORD	X MKV 6-25-99	

000016

FS-F-4950-RV1 (02/02/98)

FDF SURVEILLANCE CHECKLIST

SURVEILLANCE NO.:	START DATE:	ASSESSOR:
	6-25-99	Muriel K. Vigus 2345

SURVEILLANCE TITLE/DESCRIPTION: HYDROSTATIC TEST PROCEDURE AND RESULTS FOR CONTAINMENT PIPE (FINAL TEST)

Surveiled DIV./DEPT./PROJECT: DIVISION: SOILS AND WATER
DEPARTMENT: ON-SITE DISPOSAL FACILITY
REPAIR OF LEACHATE CONVEYANCE SYSTEM

Page___ of___

Item	Requirements / Results	Sat (✓)	Unsat (✓)
3.	**Requirements:** **PREPARATION FOR TEST** Verify vent plugs from fixed end seals at all cleanouts of the section to be tested are removed. Verify holes are drilled in any fixed-end seals which do not have vent plugs. Tap the hole for subsequent installation of ta vent plug. **Results:** No cleanouts. Satisfactory	X MKV 6-25-99	
4.	**Requirements:** **PREPARATION FOR TEST** Verify all necessary blind flanges, low-point drain valve, high-point drain valve, pressure gauge and fill hose connections to the section of containment pipe to be tested are attached. Low-point refers to the end of pipe section being tested with the lowest elevation; while high-point refers to the end with the highest elevation. Note the pressure gauge must be installed upgradient of the low-point drain valve. Position the pressure gauge such that it is in full view of the testing operator when the valve is being turned on or off. **Results:** Met. Gauge is upgradient of low point drain.	X MKV 6-25-99	
5.	**Requirements:** **PREPARATION FOR TEST** Verify all high point vent valves of the **carrier piping** system are opened. Verify the fill hose is attached to the low-point drain valve. **Results:** Met.	X MKV 6-25-99	

RECORD

000017

FS-F-4950-RV1 (02/02/98)

FDF SURVEILLANCE CHECKLIST

SURVEILLANCE NO.:	START DATE:	ASSESSOR:
	6-25-99	Muriel K. Vigus 2345

SURVEILLANCE TITLE/DESCRIPTION: HYDROSTATIC TEST PROCEDURE AND RESULTS FOR CONTAINMENT PIPE (FINAL TEST)

Surveiled DIV./DEPT./PROJECT: DIVISION: SOILS AND WATER
DEPARTMENT: ON-SITE DISPOSAL FACILITY
REPAIR OF LEACHATE CONVEYANCE SYSTEM

Page___ of___

Item	Requirements / Results	Sat (✓)	Unsat (✓)
6.	**Requirements:** **PREPARATION FOR TEST** Verify the carrier pipe is filled and gradually pressurized to 15 psi. **Results:** We pressurized to approx. 16 psi. Air	X MKV 6-25-99	
7.	**Requirements:** **PREPARATION FOR TEST** Verify all high point vent valves of the **containment piping** system are opened. Verify the fill hose is attached to the low-point drain valve. **Results:** This is met. Vent open @ Mh.-1 Filled in Mh.-2	X MKV 6-25-99	
8.	**Requirements:** **PREPARATION FOR TEST** Verify the air in the **containment pipe** is completely vented. The pipe can be shaked or tapped to aid in removing the air. When all the air is removed, verify the high point drain is shutoff , the vent plugs at the cleanout locations are replaced, the low point drain valve is closed, the water source is shutoff, and the fill hose is removed. **Results:** No cleanouts, Met	X MKV 6-25-99	

RECORD

FS-F-4950-RV1 (02/02/98)

FDF SURVEILLANCE CHECKLIST

SURVEILLANCE NO.:	START DATE:	ASSESSOR:
	6-25-99	Muriel K. Vigus 2345

SURVEILLANCE TITLE/DESCRIPTION: HYDROSTATIC TEST PROCEDURE AND RESULTS FOR CONTAINMENT PIPE (FINAL TEST)

Surveiled DIV./DEPT./PROJECT: DIVISION: SOILS AND WATER
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REPAIR OF LEACHATE CONVEYANCE SYSTEM

Page___ of___

Item	Requirements / Results	Sat (✓)	Unsat (✓)
9.	**Requirements:** **PREPARATION FOR TEST** Verify a pressure source is attached to the low point drain of the **containment pipe** and the pipe is gradually pressurized to 15 psi. **Results:** Filled to 17 psi.	X MKV 6-25-99	
10.	**Requirements:** **PREPARATION FOR TEST** Inspect the containment pipe welds, joints, and fittings as the pressure is applied and verify there are no signs of water. **Results:** ~~These were soaped. no leaks~~ MKV No visual leaks 6-25-99	X MKV 6-25-99	
11.	**Requirements:** **PREPARATION FOR TEST** Allow for 1 to 3 hours for pipe stabilization. Pipe stabilization is achieved if there is no drop in pressure over a one-hour period. Verify the pipe has stabilized prior to starting the test. 1 Hr. for stabilization, stabilized @ 10:35	X MKV 6-25-99	

RECORD

FS-F-4950-RV1 (02/02/98)

FDF SURVEILLANCE CHECKLIST

SURVEILLANCE NO.:	START DATE:	ASSESSOR:
	6-25-99	Muriel K. Vigus 2345

SURVEILLANCE TITLE/DESCRIPTION: HYDROSTATIC TEST PROCEDURE AND RESULTS FOR CONTAINMENT PIPE (FINAL TEST)

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REPAIR OF LEACHATE CONVEYANCE SYSTEM

Page___ of___

Item	Requirements / Results	Sat (✓)	Unsat (✓)
12.	**Requirements:** **PREPARATION FOR TEST** After the completion of the stabilization period, verify the test is for 1 hour if the pipe system is not buried or 3 hours if pipe system is buried. **Results:** Tested for 3 hrs starting @ 10:35	X MKV 6-25-99	
13.	**Requirements:** **TEST RESULTS** Verify the test is evaluated for a (1) hour period at 15 psi pressure. "ACCEPTANCE CRITERIA" [ ] No drop in pressure over the test duration. [X] There shall be no leaks detected during the test duration. Status: [X] PASS [ ] FAIL **Results:** See Attached: Used Table 1. Allowance for expansion under Test Pressure.	X MKV 6-25-99	
14.	**Requirements:** **PROTOCOLS FOR DROPPING PRESSURE** Verify the pressure in the system is dropped in the following sequence: 1. Open the containment system high point vent valve and slowly allow the pressure to drop to atmospheric pressure. 2. Open the carrier system high point vent valve and slowly allow the pressure to drop to atmospheric pressure. 3. Remove the water from the containment pipe prior to releasing the water from the carrier. **Results:** Met.	X MKV 6-25-99	

RECORD

000020

FS-F-4950-RV1 (02/02/98)

FDF SURVEILLANCE CHECKLIST

SURVEILLANCE NO.:	START DATE:	ASSESSOR:
	6-25-99	Muriel K. Vigus 2345

SURVEILLANCE TITLE/DESCRIPTION: HYDROSTATIC TEST PROCEDURE AND RESULTS FOR CONTAINMENT PIPE (FINAL TEST)

Surveiled DIV./DEPT./PROJECT: DIVISION: SOILS AND WATER
DEPARTMENT: ON-SITE DISPOSAL FACILITY
REPAIR OF LEACHATE CONVEYANCE SYSTEM

Page___ of___

Item	Requirements / Results	Sat (✓)	Unsat (✓)
15.	**Requirements:** **DROPPING SYSTEM PRESSURE** Verify the pressure in the system is dropped in the following sequence: 1. Open the containment system high point vent valve and slowly allow the pressure to drop to atmospheric pressure. 2. Open the carrier system high point vent valve and slowly allow the pressure to drop to atmospheric pressure. **Results:** Met.	X MKV 6-25-99	
	Requirements: **Results:**		
	Requirements: **Results:** RECORD		

FS-F-4950-RV1 (02/02/98)

HYDROSTATIC TEST LOG 6-25-99

2345

TIME	STATUS	TEMPERATURE	PRESSURE	CHANGE	COMMENTS
0800	Filling	DNH			Filling line
0905	Start		17psi	—	Stabilization
0935			16.1	.9	
1005			16.1	—	
1035			16.1	—	Start 3 hr. test
1105			16.1	—	
1135			16.	.1	
1205			16.	—	
1235			16.	—	
1305			15.9	.1	
1335	Finished		15.9	—	Finished
					THE MAKEUP WAS MEASURED
					AND WAS LESS THAN
					(1) QUART WHICH IS
					ACCEPTABLE.

RECORD

000022

TABLE 1: ALLOWANCE FOR EXPANSION UNDER TEST PRESSURE*

Allowance for Expansion (U.S. Gallons / 100 Feet of Pipe)

DUAL CONTAINMENT

Nominal Pipe Size (Inches)	1 Hour Test	2 Hour Test	3 Hour Test
3	0.10	0.15	0.25
4	0.13	0.25	0.40
6	0.30	0.60	0.90
8	0.50	1.0	1.5
10	0.75	1.30	2.10
11	1.0	2.0	3.0
12	1.1	2.3	3.4
14	1.4	2.8	3.2
16	1.7	3.3	5.0
18	2.2	4.3	6.5
20	2.8	5.5	8.0
22	3.5	7.0	10.5
24	4.5	8.8	13.3
28	5.5	11.1	16.8
32	7.0	14.3	21.5
36	9.0	18.0	27.0
40	11.0	22.0	33.0
48	15.0	27.0	43.0

* These allowances only apply to the test period and not to the initial expansion phase.

1.4 GALLON

RECORD

000023

2345

INSTRUMENT CALIBRATION RECORD

ORIGINAL

Instrument Tag #	Manufacturer	Model #	S/N
ØØ-ØA357-PI	Helicoid	UNKnown	UNKNOWN (RE-13)

Location	Portable / Stationary	W/O #
Wise Construction	Portable ☒ Stationary ☐	PMØ65620

Instrument Range	Tolerance	Procedure #
Ø-1ØØ PSI	± 2 PSI	IPGØØ1

Calibration Equipment I.D.	Calibration Equipment Description	Cal Date
ØØ-A321-TST	Dead weight Tester	2-12-98
N/A	N/A	N/A

Ambient Conditions	Correction Used (if any)
71°F	N/A

INPUT	EXPECTED VALUE	COMMENTS (e.g. switch opens, TI-231 also sends 73.5)	AS FOUND	AS LEFT
Ø PSI	Ø ± 2	N/A	2 PSI	Ø PSI
25 PSI	25 ± 2	N/A	25 PSI	25 PSI
5Ø PSI	5Ø ± 2	N/A	5Ø PSI	5Ø PSI
75 PSI	75 ± 2	N/A	75 PSI	75 PSI
1ØØ PSI	1ØØ ± 2	N/A	99 PSI	99 PSI

SYSTEM FUNCTION CHECK

INPUT	EXPECTED VALUE	COMMENTS	AS FOUND	AS LEFT
N/A	N/A ±	N/A	N/A	N/A

GENERAL COMMENTS:

N/A

Work performed by	Date
R. Howell Jr.	12-9-98

000024

Copy #	Distribution
1	Return with Work Package
2	Instrument Shop (MS-56)

RECORD

GEOSYNTEC CONSULTANTS

FLUOR DANIEL FERNALD

PRESSURE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: G00409 TASK NO.: 4.1

DESCRIPTION: Phase II YEAR: 1999

CONTRACTOR: Wise Constr.

TEST DESCRIPTION: HYDROSTATIC: ☒ PNEUMATIC (ATTACH WRITTEN AUTHORIZATION): ☐

PASS/FAIL CRITERION:

MATERIAL DESCRIPTION: FORCEMAIN: ☐ CONTAINMENT: ☒ CARRIER ☐ OTHER: ☐

TARGET PRESSURE: N/A TEST DURATION: 4 hour GAUGE NO.: RE-13 GAUGE LOCATION: @ MH2

TEST LOCATION: MH 1 to MH 2 TO

FOR CONTAINMENT PIPE TESTING, CARRIER PIPE PRESSURIZED FIRST: ☒ YES ☐ NO

READING NO.	STABILIZATION TEST PERIOD	DATE (day/mo)	TIME	READING	CHANGE IN READING	QA ID
1	0905	25 June	0905	17.0 psi	—	RP
2	0935	↓	0905	16.1 psi	0.9 psi	RP
3	1005	↓	1005	16.1 psi	0	RP
4	1035	↓	1035	16.1 psi	0	RP
5		↓	1135	16.0 psi	0.1	RP
6		↓	1235	16.0 psi	0	RP
7		↓	1335	15.9 psi	0.1	RP

RECORD

PASS: ☐

FAIL: ☐

000025

VISUAL MONITORING: [signature] 25-6-99 CONTRACTOR'S REPRESENTATIVE day/mo/yr [signature] 25 Jun 99 CQA REPRESENTATIVE day/mo/yr

FINAL APPROVAL: [signature] 25-6-99 CONTRACTOR'S REPRESENTATIVE day/mo/yr [signature] 25/6/99 CQA REPRESENTATIVE day/mo/yr

COPY TO: