CONSTRUCTION QUALITY ASSURANCE

FINAL REPORT

PHASE IV - CELLS 4 AND 5 CONSTRUCTION ON-SITE DISPOSAL FACILITY

United States Department of Energy
Fernald Environmental Management Project
Fernald, Ohio

prepared by

GEOSYNTEC CONSULTANTS

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under

Fluor Fernald, Inc.
Contract No. 95RS005028

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APPENDIX G (continued)

Field Moisture/Density Test Results

Clay Liner Drive Cylinder Test Results

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4943

FLUOR FERNALD

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GR1341 TASK NO.: 041

DESCRIPTION: Phase IV DATE: 13 day June month 2002 year

TEST NO.: DCØ2-Ø1 → CLO2-37

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRLCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY OTHER:

% COMPACTION: ≥95% & APZ MOISTURE CONTENT RANGE: +Ø-3 APZ

FDT LOCATION: Cell 4 SW End FDT TEST NO.: CLO2-37

FIELD TEST DATA – ASTM D 2937 QA ID: DCE

A	CYLINDER NO. 02-006 VOLUME[1] (cf)	0.03344	E	WET UNIT WEIGHT = D/A (lbs)	136.4
B	WEIGHT OF SAMPLE & CYLINDER 2670.5 (lbs)	5.89	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	118.7
C	WEIGHT OF CYLINDER 605.4 gm (lbs)	1.33	G		
D	WEIGHT OF WET SAMPLE = B–C 2068.4 (lbs)	4.56			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID:

O	WT. OF TARE NO. #114 (grams)	8.4	R	WT. OF WATER = P–Q (grams)	71.2
P	WT. OF WET SOIL & TARE (grams)	556.9	S	WT. OF DRY SOIL = Q–O (grams)	477.3
Q	WT. OF DRY SOIL & TARE (grams)	485.7	T	MOISTURE CONTENT = (R/S)X100 (%)	14.9

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 121.3 (pcf) OPTIMUM MOISTURE CONTENT 13.1 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID: DLE

DELTA MOISTURE CONTENT = T – U	0.8	U	FDT MOISTURE CONTENT (%)	14.1
FDT WET UNIT WT. (pcf)	136.3	V	FDT DRY UNIT WT. (pcf)	118.2
DELTA DRY UNIT WT. = F – V	0.8		FDT #	CLØ2-37

COMMENTS:

000004

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DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. G-Q1341 TASK NO.: 041

DESCRIPTION: Phase IV DATE: 18 day June month 2002 year

TEST NO.: DC 02-2

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRLCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% / APZ MOISTURE CONTENT RANGE: 0 to 3% / APZ

FDT LOCATION: Cell 4 NE End FDT TEST NO.: DC 02-2 / CL 02-50

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02007 VOLUME[1] (cf)	0.03344	E	WET UNIT WEIGHT = D/A (lbs)	~~137.5~~ 3.2 DLE
B	WEIGHT OF SAMPLE & CYLINDER 2628.0 gram (lbs)	5.8	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	~~116.6~~ 2.7 DLE
C	WEIGHT OF CYLINDER 611.2 gram (lbs)	1.3	G		114.0
D	WEIGHT OF WET SAMPLE = B–C 2041.2 gram (lbs)	4.5			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #18 (grams)	8.4	R	WT. OF WATER = P–Q (grams)	83.0
P	WT. OF WET SOIL & TARE (grams)	553.6	S	WT. OF DRY SOIL = Q–O (grams)	162.2
Q	WT. OF DRY SOIL & TARE (grams)	470.6	T	MOISTURE CONTENT = (R/S)X100 (%)	~~179~~ 1.17 18.0

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 115.3 (pcf) OPTIMUM MOISTURE CONTENT 15.5 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	~~1.4~~ .5	U	FDT MOISTURE CONTENT (%)	~~16.5~~ 17.4	
FDT WET UNIT WT. (pcf)	131.8	V	FDT DRY UNIT WT. (pcf)	~~112.3~~ 113.1	
DELTA DRY UNIT WT. = F – V	0.9		FDT #		

COMMENTS:

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DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ1341 TASK NO.: 641

DESCRIPTION: Phase II DATE: 20 day June month 2002 year

TEST NO.: DC02-3 @ CL02-79

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRLCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% / APZ MOISTURE CONTENT RANGE: 0 to 3% / APZ

FDT LOCATION: Cell 4 SW End FDT TEST NO.: CL02-79

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02-009 VOLUME[1] 2665.8	(cf)	0.03344	E	WET UNIT WEIGHT = D/A	(lbs) 134.6
B	WEIGHT OF SAMPLE & CYLINDER	(lbs)	5.9	F	DRY UNIT WEIGHT = E/[1+(T/100)]	(pcf) 114.3
C	WEIGHT OF CYLINDER 622.5 gr	(lbs)	1.4	G		
D	WEIGHT OF WET SAMPLE = B–C 2041.2 gm	(lbs)	4.5			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01–in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #T14	(grams)	8.4	R	WT. OF WATER = P–Q	(grams) 79.6
P	WT. OF WET SOIL & TARE	(grams)	536.5	S	WT. OF DRY SOIL = Q–O	(grams) 448.5
Q	WT. OF DRY SOIL & TARE	(grams)	456.9	T	MOISTURE CONTENT = (R/S)X100	(%) 17.7 1.177

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 115.3 (pcf) OPTIMUM MOISTURE CONTENT 15.5 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID: ~~14.9~~

DELTA MOISTURE CONTENT = T – U	~~2.8~~ 1.3	U	FDT MOISTURE CONTENT	(%)	~~14.9~~ 16.0
FDT WET UNIT WT.	(pcf) 133.6	V	FDT DRY UNIT WT.	(pcf)	~~115.2~~ 116.3
DELTA DRY UNIT WT. = F – V	-0.9		FDT #		CL02-79

COMMENTS:

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DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. 6Q1341 TASK NO.: 04.1

DESCRIPTION: Phase IV DATE: 21 day June month 2002 year

TEST NO.: DC 02-4@ CL 02-100

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRLCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% / APZ MOISTURE CONTENT RANGE: 0 to 3% / APZ

FDT LOCATION: Cell 4 SW End FDT TEST NO.: CL02-100

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02-008 VOLUME[1] 26073	(cf)	0.03234	E	WET UNIT WEIGHT = D/A	(lbs) 136.7
B	WEIGHT OF SAMPLE & CYLINDER	(lbs)	5.75	F	DRY UNIT WEIGHT = E/[1+(T/100)]	(pcf) ~~117.6~~ 117.5
C	WEIGHT OF CYLINDER 604.2 gm	(lbs)	1.33	G		
D	WEIGHT OF WET SAMPLE = B–C 2004.9	(lbs)	4.42			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01–in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #630	(grams)	8.1	R	WT. OF WATER = P–Q	(grams) 77.4
P	WT. OF WET SOIL & TARE	(grams)	560.9	S	WT. OF DRY SOIL = Q–O	(grams) 475.4
Q	WT. OF DRY SOIL & TARE	(grams)	483.5	T	MOISTURE CONTENT = (R/S)X100	(%) 16.28 1.16

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 115.3 (pcf) OPTIMUM MOISTURE CONTENT ~~15.5~~ (%)

COMPARISON WITH NUCLEAR GAUGE ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	~~1.4~~ .3%	U	FDT MOISTURE CONTENT (%)	~~14.8~~ 15.9
FDT WET UNIT WT. (pcf)	133.5	V	FDT DRY UNIT WT. (pcf)	~~115.2~~ 116.3
DELTA DRY UNIT WT. = F – V	2.4		FDT #	CL02-100

COMMENTS:

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DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: 6Q1341 TASK NO.: 04.1

DESCRIPTION: Phase IV DATE: 24 day June month 2002 year

TEST NO.: DC Ø2-5 @ CL Ø2-114

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRLCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95%/APZ MOISTURE CONTENT RANGE: 0 to 3%/APZ

FDT LOCATION: Cell 4 NE End FDT TEST NO.: CLØ2-144

FIELD TEST DATA – ASTM D 2937 QA ID: DZE

A	CYLINDER NO. Ø2-005 VOLUME[1] (cf) 2676.0 gm	0.03338	E	WET UNIT WEIGHT = D/A (lbs)	134.8
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.9	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	116.7
C	WEIGHT OF CYLINDER 616.4 gm (lbs)	1.4	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs) 2042.2 gm	4.5			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01–in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DCE

O	WT. OF TARE NO. #18 (grams)	8.4	R	WT. OF WATER = P–Q (grams)	59.6
P	WT. OF WET SOIL & TARE (grams)	453.7	S	WT. OF DRY SOIL = Q–O (grams)	385.7
Q	WT. OF DRY SOIL & TARE (grams)	394.1	T	MOISTURE CONTENT = (R/S)X100 (%)	15.5

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 120.7 (pcf) OPTIMUM MOISTURE CONTENT 13.6 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	2.3	U	FDT MOISTURE CONTENT (%)	~~13.2~~ 14.6
FDT WET UNIT WT. (pcf)	136.0	V	FDT DRY UNIT WT. (pcf)	~~118.7~~ 120.1
DELTA DRY UNIT WT. = F – V	3.4		FDT #	

COMMENTS:

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DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ1341 TASK NO.: 09-1

DESCRIPTION: Phase II DATE: 24 day June month 2002 year

TEST NO.: DC Ø2-6 @ CL Ø2-146

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRLCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% / APE MOISTURE CONTENT RANGE: 0 to 3% / APE

FDT LOCATION: Cell 4 NE End FDT TEST NO.: DCØ2-6 CL Ø2-146

FIELD TEST DATA – ASTM D 2937 QA ID:

A	CYLINDER NO. Ø2006 VOLUME[1] (cf) 2739.1	0.03344	E	WET UNIT WEIGHT = D/A (lbs)	139.7
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	6.0	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	~~122.03~~ CL
C	WEIGHT OF CYLINDER 605.4 gm (lbs)	1.33	G		122.0
D	WEIGHT OF WET SAMPLE = B–C (lbs) 2118.3 gm	4.67			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLF

O	WT. OF TARE NO. #114 (grams)	8.4	R	WT. OF WATER = P–Q (grams)	67.
P	WT. OF WET SOIL & TARE (grams)	~~538.0~~	S	WT. OF DRY SOIL = Q–O (grams)	462.6
Q	WT. OF DRY SOIL & TARE (grams)	471.0	T	MOISTURE CONTENT = (R/S)X100 (%)	14.48 1.14

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 120.7 (pcf) OPTIMUM MOISTURE CONTENT 13.6 (%)

COMPARISON WITH NUCLEAR GAUGE ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	~~0.68~~ ~~-1.62~~	U	FDT MOISTURE CONTENT (%)	~~13.8~~ ~~15.1~~
FDT WET UNIT WT. (pcf)	136.8	V	FDT DRY UNIT WT. (pcf)	~~118.9~~ 120.2
DELTA DRY UNIT WT. = F – V	~~3.13~~ 1.8		FDT #	CL Ø2-146

COMMENTS:

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DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV DATE: 26 day June month 2002 year

TEST NO.: DC 02-7 @ CL 02-180

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRLCLE ONE) FILL / SUBGRADE / SUBBASE / (CLAY) / OTHER:

% COMPACTION: 95% / APZ MOISTURE CONTENT RANGE: 0 to 3% / APZ

FDT LOCATION: Cell 4 SE End FDT TEST NO.: CL 02-180

FIELD TEST DATA – ASTM D 2937 QA ID: DLF

A	CYLINDER NO. 02-004 VOLUME[1] (cf) 2699.4 gm	0.03344	E	WET UNIT WEIGHT = D/A (lbs)	137.9 4.58
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.95 lb	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	119.4
C	WEIGHT OF CYLINDER 609.1 gm (lbs)	1.34	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs) 2091.1	4.61			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLF

O	WT. OF TARE NO. #614 (grams)	8.3	R	WT. OF WATER = P–Q (grams)	63.0
P	WT. OF WET SOIL & TARE (grams)	478.2	S	WT. OF DRY SOIL = Q–O (grams)	406.9
Q	WT. OF DRY SOIL & TARE (grams)	415.2	T	MOISTURE CONTENT = (R/S)X100 (%)	15.48 1.1548

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 120.7 (pcf) OPTIMUM MOISTURE CONTENT 13.6 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	1.08 0.12	U	FDT MOISTURE CONTENT (%)	14.4 15.6	
FDT WET UNIT WT. (pcf)	136.0	V	FDT DRY UNIT WT. (pcf)	117.6 118.9	
DELTA DRY UNIT WT. = F – V	0.5		FDT #		

COMMENTS:

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DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ 1341 TASK NO.: 04.1

DESCRIPTION: Phase IV DATE: 27 day June month 2002 year

TEST NO.: DC02-8 @ CL02-199

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRLCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% / APZ MOISTURE CONTENT RANGE: 0 to 3% / APZ

FDT LOCATION: Cell 4 NW End FDT TEST NO.: DC02-8 / CL02-199

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02-008 VOLUME[1] (cf) 2640.8	0.03234	E	WET UNIT WEIGHT = D/A (lbs)	138.8
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.82	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	120.6
C	WEIGHT OF CYLINDER 604.2 6gm (lbs)	1.33	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs) 2036.66gm	4.49			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #114 (grams)	8.4	R	WT. OF WATER = P–Q (grams)	63.7
P	WT. OF WET SOIL & TARE (grams)	495.3	S	WT. OF DRY SOIL = Q–O (grams)	423.2
Q	WT. OF DRY SOIL & TARE (grams)	431.6	T	MOISTURE CONTENT = (R/S)X100 (%)	15.1 1.151

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 118.8 (pcf) OPTIMUM MOISTURE CONTENT 14.1 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	~~1.4~~ 0.1	U	FDT MOISTURE CONTENT (%)	~~13.7~~ 15.0
FDT WET UNIT WT. (pcf)	136.4	V	FDT DRY UNIT WT. (pcf)	~~118.6~~ 120.0
DELTA DRY UNIT WT. = F – V	~~2.00.6~~		FDT #	CL02-199

COMMENTS:

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DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

4943

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. 601341 TASK NO.: 04J

DESCRIPTION: Phase II DATE: 28 day June month 2002 year

TEST NO.: DC02-9 @ CL02-230

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% / APZ MOISTURE CONTENT RANGE: 0 to 3% / APZ

FDT LOCATION: Cell 4 East Bench FDT TEST NO.: DC02-9 @ CL02-230

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02-009 VOLUME[1] (cf) 2640.2 cm³	0.0334	E	WET UNIT WEIGHT = D/A (lbs)	133.1
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.82	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	113.8
C	WEIGHT OF CYLINDER 622.5 grams (lbs)	1.37	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs) 2018.52	4.45			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE/

O	WT. OF TARE NO. #110 (grams)	80	R	WT. OF WATER = P–Q (grams)	67.5
P	WT. OF WET SOIL & TARE (grams)	479.3	S	WT. OF DRY SOIL = Q–O (grams)	398.8
Q	WT. OF DRY SOIL & TARE (grams)	466.8	T	MOISTURE CONTENT = (R/S)X100 (%)	16.9

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 118.9 (pcf) OPTIMUM MOISTURE CONTENT 13.9 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID: 15.3 DLE

DELTA MOISTURE CONTENT = T – U	1.6	U	FDT MOISTURE CONTENT (%)	~~18.5~~ 16.3
FDT WET UNIT WT. (pcf)	133.8	V	FDT DRY UNIT WT. (pcf)	~~115.0~~ 116.0
DELTA DRY UNIT WT. = F – V	2.2		FDT #	CL02-230

COMMENTS:

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DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. ~~60134~~ TASK NO.: 04.1

DESCRIPTION: Phase IV DATE: 01 day July month 2002 year

TEST NO.: DC02-10 CL02-254 Date Taken 30 [illegible]

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRLCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% /APZ MOISTURE CONTENT RANGE: 0 to 3% /APZ

FDT LOCATION: Cell 5 South End FDT TEST NO.: DC02-10 / CL02-254

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02-009 VOLUME[1] (cf)	0.03344	E	WET UNIT WEIGHT = D/A (lbs)	130.08
B	WEIGHT OF SAMPLE & CYLINDER 2594.7 (lbs)	5.72	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	108.9
C	WEIGHT OF CYLINDER 6225 gram (lbs)	1.37	G		
D	WEIGHT OF WET SAMPLE = B–C 1973.16 (lbs)	4.35			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE/CA

O	WT. OF TARE NO. 114 (grams)	8.4	R	WT. OF WATER = P–Q (grams)	77.2
P	WT. OF WET SOIL & TARE (grams)	484.4	S	WT. OF DRY SOIL = Q–O (grams)	398.8
Q	WT. OF DRY SOIL & TARE (grams)	407.2	T	MOISTURE CONTENT = (R/S)X100 (%)	19.4

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 118.9 (pcf) OPTIMUM MOISTURE CONTENT 13.9 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	2.4	U	FDT MOISTURE CONTENT (%)	17.0 / 17.8	
FDT WET UNIT WT. (pcf)	128.4	V	FDT DRY UNIT WT. (pcf)	109.7	
DELTA DRY UNIT WT. = F – V	0.8		FDT #	CL02-254	

COMMENTS:

000013

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FLUOR FERNALD

4943

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV DATE: 01 day July month 2002 year

TEST NO.: DC02.11 @ CL02.275

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95%/APZ MOISTURE CONTENT RANGE: 0 to 3%/APZ

FDT LOCATION: Cell 5 10:1 Slope FDT TEST NO. DC02-11 @ CL02-275

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02-007 VOLUME[1] (cf)	.003344	E	WET UNIT WEIGHT = D/A (lbs)	134.6
B	WEIGHT OF SAMPLE & CYLINDER 2651.6 (lbs)	5.85	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	114.6
C	WEIGHT OF CYLINDER 611.2 (lbs)	1.35	G		
D	WEIGHT OF WET SAMPLE = B-C (lbs) 2041.2 gm	4.50			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE/GA

O	WT. OF TARE NO. #110 (grams)	8.0	R	WT. OF WATER = P-Q (grams)	73.6
P	WT. OF WET SOIL & TARE (grams)	501.9	S	WT. OF DRY SOIL = Q-O (grams)	420.3
Q	WT. OF DRY SOIL & TARE (grams)	428.3	T	MOISTURE CONTENT = (R/S)X100 (%)	17.5

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 118.9 (pcf) OPTIMUM MOISTURE CONTENT 13.9 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T - U	2.1	U	FDT MOISTURE CONTENT (%)	~~15.4~~/16.4
FDT WET UNIT WT. (pcf)	132.4	V	FDT DRY UNIT WT. (pcf)	~~118.7~~ 114.7
DELTA DRY UNIT WT. = F - V	0.1		FDT #	CL02-275

COMMENTS:

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FLUOR FERNALD

4943

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV DATE: 02 day July month 2002 year

TEST NO.: DC 02-12 @ CL 02-295

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / (CLAY) / OTHER:

% COMPACTION: 95% / APZ MOISTURE CONTENT RANGE: 0 to 3% APZ

FDT LOCATION: Cell 5 SE End FDT TEST NO.: DC 02-12 @ CL 02-295

FIELD TEST DATA – ASTM D 2937 QA ID: DJE

A	CYLINDER NO. 02-004 VOLUME[1] 2700.9	(cf)	0.03344	E	WET UNIT WEIGHT = D/A	(lbs) 137.86
B	WEIGHT OF SAMPLE & CYLINDER	(lbs)	5.95	F	DRY UNIT WEIGHT = E/[1+(T/100)]	(pcf) 120.2
C	WEIGHT OF CYLINDER 609.1 gm	(lbs)	1.34	G		
D	WEIGHT OF WET SAMPLE = B–C 2091.1 gm	(lbs)	4.61			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01–in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #107	(grams)	8.3	R	WT. OF WATER = P–Q	(grams) 61.4
P	WT. OF WET SOIL & TARE	(grams)	486.3	S	WT. OF DRY SOIL = Q–O	(grams) 416.6
Q	WT. OF DRY SOIL & TARE	(grams)	424.9	T	MOISTURE CONTENT = (R/S)X100	(%) 14.7

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 122.8 (pcf) OPTIMUM MOISTURE CONTENT 12.2 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	~~2.3~~ 0.8	U	FDT MOISTURE CONTENT	(%)	~~12.4~~ 13.9
FDT WET UNIT WT. (pcf)	137.8	V	FDT DRY UNIT WT.	(pcf)	~~121.0~~ 122.6
DELTA DRY UNIT WT. = F – V	~~0.8~~ 2.4		FDT #		CL 02-295

COMMENTS:

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DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. C-Q1341 TASK NO.: 04.1

DESCRIPTION: Phase IV DATE: 05 day July month 2002 year

TEST NO.: DC-02-13 @ CL 02-332

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRLCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% / APZ MOISTURE CONTENT RANGE: 0 to 3% / APZ

FDT LOCATION: Cell 5 10:1 Slope FDT TEST NO.: DC 02-13 @ CL 02-332

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. P2-006 VOLUME[1] (cf) 2699.8	0.03344	E	WET UNIT WEIGHT = D/A (lbs)	138.2
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.95	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	120.8
C	WEIGHT OF CYLINDER 605.4 gr (lbs)	1.33	G		
D	WEIGHT OF WET SAMPLE = B-C (lbs) 2095.6	4.62			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #93 (grams)	8.3	R	WT. OF WATER = P-Q (grams)	57.6
P	WT. OF WET SOIL & TARE (grams)	466.3	S	WT. OF DRY SOIL = Q-O (grams)	400.4
Q	WT. OF DRY SOIL & TARE (grams)	408.7	T	MOISTURE CONTENT = (R/S)X100 (%)	14.4

1.141

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 122.8 (pcf) OPTIMUM MOISTURE CONTENT 12.2 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	~~2.0~~ ~~0.5~~ 0.5	U	FDT MOISTURE CONTENT (%)	~~12.4~~ 13.9
FDT WET UNIT WT. (pcf)	137.1	V	FDT DRY UNIT WT. (pcf)	~~120.4~~ 122.0
DELTA DRY UNIT WT. = F – V	~~0.4~~ 1.2		FDT #	CL02-332

COMMENTS:

000016

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FLUOR FERNALD 4943

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase II DATE: 08 day July month 2002 year

TEST NO.: DC Ø2-14 @ CL Ø2-355

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% / APZ MOISTURE CONTENT RANGE: 0 to 3% / APZ

FDT LOCATION: Cell 5 10:1 Slope FDT TEST NO.: DC Ø2-14 @ CL Ø2-355

FIELD TEST DATA – ASTM D 2937 QA ID: DCE

A	CYLINDER NO. 02-008 VOLUME[1] (cf) 2637.8	0.03234	E	WET UNIT WEIGHT = D/A (lbs)	138.8
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.82	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	122.2
C	WEIGHT OF CYLINDER 604.2 gr (lbs)	1.33	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs) 2036.7	4.49			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DCE

O	WT. OF TARE NO. #18 (grams)	8.41	R	WT. OF WATER = P–Q (grams)	55.6
P	WT. OF WET SOIL & TARE (grams)	471.9	S	WT. OF DRY SOIL = Q–O (grams)	407.9
Q	WT. OF DRY SOIL & TARE (grams)	416.3	T	MOISTURE CONTENT = (R/S)X100 (%)	13.6

1.136

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 120.7 (pcf) OPTIMUM MOISTURE CONTENT 13.6 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID: DCE

DELTA MOISTURE CONTENT = T – U	~~0.8~~ 0.6	U	FDT MOISTURE CONTENT (%)	~~12.8~~ 14.2
FDT WET UNIT WT. (pcf)	137.5	V	FDT DRY UNIT WT. (pcf)	~~120.4~~ 121.9
DELTA DRY UNIT WT. = F – V	0.3		FDT #	CL Ø2-355

COMMENTS:

000017

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FLUOR FERNALD

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV DATE: 10 day July month 2002 year

TEST NO.: DC02-15 @ CL02-389

2694.1

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / (CLAY) OTHER:

% COMPACTION: 95% / APZ MOISTURE CONTENT RANGE: 0 to 3% / APZ

FDT LOCATION: Cell 5 NW End FDT TEST NO.: DC02-14 @ CL02-389

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02-007 VOLUME[1] (cf)	0.03344	E	WET UNIT WEIGHT = D/A (lbs)	138.2
B	WEIGHT OF SAMPLE & CYLINDER 2709.5 (lbs)	5.97	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	120.5
C	WEIGHT OF CYLINDER 611.2 (lbs)	1.35	G		
D	WEIGHT OF WET SAMPLE = B–C 2095.6 (lbs)	4.62			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #95 (grams)	80	R	WT. OF WATER = P–Q (grams)	70.8
P	WT. OF WET SOIL & TARE (grams)	561.8	S	WT. OF DRY SOIL = Q–O (grams)	483.0
Q	WT. OF DRY SOIL & TARE (grams)	491.0	T	MOISTURE CONTENT = (R/S)X100 (%)	14.7 1.147

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 122.3 (pcf) OPTIMUM MOISTURE CONTENT 12.6 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	~~1.7~~ 0.3	U	FDT MOISTURE CONTENT (%)	~~13.0~~ 14.4	
FDT WET UNIT WT. (pcf)	136.7	V	FDT DRY UNIT WT. (pcf)	~~119.5~~	121.0
DELTA DRY UNIT WT. = F – V	~~18.7~~ 0.5		FDT #		

COMMENTS:

000018

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FLUOR FERNALD

4943

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ1341 TASK NO. 041

DESCRIPTION: Phase IV DATE: 11 day July month 2002 year

TEST NO.: DC 02-16 @ CL 02-401

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / (CLAY) OTHER:

% COMPACTION: 95% and APZ MOISTURE CONTENT RANGE: ±3% and APZ

FDT LOCATION: Cell 5 NW End FDT TEST NO.: DC02-16 @ CL 02-401

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 0.005 VOLUME[1] (cf) 2697.2	0.03338	E	WET UNIT WEIGHT = D/A (lbs)	137.5
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.95	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	118.1
C	WEIGHT OF CYLINDER 616.4 (lbs)	1.36	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs)	4.59			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #14 (grams)	8.3	R	WT. OF WATER = P–Q (grams)	66.9
P	WT. OF WET SOIL & TARE (grams)	482.5	S	WT. OF DRY SOIL = Q–O (grams)	407.3
Q	WT. OF DRY SOIL & TARE (grams)	415.6	T	MOISTURE CONTENT = (R/S)X100 (%)	16.4 1.16

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 122.3 (pcf) OPTIMUM MOISTURE CONTENT 12.6 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	~~4.3~~ 2.0	U	FDT MOISTURE CONTENT (%)	~~12.1~~ 13.6
FDT WET UNIT WT. (pcf)	135.0	V	FDT DRY UNIT WT. (pcf)	~~118.8~~ 120.4
DELTA DRY UNIT WT. = F – V	~~0.7~~ 2.3		FDT #	

COMMENTS:

000019

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FLUOR FERNALD

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: DATE: 11 day JUL month 02 year

TEST NO.: DC-02-17 @ CL02-424

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% and APZ MOISTURE CONTENT RANGE: ±3% and APZ

FDT LOCATION: CL-02-424 FDT TEST NO.: Cell 4 SE End

FIELD TEST DATA – ASTM D 2937 QA ID: CB

A	CYLINDER NO. 02-009 VOLUME[1] (cf) 2639.95	0.03344	E	WET UNIT WEIGHT = D/A (lbs)	133.4
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.82	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	116.9
C	WEIGHT OF CYLINDER 622.50 (lbs)	1.36	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs) 2023.05	4.46			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01–in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 1507 HR QA ID: CB

O	WT. OF TARE NO. 18 (grams)	8.41	R	WT. OF WATER = P–Q (grams)	32.5
P	WT. OF WET SOIL & TARE (grams)	271.0	S	WT. OF DRY SOIL = Q–O (grams)	230.1
Q	WT. OF DRY SOIL & TARE (grams)	238.5	T	MOISTURE CONTENT = (R/S)X100 (%)	14.1

1.141

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 122.3 (pcf) OPTIMUM MOISTURE CONTENT 12.6 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID: CB

DELTA MOISTURE CONTENT = T – U	~~1.2~~ 0.4	U	FDT MOISTURE CONTENT (%)	12.9 ~~14.3~~	CB 14.3
FDT WET UNIT WT. (pcf)	136.2	V	FDT DRY UNIT WT. (pcf)	~~119.2~~	120.6
DELTA DRY UNIT WT. = F – V	~~2.5~~ 3.7		FDT #		

COMMENTS:

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FLUOR FERNALD 4943

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ134 TASK NO.: 04.1

DESCRIPTION: Phase IV DATE: 12 day July month 2002 year

TEST NO.: DC02-18 @ CL02-450

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% And APZ MOISTURE CONTENT RANGE: ± 3% and APZ

FDT LOCATION: Cell 5 10:1 Slope FDT TEST NO.: DC02-18 @ CL02-450

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02-007 VOLUME[1] (cf) 2646.9 gm	0.03344	E	WET UNIT WEIGHT = D/A (lbs)	134.0
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.83	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	118.5
C	WEIGHT OF CYLINDER 611.2 gm (lbs)	1.35	G		
D	WEIGHT OF WET SAMPLE = B–C 2032.1 gm (lbs)	4.48			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01–in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #606 (grams)	8.2	R	WT. OF WATER = P–Q (grams)	55.6
P	WT. OF WET SOIL & TARE (grams)	489.1	S	WT. OF DRY SOIL = Q–O (grams)	425.3
Q	WT. OF DRY SOIL & TARE (grams)	433.5	T	MOISTURE CONTENT = (R/S)X100 (%)	13.1 ~~13.0~~ 1.131

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 122.3 (pcf) OPTIMUM MOISTURE CONTENT 12.6 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID: 6

DELTA MOISTURE CONTENT = T – U	~~1.5~~ -0.1	U	FDT MOISTURE CONTENT (%)	~~11~~ 13.2	
FDT WET UNIT WT. (pcf)	137.0	V	FDT DRY UNIT WT. (pcf)	~~124.0~~	122.8
DELTA DRY UNIT WT. = F – V	~~2.5~~ 4.3		FDT #		

COMMENTS:

000021

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FLUOR FERNALD

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GR1341 TASK NO.: 04.1

DESCRIPTION: Phase IV DATE: 12 day July month 2002 year

TEST NO.: DC 02-19 @ CL 02-475

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRLCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% And APZ MOISTURE CONTENT RANGE: ±3% and APZ

FDT LOCATION: Cell 5 NW End FDT TEST NO.: DC 02-19 @ CL 02-475

2580.7

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02-008 VOLUME[1] (cf)	0.03234	E	WET UNIT WEIGHT = D/A (lbs)	137.0
B	WEIGHT OF SAMPLE & CYLINDER 2612.6 (lbs)	5.76	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	118.7
C	WEIGHT OF CYLINDER 604.2gr (lbs)	1.33	G		
D	WEIGHT OF WET SAMPLE = B–C 2008.4 (lbs)	4.43			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #607 (grams)	8.1	R	WT. OF WATER = P–Q (grams)	70.7
P	WT. OF WET SOIL & TARE (grams)	537.8	S	WT. OF DRY SOIL = Q–O (grams)	459.0
Q	WT. OF DRY SOIL & TARE (grams)	467.1	T	MOISTURE CONTENT = (R/S)X100 (%)	15.4 1.154

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 122.4 (pcf) OPTIMUM MOISTURE CONTENT 12.8 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	~~1.9~~ 1.4	U	FDT MOISTURE CONTENT (%)	~~13.5~~ ~~14.8~~	
FDT WET UNIT WT. (pcf)	136.5	V	FDT DRY UNIT WT. (pcf)	~~118.9~~ 120.3	
DELTA DRY UNIT WT. = F – V	~~0.2~~ 1.6		FDT #		

COMMENTS:

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4943

FLUOR FERNALD

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. 6Q1341 TASK NO. 041

DESCRIPTION: Phase IV DATE: 15 day July month 2002 year

TEST NO.: DC02-20 @ CL02-54 511

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% AND APZ MOISTURE CONTENT RANGE: ±3% AND APZ

FDT LOCATION: Cell 4/5 I.C. Berm FDT TEST NO.: DC02-20 @ CL02-54 511

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02-004 VOLUME[1] (cf)	0.03344	E	WET UNIT WEIGHT = D/A (lbs)	135.5
B	WEIGHT OF SAMPLE & CYLINDER 2663.1 (lbs)	5.87	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	118.4
C	WEIGHT OF CYLINDER 609.1 (lbs)	1.34	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs)	4.53			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01–in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #601 (grams)	8.2	R	WT. OF WATER = P–Q (grams)	62.0
P	WT. OF WET SOIL & TARE (grams)	499.6	S	WT. OF DRY SOIL = Q–O (grams)	429.4
Q	WT. OF DRY SOIL & TARE (grams)	437.6	T	MOISTURE CONTENT = (R/S)X100 (%)	14.4 1.144

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 124.4 (pcf) OPTIMUM MOISTURE CONTENT 11.7 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID: DLE

DELTA MOISTURE CONTENT = T – U	1.9 ~~0.4~~	U	FDT MOISTURE CONTENT (%)	12.5 ~~14.0~~	
FDT WET UNIT WT. (pcf)	137.5	V	FDT DRY UNIT WT. (pcf)	~~120.6~~	122.2
DELTA DRY UNIT WT. = F – V	~~2.2~~ 3.8		FDT #		

COMMENTS:

000023

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FLUOR FERNALD 4943

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ1341 TASK NO. 04.1

DESCRIPTION: Phase IV DATE: 15 day July month 2002 year

TEST NO.: DC02-21 @ CL02-525

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% and APZ MOISTURE CONTENT RANGE: ±3% and APZ

FDT LOCATION: Cell 5 10:1 Slope FDT TEST NO.: CL02-525

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02.006 VOLUME[1] 2714.9	(cf)	.003344	E	WET UNIT WEIGHT = D/A	(lbs) 139.0
B	WEIGHT OF SAMPLE & CYLINDER	(lbs)	5.98	F	DRY UNIT WEIGHT = E/[1+(T/100)]	(pcf) 121.0
C	WEIGHT OF CYLINDER 605.4	(lbs)	1.33	G		
D	WEIGHT OF WET SAMPLE = B–C	(lbs)	4.65			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01–in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #616	(grams)	8.2	R	WT. OF WATER = P–Q	(grams) 56.7
P	WT. OF WET SOIL & TARE	(grams)	446.3	S	WT. OF DRY SOIL = Q–O	(grams) 381.4
Q	WT. OF DRY SOIL & TARE	(grams)	389.6	T	MOISTURE CONTENT = (R/S)X100	(%) 14.9 1.149

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 124.4 (pcf) OPTIMUM MOISTURE CONTENT 11.7 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID: DLE

DELTA MOISTURE CONTENT = T – U	~~2.2~~ 0.8	U	FDT MOISTURE CONTENT	(%)	~~13.9~~ 14.1 @
FDT WET UNIT WT. (pcf)	136.6	V	FDT DRY UNIT WT.	(pcf)	~~119.7~~ 121.2
DELTA DRY UNIT WT. = F – V	~~1.3~~ @ 0.2		FDT #		

COMMENTS:

000024

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FLUOR FERNALD 4013

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. 6Q134 TASK NO.: 04

DESCRIPTION: Phase II DATE: 16 day July month 2002 year

TEST NO.: DC02-22 @ CL02-550

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% + APZ MOISTURE CONTENT RANGE: ±3% and APZ

FDT LOCATION: NW End Cell 6 FDT TEST NO.: DC 02-22 @ CL02-550

FIELD TEST DATA – ASTM D 2937 QA ID: DZ

A	CYLINDER NO. 02-008 VOLUME[1] 2664.3 (cf)	0.03234	E	WET UNIT WEIGHT = D/A (lbs)	140.7
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.88	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	123.7
C	WEIGHT OF CYLINDER 604.2 gm (lbs)	1.33	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs) 2063.9	4.55			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01–in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #603 (grams)	8.1	R	WT. OF WATER = P–Q (grams)	62.2
P	WT. OF WET SOIL & TARE (grams)	523.0	S	WT. OF DRY SOIL = Q–O (grams)	452.7
Q	WT. OF DRY SOIL & TARE (grams)	460.8	T	MOISTURE CONTENT = (R/S)X100 (%)	13.7 1.137

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 124.4 (pcf) OPTIMUM MOISTURE CONTENT 11.7 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID: DLE

DELTA MOISTURE CONTENT = T – U	1.6 / 0.1	U	FDT MOISTURE CONTENT (%)	12.1 / 13.6	
FDT WET UNIT WT. (pcf)	139.3	V	FDT DRY UNIT WT. (pcf)	~~122.6~~	124.3
DELTA DRY UNIT WT. = F – V	0.6		FDT #		

COMMENTS:

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD 4943

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV DATE: 17 day July month 2002 year

TEST NO.: DC02-23 / @ CL02 575

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRLCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% and APZ MOISTURE CONTENT RANGE: ±3% and APZ

FDT LOCATION: Cell 6 NE End FDT TEST NO.: DC02-23 @ CL02-575

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 0.007 VOLUME[1] 2667.0 (cf)	0.03344	E	WET UNIT WEIGHT = D/A (lbs)	~~120.~~ 135.
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.87	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	~~109.9~~ 116.
C	WEIGHT OF CYLINDER 611.2 gram (lbs)	1.35	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs)	~~4.25~~ 4.52			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01–in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #603 (grams)	8.2	R	WT. OF WATER = P–Q (grams)	62.1
P	WT. OF WET SOIL & TARE (grams)	466.2	S	WT. OF DRY SOIL = Q–O (grams)	395.9
Q	WT. OF DRY SOIL & TARE (grams)	404.1	T	MOISTURE CONTENT = (R/S)X100 (%)	15.7 1.15

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 122.7 (pcf) OPTIMUM MOISTURE CONTENT 12.5 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	~~2.2~~ 0.9	U	FDT MOISTURE CONTENT (%)	~~13.5~~ 14.8	
FDT WET UNIT WT. (pcf)	135.8	V	FDT DRY UNIT WT. (pcf)	~~118.3~~ 119.1	
DELTA DRY UNIT WT. = F – V	~~2.8~~ 2.3		FDT #		

COMMENTS:

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FLUOR FERNALD

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. 6Q134/ TASK NO.: 04.1

DESCRIPTION: Phase IV DATE: 17 day July month 2002 year

TEST NO.: DC02-24 CL02-600

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / (CLAY) / OTHER:

% COMPACTION: 95% /APZ MOISTURE CONTENT RANGE: ±3% +APZ

FDT LOCATION: Cell 5 10:1 Slope FDT TEST NO.: CL02-600

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02-009 VOLUME[1] 2714.4	(cf)	0.03344	E	WET UNIT WEIGHT = D/A	(lbs)	137.9
B	WEIGHT OF SAMPLE & CYLINDER	(lbs)	5.98	F	DRY UNIT WEIGHT = E/[1+(T/100)]	(pcf)	120.9
C	WEIGHT OF CYLINDER 622.5	(lbs)	1.37	G			
D	WEIGHT OF WET SAMPLE = B–C	(lbs)	4.61				

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #92	(grams)	8.2	R	WT. OF WATER = P–Q	(grams)	65.2
P	WT. OF WET SOIL & TARE	(grams)	537.2	S	WT. OF DRY SOIL = Q–O	(grams)	463.8
Q	WT. OF DRY SOIL & TARE	(grams)	472.0	T	MOISTURE CONTENT = (R/S)X100	(%)	14.1 1.141

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 122.7 (pcf) OPTIMUM MOISTURE CONTENT 12.5 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U		1.3 ~~-0.1~~	U	FDT MOISTURE CONTENT	(%) 12.8 ~~14.2~~
FDT WET UNIT WT.	(pcf)	137.4	V	FDT DRY UNIT WT.	(pcf) ~~120.3~~ 121.8
DELTA DRY UNIT WT. = F – V		~~0.6~~ 0.9		FDT #	

COMMENTS:

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FLUOR FERNALD 4943

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. 6Q1341 TASK NO.: 04.1

DESCRIPTION: Phase IV DATE: 20 day July month 2002 year

TEST NO.: DC 02-25 @ CL02-625

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRLCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY OTHER:

% COMPACTION: 95% And APZ MOISTURE CONTENT RANGE: ±3% and APZ

FDT LOCATION: Cell 5 Drainage Corridor FDT TEST NO.: DC 02-25 @ CL 02-625

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02-005 VOLUME[1] (cf)	0.03338	E	WET UNIT WEIGHT = D/A (lbs)	~~134.6~~ 136.3
B	WEIGHT OF SAMPLE & CYLINDER 2681.6 (lbs)	5.91	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	~~116.2~~ 117.7
C	WEIGHT OF CYLINDER 616.4 gm (lbs)	1.36	G		
D	WEIGHT OF WET SAMPLE = B–C 2063.9 (lbs)	4.55			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01–in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #679 (grams)	8.1	R	WT. OF WATER = P–Q (grams)	60.3
P	WT. OF WET SOIL & TARE (grams)	449.6	S	WT. OF DRY SOIL = Q–O (grams)	381.2
Q	WT. OF DRY SOIL & TARE (grams)	389.3	T	MOISTURE CONTENT = (R/S)X100 (%)	15.8 1.158

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 121.1 (pcf) OPTIMUM MOISTURE CONTENT 13.3 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	~~2.3~~ 1.0	U	FDT MOISTURE CONTENT (%)	~~13.5~~ 14.8
FDT WET UNIT WT. (pcf)	134.0	V	FDT DRY UNIT WT. (pcf)	~~116.7~~ 118.1
DELTA DRY UNIT WT. = F – V	~~0.5~~ 0.4		FDT #	

COMMENTS:

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4943

FLUOR FERNALD

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase II DATE: 22 day July month 2002 year

TEST NO.: DC02-26 @ CL 02-650

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRLCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% And APZ MOISTURE CONTENT RANGE: ±3% and APZ

FDT LOCATION: Cell 5 NE End FDT TEST NO.: DC02-26 @ CL 20-650

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02-004 VOLUME[1] (cf) 2648.8 gm	0.03344	E	WET UNIT WEIGHT = D/A (lbs)	139.9
B	WEIGHT OF SAMPLE & CYLINDER 9 (lbs)	5.95	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	121.4
C	WEIGHT OF CYLINDER 609.1 gm (lbs)	1.34	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs) 2091.1 gm	4.61			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01–in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #604 (grams)	8.3	R	WT. OF WATER = P–Q (grams)	59.2
P	WT. OF WET SOIL & TARE (grams)	504.0	S	WT. OF DRY SOIL = Q–O (grams)	436.5
Q	WT. OF DRY SOIL & TARE (grams)	444.8	T	MOISTURE CONTENT = (R/S)X100 (%)	13.56 1.135

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 121.1 (pcf) OPTIMUM MOISTURE CONTENT 13.3 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	~~-1.04~~ -2.14	U	FDT MOISTURE CONTENT (%)	~~14.6~~ ~~15.7~~ 18.2
FDT WET UNIT WT. (pcf)	135.5	V	FDT DRY UNIT WT. (pcf)	~~117.1~~
DELTA DRY UNIT WT. = F – V	4.3		FDT #	

COMMENTS:

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD 4943

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. 6013 41 TASK NO. 04.1

DESCRIPTION: Phase II DATE: 23 day July month 2002 year

TEST NO.: DC 02-268 @ CL 02-675

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% / APZ MOISTURE CONTENT RANGE: 0 to 3% / APZ

FDT LOCATION: Cell 5 SW End FDT TEST NO.: CL 02-675

FIELD TEST DATA – ASTM D 2937 QA ID: DCE

A	CYLINDER NO. 02-008 VOLUME[1] 2599.0	(cf)	.003234	E	WET UNIT WEIGHT = D/A	(lbs) 136.1
B	WEIGHT OF SAMPLE & CYLINDER	(lbs)	5.73	F	DRY UNIT WEIGHT = E/[1+(T/100)]	(pcf) 118.0
C	WEIGHT OF CYLINDER 604.2	(lbs)	1.33	G		
D	WEIGHT OF WET SAMPLE = B–C	(lbs)	4.4			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: CL

O	WT. OF TARE NO. #604	(grams)	8.3	R	WT. OF WATER = P–Q	(grams) 52.9
P	WT. OF WET SOIL & TARE	(grams)	406.6	S	WT. OF DRY SOIL = Q–O	(grams) 345.4
Q	WT. OF DRY SOIL & TARE	(grams)	353.7	T	MOISTURE CONTENT = (R/S)X100	(%) 15.3

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 121.3 (pcf) OPTIMUM MOISTURE CONTENT 13.1 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID: CL

DELTA MOISTURE CONTENT = T – U		2.3	U	FDT MOISTURE CONTENT	(%) 13.9/14.4
FDT WET UNIT WT.	(pcf)	135.5	V	FDT DRY UNIT WT.	(pcf) 119.9
DELTA DRY UNIT WT. = F – V		1.9		FDT #	

COMMENTS:

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FLUOR FERNALD

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. G-Q134 TASK NO.: 04.1

DESCRIPTION: Phase II DATE: 25 day July month 2002 year

TEST NO.: DC 02-27 @ CL 02.700

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRLCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95%/APZ MOISTURE CONTENT RANGE: 0 to 3%/APZ

FDT LOCATION: Cell 6 4:1 Slope 5/6 TC Berm FDT TEST NO.: CL 02-700

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02-006 VOLUME[1] 2686.4 gm (cf)	0.03344	E	WET UNIT WEIGHT = D/A (lbs)	137.3
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.92	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	117.9
C	WEIGHT OF CYLINDER 605.4 gm (lbs)	1.33	G		
D	WEIGHT OF WET SAMPLE = B–C 2082.0 gm (lbs)	4.59			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01–in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #602 (grams)	8.2	R	WT. OF WATER = P–Q (grams)	73.8
P	WT. OF WET SOIL & TARE (grams)	529.3	S	WT. OF DRY SOIL = Q–O (grams)	447.3
Q	WT. OF DRY SOIL & TARE (grams)	455.5	T	MOISTURE CONTENT = (R/S)X100 (%)	16.5 1.16

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 121.3 (pcf) OPTIMUM MOISTURE CONTENT 13.1 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	4.1 / 2.6	U	FDT MOISTURE CONTENT (%)	12.4 / 13.9	
FDT WET UNIT WT. (pcf)	135.2	V	FDT DRY UNIT WT. (pcf)	118.9	120.3
DELTA DRY UNIT WT. = F – V	~~0.8~~ 2.4		FDT #		

COMMENTS:

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FLUOR FERNALD

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ1341 TASK NO.: 641

DESCRIPTION: Phase IV DATE: 26 day July month 2002 year

TEST NO.: DC 28A

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / (CLAY) / OTHER:

% COMPACTION: 95% / APZ MOISTURE CONTENT RANGE: 0 to 3% / APZ

FDT LOCATION: Cell 5/6 IC Berm FDT TEST NO.: CL 02-725

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 2.007 VOLUME[1] (cf)	0.03344	E	WET UNIT WEIGHT = D/A (lbs)	134.0
B	WEIGHT OF SAMPLE & CYLINDER 2691.2 (lbs)	5.93	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	116.1
C	WEIGHT OF CYLINDER 611.2 gm (lbs)	1.45	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs)	4.48			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DZE

O	WT. OF TARE NO. #630 (grams)	8.1	R	WT. OF WATER = P–Q (grams)	66.0
P	WT. OF WET SOIL & TARE (grams)	503.6	S	WT. OF DRY SOIL = Q–O (grams)	429.5
Q	WT. OF DRY SOIL & TARE (grams)	437.6	T	MOISTURE CONTENT = (R/S)X100 (%)	~~15.9~~ 1.15 15.4

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 122.7 (pcf) OPTIMUM MOISTURE CONTENT 12.5 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	~~2.9~~ 1.9	U	FDT MOISTURE CONTENT (%)	~~13.0~~ 14.4	
FDT WET UNIT WT. (pcf)	135.2	V	FDT DRY UNIT WT. (pcf)	~~118.2~~	119.6
DELTA DRY UNIT WT. = F – V	~~-2.1~~ 3.5		FDT #		

COMMENTS:

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4943

FLUOR FERNALD

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GG1341 TASK NO.: 04.1

DESCRIPTION: Phase IV DATE: 29 day July month 2002 year

TEST NO.: DC02-2930

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% / APZ MOISTURE CONTENT RANGE: +3% / APZ

FDT LOCATION: Cell 4 West Bench FDT TEST NO.: CL02-750

FIELD TEST DATA – ASTM D 2937 QA ID: KS

A	CYLINDER NO. 02-009 VOLUME[1] (cf)	0.03344	E	WET UNIT WEIGHT = D/A (lbs)	130.7
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.74	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	113.4
C	WEIGHT OF CYLINDER (lbs)	1.37	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs)	4.37			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: KS

O	WT. OF TARE NO. 49 (grams)	8.2	R	WT. OF WATER = P–Q (grams)	40.1
P	WT. OF WET SOIL & TARE (grams)	310.1	S	WT. OF DRY SOIL = Q–O (grams)	261.8
Q	WT. OF DRY SOIL & TARE (grams)	270.0	T	MOISTURE CONTENT = (R/S)X100 (%)	15.3 1.15

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 115.5 (pcf) OPTIMUM MOISTURE CONTENT 15.3 (%)

COMPARISON WITH NUCLEAR GAUGE ASTM D 2922 AND D 3017 QA ID: KS

DELTA MOISTURE CONTENT = T – U	~~0.0~~ 1.0	U	FDT MOISTURE CONTENT (%)	15.3/16.3
FDT WET UNIT WT. (pcf)	132.4	V	FDT DRY UNIT WT. (pcf)	114.8
DELTA DRY UNIT WT. = F – V	+1.4		FDT #	

COMMENTS:

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FLUOR FERNALD

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ1341 TASK NO.: 6.1

DESCRIPTION: Phase II DATE: 01 day Aug month 2002 year

TEST NO.: DC02-3031 @ CL02-775

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95%/APZ MOISTURE CONTENT RANGE: 0 to 3%/APZ

FDT LOCATION: Cell 5 West Bench FDT TEST NO.: CL02-775

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02-004 VOLUME[1] (cf)	0.03344	E	WET UNIT WEIGHT = D/A (lbs)	127.1
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.59 ~~2534.3~~	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	108.1
C	WEIGHT OF CYLINDER 609.1 (lbs)	1.34	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs)	4.25			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #604 (grams)	8.3	R	WT. OF WATER = P–Q (grams)	42.0
P	WT. OF WET SOIL & TARE (grams)	289.0	S	WT. OF DRY SOIL = Q–O (grams)	238.7
Q	WT. OF DRY SOIL & TARE (grams)	247.0	T	MOISTURE CONTENT = (R/S)X100 (%)	17.6

1.17

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 115.5 (pcf) OPTIMUM MOISTURE CONTENT 15.3 (%)

COMPARISON WITH NUCLEAR GAUGE ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	1.6 ~~0.7~~	U	FDT MOISTURE CONTENT (%)	~~16.0~~ 16.9	
FDT WET UNIT WT. (pcf)	132.1	V	FDT DRY UNIT WT. (pcf)	~~113.0~~	113.9
DELTA DRY UNIT WT. = F – V	-5.8		FDT #		

COMMENTS:

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FLUOR FERNALD

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04-1

DESCRIPTION: Phase II DATE: 05 day Aug month 2001 year

TEST NO.: LP 02-800 ~~DC 02-32~~ DC02-3132

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95%/APZ MOISTURE CONTENT RANGE: 0 to 3%/APZ

FDT LOCATION: Cell 4 Penetration Box FDT TEST NO.: LP-02-800

FIELD TEST DATA – ASTM D 2937 QA ID: DCE

A	CYLINDER NO. 02-005 VOLUME[1] (cf) 26.53.8	0.03338	E	WET UNIT WEIGHT = D/A (lbs)	134.5
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.85	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	117.5
C	WEIGHT OF CYLINDER 616.4 gm (lbs)	1.36	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs)	4.49			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DCE

O	WT. OF TARE NO. #647 (grams)	8.1	R	WT. OF WATER = P–Q (grams)	66.3
P	WT. OF WET SOIL & TARE (grams)	530.4	S	WT. OF DRY SOIL = Q–O (grams)	456.0
Q	WT. OF DRY SOIL & TARE (grams)	464.1	T	MOISTURE CONTENT = (R/S)X100 (%)	14.5 1.14

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 115.5 (pcf) OPTIMUM MOISTURE CONTENT 15.3 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	~~-1.6~~ -2.5	U	FDT MOISTURE CONTENT (%)	~~16.1~~ 17.0	
FDT WET UNIT WT. (pcf)	132.7	V	FDT DRY UNIT WT. (pcf)	~~115.9~~ 114.3	
DELTA DRY UNIT WT. = F – V	3.2		FDT #		

COMMENTS:

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FLUOR FERNALD

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV DATE: 10 day Aug month 2000 year

TEST NO.: DC 02-3 (CB) 3233 @ CL02-825

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / (CLAY) OTHER:

% COMPACTION: 95%/APZ MOISTURE CONTENT RANGE: 0-3%/APZ

FDT LOCATION: Cell 5 West Bench FDT TEST NO.: CL02-825

FIELD TEST DATA – ASTM D 2937 QA ID: DFZ

A	CYLINDER NO. 02-005 VOLUME[1] (cf) 2689.4	.003338	E	WET UNIT WEIGHT = D/A (lbs)	1366
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.92	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	119.9
C	WEIGHT OF CYLINDER 616.4gm (lbs)	1.36	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs)	4.56			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01–in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID:

O	WT. OF TARE NO. #602 (grams)	8.3	R	WT. OF WATER = P–Q (grams)	55.4
P	WT. OF WET SOIL & TARE (grams)	463.4	S	WT. OF DRY SOIL = Q–O (grams)	399.7
Q	WT. OF DRY SOIL & TARE (grams)	408.0	T	MOISTURE CONTENT = (R/S)X100 (%)	13.9 2139

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 121.6 (pcf) OPTIMUM MOISTURE CONTENT 12.4 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	0.4	U	FDT MOISTURE CONTENT (%)	13.7/15.0
FDT WET UNIT WT. (pcf)	134.9	V	FDT DRY UNIT WT. (pcf)	118.6
DELTA DRY UNIT WT. = F – V	1.3		FDT #	

COMMENTS:

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4943

FLUOR FERNALD

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. 6Q134 TASK NO.: 04.1

DESCRIPTION: Phase IV Q4 DATE: 20 day Aug month 2002 year

TEST NO.: DC Ø2-34 / CL Ø2-850

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95% / APZ MOISTURE CONTENT RANGE: 0-3% / APZ

FDT LOCATION: Cell #5 Penetration Boxes FDT TEST NO.: CL Ø2-850

FIELD TEST DATA – ASTM D 2937 QA ID: DLE

A	CYLINDER NO. 02-008 VOLUME[1] 2643.9 (cf)	0.03234	E	WET UNIT WEIGHT = D/A (lbs)	139.1
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.83	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	121.2
C	WEIGHT OF CYLINDER 604.2 gm (lbs)	1.33	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs)	4.50			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01–in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DLE

O	WT. OF TARE NO. #90 (grams)	8.2	R	WT. OF WATER = P–Q (grams)	77.3
P	WT. OF WET SOIL & TARE (grams)	608.0	S	WT. OF DRY SOIL = Q–O (grams)	522.5
Q	WT. OF DRY SOIL & TARE (grams)	530.7	T	MOISTURE CONTENT = (R/S)X100 (%)	14.8 1.14

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 121.6 (pcf) OPTIMUM MOISTURE CONTENT 12.4 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID: DLE

DELTA MOISTURE CONTENT = T – U	2.5 / 1.0	U	FDT MOISTURE CONTENT (%)	12.3 / 13.0
FDT WET UNIT WT. (pcf)	137.0	V	FDT DRY UNIT WT. (pcf)	122.1
DELTA DRY UNIT WT. = F – V	1.5		FDT #	

COMMENTS:

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4943

FLUOR FERNALD

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: 6Q1341 TASK NO.: 04.1

DESCRIPTION: Phase III-Cells 4+5 Construction DATE: 18 day Oct month 2002 year

TEST NO.: DC02-35

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / (CLAY) / OTHER:

% COMPACTION: 95% w/ APZ MOISTURE CONTENT RANGE: +0-3% + APZ

FDT LOCATION: Cell 4 East Wedge FDT TEST NO.: 893

FIELD TEST DATA – ASTM D 2937 QA ID: KS

A	CYLINDER NO. 01-3 VOLUME[1] (cf)	0.03346	E	WET UNIT WEIGHT = D/A (lbs)	134.8
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.87	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	117.4
C	WEIGHT OF CYLINDER (lbs)	1.36	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs)	4.51			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: KS

O	WT. OF TARE NO. 309 (grams)	8.1	R	WT. OF WATER = P–Q (grams)	43.4
P	WT. OF WET SOIL & TARE (grams)	345.7	S	WT. OF DRY SOIL = Q–O (grams)	294.2
Q	WT. OF DRY SOIL & TARE (grams)	302.3	T	MOISTURE CONTENT = (R/S)X100 (%)	14.8

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. _____ (pcf) OPTIMUM MOISTURE CONTENT _____ (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID: KS

DELTA MOISTURE CONTENT = T – U	0.7	U	FDT MOISTURE CONTENT (%)	14.1	KS
FDT WET UNIT WT. (pcf)	~~134.2~~ 141.2	V	FDT DRY UNIT WT. (pcf)	~~141.2~~ 123.5	117.6
DELTA DRY UNIT WT. = F – V	6.3		FDT #		

COMMENTS: Stockpile 02-2

000038

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FLUOR FERNALD

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: G01341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 DATE: 5 day Nov month 2002 year

TEST NO.: DC02-36

SPECIFICATION REQUIREMENTS:

MATERIAL TYPE: (CIRLCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY OTHER:

% COMPACTION: 95%/APZ MOISTURE CONTENT RANGE: 0+3%/APZ

FDT LOCATION: West Wedge, L-5 FDT TEST NO.: CL02-915 912

FIELD TEST DATA – ASTM D 2937 QA ID: CAW

A	CYLINDER NO. 01-5 VOLUME[1] (cf)	0.03357	E	WET UNIT WEIGHT = D/A (lbs)	136.4
B	WEIGHT OF SAMPLE & CYLINDER (lbs)	5.93	F	DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	119.1
C	WEIGHT OF CYLINDER (lbs)	1.35	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs)	4.58			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: KS/CAW

O	WT. OF TARE NO. _____ (grams)	8.0	R	WT. OF WATER = P–Q (grams)	65.1
P	WT. OF WET SOIL & TARE (grams)	523.0	S	WT. OF DRY SOIL = Q–O (grams)	449.9
Q	WT. OF DRY SOIL & TARE (grams)	457.9	T	MOISTURE CONTENT = (R/S)X100 (%)	14.5

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 119.9 (pcf) OPTIMUM MOISTURE CONTENT 13.4 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID: KS/CAW

DELTA MOISTURE CONTENT = T – U		~~1.02.9~~	U	FDT MOISTURE CONTENT (%)	12.9/13.5
FDT WET UNIT WT. (pcf)		138.1	V	FDT DRY UNIT WT. (pcf)	121.7
DELTA DRY UNIT WT. = F – V		~~121.7~~ -2.6		FDT # CL02	915

COMMENTS:

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FLUOR FERNALD 4943

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ1341 TASK NO.: 041

DESCRIPTION: Phase IV DATE: 13 day Nov month 2002 year

TEST NO.: DCØ2-37

SPECIFICATION REQUIREMENTS: 12 Nov. Date Sample Taken

MATERIAL TYPE: (CIRCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER:

% COMPACTION: 95 MOISTURE CONTENT RANGE: 0 to +3%

FDT LOCATION: West Wedge L-5 FDT TEST NO.: CLØ2-929

FIELD TEST DATA – ASTM D 2937 12/Nov/2002 Date Sample Taken QA ID: DLE

A	CYLINDER NO. 02-6 VOLUME[1] 2690.7	(cf)	0.03351	E	WET UNIT WEIGHT = D/A	(lbs) 137.Ø
B	WEIGHT OF SAMPLE & CYLINDER	(lbs)	5.93	F	DRY UNIT WEIGHT = E/[1+(T/100)]	(pcf) 118.9
C	WEIGHT OF CYLINDER 608.2 gm	(lbs)	1.34	G		
D	WEIGHT OF WET SAMPLE = B–C	(lbs)	4.59			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01–in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DZE

O	WT. OF TARE NO. #662	(grams)	8.3	R	WT. OF WATER = P–Q	(grams) 61.7
P	WT. OF WET SOIL & TARE	(grams)	474.8	S	WT. OF DRY SOIL = Q–O	(grams) 404.8
Q	WT. OF DRY SOIL & TARE	(grams)	413.1	T	MOISTURE CONTENT = (R/S)X100	(%) 15.2

1.152

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. 119.9 (pcf) OPTIMUM MOISTURE CONTENT 13.4 (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID:

DELTA MOISTURE CONTENT = T – U	2.7 / 0.9	U	FDT MOISTURE CONTENT	(%)	12.9 / 14.3
FDT WET UNIT WT.	(pcf) 138.3	V	FDT DRY UNIT WT.	(pcf) 121.Ø	
DELTA DRY UNIT WT. = F – V	-2.1		FDT #	CLØ2 929	

COMMENTS:

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FLUOR FERNALD

DETERMINATION OF DENSITY (DRIVE CYLINDER) (ASTM D 2937)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ1341 TASK NO.: 041

DESCRIPTION: Phase IV DATE: 13 day Nov month 2002 year

TEST NO.: DT02-38

SPECIFICATION REQUIREMENTS: Nov. 13, 2002

MATERIAL TYPE: (CIRLCLE ONE) FILL / SUBGRADE / SUBBASE / CLAY / OTHER: West Clay Wedge

% COMPACTION: 95 MOISTURE CONTENT RANGE: 0 to +3%

FDT LOCATION: West Wedge L-5 FDT TEST NO.: CL02-932

FIELD TEST DATA – ASTM D 2937 QA ID: DJE

A	CYLINDER NO. 02-4 VOLUME[1] (cf)	0.03355	E	WET UNIT WEIGHT = D/A (lbs)	135.9
B	WEIGHT OF SAMPLE & CYLINDER 2674.8 gm (lbs)	~~2674.8~~ 5.90		DRY UNIT WEIGHT = E/[1+(T/100)] (pcf)	118.6
C	WEIGHT OF CYLINDER 608.6 gm (lbs)	1.34	G		
D	WEIGHT OF WET SAMPLE = B–C (lbs)	4.56			

NOTE: DRIVE CYLINDER VOLUME IS OBTAINED BY MEASURING THE HEIGHT AND DIAMETER, OF FOUR EQUALLY SPACED POINTS, TO AN ACCURACY OF 0.01-in., AND CALCULATING VOLUME USING AVERAGE HEIGHT AND DIAMETER.

FIELD MOISTURE CONTENT – ASTM D 2216 QA ID: DJE

O	WT. OF TARE NO. #40 (grams)	8.1	R	WT. OF WATER = P–Q (grams)	59.3
P	WT. OF WET SOIL & TARE (grams)	473.3	S	WT. OF DRY SOIL = Q–O (grams)	405.9
Q	WT. OF DRY SOIL & TARE (grams)	414.0	T	MOISTURE CONTENT = (R/S)X100 (%)	14.6

1.14

PROCTOR TEST DATA: [L] MAXIMUM DRY UNIT WT. _____ (pcf) OPTIMUM MOISTURE CONTENT _____ (%)

COMPARISON WITH NUCLEAR GAUGE – ASTM D 2922 AND D 3017 QA ID: _____

DELTA MOISTURE CONTENT = T – U	1.6 / 0.2	U	FDT MOISTURE CONTENT (%)	13.4 / 14.4
FDT WET UNIT WT. (pcf)	137.4	V	FDT DRY UNIT WT. (pcf)	120.1
DELTA DRY UNIT WT. = F – V	-1.5		FDT #	

COMMENTS:

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APPENDIX H

Geosynthetic Conformance Test Results

Geosynthetic Clay Liner

Hydraulic Conductivity Test Results

JANUARY 2002

023-3313

SUMMARY OF GEOSYNTHETIC CLAY LINER CONFORMANCE TEST RESULTS
GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE DESIGNATION	Reference Value	GCL-02-01	GCL-02-02	GCL-02-03	GCL-02-04	GCL-02-05	GCL-02-06	GCL-02-07	GCL-02-08	GCL-02-09	GCL-02-10
HYDRAULIC CONDUCTIVITY (cm/sec) ASTM D5887	<=5.0E-09	3.9E-09	3.8E-09	3.8E-09	3.2E-09	3.5E-09	3.5E-09	4.8E-09	4.1E-09	3.3E-09	3.4E-09

JANUARY 2002

023-3313

SUMMARY OF GEOSYNTHETIC CLAY LINER CONFORMANCE TEST RESULTS
GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE DESIGNATION	Reference Value	GCL-02-11	GCL-02-12	GCL-02-13	GCL-02-14	GCL-02-15	GCL-02-16	GCL-02-17	-	-	-
HYDRAULIC CONDUCTIVITY (cm/sec) ASTM D5887	<=5.0E-09	3.9E-09	3.5E-09	3.2E-09	3.9E-09	3.2E-09	4.5E-09	3.7E-09	-	-	-

JANUARY 2002 023-3313

GEOSYNTHETIC CLAY LINER

Project Name: GEOSYNTEC/FLUOR FERNALD/GA

ROLL DESIGNATION: GCL 02-01

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	3.9E-09
AVG	3.9E-09

ROLL DESIGNATION: GCL 02-02

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	3.8E-09
AVG	3.8E-09

JANUARY 2002 023-3313

GEOSYNTHETIC CLAY LINER

Project Name: GEOSYNTEC/FLUOR FERNALD/GA

ROLL DESIGNATION: GCL 02-03

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	3.8E-09
AVG	3.8E-09

ROLL DESIGNATION: GCL 02-04

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	3.2E-09
AVG	3.2E-09

MARCH 2002 023-3313

GEOSYNTHETIC CLAY LINER

Project Name: GEOSYNTEC/FLUOR FERNALD/GA

ROLL DESIGNATION: GCL 02-05

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	3.5E-09
AVG	3.5E-09

ROLL DESIGNATION: GCL 02-06

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	3.5E-09
AVG	3.5E-09

MARCH 2002 023-3313

GEOSYNTHETIC CLAY LINER

Project Name: GEOSYNTEC/FLUOR FERNALD/GA

ROLL DESIGNATION: GCL 02-07

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	4.8E-09
AVG	4.8E-09

ROLL DESIGNATION: GCL 02-08

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	4.1E-09
AVG	4.1E-09

FEBRUARY 2002 023-3313

GEOSYNTHETIC CLAY LINER

Project Name: GEOSYNTEC/FLUOR FERNALD/GA

ROLL DESIGNATION: GCL 02-09

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	3.3E-09
AVG	3.3E-09

ROLL DESIGNATION: GCL 02-10

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	3.4E-09
AVG	3.4E-09

FEBRUARY 2002 023-3313

GEOSYNTHETIC CLAY LINER

Project Name: GEOSYNTEC/FLUOR FERNALD/GA

ROLL DESIGNATION: GCL 02-11

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	3.9E-09
AVG	3.9E-09

ROLL DESIGNATION: GCL 02-12

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	3.5E-09
AVG	3.5E-09

FEBRUARY 2002 023-3313

GEOSYNTHETIC CLAY LINER

Project Name: GEOSYNTEC/FLUOR FERNALD/GA

ROLL DESIGNATION: GCL 02-13

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	3.2E-09
AVG	3.2E-09

ROLL DESIGNATION: GCL 02-14

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	3.9E-09
AVG	3.9E-09

MARCH 2002 023-3313

GEOSYNTHETIC CLAY LINER

Project Name: GEOSYNTEC/FLUOR FERNALD/GA

ROLL DESIGNATION: GCL 02-15

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	3.2E-09
AVG	3.2E-09

ROLL DESIGNATION: GCL 02-16

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	4.5E-09
AVG	4.5E-09

MARCH 2002 023-3313

GEOSYNTHETIC CLAY LINER

Project Name: GEOSYNTEC/FLUOR FERNALD/GA

ROLL DESIGNATION: GCL-02-17

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	3.7E-09
AVG	3.7E-09

ROLL DESIGNATION: -

	HYDRAULIC CONDUCTIVITY (cm/sec)
1.	-
AVG	-

Direct Shear Test Results

Fernald OSDF Project
Direct Shear Testing Results Summary
2002 Construction Season

Conformance Testing							MQC Testing					
GCL Sample No.	GCL Roll No.	GML Roll No.	Interface*	Test Series	Results	Remarks	GCL Roll No.	GML Roll No.	Interface*	Test Series	Results	Remarks
	138		I	1	Pass		117		I	17	Pass	
GCL-02-01	138	884	G	36	Pass		117	203	G	17A	Pass	
	138	906	G	38	Pass	Added test						
	188		I	2	Pass		162		I	16	Pass	
GCL-02-02	188	875	G	35	Pass		162	266	G	16A	Pass	GML Rejected
							188	834	G	3	Pass	Retest
	241		I	3	Pass		210		I	15	Pass	
GCL-02-03	241	863	G	34	Pass		210	239	G	15A	Pass	Need Correction
	283		I	28	Pass		252		I	14	Pass	
GCL-02-04	283	856	G	33	Pass		252	337	G	14A	Pass	GML Rejected
							283	899	G	9	Pass	Retest
	332		I	27	Pass		302		I	13	Pass	
GCL-02-05	332	850	G	32	Pass		302	348	G	13A	Pass	GML Rejected
							241	910	G	10	Pass	Retest
	376		I	26	Pass		347		I	12	Pass	
GCL-02-06	376	838	G	31	Pass		347	370	G	12A	Pass	GML Rejected
	376	895	G	37	Pass	Added test	332	888	G	8	Pass	Retest
	425		I	24	Pass		397		I	11	Pass	
GCL-02-07	425	371	G	25	Pass		397	359	G	11A	Pass	GML Rejected
							425	866	G	6	Pass	Retest
	475		I	22	Pass		442		I	10	Pass	
GCL-02-08	475	294	G	23	Pass		442	310	G	10A	Pass	GML Rejected
							475	857	G	5	Pass	Retest
	516		I	20	Pass		492		I	9	Pass	
GCL-02-09	516	283	G	21	Pass		492	321	G	9A	Pass	GML Rejected
							516	877	G	7	Pass	Retest
	567		I	18	Pass		543		I	8	Pass	
GCL-02-10	567	272	G	19	Pass		543	299	G	8A	Pass	
	610		I	16	Pass		588		I	7	Pass	
GCL-02-11	610	259	G	17	Pass	GML Rejected	588	288	G	7A	Pass	
	610	826	G	30	Pass	Retest						
	662		I	14	Pass		638		I	6	Pass	
GCL-02-12	662	246	G	15	Pass		638	255	G	6A	Pass	GML Rejected
							662	845	G	4	Pass	Retest
	706		I	12	Pass		683		I	5	Pass	
GCL-02-13	706	235	G	13	Pass		683	277	G	5A	Pass	
	752		I	10	Pass		728		I	4	Pass	
GCL-02-14	752	222	G	11	Pass		728	228	G	4A	Pass	
	796		I	8	Pass		773		I	3	Pass	
GCL-02-15	796	207	G	9	Pass		773	219	G	3A	Pass	
	839		I	6	Pass		819		I	2	Pass	
GCL-02-16	839	197	G	7	Pass		819	192	G	2A	Pass	GML Rejected
							839	822	G	2	Pass	Retest
	888		I	4	Pass		863		I	1	Pass	
GCL-02-17	888	187	G	5	Pass	GML Rejected	863	181	G	1A	Pass	GML Rejected
	888	814	G	29	Pass	retest	888	811	G	1	Pass	Retest

* I = Internal G = Geomembrane Interface

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GEOSYNTEC CONSULTANTS, INC.

FERNALD OSDF CONSTRUCTION 2002

TESTING PROCEDURES

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TEST PROCEDURES AND CONDITIONS
TEST SERIES NUMBER: 02-INTERNAL (I)

Test Specimen Configuration (from top to bottom) and Placement Conditions:

- upper shear box: rigid substrate with textured steel gripping surface;
- Bentomat ST GCL (Sample Nos. GCL-02-01 through GCL-02-17). GCL's initial moisture content and final moisture contents are reported on each final test result presentation; and
- lower shear box: rigid substrate with textured steel gripping surface.

Designated Shear Plane: Within GCL

Test Procedures for Each Normal Stress Condition:

- A fresh GCL specimen was trimmed from the bulk sample of the GCL and placed between two rigid wooden substrates with textured steel gripping surfaces. The ends of each geotextile were then sandwiched between a second rigid wooden substrate prior to testing. The entire test specimen was then placed in the shear box to provide confinement for the exposed bentonite component. The textured steel gripping surfaces were employed to minimize slippage between each geotextile component of the GCL and rigid wood substrate, therefore providing a relatively uniform transfer of shear load onto the GCL specimen.
- Soaking conditions: The GCL specimen was soaked in tap water for 7 days (168 hours) under a normal stress of 3 psi.
- Consolidation conditions: After the 7-day (168-hours) soaking period, the tap water was drained, and the GCL specimen was consolidated for 2 days (48 hours) under each test normal stress.
- Test normal stresses: 5, 20, and 45 psi.
- Constant shear displacement rate: 0.004 in/min.
- The direction of shear for each internal direct shear test was in the direction of manufacture (machine direction) of the GCL sample.
- Each test was sheared until a minimum total shear displacement of 2 in. was achieved.

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TEST PROCEDURES AND CONDITIONS
TEST SERIES NUMBER: 02-INTERFACE (G), (GR), or (GA)

Test Specimen Configuration (from top to bottom) and Placement Conditions:

- upper shear box: rigid substrate with textured steel gripping surface;
- Bentomat ST GCL (Sample No. GCL-02-01 through GCL-02-17) with woven geotextile against geomembrane (see below). GCL's initial moisture content and final moisture contents are reported on each final test result presentation;
- 80-mil GSE HDT geomembrane (Sample Nos. GML-02-01 through GML-02-27); and
- lower shear box: supporting substrate.

Test Interface: GCL against geomembrane

Test Procedures for Each Normal Stress Condition:

- A fresh specimen of geomembrane was trimmed from the bulk sample and attached to the lower shear box with mechanical compression clamps.
- A fresh specimen of GCL was trimmed from the bulk sample and attached to the upper shear box with mechanical compression clamps. The GCL was oriented so that the woven geotextile component of the GCL was in contact with the geomembrane.
- A rigid substrate with a textured steel gripping surface was placed on top of the GCL. The textured steel gripping surface was used to minimize slippage between the upper geotextile component of the GCL and rigid wooden substrate, therefore providing a relatively uniform transfer of shear load onto the test interface.
- Soaking conditions: The entire test specimen was soaked in tap water for 7 days (168 hours) under a normal stress of 3 psi.
- Consolidation conditions: After the 7-day (168-hour) soaking period, the tap water was drained, and the entire test specimen was consolidated for 2 day (48 hours) under each test normal stress.
- Test normal stresses: 5, 20, and 45 psi.
- Constant shear displacement rate: 0.004 in/min.
- The direction of shear for each interface direct shear test was in the direction of manufacture (machine direction) of the geosynthetic samples.
- Each test was sheared until a minimum total shear displacement of 2 in. was achieved.

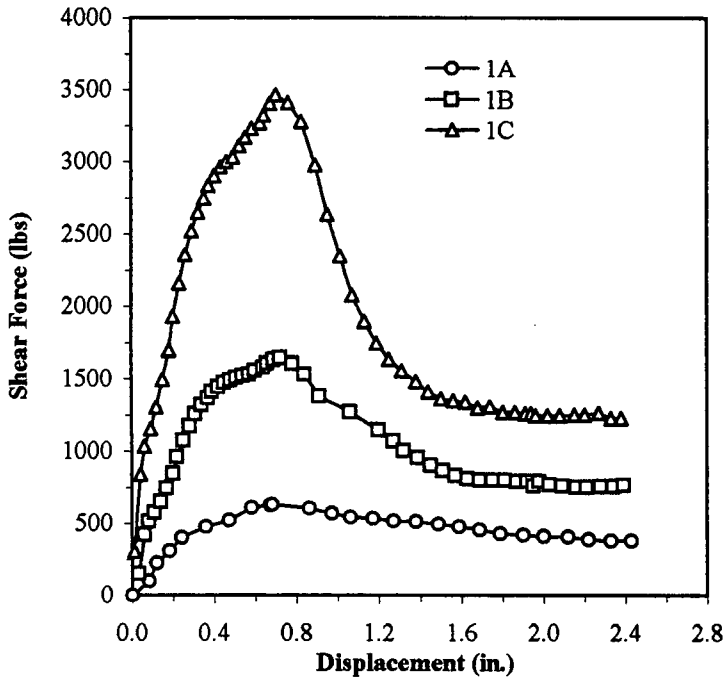
GEOSYNTEC CONSULTANTS, INC.

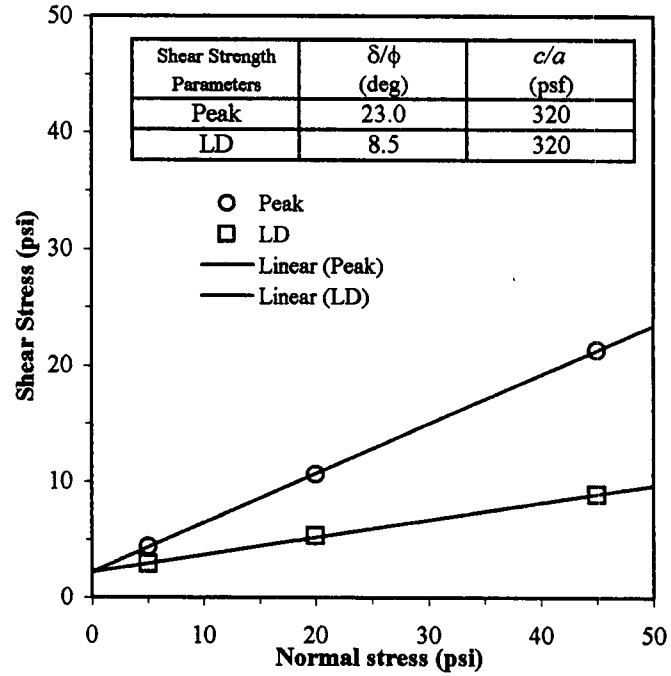
FERNALD OSDF CONSTRUCTION 2002

GCL INTERNAL AND INTERFACE DIRECT SHEAR TEST RESULTS

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002
INTERNAL DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-01I: internal strength of Bentomat ST GCL (Sample No. GCL-02-01 (Lot No. 200202LO/Roll No. 138)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	23.0	320
LD	8.5	320

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking Stress (psi)	Soaking Time (hour)	Consolidation Stress (psi)	Consolidation Time (hour)	GCL ω_i (%)	GCL ω_f (%)	Shear Stress Measured τ_p (psi)	Shear Stress Measured τ_{LD} (psi)	Shear Stress Specified τ_p (psi)	Shear Stress Specified τ_{LD} (psi)	Failure Mode
1A	12 x 12	5.0	0.004	3	168	5	48	24.6	92.2	4.40	2.90	1.53 (17 deg)	1.06 (12 deg)	(1)
1B	12 x 12	20.0	0.004	3	168	20	48	24.6	74.3	10.64	5.32	6.11 (17 deg)	2.46 (7 deg)	(1)
1C	12 x 12	45.0	0.004	3	168	45	48	24.6	61.7	21.40	8.91	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Partial separation of the GCL was observed at the normal stress of 5 psi and complete separation was oberved at the normal stresses of 20 and 45 psi.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

SGI TESTING SERVICES, LLC

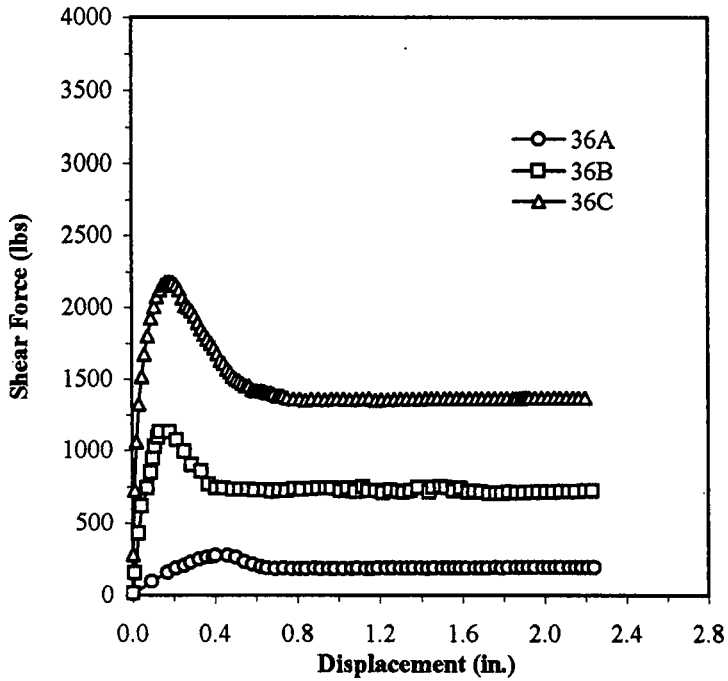
DATE OF TEST:	9 to 18 January 2002
FIGURE NO.	A-1
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02011
FILE NO.	

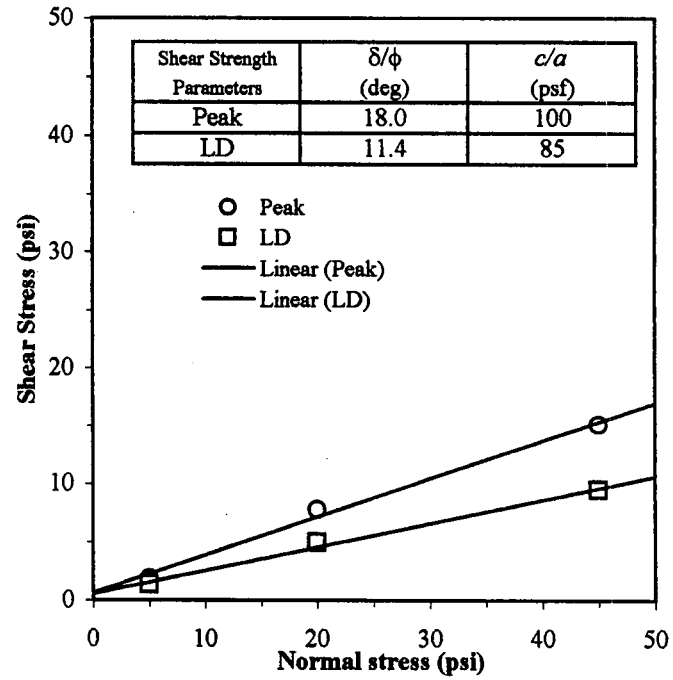
290000

4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002
INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-01G: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-01 (Lot No. 200202LO/Roll No. 138)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-25 (Lot No. 8220082/Roll No. 103114884)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	18.0	100
LD	11.4	85

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking Stress (psi)	Soaking Time (hour)	Consolidation Stress (psi)	Consolidation Time (hour)	GCL ω_i (%)	GCL ω_f (%)	Shear Stress Measured τ_p (psi)	Shear Stress Measured τ_{LD} (psi)	Shear Stress Specified τ_p (psi)	Shear Stress Specified τ_{LD} (psi)	Failure Mode
36A	12 x 12	5.0	0.004	3	168	5	48	24.6	97.7	1.94	1.35	1.53 (17 deg)	1.06 (12 deg)	(1)
36B	12 x 12	20.0	0.004	3	168	20	48	24.6	69.6	7.83	5.01	6.11 (17 deg)	2.46 (7 deg)	(1)
36C	12 x 12	45.0	0.004	3	168	45	48	24.6	53.5	15.12	9.50	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

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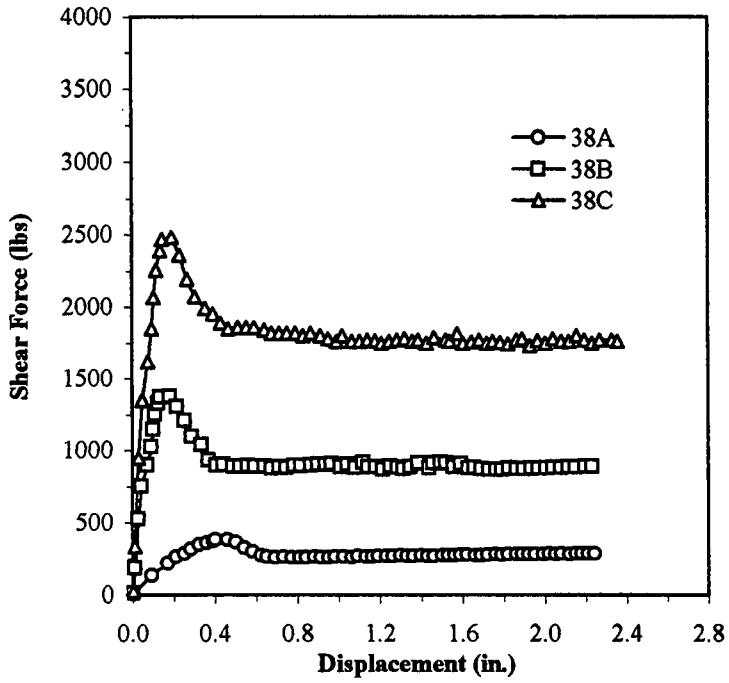
SGI TESTING SERVICES, LLC

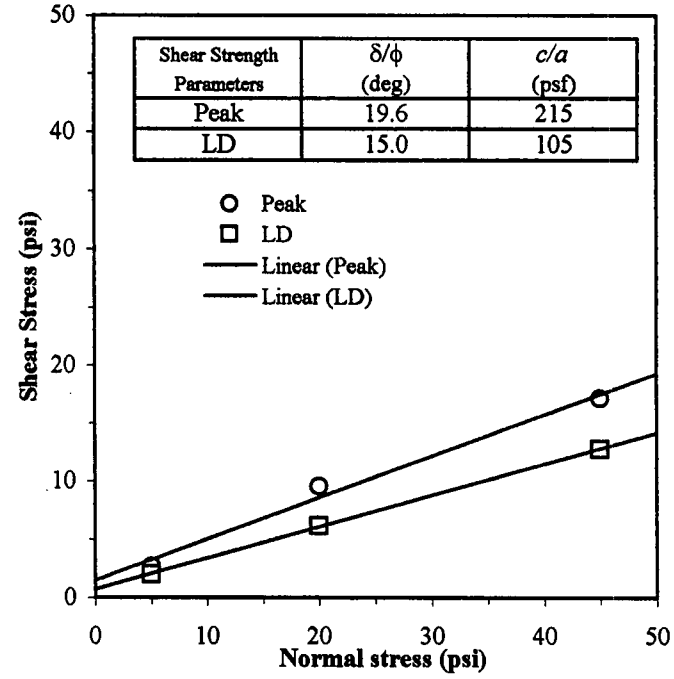
DATE OF TEST:	8 to 17 April 2002
FIGURE NO.	A-2
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02011
FILE NO.	

4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002
INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-01GA: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-01 (Lot No. 200202LO/Roll No. 138)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-27 (Lot No. 8220074/Roll No. 103114906)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	19.6	215
LD	15.0	105

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking Stress (psi)	Soaking Time (hour)	Consolidation Stress (psi)	Consolidation Time (hour)	GCL ω_i (%)	GCL ω_f (%)	Shear Stress Measured τ_p (psi)	Shear Stress Measured τ_{LD} (psi)	Shear Stress Specified τ_p (psi)	Shear Stress Specified τ_{LD} (psi)	Failure Mode
38A	12 x 12	5.0	0.004	3	168	5	48	24.6	97.7	2.68	2.00	1.53 (17 deg)	1.06 (12 deg)	(1)
38B	12 x 12	20.0	0.004	3	168	20	48	24.6	69.6	9.53	6.17	6.11 (17 deg)	2.46 (7 deg)	(1)
38C	12 x 12	45.0	0.004	3	168	45	48	24.6	53.5	17.16	12.76	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

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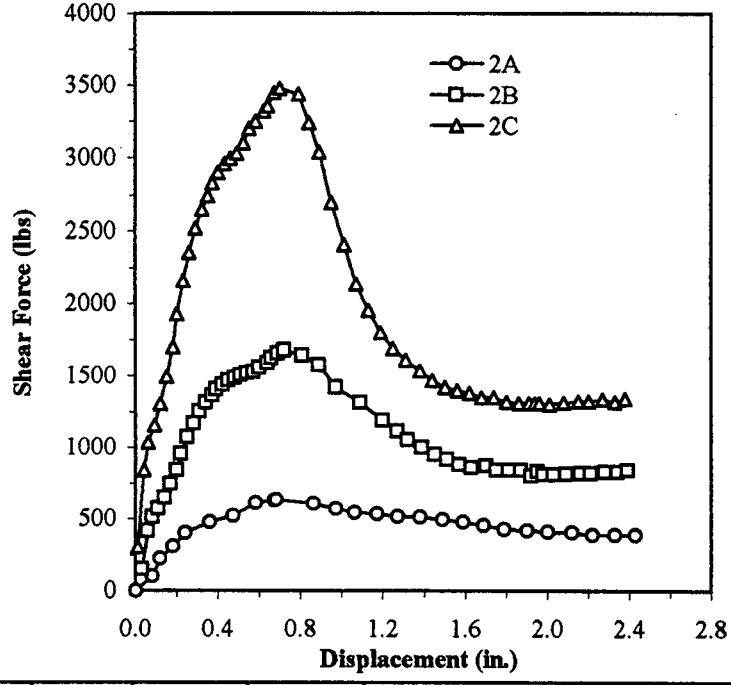
SGI TESTING SERVICES, LLC

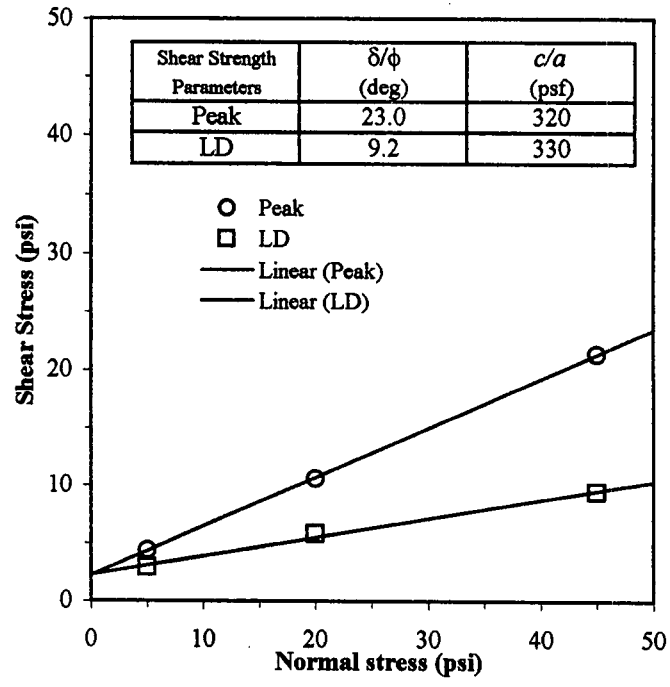
DATE OF TEST:	13 to 22 April 2002
FIGURE NO.	A-3
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02011
FILE NO.	

4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002
INTERNAL DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-02I: internal strength of Bentomat ST GCL (Sample No. GCL-02-02 (Lot No. 200202LO/Roll No. 188)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	23.0	320
LD	9.2	330

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
2A	12 x 12	5.0	0.004	3	168	5	48	22.9	87.9	4.40	2.90	1.53 (17 deg)	1.06 (12 deg)	(1)
2B	12 x 12	20.0	0.004	3	168	20	48	22.9	75.0	10.60	5.83	6.11 (17 deg)	2.46 (7 deg)	(1)
2C	12 x 12	45.0	0.004	3	168	45	48	22.9	53.8	21.38	9.44	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Partial separation of the GCL was observed at the normal stress of 5 psi and complete separation was oberved at the normal stresses of 20 and 45 psi.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

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SGI TESTING SERVICES, LLC

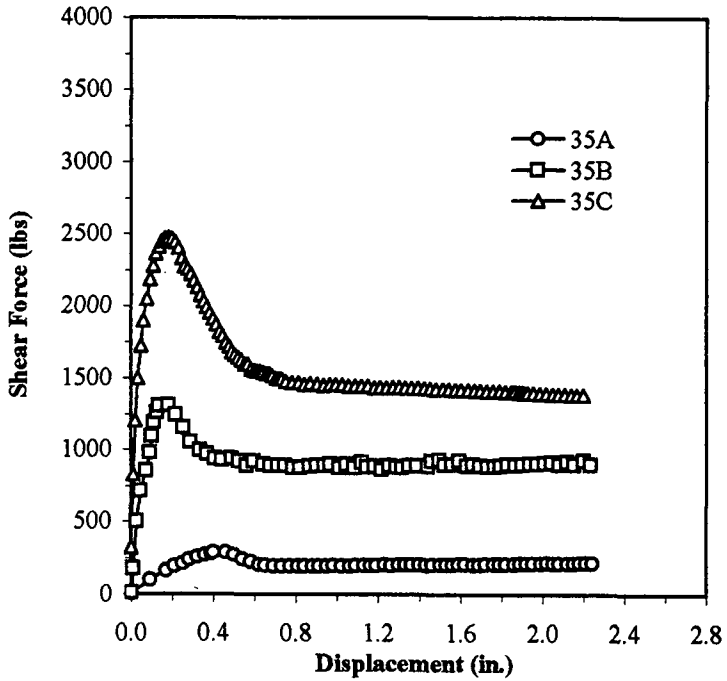
DATE OF TEST:	12 to 21 January 2002
FIGURE NO.	A-1
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02012
FILE NO.	

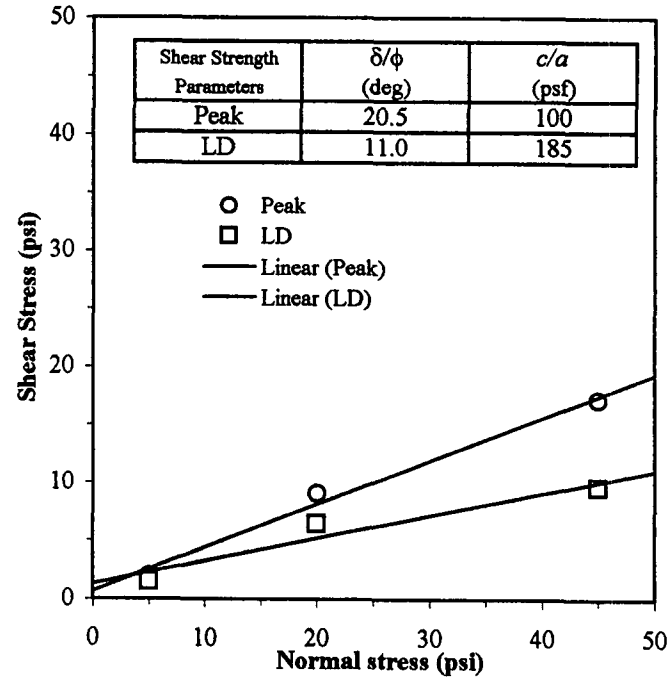
4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-02G: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-02 (Lot No. 200202LO/Roll No. 188)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-24 (Lot No. 8220076/Roll No. 103114877)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	20.5	100
LD	11.0	185

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_I (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
35A	12 x 12	5.0	0.004	3	168	5	48	22.9	93.7	1.99	1.49	1.53 (17 deg)	1.06 (12 deg)	(1)
35B	12 x 12	20.0	0.004	3	168	20	48	22.9	70.7	9.06	6.43	6.11 (17 deg)	2.46 (7 deg)	(1)
35C	12 x 12	45.0	0.004	3	168	45	48	22.9	57.7	17.18	9.60	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

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SGI TESTING SERVICES, LLC

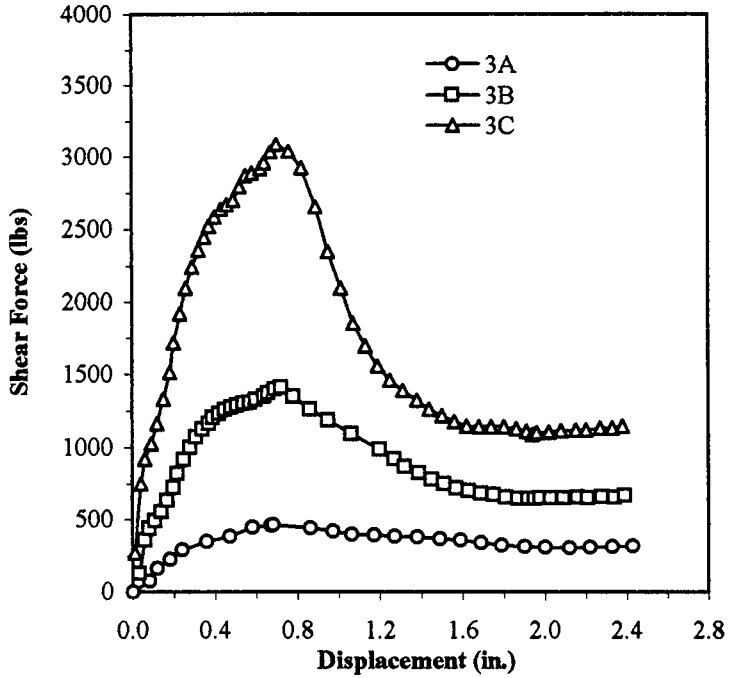
DATE OF TEST:	6 to 15 April 2002
FIGURE NO.	A-2
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02012
FILE NO.	

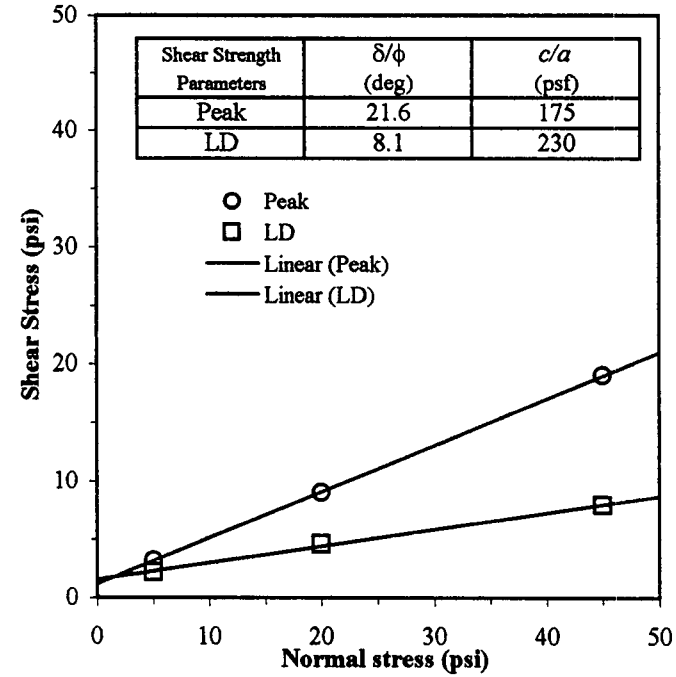
4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERNAL DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-03I: internal strength of Bentomat ST GCL (Sample No. GCL-02-03 (Lot No. 200202LO/Roll No. 241)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	21.6	175
LD	8.1	230

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
3A	12 x 12	5.0	0.004	3	168	5	48	23.0	92.7	3.22	2.21	1.53 (17 deg)	1.06 (12 deg)	(1)
3B	12 x 12	20.0	0.004	3	168	20	48	23.0	74.6	9.08	4.63	6.11 (17 deg)	2.46 (7 deg)	(1)
3C	12 x 12	45.0	0.004	3	168	45	48	23.0	60.0	19.04	7.97	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Partial separation of the GCL was observed at the normal stress of 5 psi and complete separation was oberved at the normal stresses of 20 and 45 psi.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

000067

SGI TESTING SERVICES, LLC

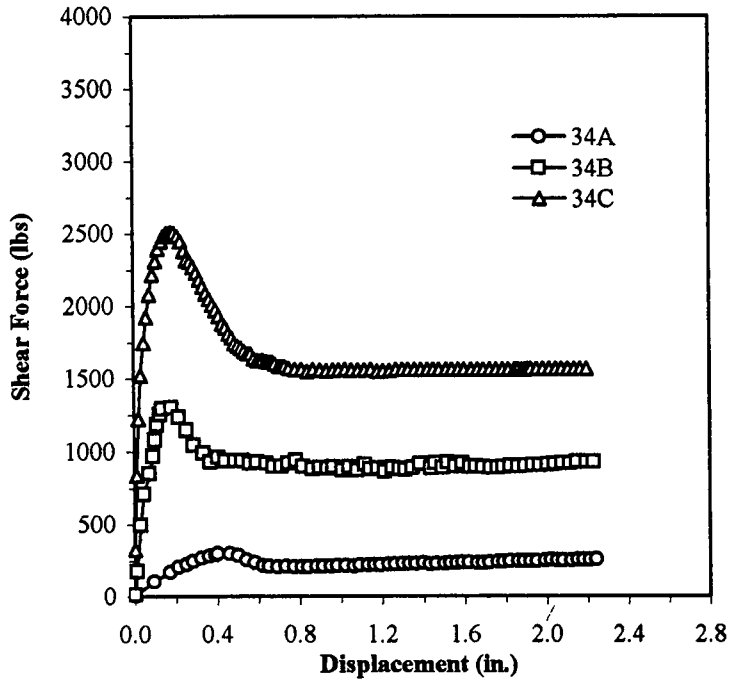
DATE OF TEST:	16 to 25 January 2002
FIGURE NO.	A-1
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02013
FILE NO.	

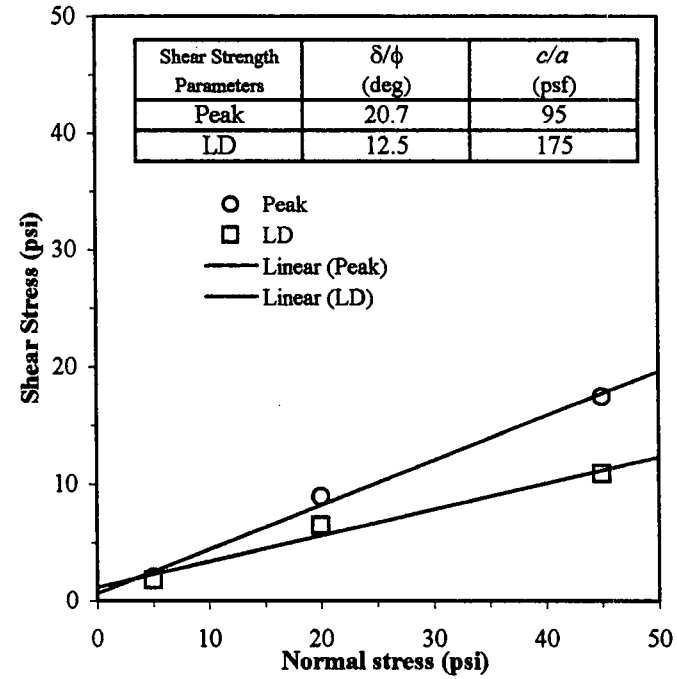
4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-03G: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-03 (Lot No. 200202LO/Roll No. 241)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-23 (Lot No. 8220076/Roll No. 103114863)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	20.7	95
LD	12.5	175

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
34A	12 x 12	5.0	0.004	3	168	5	48	23.0	84.6	2.08	1.80	1.53 (17 deg)	1.06 (12 deg)	(1)
34B	12 x 12	20.0	0.004	3	168	20	48	23.0	73.9	8.98	6.47	6.11 (17 deg)	2.46 (7 deg)	(1)
34C	12 x 12	45.0	0.004	3	168	45	48	23.0	52.6	17.42	10.88	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

000068

SGI TESTING SERVICES, LLC

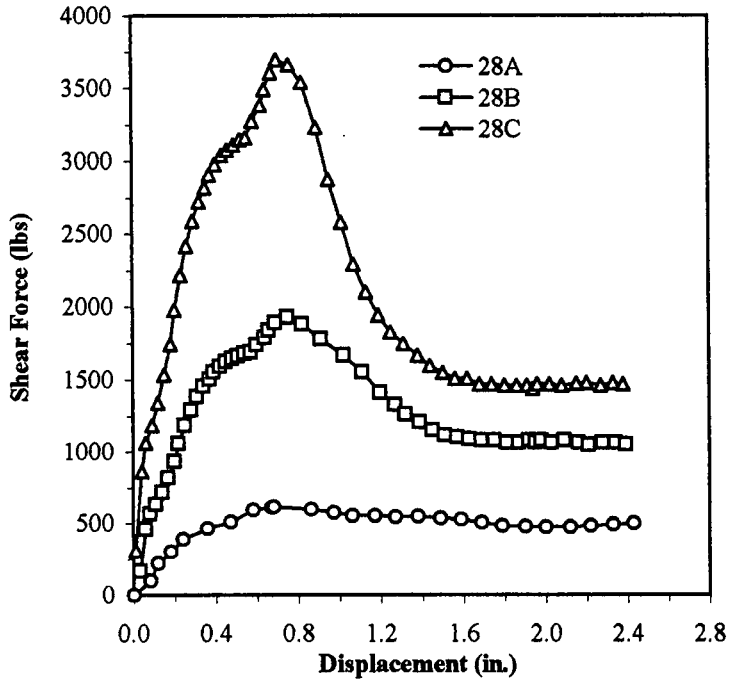
DATE OF TEST:	3 to 12 April 2002
FIGURE NO.	A-2
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02013
FILE NO.	

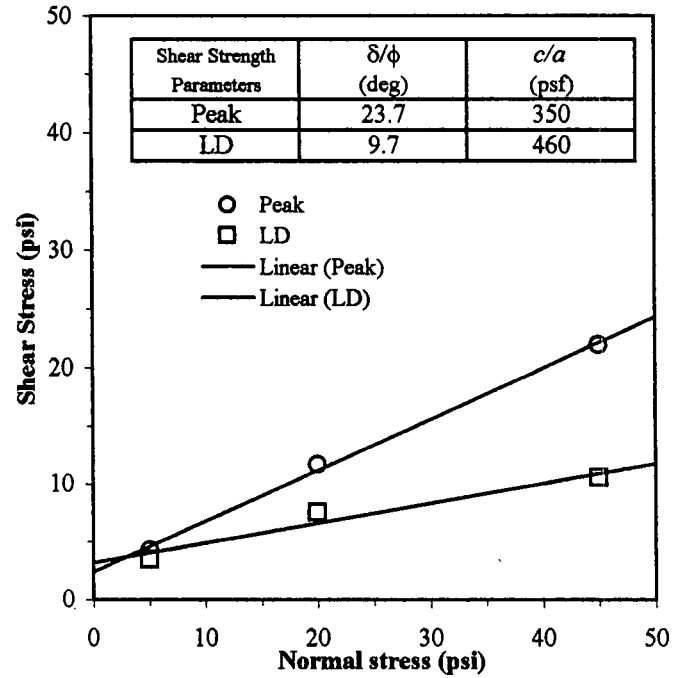
4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERNAL DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-04I: internal strength of Bentomat ST GCL (Sample No. GCL-02-04 (Lot No. 200202LO/Roll No. 283)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	23.7	350
LD	9.7	460

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
28A	12 x 12	5.0	0.004	3	168	5	48	20.4	91.0	4.27	3.49	1.53 (17 deg)	1.06 (12 deg)	(1)
28B	12 x 12	20.0	0.004	3	168	20	48	20.4	74.3	11.73	7.51	6.11 (17 deg)	2.46 (7 deg)	(1)
28C	12 x 12	45.0	0.004	3	168	45	48	20.4	65.3	21.95	10.56	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Partial separation of the GCL was observed at the normal stress of 5 psi and complete separation was oberved at the normal stresses of 20 and 45 psi.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

690000

SGI TESTING SERVICES, LLC

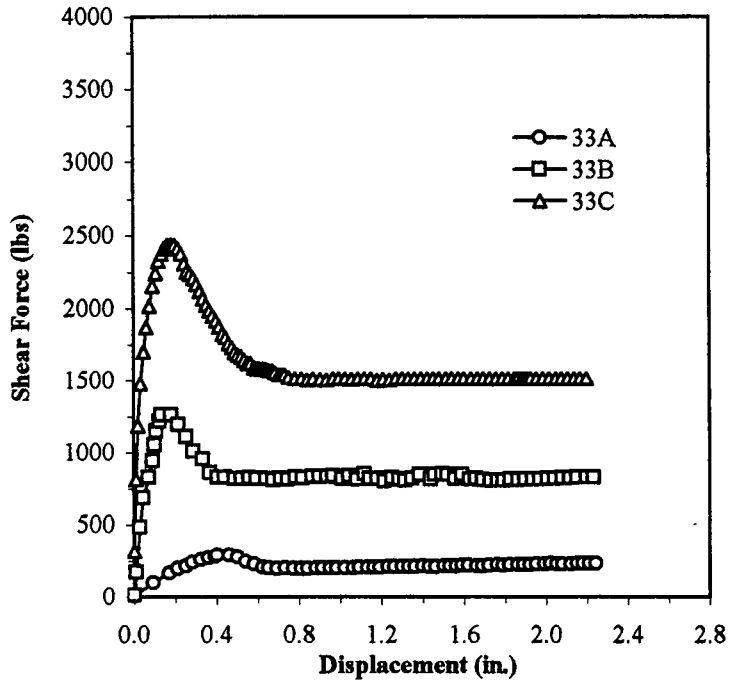
DATE OF TEST:	20 to 29 March 2002
FIGURE NO.	A-1
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02014
FILE NO.	

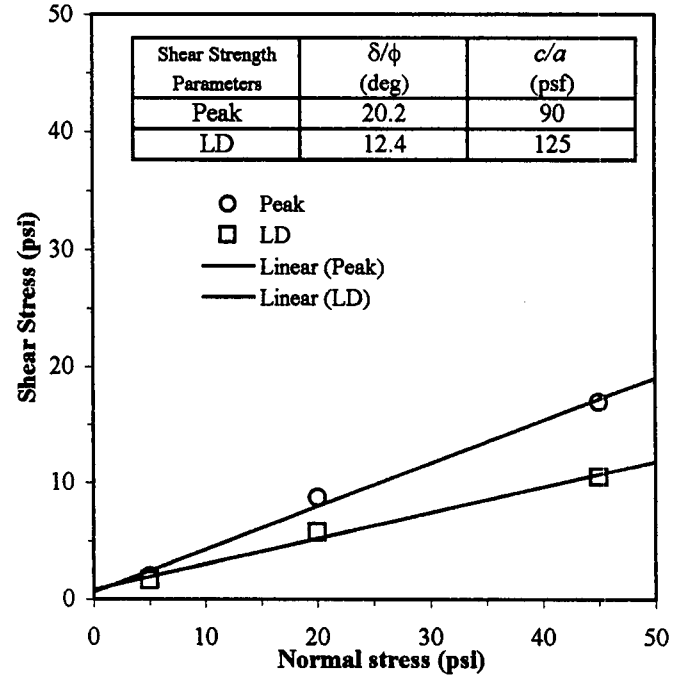
4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-04G: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-04 (Lot No. 200202LO/Roll No. 283)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-22 (Lot No. 8220072/Roll No. 103114856)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	20.2	90
LD	12.4	125

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
33A	12 x 12	5.0	0.004	3	168	5	48	20.4	88.0	2.02	1.63	1.53 (17 deg)	1.06 (12 deg)	(1)
33B	12 x 12	20.0	0.004	3	168	20	48	20.4	76.5	8.74	5.76	6.11 (17 deg)	2.46 (7 deg)	(1)
33C	12 x 12	45.0	0.004	3	168	45	48	20.4	55.4	16.93	10.52	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

000070

SGI TESTING SERVICES, LLC

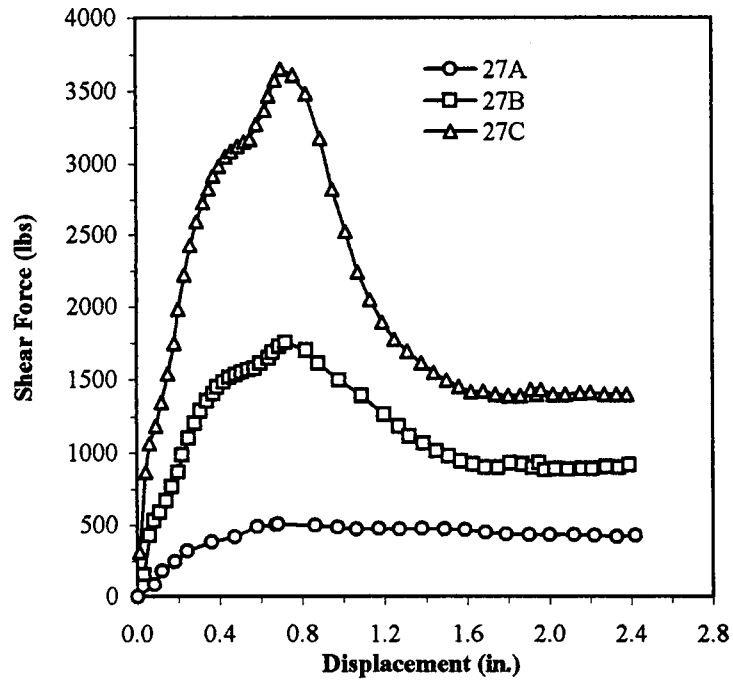
DATE OF TEST:	1 to 10 April 2002
FIGURE NO.	A-2
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02014
FILE NO.	

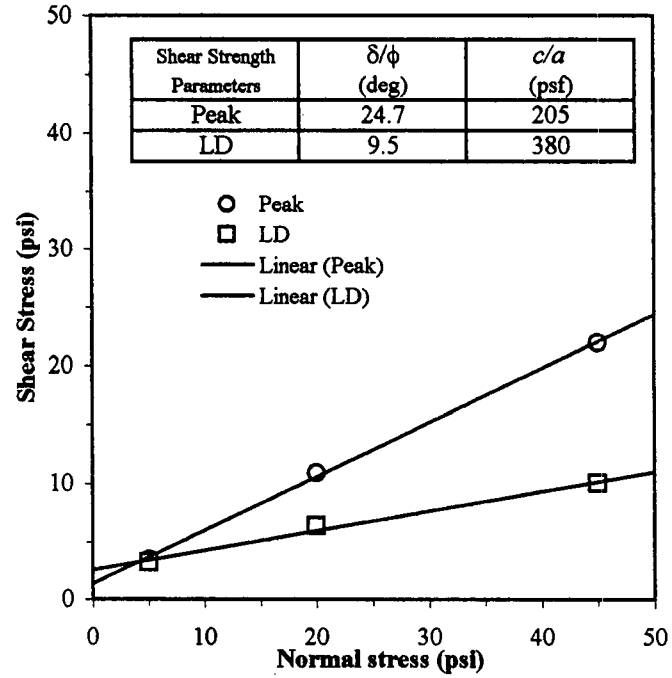
4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERNAL DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-05I: internal strength of Bentomat ST GCL (Sample No. GCL-02-05 (Lot No. 200202LO/Roll No. 332)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	24.7	205
LD	9.5	380

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
27A	12 x 12	5.0	0.004	3	168	5	48	21.0	88.5	3.54	3.24	1.53 (17 deg)	1.06 (12 deg)	(1)
27B	12 x 12	20.0	0.004	3	168	20	48	21.0	75.9	10.93	6.36	6.11 (17 deg)	2.46 (7 deg)	(1)
27C	12 x 12	45.0	0.004	3	168	45	48	21.0	61.4	22.00	10.06	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Partial separation of the GCL was observed at the normal stress of 5 psi and complete separation was oberved at the normal stresses of 20 and 45 psi.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

000071

4943

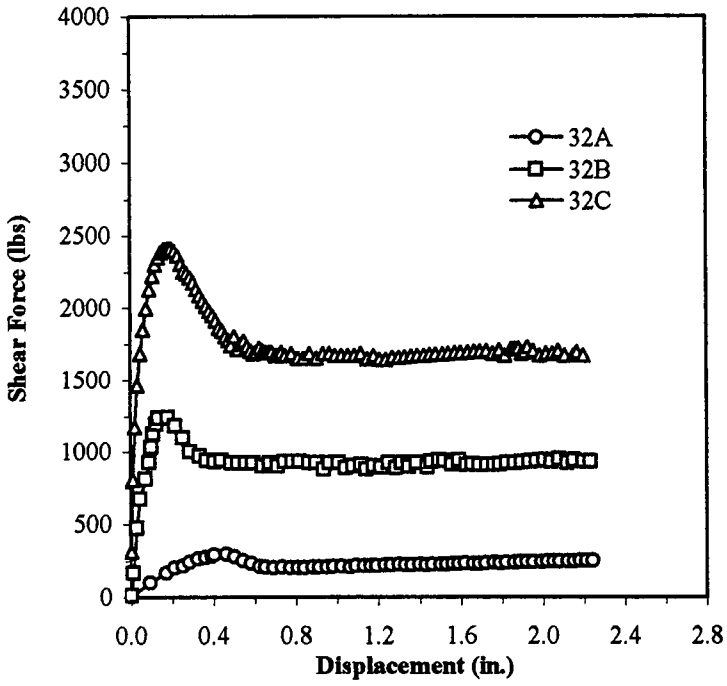
SGI TESTING SERVICES, LLC

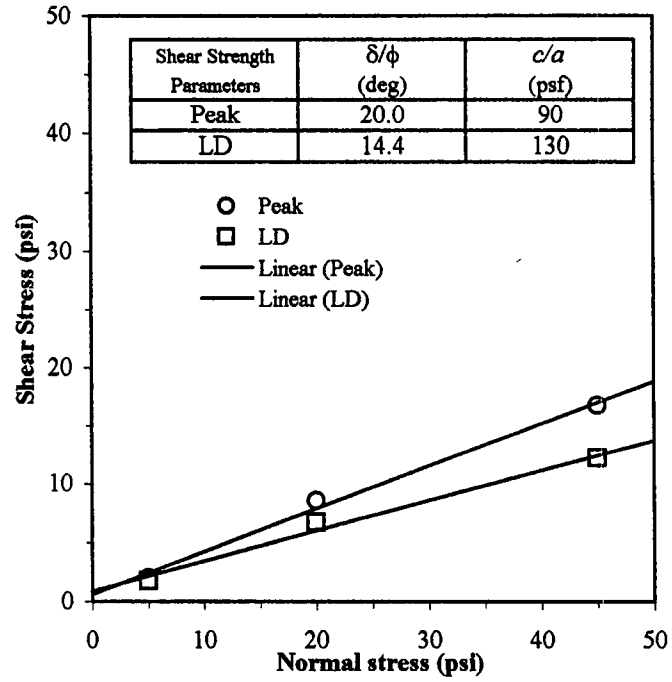
DATE OF TEST:	18 to 27 March 2002
FIGURE NO.	A-1
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02015
FILE NO.	

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-05G: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-05 (Lot No. 200202LO/Roll No. 332)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-21 (Lot No. 8220072/Roll No. 103114850)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	20.0	90
LD	14.4	130

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
32A	12 x 12	5.0	0.004	3	168	5	48	21.0	84.9	2.03	1.76	1.53 (17 deg)	1.06 (12 deg)	(1)
32B	12 x 12	20.0	0.004	3	168	20	48	21.0	71.4	8.56	6.69	6.11 (17 deg)	2.46 (7 deg)	(1)
32C	12 x 12	45.0	0.004	3	168	45	48	21.0	60.8	16.74	12.18	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

000072

4943

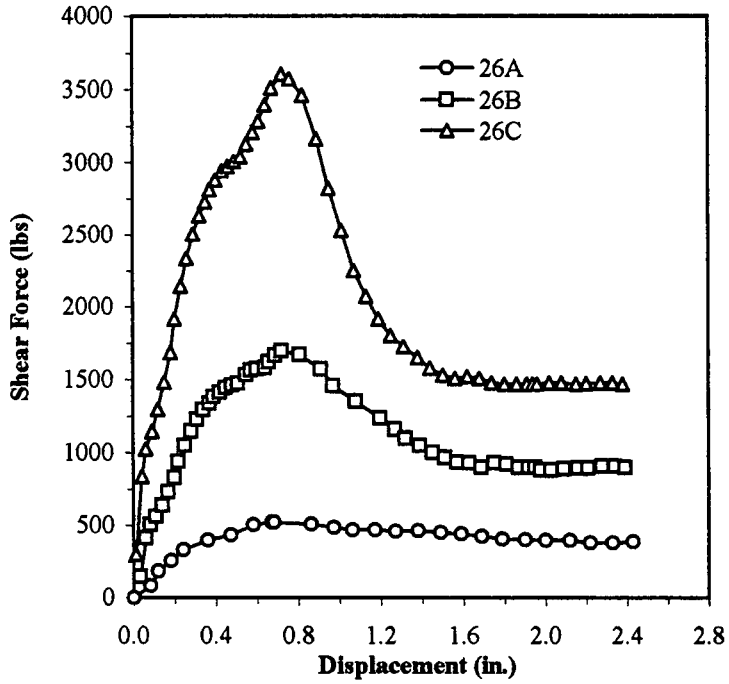
SGI TESTING SERVICES, LLC

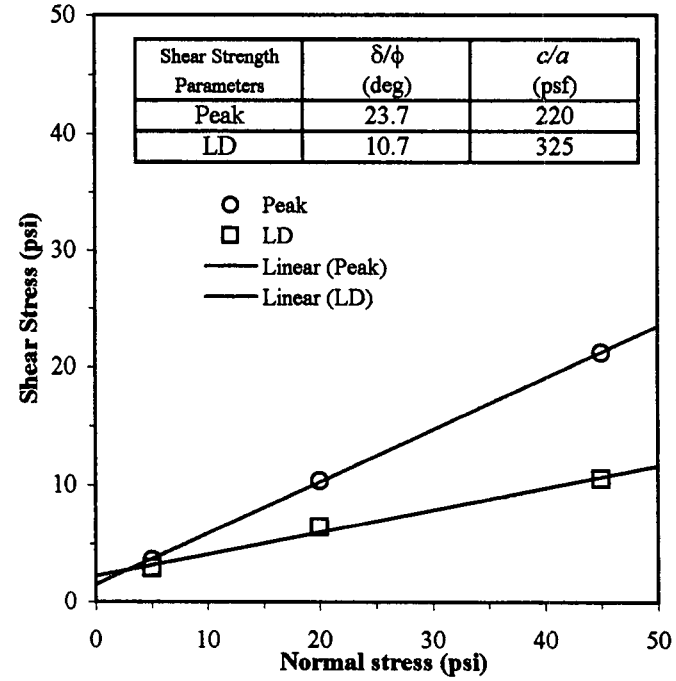
DATE OF TEST:	30 March to 8 April 2002
FIGURE NO.	A-2
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02015
FILE NO.	

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERNAL DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-06I: internal strength of Bentomat ST GCL (Sample No. GCL-02-06 (Lot No. 200202LO/Roll No. 376)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	23.7	220
LD	10.7	325

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
26A	12 x 12	5.0	0.004	3	168	5	48	22.7	89.6	3.64	2.92	1.53 (17 deg)	1.06 (12 deg)	(1)
26B	12 x 12	20.0	0.004	3	168	20	48	22.7	70.9	10.41	6.42	6.11 (17 deg)	2.46 (7 deg)	(1)
26C	12 x 12	45.0	0.004	3	168	45	48	22.7	60.5	21.23	10.56	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Partial separation of the GCL was observed at the normal stress of 5 psi and complete separation was oberved at the normal stresses of 20 and 45 psi.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

SGI TESTING SERVICES, LLC

DATE OF TEST:	16 to 25 March 2002
FIGURE NO.	A-1
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02016
FILE NO.	

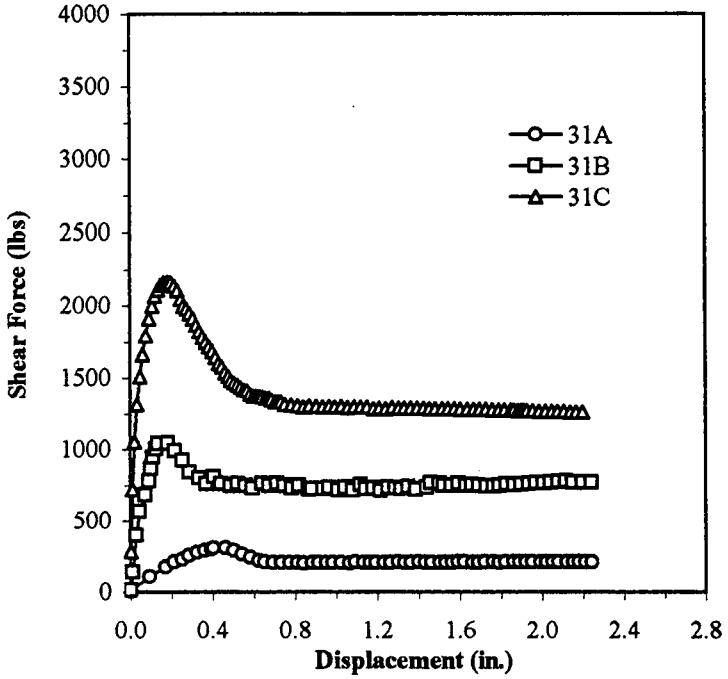
000073

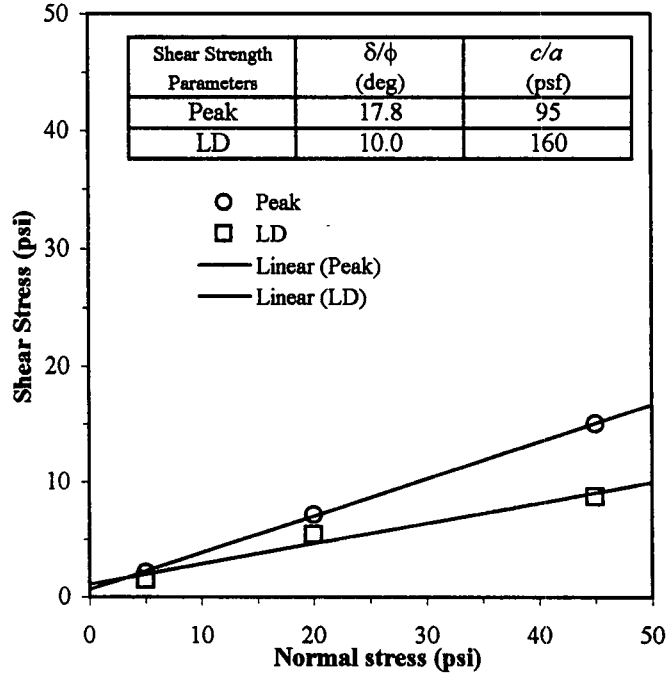
A943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-06G: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-06 (Lot No. 200202LO/Roll No. 376)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-20 (Lot No. 8220062/Roll No. 103114838)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	17.8	95
LD	10.0	160

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking Stress (psi)	Soaking Time (hour)	Consolidation Stress (psi)	Consolidation Time (hour)	GCL ω_i (%)	GCL ω_f (%)	Shear Stress Measured τ_p (psi)	Shear Stress Measured τ_{LD} (psi)	Shear Stress Specified τ_p (psi)	Shear Stress Specified τ_{LD} (psi)	Failure Mode
31A	12 x 12	5.0	0.004	3	168	5	48	22.7	83.3	2.16	1.47	1.53 (17 deg)	1.06 (12 deg)	(1)
31B	12 x 12	20.0	0.004	3	168	20	48	22.7	73.9	7.22	5.47	6.11 (17 deg)	2.46 (7 deg)	(1)
31C	12 x 12	45.0	0.004	3	168	45	48	22.7	52.7	15.03	8.76	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

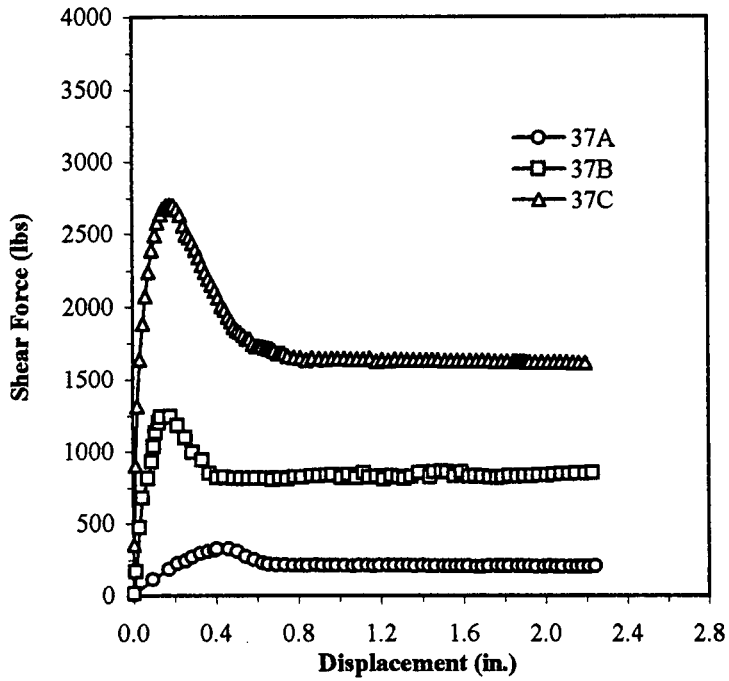
SGI TESTING SERVICES, LLC

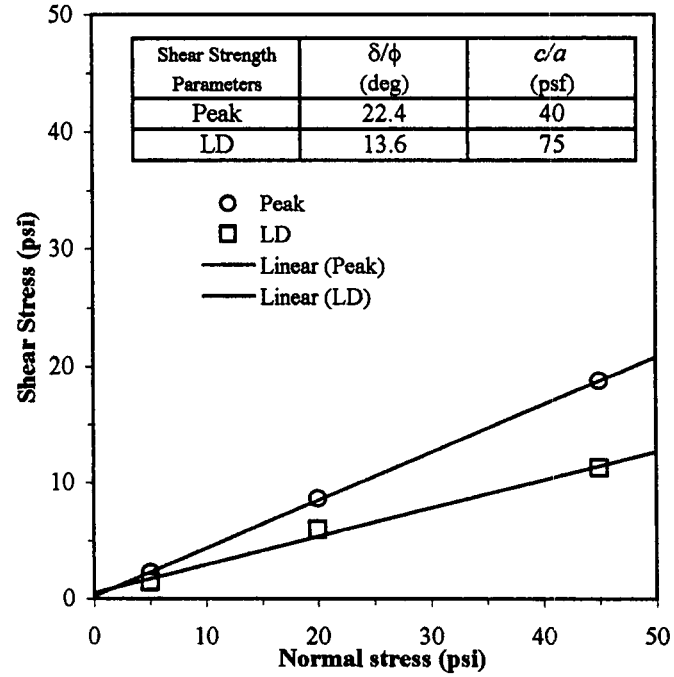
DATE OF TEST:	27 March to 5 April 2002
FIGURE NO.	A-2
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02016
FILE NO.	

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-06GA: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-06 (Lot No. 200202LO/Roll No. 376)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-26 (Lot No. 8220082/Roll No. 103114895)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	22.4	40
LD	13.6	75

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
37A	12 x 12	5.0	0.004	3	168	5	48	22.7	92.4	2.27	1.41	1.53 (17 deg)	1.06 (12 deg)	(1)
37B	12 x 12	20.0	0.004	3	168	20	48	22.7	72.4	8.61	5.92	6.11 (17 deg)	2.46 (7 deg)	(1)
37C	12 x 12	45.0	0.004	3	168	45	48	22.7	55.8	18.78	11.25	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

SGI TESTING SERVICES, LLC

DATE OF TEST:	10 to 19 April 2002
FIGURE NO.	A-3
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02016
FILE NO.	

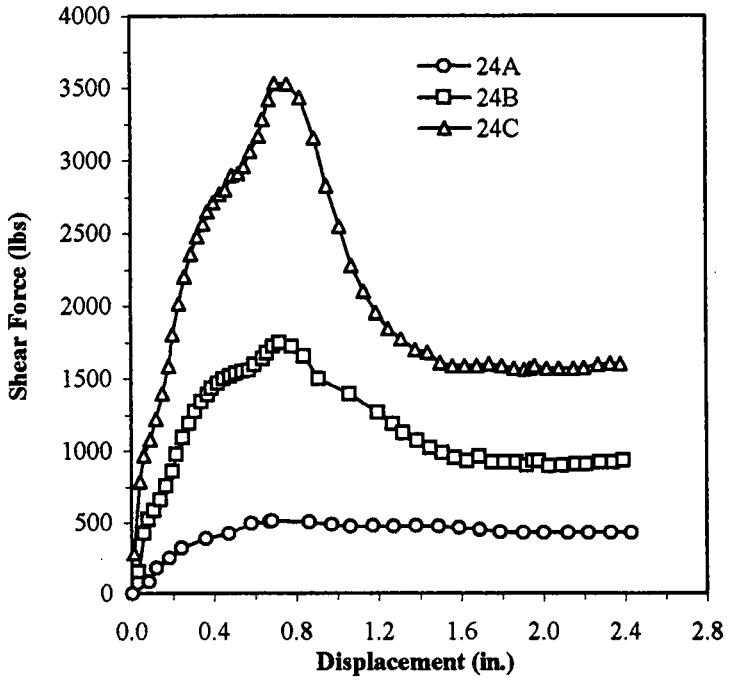
000075

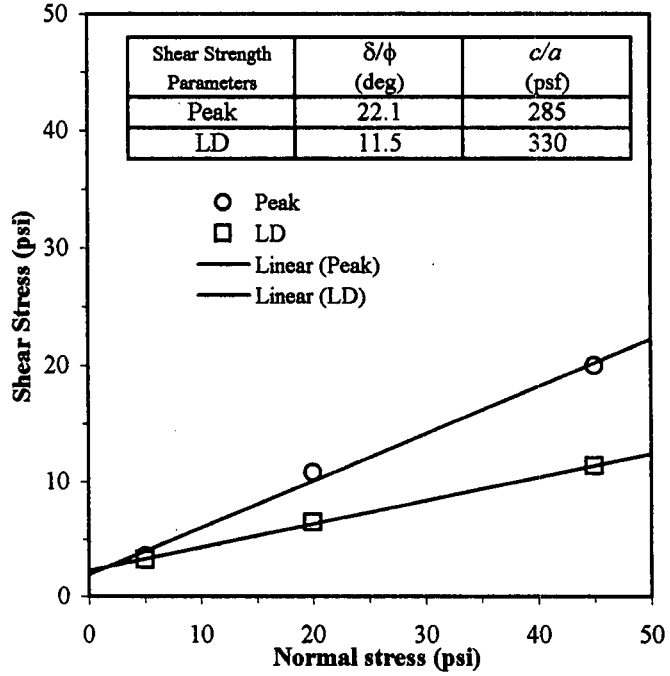
4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERNAL DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-07I: internal strength of Bentomat ST GCL (Sample No. GCL-02-07 (Lot No. 200202LO/Roll No. 425)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	22.1	285
LD	11.5	330

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
24A	12 x 12	5.0	0.004	3	168	5	48	23.5	85.3	3.57	3.22	1.53 (17 deg)	1.06 (12 deg)	(1)
24B	12 x 12	20.0	0.004	3	168	20	48	23.5	70.7	10.82	6.49	6.11 (17 deg)	2.46 (7 deg)	(1)
24C	12 x 12	45.0	0.004	3	168	45	48	23.5	53.6	19.99	11.35	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Partial separation of the GCL was observed at the normal stress of 5 psi and complete separation was oberved at the normal stresses of 20 and 45 psi.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

SGI TESTING SERVICES, LLC

DATE OF TEST:	11 to 20 March 2002
FIGURE NO.	A-1
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02017
FILE NO.	

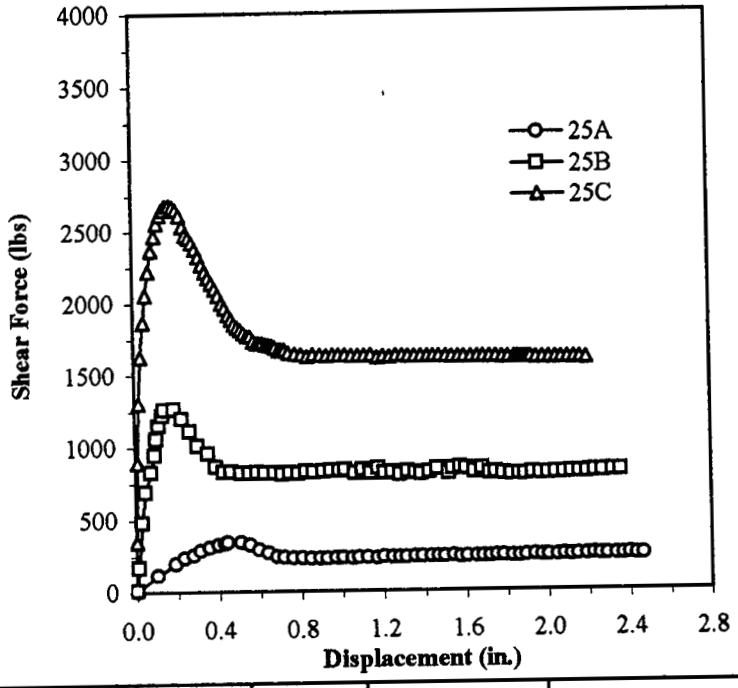
000076

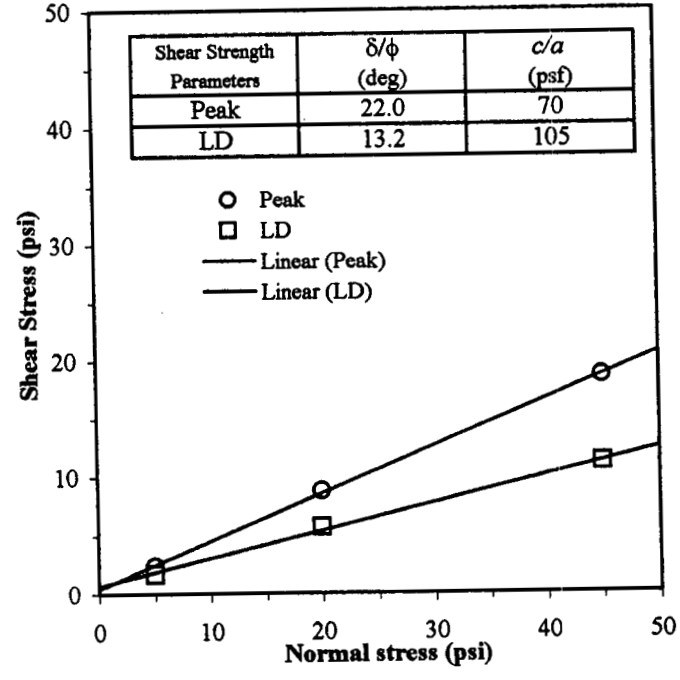
4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-07G: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-07 (Lot No. 200202LO/Roll No. 425)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-17 (Lot No. 7111751/Roll No. 103114371)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	22.0	70
LD	13.2	105

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
25A	12 x 12	5.0	0.004	3	168	5	48	23.5	85.7	2.40	1.73	1.53 (17 deg)	1.06 (12 deg)	(1)
25B	12 x 12	20.0	0.004	3	168	20	48	23.5	75.0	8.77	5.72	6.11 (17 deg)	2.46 (7 deg)	(1)
25C	12 x 12	45.0	0.004	3	168	45	48	23.5	59.3	18.62	11.17	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

SGI TESTING SERVICES, LLC

DATE OF TEST:	13 to 22 March 2002
FIGURE NO.	A-2
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02017
FILE NO.	

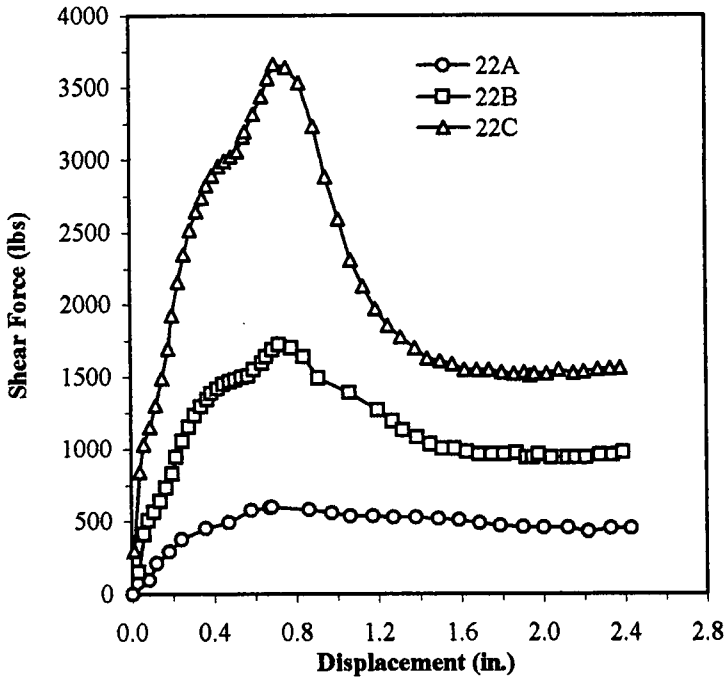
000077

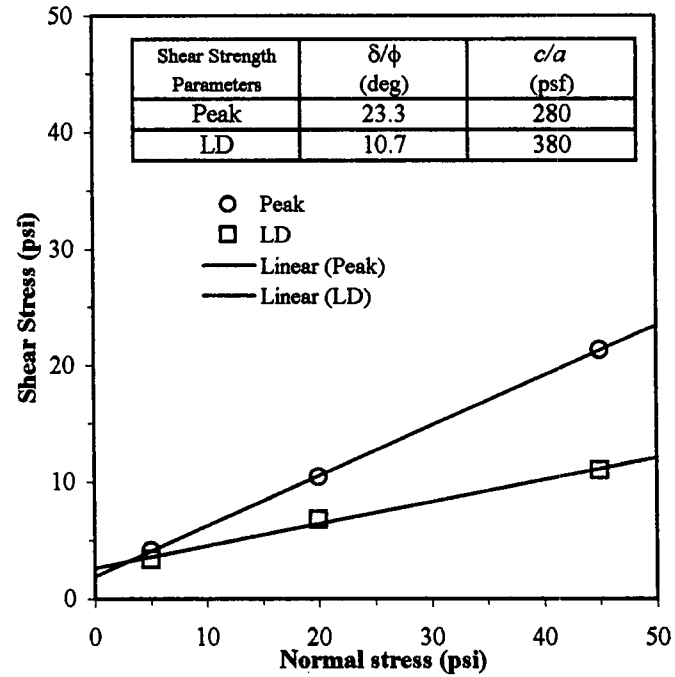
4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERNAL DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-08I: internal strength of Bentomat ST GCL (Sample No. GCL-02-08 (Lot No. 200202LO/Roll No. 475)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	23.3	280
LD	10.7	380

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
22A	12 x 12	5.0	0.004	3	168	5	48	21.4	91.7	4.15	3.35	1.53 (17 deg)	1.06 (12 deg)	(1)
22B	12 x 12	20.0	0.004	3	168	20	48	21.4	74.1	10.44	6.76	6.11 (17 deg)	2.46 (7 deg)	(1)
22C	12 x 12	45.0	0.004	3	168	45	48	21.4	59.4	21.33	11.01	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Partial separation of the GCL was observed at the normal stress of 5 psi and complete separation was oberved at the normal stresses of 20 and 45 psi.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

SGI TESTING SERVICES, LLC

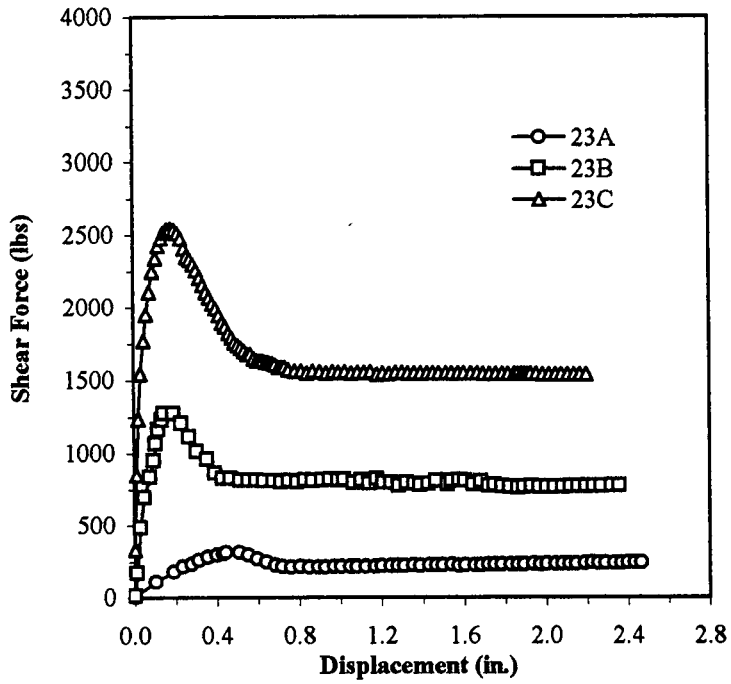
DATE OF TEST:	6 to 15 March 2002
FIGURE NO.	A-1
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02018
FILE NO.	

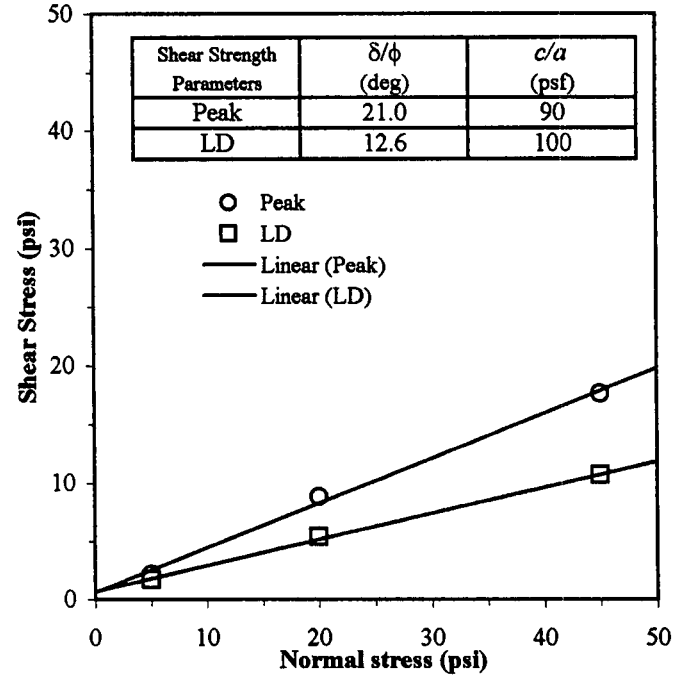
000078

4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002
INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-08G: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-08 (Lot No. 200202LO/Roll No. 475)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-10 (Lot No. 7120001/Roll No. 103114294)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	21.0	90
LD	12.6	100

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking Stress (psi)	Soaking Time (hour)	Consolidation Stress (psi)	Consolidation Time (hour)	GCL ω_i (%)	GCL ω_f (%)	Shear Stress Measured τ_p (psi)	Shear Stress Measured τ_{LD} (psi)	Shear Stress Specified τ_p (psi)	Shear Stress Specified τ_{LD} (psi)	Failure Mode
23A	12 x 12	5.0	0.004	3	168	5	48	21.4	92.2	2.18	1.68	1.53 (17 deg)	1.06 (12 deg)	(1)
23B	12 x 12	20.0	0.004	3	168	20	48	21.4	71.7	8.84	5.37	6.11 (17 deg)	2.46 (7 deg)	(1)
23C	12 x 12	45.0	0.004	3	168	45	48	21.4	59.3	17.66	10.69	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

SGI TESTING SERVICES, LLC

DATE OF TEST:	9 to 18 March 2002
FIGURE NO.	A-2
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02018
FILE NO.	

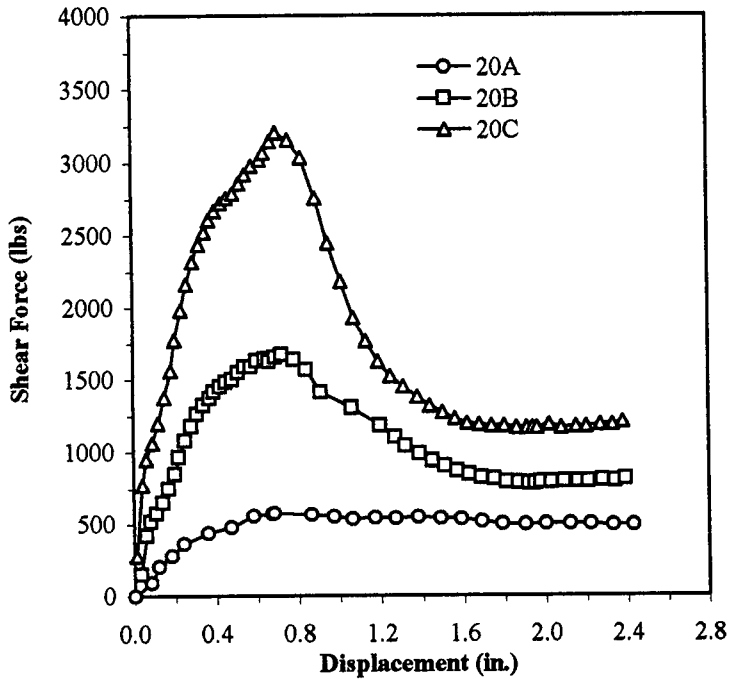
000079

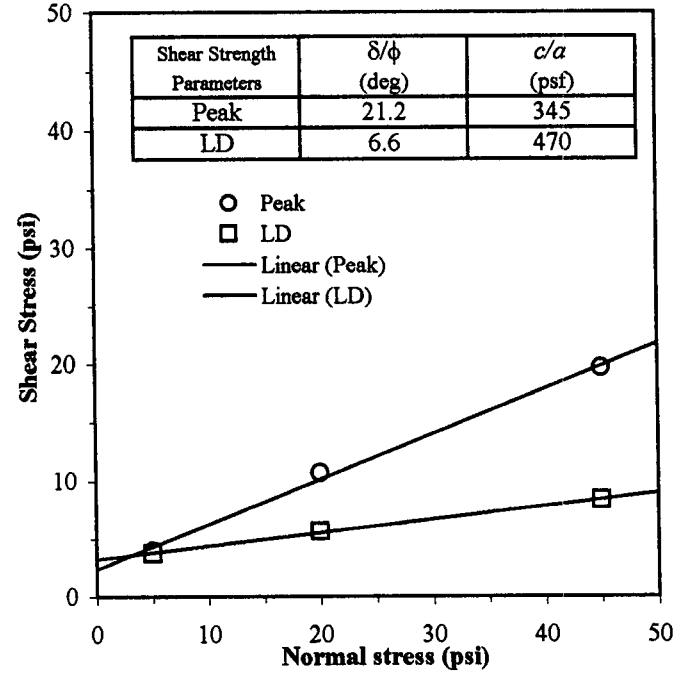
4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERNAL DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-09I: internal strength of Bentomat ST GCL (Sample No. GCL-02-09 (Lot No. 200202LO/Roll No. 516)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	21.2	345
LD	6.6	470

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking Stress (psi)	Soaking Time (hour)	Consolidation Stress (psi)	Consolidation Time (hour)	GCL ω_i (%)	GCL ω_f (%)	Shear Stress Measured τ_p (psi)	Shear Stress Measured τ_{LD} (psi)	Shear Stress Specified τ_p (psi)	Shear Stress Specified τ_{LD} (psi)	Failure Mode
20A	12 x 12	5.0	0.004	3	168	5	48	23.0	92.5	4.00	3.75	1.53 (17 deg)	1.06 (12 deg)	(1)
20B	12 x 12	20.0	0.004	3	168	20	48	23.0	73.8	10.69	5.66	6.11 (17 deg)	2.46 (7 deg)	(1)
20C	12 x 12	45.0	0.004	3	168	45	48	23.0	58.1	19.66	8.38	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Partial separation of the GCL was observed at the normal stress of 5 psi and complete separation was oberved at the normal stresses of 20 and 45 psi.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

SGI TESTING SERVICES, LLC

DATE OF TEST:	2 to 11 March 2002
FIGURE NO.	A-1
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02019
FILE NO.	

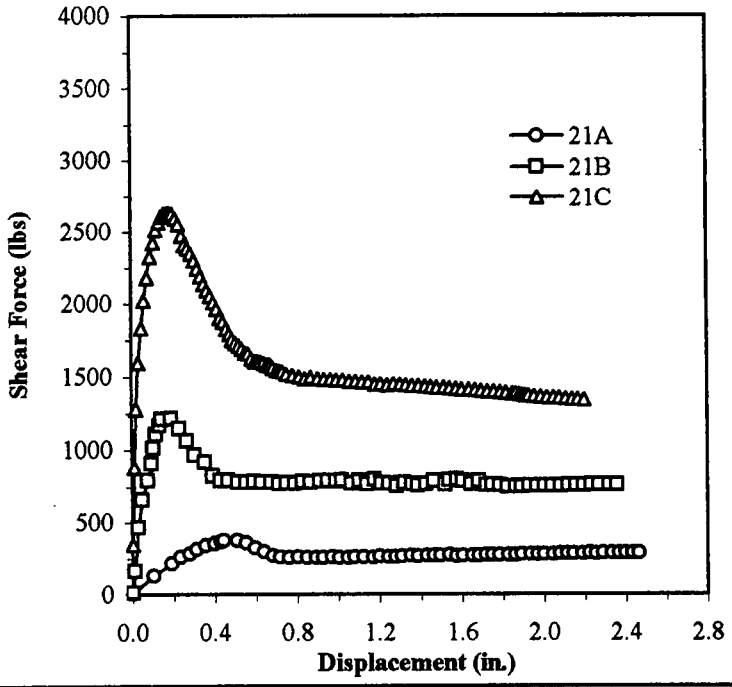
080000

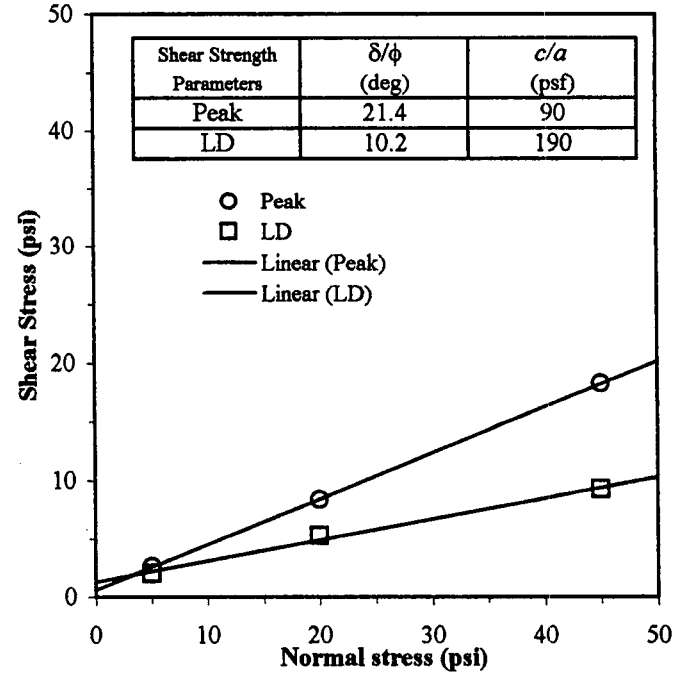
7-4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-09G: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-09 (Lot No. 200202LO/Roll No. 516)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-09 (Lot No. 7120001/Roll No. 103114283)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	21.4	90
LD	10.2	190

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
21A	12 x 12	5.0	0.004	3	168	5	48	23.0	91.1	2.62	2.01	1.53 (17 deg)	1.06 (12 deg)	(1)
21B	12 x 12	20.0	0.004	3	168	20	48	23.0	78.4	8.40	5.30	6.11 (17 deg)	2.46 (7 deg)	(1)
21C	12 x 12	45.0	0.004	3	168	45	48	23.0	50.8	18.28	9.31	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

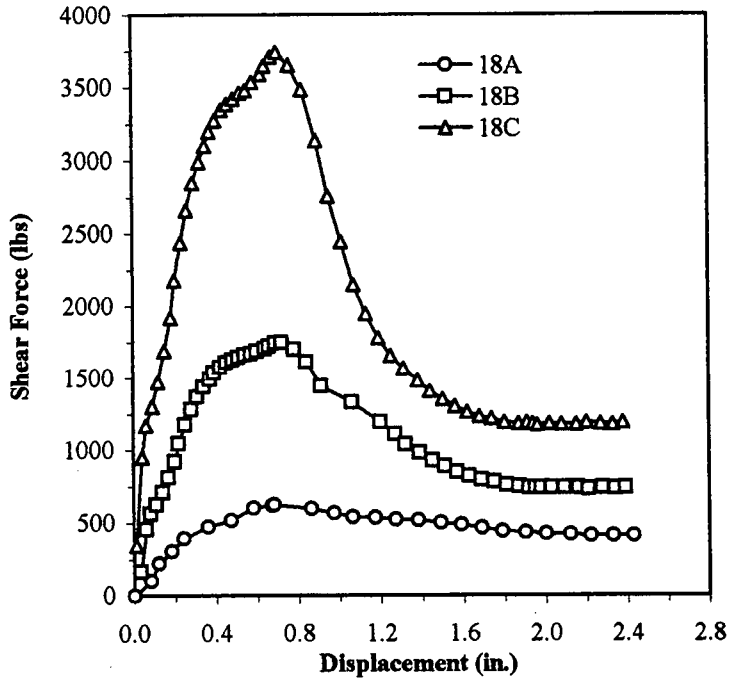
SGI TESTING SERVICES, LLC

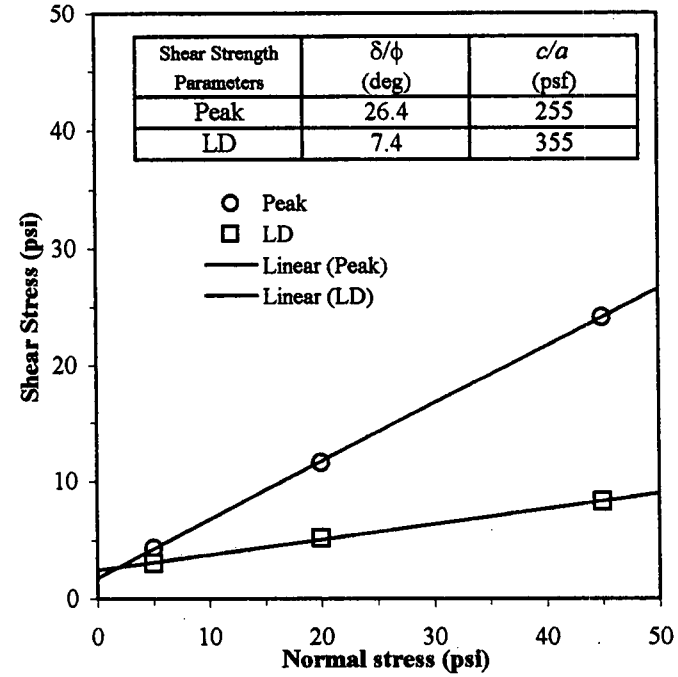
DATE OF TEST:	4 to 13 March 2002
FIGURE NO.	A-2
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02019
FILE NO.	

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERNAL DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-10I: internal strength of Bentomat ST GCL (Sample No. GCL-02-10 (Lot No. 200202LO/Roll No. 567)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	26.4	255
LD	7.4	355

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
18A	12 x 12	5.0	0.004	3	168	5	48	20.7	91.4	4.33	3.04	1.53 (17 deg)	1.06 (12 deg)	(1)
18B	12 x 12	20.0	0.004	3	168	20	48	20.7	71.8	11.60	5.15	6.11 (17 deg)	2.46 (7 deg)	(1)
18C	12 x 12	45.0	0.004	3	168	45	48	20.7	58.5	24.15	8.26	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Partial separation of the GCL was observed at the normal stress of 5 psi and complete separation was oberved at the normal stresses of 20 and 45 psi.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

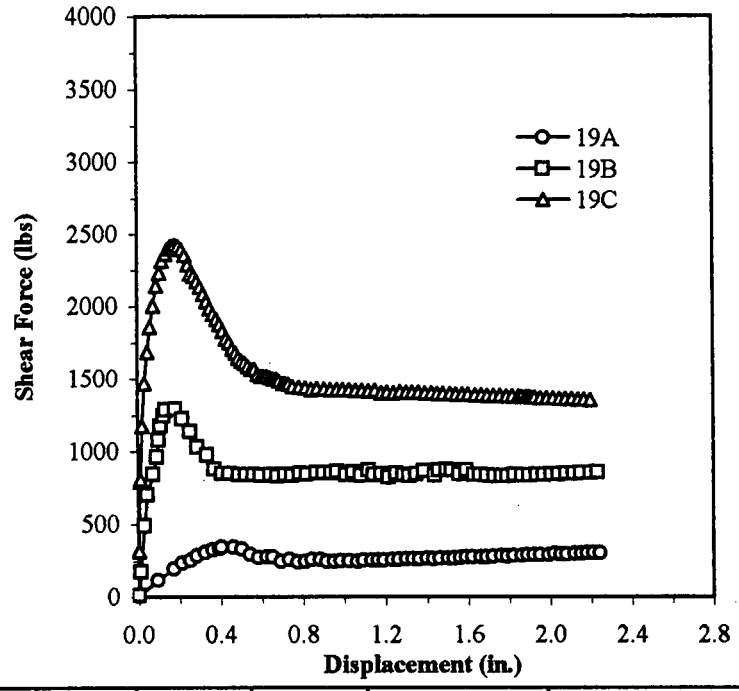
SGI TESTING SERVICES, LLC

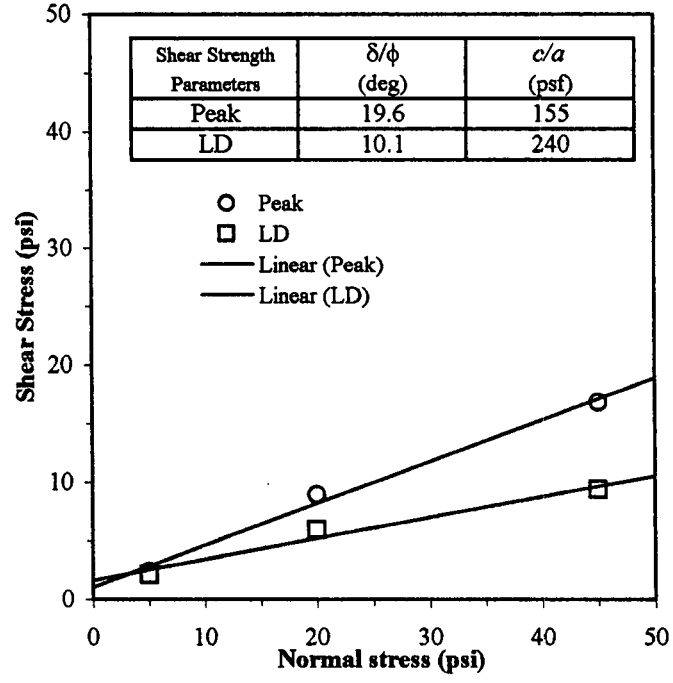
DATE OF TEST:	25 February to 6 March 2002
FIGURE NO.	A-1
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02020
FILE NO.	

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-10G: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-10 (Lot No. 200202LO/Roll No. 567)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-08 (Lot No. 7120001/Roll No. 103114272)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	19.6	155
LD	10.1	240

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
19A	12 x 12	5.0	0.004	3	168	5	48	20.7	93.3	2.40	2.12	1.53 (17 deg)	1.06 (12 deg)	(1)
19B	12 x 12	20.0	0.004	3	168	20	48	20.7	72.3	8.95	5.95	6.11 (17 deg)	2.46 (7 deg)	(1)
19C	12 x 12	45.0	0.004	3	168	45	48	20.7	58.4	16.83	9.42	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

SGI TESTING SERVICES, LLC

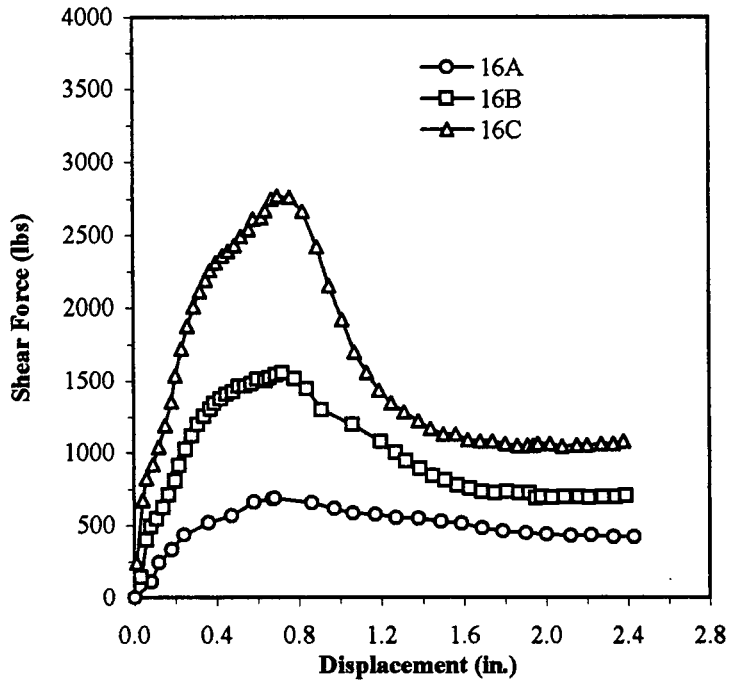
DATE OF TEST:	27 February to 8 March 2002
FIGURE NO.	A-2
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02020
FILE NO.	

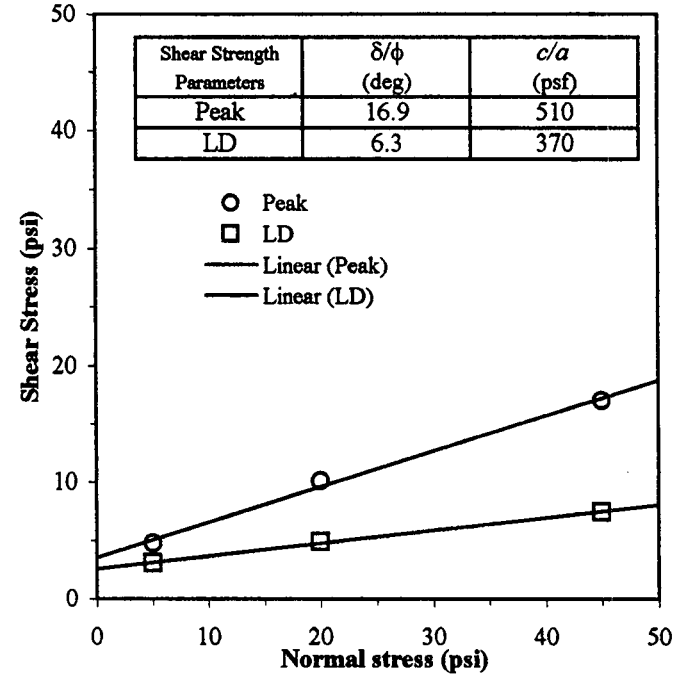
000083

4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002
INTERNAL DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-11I: internal strength of Bentomat ST GCL (Sample No. GCL-02-11 (Lot No. 200202LO/Roll No. 610)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	16.9	510
LD	6.3	370

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
16A	12 x 12	5.0	0.004	3	168	5	48	22.1	86.2	4.76	3.06	1.53 (17 deg)	1.06 (12 deg)	(1)
16B	12 x 12	20.0	0.004	3	168	20	48	22.1	78.2	10.12	4.88	6.11 (17 deg)	2.46 (7 deg)	(1)
16C	12 x 12	45.0	0.004	3	168	45	48	22.1	55.2	17.04	7.50	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Partial separation of the GCL was observed at the normal stress of 5 psi and complete separation was observed at the normal stresses of 20 and 45 psi.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

000084

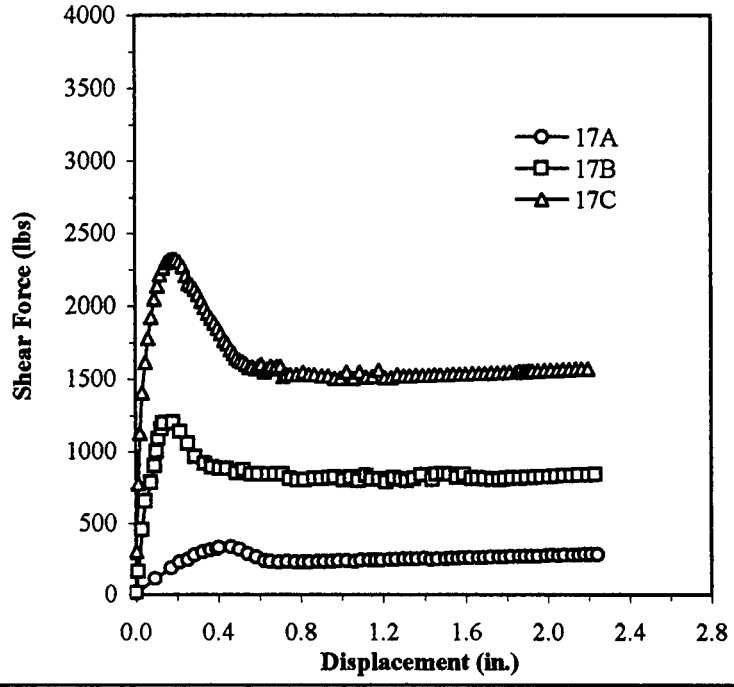
SGI TESTING SERVICES, LLC

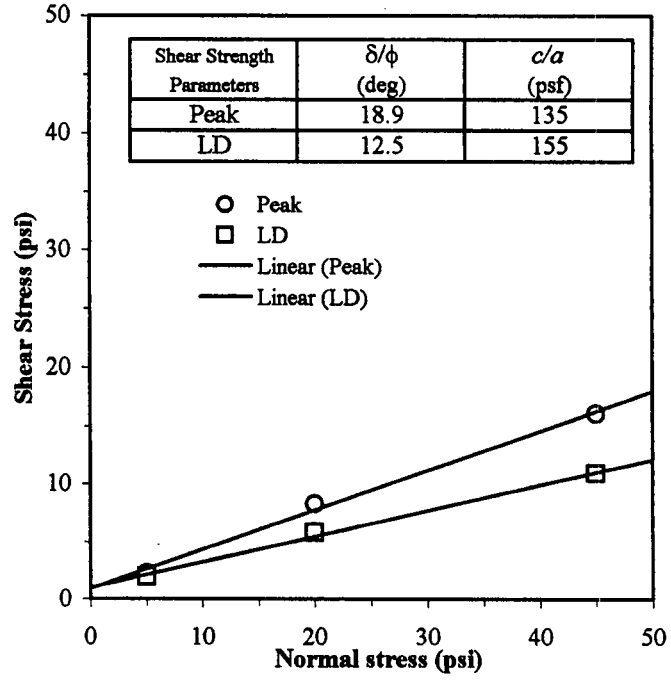
DATE OF TEST:	20 February to 1 March 2002
FIGURE NO.	A-1
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02021
FILE NO.	

4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002
INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-11G: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-11 (Lot No. 200202LO/Roll No. 610)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-07 (Lot No. 7111752/Roll No. 103114259)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	18.9	135
LD	12.5	155

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
17A	12 x 12	5.0	0.004	3	168	5	48	22.1	88.9	2.31	1.96	1.53 (17 deg)	1.06 (12 deg)	(1)
17B	12 x 12	20.0	0.004	3	168	20	48	22.1	75.0	8.31	5.84	6.11 (17 deg)	2.46 (7 deg)	(1)
17C	12 x 12	45.0	0.004	3	168	45	48	22.1	54.4	16.11	10.92	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

000085

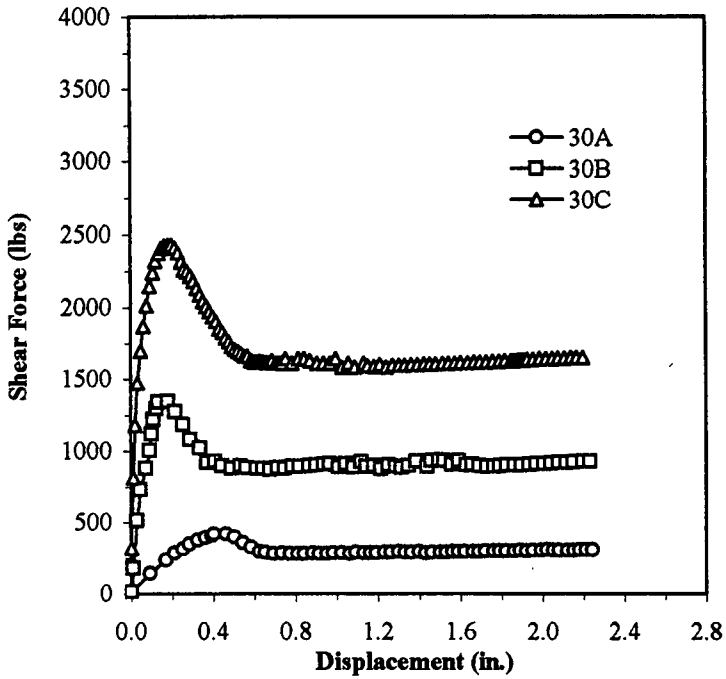
SGI TESTING SERVICES, LLC

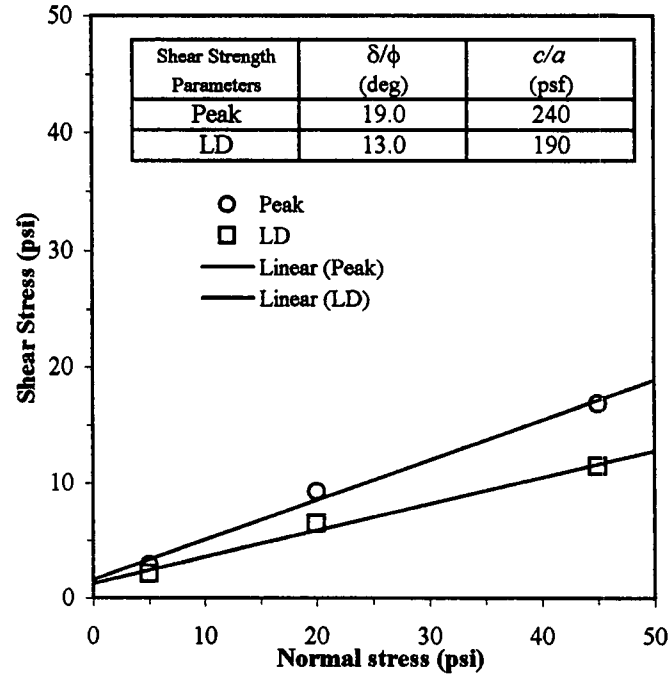
DATE OF TEST:	23 February to 4 March 2002
FIGURE NO.	A-2
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02021
FILE NO.	

4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002
INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-11GR: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-11 (Lot No. 200202LO/Roll No. 610)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-19 (Lot No. 8220062/Roll No. 103114826)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	19.0	240
LD	13.0	190

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
30A	12 x 12	5.0	0.004	3	168	5	48	22.1	92.0	2.91	2.14	1.53 (17 deg)	1.06 (12 deg)	(1)
30B	12 x 12	20.0	0.004	3	168	20	48	22.1	75.0	9.31	6.46	6.11 (17 deg)	2.46 (7 deg)	(1)
30C	12 x 12	45.0	0.004	3	168	45	48	22.1	58.4	16.88	11.47	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

980000

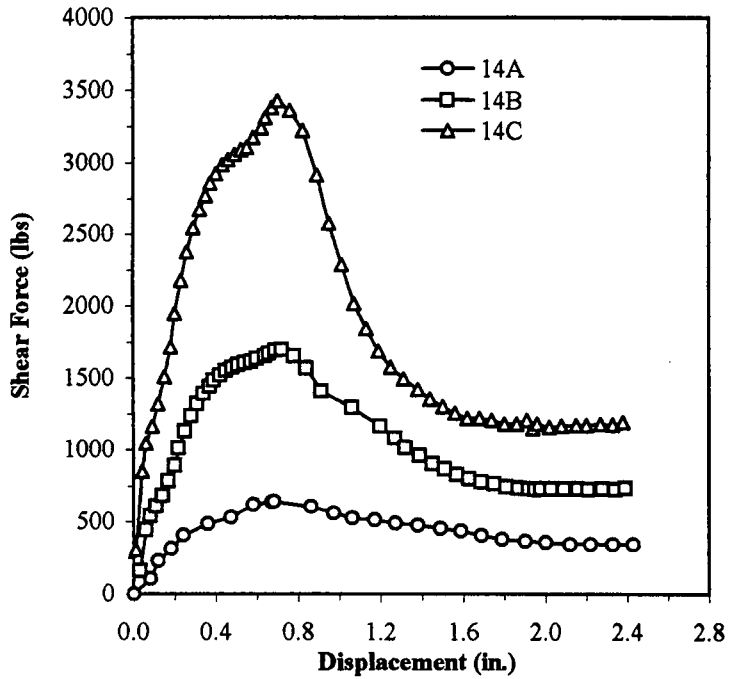
SGI TESTING SERVICES, LLC

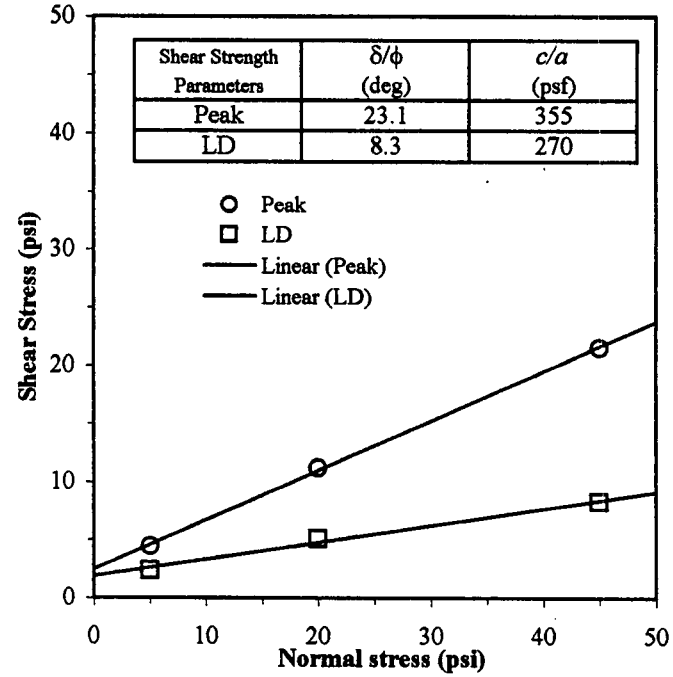
DATE OF TEST:	25 March to 3 April 2002
FIGURE NO.	A-3
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02021
FILE NO.	

4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002
INTERNAL DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-12I: internal strength of Bentomat ST GCL (Sample No. GCL-02-12 (Lot No. 200203LO/Roll No. 662)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	23.1	355
LD	8.3	270

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking Stress (psi)	Soaking Time (hour)	Consolidation Stress (psi)	Consolidation Time (hour)	GCL ω_i (%)	GCL ω_f (%)	Shear Stress Measured τ_p (psi)	Shear Stress Measured τ_{LD} (psi)	Shear Stress Specified τ_p (psi)	Shear Stress Specified τ_{LD} (psi)	Failure Mode
14A	12 x 12	5.0	0.004	3	168	5	48	22.3	92.2	4.47	2.38	1.53 (17 deg)	1.06 (12 deg)	(1)
14B	12 x 12	20.0	0.004	3	168	20	48	22.3	75.9	11.19	5.10	6.11 (17 deg)	2.46 (7 deg)	(1)
14C	12 x 12	45.0	0.004	3	168	45	48	22.3	57.6	21.56	8.29	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Partial separation of the GCL was observed at the normal stress of 5 psi and complete separation was oberved at the normal stresses of 20 and 45 psi.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

000087

SGI TESTING SERVICES, LLC

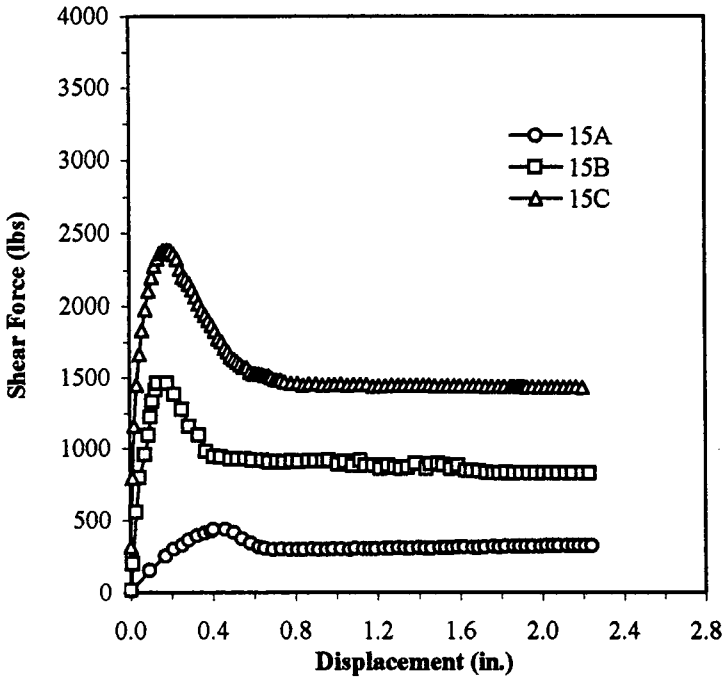
DATE OF TEST:	16 to 25 February 2002
FIGURE NO.	A-1
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02022
FILE NO.	

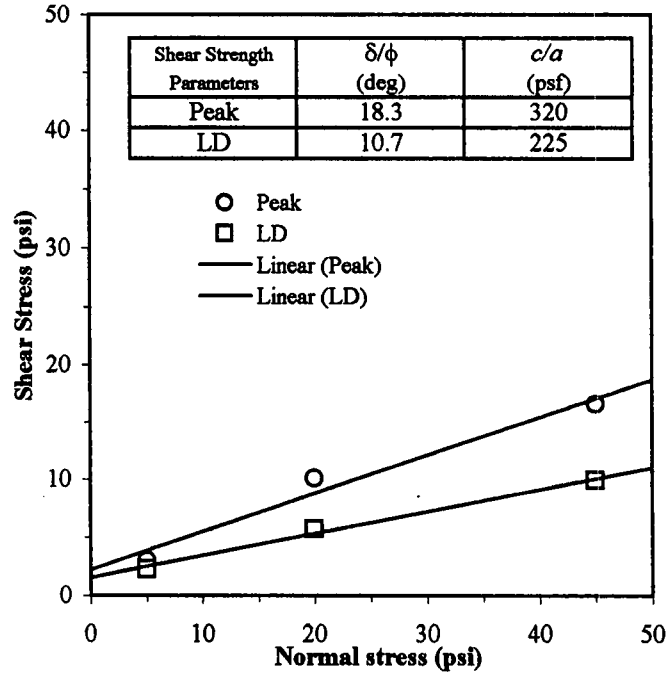
4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-12G: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-12 (Lot No. 200203LO/Roll No. 662)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-06 (Lot No. 7111752/Roll No. 103114246)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	18.3	320
LD	10.7	225

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
15A	12 x 12	5.0	0.004	3	168	5	48	22.3	82.1	3.04	2.25	1.53 (17 deg)	1.06 (12 deg)	(1)
15B	12 x 12	20.0	0.004	3	168	20	48	22.3	73.5	10.13	5.74	6.11 (17 deg)	2.46 (7 deg)	(1)
15C	12 x 12	45.0	0.004	3	168	45	48	22.3	55.3	16.58	9.94	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

000088

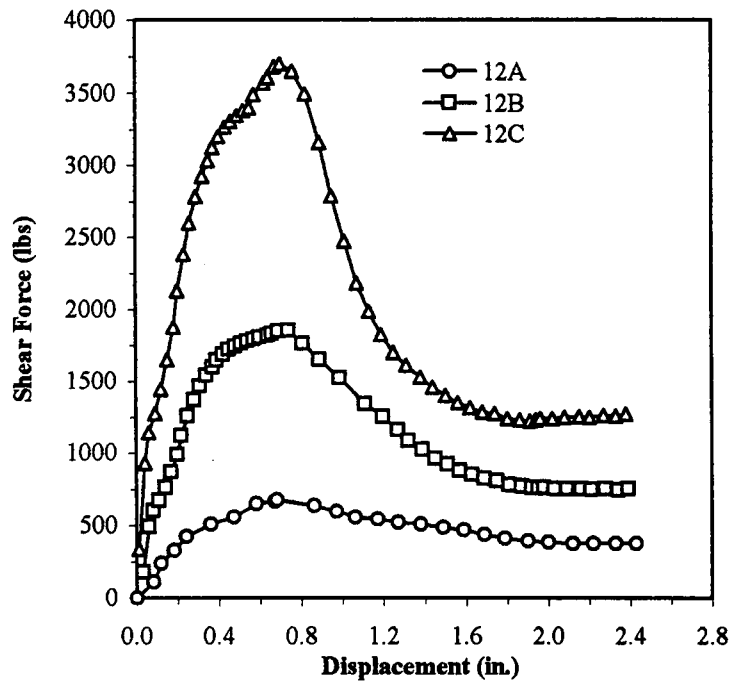
SGI TESTING SERVICES, LLC

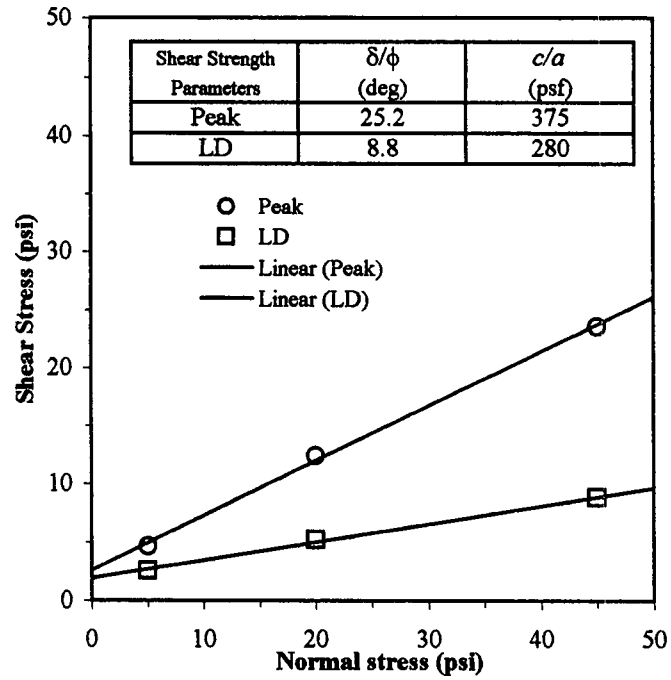
DATE OF TEST:	18 to 27 February 2002
FIGURE NO.	A-2
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02022
FILE NO.	

4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002
INTERNAL DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-13I: internal strength of Bentomat ST GCL (Sample No. GCL-02-13 (Lot No. 200203LO/Roll No. 706)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	25.2	375
LD	8.8	280

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
12A	12 x 12	5.0	0.004	3	168	5	48	23.2	97.5	4.69	2.60	1.53 (17 deg)	1.06 (12 deg)	(1)
12B	12 x 12	20.0	0.004	3	168	20	48	23.2	69.7	12.43	5.22	6.11 (17 deg)	2.46 (7 deg)	(1)
12C	12 x 12	45.0	0.004	3	168	45	48	23.2	55.7	23.59	8.83	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Partial separation of the GCL was observed at the normal stress of 5 psi and complete separation was oberved at the normal stresses of 20 and 45 psi.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

0000089

SGI TESTING SERVICES, LLC

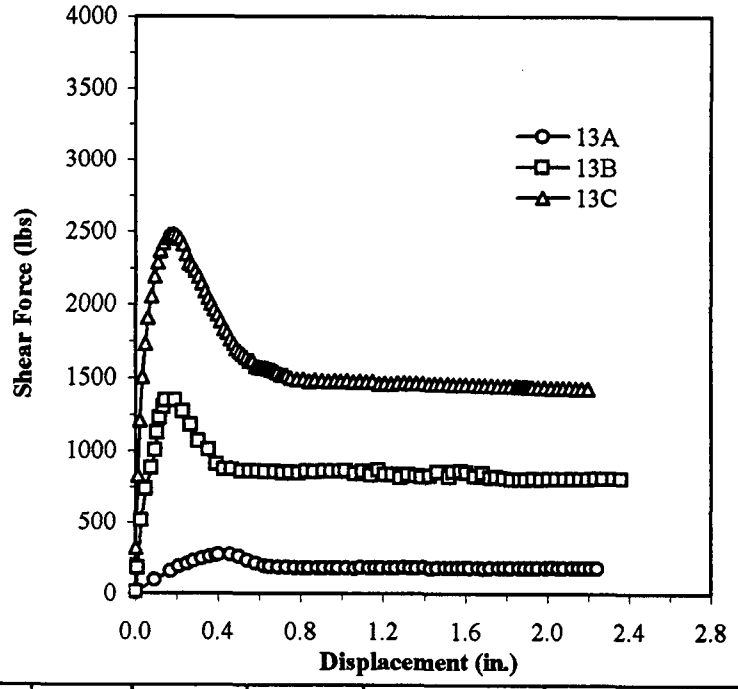
DATE OF TEST:	11 to 20 February 2002
FIGURE NO.	A-1
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02023
FILE NO.	

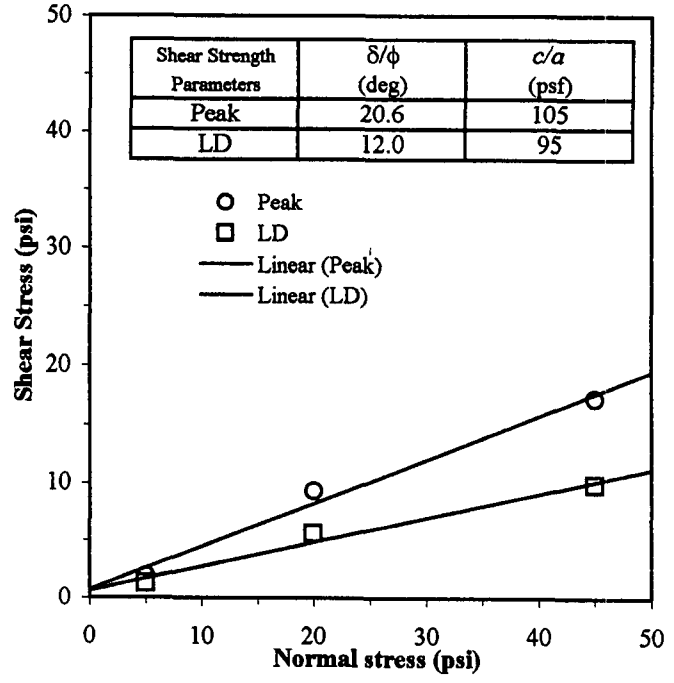
4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-13G: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-13 (Lot No. 200203LO/Roll No. 706)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-05 (Lot No. 7111752/Roll No. 103114235)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	20.6	105
LD	12.0	95

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
13A	12 x 12	5.0	0.004	3	168	5	48	23.2	80.3	1.92	1.26	1.53 (17 deg)	1.06 (12 deg)	(1)
13B	12 x 12	20.0	0.004	3	168	20	48	23.2	71.6	9.33	5.63	6.11 (17 deg)	2.46 (7 deg)	(1)
13C	12 x 12	45.0	0.004	3	168	45	48	23.2	58.3	17.24	9.92	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

060000

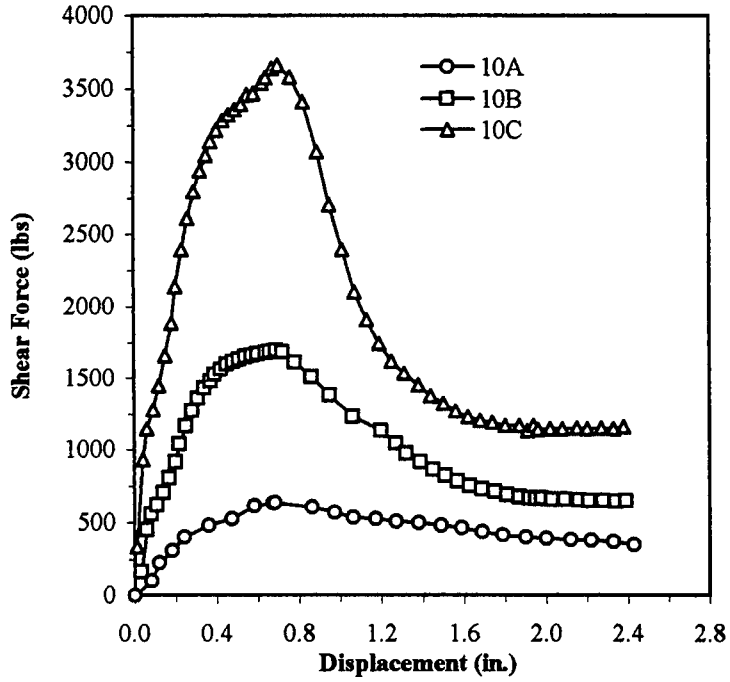
SGI TESTING SERVICES, LLC

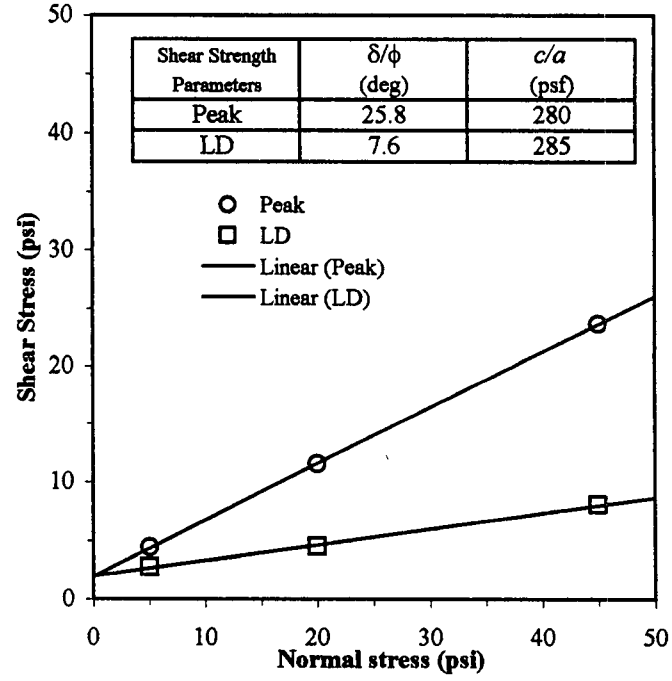
DATE OF TEST:	13 to 22 February 2002
FIGURE NO.	A-2
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02023
FILE NO.	

4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002
INTERNAL DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-14I: internal strength of Bentomat ST GCL (Sample No. GCL-02-14 (Lot No. 200203LO/Roll No. 752)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	25.8	280
LD	7.6	285

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking Stress (psi)	Soaking Time (hour)	Consolidation Stress (psi)	Consolidation Time (hour)	GCL ω_i (%)	GCL ω_f (%)	Shear Stress Measured τ_p (psi)	Shear Stress Measured τ_{LD} (psi)	Shear Stress Specified τ_p (psi)	Shear Stress Specified τ_{LD} (psi)	Failure Mode
10A	12 x 12	5.0	0.004	3	168	5	48	23.1	93.7	4.42	2.73	1.53 (17 deg)	1.06 (12 deg)	(1)
10B	12 x 12	20.0	0.004	3	168	20	48	23.1	69.4	11.52	4.52	6.11 (17 deg)	2.46 (7 deg)	(1)
10C	12 x 12	45.0	0.004	3	168	45	48	23.1	54.6	23.71	8.06	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Partial separation of the GCL was observed at the normal stress of 5 psi and complete separation was oberved at the normal stresses of 20 and 45 psi.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

000091

SGI TESTING SERVICES, LLC

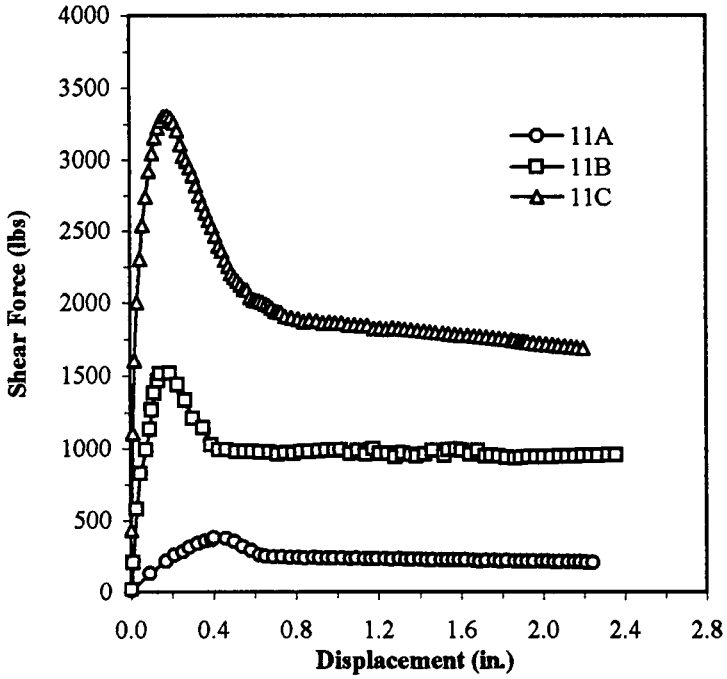
DATE OF TEST:	6 to 15 February 2002
FIGURE NO.	A-1
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02024
FILE NO.	

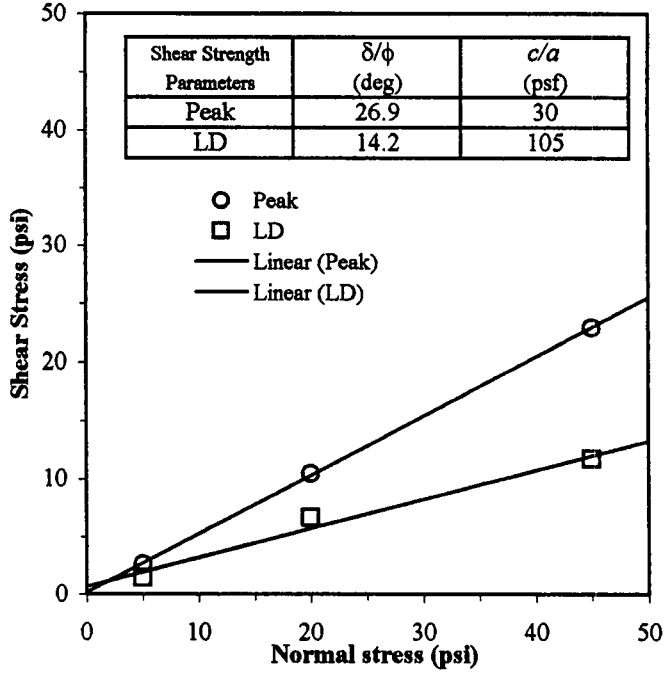
4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-14G: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-14 (Lot No. 200203LO/Roll No. 752)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-04 (Lot No. 7111748/Roll No. 103114222)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	26.9	30
LD	14.2	105

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking Stress (psi)	Soaking Time (hour)	Consolidation Stress (psi)	Consolidation Time (hour)	GCL ω_i (%)	GCL ω_f (%)	Shear Stress Measured τ_p (psi)	Shear Stress Measured τ_{LD} (psi)	Shear Stress Specified τ_p (psi)	Shear Stress Specified τ_{LD} (psi)	Failure Mode
11A	12 x 12	5.0	0.004	3	168	5	48	23.1	85.5	2.63	1.44	1.53 (17 deg)	1.06 (12 deg)	(1)
11B	12 x 12	20.0	0.004	3	168	20	48	23.1	66.7	10.51	6.64	6.11 (17 deg)	2.46 (7 deg)	(1)
11C	12 x 12	45.0	0.004	3	168	45	48	23.1	53.5	22.96	11.75	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

000092

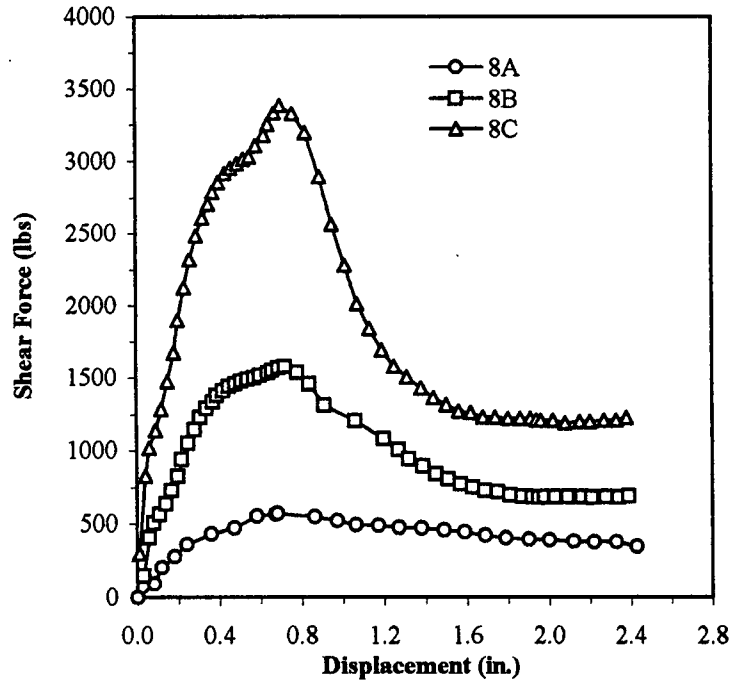
SGI TESTING SERVICES, LLC

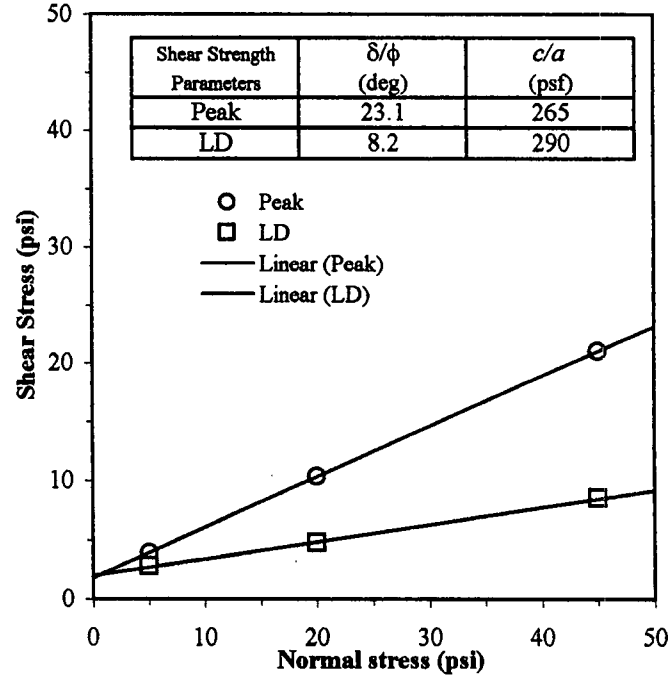
DATE OF TEST:	9 to 18 February 2002
FIGURE NO.	A-2
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02024
FILE NO.	

4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002
INTERNAL DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-15I: internal strength of Bentomat ST GCL (Sample No. GCL-02-15 (Lot No. 200203LO/Roll No. 796)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	23.1	265
LD	8.2	290

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
8A	12 x 12	5.0	0.004	3	168	5	48	22.2	97.4	3.97	2.79	1.53 (17 deg)	1.06 (12 deg)	(1)
8B	12 x 12	20.0	0.004	3	168	20	48	22.2	57.8	10.38	4.77	6.11 (17 deg)	2.46 (7 deg)	(1)
8C	12 x 12	45.0	0.004	3	168	45	48	22.2	45.5	21.04	8.50	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Partial separation of the GCL was observed at the normal stress of 5 psi and complete separation was oberved at the normal stresses of 20 and 45 psi.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

000093

SGI TESTING SERVICES, LLC

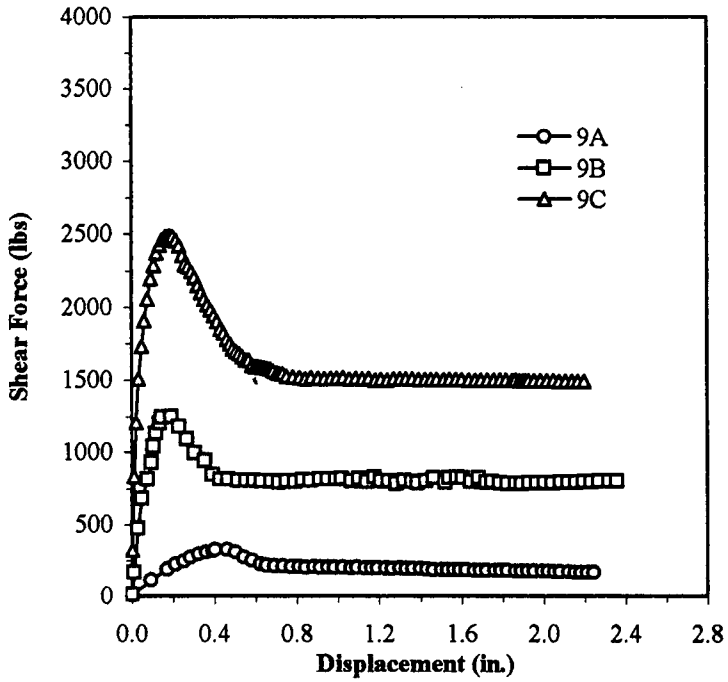
DATE OF TEST:	2 to 11 February 2002
FIGURE NO.	A-1
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02026
FILE NO.	

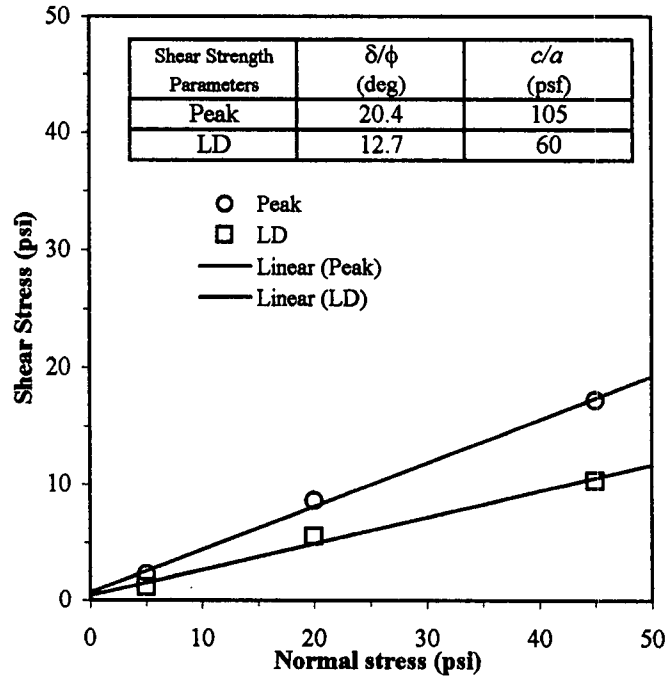
4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-15G: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-15 (Lot No. 200203LO/Roll No. 796)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-03 (Lot No. 7111748/Roll No. 103114207)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	20.4	105
LD	12.7	60

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
9A	12 x 12	5.0	0.004	3	168	5	48	22.2	94.0	2.28	1.16	1.53 (17 deg)	1.06 (12 deg)	(1)
9B	12 x 12	20.0	0.004	3	168	20	48	22.2	70.1	8.63	5.57	6.11 (17 deg)	2.46 (7 deg)	(1)
9C	12 x 12	45.0	0.004	3	168	45	48	22.2	63.9	17.26	10.35	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

000094

SGI TESTING SERVICES, LLC

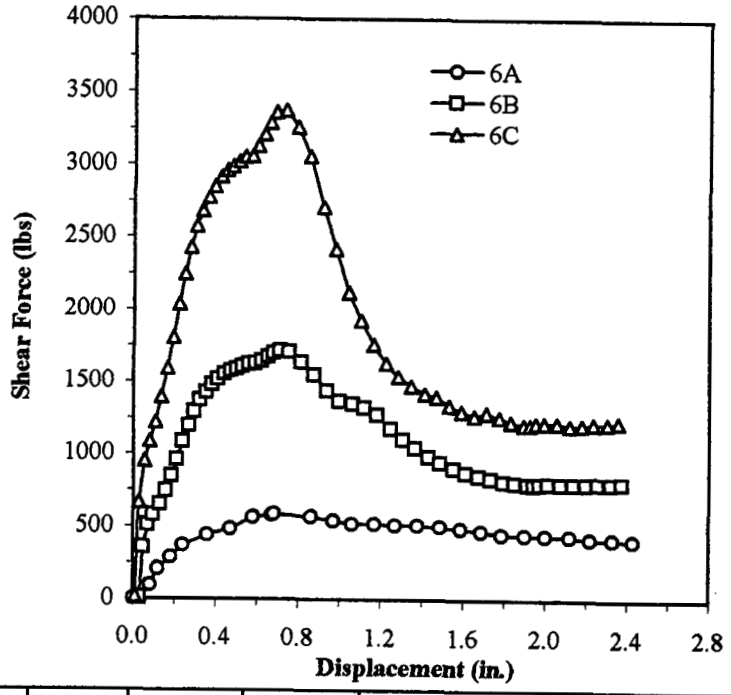
DATE OF TEST:	4 to 13 February 2002
FIGURE NO.	A-2
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02025
FILE NO.	

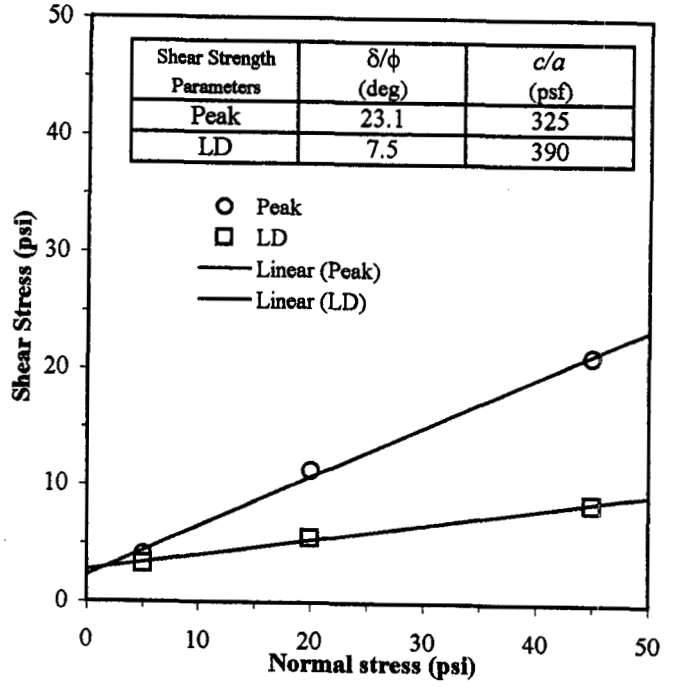
4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERNAL DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-16I: internal strength of Bentomat ST GCL (Sample No. GCL-02-16 (Lot No. 200203LO/Roll No. 839)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	23.1	325
LD	7.5	390

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
6A	12 x 12	5.0	0.004	3	168	5	48	22.6	83.3	4.08	3.23	1.53 (17 deg)	1.06 (12 deg)	(1)
6B	12 x 12	20.0	0.004	3	168	20	48	22.6	70.5	11.30	5.58	6.11 (17 deg)	2.46 (7 deg)	(1)
6C	12 x 12	45.0	0.004	3	168	45	48	22.6	46.8	21.23	8.54	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Partial separation of the GCL was observed at the normal stress of 5 psi and complete separation was oberved at the normal stresses of 20 and 45 psi.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

000095

SGI TESTING SERVICES, LLC

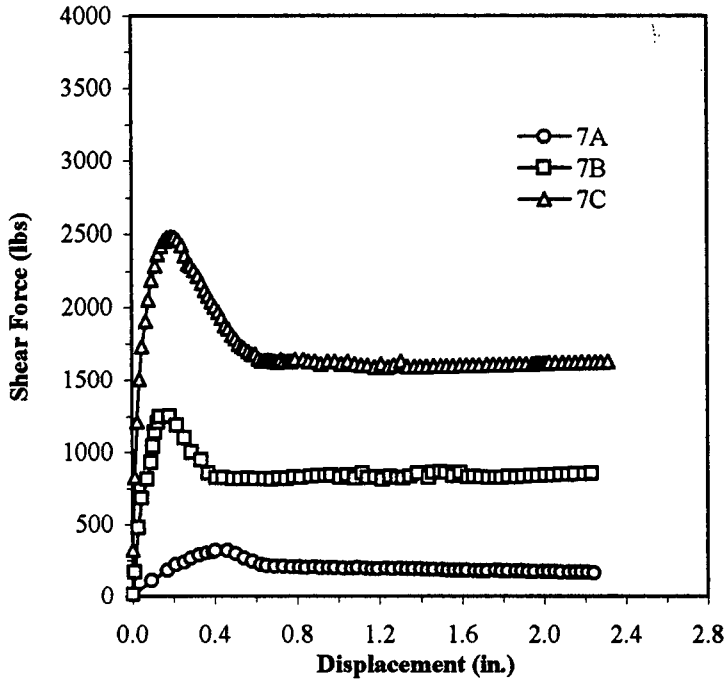
DATE OF TEST:	28 January to 6 February 2002
FIGURE NO.	A-1
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02026
FILE NO.	

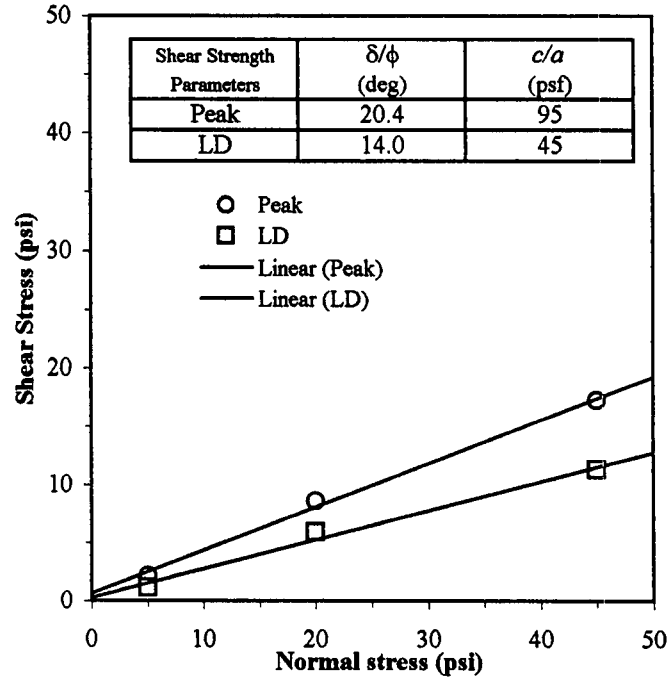
4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-16G: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-16 (Lot No. 200203LO/Roll No. 839)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-02 (Lot No. 7111749/Roll No. 103114197)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	20.4	95
LD	14.0	45

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
7A	12 x 12	5.0	0.004	3	168	5	48	22.6	81.6	2.22	1.15	1.53 (17 deg)	1.06 (12 deg)	(1)
7B	12 x 12	20.0	0.004	3	168	20	48	22.6	60.1	8.64	5.93	6.11 (17 deg)	2.46 (7 deg)	(1)
7C	12 x 12	45.0	0.004	3	168	45	48	22.6	51.3	17.24	11.30	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

960000

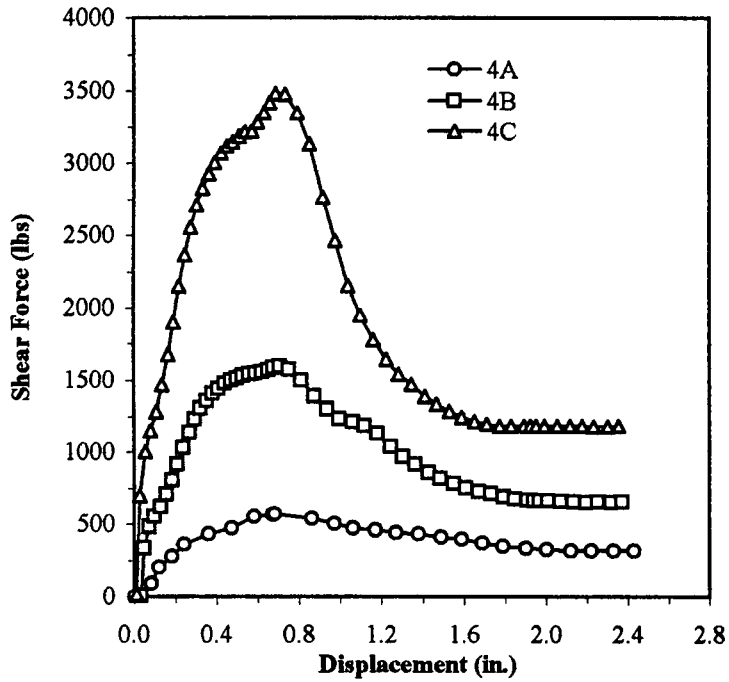
SGI TESTING SERVICES, LLC

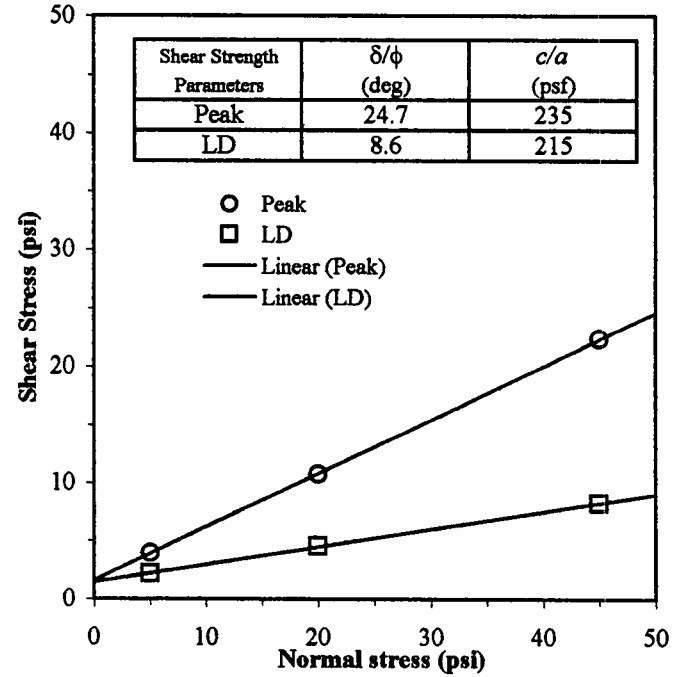
DATE OF TEST:	30 January to 8 February 2002
FIGURE NO.	A-2
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02026
FILE NO.	

4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002
INTERNAL DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-17I: internal strength of Bentomat ST GCL (Sample No. GCL-02-17 (Lot No. 200203LO/Roll No. 888)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	24.7	235
LD	8.6	215

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
4A	12 x 12	5.0	0.004	3	168	5	48	24.6	87.1	3.97	2.21	1.53 (17 deg)	1.06 (12 deg)	(1)
4B	12 x 12	20.0	0.004	3	168	20	48	24.6	75.3	10.76	4.55	6.11 (17 deg)	2.46 (7 deg)	(1)
4C	12 x 12	45.0	0.004	3	168	45	48	24.6	47.1	22.38	8.25	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Partial separation of the GCL was observed at the normal stress of 5 psi and complete separation was oberved at the normal stresses of 20 and 45 psi.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

000097

SGI TESTING SERVICES, LLC

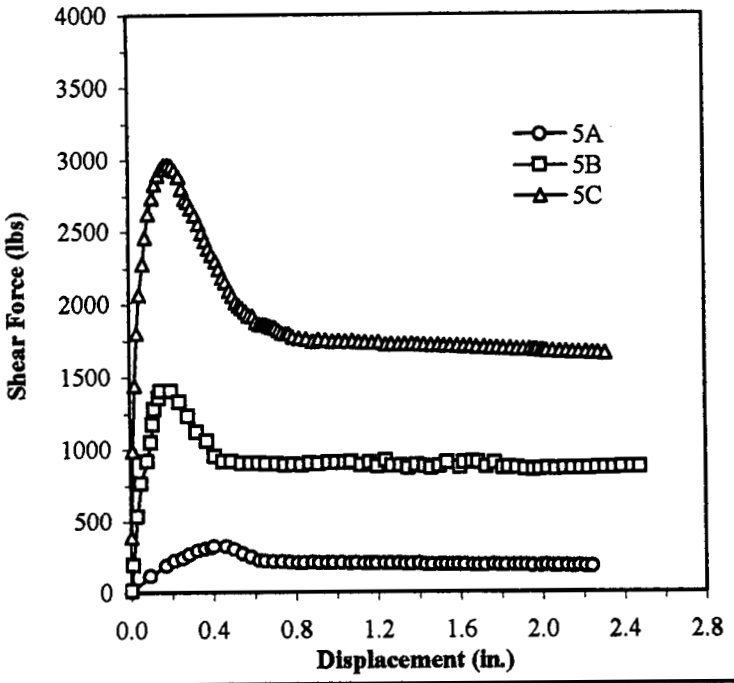
DATE OF TEST:	19 to 28 January 2002
FIGURE NO.	A-1
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02027
FILE NO.	

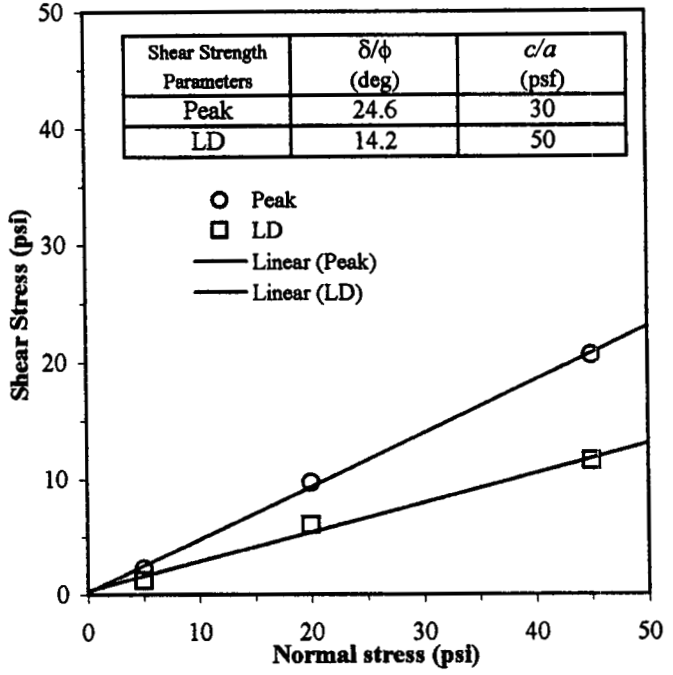
4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002

INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-17G: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-17 (Lot No. 200203LO/Roll No. 888)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-01 (Lot No. 7111749/Roll No. 103114187)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	24.6	30
LD	14.2	50

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking		Consolidation		GCL		Shear Stress Measured		Shear Stress Specified		Failure Mode
				Stress (psi)	Time (hour)	Stress (psi)	Time (hour)	ω_i (%)	ω_f (%)	τ_p (psi)	τ_{LD} (psi)	τ_p (psi)	τ_{LD} (psi)	
5A	12 x 12	5.0	0.004	3	168	5	48	24.6	78.4	2.24	1.23	1.53 (17 deg)	1.06 (12 deg)	(1)
5B	12 x 12	20.0	0.004	3	168	20	48	24.6	62.1	9.74	6.06	6.11 (17 deg)	2.46 (7 deg)	(1)
5C	12 x 12	45.0	0.004	3	168	45	48	24.6	52.3	20.62	11.53	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

0000098

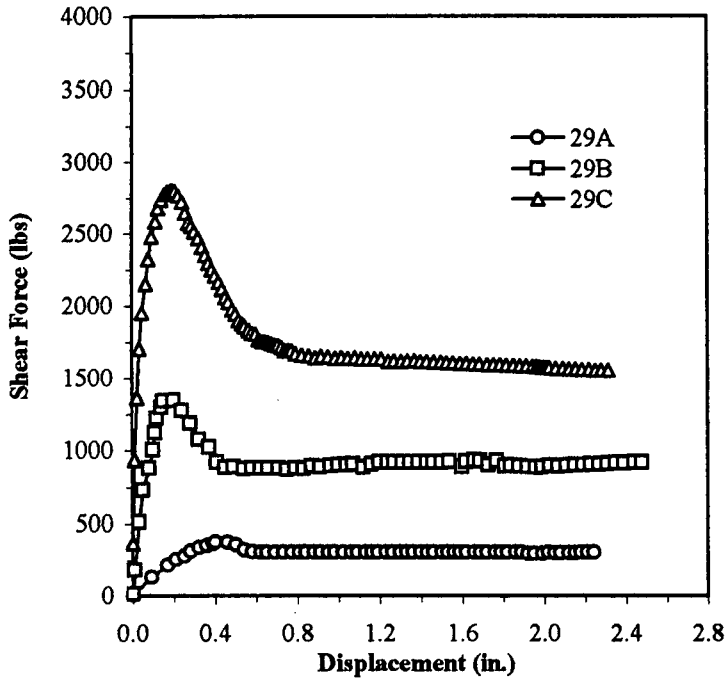
SGI TESTING SERVICES, LLC

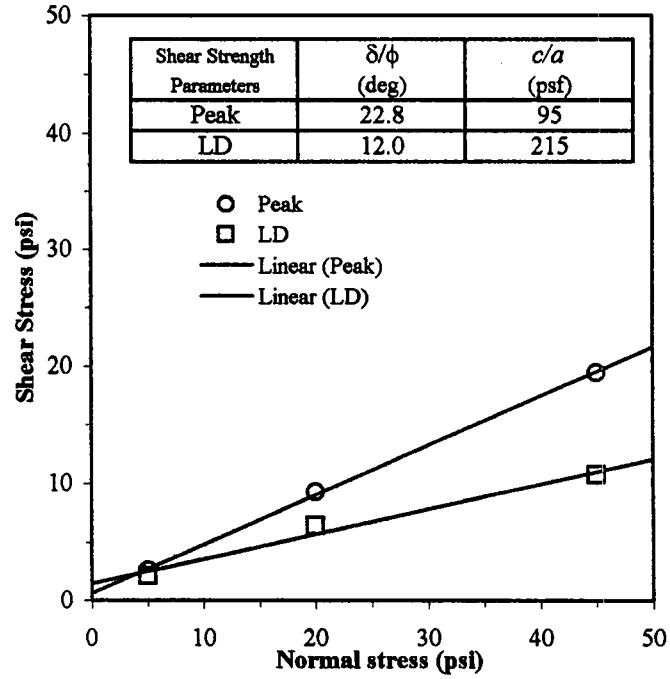
DATE OF TEST:	26 January to 4 February 2002
FIGURE NO.	A-2
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02027
FILE NO.	

4943

GEOSYNTEC CONSULTANTS, INC. - FERNALD OSDF CONSTRUCTION 2002
INTERFACE DIRECT SHEAR TESTING (ASTM D 6243)

Test Series 02-17GR: woven geotextile side of Bentomat ST GCL (Sample No. GCL-02-17 (Lot No. 200203LO/Roll No. 888)) against 80-mil GSE HDT geomembrane (Sample No. GML-02-18 (Lot No. 8820062/Roll No. 103114814)) under soaked, consolidated, and slow shear conditions





Shear Strength Parameters	δ/ϕ (deg)	c/a (psf)
Peak	22.8	95
LD	12.0	215

Test No.	Shear Box Size (in. x in.)	Normal Stress (psi)	Shear Rate (in./min)	Soaking Stress (psi)	Soaking Time (hour)	Consolidation Stress (psi)	Consolidation Time (hour)	GCL ω_i (%)	GCL ω_f (%)	Shear Stress Measured τ_p (psi)	Shear Stress Measured τ_{LD} (psi)	Shear Stress Specified τ_p (psi)	Shear Stress Specified τ_{LD} (psi)	Failure Mode
29A	12 x 12	5.0	0.004	3	168	5	48	24.6	81.3	2.61	2.13	1.53 (17 deg)	1.06 (12 deg)	(1)
29B	12 x 12	20.0	0.004	3	168	20	48	24.6	60.3	9.31	6.40	6.11 (17 deg)	2.46 (7 deg)	(1)
29C	12 x 12	45.0	0.004	3	168	45	48	24.6	51.8	19.47	10.77	13.76 (17 deg)	5.13 (6.5 deg)	(1)

Notes: (1) Sliding (i.e., shear failure) occurred at the GCL-geomembrane interface in each test.
(2) The reported total-stress parameters of friction angle and adhesion were determined from a best-fit line drawn through the test data. The large-displacement (LD) shear strength was calcualted using the shear force measured at 2 inches of displacement. The test results relate only to the samples and laboratory conditions tested.

660000

SGI TESTING SERVICES, LLC

DATE OF TEST:	23 March to 1 April 2002
FIGURE NO.	A-3
PROJECT NO.	SGI2002
DOCUMENT NO.	SGI02027
FILE NO.	

4943

Geomembrane

FEBRUARY 2002

023-3313

SUMMARY OF GEOMEMBRANE CONFORMANCE TEST RESULTS

GEOSYNTEC
FLUOR FERNALD
GEORGIA

SAMPLE DESIGNATION	Reference Value	GML 02-01	GML 02-02	GML 02-03	GML 02-04	GML 02-05	GML 02-06	GML 02-07	GML 02-08	GML 02-09	GML 02-10
THICKNESS (mils) ASTM D5994	>=80	79	81	80	81	80	81	80	83	84	84
PUNCTURE RESISTANCE (lbs) ASTM D4833	>=120	181.8	-	-	-	-	-	185.7	-	-	-
DENSITY (g/cc) ASTM D1505	>=0.940	0.944	0.944	0.945	0.944	0.943	0.945	0.944	0.944	0.943	0.944
CARBON BLACK CONTENT (%) ASTM D1603	2-3	2.29	2.24	2.46	2.16	2.31	2.29	2.35	2.30	2.24	2.27
CARBON BLACK DISPERSION (1) ASTM D5596	1 or 2	1	1	1	1	1	1	1	1	1	1
STRENGTH AT YIELD (ppi)	>=168	205.3	214.0	202.3	208.4	205.4	216.7	214.9	217.0	221.7	215.9
MD/TD (1) ASTM D638	>=168	216.1	213.9	208.5	212.2	213.0	221.5	220.4	224.2	227.2	223.7
STRENGTH AT BREAK (ppi)	>=120	231.6	251.4	246.4	237.3	232.7	232.4	241.4	240.0	250.5	240.4
MD/TD (1) ASTM D638	>=120	239.2	240.3	246.9	234.7	227.9	211.5	220.0	229.4	212.4	211.4
ELONGATION AT YIELD (%)	>=12	16.6	16.2	16.6	16.1	16.4	16.2	16.3	16.6	16.0	16.0
MD/TD (1) ASTM D638	>=12	16.8	15.2	16.4	15.3	15.2	16.0	15.5	15.2	14.8	15.7
ELONGATION AT BREAK (%)	>=100	498	538	490	501	495	456	501	504	502	517
MD/TD (1) ASTM D638	>=100	534	542	569	519	503	397	453	458	391	460

(1) MD/TD corresponds to Machine Direction / Transverse Direction.

FEBRUARY 2002

023-3313

SUMMARY OF GEOMEMBRANE CONFORMANCE TEST RESULTS

GEOSYNTEC
FLUOR FERNALD
GEORGIA

SAMPLE DESIGNATION	Reference Value	GML 02-11	GML 02-12	GML 02-13	GML 02-14	GML 02-15	GML 02-16	GML 02-17	GML 02-18	GML 02-19	GML 02-20
THICKNESS (mils) ASTM D5994	>=80	83	83	82	79	80	81	86	87	86	92
PUNCTURE RESISTANCE (lbs) ASTM D4833	>=120	185.5	-	179.5	181.5	185.3	179.2	-	-	-	-
DENSITY (g/cc) ASTM D1505	>=0.940	0.944	0.945	0.945	0.944	0.945	0.945	0.944	0.944	0.942	0.943
CARBON BLACK CONTENT (%) ASTM D1603	2-3	2.29	2.44	2.32	2.29	2.45	2.32	2.41	2.46	2.28	2.71
CARBON BLACK DISPERSION (1) ASTM D5596	1 or 2	1	1	1	1	1	1	1	1	1	1
STRENGTH AT YIELD (ppi)	>=168	217.3	210.4	208.8	211.2	208.4	205.4	209.2	224.7	219.3	217.9
MD/TD (1) ASTM D638	>=168	222.7	222.0	215.2	211.1	209.4	207.8	215.1	223.1	219.7	225.2
STRENGTH AT BREAK (ppi)	>=120	250.7	228.0	201.8	234.1	215.8	233.7	228.8	266.4	249.3	264.9
MD/TD (1) ASTM D638	>=120	208.9	225.2	208.4	199.8	189.8	188.6	219.3	233.7	238.6	271.5
ELONGATION AT YIELD (%)	>=12	16.5	16.3	15.5	15.9	15.7	15.7	16.7	16.2	16.1	17.2
MD/TD (1) ASTM D638	>=12	15.1	15.9	15.7	15.0	16.3	15.5	16.2	16.5	16.0	15.8
ELONGATION AT BREAK (%)	>=100	531	435	435	497	439	508	478	539	521	540
MD/TD (1) ASTM D638	>=100	462	435	432	413	367	385	445	443	478	570

(1) MD/TD corresponds to Machine Direction / Transverse Direction.

FEBRUARY 2002

023-3313

SUMMARY OF GEOMEMBRANE CONFORMANCE TEST RESULTS

GEOSYNTEC
FLUOR FERNALD
GEORGIA

SAMPLE DESIGNATION	Reference Value	GML 02-21	GML 02-22	GML 02-23	GML 02-24	GML 02-25	GML 02-26	GML 02-27	-	-	-
THICKNESS (mils) ASTM D5994	>=80	93	91	91	93	94	89	92	-	-	-
PUNCTURE RESISTANCE (lbs) ASTM D4833	>=120	-	-	-	-	-	-	-	-	-	-
DENSITY (g/cc) ASTM D1505	>=0.940	0.943	0.944	0.942	0.943	0.943	0.944	0.943	-	-	-
CARBON BLACK CONTENT (%) ASTM D1603	2-3	2.28	2.25	2.58	2.62	2.61	2.64	2.48	-	-	-
CARBON BLACK DISPERSION (1) ASTM D5596	1 or 2	1	1	1	1	1	1	1	-	-	-
STRENGTH AT YIELD (ppi)	>=168	234.5	222.5	217.2	220.2	220.8	233.1	233.3	-	-	-
MD/TD (1) ASTM D638	>=168	233.7	226.1	217.7	224.8	215.5	229.6	226.9	-	-	-
STRENGTH AT BREAK (ppi)	>=120	301.0	293.1	290.3	256.4	273.5	295.6	275.6	-	-	-
MD/TD (1) ASTM D638	>=120	267.7	251.2	272.7	270.6	245.9	231.9	266.3	-	-	-
ELONGATION AT YIELD (%)	>=12	16.9	17.2	17.7	17.3	17.1	16.6	17.3	-	-	-
MD/TD (1) ASTM D638	>=12	16.4	16.5	16.6	16.2	16.9	16.2	16.6	-	-	-
ELONGATION AT BREAK (%)	>=100	601	594	597	523	557	581	548	-	-	-
MD/TD (1) ASTM D638	>=100	551	511	591	578	515	453	562	-	-	-

(1) MD/TD corresponds to Machine Direction / Transverse Direction.

FEBRUARY 2002 023-3313

GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-01

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)	PUNCTURE RESISTANCE (lbs)	
		0.944				
1.	74	0.944	1	2.29	185.8	185.3
2.	83	0.944	1	2.28	179.4	178.0
3.	77		1		188.8	175.1
4.	79		1		187.0	174.9
5.	77		2		181.9	180.1
6.	82		1		184.8	
7.	80		2		187.1	
8.	77		1		182.4	
9.	77		1		172.6	
10.	82		1		183.9	
AVG	79	0.944	1	2.29	181.8	

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	205.6	219.8	17.9	16.6	251.1	263.4	543.2	577.5
2.	212.9	221.5	17.4	17.6	253.1	239.4	525.8	530.0
3.	205.9	218.7	15.6	16.9	241.0	275.3	520.0	613.9
4.	196.7	210.2	16.1	16.6	242.2	229.5	533.7	511.5
5.	205.6	210.3	15.8	16.1	170.5	188.2	365.5	435.8
AVG	205.3	216.1	16.6	16.8	231.6	239.2	498	534

FEBRUARY 2002 023-3313

GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-02

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.945		
1.	77	0.944	1	2.24
2.	80	0.944	1	2.23
3.	80		1	
4.	83		1	
5.	79		2	
6.	81		1	
7.	82		1	
8.	84		1	
9.	82		1	
10.	79		2	
AVG	81	0.944	1	2.24

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	216.1	217.1	16.9	16.1	239.3	220.9	508.6	486.0
2.	209.1	208.7	16.1	15.8	251.7	257.9	551.7	602.1
3.	215.5	191.9	15.6	12.5	250.9	208.1	537.6	489.1
4.	215.2	227.9	16.7	16.1	267.1	277.8	569.7	613.1
5.	214.1	223.7	15.6	15.6	247.9	237.0	523.4	521.3
AVG	214.0	213.9	16.2	15.2	251.4	240.3	538	542

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GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-03

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.945		
1.	82	0.945	1	2.47
2.	80	0.944	2	2.44
3.	82		1	
4.	82		1	
5.	77		1	
6.	76		1	
7.	82		1	
8.	79		1	
9.	76		1	
10.	85		1	
AVG	80	0.945	1	2.46

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	205.2	211.3	17.0	17.2	156.3	245.7	61.6	577.9
2.	204.0	212.6	16.2	16.1	291.9	230.4	647.1	511.1
3.	203.0	211.8	16.4	16.1	295.8	280.7	648.7	637.3
4.	196.9	203.0	17.5	16.4	242.8	243.5	548.2	569.9
5.	202.3	203.8	15.7	16.1	245.2	234.2	542.7	546.6
AVG	202.3	208.5	16.6	16.4	246.4	246.9	490	569

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GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-04

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.944		
1.	80	0.944	1	2.23
2.	81	0.944	1	2.09
3.	79		1	
4.	77		1	
5.	79		1	
6.	81		1	
7.	81		1	
8.	84		1	
9.	85		1	
10.	82		1	
AVG	81	0.944	1	2.16

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	211.7	210.7	15.0	15.0	249.0	216.3	526.8	470.5
2.	205.7	214.5	17.4	15.5	212.9	253.6	462.8	566.1
3.	219.3	215.9	17.1	15.5	246.5	249.3	501.8	565.3
4.	205.9	211.8	15.8	15.7	235.8	242.9	501.6	540.5
5.	199.5	208.1	15.0	15.0	242.4	211.5	512.4	450.3
AVG	208.4	212.2	16.1	15.3	237.3	234.7	501	519

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GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-05

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.944		
1.	86	0.943	1	2.29
2.	82	0.943	1	2.32
3.	82		2	
4.	78		1	
5.	79		1	
6.	82		1	
7.	80		2	
8.	79		1	
9.	77		2	
10.	79		1	
AVG	80	0.943	1	2.31

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	216.3	218.0	16.0	16.1	208.7	234.9	422.9	527.4
2.	206.7	219.4	17.3	15.6	223.5	236.1	486.5	527.4
3.	214.9	208.9	16.0	13.0	270.1	223.8	570.5	491.7
4.	200.2	209.6	16.3	14.8	235.5	220.3	515.5	471.2
5.	188.7	208.9	16.5	16.6	225.5	224.6	477.9	494.9
AVG	205.4	213.0	16.4	15.2	232.7	227.9	495	503

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GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-06

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.945		
1.	83	0.945	1	2.30
2.	79	0.945	1	2.28
3.	82		1	
4.	82		1	
5.	85		1	
6.	80		1	
7.	80		1	
8.	81		1	
9.	81		1	
10.	79		1	
AVG	81	0.945	1	2.29

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	225.0	224.0	16.4	15.1	211.6	172.3	418.1	137.9
2.	211.5	224.3	16.1	16.4	224.8	232.9	463.4	498.0
3.	216.5	226.9	15.6	15.9	269.0	240.4	573.9	494.5
4.	219.0	221.9	15.6	16.7	282.6	194.9	574.9	399.7
5.	211.6	210.4	17.2	16.1	174.2	217.1	247.2	456.5
AVG	216.7	221.5	16.2	16.0	232.4	211.5	456	397

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GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-07

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)	PUNCTURE RESISTANCE (lbs)	
		0.945				
1.	78	0.944	1	2.34	190.2	182.4
2.	75	0.944	1	2.35	186.6	184.0
3.	80		1		187.8	180.3
4.	77		1		179.1	181.2
5.	83		1		192.8	191.5
6.	84		1		189.5	
7.	84		1		188.1	
8.	80		1		181.5	
9.	77		1		184.3	
10.	82		1		186.4	
AVG	80	0.944	1	2.35	185.7	

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	222.9	214.5	17.2	15.7	242.3	159.4	500.9	175.4
2.	212.3	225.1	15.6	16.2	270.0	237.8	577.1	519.9
3.	218.7	224.6	15.6	14.9	221.6	215.9	436.9	455.5
4.	215.8	225.7	15.6	15.1	264.6	259.8	566.1	571.7
5.	204.7	212.2	17.4	15.4	208.7	237.1	423.4	541.2
AVG	214.9	220.4	16.3	15.5	241.4	222.0	501	453

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GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-08

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.945		
1.	81	0.944	1	2.35
2.	80	0.944	1	2.24
3.	78		1	
4.	79		1	
5.	86		1	
6.	83		1	
7.	89		2	
8.	84		1	
9.	84		1	
10.	84		1	
AVG	83	0.944	1	2.30

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	215.4	217.7	16.4	15.5	232.7	160.6	493.6	157.8
2.	216.7	221.6	17.1	16.3	270.0	257.8	573.3	581.8
3.	220.1	223.3	16.1	14.5	232.5	238.0	481.3	516.3
4.	214.8	232.1	16.4	15.0	261.5	250.5	551.6	531.0
5.	218.2	226.3	17.1	14.7	203.2	240.1	418.8	501.5
AVG	217.0	224.2	16.6	15.2	240.0	229.4	504	458

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GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-09

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.943		
1.	87	0.943	1	2.26
2.	83	0.943	1	2.21
3.	79		2	
4.	83		1	
5.	86		1	
6.	81		1	
7.	85		1	
8.	83		1	
9.	87		1	
10.	85		1	
AVG	84	0.943	1	2.24

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	224.3	229.4	15.2	15.0	176.0	163.0	233.6	55.5
2.	223.7	235.9	15.4	15.8	282.8	281.5	596.8	610.7
3.	213.6	229.6	16.4	15.0	259.7	252.8	577.1	563.2
4.	227.7	223.8	16.2	14.5	262.9	182.7	534.8	307.9
5.	219.1	217.5	16.7	13.7	270.9	182.1	567.3	415.9
AVG	221.7	227.2	16.0	14.8	250.5	212.4	502	391

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GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-10

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.945		
1.	84	0.944	2	2.26
2.	91	0.944	1	2.27
3.	81		1	
4.	81		1	
5.	87		2	
6.	88		1	
7.	84		1	
8.	79		1	
9.	80		1	
10.	88		1	
AVG	84	0.944	1	2.27

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	210.2	225.0	15.7	15.7	215.7	203.9	473.8	443.1
2.	208.5	221.8	16.7	15.9	244.6	216.2	545.8	469.0
3.	230.8	234.2	16.2	15.7	261.9	261.7	541.5	559.0
4.	220.8	220.1	16.2	15.2	246.6	177.6	517.0	390.6
5.	209.3	217.6	15.4	16.2	233.1	197.5	506.6	437.5
AVG	215.9	223.7	16.0	15.7	240.4	211.4	517	460

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GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-11

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)	PUNCTURE RESISTANCE (lbs)	
		0.944				
1.	83	0.944	1	2.29	186.5	182.1
2.	70	0.944	1	2.28	181.0	183.1
3.	85		1		187.1	182.6
4.	84		1		186.3	186.4
5.	84		1		188.9	177.7
6.	88		1		184.4	
7.	85		1		190.7	
8.	84		1		185.4	
9.	82		1		189.7	
10.	82		1		191.3	
AVG	83	0.944	1	2.29	185.5	

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	215.9	221.5	17.3	16.1	227.7	187.2	468.2	404.0
2.	222.7	226.1	17.0	14.5	274.2	175.2	570.2	380.3
3.	225.2	226.0	15.7	14.0	268.9	242.6	563.4	528.8
4.	206.7	216.9	16.7	15.0	232.7	235.0	514.2	536.0
5.	215.8	223.0	15.7	16.1	249.8	204.4	541.4	462.8
AVG	217.3	222.7	16.5	15.1	250.7	208.9	531	462

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GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-12

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.946		
1.	76	0.945	1	2.39
2.	83	0.945	1	2.49
3.	86		1	
4.	76		1	
5.	89		1	
6.	84		1	
7.	86		1	
8.	88		1	
9.	79		1	
10.	83		1	
AVG	83	0.945	1	2.44

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	210.6	219.5	17.0	15.7	165.8	154.7	88.2	61.1
2.	203.8	221.8	16.4	16.2	219.1	229.5	469.6	497.6
3.	212.7	225.5	16.2	16.8	271.7	255.4	587.2	567.7
4.	218.1	218.8	16.4	14.7	248.0	234.4	513.9	507.6
5.	206.6	224.2	15.7	16.0	235.3	252.0	514.2	543.3
AVG	210.4	222.0	16.3	15.9	228.0	225.2	435	435

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GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-13

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)	PUNCTURE RESISTANCE (lbs)	
		0.945				
1.	73	0.945	1	2.33	185.7	182.4
2.	87	0.945	1	2.31	178.7	173.6
3.	75		1		181.5	174.3
4.	80		1		175.6	186.2
5.	90		2		181.3	174.9
6.	89		1		183.6	
7.	85		1		183.1	
8.	81		1		183.6	
9.	86		1		165.9	
10.	73		1		182.7	
AVG	82	0.945	1	2.32	179.5	

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	198.6	206.9	16.2	15.8	190.1	151.7	425.5	175.7
2.	210.0	209.0	16.7	15.3	188.9	223.9	394.9	517.4
3.	205.4	234.3	14.1	16.5	223.2	272.7	476.7	587.0
4.	217.7	219.7	14.9	15.5	174.9	177.9	369.4	390.4
5.	212.5	205.9	15.7	15.5	232.1	216.0	507.7	488.4
AVG	208.8	215.2	15.5	15.7	201.8	208.4	435	432

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GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-14

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)	PUNCTURE RESISTANCE (lbs)	
		0.945				
1.	79	0.944	2	2.30	186.5	180.1
2.	76	0.944	1	2.28	184.5	183.0
3.	83		1		181.9	177.7
4.	83		1		180.8	181.2
5.	77		1		175.1	177.4
6.	73		1		178.7	
7.	80		1		188.0	
8.	77		1		181.2	
9.	79		1		181.4	
10.	82		1		184.7	
AVG	79	0.944	1	2.29	181.5	

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	211.5	216.2	15.4	15.3	255.6	204.7	534.1	463.4
2.	217.1	222.8	15.7	15.9	237.8	248.2	495.4	544.4
3.	213.6	207.7	15.9	15.1	198.0	158.5	400.6	375.6
4.	215.0	203.4	16.7	14.3	252.9	163.6	546.6	167.1
5.	198.9	205.6	15.7	14.6	226.4	223.8	509.6	514.7
AVG	211.2	211.1	15.9	15.0	234.1	199.8	497	413

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GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-15

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)	PUNCTURE RESISTANCE (lbs)	
		0.945				
1.	74	0.945	1	2.45	187.4	174.7
2.	80	0.945	1	2.44	186.5	179.6
3.	74		1		184.3	183.9
4.	83		1		187.2	182.2
5.	77		1		191.5	186.3
6.	83		1		188.3	
7.	84		1		185.2	
8.	85		1		190.3	
9.	72		1		184.5	
10.	84		1		188.3	
AVG	80	0.945	1	2.45	185.3	

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	204.7	208.9	16.1	16.8	240.4	155.2	524.3	66.2
2.	215.6	221.2	16.1	16.3	200.4	248.6	402.5	550.7
3.	217.6	208.7	16.6	15.5	251.4	195.9	538.0	429.1
4.	204.7	205.3	14.3	16.3	220.8	153.8	462.3	335.4
5.	199.4	203.1	15.3	16.5	165.9	195.4	268.0	455.4
AVG	208.4	209.4	15.7	16.3	215.8	189.8	439	367

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GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-16

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)	PUNCTURE RESISTANCE (lbs)	
		0.945				
1.	91	0.945	1	2.29	188.2	172.5
2.	77	0.944	1	2.34	182.0	173.9
3.	74		1		181.2	179.0
4.	86		1		177.9	180.1
5.	82		2		179.9	181.9
6.	79		1		180.3	
7.	81		1		182.3	
8.	77		1		178.4	
9.	79		1		176.3	
10.	81		1		174.2	
AVG	81	0.945	1	2.32	179.2	

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	210.2	209.3	16.7	16.0	238.1	212.4	512.5	476.1
2.	206.2	201.7	15.2	16.0	236.6	158.6	508.6	160.4
3.	204.2	207.2	15.2	15.3	235.1	157.0	515.1	347.3
4.	203.5	210.0	16.5	15.3	230.5	218.4	515.1	491.9
5.	202.8	211.0	14.7	15.0	228.3	196.7	489.8	451.6
AVG	205.4	207.8	15.7	15.5	233.7	188.6	508	385

FEBRUARY 2002 023-3313

GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-17

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.945		
1.	87	0.944	1	2.37
2.	84	0.944	1	2.44
3.	90		1	
4.	85		1	
5.	86		1	
6.	84		1	
7.	88		1	
8.	82		1	
9.	84		1	
10.	88		1	
AVG	86	0.944	1	2.41

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	206.5	214.0	16.5	15.6	176.1	241.8	370.2	530.5
2.	211.9	218.3	16.7	16.9	240.0	178.5	498.0	396.2
3.	213.7	218.3	16.7	16.4	267.9	271.7	558.0	585.7
4.	202.5	210.2	17.0	15.6	227.8	250.5	484.4	560.2
5.	211.6	214.8	16.7	16.6	232.1	154.1	479.0	154.4
AVG	209.2	215.1	16.7	16.2	228.8	219.3	478	445

MARCH 2002 023-3313

GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-18

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.945		
1.	92	0.944	1	2.46
2.	78	0.944	1	2.46
3.	88		1	
4.	85		1	
5.	88		1	
6.	86		1	
7.	86		1	
8.	92		1	
9.	92		1	
10.	91		1	
AVG	87	0.944	1	2.46

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	221.0	219.7	15.6	17.0	267.3	158.1	562.1	63.5
2.	226.2	221.7	15.9	15.7	265.3	248.8	531.2	530.5
3.	229.1	227.1	16.6	17.0	259.5	267.5	516.6	568.1
4.	226.1	223.2	16.4	16.5	258.2	247.7	510.6	524.6
5.	221.3	223.8	16.4	16.2	281.7	246.5	573.2	526.6
AVG	224.7	223.1	16.2	16.5	266.4	233.7	539	443

MARCH 2002 023-3313

GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-19

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.942		
1.	86	0.942	1	2.28
2.	81	0.943	2	2.27
3.	91		1	
4.	87		1	
5.	82		1	
6.	86		1	
7.	85		2	
8.	87		1	
9.	87		1	
10.	88		1	
AVG	86	0.942	1	2.28

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	226.2	216.3	16.1	15.7	257.3	165.9	514.0	205.4
2.	211.5	215.7	16.1	17.0	243.9	283.3	523.2	602.1
3.	218.5	233.8	15.8	15.4	248.0	272.3	547.7	570.1
4.	223.5	216.0	16.1	16.0	211.3	237.2	412.5	503.6
5.	216.7	216.5	16.3	16.0	286.1	234.3	607.3	508.4
AVG	219.3	219.7	16.1	16.0	249.3	238.6	521	478

MARCH 2002 023-3313

GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-20

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.943		
1.	95	0.943	1	2.71
2.	96	0.942	1	2.71
3.	95		1	
4.	93		1	
5.	91		1	
6.	88		1	
7.	82		1	
8.	96		1	
9.	95		1	
10.	91		1	
AVG	92	0.943	1	2.71

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	223.8	220.6	18.1	15.6	258.2	280.4	527.3	604.8
2.	209.6	221.2	16.3	16.1	243.9	284.0	504.1	618.5
3.	224.1	241.4	17.1	16.4	294.5	263.1	599.1	506.7
4.	227.3	225.7	16.8	16.4	300.9	278.6	601.5	585.5
5.	204.7	216.9	17.6	14.6	227.0	251.3	465.5	532.6
AVG	217.9	225.2	17.2	15.8	264.9	271.5	540	570

MARCH 2002 023-3313

GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-21

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.943		
1.	93	0.943	1	2.31
2.	86	0.943	1	2.25
3.	90		1	
4.	98		1	
5.	92		1	
6.	94		1	
7.	92		1	
8.	93		1	
9.	98		1	
10.	93		1	
AVG	93	0.943	1	2.28

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	228.6	240.7	16.3	17.1	263.4	270.6	540.6	556.1
2.	230.1	231.4	17.6	14.8	292.3	248.9	600.3	513.3
3.	242.4	237.6	16.8	16.1	283.4	269.1	557.1	547.0
4.	244.2	228.5	17.6	16.9	338.3	291.2	648.3	609.9
5.	227.0	230.4	16.3	16.9	327.7	258.8	658.2	527.6
AVG	234.5	233.7	16.9	16.4	301.0	267.7	601	551

MARCH 2002 023-3313

GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-22

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.944		
1.	88	0.944	1	2.24
2.	94	0.943	1	2.26
3.	97		2	
4.	88		1	
5.	95		1	
6.	86		1	
7.	87		1	
8.	98		1	
9.	85		2	
10.	89		1	
AVG	91	0.944	1	2.25

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	227.8	226.0	17.8	16.8	298.1	250.6	598.1	525.4
2.	219.8	220.9	16.0	16.8	304.1	261.1	632.1	577.2
3.	232.3	239.0	17.3	16.6	308.5	299.7	614.1	623.7
4.	219.0	229.4	17.3	15.8	256.9	269.9	518.8	565.7
5.	213.8	215.0	17.8	16.6	297.9	174.6	604.6	261.9
AVG	222.5	226.1	17.2	16.5	293.1	251.2	594	511

MARCH 2002 023-3313

GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-23

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.942		
1.	92	0.942	1	2.60
2.	91	0.942	1	2.55
3.	94		1	
4.	87		1	
5.	83		2	
6.	88		1	
7.	90		1	
8.	94		1	
9.	93		1	
10.	97		1	
AVG	91	0.942	1	2.58

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	214.1	221.6	17.6	15.9	250.5	299.9	520.4	657.1
2.	214.5	215.0	18.4	16.4	296.8	286.9	624.1	633.9
3.	224.2	219.6	16.8	16.4	317.0	258.6	640.9	565.8
4.	221.4	216.0	17.6	16.9	322.7	247.5	656.1	513.9
5.	211.6	216.1	18.1	17.5	264.7	270.4	542.9	584.1
AVG	217.2	217.7	17.7	16.6	290.3	272.7	597	591

MARCH 2002 023-3313

GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-24

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.944		
1.	91	0.943	1	2.63
2.	86	0.942	1	2.61
3.	93		1	
4.	92		1	
5.	99		1	
6.	90		1	
7.	93		1	
8.	99		1	
9.	100		1	
10.	85		1	
AVG	93	0.943	1	2.62

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	217.5	231.2	17.1	16.7	211.6	273.1	430.1	584.8
2.	221.7	225.6	17.4	16.7	296.5	288.1	626.6	624.6
3.	228.6	226.6	17.9	15.9	289.0	257.5	585.3	545.3
4.	221.4	225.4	17.1	16.1	243.4	246.2	482.3	510.6
5.	211.9	215.0	17.1	15.4	241.3	287.9	488.4	626.4
AVG	220.2	224.8	17.3	16.2	256.4	270.6	523	578

MARCH 2002 023-3313

GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-25

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.943		
1.	91	0.943	2	2.61
2.	94	0.942	1	2.61
3.	95		1	
4.	97		1	
5.	94		1	
6.	91		1	
7.	91		1	
8.	92		1	
9.	98		1	
10.	94		1	
AVG	94	0.943	1	2.61

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	215.3	221.4	17.1	15.5	256.2	213.5	532.3	442.5
2.	228.7	213.8	17.1	17.3	263.6	244.3	524.8	520.4
3.	226.4	220.4	16.5	16.8	311.0	269.7	630.8	567.2
4.	219.6	211.8	17.1	17.6	273.9	250.9	559.5	527.5
5.	213.8	210.3	17.7	17.1	262.8	251.3	535.7	516.7
AVG	220.8	215.5	17.1	16.9	273.5	245.9	557	515

MARCH 2002 023-3313

GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-26

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.943		
1.	96	0.944	1	2.54
2.	84	0.944	1	2.74
3.	85		1	
4.	88		1	
5.	85		1	
6.	88		1	
7.	93		1	
8.	93		1	
9.	91		1	
10.	92		1	
AVG	89	0.944	1	2.64

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	237.6	235.2	17.0	16.4	302.8	259.3	588.7	535.9
2.	235.5	235.5	17.0	16.4	276.3	172.9	533.0	198.7
3.	230.5	233.7	16.0	15.6	299.0	266.8	600.3	555.4
4.	235.0	224.7	16.2	15.6	292.4	196.3	569.5	404.1
5.	227.1	218.8	17.0	16.9	307.4	264.3	611.8	572.6
AVG	233.1	229.6	16.6	16.2	295.6	231.9	581	453

MARCH 2002 023-3313

GEOMEMBRANE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
SAMPLE NUMBER: GML-02-27

	THICKNESS (mils)	DENSITY (g/cc)	CARBON BLACK DISPERSION (rating)	CARBON BLACK CONTENT (%)
		0.944		
1.	99	0.943	1	2.51
2.	91	0.943	1	2.44
3.	98		2	
4.	99		1	
5.	93		1	
6.	92		1	
7.	88		2	
8.	87		1	
9.	84		1	
10.	86		1	
AVG	92	0.943	1	2.48

	YIELD STRENGTH (lb/in. width)		ELONGATION AT YIELD (%)		BREAK STRENGTH (lb/in. width)		ELONGATION AT BREAK (%)	
	MD	TD	MD	TD	MD	TD	MD	TD
1.	240.6	227.2	17.7	15.5	284.0	276.8	561.0	587.9
2.	238.8	222.8	16.9	17.5	260.5	268.7	492.8	587.1
3.	238.0	234.6	16.7	17.0	304.4	257.6	602.0	531.9
4.	223.6	221.4	17.9	16.5	262.0	274.2	542.3	590.5
5.	225.4	228.6	17.2	16.7	266.9	254.0	540.7	512.4
AVG	233.3	226.9	17.3	16.6	275.6	266.3	548	562

Geotextile

7 oz/yd^2

MARCH 2002

023-3313

SUMMARY OF 7 oz. GEOTEXTILE CONFORMANCE TEST RESULTS

GEOSYNTEC
FLUOR FERNALD
GEORGIA

SAMPLE DESIGNATION	REFERENCE VALUE	GT7 02-01	GT7 02-02	GT7 02-03	GT7 02-04	GT7 02-05	GT7 02-06	GT7 02-07	GT7 02-08	GT7 02-09	GT7 02-10
MASS/UNIT AREA (oz/yd²) ASTM D5261	>=7	8.0	7.6	7.9	7.7	8.3	8.3	8.2	8.4	8.4	8.5
GRAB STRENGTH (lbs)	>=180	226.7	201.6	210.9	210.9	244.0	213.8	220.1	242.0	229.9	234.1
MD/TD (1) ASTM D4632	>=180	226.6	243.2	241.8	238.0	263.6	267.3	281.8	282.7	275.5	264.3
GRAB ELONGATION	-	61	65	71	69	68	78	77	76	73	74
(%) ASTM D4632	-	66	63	74	76	81	78	72	75	73	70
TRAPEZOIDAL TEAR STRENGTH	>=75	83.2	83.0	81.7	86.6	92.6	90.3	87.1	90.2	91.6	96.0
(lbs) MD/TD (1) ASTM D4533	>=75	103.5	119.1	110.7	110.7	121.6	126.5	132.3	131.3	134.4	132.8
BURST STRENGTH (psi) ASTM D3786	>=350	405	373	366	357	402	409	389	391	399	414
PUNCTURE STRENGTH (lbs) ASTM D4833	>=75	130.2	113.5	120.3	115.4	128.1	123.5	128.0	120.9	128.7	131.1
APPARENT OPENING SIZE (mm)	<=0.212	0.145	0.180	0.174	0.180	0.180	0.180	0.150	0.180	0.180	0.174
(U.S. SIEVE NO.) ASTM D4751	>=70	100	80	80	80	80	80	100	80	80	80
PERMITTIVITY (sec-1)	>=0.5	1.71	2.04	2.02	1.99	2.07	1.71	1.73	1.96	2.14	1.93
PERMEABILITY (cm/sec) (2) ASTM D4491	-	0.44	0.53	0.54	0.55	0.57	0.47	0.48	0.54	0.58	0.55

(1) MD/TD corresponds to Machine Direction / Transverse Direction.
(2) Permeability calculated by multiplying measured thickness by permittivity.

TEXTSUM.xls

MARCH 2002

023-3313

SUMMARY OF 7 oz. GEOTEXTILE CONFORMANCE TEST RESULTS

GEOSYNTEC
FLUOR FERNALD
GEORGIA

SAMPLE DESIGNATION	REFERENCE VALUE	GT7 02-11	GT7 02-13	-	-	-	-	-	-	-	-
MASS/UNIT AREA (oz/yd²) ASTM D5261	>=7	7.9	9.4	-	-	-	-	-	-	-	-
GRAB STRENGTH (lbs)	>=180	177.4	273.1	-	-	-	-	-	-	-	-
MD/TD (1) ASTM D4632	>=180	237.7	241.7	-	-	-	-	-	-	-	-
GRAB ELONGATION	-	80	65	-	-	-	-	-	-	-	-
(%) ASTM D4632	-	86	87	-	-	-	-	-	-	-	-
TRAPEZOIDAL TEAR STRENGTH	>=75	76.1	111.0	-	-	-	-	-	-	-	-
(lbs) MD/TD (1) ASTM D4533	>=75	108.5	114.4	-	-	-	-	-	-	-	-
BURST STRENGTH (psi) ASTM D3786	>=350	334	402	-	-	-	-	-	-	-	-
PUNCTURE STRENGTH (lbs) ASTM D4833	>=75	109.4	138.7	-	-	-	-	-	-	-	-
APPARENT OPENING SIZE (mm)	<=0.212	0.168	0.135	-	-	-	-	-	-	-	-
(U.S. SIEVE NO.) ASTM D4751	>=70	80	100	-	-	-	-	-	-	-	-
PERMITTIVITY (sec-1)	>=0.5	1.05	0.88	-	-	-	-	-	-	-	-
PERMEABILITY (cm/sec) (2) ASTM D4491	-	0.29	0.33	-	-	-	-	-	-	-	-

(1) MD/TD corresponds to Machine Direction / Transverse Direction.
(2) Permeability calculated by multiplying measured thickness by permittivity.

TEXTSUM.xls

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT7-02-01

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	1.59	0.125	10.52	430
2.	1.77	0.150	8.04	350
3.	1.75	0.150	7.45	395
4.	1.73	0.150	7.23	415
5.		0.150	7.05	400
6.			7.15	385
AVG	1.71	0.145	7.30	405
8.			7.66	415
9.	PERMEABILITY	EQUIVALENT	8.27	425
10.	(cm/sec)	SIEVE SIZE	9.82	425
AVG	0.00	100	8.0	405

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	330.7	209.5	49.0	74.7	102.8	85.1	132.2	96.5
2.	176.5	206.5	51.0	73.0	84.8	90.2	152.4	126.9
3.	202.5	201.0	71.3	62.0	69.2	97.6	120.5	116.7
4.	228.5	207.7	65.3	55.3	70.4	104.1	132.5	161.3
5.	185.0	262.2	58.3	66.3	75.3	128.0	127.7	141.5
6.	177.2	243.7	71.0	57.3	83.0	95.8	115.3	
7.	223.5	242.7	75.0	61.7	79.0	119.1	118.1	
8.	214.2	220.7	56.0	63.0	74.7	117.1	136.3	
9.	225.5	237.5	53.7	65.0	90.1	96.7	147.2	
10.	303.7	234.7	58.7	76.7	102.3	101.5	127.4	
AVG	226.7	226.6	61	66	83.2	103.5	130.2	

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT7-02-02

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	1.88	0.180	9.52	465
2.	2.10	0.180	7.69	435
3.	2.05	0.180	7.81	395
4.	2.11	0.180	7.09	385
5.		0.180	7.07	315
6.			6.83	335
7.	AVG 2.04	0.180	6.95	285
8.			6.89	350
9.	PERMEABILITY	EQUIVALENT	7.80	345
10.	(cm/sec)	SIEVE SIZE	8.55	415
AVG	0.00	80	7.6	373

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	176.0	269.7	71.3	71.0	80.4	124.4	147.2	103.4
2.	186.0	262.0	56.7	66.0	75.3	130.8	129.2	116.4
3.	196.7	256.0	57.0	61.3	88.0	114.8	101.4	109.0
4.	284.5	227.2	55.0	59.0	87.5	112.6	105.2	107.5
5.	164.7	245.2	68.3	62.7	68.5	125.8	106.6	115.1
6.	184.5	232.0	66.0	63.0	79.1	115.9	125.3	
7.	254.0	262.0	47.7	61.7	110.2	126.8	130.9	
8.	238.5	217.2	83.3	60.0	89.1	116.5	78.7	
9.	174.2	230.2	75.3	62.3	85.4	111.6	121.0	
10.	157.2	230.2	65.0	67.7	66.9	111.3	105.1	
AVG	201.6	243.2	65	63	83.0	119.1	113.5	

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT7-02-03

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	1.88	0.150	10.39	405
2.	2.05	0.180	8.13	375
3.	1.99	0.180	7.34	355
4.	2.14	0.180	7.17	375
5.		0.180	7.01	335
6.			6.71	325
7.	AVG 2.02	0.174	6.96	345
8.			7.57	345
9.	PERMEABILITY	EQUIVALENT	7.87	365
10.	(cm/sec)	SIEVE SIZE	10.07	435
AVG	0.00	80	7.9	366

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	280.2	244.5	62.3	93.3	93.9	99.3	150.3	116.5
2.	209.0	245.2	61.0	74.7	74.8	111.6	127.7	102.8
3.	198.7	246.2	70.7	71.0	73.6	122.4	106.9	137.6
4.	185.7	231.7	95.0	67.7	92.9	110.7	110.1	111.5
5.	184.5	242.2	83.3	70.7	85.8	108.9	126.6	123.2
6.	196.0	253.2	82.0	67.7	69.9	101.0	136.4	
7.	172.2	253.0	66.0	69.7	83.3	110.7	126.7	
8.	183.5	248.2	86.0	74.3	67.9	104.3	115.4	
9.	189.7	224.5	62.7	70.0	84.3	108.8	104.8	
10.	309.0	229.7	44.0	81.3	91.2	129.7	108.1	
AVG	210.9	241.8	71	74	81.7	110.7	120.3	

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT7-02-04

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	1.78	0.180	9.82	415
2.	2.14	0.180	8.06	365
3.	2.03	0.180	7.47	370
4.	2.02	0.180	7.49	380
5.		0.180	6.92	345
6.			6.98	365
7.	AVG 1.99	0.180	6.79	305
8.			7.05	335
9.	PERMEABILITY	EQUIVALENT	6.97	345
10.	(cm/sec)	SIEVE SIZE	9.77	345
AVG	0.00	80	7.7	357

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	331.0	255.7	62.0	73.3	108.5	118.1	129.0	139.9
2.	226.7	218.5	70.3	63.7	84.4	123.7	116.3	108.0
3.	186.0	249.2	60.7	68.0	75.9	118.2	108.0	88.4
4.	181.7	228.7	89.3	70.0	73.3	112.9	109.9	117.3
5.	169.2	241.7	68.3	72.7	73.3	110.2	121.4	112.8
6.	161.7	233.7	65.0	79.7	98.9	107.4	137.7	
7.	175.7	222.5	70.3	79.0	91.1	111.4	111.5	
8.	173.2	217.5	87.0	92.0	76.8	105.9	110.8	
9.	207.7	255.5	67.3	86.7	80.9	100.5	102.5	
10.	295.7	257.0	46.7	79.3	103.2	99.0	117.4	
AVG	210.9	238.0	69	76	86.6	110.7	115.4	

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT7-02-05

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	1.98	0.180	10.03	450
2.	2.11	0.180	7.63	445
3.	2.15	0.180	7.25	365
4.	2.02	0.180	7.19	375
5.		0.180	7.62	375
6.			7.47	375
7.	AVG 2.07	0.180	7.60	345
8.			7.67	405
9.	PERMEABILITY	EQUIVALENT	8.31	455
10.	(cm/sec)	SIEVE SIZE	12.16	425
AVG	0.00	80	8.3	402

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	301.7	257.7	63.0	90.0	100.7	110.7	132.6	131.5
2.	215.2	270.2	67.3	86.0	88.4	129.3	121.0	107.7
3.	199.5	259.7	66.0	78.0	85.5	113.0	128.2	107.9
4.	197.5	242.2	70.0	81.0	94.8	101.5	118.9	125.3
5.	177.5	261.2	65.0	81.0	77.4	104.3	134.9	134.3
6.	225.0	245.0	77.7	75.3	85.0	128.8	121.7	
7.	194.0	275.5	68.0	75.7	94.4	128.2	125.3	
8.	210.2	273.7	71.0	77.7	79.7	135.6	144.4	
9.	269.2	288.7	72.7	76.0	112.3	123.8	154.0	
10.	450.0	261.7	55.3	85.7	108.0	140.4	133.4	
AVG	244.0	263.6	68	81	92.6	121.6	128.1	

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GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT7-02-06

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	1.80	0.180	9.67	425
2.	1.80	0.180	8.12	375
3.	1.63	0.180	7.64	385
4.	1.59	0.180	8.02	435
5.		0.180	7.08	445
6.			7.28	385
7.	AVG 1.71	0.180	7.78	335
8.			8.14	415
9.	PERMEABILITY	EQUIVALENT	8.55	425
10.	(cm/sec)	SIEVE SIZE	11.06	465
AVG	0.47	80	8.3	409

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	313.2	251.0	65.7	88.3	103.1	126.0	116.0	108.4
2.	199.2	262.5	77.3	77.7	91.5	125.5	121.3	115.5
3.	174.0	247.2	89.0	70.3	77.1	114.7	132.8	117.6
4.	172.0	257.2	73.3	75.7	87.8	136.5	129.0	127.6
5.	164.5	272.7	95.0	73.0	96.5	123.7	118.9	119.2
6.	178.2	268.7	69.3	76.0	91.5	128.6	136.1	
7.	169.5	277.5	92.3	72.0	79.2	130.5	128.6	
8.	185.7	275.0	96.7	78.0	82.5	135.0	130.5	
9.	211.7	274.0	71.7	78.0	95.0	116.7	127.8	
10.	370.2	287.5	52.3	88.3	98.7	128.1	123.7	
AVG	213.8	267.3	78	78	90.3	126.5	123.5	

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT7-02-07

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	1.62	0.150	10.69	475
2.	1.82	0.150	8.31	415
3.	1.87	0.150	7.66	395
4.	1.62	0.150	7.84	335
5.		0.150	7.44	385
6.			7.22	375
7.	AVG 1.73	0.150	7.43	365
8.			7.08	325
9.	PERMEABILITY	EQUIVALENT	7.55	395
10.	(cm/sec)	SIEVE SIZE	10.85	425
AVG	0.48	100	8.2	389

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	326.7	332.0	73.3	83.3	104.3	152.3	121.3	124.6
2.	219.7	286.5	72.3	70.0	88.2	131.7	123.8	92.8
3.	192.5	284.0	98.0	69.0	76.5	140.8	118.2	142.9
4.	169.0	279.2	94.3	75.0	83.2	131.6	142.5	123.1
5.	149.5	262.2	69.3	70.3	75.2	129.6	126.4	131.0
6.	182.5	275.5	84.7	70.7	83.6	132.8	146.6	
7.	165.2	278.2	69.7	70.0	84.5	125.0	141.8	
8.	182.7	259.7	85.0	67.3	81.4	113.1	120.9	
9.	212.0	280.7	70.7	69.0	96.3	119.2	125.5	
10.	401.5	279.7	56.0	79.3	97.8	146.6	138.4	
AVG	220.1	281.8	77	72	87.1	132.3	128.0	

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT7-02-08

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	1.93	0.180	10.71	465
2.	1.95	0.180	8.74	445
3.	1.94	0.180	8.18	415
4.	2.02	0.180	7.67	375
5.		0.180	8.13	395
6.			7.26	325
7.	AVG 1.96	0.180	7.29	335
8.			7.26	375
9.	PERMEABILITY	EQUIVALENT	7.41	345
10.	(cm/sec)	SIEVE SIZE	11.05	435
AVG	0.54	80	8.4	391

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	348.0	291.0	68.7	83.3	104.9	152.0	137.0	112.2
2.	236.7	283.0	71.0	75.7	92.5	121.0	129.7	121.6
3.	239.7	288.0	76.7	73.0	78.8	134.2	132.0	134.8
4.	198.0	297.0	89.3	72.3	83.1	123.3	138.5	102.0
5.	191.7	273.7	72.0	66.7	85.8	131.8	132.9	106.4
6.	213.2	279.5	80.3	66.7	84.5	148.5	114.1	
7.	206.2	286.0	76.0	72.0	94.2	141.4	109.4	
8.	178.2	294.5	96.7	77.3	80.7	125.4	118.8	
9.	231.0	274.2	82.0	76.3	92.5	120.8	96.2	
10.	377.7	259.7	48.3	84.3	105.1	114.5	128.1	
AVG	242.0	282.7	76	75	90.2	131.3	120.9	

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT7-02-09

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	2.06	0.180	9.72	445
2.	2.22	0.180	8.39	375
3.	2.17	0.180	8.02	465
4.	2.10	0.180	7.78	405
5.		0.180	8.65	405
6.			7.76	345
7.	AVG 2.14	0.180	7.68	385
8.			7.35	375
9.	PERMEABILITY	EQUIVALENT	7.31	365
10.	(cm/sec)	SIEVE SIZE	11.16	425
AVG	0.58	80	8.4	399

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	324.5	284.7	59.7	82.0	104.4	135.2	131.1	121.4
2.	238.5	270.0	78.0	69.0	95.7	144.5	118.8	128.5
3.	201.5	291.0	72.3	71.3	82.7	124.7	160.6	134.1
4.	190.2	298.0	81.0	71.7	91.5	128.8	132.8	105.8
5.	185.2	280.7	88.7	69.0	86.0	139.5	133.9	123.9
6.	192.5	282.0	82.7	70.7	83.6	148.6	118.5	
7.	208.0	278.7	79.3	68.3	82.2	121.2	118.2	
8.	186.7	286.2	74.0	71.3	81.0	137.9	136.0	
9.	177.7	231.2	60.3	67.3	88.4	131.0	150.3	
10.	394.5	252.5	51.3	86.7	120.2	132.8	116.0	
AVG	229.9	275.5	73	73	91.6	134.4	128.7	

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT7-02-10

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	1.86	0.180	10.61	465
2.	2.08	0.180	8.41	425
3.	1.73	0.180	7.78	405
4.	2.03	0.180	7.78	355
5.		0.150	7.72	415
6.			7.71	415
7.	AVG 1.93	0.174	7.84	435
8.			7.81	415
9.	PERMEABILITY	EQUIVALENT	8.11	395
10.	(cm/sec)	SIEVE SIZE	11.50	415
AVG	0.55	80	8.5	414

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	289.7	265.7	66.7	83.3	123.7	133.3	155.1	140.9
2.	201.5	226.7	81.7	63.0	103.5	128.1	128.1	138.7
3.	206.7	287.7	70.0	70.7	79.7	119.8	122.6	134.8
4.	239.5	284.2	74.7	73.7	97.7	139.2	125.4	112.4
5.	190.7	261.5	81.3	66.3	89.4	144.1	120.3	130.4
6.	217.0	282.2	79.3	69.7	87.4	120.2	134.7	
7.	206.0	272.2	71.0	64.7	77.4	135.8	128.7	
8.	191.7	263.7	94.0	67.0	85.3	143.5	137.0	
9.	194.5	257.5	68.7	68.7	89.6	131.7	135.0	
10.	403.7	242.0	52.0	75.3	126.1	132.7	123.1	
AVG	234.1	264.3	74	70	96.0	132.8	131.1	

JUNE 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT7-02-11

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	1.00	0.180	8.32	375
2.	1.14	0.180	8.01	335
3.	0.96	0.180	7.67	345
4.	1.10	0.150	7.93	335
5.		0.150	7.93	335
6.			7.25	315
7.	AVG 1.05	0.168	7.43	305
8.			7.82	305
9.	PERMEABILITY	EQUIVALENT	8.39	295
10.	(cm/sec)	SIEVE SIZE	8.31	390
AVG	0.29	80	7.9	334

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	171.7	220.7	73.7	73.0	93.4	118.3	122.8	99.2
2.	181.0	259.2	80.7	80.7	73.9	96.5	111.5	123.7
3.	159.5	238.5	72.7	89.3	69.3	94.0	110.8	101.8
4.	171.0	236.2	81.3	109.7	68.3	105.0	83.1	98.4
5.	197.5	223.2	79.3	88.3	75.3	108.0	94.0	129.4
6.	183.2	218.7	79.3	84.0	71.4	108.5	118.4	
7.	158.2	232.2	86.3	92.3	67.5	96.3	122.9	
8.	184.2	245.0	89.7	79.3	75.3	111.1	113.1	
9.	176.2	266.7	84.7	83.0	80.9	125.7	128.8	
10.	191.2	236.2	74.3	81.7	86.2	122.0	83.9	
AVG	177.4	237.7	80	86	76.1	108.5	109.4	

JULY 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT7-02-13

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	0.88	0.150	10.89	465
2.	0.98	0.125	10.22	435
3.	0.90	0.125	9.61	435
4.	0.76	0.150	9.39	395
5.		0.125	8.57	420
6.			8.81	335
7.	AVG 0.88	0.135	9.17	395
8.			8.44	380
9.	PERMEABILITY	EQUIVALENT	8.73	400
10.	(cm/sec)	SIEVE SIZE	10.64	355
AVG	0.33	100	9.4	402

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	228.5	268.2	62.3	96.3	130.7	120.5	162.8	140.5
2.	325.0	255.7	63.3	88.7	115.5	116.5	146.1	127.5
3.	308.7	256.2	67.3	90.7	122.0	123.5	153.6	142.1
4.	283.2	248.0	63.7	84.7	141.0	122.7	141.4	113.4
5.	271.5	261.5	65.7	81.7	84.0	118.0	166.1	131.3
6.	280.2	241.7	71.3	85.7	97.0	122.5	149.2	
7.	216.0	237.5	58.7	81.7	106.2	101.7	130.1	
8.	237.7	216.0	68.7	87.0	95.3	97.8	100.6	
9.	281.2	232.7	71.3	88.3	104.2	116.0	143.2	
10.	299.2	199.7	60.0	86.0	114.0	105.2	132.1	
AVG	273.1	241.7	65	87	111.0	114.4	138.7	

10 oz/yd^2

MARCH 2002

023-3313

SUMMARY OF 10 oz. GEOTEXTILE CONFORMANCE TEST RESULTS

GEOSYNTEC
FLUOR FERNALD
GEORGIA

SAMPLE DESIGNATION	REFERENCE VALUE	GT10 02-01	GT10 02-02	GT10 02-03	GT10 02-04	GT10 02-05	GT10 02-06	GT10 02-07	GT10 02-08	GT10 02-09	GT10 02-10
MASS/UNIT AREA (oz/yd²) ASTM D5261	>=10	11.6	11.4	11.0	11.4	10.9	11.3	10.6	10.6	10.9	10.7
GRAB STRENGTH (lbs)	>=225	290.4	315.0	280.4	311.7	291.4	306.9	310.8	278.9	317.4	291
MD/TD (1)	>=225	329.6	329.6	311.3	327.8	317.5	337.5	309.4	316.2	312.0	320.0
ASTM D4632											
GRAB ELONGATION	-	63	62	63	65	68	77	65	65	66	68
(%)	-	66	68	65	79	77	76	84	88	87	80
ASTM D4632											
TRAPEZOIDAL TEAR STRENGTH	>=90	107.8	116.7	118.6	119.2	115.3	119.7	113.1	112.2	116.4	110.7
(lbs) MD/TD (1)	>=90	143.8	145.7	145.4	149.4	151.5	153.8	140.8	145.0	136.0	146.5
ASTM D4533											
BURST STRENGTH (psi) ASTM D3786	>=450	589	568	553	604	538	562	588	599	559	541
PUNCTURE STRENGTH (lbs) ASTM D4833	>=120	189.2	180.4	177.0	185.1	176.8	184.8	190.8	170.0	176.2	165.7

(1) MD/TD corresponds to Machine Direction / Transverse Direction.

TEXTSUM.xls

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SUMMARY OF 10 oz GEOTEXTILE CONFORMANCE TEST RESULTS

GEOSYNTEC
FLUOR FERNALD
GEORGIA

SAMPLE DESIGNATION	REFERENCE VALUE	GT10 02-011	GT10 02-012	GT10 02-013	GT10 02-014	GT10 02-015	GT10 02-016	-	-	-	-
MASS/UNIT AREA (oz/yd²) ASTM D5261	>=10	10.7	10.7	10.8	10.8	10.7	17.4	-	-	-	-
GRAB STRENGTH (lbs)	>=225	336.2	311.0	366.1	353.6	291.7	321.4	-	-	-	-
MD/TD (1) ASTM D4632	>=225	318.0	307.9	319.1	326.2	321.1	300.1	-	-	-	-
GRAB ELONGATION	-	65	67	67	68	69	69	-	-	-	-
(%) ASTM D4632	-	80	78	83	80	81	80	-	-	-	-
TRAPEZOIDAL TEAR STRENGTH	>=90	119.4	121.9	128.5	134.8	115.0	117.0	-	-	-	-
(lbs) MD/TD (1) ASTM D4533	>=90	145.7	148.2	156.2	149.5	146.3	141.8	-	-	-	-
BURST STRENGTH (psi) ASTM D3786	>=450	469	562	512	502	481	482	-	-	-	-
PUNCTURE STRENGTH (lbs) ASTM D4833	>=120	159.6	175.2	168.1	171.8	165.2	159.2	-	-	-	-

(1) MD/TD corresponds to Machine Direction / Transverse Direction.

TEXTSUM.xls

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT10-02-01

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	13.11	625
2.	-	-	11.86	605
3.	-	-	10.98	565
4.	-	-	10.84	575
5.		-	10.98	585
6.			10.17	525
	AVG 0.00	0.000	11.04	585
8.			11.44	565
9.	PERMEABILITY	EQUIVALENT	11.96	605
10.	(cm/sec)	SIEVE SIZE	13.20	655
AVG	0.00	0	11.6	589

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	301.2	295.7	52.7	71.3	117.5	137.3	174.4	181.6
2.	285.0	312.0	60.3	67.3	118.2	134.8	155.1	156.0
3.	238.5	311.2	70.0	63.3	86.1	158.7	226.7	184.4
4.	235.5	311.5	66.7	65.7	102.9	125.9	202.5	192.8
5.	260.2	313.5	66.7	58.3	101.4	136.9	199.3	214.1
6.	288.2	391.2	66.3	64.3	110.1	144.9	187.1	
7.	277.7	372.2	68.3	62.3	109.1	157.0	189.4	
8.	290.0	318.2	63.0	60.7	118.0	165.7	193.0	
9.	349.5	336.2	65.7	71.3	111.9	125.3	198.9	
10.	378.2	334.5	52.7	76.3	102.7	151.9	182.5	
AVG	290.4	329.6	63	66	107.8	143.8	189.2	

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT10-02-02

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	13.74	645
2.	-	-	11.07	545
3.	-	-	10.89	525
4.	-	-	10.57	535
5.		-	10.50	535
6.			10.21	515
7.	AVG 0.00	0.000	10.66	615
8.			11.17	565
9.	PERMEABILITY	EQUIVALENT	11.64	565
10.	(cm/sec)	SIEVE SIZE	13.42	635
AVG	0.00	0	11.4	568

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	441.0	362.0	56.3	75.3	150.3	139.3	191.5	172.5
2.	309.0	362.7	61.0	70.0	128.4	151.5	210.9	185.7
3.	268.7	312.2	59.7	64.7	112.3	135.5	188.9	185.0
4.	244.0	295.2	61.3	64.7	104.2	146.1	191.4	176.5
5.	287.7	298.7	72.3	59.3	114.1	157.0	159.3	176.2
6.	302.2	341.2	67.0	63.3	107.8	159.7	190.5	
7.	280.2	339.2	62.7	65.3	110.4	137.1	179.5	
8.	268.0	333.2	57.0	68.3	112.2	148.4	169.7	
9.	328.2	330.7	63.3	70.0	106.7	140.6	149.2	
10.	420.5	321.0	55.7	74.3	120.5	141.7	179.4	
AVG	315.0	329.6	62	68	116.7	145.7	180.4	

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GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT10-02-03

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	12.45	625
2.	-	-	11.36	555
3.	-	-	10.32	605
4.	-	-	9.91	535
5.		-	10.34	535
6.			10.39	495
7.	AVG 0.00	0.000	10.47	465
8.			10.36	565
9.	PERMEABILITY	EQUIVALENT	10.99	545
10.	(cm/sec)	SIEVE SIZE	13.03	605
AVG	0.00	0	11.0	553

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	389.2	293.0	55.3	67.7	128.9	132.6	214.5	162.2
2.	304.5	279.2	59.0	61.7	129.5	149.1	159.6	181.7
3.	294.2	296.7	66.3	64.7	95.1	161.4	191.2	167.8
4.	248.0	302.0	77.7	63.0	112.1	141.6	165.7	172.9
5.	245.2	358.7	67.0	65.0	99.8	155.7	161.1	198.9
6.	223.0	339.7	65.7	62.7	130.3	148.0	178.1	
7.	275.0	321.7	63.3	62.7	117.6	139.2	167.8	
8.	243.7	327.0	56.7	68.0	106.4	145.9	174.6	
9.	296.5	308.5	63.0	68.0	120.4	146.3	176.1	
10.	284.2	286.0	52.7	70.3	146.1	133.9	183.1	
AVG	280.4	311.3	63	65	118.6	145.4	177.0	

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GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT10-02-04

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	13.15	665
2.	-	-	11.80	595
3.	-	-	11.65	605
4.	-	-	10.82	555
5.		-	10.99	575
6.			10.85	655
7.	AVG 0.00	0.000	10.91	615
8.			10.86	545
9.	PERMEABILITY	EQUIVALENT	10.98	605
10.	(cm/sec)	SIEVE SIZE	12.39	625
AVG	0.00	0	11.4	604

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	445.7	320.5	62.7	91.3	138.3	150.4	153.8	161.0
2.	291.7	316.0	74.7	80.3	107.0	131.9	156.9	180.1
3.	264.2	324.7	68.0	80.3	114.6	152.8	179.7	211.3
4.	294.5	328.5	63.0	77.7	123.3	143.6	185.6	151.0
5.	260.0	345.2	63.0	70.7	112.1	127.6	196.0	211.5
6.	288.7	321.5	65.0	73.7	116.0	147.4	199.5	
7.	263.0	349.5	64.7	77.3	115.1	182.9	200.9	
8.	298.0	333.0	65.0	79.7	126.9	151.3	200.8	
9.	316.2	315.7	69.0	79.3	111.5	146.8	172.5	
10.	395.0	323.5	59.3	81.7	127.1	159.5	215.2	
AVG	311.7	327.8	65	79	119.2	149.4	185.1	

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GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT10-02-05

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	11.17	565
2.	-	-	10.64	525
3.	-	-	10.69	565
4.	-	-	10.14	505
5.		-	10.06	515
6.			10.49	535
7.	AVG 0.00	0.000	10.60	535
8.			11.54	525
9.	PERMEABILITY	EQUIVALENT	11.34	555
10.	(cm/sec)	SIEVE SIZE	12.31	555
AVG	0.00	0	10.9	538

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	338.5	321.7	61.7	81.7	113.7	174.0	178.8	190.2
2.	305.2	331.7	76.0	79.3	112.6	132.2	204.0	196.1
3.	259.2	321.7	66.0	78.3	118.2	152.9	179.7	156.2
4.	268.2	321.5	66.7	72.3	129.3	154.1	176.0	188.0
5.	253.0	327.5	69.3	69.7	112.4	158.5	143.2	208.3
6.	258.5	293.2	66.3	74.7	101.2	165.4	169.7	
7.	274.2	310.0	69.3	71.7	105.3	150.9	168.8	
8.	297.5	337.0	78.0	80.0	100.8	150.4	156.1	
9.	294.2	317.0	72.7	82.0	129.6	133.7	162.7	
10.	365.5	293.2	58.7	81.3	129.8	142.5	173.7	
AVG	291.4	317.5	68	77	115.3	151.5	176.8	

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GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT10-02-06

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	12.78	635
2.	-	-	11.51	555
3.	-	-	10.43	535
4.	-	-	10.59	555
5.		-	10.83	535
6.			11.37	585
7.	AVG 0.00	0.000	11.02	515
8.			10.85	525
9.	PERMEABILITY	EQUIVALENT	11.16	585
10.	(cm/sec)	SIEVE SIZE	12.95	595
AVG	0.00	0	11.3	562

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	415.5	330.7	65.0	88.0	148.3	160.6	201.2	193.4
2.	297.5	341.0	76.7	81.7	121.4	166.3	189.8	184.7
3.	270.7	326.0	80.0	77.3	119.9	167.5	164.2	190.2
4.	268.5	328.7	91.3	74.0	96.2	155.8	191.1	197.2
5.	259.0	309.0	75.7	72.7	112.4	165.1	154.4	179.9
6.	281.2	344.5	82.3	68.3	121.8	164.6	178.3	
7.	263.2	359.0	74.3	75.7	115.9	142.3	187.0	
8.	273.5	353.2	76.0	73.0	99.3	134.7	162.0	
9.	300.7	337.7	73.7	73.0	113.9	140.1	183.4	
10.	439.5	345.2	70.3	77.3	148.1	140.7	215.2	
AVG	306.9	337.5	77	76	119.7	153.8	184.8	

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GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT10-02-07

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	11.26	665
2.	-	-	10.66	535
3.	-	-	10.24	595
4.	-	-	9.87	525
5.		-	10.34	575
6.			9.79	585
7.	AVG 0.00	0.000	10.19	575
8.			10.19	615
9.	PERMEABILITY	EQUIVALENT	11.73	575
10.	(cm/sec)	SIEVE SIZE	12.20	635
AVG	0.00	0	10.6	588

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	382.5	280.7	55.3	82.0	141.3	142.5	195.0	202.1
2.	257.5	266.5	60.0	82.7	115.4	129.5	170.0	228.5
3.	324.5	335.0	69.7	75.7	94.8	134.6	183.2	190.8
4.	262.2	322.2	66.3	80.3	101.0	149.3	180.1	188.0
5.	281.2	296.7	67.3	77.3	105.3	162.6	188.1	210.7
6.	244.2	321.2	68.0	83.7	107.3	135.1	188.3	
7.	273.2	327.7	66.7	90.3	110.9	163.1	212.2	
8.	272.5	344.2	65.3	91.7	93.4	129.7	194.8	
9.	337.0	289.5	68.0	81.7	122.1	125.0	145.9	
10.	472.7	310.5	59.3	94.3	139.4	137.0	184.2	
AVG	310.8	309.4	65	84	113.1	140.8	190.8	

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GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT10-02-08

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	10.96	655
2.	-	-	10.56	625
3.	-	-	10.27	545
4.	-	-	9.72	565
5.		-	10.24	555
6.			9.75	545
7.	AVG 0.00	0.000	9.68	565
8.			9.96	635
9.	PERMEABILITY	EQUIVALENT	11.82	665
10.	(cm/sec)	SIEVE SIZE	12.93	635
AVG	0.00	0	10.6	599

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	372.2	302.5	59.7	89.0	134.3	156.9	171.2	123.5
2.	313.2	310.0	72.3	82.3	94.7	147.6	164.1	176.1
3.	256.2	290.7	62.3	79.7	104.1	146.7	191.5	177.5
4.	248.5	328.0	66.3	85.0	119.5	134.7	140.1	189.0
5.	266.0	327.2	69.7	80.7	113.1	157.7	147.4	216.2
6.	272.0	320.7	69.7	86.0	126.9	138.3	144.3	
7.	243.0	317.2	68.7	78.0	117.6	160.6	172.9	
8.	241.2	324.0	64.3	86.0	97.6	115.6	172.5	
9.	236.5	329.0	62.7	114.3	102.9	118.1	184.8	
10.	340.0	312.2	58.0	100.0	111.1	173.3	178.8	
AVG	278.9	316.2	65	88	112.2	145.0	170.0	

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GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT10-02-09

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	12.09	635
2.	-	-	10.80	545
3.	-	-	9.55	525
4.	-	-	9.79	595
5.		-	10.21	535
6.			10.62	535
7.	AVG 0.00	0.000	10.58	605
8.			11.50	515
9.	PERMEABILITY	EQUIVALENT	11.09	545
10.	(cm/sec)	SIEVE SIZE	12.37	555
AVG	0.00	0	10.9	559

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	400.7	290.2	57.3	105.3	139.5	124.6	178.4	175.2
2.	276.5	299.2	65.3	91.7	112.2	113.6	171.9	166.4
3.	239.0	306.0	63.7	91.3	101.8	132.0	231.9	192.3
4.	259.0	295.2	66.3	86.0	108.6	151.7	164.3	165.1
5.	287.0	302.2	71.0	80.7	109.0	154.2	143.0	189.9
6.	281.2	341.5	63.3	84.0	119.0	143.2	172.0	
7.	314.7	340.0	73.7	78.3	103.5	144.2	197.2	
8.	289.5	336.5	67.7	87.0	109.3	136.0	186.5	
9.	368.5	309.7	70.3	83.0	111.5	125.1	162.6	
10.	457.5	299.5	62.3	83.7	150.0	135.2	146.5	
AVG	317.4	312.0	66	87	116.4	136.0	176.2	

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GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT10-02-10

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	11.83	575
2.	-	-	10.63	515
3.	-	-	10.31	515
4.	-	-	10.74	555
5.		-	10.90	615
6.			10.32	565
7.	AVG 0.00	0.000	10.21	515
8.			10.34	505
9.	PERMEABILITY	EQUIVALENT	10.71	485
10.	(cm/sec)	SIEVE SIZE	11.25	565
AVG	0.00	0	10.7	541

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	348.2	313.0	60.0	73.7	135.2	171.5	157.9	174.7
2.	284.5	313.2	65.0	80.7	117.7	131.8	175.4	163.7
3.	253.5	325.5	65.7	78.3	88.7	161.6	170.1	117.8
4.	301.0	350.2	76.3	77.3	115.7	148.7	144.8	186.1
5.	278.0	343.5	67.0	81.7	109.7	136.3	150.3	167.1
6.	315.0	340.2	72.7	83.7	106.3	143.4	165.9	
7.	296.7	317.5	72.7	89.0	117.7	154.8	169.6	
8.	285.5	299.0	69.3	84.7	96.9	147.2	193.3	
9.	267.7	279.5	63.0	89.3	107.3	139.4	180.0	
10.	280.2	318.7	69.7	59.0	111.9	130.0	169.3	
AVG	291.0	320.0	68	80	110.7	146.5	165.7	

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT10-02-11

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	12.65	515
2.	-	-	11.46	455
3.	-	-	10.60	455
4.	-	-	9.98	465
5.		-	10.06	445
6.			10.09	455
7.	AVG 0.00	0.000	9.18	465
8.			9.74	465
9.	PERMEABILITY	EQUIVALENT	10.62	505
10.	(cm/sec)	SIEVE SIZE	12.68	465
AVG	0.00	0	10.7	469

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	528.5	310.0	64.7	87.0	166.1	140.4	184.5	129.2
2.	365.5	301.0	61.3	85.3	116.8	164.8	128.3	154.1
3.	299.0	348.2	67.0	73.7	111.4	152.6	174.4	145.2
4.	283.7	306.5	68.0	76.0	121.2	138.9	167.8	163.3
5.	324.7	369.7	76.7	77.7	113.2	156.6	153.1	174.7
6.	275.0	289.5	64.3	77.3	104.0	132.4	173.9	
7.	256.0	302.2	69.3	76.0	96.9	132.8	164.7	
8.	268.5	314.2	60.7	74.7	103.3	139.0	178.3	
9.	315.7	318.0	61.0	84.7	119.6	149.3	178.3	
10.	445.2	321.0	54.7	88.7	141.4	150.0	124.8	
AVG	336.2	318.0	65	80	119.4	145.7	159.6	

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT10-02-12

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	12.67	575
2.	-	-	9.94	565
3.	-	-	10.53	565
4.	-	-	9.71	525
5.		-	10.55	585
6.			9.21	585
7.	AVG 0.00	0.000	9.47	535
8.			10.22	575
9.	PERMEABILITY	EQUIVALENT	10.98	545
10.	(cm/sec)	SIEVE SIZE	13.23	565
AVG	0.00	0	10.7	562

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	434.7	316.5	56.7	92.0	149.0	129.8	239.3	190.0
2.	314.7	317.5	68.3	77.3	108.4	145.1	167.1	171.8
3.	262.7	304.0	67.3	80.7	107.4	142.8	182.7	176.4
4.	250.0	293.5	72.7	70.3	101.5	149.9	153.2	173.0
5.	264.2	293.5	75.0	71.0	114.6	149.4	173.4	199.9
6.	257.0	310.7	73.3	73.0	101.1	151.4	149.4	
7.	255.0	294.2	68.3	76.0	113.3	164.4	153.1	
8.	287.5	336.5	67.3	76.3	109.2	160.9	167.7	
9.	298.0	306.5	62.3	75.7	139.4	139.1	148.3	
10.	486.0	306.5	58.7	89.0	175.1	149.2	183.1	
AVG	311.0	307.9	67	78	121.9	148.2	175.2	

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT10-02-13

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	13.00	595
2.	-	-	10.80	455
3.	-	-	9.61	465
4.	-	-	9.65	465
5.		-	10.50	515
6.			9.77	465
7.	AVG 0.00	0.000	10.72	535
8.			9.87	535
9.	PERMEABILITY	EQUIVALENT	10.67	465
10.	(cm/sec)	SIEVE SIZE	12.95	625
AVG	0.00	0	10.8	512

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	539.6	329.5	66.0	86.2	137.8	143.4	196.4	160.0
2.	316.6	288.2	66.1	80.5	115.0	134.4	172.5	187.7
3.	298.9	302.7	66.0	84.2	116.0	151.9	181.1	157.7
4.	310.7	289.7	64.2	81.2	127.3	140.6	148.1	179.8
5.	314.5	320.7	69.0	88.2	110.1	141.3	158.7	170.9
6.	356.0	315.6	72.1	79.3	122.9	147.7	167.5	
7.	326.2	309.9	67.8	76.7	131.5	164.0	163.5	
8.	329.0	359.1	69.7	81.1	135.5	194.8	157.0	
9.	396.5	339.6	71.6	81.2	144.0	163.9	144.6	
10.	473.2	336.4	61.1	89.0	145.3	179.6	176.1	
AVG	366.1	319.1	67	83	128.5	156.2	168.1	

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT10-02-14

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	13.68	535
2.	-	-	10.73	485
3.	-	-	9.96	485
4.	-	-	9.98	525
5.		-	9.62	465
6.			9.77	465
7.	AVG 0.00	0.000	10.14	495
8.			10.29	525
9.	PERMEABILITY	EQUIVALENT	10.83	525
10.	(cm/sec)	SIEVE SIZE	12.65	515
AVG	0.00	0	10.8	502

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	543.1	320.1	62.3	89.0	137.2	176.3	198.0	150.6
2.	351.0	311.1	69.4	78.5	135.1	149.6	183.0	166.4
3.	300.4	328.5	67.4	75.5	134.0	147.8	155.0	175.5
4.	287.7	353.0	65.3	82.4	169.7	103.0	161.9	177.0
5.	292.8	341.1	72.1	76.4	130.5	174.5	156.8	191.7
6.	284.8	310.9	76.1	69.7	119.2	156.3	148.9	
7.	290.3	306.0	68.8	79.6	145.6	127.7	155.8	
8.	286.2	331.3	67.1	79.7	119.2	156.8	201.9	
9.	412.9	318.8	70.3	84.3	121.6	148.5	198.0	
10.	486.7	341.5	61.5	88.9	136.1	154.9	156.2	
AVG	353.6	326.2	68	80	134.8	149.5	171.8	

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT10-02-15

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	12.52	585
2.	-	-	10.31	435
3.	-	-	10.28	465
4.	-	-	10.04	515
5.		-	9.82	415
6.			9.72	425
7.	AVG 0.00	0.000	9.96	425
8.			10.19	535
9.	PERMEABILITY	EQUIVALENT	11.58	485
10.	(cm/sec)	SIEVE SIZE	12.18	525
AVG	0.00	0	10.7	481

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	364.0	310.0	59.7	88.7	131.6	129.0	191.6	163.1
2.	277.2	324.0	67.3	75.7	103.8	156.7	157.8	159.5
3.	288.2	308.5	73.0	80.7	110.2	128.9	182.5	156.1
4.	240.0	321.2	74.7	84.0	89.1	138.6	180.9	161.3
5.	238.2	317.7	69.3	77.7	107.4	158.4	157.7	184.5
6.	316.7	319.2	65.0	77.3	105.9	152.9	138.8	
7.	298.0	322.0	73.7	80.0	125.2	154.6	172.5	
8.	281.0	332.2	71.3	80.0	111.0	151.7	169.3	
9.	264.7	343.2	74.3	79.7	131.9	141.9	151.0	
10.	349.0	313.2	63.0	88.0	134.1	150.5	151.1	
AVG	291.7	321.1	69	81	115.0	146.3	165.2	

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT10-02-16

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	20.69	495
2.	-	-	17.75	505
3.	-	-	16.88	465
4.	-	-	15.91	465
5.		-	16.11	435
6.			15.37	465
7.	AVG 0.00	0.000	16.68	465
8.			16.52	495
9.	PERMEABILITY	EQUIVALENT	16.68	505
10.	(cm/sec)	SIEVE SIZE	20.97	525
AVG	0.00	0	17.4	482

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	516.8	274.0	60.5	86.3	124.7	140.2	180.7	177.4
2.	284.3	260.0	61.6	76.7	109.7	125.0	161.3	163.3
3.	286.4	261.5	69.9	76.0	111.7	121.1	172.9	134.4
4.	240.0	279.5	71.7	76.3	127.9	121.1	147.2	177.4
5.	242.1	284.0	66.7	74.7	100.8	138.2	164.0	170.8
6.	287.5	337.2	76.9	78.7	113.9	153.8	133.7	
7.	281.2	294.7	78.2	76.3	119.5	163.4	193.7	
8.	313.7	305.5	70.3	76.7	105.6	140.1	147.1	
9.	332.8	348.2	67.1	85.3	110.9	147.6	120.1	
10.	429.0	356.0	62.2	92.7	145.7	167.2	144.7	
AVG	321.4	300.1	69	80	117.0	141.8	159.2	

16 oz/yd^2

MARCH 2002

023-3313

SUMMARY OF 16 oz. GEOTEXTILE CONFORMANCE TEST RESULTS

GEOSYNTEC
FLUOR FERNALD
GEORGIA

SAMPLE DESIGNATION	REFERENCE VALUE	GT16 02-01	GT16 02-02	-	-	-	-	-	-	-	-
MASS/UNIT AREA (oz/yd²) ASTM D5261	>=16	17.4	16.9	-	-	-	-	-	-	-	-
GRAB STRENGTH (lbs)	>=350	483.5	451.8	-	-	-	-	-	-	-	-
MD/TD (1) ASTM D4632	>=350	600.4	559.3	-	-	-	-	-	-	-	-
GRAB ELONGATION	-	71	70	-	-	-	-	-	-	-	-
(%) ASTM D4632	-	74	73	-	-	-	-	-	-	-	-
TRAPEZOIDAL TEAR STRENGTH	>=120	162.8	165.2	-	-	-	-	-	-	-	-
(lbs) MD/TD (1) ASTM D4533	>=120	252.2	240.3	-	-	-	-	-	-	-	-
BURST STRENGTH (psi) ASTM D3786	>=700	836	784	-	-	-	-	-	-	-	-
PUNCTURE STRENGTH (lbs) ASTM D4833	>=180	276.5	253.2	-	-	-	-	-	-	-	-

(1) MD/TD corresponds to Machine Direction / Transverse Direction.

TEXTSUM.xls

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT16-02-01

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	20.69	965
2.	-	-	17.75	825
3.	-	-	16.88	865
4.	-	-	15.91	745
5.		-	16.11	825
6.			15.37	875
AVG	0.00	0.000	16.68	785
8.			16.52	805
9.	PERMEABILITY	EQUIVALENT	16.68	785
10.	(cm/sec)	SIEVE SIZE	20.97	885
AVG	0.00	0	17.4	836

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	652.7	610.2	67.7	82.0	199.6	269.8	289.8	293.8
2.	504.5	613.0	70.3	71.3	147.3	251.0	291.0	256.2
3.	418.5	625.2	70.0	68.3	160.8	255.4	313.3	286.7
4.	390.5	608.5	72.0	82.7	144.4	272.8	262.4	291.4
5.	414.7	629.7	74.7	68.3	146.3	284.4	304.7	263.0
6.	455.0	599.5	78.3	66.0	164.3	253.3	272.2	
7.	458.0	596.5	77.3	68.0	156.2	232.3	257.9	
8.	415.7	569.0	73.0	68.3	155.3	219.6	263.4	
9.	426.2	570.0	63.7	73.0	166.2	249.3	270.2	
10.	698.7	582.5	64.0	93.0	187.4	234.1	231.5	
AVG	483.5	600.4	71	74	162.8	252.2	276.5	

MARCH 2002 023-3313

GEOTEXTILE TEST RESULTS

PROJECT NUMBER: 023-3313
PROJECT NAME: GEOSYNTEC/FLUOR FERNALD/GA
ROLL DESIGNATION: GT16-02-02

	PERMITTIVITY (sec-1)	APPARENT OPENING SIZE (mm)	MASS PER UNIT AREA (oz/yd²)	BURST STRENGTH (psi)
1.	-	-	20.49	885
2.	-	-	16.72	835
3.	-	-	15.43	805
4.	-	-	15.25	715
5.		-	15.26	725
6.			15.40	765
7.	AVG 0.00	0.000	15.41	705
8.			16.26	795
9.	PERMEABILITY	EQUIVALENT	17.11	745
10.	(cm/sec)	SIEVE SIZE	21.21	865
AVG	0.00	0	16.9	784

	GRAB STRENGTH (pounds)		GRAB ELONGATION (%)		TRAPEZOIDAL TEAR (pounds)		PUNCTURE STRENGTH (pounds)	
	MD	TD	MD	TD	MD	TD		
1.	640.5	528.2	67.7	79.0	214.1	242.4	258.0	269.1
2.	494.0	550.5	73.7	72.7	168.0	220.8	259.2	236.9
3.	428.5	584.5	72.7	70.7	140.5	240.9	254.0	223.9
4.	372.2	552.5	74.3	67.7	144.7	237.0	248.1	247.9
5.	342.0	543.2	68.7	67.0	140.3	249.4	268.2	277.9
6.	380.5	559.5	65.3	68.3	154.4	227.1	265.1	
7.	391.5	579.2	70.0	69.7	151.4	270.2	262.0	
8.	435.0	559.0	76.3	73.7	145.7	220.8	232.2	
9.	448.5	563.2	67.0	78.3	184.3	251.0	245.9	
10.	585.5	573.5	60.7	86.7	208.7	243.4	250.3	
AVG	451.8	559.3	70	73	165.2	240.3	253.2	

APPENDIX I

Contractor's Certification of Acceptance of Subgrade Surface

Secondary

CERTIFICATE OF ACCEPTANCE
SUBGRADE SURFACE

INSTALLER	PROJECT
NAME: THE ISTRE COMPANY	NAME: FERNALD OSDF CELLS 4 & 5 LINER
ADDRESS:	LOCATION: 7400 WILLEY ROAD HAMILTON, OH 45013
INSTALLER AUTHORIZED REPRESENTATIVE: JERRY ISTRE	OWNER: FLUOR FERNALD / DOE

I, The undersigned, duly authorized representive of THE ISTRE COMPANY do hereby accept the surface on which the geosynthetics will be installed and shall be responsible for maintaining the suitability of this surface, in accordance with the project specifications. (i.e., The contractor shall not install the geosynthetics until the subgrade surface is acceptable. Installation of the geosynthetics will be considered acceptance of the subgrade.)

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

DATE	PANEL NOS.	SIGNATURE
18 JULY 2002	S-1	
19 JULY 2002	S-1 TO S-4	
20 JULY 2002	S-5 TO S-7	
23 JULY 2002	S-8	
24 JULY 2002	S-9 TO S-11	
25 JULY 2002	S-12 TO S-~~15~~ 14 CB	
26 JULY 2002	S-15	
29 JULY 2002	S-16 TO S-19	
30 JULY 2002	S-20	
31 JULY 2002	S-21 ~~TO~~ CB	
01 AUG 2002	S-22 TO S-23	
02 AUG 2002	S-24 TO S-27	
03 AUG 2002	S-28 TO S-30	
05 AUG 2002	S-31 TO S-40	
06 AUG 2002	S-41 TO S-55	
07 AUG 2002	S-56 TO S-61	

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4943

CERTIFICATE OF ACCEPTANCE
SUBGRADE SURFACE

INSTALLER	PROJECT
NAME: THE ISTRE COMPANY	NAME: FERNALD OSDF CELLS 4+5 LINER
ADDRESS:	LOCATION: 7400 WILLEY ROAD HAMILTON, OH 45013
INSTALLER AUTHORIZED REPRESENTATIVE: JERRY ISTRE	OWNER: FLUOR FERNALD / DOE

I, The undersigned, duly authorized representive of THE ISTRE COMPANY do hereby accept the surface on which the geosynthetics will be installed and shall be responsible for maintaining the suitability of this surface, in accordance with the project specifications. (i.e., The contractor shall not install the geosynthetics until the subgrade surface is acceptable. Installation of the geosynthetics will be considered acceptance of the subgrade.)

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

DATE	PANEL NOS.	SIGNATURE
08 AUG 2002	S-62 TO S-66	
13 AUG 02	S-67 TO 68	
14 AUG 02	S-69	
15 AUG 02	S-70 - S73	
16 AUG 02	S-74 - 75	
20 AUG 02	S-76 - 80	
21 AUG 02	S-81 - 85	
22 AUG 02	S-86 - 88	
26 AUG 02	S-89 - S-109	
27 AUG 02	S-110 - S-111	
28 AUG 02	S-112 - S-115	
30 AUG 02	S-116	
4 SEPT 02	S-117 - S-123	

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Primary

CERTIFICATE OF ACCEPTANCE SUBGRADE SURFACE

INSTALLER	PROJECT
NAME: JERRY ISTRE	NAME: FERNALD OSDF CELLS 4 & 5
ADDRESS:	LOCATION: 7400 WILLEY ROAD HAMILTON, OH 45013
INSTALLER AUTHORIZED REPRESENTATIVE:	OWNER: FLUOR FERNALD / DOE

I, The undersigned, duly authorized representive of THE ISTRE CO. do hereby accept the surface on which the geosynthetics will be installed and shall be responsible for maintaining the suitability of this surface, in accordance with the project specifications. (i.e., The contractor shall not install the geosynthetics until the subgrade surface is acceptable. Installation of the geosynthetics will be considered acceptance of the subgrade.)

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

DATE	PANEL NOS.	SIGNATURE
11 SEPT	P-1 THRU P-2	
12 SEPT	P-3 THRU P-7	
13 SEPT	P-8 THRU P-13	
14 SEPT	P-14 THRU P-15	
16 SEPT	P-16 THRU P-20	
17 SEPT	P-21 THRU P-27	
18 SEPT	P-28 THRU P-32	
19 SEPT	P-33 THRU P-43	
23 SEPT	P-44 THRU P-56	
24 SEPT	P-57 THRU P-63	
25 SEPT	P-64 THRU P-73	
30 SEPT	P-74 THRU P-77	
1 OCT	P-78 THRU P-94	
2 OCT	P-95 THRU P-105	
7 OCT	P-106 THRU P-109	
8 OCT	P-110 THRU P-115	

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APPENDIX J

Geomembrane Panel Placement Monitoring Logs

Secondary

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD

PANEL PLACEMENT LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4+5 YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: _____ PRODUCT TYPE: GML

PANEL NO.	BATCH / ROLL NO.	DATE (day/mo)	TIME	PLACEMENT LOCATION COMMENTS	APPROX WIDTH (ft)	APPROX LENGTH (ft)	QA ID
S-1	103114878	18 JUL	1617	CELL 4, NE CORNER	22.5	~400	CB
S-2	10311484 ~~4884~~	19 JUL	1512	CELL 4, NE CORNER	22.5	~400	CB
S-3	103114834	19 JUL	~~1733~~ 1633	CELL 4, NE CORNER	22.5	~400	CB
S-4	103114900	19 JUL	1710	CELL 4, NE CORNER	~~22.5~~	~~400~~ 313	CB
S-5	↓	20 JUL	1015	CELL 4, N. CENTRAL	22.5	88	CB
S-6	103114842	20 JUL	1050	CELL 4, NE CORNER	22.5	~400	CB
S-7	103114899	20 JUL	1300	CELL 4, EAST SIDE	22.5	~400	CB
S-8	10311490~~7~~	23 JUL	0825	CELL 4/5 I. CELL BERM	22.5	~400	TBD
S-9	103114871	24 JUL	1624	CELL 4 I. CELL BERM	22.5	~400	CB
S-10	103114863	24 JUL	1650	CELL 4, SE CORNER	22.5	~400	CB
S-11	103114826	24 JUL	1735	CELL 4, SE CORNER	22.5	~400	CB
CB ~~S-12~~	~~103114836~~	~~24 JUL~~	~~1555~~	~~CELL 4, SE CORNER~~	~~22.5~~	~~~400~~	~~CB~~
S-12	103114838	25 JUL	1555	CELL 4, SE CORNER	22.5	~400	CB
S-13	103114845	25 JUL	1646	CELL 4, SE CORNER	22.5	~400	CB
S-14	103114825	25 JUL	1910	CELL 4, SE CORNER	22.5	~400	CB
CB ~~S-15~~	~~103114851~~	~~25 JUL~~	~~1950~~	~~CELL 4, EAST SIDE~~	~~22.5~~	~~~400~~	~~CB~~
S-15	103114851	26 JUL	0844	CELL 4, EAST SIDE	22.5	~400	CB
S-16	103114379	29 JUL	1010	CELL 4, EAST SIDE	22.5	~375	CB
S-17	103114379	29 JUL	1040	CELL 4, CENTER	22.5	~25	CB
S-18	103114376	29 JUL	1550	CELL 4, EAST SIDE	22.5	~400	CB
S-19	103114905	29 JUL	1705	CELL 4, EAST SIDE	22.5	~400	CB
S-20	103114902	30 JUL	P.M.	CELL 4, EAST SIDE, COLLECTION CORRIDOR	5	~400	CB
S-21	103114911	31 JUL	0913	CELL 5, IC BERM, EAST SIDE	22.5	~400	CB
				TOTALS:(1)			

NOTE: (1) APPROXIMATE AREA: THIS PAGE: 164,022.5 (ft²) ACCUMULATED: 164,022.5 (ft²)

NOTES:

000178

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GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD

PANEL PLACEMENT LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE N, CELLS 4+5 LINER YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: _____ PRODUCT TYPE: GEOMEMBRANE

PANEL NO.	BATCH / ROLL NO.	DATE (day/mo)	TIME	PLACEMENT LOCATION COMMENTS	APPROX WIDTH (ft)	APPROX LENGTH (ft)	QA ID
S-22	114101804	01 AUG	1245	CELL 5, IC BERM, EAST SIDE	23.5	~~390~~ 220	CB
S-23	114101~~757~~ 804	01 AUG	1310	CELL 5, IC BERM, MID CELL	23.5	~~390~~ 190	CB
S-24	114101757	02 AUG	0820	CELL 5, EAST SIDE	23.5	~390	CB
S-25	114101756	02 AUG	1057	CELL 5, EAST SIDE	23.5	~390	CB
S-26	103114884	02 AUG	1315	CELL 4/5, IC BERM, EAST SIDE	23.5	~~390~~ 50	CB/KS
S-27	114101811	02 Aug	1520	Cell 5, East Side	23.5	~390'	KS
S-28	103114903	3 Aug	0836	CELL 5 EAST SIDE	22.5	~400'	JW
S-29	114101802	3 Aug	1015	CELL 5 EAST SIDE	23.5	~390'	JW
S-30	114101785	3 Aug	1230	CELL 5 EAST SIDE	23.5	~390	JW
S-31	103114876	5 Aug	1005	CELL 5-6 IC BERM	22.5	84	JW
S-32	103114876	5 Aug	1010	CELL 5-6 IC BERM	22.5	87	JW
S-33	103114876	5 Aug	1020	CELL 5-6 IC BERM	22.5	89	JW
S-34	103114876	5 Aug	1028	CELL 5-6 IC BERM	22.5	89	JW
S-35	103114876	5 Aug	1256	CELL 5-6 IC BERM	22.5	36	JW
S-36	103114229	5 Aug	1313	CELL 5-6 IC BERM	22.5	58	JW
S-37	103114229	5 Aug	1346	CELL 5-6 IC BERM	22.5	92	JW
S-38	103114229	5 Aug	1358	CELL 5-6 IC BERM	22.5	91	JW
S-39	103114229	5 Aug	1420	CELL 5-6 IC BERM	22.5	90	JW
S-40	103114229	5 Aug	1503	CELL 5-6 IC BERM	22.5	35	JW
				TOTALS:(1)			

NOTE: (1) APPROXIMATE AREA: THIS PAGE: 82,062.5 (ft²) ACCUMULATED: 246,085 (ft²)

NOTES:

000179

GEOSYNTEC CONSULTANTS

4943
FLUOR FERNALD

PANEL PLACEMENT LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ 1341 TASK NO.: 4.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: _____ PRODUCT TYPE: 80 MIL GEOMEMBRANE

PANEL NO.	BATCH / ROLL NO.	DATE (day/mo)	TIME	PLACEMENT LOCATION COMMENTS	APPROX WIDTH (ft)	APPROX LENGTH (ft)	QA ID
S-41	103114291	6 AUG	0922	CELL 5-6 IC BERM	22.5	~85	JW
S-42	103114291	6 AUG	0831	CELL 5-6 IC BERM	22.5	~65	JW
S-43	103114291	6 AUG	0846	CELL 5-6 IC BERM	22.5	29	JW
S-44	103114291	6 AUG	0849	CELL 5-6 IC BERM	22.5	~58	JW
S-45	103114291	6 AUG	0859	CELL 5-6 IC BERM	22.5	~55	JW
S-46	103114291	6 AUG	0904	CELL 5-6 IC BERM	22.5	~48	JW
S-47	(NEW ROLL) 103114219	6 AUG	0951	CELL 5-6 IC BERM	22.5	~55	JW
S-48	103114219	6 AUG	1037	CELL 5-6 IC BERM	22.5	~95	JW
S-49	103114219	6 AUG	1047	CELL 5-6 IC BERM	22.5	~95	JW
S-50	103114219	6 AUG	1250	CELL 5-6 IC BERM	22.5	~95	JW
S-51	103114219	6 AUG	1435	CELL 5-6 IC BERM	22.5	53	JW
S-52	103114 ~~221~~ 222	6 AUG	1440	CELL 5-6 IC BERM	22.5	44	JW
S-53	103114222	6 AUG	1446	CELL 5-6 IC BERM	22.5	95	JW
S-54	103114222	6 AUG	1501	CELL 5-6 IC BERM	22.5	95	JW
S-55	103114222	6 AUG	1505	CELL 5-6 IC BERM	22.5	95	JW
S-~~56~~ 56	103114815	7 AUG	0901	CELL 5 TIE U/ 5-6 IC BERM	22.5	~390	JW
S-57	103114241	7 AUG	1000	CELL 5 ~~SE~~ EAST SIDE	22.5	~390	JW
S-58	103114877	7 AUG	1235	CELL 5 EAST SIDE	22.5	~390	JW
S-59	103114906	7 AUG	1253	CELL 5 EAST SIDE	22.5	~~390~~ 385	JW
S-60	103114888	7 AUG	1516	CELL 5 EAST SIDE	22.5	~390	JW
S-61	103114375	7 AUG	1625	CELL 5 EAST SIDE	22.5	~390	JW
				TOTALS:(1)			

NOTE: (1) APPROXIMATE AREA: THIS PAGE: 76,432.5 (ft^2) ACCUMULATED: 322,517.5 (ft^2)

NOTES:

000180

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD

PANEL PLACEMENT LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GO 1341 TASK NO.: 4.1

DESCRIPTION: PHASE IV, CELL 4+5 YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: _____ PRODUCT TYPE: 80 MIL GEOMEMBRANE

PANEL NO.	BATCH / ROLL NO.	DATE (day/mo)	TIME	PLACEMENT LOCATION COMMENTS	APPROX WIDTH (ft)	APPROX LENGTH (ft)	QA ID
S-62	103114199	8 AUG	1003	CELL 5 EAST SIDE	22.5	~397	JW
S-63	103114300	8 AUG	1043	CELL 5 EAST SIDE	22.5	~397	JW
S-64	103114912	8 AUG	1242	CELL 5 EAST SIDE	~~22.5~~ 15.0	~390	JW
S-65	103114374	8 AUG	1505	CELL 6 (TIE IN) TO CELL 5 EAST SIDE	22.5	394	JW
S-66	103114822	8 AUG	1642	CELL 6 (TIE IN TO CELL 5 EAST SIDE	22.5	402	JW
(1) SS-~~67~~ 1 (JW)	SACRIFICIAL PANEL	104112100	~~9~~ 9 AUG	1008	CELL 6 (SACRIFICIAL COVER)	17.0	394	JW
S-67	103114293	13 AUG	1425	CELL 4 NW CORNER	22.5	357.0	JW
S-68	103114893	13 AUG	1511	CELL 4 NW CORNER	22.5	361.0	JW
S-69	103114872	14 AUG	1404	CELL 4 W SIDE	22.5	349	JW
S-70	103114235	15 AUG	1049	~~CELL~~ 4/5 IC BERM	22.5	351	JW
S-71	103114882	15 AUG	1305	4-5 IC BERM	22.5	366	JW
S-72	103114894	15 AUG	1509	CELL 4 W SIDE	22.5	350	JW
S-73	103114895	15 AUG	1614	CELL 4 W. SIDE	22.5	355	JW
S-74	103114285	16 AUG	1250	CELL 4 W. SIDE	22.5	353	JW
S-75	103114226	16 AUG	1401	CELL 4 W. SIDE	22.5	362	JW
S-76	103114858	20 AUG	1023	CELL 5 W. SIDE	22.5	371	JW
S-77	103114869	20 AUG	1231	CELL 5 W. SIDE	22.5	377	JW
S-78	103114832	20 AUG	1511	CELL 5 W. SIDE	22.5	367	JW
S-79	103114380	20 AUG	1647	CELL 5 W. SIDE	22.5	380	JW
S-80	103114207	20 AUG	1731	CELL 5 W. SIDE	16.0	370	JW
S-81	103114910	21 AUG	1059	CELL 4 W. SIDE	22.5	374	JW
S-82	103114288	21 AUG	1348	CELL 4 W. SIDE	22.5	368	JW
S-83	103114371	21 AUG	1452	CELL 4 W. SIDE	22.5	351	JW
				TOTALS:(1)			

NOTE: (1) APPROXIMATE AREA: THIS PAGE: 184,563 (ft²) ACCUMULATED: 507,080.5 (ft²)

NOTES: (1) SS-1 IS A SACRIFICIAL PANEL SEAMED TO S-66 AND → NOTE → SHINGLED IMPROPERLY.

000181

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832 MEM

GEOSYNTEC CONSULTANTS

FLUOR FERNALD 4943

PANEL PLACEMENT LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GR1341 TASK NO.: 4.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: _____ PRODUCT TYPE: 80 mil GML

PANEL NO.	BATCH / ROLL NO.	DATE (day/mo)	TIME	PLACEMENT LOCATION COMMENTS	APPROX WIDTH (ft)	APPROX LENGTH (ft)	QA ID
S-84	103 114 865	21 AUG	1719	CELL 4 W. SIDE	22.5	351	JW
S-85	103 114 891	21 AUG	1730	CELL 4 W. SIDE	22.5	358	JW
S-86	103 114 892	22 AUG	1045	CELL 4 W. SIDE	22.5	355	JW
S-87	103 114 287	22 AUG	1231	CELL 4 W. SIDE	22.5	360	JW
S-88	103 114 898	22 AUG	1259	CELL 4 W. SIDE	22.5	360	JW
S-89	103 114 881	26 AUG	0955	CELL 5/6 IC BERM	22.5	97	JW
S-90	103 114 881	26 AUG	1004	CELL 5/6 IC BERM	22.5	99	JW
S-91	103 114 881	26 AUG	1010	CELL 5/6 IC BERM	22.5	99	JW
S-92	103 114 881	26 AUG	1017	CELL 5/6 IC BERM	22.5	100	JW
S-93	103 114 213	26 AUG	1059	CELL 5/6 IC BERM	22.5	101	JW
S-94	103 114 213	26 AUG	1225	CELL 5/6 IC BERM	22.5	101	JW
S-95	103 114 213	26 AUG	1234	CELL 5/6 IC BERM	22.5	101	JW
S-96	103 114 213	26 AUG	1242	CELL 5/6 IC BERM	22.5	98	JW
S-97	103 114 279	26 AUG	1348	CELL 5/6 IC BERM	22.5	97	JW
S-98	103 114 279	26 AUG	1439	CELL 5/6 IC BERM	22.5	99	JW
S-99	103 114 279	26 AUG	1445	CELL 5/6 IC BERM	22.5	99	JW
S-100	103 114 279	26 AUG	1457	CELL 5/6 IC BERM	22.5	98	JW
S-101	103 114 274	26 AUG	1644	CELL 5/6 IC BERM	22.5	40	JW
S-102	103 114 274	26 AUG	1700	CELL 5/6 IC BERM	~~22.5~~ 14.5	53	JW
S-103	103 114 274	26 AUG	1734	CELL 5/6 IC BERM	~~24~~ 22.5	38	JW
S-104	103 114 274	26 AUG	1737	CELL 5/6 IC BERM	~~22.5~~ 15	28	JW
S-105	103 114 274	26 AUG	1750	CELL 5 SW CORNER FROM A1	~~22.5~~ 22	43	JW
S-106	103 114 274	26 AUG	1753	CELL 5/6 IC BERM FROM A1	~~22.5~~ 22	33	JW
				TOTALS:(1)			

NOTE: (1) APPROXIMATE AREA: THIS PAGE: 71,508 (ft²) ACCUMULATED: 578,588.5 (ft²)

NOTES:

000182

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD

PANEL PLACEMENT LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ 1341 TASK NO.: 4.1

DESCRIPTION: PHASE IV, CELL 4+5 LINER YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: _____ PRODUCT TYPE: GML 80 mil

PANEL NO.	BATCH / ROLL NO.	DATE (day/mo)	TIME	PLACEMENT LOCATION COMMENTS	APPROX WIDTH (ft)	APPROX LENGTH (ft)	QA ID
S-107	103 114 274	26 AUG	1730	CELL 5/6 IC BEAM FROM AT	~~22.5~~ 22	33	JW
S-108	103 114 274	26 AUG	1815	CELL 5/6 IC BEAM FROM AT	~~22.5~~ 22	48	JW
S-109	103 114 274	26 AUG	1825	CELL 5/6 IC BEAM FROM AT	5	63	JW
~~S-110~~ TOTTO	~~103 114 274~~	~~26 AUG~~	~~1825~~	~~CELL 5/6 IC BEAM AT~~	~~22.5~~		
S-110	103 114 829	27 AUG	1238	CELL 6 W. SIDE FROM AT	22.5	349	JW
S-111	103 114 817	27 AUG	1320	CELL 6 W. SIDE FROM AT	22.5	349	JW
S-112	103 114 823	28 AUG	0927	CELL 5 W. SIDE ~~FROM~~	22.5	352	JW
S-113	103 114 292	28 AUG	1036	CELL 5 W. SIDE FROM AT	22.5	351	JW
S-114	103 114 372	28 AUG	1326	CELL 5 W. SIDE ~~FROM~~	22.5	352	JW
S-115	103 114 860	28 AUG	1407	CELL 5 W. SIDE	22.5	352	JW
S-116	103 114 827	29 AUG	1530	CELL 5 W. SIDE	22.5	365	JW
S-117	103 114 833	4 SEPT	1258	CELL 5 W. SIDE	22.5	365	JW
S-118	103 114 289	4 SEPT	1330	CELL 5 W. SIDE	22.5	368	JW
S-119	103 114 277	4 SEPT	1452	CELL 5 W. SIDE	22.5	367	JW
S-120	103114 864	4 SEPT	1531	CELL 5 W. SIDE	22.5	356	JW
S-121	103 114 909	4 SEPT	1724	CELL 5 W. SIDE	22.5	357	JW
S-122	103 114 278	4 SEPT	1800	CELL 5 W. SIDE	22.5	355	JW
S-123	103 114 272	4 SEPT	1825	CELL 5 W. SIDE	22	355	JW
SS-2	104112102	27 AUG	1500	CELL 6 - S. WEST END (SACRIFICIAL)	22	400	JW
	→ SHINGLED IMPROPERLY WILL BE REMOVED FOR CELL 6 CONSTRUCTION.						
				TOTALS:(1)			

NOTE: (1) APPROXIMATE AREA: THIS PAGE: 123,062 (ft²) ACCUMULATED: 701,650.5 (ft²)

NOTES:

000183

Primary

GEOSYNTEC CONSULTANTS

FLUOR FERNALD 4943

PANEL PLACEMENT LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: 661341 TASK NO.: 4.1

DESCRIPTION: PHASE IV CELL 4+5 LINER YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: _____ PRODUCT TYPE: 80 mil HDPE GML

	PANEL NO.	BATCH / ROLL NO.	DATE (day/mo)	TIME	PLACEMENT LOCATION COMMENTS	APPROX WIDTH (ft)	APPROX LENGTH (ft)	QA ID
93 mil	P-1	103 114 857	11 SEPT	1545	CELL 3/4 TIE IN R. SIDE	22.5	388	JW
93 mil	P-2	103 114 854	11 SEPT	1620	CELL 4 E. SIDE	22.5	392	JW
93 mil	P-3	103 114 853	12 SEPT	0922	"	22.5	394	JW
93 mil	P-4	103 114 855	12 SEPT	1240	"	22.5	386	JW
91 mil	P-5	103 114 830	12 SEPT	1333	"	22.5	402	JW
90 mil	P-6	103 114 818	12 SEPT	1549	"	22.5	402	JW
89 mil	P-7	103 114 868	12 SEPT	1613	"	22.5	388	JW
89 mil	P-8	103 114 821	13 SEPT	1015	"	22.5	403	JW
89 mil	P-9	103 114 896	13 SEPT	1043	"	22.5	402	JW
8	P-10	103 114 835	13 SEPT	1353	"	22.5	402	JW
89 mil	P-11	103 114 819	13 SEPT	1433	"	22.5	402	JW
88 mil	P-12	103 114 866	13 SEPT	1605	"	22.5	400	JW
87 mil	P-13	103 114 898	13 SEPT	0919	"	22.5	402	JW
87 mil	P-14	103 114 811	14 SEPT	1252	"	22.5	398	JW
86 mil	P-15	103 114 843	14 SEPT	1400	"	22.5	396	JW
88 mil	P-16	103 114 885	16 SEPT	1015	4-5/6 IC BEAM	22.5	400	JW
88 mil	P-17	103 114 904	16 SEPT	1130	4/5/ IC BEAM	22.5	400	JW
88 mil	P-18	103 114 908	16 SEPT	1322	4/5 IC BEAM	22.5	398	JW
88 mil	P-19	88 103 114 879	16 SEPT	1454	CELL 5 E. SIDE	22.5	402	JW
86 mil	P-20	103 114 824	16 SEPT	1632	CELL 5 E. SIDE	22.5	400	JW
86 mil	P-21	103 114 837	17 SEPT	0901	CELL 5 E. SIDE	22.5	400	JW
86 mil	P-22	103 114 840	17 SEPT	0925	CELL 5 E SIDE	22.5	401	JW
86 mil	P-23	103 114 828	17 SEPT	1048	CELL 5 E. SIDE	22.5	400	JW
					TOTALS:(1)			

NOTE: (1) APPROXIMATE AREA: THIS PAGE: 206,055 (ft²) ACCUMULATED: 206,055 (ft²)

NOTES:

000185

GEOSYNTEC CONSULTANTS

FLUOR FERNALD

4943

PANEL PLACEMENT LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: 6Q 1341 TASK NO.: 4.1

DESCRIPTION: PHASE IV CELL 4+5 LINER YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: _____ PRODUCT TYPE: 80 mil HDPE GML

mil	PANEL NO.	BATCH / ROLL NO.	DATE (day/mo)	TIME	PLACEMENT LOCATION COMMENTS	APPROX WIDTH (ft)	APPROX LENGTH (ft)	QA ID
85 mil	P-24	103 114 862	17 SEPT	1130	CELL 5 E. SIDE	22.5	399	JW
85	P-25	103 114 814	17 SEPT	1375	CELL 5 E. SIDE	22.5	396	JW
84	P-26	103 114 204	17 SEPT	1500	CELL 5 E. SIDE	22.5	403	JW
84	P-27	103 114 210	17 SEPT	1530	CELL 5 E. SIDE	22.5	400	JW
84	P-28	103 114 242	18 SEPT	0851	CELL 5 E. SIDE	22.5	402	JW
84	P-29	103 114 303	18 SEPT	1007	CELL 5 E. SIDE	22.5	398	JW
84	P-30	103 114 243	18 SEPT	1107	CELL 5 E. SIDE	22.5	402	JW
84	P-31	103 114 203	18 SEPT	1350	CELL 5 E. SIDE	22.5	400	JW
83	P-32	103 114 214	18 SEPT	1521	CELL 5 E. SIDE	22.5	400	JW
[illegible]	P-33	103 114 297	19 SEPT	0855	CELL 5/6 IC BERM	22.5	135	JW
83	P-34	103 114 297	19 SEPT	0914	CELL 5/6 IC BERM	22.5	132	JW
83	P-35	103 114 297	19 SEPT	1002	CELL 5/6 IC BERM	22.5	129	JW
83	P-36	103 114 377	19 SEPT	1027	CELL 5/6 IC BERM	22.5	132	JW
83	P-37	103 114 377	19 SEPT	1052	CELL 5/6 IC BERM	22.5	133	JW
83	P-38	103 114 377	19 SEPT	1113	CELL 5/6 IC BERM	22.5	133	JW
83	P-39	103 114 302	19 SEPT	1129	CELL 5/6 IC BERM	22.5	129	JW
83	P-40	103 114 302	19 SEPT	1309	CELL 5/6 IC BERM	22.5	132	JW
83	P-41	103 114 302	19 SEPT	1339	CELL 5/6 IC BERM	22.5	131	JW
83	P-42	103 114 230	19 SEPT	1355	CELL 5/6 IC BERM	22.5	132	JW
83	P-43	103 114 230	19 SEPT	1405	CELL 5/6 IC BERM	22.5	133	JW
83	P-44	103 114 230	23 SEPT	0951	CELL 5/6 IC BERM	22.5	131	JW
83	P-45	103 114 284	23 SEPT	1029	CELL 5/6 IC BERM	22.5	131	JW
83	P-46	103 114 284	23 SEPT	1044	CELL 5/6 IC BERM	22.5	135	JW
					TOTALS:(1)			

NOTE: (1) APPROXIMATE AREA: THIS PAGE: 122,445 (ft^2) ACCUMULATED: 328,500 (ft^2)

NOTES:

000186

GEOSYNTEC CONSULTANTS

FLUOR FERNALD 4943

PANEL PLACEMENT LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 4.1

DESCRIPTION: PHASE III CELL 4+5 LINER YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: _____ PRODUCT TYPE: 80 mil HDPE GML

mil	PANEL NO.	BATCH / ROLL NO.	DATE (day/mo)	TIME	PLACEMENT LOCATION COMMENTS	APPROX WIDTH (ft)	APPROX LENGTH (ft)	QA ID
83	P-47	103 114 284	23 SEPT	1101	CELL 5/6 ZC BERM	22.5	132	JW
84	P-48	103 114 283	23 SEPT	1426	CELL 5/6 ZC BERM	22.5	95	JW
84	P-49	103 114 283	23 SEPT	1438	CELL 5/6 ZC BERM	22.5	61	JW
84	P-50	103 114 283	23 SEPT	1446	CELL 5/6 ZC BERM FROM A7	22.5	80	JW
84	P-51	103 114 283	23 SEPT	1456	CELL 5/6 ZC BERM FROM A7	22.5	74	JW
84	P-52	103 114 283	23 SEPT	1501	CELL 5/6 ZC BERM FROM A7	22.5	65	JW
83	P-53	103 114 227	23 SEPT	1516	CELL 5/6 ZC BERM FROM A7	22.5	46	JW
83	P-54	103 114 227	23 SEPT	1522	CELL 5/6 ZC BERM FROM A7	22.5	50	JW
83	P-55	103 114 227	23 SEPT	1527	CELL 5/6 ZC BERM FROM A7	22.5	69	JW
84	P-56	103 114 209	23 SEPT	1640	CELL 5 E SIDE	22.5	388	JW
9[illegible]	P-57	103 114 875	24 SEPT	1015	CELL 4 W. SIDE TIE TO CELL 3	22.5	379	JW
93	P-58	103 114 873	24 SEPT	1101	CELL 4 W. SIDE	22.5	380	JW
93	P-59	103 114 874	24 SEPT	1315	CELL 4 W. SIDE	22.5	377	JW
93	~~1355~~ P-60	103 114 856	24 SEPT	1355	CELL 4 W. SIDE	22.5	379	JW
93	P-61	103 114 889	24 SEPT	1431	CELL 4 W. SIDE	22.5	381	JW
92	P-62	103 114 850	24 SEPT	1602	CELL 4 W. SIDE	22.5	381	JW
90	P-63	103 114 852	24 SEPT	1633	CELL 4 W. SIDE	22.5	~~380~~ 377	JW
89	P-64	103 114 880	25 SEPT	0925	CELL 4 W. SIDE	22.5	379	JW
89	P-65	103 114 901	25 SEPT	1013	CELL 4 W. SIDE	22.5	382	JW
89	P-66	103 114 849	25 SEPT	1050	CELL 4 W. SIDE	22.5	382	JW
89	P-67	103 114 859	25 SEPT	1317	CELL 4 W. SIDE	22.5	382	JW
87	P-68	103 114 867	25 SEPT	1343	CELL 4 W. SIDE	22.5	383	JW
87	P-69	103 114 820	25 SEPT	1425	CELL 4 W. SIDE	22.5	383	JW
					TOTALS:(1)			

NOTE: (1) APPROXIMATE AREA: THIS PAGE: 135,112.5 (ft²) ACCUMULATED: 463,612.5 (ft²)

NOTES:

000187

GEOSYNTEC CONSULTANTS

FLUOR FERNALD 4943

PANEL PLACEMENT LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. G&1341 TASK NO.: 4.1

DESCRIPTION: PHASE IV CELL 4+5 LINER YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: _____ PRODUCT TYPE: 80mil HDPE GML

mil	PANEL NO.	BATCH / ROLL NO.	DATE (day/mo)	TIME	PLACEMENT LOCATION COMMENTS	APPROX WIDTH (ft)	APPROX LENGTH (ft)	QA ID
86	P-70	103114816	25 SEPT	1507	CELL 4 W. SIDE	22.5	384	JW
86	P-71	103114839	25 SEPT	1538	CELL 4 W. SIDE	22.5	381	JW
86	P-72	103114812	25 SEPT	1614	CELL 4/5 IC BERM	22.5	377	JW
87	P-73	103114861	25 SEPT	1701	CELL 4/5 IC BERM	22.5	382	JW
86	P-74	103114844	30 SEPT	1335	CELL 4/5 IC BERM	22.5	376	JW
85	P-75	103114827	30 SEPT	1441	CELL 5 W. SIDE	22.5	376	JW
85	P-76	103114846	30 SEPT	1527	CELL 5 W. SIDE	22.5	378	JW
84	P-77	103114246	30 SEPT	1623	CELL 5 W. SIDE	22.5	361	JW
83	P-78	103114301	1 OCT	0949	CELL 5/6 IC BERM	22.5	135	JW
	P-79	103114301	1 OCT	1015	CELL 5/6 IC BERM	22.5	135	JW
83	P-80	103114301	1 OCT	1034	CELL 5/6 IC BERM	22.5	122	JW
	P-81	103114817	1 OCT	1100	CELL 5/6 IC BERM	22.5	22	JW
83	P-82	103114~~423~~ 231	1 OCT	1130	CELL 5/6 IC BERM	22.5	143	JW
83	P-83	103114~~423~~ 231	1 OCT	1326	CELL 5/6 IC BERM	22.5	~~135~~ 140	JW
83	P-84	103114231	1 OCT	1340	CELL 5/6 IC BERM	22.5	117	JW
	P-85	* 103~~84~~ 114 882	1 OCT	1413	CELL 5/6 IC BERM	22.5	20	JW
83	P-86	103114296	1 OCT	1424	CELL 5/6 IC BERM	22.5	137	JW
83	P-87	103114296	1 OCT	1458	CELL 5/6 IC BERM	22.5	139	JW
83	P-88	103114296	1 OCT	1530	CELL 5/6 IC BERM	22.5	~~276~~ 124	JW
83	P-89	103114~~298~~ 882	1 OCT	1590	CELL 5/6 IC BERM	22.5	120	JW
83	P-90	103114298	1 OCT	1556	CELL 5/6 IC BERM	22.5	123.0	JW
83	P-91	103114298	1 OCT	1617	CELL 5/6 IC BERM	22.5	139.0	JW
83	P-92	103114298	1 OCT	1632	CELL 5/6 IC BERM	22.5	119	JW
					TOTALS:(1)			

NOTE: (1) APPROXIMATE AREA: THIS PAGE: 104,445 (ft²) ACCUMULATED: 568,057.5 (ft²)

NOTES:

000188

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD 4943

PANEL PLACEMENT LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: 6Q1341 TASK NO.: 4.1

DESCRIPTION: PHASE IV CELL 4+5 YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: _____ PRODUCT TYPE: 80 mil HDPE GML

mil	PANEL NO.	BATCH / ROLL NO.	DATE (day/mo)	TIME	PLACEMENT LOCATION COMMENTS	APPROX WIDTH (ft)	APPROX LENGTH (ft)	QA ID
	P-93	103 114 846	Oct 1	1730	CELL 5/6 IC BERM	22.5	19	JW
82	P-94	103 114 290	Oct 1	1735	CELL 5/6 IC BERM W. SIDE	22.5	140	JW
82	P-95	103 114 290	Oct 2	1035	CELL 5/6 IC BERM W. SIDE	22.5	111	JW
82	P-96	103 114 290	Oct 2	1048	CELL 5/6 IC BERM W. SIDE	22.5	81	JW
82	P-97	103 114 290	Oct 2	1101	CELL 5/6 IC BERM W. SIDE	22.5	66	JW
84	P-98	103 114 281	Oct 2	1114	CELL 5/6 IC BERM W. SIDE	22.5	69	JW
84	P-99	103 114 281	Oct 2	1120	CELL 5/6 IC BERM W. SIDE	22.5	71	JW
84	P-100	103 114 281	Oct 2	1130	CELL 5/6 IC BERM W. SIDE	22.5	47	JW
84	P-101	103 114 281	Oct 2	1132	CELL 5/6 IC BERM W. SIDE	22.5	44	JW
84	P-102	103 114 281	Oct 2	1315	CELL 5/6 IC BERM	22.5	57	JW
84	P-103	103 114 281 ~~103 114 763~~	Oct 2	1446	CELL 5. WEST SIDE	22.5	64	JW
84	P-104	103 114 282	Oct 2	1517	CELL 5 W. SIDE	22.5	365	JW
84	P-105	103 114 208	Oct 2	1600	CELL 5 W. SIDE	22.5	366	JW
84	P-106	103 114 205	Oct 7	1123	CELL 5 W. SIDE	22.5	363	JW
84	P-107	103 114 286	Oct 7	1318	CELL 5 W. SIDE	22.5	364	JW
84	P-108	103 114 206	Oct 7	1477	CELL 5 W. SIDE	22.5	364	JW
84	P-109	103 114 276	Oct 7	1610	CELL 5 W. SIDE	22.5	359	JW
83	P-110	103 114 280	Oct 8	1000	CELL 5 W. SIDE	22.5	377	JW
83	P-111	103 114 224	Oct 8	1042	CELL 5 W. SIDE	22.5	361	JW
84	P-112	103 114 240	Oct 8	1310	CELL 5 W. SIDE	22.5	366	JW
83	P-113	103 114 228	Oct 8	1443	CELL 5 W. SIDE	22.5	366	JW
83	P-114	103 114 225	Oct 8	1531	CELL 5 W. SIDE	22.5	372	JW
82	P-115	103 114 198	Oct 8	1608	CELL 5 W. SIDE	~~22.5~~ 11.0	368	JW
					TOTALS:(1)			

NOTE: (1) APPROXIMATE AREA: THIS PAGE: ~~206,055~~ 111,868 ft² (ft²) ACCUMULATED: 679,925.5 (ft²)

NOTES:

000189

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APPENDIX K

Geomembrane Trial Seam Logs

Field Tensiometer Calibration

CALIBRATION CERTIFICATE

Customer Name: THE ISTRE CO.
Tensiometer Serial Number: NAL -

110 Volt [X]
220 Volt [ ]
LBS

Device Calibrated: S-Type load cell
Range: 0-500 lbs. Tension
Model No: M2300-500
Serial No: 126721

Calibration Apparatus:
Dead Weight system w/
Fluke Model 8840A Multimeter

Readout Model No: 2840AG-24123
Readout Serial No: 10553035-149
Channel No: N/A

W1	2	R1	808
W2	152	R2	2683
W3	302	R3	4557

Indicator reading with no load: 0

Applied Force lbs.	Output (mv):	Display reading:	Deviation Error:
2	2.423	2	0.00
52	4.296	52	0.00
102	6.175	102	0.00
152	8.049	152	0.00
202	9.917	202	0.00
252	11.794	252	0.00
302	13.667	302	0.00

Total Deviation Error (%): 0.00%

Temperature at time of calibration: 73 degrees F
Exitation Voltage: 10 V DC

Scale Factor (1):	0.0800	Offset (1):	-63
Scale Factor (2):	0.0800	Offset (2):	-63
Break point:	2683	Calibration Check #	

Traceable to NIST Standards

***NOTE: Readout and load cell above have been systems calibrated and are considered a matched pair. In general, calibrated readouts and load cells are not interchangeable.**

This calibration conforms to the standards set by ASTM E4.

Calibration performed by: BILL AULTZ

Signature: Bill Aultz Date: 7/16/02

Secondary

Fusion

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4+5 LINER YEAR: 2002

SPECIFICATIONS: 115 PEEL, 151 SHEAR (ppi) TENSIOMETER DESCRIPTION: COLUMBINE ACCURA-LITE

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	MATERIAL DESCRIPTION (1)	FUSION WEDGE (SET/°C/F)	FUSION MEASURED SPEED (°C/F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
1	20 JUL	0840	01	DW	T/T	850	5.0	150/179	209	P		CB
								165/172	205	P		CB
2	20 JUL	1350	08	JB	T/T	425 °C	5.5	148/147	162	P		CB
								139/148	177	P		CB
3	20 JUL	1325	01	DW	T/T	850	5.5	138/133	168	P		CB
								144/146	155	P		CB
4	20 JUL	1820	01	DW	T/T	850	5.5	133/136		P	CB P	CB
								143/*145			*F	CB
5	22 JUL	0735	01	DW	T/T	850	5.0	177/168	214	P		CB
								157/162	204	P		CB
6	24 JULY	1540	01	DW	T/T	850	3.0	148/142	153	P	–	TBC
								149/150	159	P	–	TBC
7	24 JULY	1545	01	DW	T/T	850	5.5	133/132	165	P	–	TBC
								123/133	174	P	–	TBC
8	25 JUL	1730	01	DW	T/T	850	4.3	121/136	188	P	–	CB
								127/129	177	P	–	CB

* SAMPLE FAILS DUE TO NON-FTB (SEAM SEPARATION).

000195

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ 1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 LINER YEAR: 2002

SPECIFICATIONS: PEEL - 115, SHEAR - 151 (ppi) TENSIOMETER DESCRIPTION: COLUMBINE ACCURA-LITE

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/°F)	FUSION MEASURED SPEED ~~(°C/°F)~~	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
9	25 JUL	1745	07	JI	T/T	850	18%	123/126	~~126~~	P	-	CB
								128/130	~~130~~	P	-	CB
10	~~24~~ 28 JUL	0830	2025 (66)	TS	T/T	430	5	153/164	215	P	-	CB
								(2) 104/129 (2)	210	-	F	CB
11	28 JUL	~~1000~~ CB 0915	2025	TS	T/T	430	5	154/189	216	P	-	CB
								172/132	221	P	-	CB
12	28 JUL	~~1000~~ CB 0915	2025	TS	T/T	430	5	167/145	221	P	-	CB
								180/164	223	P	-	CB
13	28 JUL	1000	01	DW	T/T	750	4	150/161	217	P	-	CB
								148/159	212	P	-	CB
14	28 JUL	1330	2025	TS	T/T	430	5	142/146	208	P	-	CB
								178/162	208	P	-	CB
15	28 JUL	1345	01	DW	T/T	750	4	152/147	201	P	-	CB
								155/137	190	P	-	CB
16	29 JUL	0658	01	DW	T/T	750	4	182/167	209	P	-	CB
								170/161	196	P	-	CB

(2) NON-FTB

000196

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 041

DESCRIPTION: PHASE IV, CELLS 4+5 LINER YEAR: 2002

SPECIFICATIONS: PEEL- 115, SHEAR - 151 (ppi) TENSIOMETER DESCRIPTION: COLUMBINE ACCURA-LITE

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE ~~(SET/°C/°F)~~	FUSION MEASURED SPEED ~~(°C/°F)~~	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
17	29 JUL	1247	01	DW	T/T	750	4	127/129	187	P	–	CB
								149/141	201	P	–	CB
18	30 JUL	1250	01	DW	T/T	750	4	(2)/ –	–	–	F	CB
								–	–	–	F	CB
19	30 JUL	1330	01	DW	T/T	750	4	141/146	209	P	–	CB
								149/158	212	P	–	CB
20	30 JUL	1332	01	DW	T/T	750	4	156/180	220	P	–	CB
								163/165	215	P	–	CB
21	31 JUL	0703	01	DW	T/T	750	4	134(2)	–	–	F	CB
								–	–	–	F	CB
22	01 AUG	1310	10	JI	T/T	750	5	149/157	205	P	–	TBC
								145/145	222	P	–	TBC
23	01 AUG	1242	09	DW	T/T	800	5.3	139/117	193	P	–	TBC
								158/133	188	P	–	TBC
24	01 AUG	1248	09	DW	S/T	800	5.3	131/134	170	P	–	TBC
								129/117	168	P	–	TBC

(2) SEAM SEPARATION OBSERVED (NON-FTB)

000197

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 041

DESCRIPTION: PHASE III, CELLS 4 & 5 YEAR: 2002

SPECIFICATIONS: PEEL-115, SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: COLUMBINE ACCURA-LITE

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	MATERIAL DESCRIPTION (1)	FUSION WEDGE (SET/°C/°F)	FUSION MEASURED SPEED ~~(°C/°F)~~	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
25	01 AUG	1240	09	DW	S/S	800	6.5	148/124	168	P	–	TBW
								150/136	167	P	–	TBW
26	01 AUG	1400	09	DW	S/T	750	5.0	134/136	175	P	–	TBW
								143/139	181	P	–	TBW
27	02 AUG	0720	10	JI	S/T	750	5.5	136/143	217	P	–	TBW
								146/139	212	P	–	TBW
28	02 AUG	0750	09	DW	S/S	800	6.5	140/131	210	P	–	TBW
								140/136	212	P	–	TBW
29	02 AUG	0835	10	JI	T/T	750	5.5	144 156/~~165~~ 123	211 209 206/~~194~~	P	–	TBW
								155 ~~151~~/~~164~~ 133				
30	02 AUG	1230	09	DW	S/S	800	6.5	125/132	168	P	–	TBW
								123/128	170	P	–	TBW
31 ~~30~~	02 AUG	1250	10	JI	T/T	750	5	150/152	206	P	–	TBW
								153/151	194	P	–	TBW
32	02 AUG	1315	09	DW	S/S	750	6.5	138/126	182	P	–	TBW
								128/117	181	P	–	TBW
33	02 AUG	1735	09	DW	S/S	750	6.5	118/124	177	P	–	CB
								136/140	176	P	–	CB

000198

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 041

DESCRIPTION: CELLS 4 & 5 LINER YEAR: 2002

SPECIFICATIONS: PEEL - 115, SHEAR - 151 (ppi) TENSIOMETER DESCRIPTION: COLUMBINE ACCURA-LITE

	TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/°F)	FUSION MEASURED SPEED (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
CB 34	~~25~~	03 AUG	~0900	09	JI	S/T	750	6.0	(2)/		-	F	CB
CB	~~35~~	~~03AUG~~	~~0920~~	~~09~~	~~JI~~	~~S/T~~	~~750~~						
	35	03AUG	0930	09	JI	S/S	750	6.0	140/136	188	P	-	CB
									140/142	194	P	-	CB
	36	03 AUG	1108	09	JI	S/T	750	6.0	160/155		P	-	CB/JW
									—(2)		-	F	CB
	37	03 AUG	1240	09	JI	S/T	750	5.0	144/156	206	P	-	CB
									148/136	211	P	-	CB
	38	03AUG	1240	09	JI	S/T	750	5.0	158/168	200	P	-	CB
									168/171	214	P	-	CB
	39	04 AUG	0800	10	JI	S/T	750	5.0	137/155	210	P	-	CB
									150/141	184	P	-	CB
	40	04 AUG	0810	09	DW	S/T(3)	750	5.0	158/148	186	P	-	CB
									149/148	199	P	-	CB
	41	04 AUG	1010	10	JI	T/T	750	5.3	137/131	183	P	-	CB
									132/152	192	P	-	CB

(2) FAILED DUE TO NON-FTB (3) TEXTURE OF ROLL W/ SMOOTH EDGE

000199

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ 1341 TASK NO.: 04.1

DESCRIPTION: CELLS 4 & 5 LINER YEAR: 2002

SPECIFICATIONS: PEEL - 115, SHEAR - 151 (ppi) TENSIOMETER DESCRIPTION: COLUMBINE ACCURA-LITE

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/°F)	FUSION MEASURED SPEED (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
42	04 AUG	1022	09	DW	T/T	750	5.0	130/154	195	P	-	CB
								134/152	185	P	-	CB
43	05 AUG	0814	09	DW	T/T	750	4.5	142/151	217	P	-	CB
								146/157	220	P	-	CB
44	05 AUG	1243	09	DW	T/T	750	4.5	135/141	171	P	-	CB
								136/142	167	P	-	CB
45	05 AUG	1410	09	JB	T/T	750	4.5	171/158	178	P	-	CB
								158/151	180	P	-	CB
46	05 AUG	1310	10	JB	T/T	750	4.5	127/132	183	P	-	CB
								130/132	155	P	-	CB
47	~~083~~ CB 06 AUG	0835	09	DW	T/T	750	4.5	151/192	267	P	-	CB
								138/164	241	P	-	CB
48	06 AUG ~~0920~~ CB	0920	10	JI	T/T	750	4.5	170/191	219	P	-	CB
								150/184	213	P	-	CB
49	06 AUG	1247	10	JI	T/T	750	4.5	138/131	152	P	-	CB
								118/121	174			

000200

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04-1

DESCRIPTION: CELLS 4&5 LINER YEAR: 2002

SPECIFICATIONS: PEEL - 115, SHEAR - 151 (ppi) TENSIOMETER DESCRIPTION: COLUMBINE ACCUMA - LITE

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/°F)	FUSION MEASURED SPEED (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
50	06 AUG	1250	09	DW	T/T	750	4.5	123/134 (2)		-	F	CB
								/		-	F	CB
51	06 AUG	1300	10	JI	T/T	750	4.5	130/138	151	P	-	CB
								117/124	157	P	-	CB
52	06 AUG	1300	10	JI	T/T	750	4.5	124/139	161	P	-	CB
								129/130	169	P	-	CB
53	06 AUG	1420 ~~1338~~	09	DW	T/T	750	4.5	204/193	231	P	-	CB
								160/166	217	P	-	CB
54	06 AUG	1420	09	DW	T/T	750	4.5	186/176	175	P	-	CB
								171/176	158	P	-	CB
55	07 AUG	0810	09	DW	T/T	750	4.5	215/189	221	P	-	CB
								180/173	226	P	-	CB
56	07 AUG	0925	10	JI	T/T	750	4.3	152/181	205	P	-	CB
								174/182	246	P	-	CB
57	07 AUG	1015	10	JI	T/T	750	4.5	177/182	240	P	-	CB
								185/181	251	P	-	CB

(2) NON-FTB

000201

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: CELLS 4+5 LINER YEAR: 2002

SPECIFICATIONS: PEEL - 115, SHEAR - 151 (ppi) TENSIOMETER DESCRIPTION: COLUMBINE ACCURA-LITE

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/F)	FUSION MEASURED SPEED (°C/F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
58	07AUG	1232	09	DW	T/T	750	4.5	174/180	176	P	-	CB
								139/136	188	P	-	CB
59	07AUG	~~0~~ CB 1450	10	JI	T/T	750	4.5	117/160	183/CB	P	-	CB
								145/154	183	P	-	CB
60	07AUG	1655	09	DW	T/T	750	4.5	158/151	191	P	-	CB
								171/153	186	P	-	CB
61	08AUG	1244	09	DW	T/T	750	4.5	152/141	165/CB	P	-	CB
								148/153	165/	P	-	CB
62	08AUG	1245	10	JI	T/T	750	4.5	136/140	169	P	-	CB
								153/128	164	P	-	CB
63	08AUG	1630	10	JI	T/T	750	4.5	140/140	165	P	-	JW
								135/147	171	P	-	JW
64	08AUG	1630	09	DW	T/T	750	4.5	150/142	172	P	-	JW
								142/142	169	P	-	JW
65	08AUG	1740	09	DW	S/T	750	4.5	181/184	230	P	-	CB
								176/180	225	P	-	CB

000202

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ 1341 TASK NO.: 4.1

DESCRIPTION: PHASE IV, CELL 4+5 LINER YEAR: 2002

SPECIFICATIONS: 115 PEEL, 151 SHEAR (ppi) TENSIOMETER DESCRIPTION: COLOBINE ACCURA LITE

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/°F)	FUSION MEASURED SPEED (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
66	9 AUG	0745	09	DW	T/T	750	4.5	173/158	256	P	F	JW
								176/177 (2)	253	P	F	JW
67	9 AUG	0750	10	JI	T/T	750	4.3	114 (2) (PEELING)			F	JW
68	9 AUG	0800	09	DW	T/T	750	4.5	183/141	246	P		JW
								178/173	250	P		JW
69	9 AUG	0800	09	DW	T/T	750	4.5	179/183	242	P		JW
								164/179	210	P		JW
70	9 AUG	0835	10	JI	T/T	750	4.5	167/169	232	P		JW
								170/175	235	P		JW
71	9 AUG	0835	10	JI	T/T	750	4.5	174/182	232	P		JW
								182/186	237	P		JW
72	9 AUG	0925	10	DW	T/T	750	4.5	182/189	241	P		JW
								187/162	241	P		JW
73	09 AUG	1235	10	DW	T/T	750	4.5	172/153	165	P	–	CB
								166/147	161	P	–	CB
74	09 AUG	1700	10	DW	T/T	750	4.5	160/146	174	P	–	CB
								158/149	174	P	–	CB

(2) NON-FTB

000203

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 041

DESCRIPTION: Cells 4+5 Liner YEAR: 2002

SPECIFICATIONS: PEEL -115, SHEAR - 151 (ppi) TENSIOMETER DESCRIPTION: Columbine Accuka-Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	MATERIAL DESCRIPTION (1)	FUSION WEDGE (SET/°C/°F)	FUSION MEASURED SPEED (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
75	10 AUG	0730	10	DW	S/T	750	5.5	160/183	223	P	–	CB
								166/170	218	P	–	CB
76	10AUG	1235	10	DW	CB S/T	750	5.5	160/152	167	P	–	CB
								133/144	170	P	–	CB
77	13 AUG	0920	09	DW	T/T	750	4.5	149/149	205	P	–	JW
								151/169	201	P	–	JW
78	13 AUG	1318	09	DW	T/T	750	4.5	143/147	164	P	–	CB
								143/136	170	P	–	CB
79	13AUG	1430	10	JI	T/T	750	4.5	142/133	170	P	–	CB
								127/129	166	P	–	CB
80	14AUG	1250	09	DW	T/T	750	4.5	153/151	199	P	–	CB
								155/158	197	P	–	CB
81	15 AUG	0740	09	DW	T/T	750	4.5	150/155	208	P	–	TBW
								151/144	208	P	–	TBW
82	15 AUG	0955	09	DW	T/T	750	4.5	157/158	207	P	–	CB
								144/165	204	P	–	CB
83	15 AUG	1310	09	DW	T/T	750	4.5	152/149	188	P	–	TBW
								146/150	193	P	–	TBW

000204

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

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FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 YEAR: 2002

SPECIFICATIONS: PEEL - 115 ppi ; SHEAR - 151 ppi TENSIOMETER DESCRIPTION: COLUMBINE ACCURA-LITE

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION (ft/min) WEDGE (SET/°C/°F)	FUSION (ft/min) MEASURED SPEED ~~(°C/°F)~~	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	TEST RESULTS PASS	TEST RESULTS FAIL	QA ID
84	15AUG	1650	09	DW	T/T	750	4.5	144/145	184	P	–	TBW
								144/139	175	P	–	TBW
85	16AUG	0835	10	DW	T/T	750	4.5	137/143	198	P	–	TBW
								133/143	194	P	–	TBW
86	16AUG	1235	10	DW	T/T	750	4.5	137/135	189	P	–	TBW
								141/127	180	P	–	TBW
87	17AUG	0745	09	DW	T/T	750	4.5	163/158	234	P	–	TBW
								164/169	235	P	–	TBW
88	17AUG	0845	10	JI	T/T	750	4.5	180/167	218	P	–	TBW
								169/168	218	P	–	TBW
89	19AUG	0815	10	DW	T/T	750	4.5	141/170	203	P	–	TBW
								182/146	213	P	–	TBW
90	19AUG	1510	10	DW	T/T	750	4.5	148/161	204	P	–	TBW
								150/165	204	P	–	TBW
91	20AUG	0810	10	DW	T/T	750	4.5	171/171	236	P	–	TBW
								174/168	237	P	–	TBW

000205

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 YEAR: 2002

SPECIFICATIONS: PEEL-115, SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: COLUMBINE ACCURA-LITE

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/°F)	FUSION MEASURED SPEED (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
92	20 AUG	1004	09	DW	T/T	750	4.5	192/178	240	P	–	TBW
								168/182	238	P	–	TBW
93	20 AUG	1350	10	DW	T/T	750	4.5	136/149	187	P	–	TBW
								142/135	197	P	–	TBW
94	20 AUG	1721	10	JI	T/T	750	4.5	149/172	202	P	–	TBW
								163/155	201	P	–	TBW
95	20 AUG	1740	09	DW	T/T	750	4.5	160/159	190	P	–	TBW
								162/159	197	P	–	TBW
96	21 AUG	1240	09	DW	T/T	750	4.5	146/141	179	P	–	TBW
								142/140	193	P	–	TBW
97	21 AUG	1330	10	JI	T/T	750	4.5	147/175	187	P	–	TBW
								144/146	185	P	–	TBW
98	21 AUG	1725	09	DW	T/T	750	4.5	166/156	176	P	–	TBW
								162/151	170	P	–	TBW
99	21 AUG	1725	10	JI	T/T	750	4.5	153/150	215	P	–	TBW
								155/152	213	P	–	TBW

000206

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

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FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 041

DESCRIPTION: PHASE IV; CELLS 4&5 YEAR: 2002

SPECIFICATIONS: PEEL-115; SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: COLUMBINE ACCURA-LITE.

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/°F)	FUSION MEASURED SPEED (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
100	22AUG	0755	09	DW	T/T	750	4.5	167/165	226	P	–	TBW
								157/166	219	P	–	TBW
101	22AUG	1240	09	DW	T/T	750	4.5	157/157	198	P	–	CHW
								171/152	187	P	–	CHW
102	22AUG	1650	09	DW	T/T	750	4.5	149/119	176	P	–	CHW
								153/151	198	P	–	CHW
103	23AUG	0845	09	DW	T/T	750	4.5	137/158	208	P	–	CHW
								154/149	197	P	–	CHW
104	26AUG	0950	09	DW	T/T	750	4.5	165/180	235	P	–	CHW
								159/157	226	P	–	CHW
105	26AUG	1240	09	DW	T/T	750	4.5	171/151	214	P	–	CHW
								155/152	211	P	–	CHW
106	26AUG	1655	09	DW	T/T	750	4.5	155/171	213	P	–	CHW
								156/167	209	P	–	CHW
107	27AUG	0830	09	DW	T/T	750	4.5	196/177	249	P	–	CHW
								186/185	216	P	–	CHW

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: G01341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell 4 & 5 YEAR: 2002

SPECIFICATIONS: PEEL-115, SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	MATERIAL DESCRIPTION (1)	FUSION WEDGE (SET/°C/°F)	FUSION MEASURED SPEED (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
108	27AUG	1350	09	DW	T/T	750	4.5	156/160	239	P	–	CHW
								156/161	214			
109	27AUG	1437	09	DW	T/T	750	4.5	166/163	204	P	–	CHW
								152/162	215			
110	28AUG	0917 ~~0820~~	09	DW	T/T	750	4.5	163/165	203	P	–	CHW
								155/155	212	P	–	CHW
111	28AUG	1245	09	DW	T/T	750	4.5	159/158	220	P	–	CHW
								158/156	205	P	–	CHW
112	28AUG	1600	09	DW	T/T	750	4.5	166/167	200	P	–	CHW
								154/167	206	P	–	CHW
113	29AUG	0830	09	DW	T/T	750	4.5	159/153	212	P	–	CHW
								154/159	211	P	–	CHW
114	29AUG	1615	09	DW	T/T	750	4.5	171/169	227	P	–	CHW
								170/172	226	P	–	CHW
115	30AUG	0120	09	DW	T/T	750	4.5	162/164	266	P	–	CHW
								154/166	251	P	–	CHW

000208

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: G01341 TASK NO.: 04.1

DESCRIPTION: Phase IV YEAR: 2002

SPECIFICATIONS: PEEL-115, SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/°F)	FUSION MEASURED SPEED (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
116	4Sept	1445	09	DW	T/T	750	4.5	180/179	245	P	–	CHW
								168/175	247	P	–	CHW
117	5Sept	0755	09	DW	T/T	750	4.5	164/169	243	P	–	CHW
								162/163	237	P	–	CHW
118	5Sept	1255	09	DW	T/T	750	4.5	154/166	214	P	–	CHW
								175/165	205	P	–	CHW
119	6Sept	1255	09	DW	T/T	750	4.5	179/173	235	P	–	CHW
								191/182	238	P	–	CHW
120	7Sept	0815	09	DW	T/T	750	4.5	153/166	241	P	–	CHW
								168/160	239	P	–	CHW
121	7Sept	1300	09	DW	T/T	750	4.5	159/162	204	P	–	CHW
								159/158	206	P	–	CHW
122	8Sept	1010	011	DW	T/T	750	4.5	174/176	224	P	–	CHW
								179/178	237	P	–	CHW
123	11Sept	1325	009	DW	T/T	750	4.5	184/175	230	P	–	CHW
								187/178	210	P	–	CHW

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: 601341 TASK NO.: 041

DESCRIPTION: Phase IV YEAR: 2002

SPECIFICATIONS: PEEL-115, SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/°F)	FUSION MEASURED SPEED (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
124	12 Sept	0902	09	DW	T/T	750	4.5	176/188	245	P	–	CHW
								177/194	259	P	–	CHW
125	12 Sept	1240	09	DW	T/T	750	4.5	193/180	252	P	–	CHW
								172/169	263	P	–	CHW
126	12 Sept	1400	11	SSC	T/T	750	4.5	184/187	239	P	–	CHW
								157/179	242	P	–	CHW
127	13 Sept	1015	11	SSC	T/T	750	4.5	182/187	200	P	–	CHW
								180/179	230	P	–	CHW
128	13 Sept	1245	11	SSC	T/T	750	4.5	198/169	235	P	–	CHW
								182/181	222	P	–	CHW
129	13 Sept	1245	09	DW	T/T	750	4.5	173/161	247	P	–	CHW
								165/172	242	P	–	CHW
130	13 Sept	1645	09	DW	T/T	750	4.5	192/192	245	P	–	CHW
								190/182	254	P	–	CHW
131	13 Sept	1730	11	JI	T/T	750	4.5	174/154	226	P	–	CHW
								179/182	190	P	–	CHW
								185/176				

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

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Extrusion

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4+5 LINER YEAR: 2002

SPECIFICATIONS: PEEL-84, SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: COLUMBINE ACCURA-LITE

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	MATERIAL DESCRIPTION (1)	EXTRUSION PREHEAT (SET °C/°F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
1	19 JUL	10:21	04	JB	T/T	445	495	116	173	P	–	–	CB
								145	181	P	–	–	CB
2*	19 JUL	1330	04	JB	T/T	445	495	132		*	*	*	CB
3	20 JUL	0918	04	JB	T/T	445	495	130	~~134~~ 196	P	–	–	CB
								134	161	P	–	–	CB
4	22 JUL	1025	04	JB	T/T	445	495	165	211	P	–	–	CB
								163	214	P	–	–	CB
5	23 JULY	0810	04	JB	T/T	445	495	155	205	P	–	–	TBC
								147	202	P	–	–	TBC
6	23 JUL	1255	04	JB	T/T	445	495	160	200	P	–	–	CB
								147	199	P	–	–	CB
7	24 JUL	0920	04	JB	T/T	445	495	131	217	P	–	–	CB
								159	222	P	–	–	CB
8	24 JUL	1550	06	JB	T/T	475	550	115	170	P	–	–	TBC
								123	175	P	–	–	TBC
9	25 JULY	0815	04	JB	T/T	475	550	162	210	P	–	–	TBC
								156	210	P	–	–	TBC

* LIGHTNING DELAY – TEST ABANDONED. NO SEAMING PERFORMED THIS PERIOD.

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

000212

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD, INC.

TRIAL SEAM LOG – EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: CELLS 4&5, PHASE IV YEAR: 2002

SPECIFICATIONS: PEEL - 84 , SHEAR - 151 (ppi) TENSIOMETER DESCRIPTION: COLUMBINE ACCURA-LITE

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/C/F)	EXTRUSION BARREL (°C/F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
10	26 JUL	1010	04	JB	T/T	475	550	171	203	P	-	-	CB
								148	195	P	-	-	CB
11	26 JUL	1250	04	JB	T/T	475	550	138	183	P	-	-	CB
								150	178	P	-	-	CB
12	30 JUL	~~1317~~ 1317 CB	04	JI	T/T	475	550	176	215	P	-	-	CB
								158	204	P	-	-	CB
13	30 JUL	1750	04	JI	T/T	475	550	128	173	P	-		CB
								139	173	P	-		CB
14	31 JUL	0730 CB	04	JI	T/T	475	550	161	209	P	-	-	CB
								124	210	P	-	-	CB
15	31 JUL	1300	04	JB	T/T	475	550	144	215	P	-	-	CB
								138	207	P	-	-	CB
16	02 AUG	0740	04	JB	T/T	475	550	145	224	P	-	-	TBU
								148	240	P	-	-	TBU
17	02 AUG	1300	04	JB	T/T	475	550	135	214	P	-	-	TBU
								155	217	P	-	-	TBU

(2) SEAM SEPARATION OBSERVED

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

000213

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GO1341 TASK NO.: 04.1

DESCRIPTION: Cells 4 & 5 LINER, PHASE IV YEAR: 2002

SPECIFICATIONS: PEEL - 84, SHEAR - 151 (ppi) TENSIOMETER DESCRIPTION: COLUMBINE ~~ACCURA-LITE~~

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/C/F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
18	05 AUG	0750	04	JB	T/T	475	550	123/CB	194	P	-		CB
								128	207	P	-		CB
19	06 CB ~~05~~ AUG	0715	04	JB	T/T	475	550	108	203	P	-		CB
								133	208	P	-		CB
20	06 AUG	1710	04	JB	T/T	475	550	159	185	P	-		CB
								141	212	P	-		CB
21	08 AUG	0755	04	JB	T/T	475	550	133	199	P	-		CB
								128	205	P	-		CB
22	08 AUG	1330	04	JB	T/T	475	550	148	152	P	-		CB
								124	164	P	-		CB
23	09 AUG	1310	04	JB	T/T	450	525	148	157	P	-		CB
								134	181	P	-		CB
24	10 AUG	0820	04	~~JB~~ JI CB	T/T	450	525	92 (2)	-	-	F	25+	CB
								-	-			26	
25	10 AUG	0915	04	JI	T/T	450	525	118	219	P	-		JW
								158	207	P	-		JW

(2) NON-FTB

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

000214

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD, INC.

TRIAL SEAM LOG – EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: 6Q1341 TASK NO.: 4.1

DESCRIPTION: PHASE IV, CELL 4+5 LINER YEAR: 2002

SPECIFICATIONS: PEEL 84 lbs SHEAR 151 lbs (PPi) TENSIOMETER DESCRIPTION: COLUBINE ACCURA-LITE

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/C/F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
26	10 Aug	0915	04	JI	T/T	450	525	131	214	P	–		JW
								127	224	P	–		JW
27	12 Aug	1630	04	JB	T/T	450	525	135	164	P	–		JW
								143	158	P	–		JW
28	12 Aug	1630	04	JB	T/T	450	525	125	173	P	–		JW
								124	187	P	–		JW
29	14 Aug	0800 ~~0735~~ (JW)	04	JB	T/T	475	550	144	190	P	–		JW
								129	167	P	–		JW
30	14 Aug	0800	04	JB	T/T	475	550	152	175	P	–		JW
								155	195	P	–		JW
31	14 Aug	0910	06	DL	T/T	475	550	125	203	P	–		JW
								133	200	P	–		JW
32	14AUG	1250	06	DL	T/T	485	550	132	157	P	–		CB
								129	172	P	–		CB
33	15 AUG	0840	06	DL	T/T	475	550	163	195	P	–		TBW
								140	201	P	–		TBW

000215

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD, INC.

TRIAL SEAM LOG – EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: G0134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 YEAR: 2002

SPECIFICATIONS: PEEL-84 ppi ; SHEAR-151 ppi TENSIOMETER DESCRIPTION: COLUMBINE ACCURA-LITE

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/C/F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
34	15AUG	0910	03	JB	T/T	475	550	131	172	P	–	–	TBU
								132	175	P	–	–	TBU
35	15AUG	0950	06	DL	T/T	475	550	145	177	P	–	–	CG
								148	185	P	–	–	CG
36	15AUG	1250	06	DL	T/T	475	550	154	177	P	–	–	TBU
								152	181	P	–	–	TBU
37	15AUG	1300	03	JB	T/T	475	550	145	180	P	–	–	TBU
								143	177	P	–	–	TBU
38	15AUG	1710	06	DL	T/T	475	550	145	167	P	–	–	TBU
								142	162	P	–	–	TBU
39	15AUG	1720	03	JB	T/T	475	550	138	163	P	–	–	TBU
								132	169	P	–	–	TBU
40	16AUG	0800	06	DL	T/T	475	550	88	194	P	–	–	TBU
								102	201	P	–	–	TBU
41	16AUG	0815	03	JB	T/T	475	550	139	203	P	–	–	TBU
								134	209	P	–	–	TBU

000216

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

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FLUOR FERNALD, INC. 4943

TRIAL SEAM LOG – EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV YEAR: 2002

SPECIFICATIONS: PEEL-84 ppi ; SHEAR-151 ppi TENSIOMETER DESCRIPTION: COLUMBINE ACCURA-LITE

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/C/F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
42	16AUG	1245	06	DL	T/T	475	550	103	174	P	–	–	TBV
								130	176	P	–	–	TBV
43	17AUG	0805	06	DL	T/T	475	550	138	191	P	–	–	TBV
								142	196	P	–	–	TBV
44	18AUG	0815	06	DL	T/T	475	550	159	227	P	–	–	TBV
								144	226	P	–	–	TBV
45	19AUG	1440	06	DL	T/T	475	550	139	188	P	–	–	TBV
								143	185	P	–	–	TBV
46	20AUG	0804	03	JB	T/T	475	550	164	229	P	–	–	TBV
								170	210	P	–	–	TBV
47	20AUG	0825	06	DL	T/T	475	550	206	224	P	–	–	TBV
								157	215	P	–	–	TBV
48	20AUG	1245	03	JB	T/T	475	550	152	189	P	–	–	TBV
								147	189	P	–	–	TBV
49	20AUG	1305	06	DL	T/T	475	550	148	189	P	–	–	TBV
								150	182	P	–	–	TBV

000217

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD, INC.

TRIAL SEAM LOG – EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO — PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 — YEAR: 2002

SPECIFICATIONS: PEEL-84, SHEAR-151 (ppi) — TENSIOMETER DESCRIPTION: COLUMBINE ACCURA-LITE

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/C/F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
50	20 AUG	1730	06	DL	T/T	475	550	112	177	P	–	–	TBY
								144	181	P	–	–	TBY
57	21 AUG	0915	06	DL	T/T	475	550	147	197	P	–	–	TBY
								143	206	P	–	–	TBY
58	21 AUG	1300	06	DL	T/T	475	550	141	167	P	–	–	TBY
								137	159	P	–	–	TBY
59	21 AUG	1315	03	JB	T/T	475	550	124	154	P	–	–	TBY
								134	155	P	–	–	TBY
60	21 AUG	1720	06	DL	T/T	475	550	118	179	P	–	–	TBY
								128	177	P	–	–	TBY
61	22 AUG	0810	06	DL	T/T	475	550	133	206	P	–	–	TBY
								149	207	P	–	–	TBY
62	22 AUG	1250	06	DL	T/T	475	550	140	179	P	–	–	CHW
								114	178	P	–	–	CHW
63	22 AUG	1305	03	JI	T/T	475	550	141	180	P	–	–	TBY
								119	166	P	–	–	TBY

000218

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD, INC.

TRIAL SEAM LOG – EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cells 4 & 5 YEAR: 2002

SPECIFICATIONS: PEEL-84, SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: Columbine Accuma-Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/C/F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
64	22AUG	1725	06	DL	T/T	475	550	156	218	P	—	—	CHW
								166	218	P	—	—	CHW
65	23AUG	~~0835~~ 0925 CHW	06	DL	T/T	475	550	153	210	P	—	—	CHW
								126	215	P	—	—	CHW
66	23AUG	1045	03	RJS	T/T	475	550	125	176	P	—	—	CHW
								132	187	P	—	—	CHW
67	23AUG	1245	03	RJS	T/T	475	550	129	177	P	—	—	CHW
								112	174	P	—	—	CHW
68	23AUG	1245	06	DL	T/T	475	550	110	185	P	—	—	CHW
								134	186	P	—	—	CHW
69	24AUG	0810	03	RJ	T/T	475	550	135	169	P	—	—	CHW
								117	193	P	—	—	CHW
70	24AUG	0810	06	DL	~~T/T~~	475	550	98	204	P	—	—	CHW
								96	202	P	—	—	CHW
71	24AUG	1240	06	DL	T/T	475	550	133	202	P	—	—	CHW
								116	203	P	—	—	CHW
72	24AUG	1350	03	RJ	T/T	475	550	111	188	P	—	—	CHW
								128	188	P	—	—	CHW

000219

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

FLUOR FERNALD 4943

TRIAL SEAM LOG - EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO: GG1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cells 4 & 5 YEAR: 2002

CONTRACTOR: ISTRE Co. TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/°C/°F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
73	25AUG	0730	03	RJ	T/T	475	550	143	208	P	—	—	[illegible]
								126	210	P	—	—	[illegible]
74	25AUG	1300	06	DL	T/T	475	535	173	191	P	—	—	[illegible]
								166	196	P	—	—	[illegible]
75	25AUG	1310	03	~~DL~~ RJ	T/T	475	550	129	196	P	—	—	[illegible]
								152	201	P	—	—	[illegible]
76	26AUG	0815	06	DL	T/T	475	535	116	212	P	—	—	[illegible]
								94	208	P	—	—	[illegible]
77	26AUG	0915	03	JI	T/T	475	550	135	217	P	—	—	[illegible]
								120	205	P	—	—	[illegible]
78	26AUG	1250	06	DL	T/T	475	535	141	206	P	—	—	[illegible]
								152	210	P	—	—	[illegible]
79	26AUG	1325	03	JI	T/T	475	550	153	203	P	—	—	[illegible]
								148	199	P	—	—	[illegible]
80	27AUG	0915	03	JI	T/T	475	540	154	207	P	—	—	[illegible]
								153	219	P	—	—	[illegible]

000220

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

FLUOR FERNALD

4943

TRIAL SEAM LOG - EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO: G01341 TASK NO.: 04.1

DESCRIPTION: Phase II Cell 4:5 YEAR: 2002

CONTRACTOR: ISTRE Co. TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/°C/°F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
81	27Aug	10:30	06	DL	T/T	475	535	148	196	P	—	—	CHW
								184	218	P	—	—	CHW
82	27Aug	1300	06	DL	T/T	475	535	186	201	P	—	—	CHW
								185	215	P	—	—	CHW
83	28Aug	0820	06	DL	T/T	475	535	152	221	P	—	—	CHW
								166	212	P	—	—	CHW
84	28Aug	1000	03	JI	T/T	475	575	140	214	P	—	—	CHW
								140	215	P	—	—	CHW
85	28 AUG	1145	03	JI	T/T	475	575	143	223	P	—	—	CHW
								132	217	P	—	—	CHW
86	28AUG	1259	06	DL	~~T/T~~	475	575	175	190	P	—	—	CHW
								131	210	P	—	—	CHW
87	28AUG	1340	03	JI	T/T	475	575	172	231	P	—	—	CHW
								165	222	P	—	—	CHW
88	29Aug	0820	06	DL	T/T	475	535	114	184	P	—	—	CHW
								136	189	P	—	—	CHW

000221

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

FLUOR FERNALD

4943

TRIAL SEAM LOG - EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV, Cells 4&5 YEAR: 2002

CONTRACTOR: Istre Co. TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/°C/°F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
89	29AUG	1015	03	JI	T/T	~~57~~475	550	169	185	P	—	—	CHW
								171	184	P	—	—	CHW
90	29Aug	1249	06	DL	T/T	475	535	132	211	P	—	—	CHW
								130	231	P	—	—	CHW
91	29Aug	1345	03	JI	T/T	475	550	142	216	P	—	—	CHW
								133	204	P	—	—	CHW
92	30Aug	0830	03	TS	T/T	475	550	177	206	P	—	—	CHW
								176	218	P	—	—	CHW
93	30AUG	0900	03	TS	T/T	475	550	133	206	P	—	—	CHW
								139	209	P	—	—	CHW
94	30AUG	0915	06	DL	T/T	475	535	124	219	P	—	—	CHW
								129	213	P	—	—	CHW
95	3Sept	0850	06	DL	T/T	475	550	153	189	P	—	—	CHW
								147	189	P	—	—	CHW
96	3Sept	0915	03	TS	T/T	475	550	124	174	P	—	—	CHW
								133	185	P	—	—	CHW

000222

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD

TRIAL SEAM LOG - EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV, Cells 4 & 5 YEAR: 2002

CONTRACTOR: ISTRC CO. TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/°C/°F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
97	3Sept	1240	06	DL	T/T	475	550	173	215	P	—	—	CHW
								178	209	P	—	—	CHW
98	3Sept	1240	03	TS	T/T	475	550	112	181	P	—	—	CHW
								161	194	P	—	—	CHW
99	4Sept	1250	06	DL	T/T	475	550	151	221	P	—	—	CHW
								160	220	P	—	—	CHW
100	4Sept	1250	03	TS	T/T	475	550	155	224	P	—	—	CHW
								183	209	P	—	—	CHW
101	5Sept	0830	06	DL	T/T	475	550	150	179	P	—	—	CHW
								130	197	P	—	—	CHW
102	5Sept	1259	06	DL	T/T	475	550	144	195	P	—	—	CHW
								140	196	P	—	—	CHW
103	5Sept	1305	03	TS	T/T	475	550	122	195	P	—	—	CHW
								117	215	P	—	—	CHW
104	6 Sept	0810	06	DL	T/T	475	550	153	190	P	—	—	CHW
								145	215	P	—	—	CHW

000223

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

FLUOR FERNALD

4943

TRIAL SEAM LOG - EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO: GO1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell 4 & 5 YEAR: 2002

CONTRACTOR: ISTRE Co. TENSIOMETER DESCRIPTION: Columbine Accura-Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/°C/°F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
105	6 Sept	1300	06	DL	T/T	475	550	107	216	P	—	—	CHW
								138	223	P	—	—	CHW
106	7 Sept	0845	06	DL	T/T	475	550	173	225	P	—	—	CHW
								160	225	P	—	—	CHW
107	7 Sept	1315	06	DL	T/T	475	550	163	215	P	—	—	CHW
								157	209	P	—	—	CHW
108	7 Sept	~~1325~~ 1400	03	JI	T/T	475	550	178	205	P	—	—	CHW
								187	201	P	—	—	CHW
109	8 Sept	0945	03	JI	T/T	475	550	123	225	P	—	—	CHW
								134	230	P	—	—	CHW
110	8 Sept	1000	06	DL	T/T	475	550	202	245	P	—	—	CHW
								208	240	P	—	—	CHW
111	9 Sept	0825	06	DL	T/T	475	550	147	213	P	—	—	CHW
								128	215	P	—	—	CHW
112	9 Sept	0830	03	JI	T/T	475	550	171	178	P	—	—	CHW
								140	199	P	—	—	CHW

000224

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

FLUOR FERNALD

4943

TRIAL SEAM LOG - EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO: G9134L TASK NO.: 04.1

DESCRIPTION: Phase IV Cell 4 & 5 YEAR: 2002

CONTRACTOR: ISTRE Co. TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/°C/°F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
113	9 Sept	1245	06	DL	T/T	475	550	169	195	P	—	—	CHW
								174	177	P	—	—	CHW
114	9 Sept	1600	03	JI	T/T	475	550	144	198	P	—	—	CHW
								166	213	P	—	—	CHW
115	9 Sept	1805	06	DL	T/T	475	550	134	219	P	—	—	CHW
								167	215	P	—	—	CHW
116	10 Sept	0950	06	DL	T/T	475	550	113	227	P	—	—	CHW
								158	198	P	—	—	CHW
117	10 Sept	0945	03	JI	T/T	475	550	152	209	P	—	—	CHW
								169	213	P	—	—	CHW
118	10 Sept	1250	06	DL	T/T	475	550	129	202	P	—	—	CHW
								153	194	P	—	—	CHW
119	10 Sept	1300	03	JI	T/T	475	550	188	198	P	—	—	CHW
								160	198	P	—	—	CHW
120	11 Sept	0805	06	DL	T/T	475	550	135	209	P	—	—	CHW
								131	208	P	—	—	CHW

000225

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD

TRIAL SEAM LOG - EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell 4 & 5 YEAR: 2002

CONTRACTOR: ISTRE Co. TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/°C/°F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
121	11 Sept	1245	06	DL	T/T	475	550	166	211	P	—	—	CHW
								154	239	P	—	—	CHW
122	11 Sept	1300	03	JI	T/T	475	550	180	197	P	—	—	CHW
								147	224	P	—	—	CHW
123	12 Sept	~~1325~~ 0805	03	DL	T/T	475	550	145	235	P	—	—	CHW
								158	246	P	—	—	CHW
124	12 Sept	1245	03	DL	T/T	475	550	191	208	P	—	—	CHW
								166	213	P	—	—	CHW
125	12 Sept	1245	03	TB	T/T	475	550	176	210	P	—	—	CHW
								169	218	P	—	—	CHW
126	13 Sept	0850	03	DL	T/T	475	550	162	230	P	—	—	CHW
								135	211	P	—	—	CHW
127	13 Sept	0850	03	TB	T/T	475	550	141	210	P	—	—	CHW
								162	217	P	—	—	CHW
128	13 Sept	1307	03	DL	T/T	475	550	185	180	P	—	—	CHW
								167	197	P	—	—	CHW

000226

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

FLUOR FERNALD

TRIAL SEAM LOG - EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO: 60341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell 4 & 5 YEAR: 2002

CONTRACTOR: ISTRE Co. TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/°C/°F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
129	13 Sept	1310	03	TB	T/T	475	550	129	207	P	—	—	CHW
								134	204	P	—	—	CHW
130	14 Sept	0830	03	TB	T/T	475	550	136	225	P	—	—	CHW
								145	226	P	—	—	CHW
131	14 Sept	0835	03	DL	T/T	475	550	139	195	P	—	—	CHW
								120	~~201~~ 194 CHW	P	—	—	CHW
132	14 Sept	1240	03	DL	T/T	475	550	184	188	P	—	—	CHW
								176	220	P	—	—	CHW
133	17 Sept	0900	03	DL	T/T	475	550	155	235	P	—	—	CHW
								130	221	P	—	—	CHW
134	17 Sept	1340	03	TB	T/T	475	550	150	238	P	—	—	CHW
								171	220	P	—	—	CHW
135	18 Sept	0830	03	TB	T/T	475	550	120	220	P	—	—	CHW
								125	230	P	—	—	CHW
136	18 Sept	1310	03	TB	T/T	475	550	168/156	204	P	—	—	CHW
								136/141	207	P	—	—	CHW

000227

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

Primary

Fusion

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FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: G01341 TASK NO.: 04.1

DESCRIPTION: Phase IV YEAR: 2002

SPECIFICATIONS: PEEL-115 SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/°F)	FUSION MEASURED SPEED (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
116	4Sept	1445	09	DW	T/T	750	4.5	180/179	245	P	–	CHW
								168/175	247	P	–	CHW
117	5Sept	0755	09	DW	T/T	750	4.5	164/169	243	P	–	CHW
								162/163	237	P	–	CHW
118	5Sept	1255	09	DW	T/T	750	4.5	154/166	214	P	–	CHW
								175/165	205	P	–	CHW
119	6Sept	1255	09	DW	T/T	750	4.5	179/173	235	P	–	CHW
								191/182	238	P	–	CHW
120	7Sept	0815	09	DW	T/T	750	4.5	153/166	241	P	–	CHW
								168/160	239	P	–	CHW
121	7Sept	1300	09	DW	T/T	750	4.5	159/162	204	P	–	CHW
								159/158	206	P	–	CHW
122	8Sept	1010	011	DW	T/T	750	4.5	174/176	224	P	–	CHW
								179/178	237	P	–	CHW
123	11Sept	1325	#09	DW	T/T	750	4.5	184/175	230	P	–	CHW
								187/178	210	P	–	CHW

000230

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: 601341 TASK NO.: 041

DESCRIPTION: Phase IV YEAR: 2002

SPECIFICATIONS: PEEL-115 SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/F)	FUSION MEASURED SPEED (°C/F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
124	12 Sept	0902	09	DW	T/T	750	4.5	176/188	245	P	–	CHW
								177/194	259	P	–	CHW
125	12 Sept	1240	09	DW	T/T	750	4.5	193/180	252	P	–	CHW
								172/169	263	P	–	CHW
126	12 Sept	1400	11	SSC	T/T	750	4.5	184/187	239	P	–	CHW
								157/179	242	P	–	CHW
127	13 Sept	1015	11	SSC	T/T	750	4.5	182/187	200	P	–	CHW
								180/179	230	P	–	CHW
128	13 Sept	1245	11	SSC	T/T	750	4.5	198/169	235	P	–	CHW
								182/181	222	P	–	CHW
129	13 Sept	1245	09	DW	T/T	750	4.5	173/161	247	P	–	CHW
								165/172	242	P	–	CHW
130	13 Sept	1645	09	DW	T/T	750	4.5	192/192	245	P	–	CHW
								190/182	254	P	–	CHW
131	13 Sept	1730	11	JI	T/T	750	4.5	174/154	226	P	–	CHW
								179/182	190	P	–	CHW
								185/176				

000231

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: Ø41

DESCRIPTION: Phase IV Cell 4 & 5 YEAR: 2002

SPECIFICATIONS: PEEL-115 SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/F)	FUSION MEASURED SPEED (°C/F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
132	14 Sept	0945	11	SSC	T/T	750	25%	168/172	225	P	–	CHW
								183/166	223	P	–	CHW
133	14 Sept	0945	Ø9	DW	T/T	750	4.5	188/163	227	P	–	CHW
								168/184	236	P	–	CHW
134	14 Sept	1245	11	SSC	T/T	750	25%	176/177	249	P	–	CHW
								169/177	243	P	–	CHW
135	14 Sept	1325	Ø9	DW	T/T	750	4.5	165/154	218	P	–	CHW
								165/159	204	P	–	CHW
136	16 Sept	Ø900	09	DW	T/T	75Ø	4.5	148/181	201	F	Peel	CHW
								179/181	191	P	–	CHW
137	16 Sept	Ø938	Ø9	DW	T/T	75Ø	4.0	185/161 173/177	245	P	–	CHW
								168/188 169/185	240	P	–	CHW
138	16 Sept	0945	11	SSC ~~DW~~	T/T	75Ø	25%	154/—	Peel	F	–	CHW
139	16 Sept	1015	11	SSC	T/T	750	20%	153/182 174/185	235/245	P	–	CHW
								166/184 183/190	232/240	P	–	CHW

000232

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: Ø4.1

DESCRIPTION: Phase IV Cell 4 & 5 YEAR: 2002

SPECIFICATIONS: PEEL-115 SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/F)	FUSION MEASURED SPEED (°C/F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
140	16 Sept	1300	Ø9	DW	T/T	750	4.5	177/168	~~178/164~~ 201	P	–	CHW
								178/164	231	P	–	CHW
141	16 Sept	1415	11	SSC	T/T	750	25%	185/167	224	P	–	CHW
								177/181	217	P	–	CHW
142	16 Sept	1730	Ø9	DW	T/T	750	4.5	171/175	243	P	–	CHW
								174/180	231	P	–	CHW
143	17 Sept	0840	11	SSC	T/T	750	22%	174/170	257	P	–	CHW
								175/171	261	P	–	CHW
144	17 Sept	~~0840~~ Ø930	Ø9	DW	T/T	750	4.5	186/180	217	P	–	CHW
								191/191	229	P	–	CHW
145	17 Sept	1400	Ø9	DW	T/T	750	4.5	186/177	231	P	–	CHW
								179/182	228	P	–	CHW
146	17 Sept	1600	11	SSC	T/T	750	22%	162/177	227	P	–	CHW
								163/184	229	P	–	CHW
147	18 Sept	0835	Ø9	DW	T/T	750	4.0	165/167	248	P	–	CHW
								162/170	239	P	–	CHW

000233

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

4943
FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 YEAR: 2002

SPECIFICATIONS: PEEL-115; SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/°F)	FUSION MEASURED SPEED (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
148	18 Sept	0926	11	SSC	T/T	750	22%	165/159	218	P	–	CHW
								163/168	224	P	–	CHW
149	18 Sept	1345	11	SSC	T/T	750	22%	159/162	209	P	–	CHW
								157/161	206	P	–	CHW
150	18 Sept	1345	09	DW	T/T	750	4.5	168/162	217	P	–	CHW
								164/175	215	P	–	CHW
151	19 Sept	0820	09	DW	T/T	750	4.0	165/164	237	P	–	CHW
								161/180	228	P	–	CHW
152	19 Sept	0925	11	SSC	T/T	750	22%	170/177	226	P	–	CHW
								170/157	230	P	–	CHW
153	19 Sept	1235	09	DW	T/T	750	4.5	189/165	191	P	–	JW
								165/156	185	P	–	JW
154	19 Sept	1300	11	SSC	T/T	750	22%	165/156	220	P	–	CHW
								171/162	214	P	–	CHW
155	23 Sept	1015	09	DW	T/T	750	4.0	161/181	216	P	–	CHW
								151/174	219	P	–	CHW

000234

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: 6Q1341 TASK NO.: Ø4.1

DESCRIPTION: Phase IV Cell 4 & 5 YEAR: 2002

SPECIFICATIONS: PEEL-115 SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: Columbine AccuraLite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/°F)	FUSION MEASURED SPEED (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
156	23Sept	1015	11	SSC	T/T	750	22%	164/172	206	P	—	CHW
								170/167	210	P	—	CHW
157	23Sept	1350	Ø9	DW	T/T	750	4.5	178/174	206	P	—	CHW
								158/160	205	P	—	CHW
158	23Sept	1400	11	SSC	T/T	750	25%	185/171	235	P	—	CHW
								180/183	225	P	—	CHW
159	23Sept	1738	Ø9	DW	T/T	750	4.5	150/162	213	P	—	CHW
								172/169	215	P	—	CHW
160	24Sept	0845	11	SSC	T/T	750	22%	169/183	220	P	—	CHW
								174/171	225	P	—	CHW
161	24Sept	1115	Ø9	DW	T/T	750	4.5	177/179	206	P	—	CHW
								174/180	209	P	—	CHW
162	24Sept	1300	11	SSC	T/T	750	22%	178/164	216	P	—	CHW
								167/178	218	P	—	CHW
163	24Sept	1510	Ø9	DW	T/T	750	4.5	178 ~~189~~/181	214 ~~177/18~~	P	—	CHW
								177/187	189	P	—	CHW

000235

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: G0134 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 YEAR: 2002

SPECIFICATIONS: PEEL-115 SHEAR-151 TENSIOMETER DESCRIPTION: COLUMBINE ACCURA LITE

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/°F)	FUSION MEASURED SPEED (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
164	24Sept	1528	11	SSC	T/T	750	4.5	211/189	225	P	—	CHW
								189/190	236	P	—	CHW
165	25Sept	0830	11	SSC	T/T	750	22%	169/194	219	P	—	CHW
								191/185	224	P	—	CHW
166	25Sept	0935	09	DW	T/T	750	4.5	178/177	215	P	—	CHW
								186/176	209	P	—	CHW
167	25Sept	1345	11	SSC	T/T	750	22%	184/206	260	P	—	CHW
								201/197	254	P	—	CHW
168	25Sept	1345	09	DW	T/T	750	4.5	214/187	250	P	—	CHW
								202/194	252	P	—	CHW
169	25Sept	1610	10	JI	T/T	750	4.4	167/161	220	P	—	CHW
								185/181	220	P	—	CHW
170	26Sept	0715	11	SSC	T/T	750	22%	198/191	251	P	—	CHW
								173/184	243	P	—	CHW
171	26Sept	0715	09	DW/JI	T/T	750	4.5	169/162	230	P	—	CHW
								189/181	234	P	—	CHW
								190/186	231	P	—	CHW
								174/177	226	P	—	CHW

000236

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 YEAR: 2002

SPECIFICATIONS: PEEL-115 SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/°F)	FUSION MEASURED SPEED (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
172	30Sept	1040	11	SSC	T/T	750	22%	188/192	249	P	–	CHW
								187/188	240	P	–	CHW
173	30Sept	1315	09	DW	T/T	750	4.5	175/170	268	P	–	CHW
								191/175	254	P	–	CHW
174	30Sept	1320	11	SSC	T/T	750	22%	183/180	235	P	–	CHW
								179/181	247	P	–	CHW
175	1Oct	0900	09	DW	T/T	750	4.5	182/176	223	P	–	CHW
								171/165	230	P	–	CHW
176	1Oct	0905	11	SSC	T/T	750	22%	164/170	218	P	–	CHW
								176/173	224	P	–	CHW
177	1Oct	1315	11	SSC	T/T	750	22%	175/194	220	P	–	CHW
								176/184	226	P	–	CHW
178	1Oct	1315	09	DW	T/T	750	4.5	182/183	210	P	–	CHW
								181/185	219	P	–	CHW
179	1Oct	1645	09	DW	T/T	750	4.5	170/165	227	P	–	CHW
								162/167	211	P	–	CHW

000237

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: G01341 TASK NO.: 041

DESCRIPTION: Phase IV Cell #4 & #5 YEAR: 2002

SPECIFICATIONS: Peel-115 SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/F)	FUSION MEASURED SPEED (°C/F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
180	20 OCT	0820	09	DW	T/T	750	4.5	177/165	223	P	–	CHW
								168/183	225	P	–	CHW
181	2 Oct	0825	11	SSC	T/T	750	22%	175/192	210	P	–	CHW
								188/165	221	P	–	CHW
182	2 OCT	1340	09	DW	T/T	750	4.5	163/153	226	P	–	CHW
								160/158	224	P	–	CHW
183	20CT	1345	11	SSC	T/T	750	22%	157/172	210	P	–	CHW
								152/149	215	P	–	CHW
184	3 OCT	0845	09	DW	T/T	750	4.5	157/166	223	P	–	CHW
								168/162	225	P	–	CHW
185	3Oct	1345	09	DW	T/T	750	4.5	173/169	219	P	–	CHW
								168/167	222	P	–	CHW
186	3OCT	1350	11	SSC	T/T	750	22%	174/178	222	P	–	CHW
								185/171	221	P	–	CHW
187	7OCT	1325	11	SSC	T/T	750	22%	175/195	213	P	–	CHW
								180/177	219	P	–	CHW

000238

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: G0134 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 YEAR: 2002

SPECIFICATIONS: PEEL-115 SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/F)	FUSION MEASURED SPEED (°C/F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
188	7 OCT	1325	09	JF	T/T	750	4.5	177/162	~~187/188~~	P	–	CHW
								187/188	199/216	P	–	CHW
189	8 OCT	1020	09	DW	T/T	750	4.0	155/181	210	P	–	CHW
								188/176	216	P	–	CHW
190	8 OCT	1300	11	SSC	T/T	750	22%	175/172	236	P	–	CHW
								164/162	234	P	–	CHW
191	8 OCT	1600	09	DW	T/T	750	4.0	171/195	222	P	–	CHW
								198/186	224	P	–	CHW
192	9 OCT	0800	09	DW	T/T	750	4.0	187/202	195	P	–	CHW
								192/198	209	P	–	CHW
193	11 OCT	1335	09	DW	T/T	750	3.5	169/174	221	P	–	TBC
								171/164	231	P	–	TBC
194	11 OCT	1630	11	SSC	T/T	750	22%	165/159	192	P	–	TBC
								162/164	219	P	–	TBC
195	12 OCT	1320	09	DW	T/T	750	3.5	166/169	222	P	–	CHW
								167/173	226	P	–	CHW

000239

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

1943

FLUOR FERNALD, INC.

TRIAL SEAM LOG – FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 YEAR: 2002

SPECIFICATIONS: PEEL-115 SHEAR-151 (ppi) TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	FUSION WEDGE (SET/°C/F)	FUSION MEASURED SPEED (°C/F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	QA ID
196	14 OCT	1345	09	DW	T/T	750	3.5	186/174	261	P	–	CHW
								182/164	264	P	–	CHW
197	14 OCT	1400	11	SSC	T/T	750	22%	188/189	248	P	–	CHW
								178/193	234	P	–	CHW
198	15 OCT	0940	09	DW	T/T	750	3.5	191/189	206	P	–	CHW
								190/163	215	P	–	CHW
199	15 OCT	1315	09	DW	T/T	750	3.5	174/194	224	P	–	CHW
								178/172	220	P	–	CHW
200	15 OCT	1617	11	DW	T/T	750	22%	187/190	220	P	–	CHW
								190/184	232	P	–	CHW
201	16 OCT	1105	11	DW	T/T	750	22%	187/175	228	P	–	CHW
								188/182	232	P	–	CHW
202	17 OCT	1115	11	DW	T/T	750	22%	199/198	248	P	–	CHW
								199/192	240	P	–	CHW
203	18 OCT	1330	13	DW	T/T	750	3.4	153/160	227	P	–	CHW
								171/156	239	P	–	CHW

000240

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD

TRIAL SEAM LOG - ~~EXTRUSION~~ FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO: G81341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 YEAR: 2002

CONTRACTOR: ISTRE Co. TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION ~~WEDGE PREHEAT (SET/°C/°F)~~	~~SPEED BARREL (°C/°F)~~ (ft/min)	TEST RESULTS PEEL (ppi/psi)	SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
204	10-21	1300	13	DW	T/T	750	3.4	186/187	236	P	—	—	CHW
								196/193	248	P	—	—	CHW
205	10-22	1305	13	DW	T/T	750	3.4	179/181	237	P	—	—	CHW
								176/188	229	P	—	—	CHW

000241

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

Extrusion

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD

TRIAL SEAM LOG - EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO: 60341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell 4 & 5 YEAR: 2002

CONTRACTOR: ISTRE Co. TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/C/F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
129	13 Sept	1310	03	TB	T/T	475	550	129	207	P	—	—	CHW
								134	204	P	—	—	CHW
130	14 Sept	0830	03	TB	T/T	475	550	136	225	P	—	—	CHW
								145	226	P	—	—	CHW
131	14 Sept	0835	03	DL	T/T	475	550	139	195	P	—	—	CHW
								120	~~201~~ 194 CHW	P	—	—	CHW
132	14 Sept	1240	03	DL	T/T	475	550	184	188	P	—	—	CHW
								176	220	P	—	—	CHW
133	17 Sept	0900	03	DL	T/T	475	550	155	235	P	—	—	CHW
								130	221	P	—	—	CHW
134	17 Sept	1340	03	TB	T/T	475	550	150	238	P	—	—	CHW
								171	220	P	—	—	CHW
135	18 Sept	0830	03	TB	T/T	475	550	120	220	P	—	—	CHW
								125	230	P	—	—	CHW
136	18 Sept	1310	03	TB	T/T	475	550	168/156	204	P	—	—	CHW
								136/141	207	P	—	—	CHW

000243

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD

TRIAL SEAM LOG - EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO: GQ1341 TASK NO.: Ø4.1

DESCRIPTION: Phase IV Cell 4 & 5 YEAR: 2002

CONTRACTOR: ISTRE Co. TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/°C/°F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	TEST RESULTS PASS	TEST RESULTS FAIL	RE-TEST NO.	QA ID
137	19Sept	0845	Ø3	TB	T/T	475	550	120	220	P	—	—	CHW
								125	232	P	—	—	CHW
138	19Sept	0850	Ø3	DL	T/T	475	550	121	235	P	—	—	CHW
								117	243	P	—	—	CHW
139	23Sept	0915	Ø3	TB	T/T	475	550	122	220	P	—	—	CHW
								137	225	P	—	—	CHW
14Ø	24Sept	0845	~~11~~ Ø3	TB	T/T	475	550	153	218	P	—	—	CHW
								144	227	P	—	—	CHW
141	24Sept	1320	Ø3	TB	T/T	475	550	163	218	P	—	—	CHW
								164	222	P	—	—	CHW
142	25Sept	0840	Ø3	TB	T/T	475	550	120	220	P	—	—	CHW
								135	218	P	—	—	CHW
143	25Sept	1330	Ø3	TB	T/T	475	550	141	219	P	—	—	CHW
								136	223	P	—	—	CHW
144	28Sept	1000	Ø3	DL	T/T	475	550	96	186	P	—	—	CHW
								109	191	P	—	—	CHW

000244

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

FLUOR FERNALD 4943

TRIAL SEAM LOG - EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 YEAR: 2002

CONTRACTOR: ISTRE Co. TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/°C/°F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	TEST RESULTS PASS	TEST RESULTS FAIL	RE-TEST NO.	QA ID
145	28Sept	1415	03	DL	T/T	475	550	155	246	P	—	—	CHW
								152	236	P	—	—	CHW
146	30Sept	0915	03	DL	T/T	475	550	154	234	P	—	—	CHW
								168	235	P	—	—	CHW
147	30Sept	1420	03	DL	T/T	475	550	121	210	P	—	—	CHW
								122	220	P	—	—	CHW
148	1Oct	0910	03	DL	T/T	475	550	138	210	P	—	—	CHW
								133	195	P	—	—	CHW
149	1OCT	1315	03	DL	T/T	475	550	167	220	P	—	—	CHW
								146	230	P	—	—	CHW
150	2OCT	0820	03	DL	T/T	475	550	137	236	P	—	—	CHW
								157	222	P	—	—	CHW
151	2OCT	1315	03	DL	T/T	475	550	154	220	P	—	—	CHW
								138	219	P	—	—	CHW
152	3OCT	1600	03	DL	T/T	475	550	151	218	P	—	—	CHW
								171	222	P	—	—	CHW

000245

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD

TRIAL SEAM LOG - EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 YEAR: 2002

CONTRACTOR: ISTRE Co TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/°C/°F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
153	7 OCT	0930	03	DL	T/T	475	550	164	214	P	—	—	CHW
								155	220	P	—	—	CHW
154	8 OCT	1345											
~~154~~	~~8 OCT~~	~~1020~~	03	TB	T/T	475	550	197	221	P	—	—	CHW
								172	218	P	—	—	CHW
155	9 OCT	0830	03	DL	T/T	475	550	177	209	P	—	—	CHW
								179	221	P	—	—	CHW
156	9 OCT	1330	03	DL	T/T	475	550	119	216	P	—	—	CHW
								181	234	P	—	—	CHW
157	11 OCT	1345	06	DL	T/T	475	550	119	202	P	—	—	TBW
								178	198	P	—	—	TBW
158	12 OCT	0915	03	DL	T/T	475	550	129	227	P	—	—	TBW
								136	231	P	—	—	TBW
159	12 OCT	1330	03	DL	T/T	475	550	157	230	P	—	—	CHW
								142	227	P	—	—	CHW
160	14 OCT	0930	03	DL	T/T	475	550	120	171	P	—	—	CHW
								114	161	P	—	—	CHW

000246

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD

TRIAL SEAM LOG - EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 YEAR: 2002

CONTRACTOR: _____ TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/°C/°F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	TEST RESULTS PASS	TEST RESULTS FAIL	RE-TEST NO.	QA ID
161	14 OCT	1345	03	DL	T/T	475	550	135	248	P	—	—	CHW
								130	246	P	—	—	CHW
162	15 OCT	0855	03	DL	T/T	475	550	144	208	P	—	—	CHW
								185	215	P	—	—	CHW
163	15 OCT	1320	03	DL	T/T	475	550	142	200	P	—	—	CHW
								145	218	P	—	—	CHW
164	17 OCT	0940	06	JI	T/T	475	550	122	205	P	—	—	CHW
								130	201	P	—	—	CHW
165	17 OCT	1030	03	JI	T/T	475	550	163	210	P	—	—	CHW
								137	208	P	—	—	CHW
166	17 OCT	1430	03	JI	T/T	475	550	165	218 ~~170~~	P	—	—	CHW
								170	206	P	—	—	CHW
167	17 OCT	1435	03	TB	T/T	475	550	148	220	P	—	—	CHW
								162	211	P	—	—	CHW
168	18 OCT	0900	03	TB	T/T	475	550	144	228	P	—	—	CHW
								145	223	P	—	—	CHW

000247

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD

TRIAL SEAM LOG - EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase III Cell #4 & #5 YEAR: 2002

CONTRACTOR: ISTRE Co. TENSIOMETER DESCRIPTION: Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/°C/°F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	TEST RESULTS PASS	TEST RESULTS FAIL	RE-TEST NO.	QA ID
169	18 OCT	1320	03	DL	T/T	475	550	156	239	P	—	—	CHW
								115	246	P	—	—	CHW
170	20 OCT	1300	03	JI	T/T	475	550	137	250	P	—	—	CHW
								173	246	P	—	—	CHW
171	21 OCT	1045	03	TB	T/T	475	550	150	206	P	—	—	CHW
								134	209	P	—	—	CHW
172	21 OCT	1305	03	JI	T/T	475	550	182	232	P	—	—	CHW
								148	241	P	—	—	CHW
173	22 OCT	1015	03	TB	T/T	475	550	105	216	P	—	—	CHW
								128	221	P	—	—	CHW
174	22 OCT	1705	03	JI	T/T	475	550	111	234	P	—	—	CHW
								109	241	P	—	—	CHW
175	23 OCT	0920	03	TB	T/T	475	550	151	261	P	—	—	CHW
								140	248	P	—	—	CHW
176	23 OCT	1320	03	DW	T/T	475	550	183	231	P	—	—	CHW
								186	244	P	—	—	CHW

000248

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD

TRIAL SEAM LOG - EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO: GQ1341 TASK NO.: D4.1

DESCRIPTION: Phase IV Cell #4 & #5 YEAR: 2002

CONTRACTOR: ISTRE Co. TENSIOMETER DESCRIPTION: ~~ISTRE Co.~~ Columbine Accura Lite

TRIAL SEAM NO.	DATE (day/mo)	TIME	MACHINE NO.	OPER ID	(1) MATERIAL DESCRIPTION	EXTRUSION PREHEAT (SET/°C/°F)	EXTRUSION BARREL (°C/°F)	TEST RESULTS PEEL (ppi/psi)	TEST RESULTS SHEAR (ppi/psi)	PASS	FAIL	RE-TEST NO.	QA ID
177	23 OCT	1325	03	TB	T/T	475	550	183	246	P	—	—	CHW
								139	249	P	—	—	CHW
178	24 OCT	0900	03	TB	T/T	475	550	134	231	P	—	—	CHW
								146	236	P	—	—	CHW
179	24 OCT	1330	03	TB	T/T	475	550	139	217	P	—	—	CHW
								128	244	P	—	—	CHW
180	31 OCT	0800	03	TB	T/T	475	550	134	207	P	—	—	CHW
								150	201	P	—	—	CHW

000249

NOTE: (1) MATERIAL DESCRIPTION REFERS TO EITHER SMOOTH/SMOOTH (S/S); SMOOTH/TEXTURED (S/T); OR TEXTURED/TEXTURED (T/T).

APPENDIX L

Geomembrane Production Seam Logs

Secondary

Fusion

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (FUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV, CELLS 4 + 5 LINER

PROJECT NO.: GQ ~~1431~~ 1341 (CB) TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ FUSION

YEAR: 2002

CONTRACTOR: ISTRE

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (11)	QA ID	LOCATION (11)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID (6) 23	PASS/ FAIL	ACTION (CB)	QA ID
20 JUL	0927	01	DW	S-1/S-2	15	396	38 (2)	CB	15-200 200-290	0917-0922 30/30 1530-1538 30/29	—	TB TB 23 JUL 23 JUL	P P	SEAM REMOVED ON 05 AUG	CB CB
20 JUL	1410	08	JB	S-3/S-4	0	308	308 (2)	CB	CAPPED BY RS-248					SEAM REMOVED	TBV
20 JUL	1420	01	DW	S-2/S-3	0	399	399 (2)	CB	CAPPED BY RS-247					SEAM REMOVED	TBV
* 20 JUL	1512	08	JB	S-4/S-5	0	22	22 (2)	CB	CAPPED BY RS 324						CHW
20 JUL	1518	08	JB	S-3/S-5	315	394	79 (2)	CB	CAPPED BY RS-248					SEAM REMOVED	TBV
20 JUL	1627	01	DW	S-4/S-6	0	311	311 (2)	CB	CAPPED BY RS-249					SEAM REMOVED	TBV
20 JUL	1723	01	DW	S-5/S-6	311	392	81 (2)	CB	CAPPED BY RS-249					SEAM REMOVED	TBV
~~22~~ 20 JUL	1825	01	DW	S-6/S-7	0	4	4 (2)	CB	— ENTIRE SEAM REMOVED						
22 JUL	0800	01	DW	S-6/S-7	6	398	392 (2)	CB	↓	↓	↓	↓		↓	
24 JULY	1655	01	DW	S-8/S-9	393	41	352 (2)	TBV	— ENTIRE SEAM REMOVED						
(CB) ~~24 JUL~~	~~1826~~	~~01~~	~~DW~~	~~S-9/S-10~~	~~(392) CB~~	~~392~~	~~(4) (3) 392~~								CB
24 JUL	1826	01	DW	S-9/S-10	392	4	(2) 388	CB	—	—	—	—	—	ENTIRE SEAM REMOVED	CB
25 JUL	1820	01	DW	S-9/S-10	392	4	(2) 388	CB	— ENTIRE SEAM REMOVED						CB
					TOTAL	(1)	3105								

NOTE: (1) SEAM LENGTH: THIS PAGE (CB) ~~(2) SEAM REMOVED AND RESEAMED~~ (11) ACCUMULATED 3105 (11)

(2) SEAM REMOVED AND RESEAMED, LENGTH NOT ADDED TO DESTRUCTIVE SAMPLE DETERMINATION.

00253

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 04 1

DESCRIPTION: PHASE IV, CELLS 4 & 5 LINER

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
25 JUL	1830	07	JI	S-10/S-11	387	04	383 (3)	CB	———	ENTIRE SEAM REMOVED			———		CB
25 JUL	1940	01	DW	S-11/S-12	395	230	(3) 165	CB	↓	↓	↓	↓ (CB)	|	↓	CB
28 JUL	1038	2025	TS (CB) (2)	S-12/S-13	388	0	388	CB	DS-6 - 388 DS-6 - 0 41 CB	30/30 1830-1535 30/30 1545-1550	— —	HW 28 HW JUL	P | — P | —	— —	CB CB
28 JUL	1045	01 (2)	DW (2)	S-8/S-9	386	41	345	CB	~~0 - DS-7~~ DS-7 - 386	30/30 1507-1512 30/30 1455-1500	— —	HW 28 (CB) HW JUL	P | — P | —	— —	CB CB
28 JUL	1358	2025	TS	S-11/S-12	230	0	230	CB	0 - 230	30/29 1600-1605	—	28 JUL (CB) HW	P | —	—	CB
28 JUL	1508	2025	TS	S-14/S-15	390	0	390	CB	0 - 390	30/28 0841-0846 ~~30/29 0825-0830~~ (CB)	—	29 JUL (CB) HW	P | —		CB
28 JUL	1400	01	DW	S-13/S-14	392	0	392	CB	0 - 392	30/29 ~~0841-0846~~ 30/30 0825-0830 (CB)	—	29 (CB) JUL HW	P | —		CB
29 JUL	0740	01	DW	S-10/S-11	387	4	383	CB	4 - 387	31/30 1005-1010	—	HW/29 JUL	P | —		CB
29 JUL	0935	01	DW	S-11/DS-52	395	230	165	CB	230 - 395	30/29 1038-1043	—	HW/29 JUL	P | —		CB
29 JUL	1030	01	DW	S-12/DS-52	395	230	165	CB	230 - 395	30/29 1347-1352	—	HW/29 JUL	P | —		CB
29 JUL	1323	01	DW	S-15/S-17	386	358	28	CB	358 - 386	30/29 1830-1535	—	HW/29 JUL	P | —		CB
29 JUL	1255	01	DW	S-16/S-17	0	22	22	CB	0 - 22	30/29 1512-1517	—	HW/29 JUL	P | —		CB
29 JUL	1331	01	DW	S-15/S-16	358	18	340	CB	RS-240 - 358 18 - RS-240	30/28 1558-1603 29/27 1701-1706	—	HW/30 JUL HW/30 JUL	P | — P | —		CB CB
					TOTAL	(1)	3396								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 6,501 (ft)

(2) MACHINE 01 HAS BEEN RECONFIGURED (NEW WEDGE ASSEMBLY) STARTING WITH SEAM S-12/S-13.

(3) SEAM REMOVED AND RESEAMED. LENGTH NOT ADDED TO DESTRUCTIVE SAMPLE DETERMINATION.

8002254

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4+5 LINER YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
30 JUL	1410	01	DW	S-9/RS-51	392	5	387	CB	5-392	30/30 1834-1839	—	HW/30 JUL	P/—	—	CB
30 JUL	1630	01	DW	S-10/RS-51	390	4	386	CB	4-390	30/30 1450-1455	—	HW/02 AUG	P/—	—	TBW
* 01 AUG	1335	10	JI	S-17/S-18	383	358	25	CB	358-383	30/30 1035-1040	—	HW 21 AUG	P/—	—	TBW
01 AUG	1343	10	JI	S-16/S-18	358	64	296	CB	64-121 121-358	CAPPED 30/30 0926-0931	—	HW 20 AUG	P/—	—	TBW
01 AUG	1442	10	JI	S-16/S-18	(RS-) 57	4	53	CB	4-55	CAPPED	—	—	—/—	—	TBW
01 AUG	1550	10	JI	S-7/S-20	6	388	382	CB	6-314 342-388	29/26 1450-1455 30/29 1530-1535	—	HW 20 AUG	P/—	—	TBW
01 AUG	1604	09	DW	S-8/S-21	32	386	354	CB	278-316 316-386	29/28 1025-1030 29/29 0913-0918	— —	HW/06 AUG HW/06 AUG	P/— P/—	— —	TBW TBW
02 AUG	0750	10	JI	S-21/S-22	5	211	206	CB	CAPPED BY RS-178		—		—/—	SEAM REMOVED	TBW
02 AUG	0835	10	JI	S-22/S-23	0	22	22	CB	CAPPED BY RS-228		—				TBW
02 AUG	0839	10	JI	S-21/S-23	213	377	164	CB	CAPPED BY RS-179 & 180		—			SEAM REMOVED	TBW
02 AUG	0925	09	DW	S-22/S-24	0	214	214	CB	0-RS-130 RS-130-108 108-214	30/30 0740-0745 30/30 0738-0743 30/30 0640-0645	—	JB/07 AUG JB/07 AUG JB/07 AUG	P/— P/— P/—	—	CB CB CB
02 AUG	1000	09	DW	S-23/S-24	214	379	165	CB	ZIA-DS-17 DS-17-379	30/30 0810-0815 30/30 0851-0859	—	JB/07 AUG JB/07 AUG	P/— P/—	—	CB CB
02 AUG	1325	10	JI	S-19/S-20	5	388	383	CB	5-175 175-388	30/30 1236-1241 30/29 1501-1506	—	HW 20 AUG	P/—	—	TBW
					TOTAL (1)		3,037								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 9538 (ft)

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (FUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1391 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 LINER

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTEE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
02 AUG	1345	09	DW	S-24/S-25	4	379	367	CB	4-DS-28 DS-28-379	30/30 0937-0942 30/30 0910-0915	—	JB/07AUG JB/07AUG	P | - P | -	—	CB CB
02 AUG	1800	09	DW	S-25/27 S-26	5	~~375~~ 380	~~375~~ 230	CB	5-DS-23 DS-23-275	30/30 0945-0950 30/30 1009-1014	—	JB/07 AUG JB/07 AUG	P | - P | -	—	CB CB
03 AUG	1031	09	JI	S-25/27 S-26	275	380	115	JW	(275) DS-103-380	30/30 1019-1024	—	JB/07AUG	P | -	—	CB
03 AUG	1257	09	JI	S-27/S-28	3	385	382	CB	3-DS-24 ~~DS-26-DS-24~~ ~~DS-26-379~~	29/29 1053-1058 29/29 1030-1035	—	JB/07AUG JB/07 AUG	P | - P | -	—	CB CB
03 AUG	0815	10	JI	S-28/S-29	6	385	379	CB	6-DS-26 DS-26-385	30/29 1345-1350 29/29 1111-1116	— —	JB/07 AUG JB/07AUG	P | - P | -	—	CB CB
04 AUG	0836	09	DW	S-29/S-30	4	384	380	CB	4-DS-25 DS-25-384	30/30 1400-1405 30/30 1405-1410	—	JB/07 AUG JB/07AUG	P | - P | -	—	CB CB
04 AUG	1100	09	DW	S-26/S-8	0	22	22	CB	0-22	30/30 1636-1641	—	HW/06 AUG	P | -	—	CB
04 AUG	1103	09	DW	S-21/S-26	3	41	38	CB	3-41	30/29 1620-1625	—	HW/06 AUG	P | -	—	CB
04 AUG	1124	09	DW	S-9/S-26	41	3	38	CB	3-41	30/28 1655-1700	—	HW/06 AUG	P | -	—	CB
04 AUG	1045	10	JI	S-6/S-7	8	384	376	CB	8-115 115-384	28/27 ~~1740-1745~~ 30/29 1620-1625	—	HW 20AUG	P | -	—	TBW
05AUG	1024	09	DW	S-31/S-32	0	84	84	CB	0-83	29/28 1100-1105	—	HW/06 AUG	P | -	—	CB
05 AUG	1045	09	DW	S-32/S-33	0	87	87	CB	0-DS-29 DS-29-84	29/28 1105-1110 30/28 1244-1249	—	HW/06 AUG HW/06 AUG	P | - P | -	—	CB CB
05AUG	1109	09	DW	S-33/S-34	0	89	89	CB	0-87	30/28 1330-1335	—	HW/06 AUG	P | -	—	CB
					TOTAL (1)		2,627								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 12,165 (ft)

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SHEET NO. 4 OF 20

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: ~~6012~~ 601341 CB TASK NO.: 04.1

DESCRIPTION: CELLS 4 & 5 LINER

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
05AUG	1412	09	DW	S-35/S-36	0	22	22	CB	0-22	29/28 1346-1351	–	HW/08AUG	P/–		CB
05AUG	1420	09	DW	S-34/S-36	0	53	53	CB	0-53	30/28 1342-1347	–	HW/08AUG	P/–		CB
05AUG	1431	09	DW	S-34/S-35	53	89	36	CB	53-87	30/29 1328-1333	–	HW/08AUG	P/–		CB
05AUG	1443	09	DW	S-36/S-37	0	53	53	CB	0-53	30/28 1355-200	–	HW/08AUG	P/–		CB
05AUG	~1454	09	DW	S-35/S-37	53	89	36	CB	53-87	29/29 1353-1358	–	HW/08AUG	P/–		CB
05AUG	1508	09	DW	S-37/S-38	0	90	90	CB	0-88	30/29 1430-1435	–	HW/08AUG	P/–		CB
05AUG	1530	10	JB	S-38/S-39	0	90	90	CB	0-DS-30 DS-30-87	30/29 1434-1429 29/29 1445-1450	–	HW/08AUG HW/08AUG	P/– P/–		CB CB
06AUG	0920	09	DW CB	~~S-31~~/S-41	0	85	85	CB	11-82	30/29 1008-1013	–	HW/08AUG	P/–		CB
06AUG	0955	09	DW	S-41/S-42	0	60	60	CB	8-53	30/30 0821-0826	–	HW/08AUG	P/–		CB
06AUG	1010	09	DW	S-43/S-44 CB	40	30	30	CB	0-24	28/27 0926-0931	–	HW/08AUG	P/–		CB
~~06AUG~~	~~1020~~	~~10~~	~~JI~~	~~S-44/S-45~~	~~4~~										
06AUG	1000	10	JI CB	~~S-45~~ 43/S-46	30	0	30	CB	0-27	29/29 0852-0857	–	HW/08AUG	P/–		CB
06AUG	1020 ~~1020~~	10	JI	S-44/S-45	4	53	49	CB	4-50	30/28 1033-1038	–	HW/08AUG CB	P/–		CB
					TOTAL (1)		634								

CB

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 12,799 (ft)

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SHEET NO. 35 OF 20

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4+5 LINER YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
06 AUG	1030	09	DW	S-40/S-47	0	22	22	CB	0-22	27/26 1552-1557	—	HW/08AUG	P -		CB
06 AUG	1040	09	DW	S-39/S-47	0	53	53	CB	0-53	28/27 1551-1556	—	HW/08AUG	P -		CB
06 AUG	1054	09	DW	S-39/40	53	91	38	CB	53-88	30/28 1503-1508	—	HW/08AUG	P -		CB
06 AUG	1105	09	DW	S-47/S-48	0	53	53	CB	0-53	30/28 1607-1612	—	HW/08AUG	P -		CB
06 AUG	1119	09	DW	S-40/S-48	53	93	40	CB	53-90	29/27 1605-1610	—	HW/08AUG	P -		CB
06 AUG	~~1345~~ 1333	10	JI	S-31/S-45	0	10	10	CB	2-10	27/26 1449-1454	—	HW/10AUG	P -		JW
06 AUG	~~1350~~ 1340	10	JI	S-41/S-45	0	12	12	CB	0-12	27/25 1023-1028	—	HW/08AUG	P -		CB
06 AUG	1345	10	JI	S-41/S-44	12	27	15	CB	12-27	28/27 1022-1027	—	HW/08AUG	P -		CB
06 AUG	1350	10	JI	S-42/S-44	27	46	19	CB	27-46	27/26 0906-0911	-	HW/08AUG	P -		CB
06 AUG	1359	10	JI	S-42/S-43	46	69	23	CB	46-63	29/28 0856-0901	-	HW/08AUG	P -		CB
06 AUG	1404	10	JI	S-42/S-46	69	84	15	CB	69-84	30/29 0827-0832	—	HW/08AUG	P -	-	CB
06 AUG	1408	10	JI	S-41/S-46	84	100	16	CB	84-~~100~~ 97	29/28 0813-0818	—	HW/08AUG	P -	-	CB
06 AUG	1430	10	JI	S-48/S-49	0	92	92	CB	0-90	30/29 1646-1651	—	HW/08AUG	P -		CB
					TOTAL (1)		408								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 13,207 (ft)

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV, CELLS 4+5 LINER

PROJECT NO.: 60341 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__/__ psi for 5 min.)	VACUUM BOX (_____ sec.)	OPERATOR ID	PASS/ FAIL		ACTION	QA ID
06 AUG	1505	10	JI	S-49 (CB) / S-50	0	93	93	CB	0-90	30/28 1650-1655 (CB)	—	HW/08 AUG	P	-		CB
06 AUG	1520	09	DW	S-50 / S-51	0	54	54	CB	0-44 44-54	29/28 1101-1106 30/26 1055-1100	—	HW/09 AUG HW/09 AUG	P -	- F	 RS-	CB CB
06 AUG	1536	10	JI	S-51 / S-53	0	53	53	CB	0-53	30/30 1112-1117	—	HW/09 AUG	P	-		JW
06 AUG	1541	09	DW	S-51 / S-52	0	22	22	CB	0-22	26/25 1027-1032	—	HW/09 AUG	P	-		CB
06 AUG	1551	10	JI	S-52 / S-53	53	94	41	CB	53-85 (DS-32)	30/30 1112-1117	—	HW/09 AUG	P	-		JW
06 AUG	1552	09	DW	S-50 / S-52	54	94	40	CB	54-C (CB)	30/29 1025-1030	—	HW/09 AUG	P	-		CB
06 AUG	1605	10	JI	S-53 / S-54	0	95	95	CB	0-92	30/29 1147-1252	—	HW/09 AUG	P	-		JW
06 AUG	1613	09	DW	S-54 / S-55	0	95	95	CB	0-91	27/27 1136-1251	—	HW/09 AUG	P	-		JW
07 AUG	0840	09	DW	S-1 / RS-115	8 (17)	393	376	CB	17-266 266-389	28/26 1000-1005 30/28 1450-1455	— —	HW 21 AUG HW 24 AUG	P P	- -		~~CB~~ (HW)
07 AUG	1045	10	JI	S-56 / S-57	399	0	399	CB	71-399 0-71	29/27 1000-1005 30/30 1000-1005	- -	HW/12 AUG HW/12 AUG	P P	- -		JW JW
07 AUG	1315	10	JI	S-57 / S-58	397	0	397	CB	0-397	30/30 0921-0926	-	HW/12 AUG	P	-		JW
07 AUG	1310	09	DW	S-2 / RS-115	6	393	387	CB	6-266 250-393	29/27 1105-1110 29/28 1352-1357	— —	HW/21 AUG HW/24 AUG	P P	- -		~~CB~~ (HW)
07 AUG	1509	09	DW	S-58 / S-59	388	0	388	CB	250-388 185-387	29/29 1031-1036 30/30 1020-1025	- -	HW/12 AUG HW/12 AUG	P P	- -		JW JW
					TOTAL	(1)	2440									

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 15,647 (ft)

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SHEET NO. 6 of 7 20

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4+5 LINER

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
07AUG	1345	10	JI	S-59/S-60	389	0	389	CB	~~278-388~~ 4-278	~~29/26 1035-1040~~ 29/29 0920-0931	–	HW/12 AUG	P –	V –	JW
07AUG	~~1645~~ 1655 CB	09	DW	S-60/S-61	389	0	389	CB	2-386	29/27 0938-0943	–	HW/12 AUG	P –	–	JW
08AUG	1310	09	DW	S-62/S-63	396	0	396	CB	10-DS-38 DS-38-396	29/28 1312-1317 30/29 1312-1317	–	HW/14 AUG HW/14 AUG	P – P –	–	CB CB
08AUG	1325	10	JI	S-63/S-64	390	2	388	CB	2-156 160-389	30/30 1024-1029 30/30 0950-0955	–	HW/14 AUG HW/13 AUG	P – P –	–	CB JW
08AUG	1428	09	DW	S-61/S-62	397	0	397	CB	0-DS-40 DS-40-397	30/29 1285-1300 30/29 1255-1300	–	HW/14 AUG HW/14 AUG	P – P –	–	CB CB
08AUG	1645	10	JI	S-65/S-66	5	134	129	CB	5-134	29/29 1414-1419	–	HW/10 AUG	P –	–	JW
08AUG	1740	~~10~~ 09 CB	~~JI~~ DW CB	S-30/64 S-64	4	386	382	CB	DS-41 DS-41-225 225-382	29/29 1242-1247 29/29 1100-1105 30/30 1230-1235	–	HW/14 AUG HW/14 AUG HW/14 AUG	P – P – P –	–	CB CB CB
09AUG	0947	10	DW	S-55/S-56	397	386	11	CB	396-386	29/29 1337-1342	–	HW/9 AUG	P –	–	JW
09AUG	0950	10	DW	S-54/S-56	386 ~~0~~ CB	364 ~~22~~	342 22	JW	386-364	28/29 1543-1549	–	HW/9 AUG	P –	–	JW
09AUG	0957	10	DW	S-53/S-56	342	343 ~~22~~	21 ~~22~~ CB	JW	364-342	29/27 1551-1556	–	HW/9 AUG	P –	–	JW
09AUG	1002	10	DW	S-52/S-56	343 ~~0~~ 342	320 ~~22~~	23 ~~22~~ CB	JW	342-322	29/27 1600-1605	–	HW/9 AUG	P –	–	JW
09AUG	1007	10	DW	S-50/S-56	320 ~~0~~	299 ~~22~~	21 ~~22~~ CB	JW	299-320	28/27 1602-1607	–	HW/9 AUG	P –	–	JW
					TOTAL (1)		2568								

NOTE: (1) SEAM LENGTH: THIS PAGE 61/62 (ft) ACCUMULATED 18,215 (ft)

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©GEOSYNTEC CONSULTANTS FILE NO. 3-07-SSL REVIEWED BY: TBW

SHEET NO. 8 OF 20

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (FUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: 681341 TASK NO.: 04.1

DESCRIPTION: PHASE IV CELL 4+5 LINER

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: FLUOR FERNALD

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
9 Aug	1012	10	DW	S-49/S-56	299	277	22	CB/DW	299-277	27/25 1701-1706	—	HW/9 AUG	P	—	JW
9 Aug	1017	10	DW	S-48/S-56	277	255	22	CB/DW	277-255	30/29 1701-1706	—	HW/9 AUG	P	—	JW
~~9 Aug~~	~~1021~~	~~10~~	~~DW~~	~~40/56~~	255			CB/JW							
09 AUG	1030	10	DW	S-65/S-66	9	194	185	CB	9-134 137-194	30/29 1414-1419 27/27 1414-1419	—	HW/10 AUG	P	—	JW
09 AUG	1306	10	DW	S-65/S-66	194	396	202	CB	194-396	30/29 1424-1429	—	HW/10 AUG	P	—	JW
09 AUG	1356	10	DW	S-40/S-56	255	233	22	CB	233-255	28/26 1731-1736	—	HW/9 AUG	P	—	JW
9 Aug	1402	10	DW	S-39/S-56	233	211	22	JW	211-233	27/26 1731-1736	—	HW/9 AUG	P	—	JW
9 Aug	1406	10	DW	S-38/S-56	211	189	22	JW	211-189	30/28 1715-1720	—	HW/9 AUG	P	—	JW
9 Aug	1411	10	DW	S-37/S-56	189	167	22	JW	189-167	29/28 1715-1720	—	HW/9 AUG	P	—	JW
9 Aug	1416	10	DW	S-35/S-56	167	145	22	JW	145-167	30/28 1745-1750	—	HW/9 AUG	P	—	JW
9 Aug	1420	10	DW	S-34/S-56	145	123	22	JW	145-123	27/26 1745-1750	—	HW/9 AUG	P	—	JW
9 Aug	1426	10	DW	S-33/S-56	123	101	22	JW	123-101	29/28 1755-1800	—	HW/9 AUG	P	—	JW
9 Aug	1431	10	DW	S-32/S-56	101	80	21	JW	101-80	29/28 1765-1800	—	HW/9 AUG	P	—	JW
						TOTAL (1)	606								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 18,821 (ft)

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (FUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO. 6Q1341 TASK NO.: 04A

DESCRIPTION: PHASE IV CELL 4/5 LINER

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: FLUOR FERNALD

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
9 Aug	1435	10	DW	S-31/S-56	80	60	20	JW	80 - 60	29/29 1755-1800	–	HW / 9 Aug	P / –	–	JW
9 Aug	1440	10	DW	S-41/S-56	60	47	13	JW	60 - 47	29/28 1755 - 1800	–	HW / 9 Aug	P / –	–	JW
9 Aug	1443	10	DW	S-46/S-56	47	0	47	JW	47 - 0	29/28 1755 - 1800	–	HW / 9 Aug	P / –	–	JW
9 Aug	1730	10	DW	S-45/65	5	60	55	JW/CB	59 - 5	28/26 1454 - 1459	–	HW / 10 Aug	P / –	–	JW
09 AUG	~~1747~~ 1742	10	DW	S-31/65	60	79	19	CB	79-73 73 - 59	30/27 1437 - 1442 30/27 1446 - 1451	–	HW / 10 Aug HW / 10 Aug	P / – P / –	– –	JW JW
09 AUG	1747	10	DW	S-32/S-65	79	100	21	CB	100 - 79	30/27 1437 - 1442	–	HW / 10 Aug	P / –	–	JW
09 AUG	1751	10	DW	S-33/S-65	100	122	22	JW	122 - 100	30/27 1426 - 1431	–	HW / 10 Aug	P / –	–	JW
9 Aug	1757	10	DW	S-34/S-65	122	144	22	JW	144 - 122	29/26 1355 - 1400	–	HW / 10 Aug	P / –	–	JW
9 Aug	1803	10	DW	S-36/S-65	144	166	22	JW	166 - 144	28/27 1355 - 1400	–	HW / 10 Aug	P / –	–	JW
9 Aug	1808	10	DW	S-37/S-65	166	188	22	JW	188 - 166	30/28 1314 - 1319	–	HW / 10 Aug	P / –	–	JW
9 Aug	~~1812~~ 1819	10	DW	S-38/S-65	188	211	23	JW	211 - 188	29/25 1314 - 1319	–	HW / 10 Aug	P / –	–	JW
9 Aug	1824	10	DW	S-39/S-65	211	233	22	JW	233 - 211	30/27 1258 - 1303	–	HW / 10 Aug	P / –	–	JW
9 Aug	1829	10	DW	S-47/S-65	233	255	22	JW	255 - 233	30/30 1258 - 1303	–	HW / 10 Aug	P / –	–	JW
					TOTAL (1)		330								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 19,151 (ft)

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©GEOSYNTEC CONSULTANTS FILE NO. 3-07-SSL REVIEWED BY: TBY

SHEET NO. 10 OF 20

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (FUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: 6G1341 TASK NO.: 04.1

DESCRIPTION: PHASE IE CELL 4&5 LINER

YEAR: 2002

PRIMARY: ☐ SECONDARY: ☒ OTHER: ☐

CONTRACTOR: FLUOR FERNALD

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
9 AUG	1834	10	DW	S-48/S-65	255	277	22	JW	277 - 255	30/28 1247-1252	—	HW / 10 AUG	P	—	JW
9 AUG	1839	10	DW	S-49/S-65	277	299	22	JW	299 - 277	29/28 1247-1252	—	HW / 10 AUG	P	—	JW
9 AUG	1845	10	DW	S-50/S-65	299	322	23	JW	322 - 299	29/27 1240-1245	—	HW / 10 AUG	P	—	JW
9 AUG	1850	10	DW	S-51/S-65	322	344	22	JW	344 - 322	30/29 1240-1245	—	HW / 10 AUG	P	—	JW
9 AUG	1855	10	DW	S-52/S-65	344	367	23	JW	367 - 344	30/28 1234-1239	—	HW / 10 AUG	P	—	JW
9 AUG	1900	10	DW	S-54/S-65	367	388	21	JW	388-378 372-367	30/28 1200-1205 30/29 1234-1239	—	HW / 10 AUG	P	—	JW
9 AUG	1905	10	DW	S-55/S-65	388	398	10	JW	398-388	29/27 1100-1105	—	HW / 10 AUG	P	—	JW
10 AUG	P.M. (CB)	10	DW	S-66/SS-1	0	394	394	JW	/ (1)	—	—	—	—	—	—
13 AUG	0945	09	DW	S-21/RS-178	0	213	213	JW	0-213	~~0815-0820~~ 27/25	—	HW/15AUG	P	—	TBC
13 AUG	1035	09	DW	S-21/RS-179	213	351	138	JW	213-351	30/29 0715-0720	—	HW/15AUG	P	—	TBC
13 AUG	1108	09	DW	RS179/~~RS-180~~	0	2	2	JW	CAPPED BY RS-217 & 218						TBC
13 AUG	1113	09	DW	S-21/RS-180	354	371	17	JW (CB)/CB	354-371	30/28 0715-0720	—	HW/15AUG	P	—	TBC
13 AUG	~~1345~~ 1338 (CB)	09	DW	S-22/RS-178	4	213	209	CB	4-213	30/28 0725-0730	—	HW/15 AUG	P	—	TBC
					TOTAL (1)		1116								

NOTE: (1) SEAM LENGTH: THIS PAGE (1) SEAM S-66/SS-1 IS NOT AIR TESTED. (ft) ACCUMULATED 20,267 (ft)

PANEL SS-1, SACRIFICIAL SECONDARY / IS A SACRIFICIAL PANEL.

~~SEAMED IMPROPERLY.~~ (CB) SEAM WAS SHINGLED IMPROPERLY AND SHALL BE REMOVED FOR THE CELL 6 CONSTRUCTION TIE-IN. ALTHOUGH A TRIAL WELD WAS PASSED, SEAM WAS NOT DESTRUCTIVELY NOR NON-DESTRUCTIVELY TESTED.

00263

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG FUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Cells 4+5 LINER

PROJECT NO.: GQ1341 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
13 AUG	1428	09	DW	S-23/BS-179	213	354	141	CB	213-354	27/26 1450-1455	—	HW/14AUG	P -	—	TBW
13 AUG	1500	09	DW	S-23/BS-180	354	371	17	CB	354-371	27/26 1450-1455 CB	—	HW/14AUG	P -	—	CB
13 AUG	1450	10	JI	S-67/S-68	359	0	359	CB	0-359	30/30 1015-1020	—	HW 26AUG	P -	—	CHW
13 AUG	1717	10	JI	S-2/S-68	42	25	17	CB	25-42	30/28 1515 1520		HW/24 AUG	P -	—	CHW
13 AUG	1722	10	JI	S-68/BS-115	25	22	3	CB	CAPPED BY RS 358						CHW
13 AUG	1723	10	JI	S-1/S-68	22	20	2	CB	CAPPED BY RS 358						CHW
13 AUG	1723	10	JI	S-1/S-67	20	2	18	CB	2-20	29/28 1515 1520		HW/24AUG	P -	—	CHW
13 AUG	1727	10	JI	S-67/BS-48	2	0	2	CB	—	CAPPED BY RS 353					CHW
14 AUG	1438	09	DW	S-68/S-69	345	188	157	JW	285-345 265-188	30/30 0935-0940 30/29 1005-1010		HW 26AUG HW 26AUG	P - P -	— —	CHW CHW
15 AUG	0807	09	DW	S-68/S-69	188	0	188	TBW	0-188	30/30 1000-1005		HW 27 AUG	P -	—	CHW
15 AUG	1404	09	DW	S-70/S-71	0	351	351	TBW	300-351 0-300	27/25 1045 1050 32/31 0930 0935		HW 28AUG HW 28 AUG	P - P -	— —	CHW CHW
15 AUG	1531	09	DW	S-71/72	0	354	354	TBW	0-354	29/29 1100-1105		HW 28AUG	P -	—	CHW
15 AUG	1726	09	DW	S-72/S-73	0	350	350	TBW	0-175 175-350	30/30 0935 0940 32/30 1247 1252		HW 29 AUG HW 29AUG	P - P -	— —	CHW CHW
						TOTAL (1)	1959								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 22226 (ft)

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©GEOSYNTEC CONSULTANTS FILE NO. 3-07-SSL REVIEWED BY: TBW

SHEET NO. 12 OF 20

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (FUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV, CELLS 4 & 5 PROJECT NO.: GQ134 TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
16 AUG	1317	10	DW	S-73/S-74	0	353	353	TBW	0-120 120-353	32/30 1515 1520 33/31 1440-1445	—	HW 29 AUG HW 28 AUG	P | — P | —	—	CHW CHW
16 AUG	1444	10	DW	S-74/S-75	0	362	362	TBW	0-300 300-362	32/31 1052-1057 32/30 1459-1500	—	HW 29 AUG HW 28 AUG	P | — P | —	—	CHW CHW
17 AUG	0917	09	DW	S-3/RS-247	0	394	394	TBW	0-350 350-394	30/30 0940 0945 29/27 0946 0951	—	HW 24 AUG	P | —	—	CHW
17 AUG	0935	10	JI	S-2/RS-247	0	255	255	TBW	0-255	29/27 1105-1110 30/	—	HW 21 AUG	P | —	—	TBW
19 AUG	0838	10	DW	S-2/RS-247	255	394	139	TBW	255-394	30/29 1054-1056	—	HW 24 AUG	P | —	—	CHW
19 AUG	1525	10	DW	S-8/RS 248	4	390	386	TBW	4-334 334-386	31/30 0850-0855 30/27 1018 1023	— —	HW 21 AUG HW 24 AUG	P | — P | —	—	TBW CHW
19 AUG	1720	10	DW	S-4/RS 248	4	315	311	CHW	4-315	30/28 0932-0939	—	HW 21 AUG	P | —	—	TBW
19 AUG	1825	10	DW	S-5/RS 248	315	325	10	CHW	315 CHW CAPPED BY RS 342						CHW
20 AUG	0833	10	DW	S-5/RS-248	325	390	65	TBW	325-390	28/28 1623-1628	—	HW 20 AUG	P | —	—	TBW
20 AUG	1220	09	DW	S-76/S-76	351	0	351	TBW	0-225 225-351	32/31 1325 1330 31/31 1005-1010	— —	HW 30 AUG HW 29 AUG	P | — P | —	—	CHW CHW
20 AUG	1420	10	DW	S-76/S-77	370	0	370	TBW	0-370	31/29 1350-1355	—	HW 30 AUG	P | —	—	CHW
20 AUG	1553	10	DW	S-77/S-78	367	0	367	TBW	0-367	30/31 1527-1532 ~~1490-1495~~	—	HW 30 AUG	P | —	—	CHW
20 AUG	1750	10	JI	S-78/S-79	370	0	370	TBW	0-370	30/29 1420-1425	—	HW 30 AUG	P | —	—	CHW
						TOTAL (1)	3733								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 25959 (ft)

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (FUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE II, Cells 4 & 5

PROJECT NO.: GQ134 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
20AUG	1805	09	DW	S-79/S-80	370	0	370	TBW	0-335 335-370	31/30 1500-1506 31/29 1500-1505	—	HW 30AUG HW 30AUG	P P	—	CHW CHW
21AUG	1320	09	DW	S-79/S-81	382	0	382	TBW	300-382 0-300	30/30 1025-1030 30/30 1033-1038	—	HW 26AUG HW 26AUG	P P	—	CHW CHW
21AUG	1420	10	JI	S-81/S-82	368	0	368	TBW	0-368	30/27 1045-1050	—	HW 26AUG	P	—	CHW
21AUG	1514	09	DW	S-82/S-83	351	0	351	TBW	351-175 0-175	30/29 1105 1110 30/29 1355-1400	—	HW 26AUG HW 26AUG	P P	—	CHW CHW
21AUG	1815	09	DW	S-83/S-84	351	0	351	TBW	0-351	30/30 1555-1600	—	HW 26AUG	P	—	CHW
22AUG	0900	09	DW	S-84/S-85	0	41	41	TBW	0-41	31/31 0920/0925	—	HW 3 Sept	P	—	CHW
22AUG	0915	09	DW	S-84/S-85	54	354	300	CHW	54-354	31/30 0940-0945	—	HW 3 Sept	P	—	CHW
22AUG	1310	09	DW	S-86/S-87	0	350	350	CHW	0-250 250-350	30/28 1620 1625 30/29 1645-1650	—	HW 26AUG HW 26AUG	P P	—	CHW CHW
22AUG	1515	09	DW	S-87/S-88	0	237	237	CHW	0-237	30/28 0930-0935	—	HW 3 Sept	P	—	CHW
22AUG	1720	09	DW	S-87/S-88	0	350	350	CHW	325-350 0-325	26/25 1635 1640 30/30 1610-1615		HW 26AUG HW 26AUG	P P	—	CHW CHW
22AUG	1915	09	DW	S-75/S-86	49	100	51	TBW	175-225 260-225	32/30 0800-0805 28/27 0835 0840	—	HW 30AUG HW 30AUG	P P	—	CHW CHW
23AUG	0916	09	DW	S-75/S-86	100	350	250	TBW	260-325 325-550	32/31 0835 0840 33/30 1525-1530	—	HW 30AUG HW 28AUG	P P	—	CHW CHW
23AUG	1050	09	DW	S-75/S-86	0	49	49	TBW	175-100 0-100	32/30 0800/0805 Capped by	RS-502	HW 30AUG	P	—	CHW
					TOTAL (1)		3450								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 29409 (ft)

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SHEET NO. 14 OF 20

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (FUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: 601341 TASK NO.: 041

DESCRIPTION: Phase IV Cell 4 & 5 YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ CONTRACTOR: Istre Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
26Aug	1016	09	DW	585/589	0	88	88	CHW	0-88	29/29 1205-1210	—	HW SSept	P -	—	CHW
26Aug	1042	09	DW	589/590	0	92	92	CHW	0-92	32/32 1000-1005	—	HW SSept	P -	—	CHW
26Aug	1303	09	DW	590/591	0	92	92	CHW	0-92	30/30 1012-1017	—	HW SSept	P -	—	CHW
26Aug	1330	09	DW	591/592	0	93	93	CHW	0-93	32/31 1035-1040	—	HW SSept	P -	—	CHW
26Aug	1353	09	DW	592/593	0	94	94	CHW	0-94	32/30 1055-1100	—	HW SSept	P -	—	CHW
26Aug	1417	09	DW	593/594	0	94	94	CHW	0-94	31/30 1105-1110	—	HW SSept	P -	—	CHW
26Aug	1443	09	DW	594/595	0	94	94	CHW	0-94	30/29 1325-1330	—	HW SSept	P -	—	CHW
26Aug	1510	09	DW	595/596	0	91	91	CHW	0-91	30/31 1335-1340	—	HW SSept	P -	—	CHW
26Aug	1545	09	DW	596/597	0	90	90	CHW	0-90	32/31 1350-1355	—	HW SSept	P -	—	CHW
26Aug	1609	09	DW	597/598	0	91	91	CHW	0-91	31/30 1315-1325	—	HW SSept	P -	—	CHW
26Aug	1632	09	DW	598/599	0	92	92	CHW	0-92	31/29 1440-1445	—	HW SSept	P -	—	CHW
26Aug	1719	09	DW	599/5100	0	91	91	CHW	0-91	32/30 1440-1445	—	HW SSept	P -	—	CHW
26Aug	1749	09	DW	5101/5102	0	22	22	CHW	0-22	33/32 0756-0801	—	HW SSept	P -	—	CHW
					TOTAL (1)		1124								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 30533 (ft)

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©GEOSYNTEC CONSULTANTS FILE NO. 3-07-SSL REVIEWED BY: TPW SHEET NO. 15 OF 20

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (FUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase II Cell 4 & 5

PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

YEAR: 2002

CONTRACTOR: Istre Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (_±_psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
26Aug	1757	Ø9	DW	S100/S102	Ø	48	48	CHW	Ø-48	32/31 0808-0813	—	HW 6Sept	P / —	—	CHW
26Aug	1807	Ø9	DW	S100/S101	55	97	42	CHW	55-97	29/29 0808-0813	—	HW 6Sept	P / —	—	CHW
26Aug	1823	Ø9	DW	S103/S104	Ø	22	22	CHW	0-22	31/31 0756-0801	—	HW 5Sept	P / —	—	CHW
27Aug	Ø831	Ø9	DW	S102/S103	Ø	36	36	CHW	Ø-36	28/28 0835-0840	—	HW 6Sept	P / —	—	CHW
27Aug	Ø914	Ø9	DW	S107/S108	Ø	36	36	CHW	Ø-36	29/29 1630-1635	—	HW 5Sept	P / —	—	CHW
27Aug	Ø924	Ø9	DW	S106/S107	Ø	31	31	CHW	Ø-31	29/28 0852-0857	—	HW 6Sept	P / —	—	CHW
27Aug	Ø947	Ø9	DW	S108/S109	61	Ø	61	CHW	Ø-61	31/30 1615-162	—	HW 5Sept	P / —	—	CHW
27Aug	Ø933	Ø9	DW	S105/S106	Ø	35	35	CHW	Ø-35	29/29 0916-0921	—	HW 5Sept	P / —	—	CHW
26Aug	[illegible]48	Ø9	DW	S101/S104	36	76	40	CHW	36-76	29/29 0835-0840	—	HW 6Sept	P / —	—	CHW
27Aug	1003	Ø9	DW	S104/S105	114	88	26	CHW	88-114	30/30 0905-0910	—	HW 6Sept	P / —	—	CHW
27Aug	1012	Ø9	DW	S104/S106	88	64	24	CHW	64-88	30/29 0852-0857	—	HW 6Sept	P / —	—	CHW
27Aug	1019	Ø9	DW	S103/S107	64	40	24	CHW	40-64	31/29 1640-1645	—	HW 5Sept	P / —	—	CHW
27Aug	1027	Ø9	DW	S103/S108	40	20	20	CHW	20-40	30/27 1630-1635	—	HW 5Sept	P / —	—	CHW
					TOTAL (1)		445								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 30978 (ft)

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SHEET NO. 16 OF 20

4943

00026988

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (FUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cells 4 & 5

PROJECT NO.: GQ1341 TASK NO.: 04

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
27Aug	1035	09	DW	S102/S108	20	8	12	CHW	8-20	28/27 1615-1620	—	HW 5Sept	P	—	CHW
27Aug	1040	09	DW	S102/S109	8	0	8	CHW	0-8	30/28 1600-1605	—	HW 5Sept	P	—	CHW
27Aug	1519	09	DW	S110/S111	349	0	349	CHW	0-349	32/32 1405-1410	~~4 Sept~~	HW 4Sept	P	—	CHW
27Aug	1834	09	DW	S111/SS-2	0	349	34	CHW	*						
28Aug	0940 ~~0945~~	09	DW	S55/S110	334	345	11	JW	334-345	31/30 0950-0905	—	HW 5Sept	P	—	CHW
28Aug	0943	09	DW	S89/S110	312	334	22	JW	312-334	32/31 0950-0955	—	HW 5Sept	P	—	CHW
28Aug	0948	09	DW	S90/S110	290	312	22	JW	290-312	31/30 1007-1012	—	HW 5Sept	P	—	CHW
28Aug	0953	09	DW	S91/S110	269	290	21	JW	269-290	32/31 1035-1040	—	HW 5Sept	P	—	CHW
28Aug	0959	09	DW	S92/S110	247	269	22	JW	247-269	31/30 1055-1100	—	HW 5Sept	P	—	CHW
28Aug	1004	09	DW	S93/S110	225	247	22	JW	225-247	31/30 1105-1110	—	HW 5Sept	P	—	CHW
28Aug	1008	09	DW	S94/S110	203	225	22	JW	203-225	30/29 1325-1330	—	HW 5Sept	P	—	CHW
28Aug	1013	09	DW	S95/S110	181	203	22	JW	181-203	31/30 1335-1340	—	HW 5Sept	P	—	CHW
28Aug	1018	09	DW	S96/S110	159	181	22	JW	181-159	31/29 1350-1355	—	HW 5Sept	P	—	CHW
					TOTAL (1)		589								

NOTE: (1) SEAM LENGTH: THIS PAGE * SS-2 IS A SACRIFICIAL SECONDARY PANEL. IT WAS SHINGLED IMPROPERLY & WILL BE REMOVED DURING CELL 6 CONSTRUCTION. (11) ACCUMULATED 31567 (11)

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (FUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5

PROJECT NO.: GQ1341 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
28Aug	1023	09	DW	S97/S110	138	159	21	JW	138-159	27/26 1405-1410	—	HW 5Sept	P / —	—	CHW
28Aug	1027	09	DW	S98/S110	116	138	22	JW	116-138	29/28 1405-1410	—	HW 5Sept	P / —	—	CHW
28 Aug	1032	09	DW	S99/S110	99	116	17	JW	99-116	26/25 1310-1315	—	HW 5Sept	P / —	—	CHW
28Aug	1038	09	DW	S100/S110	72	94	22	JW	72-94	32/31 1525-1530	—	HW 5Sept	P / —	—	CHW
28 Aug	1310	09	DW	S112/S113	0	352	352	JW	0-352	28/29 1355-1400	—	HW 3Sept	P / —	—	CHW
28Aug	1442	09	DW	S113/S114	0	351	351	JW	0-351	32/31 1350-1355	—	HW 3Sept	P / —	—	CHW
* 28Aug	1625	09	DW	S114/S115	0	354	354	JW	0-354	31/30 1330-1335	—	HW 3Sept	P / —	—	CHW
29Aug	0854	09	DW	S105/S112	3	52	49	JW	3-52	32/31 1005-1010	—	HW 4Sept	P / —	—	CHW
29Aug	0905	09	DW	S101/S112	52	74	22	JW	52-74	30/30 1005-1010	—	HW 4Sept	P / —	—	CHW
29Aug	0911	09	DW	S100/S112	74	95	21	JW	95-74	35/35 0950-0955	—	HW 4Sept	P / —	—	CHW
29Aug	0916	09	DW	S99/S112	95	117	22	JW	117-95	34/33 0950-0955	—	HW 4Sept	P / —	—	CHW
29Aug	0920	09	DW	S98/S112	117	140	23	JW	117-140	35/34 0920-0925	—	HW 4Sept	P / —	—	CHW
29Aug	0925	09	DW	S97/S112	140	162	22	JW	140-162	32/31 0912-0917	—	HW 4Sept	P / —	—	CHW
					TOTAL (1)		1298								

NOTE: (1) SEAM LENGTH: THIS PAGE * SEE PAGE 20 FOR CONTINUATION OF 28 AUG SEAMS S-162/S-110, AND S-109/S-110. (ft) ACCUMULATED 32865 (ft)

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4943

©GEOSYNTEC CONSULTANTS FILE NO. 3-07-SS REVIEWED BY: [illegible]

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (FUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase III Cell 4&5

PROJECT NO.: GQ1341 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: Istre Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
29Aug	0930	09	DW	596/5112	162	183	21	JW	162-183	32/32 0850-0855	—	HW 4Sept	P	—	CHW
29Aug	0935	09	DW	595/5112	183	205	22	JW	205-183	35/35 0835-0840	—	HW 4Sept	P	—	CHW
29Aug	0940	09	DW	594/5112	205	227	22	JW	205-227	28/28 0735-0740	—	HW 4Sept	P	—	CHW
29Aug	0944	09	DW	593/5112	227	249	22	JW	227-249	30/29 1642-1647	—	HW 3Sept	P	—	CHW
29Aug	0949	09	DW	592/5112	249	272	23	JW	249-272	31/30 1635-1640	—	HW 3Sept	P	—	CHW
29Aug	0955	09	DW	591/5112	272	294	22	JW	272-294	31/29 1627-1632	—	HW 3Sept	P	—	CHW
29Aug	0959	09	DW	590/5112	294	316	22	JW	294-316	32/31 1620-1625	—	HW 3Sept	P	—	CHW
29Aug	1004	09	DW	589/5112	316	339	23	JW	316-339	31/30 1430-1435	—	HW 3Sept	P	—	CHW
29Aug	1008	09	DW	355/5112	339	347	8	JW	339-347	28/27 1415-1420	—	HW 3Sept	P	—	CHW
30AUG	0750	09	DW	580/5116	360	4	356	CHW	4-356	31/29 1430-1435	—	HW 30AUG	P	—	CHW
* 4Sept	1515	09	DW	5112/5118	363	0	363	CHW	0-200 200-363	34/33 1435-1440 29/28 1430-1435	— —	HW 11Sept HW 11Sept	P P	— —	CHW CHW
* 4Sept	1645	09	DW	5112/5119	367	0	367	CHW	0-367	36/35 1055-1100	—	HW 11Sept	P	—	CHW
5Sept	0927	09	DW	5115/5123	6	367	361	CHW	5-360	32/31 1410-1415	—	HW 9Sept	P	—	CHW
						TOTAL (1)	~~1271~~	CHW							

NOTE: (1) SEAM LENGTH: THIS PAGE ~~3805~~ CHW 1638 2

(ft) ACCUMULATED ~~34136~~ CHW ~~34870~~ CHW ~~34503~~ 34497 (ft)

4943

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©GEOSYNTEC CONSULTANTS FILE NO. 3-07-SS REVIEWED BY: TBV

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (FUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5

PROJECT NO.: GQ134 / TASK NO.: 04-1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

YEAR: 2002

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (±psi for 5 min.)	VACUUM BOX (sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
* 5 Sept	1357	Ø9	DW	S122/S123	Ø	35	35	CHW	Ø-39 39-350	32/32 0910-0915 30/28 1015-1020		9 Sept HW 11 Sept HW	P / —		CHW
28 AUG	1045	Ø9	DW	S102/S140	72	65	13	CHW	72-65	29/28 1525-1530		5 Sept HW	P / —		CHW
28 AUG	1055	Ø9	DW	S109/S110	65	0	65	CHW	Ø-65	31/30 1600-1605		5 Sept HW	P / —		CHW
6 Sept	1325	Ø9	DW	S122/S123	35	35Ø	315	CHW	35-350	30/28 1015-1020		11 Sept HW	P / —		CHW
6 Sept	~~1455~~ 1305	Ø9	DW	S121/S122	4	355	351	CHW	4-5Ø 50-215 / 215-355	30/30 1000/1005 35/34 33/31 1320/1325 1350/1355	~~10 Sept~~	9 Sept HW 10 Sept HW	P / — P / —		CHW CHW
7 Sept	Ø837	Ø9	DW	S120/S121	5	357	352	CHW	5-200 200-357	36/34 1445/1450 35/34 1445-1450		11 Sept HW 11 Sept HW	P / — P / —		CHW
7 Sept	1020	Ø9	DW	S116/S119	360	Ø	360	CHW	Ø-350 350-360	33/31 1445-1450 34/34 1600-1605		11 Sept HW 11 Sept HW	P / — P / —		CHW
7 Sept	1325	Ø9	DW	S119/S120	5	356	351	CHW	5-45 45-340	29/29 0758-0803 32/30 0935-0940		8 Sept HW 8 Sept HW	P / — P / —		CHW
						TOTAL (1)	1,842								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 36,339 (ft)

* M 09 - 5 Sept - down for maintenance S119/S120

ACCUMULATED SEAM LENGTH AFTER SUBTRACTING SEAMS THAT WERE REMOVED & RENEWEDED → 32,686 ft

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Extrusion

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: CELLS 4 & 5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ EXTRUSION YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (_±_psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
19 JULY	1055	04	JB	S-1/CELL3 S-5	0	64	64	TOK/CB	— CAPPED BY RS-48 —						
22 JUL	1055	04	JB	S-1/CELL3 S-7	64	70	6	CB							CB
22 JUL	1100	04	JB	S-1/CELL3 S-8	70	93	23	CB							CB
22 JUL	1115	04	JB	S-1/CELL3 S-9	93	103	10	CB							CB
22 JUL	1124	04	JB	S-1/CELL3 S-9	103	116	13	CB							CB
23 JUL	0845	04	JB	S-1/CELL3 S-10	116	139	23	CB							CB
23 JUL	0950	04	JB	S-1/CELL3 S-11	139	163	24	CB							CB
23 JUL	1002	04	JB	S-1/CELL3 S-12	163	165	2	CB							CB
23 JUL	1003	04	JB	S-1/RS-17	165	179	14	CB	165-179	—	VTOK	AC/OZ AUG	P/-		CB
23 JUL	1010	04	JB	RS-17/CELL3 S-12	165	179	14	CB	— CAPPED BY RS-48 —						CB
23 JUL	1015	04	JB	S-1/CELL3 S-12	179	186	7	CB							CB
23 JUL	1018	04	JB	S-1/CELL3 S-13	186	209	23	CB							CB
23 JUL	1028	04	JB	S-1/CELL3 S-14	209	232	23	CB							CB
					TOTAL (1)		246								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 246 (ft)

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4+5 LINER

YEAR: 2007

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ EXTRUSION

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (_±_psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
23 JUL	1037	04	JB	S-1/CELL3 S-15	232	255	23	CB	—	CAPPED BY RS-48					CB
23 JUL	1045	04	JB	S-1/CELL3 S-16	255	260	5	CB							CB
23 JUL	1104	04	JB	S-1/CELL3 S-17	279	298	19	CB							CB
23 JUL	1052	04	JB	S-1/CELL3 S-16	260	279	19	CB							CB
23 JUL	1322	04	JB	* S-1/CELL3 ~~S-16~~	~~279~~ 298	~~279~~ 302	6	CB							CB
23 JUL	1325	04	JB	S-1/CELL3 S-18	302	325	23	CB							CB
23 JUL	1334	04	JB	S-1/CELL3 S-25	325	343	18	CB							CB
~~23 JUL~~	~~1340~~	~~04~~	~~JB~~	~~S-1/CELL3 S-25~~	~~343~~	~~348~~									CB
23 JUL	1340	04	JB	S-1/RS-29	343	~~348~~ 337	9	CB	—	CAPPED BY RS-48					CB
23 JUL	1345	04	JB	S-1 RS-29 CELL3 S-25	343	348	5	CB	—	CAPPED BY RS-89					CB
23 JUL	1348	04	JB	RS-29 CELL3 S-26	348	352	4	CB							
23 JUL	1349	04	JB	S-1/CELL3 S-26	352	371	19	CB	—	CAPPED BY RS-48					CB
23 JUL	1357	04	JB	S-1/CELL3 S-27	371	385	14	CB							CB
					TOTAL (1)		164								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 410 (ft)

* Seam No S-1/CELL3 S-17

000275

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ 1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4+5 LINER

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ EXTRUSION

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__ psi for 5 min.)	VACUUM BOX (20 sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
23 JUL	1403	04	JB	S-1/R-31	385	396	11	CB	—	CAPPED	BY RS 48	—	—	—	CHW
23 JUL	1405	04	JB	R-31/CELL 3 S-27	385	394	9	CB	—	CAPPED	BY RS48	—	—	—	CHW
23 JUL	1415	04	JB	RS-31/CELL 3 S-35	394	396	2	CB	—	CAPPED	BY RS48	—	—	—	CHW
24 JULY	0940	04	JB	S-1/RS-46	0	16	16	TBW	0-16	—	VTOK	SC/25 JUL	P	—	CB
24 JULY	0955	04	JB	S-2/RS-46	0	16	16	TBW	0-16	—	VTOK	SC/25 JUL	P	—	CB
24 JULY	1020	04	JB	S-2/RS-47	0	22	22	TBW	0-22	—	VTOK	HW/24 JUL	P	—	CB
24 JULY	1630	06	JB	S-1/RS-48	4	0	4	TBW	0-4	—	VTOK	SC/25 JUL	P	—	CB
24 JULY	1640	06	JB	RS-48/CELL 3 S-5	0	5	5	TBW	0-5	—	VTOK	SC/25 JUL	P	—	CB
25 JULY	0910	04	JB	S-1/RS-48	4	23	19	TBW	4-23	—	VTOK	SC/25 JUL	P	—	CB
25 JULY	0920	04	JB	RS-48/CELL 3 S-5	23	5	18	TBW	5-23	—	VTOK	SC/25 JUL	P	—	CB
25 JULY	1005	04	JB	S-1/RS-48	23	45	22	TBW	23-45	—	VTOK	JH/26 JUL	P	—	CB
25 JULY	1015	04	JB	RS-48/CELL 3 S-5	23	45	22	TBW	23-45	—	VTOK	JH/26 JUL	P	—	CB
25 JULY	1025	04	JB	RS-48/CELL 3 S-5	45	66	21	TBW	45-66	—	VTOK	SC/26 JUL	P	—	CB
					TOTAL (1)		187								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 597 (ft)

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4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: CELLS 4&5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (±psi for 5 min.)	VACUUM BOX (20 sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
25 JULY	1035	04	JB	S-1/RS-48	66	45	21	TBM	45-66	—	VTOK	SC/26 JUL	P/-		CB
25 JULY	1105	04	JB	RS-48/CELL3 S-7	66	70	4	TBM	66-70	—	VTOK	JH/26 JUL	P/-		CB
25 JULY	1109	04	JB	RS-48/CELL3 S-8	70	86	16	TBM	70-86	—	VTOK	JH/26 JUL	P/-		CB
25 JULY	1118	04	JB	S-1/RS-48	86	~~99~~ 86	~~13~~ 20	TBM	66-86	—	VTOK	JH/26 JUL	P/-		CB
~~25~~ 26 JUL	1025	04	JB	RS-48/CELL3 S-8	86	93	7	CB	86-93	—	VTOK	AC/02 AUG	P/-		CB
26 JUL	1030	04	JB	RS-48/CELL3 S-9	93	99	6	CB	93-99	—	VTOK	AC/02 AUG	P/-		CB
26 JUL	1034	04	JB	S-1/RS-48	99	86	13	CB	86-99	—	VTOK	AC/02 AUG	P/-		CB
26 JUL	1045	04	JB	RS-48/CELL3 S-9	99	116	17	CB	99-116	—	VTOK	AC/02 AUG	P/-		CB
26 JUL	1058	04	JB	RS-48/CELL3 S-10	116	127	12	CB	116-127	—	VTOK	AC/02 AUG	P/-		CB
26 JUL	1108	04	JB	RS-48/S-1	127	120	7	CB	120-127	—	VTOK	AC/02 AUG	P/-		CB
26 JUL	1300	04	JB	S-1/RS-48	120	99	21	CB	99-120	—	VTOK	AC/02 AUG	P/-		CB
26 JUL	1330	04	JB	RS-48/CELL3 S-10	127	136	9	CB	127-136	—	VTOK	AC/02 AUG	P/-		CB
26 JUL	1345	04	JB	S-1/RS-48	127	144	17	CB	127-144	—	VTOK	AC/02 AUG	P/-		CB
					TOTAL (1)		~~157~~ 170	CB							

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED ~~597~~ 767 (ft)

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©GEOSYNTEC CONSULTANTS FILE NO. 3-07-SSL REVIEWED BY: TBM

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 04-1

DESCRIPTION: PHASE IV, CELLS 4 & 5 LINER

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (_±_psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
30 JUL	~1810	04	JI	S-9 / RS-80	388	363 (RS-512)	25	CB	~~363-388~~	—	31 JULY	AC	P / —	—	CHW
30 JUL	~1820	04	JI	S-10 / RS-80	363 (RS-512)	388	25	CB	363-388	—	31 JULY	AC	P / —	—	CHW
31 JULY	0810	04	JI	RS-48 / CELL 3 S-10	136	139	3	TBW	136-139	—	VTOK	AC / 02 AUG	P / —	—	CB
31 JULY	0812	04	JI	RS-48 / CELL 3 S-11	139	156	17	TBW	139-156	—	VTOK	AC / 02 AUG	P / —	—	CB
31 JULY	0820	04	JI	S-1 / RS-48	156	144	12	TBW	144-156 (CB)	—	VTOK	AC / 02 AUG	P / —	—	CB
31 JULY	0841	04	JI	RS-48 / CELL 3 S-11	156	163	7	TBW	156-163	—	VTOK	AC / 02 AUG	P / —	—	CB
31 JULY	0845	04	JI	RS-48 / CELL 3 S-12	163	170	7	TBW	163-170	—	VTOK	AC / 02 AUG	P / —	—	CB
31 JULY	0849	04	JI	S-1 / RS-48	156	165	9	TBW	156-165	—	VTOK	AC / 02 AUG	P / —	—	CB
31 JULY	0945	04	JI	RS-48 / CELL 3 S-12	170	186	16	TBW	170-186	—	VTOK	AC / 02 AUG	P / —	—	CB
31 JULY	0955	04	JI	RS-48 / CELL 3 S-13	186	195	9	TBW	186-195	—	VTOK	AC / 02 AUG	P / —	—	CB
31 JULY	1000	04	JI	S-1 / RS-48	165	195	30	TBW	165-195	—	VTOK	AC / 02 AUG	P / —	—	CB
31 JULY	1355	04	JB	S-18 / S-19	0	380	380	TBW / CB	0-380	—	VTOK	AC / 02 / 03 AUG	P / —	—	TBW
02 AUG	0755	04	JB	RS-48 / CELL 3 S-13	195	209	14	TBW	195-209	—	VTOK	AC / 02 AUG	P / —	—	CB
					TOTAL (1)		554								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 1,321 (ft)

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
02 AUG	0804	04	JB	RS-48/CELL 3 S-14	209	214	5	TBM	209-214	–	✓TOK	AC/02 AUG	P	–	CB
02 AUG	0807	04	JB	S-1/RS-48	214	195	19	TBM	195-214	–	✓TOK	AC/02 AUG	P	–	CB
02 AUG	0830	04	JB	RS-48/CELL 3 S-14	214	232	18	TBM	214-232	–	✓TOK	AC/~~05~~ 06 AUG	P	–	CB
02 AUG	0840	04	JB	RS-48/CELL 3 S-15	232	243	11	TBM	232-243	–	✓TOK	AC/06 AUG	P	–	CB
02 AUG	0855	04	JB	S-1/RS-48	243	214	29	TBM	214-243	–	✓TOK	AC/06 AUG	P	–	CB
02 AUG	0915	04	JB	RS-48/CELL 3 S-15	243	255	12	TBM	243-255	–	✓TOK	AC/06 AUG	P	–	CB
02 AUG	0921	04	JB	RS-48/CELL 3 S-16	255	273	18	TBM	255-273	–	✓TOK	AC/06 AUG	P	–	CB
02 AUG	0931	04	JB	S-1/RS-48	273	243	30	TBM	243-273	–	✓TOK	AC/06 AUG	P	–	CB
02 AUG	1002	04	JB	RS-48/CELL 3 S-16	273	279	6	TBM	273-279	–	✓TOK	AC/06 AUG	P	–	CB
02 AUG	1005	04	JB	RS-48/CELL 3 S-17	279	302	23	TBM	279-302	–	✓TOK	AC/06 AUG	P	–	CB
02 AUG	1025	04	JB	S-1/RS-48	302	273	29	TBM	273-302	–	✓TOK	AC/06 AUG	P	–	CB
02 AUG	1100	04	JB	RS-48/CELL 3 S-18	302	325	23	TBM	302-325	–	✓TOK	AC/06 AUG	P	–	CB
02 AUG	1112	04	JB	RS-48/CELL 3 S-25	325	329	4	TBM	325-329	–	✓TOK	AC/06 AUG	P	–	CB
					TOTAL (1)		227								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 1548 (ft)

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GEOSYNTEC CONSULTANTS FILE NO. 3-07-SSL REVIEWED BY: TBM

SHEET NO. 6 OF 26

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (20 sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
02 AUG	1320	04	JB	25-48 / CELL3 S-25	329	332	3	TBH	329-332	—	VTOK	AC/06 AUG	P / -	—	CB
02 AUG	1345	04	JB	S-1 / 25-48	332	302	30	TBH	302-332	—	VTOK	AC/06 AUG	P / -	—	CB
02 AUG	1430	04	JB	S-1 / 25-48	332	378	46	CB	332-352 352-378	—	VTOK VTOK	AC/06 AUG AC/5 AUG	P / - P / -	— —	CB CB
~~02~~ 05 AUG	~0835	04	JB	CELL3 S-25 / 25-48	332	343	11	CB	332-343	—	VTOK	AC/06 AUG	P / -	—	CB
05 AUG	~0845	04	JB	CELL3 S-24 / 25-89	343	348	5	CB	343-348	—	VTOK	AC/06 AUG	P / -	—	CB
05 AUG	~0848	04	JB	CELL3 S-26 / 25-89	348	352	4	CB	348-352	—	VTOK	AC/06 AUG	P / -	—	CB
05 AUG	~0850	04	JB	25-48 / 25-89	352	343	9	CB	343-352	—	VTOK	AC/06 AUG	P / -	—	CB
05 AUG	~0855	04	JB	CELL3 S-26 / 25-48	352	371	19	CB	352-371	—	6AUG	AC	P / -	—	CHW
05 AUG	~0905	04	JB	CELL3 S-27 / 25-48	371	378	7	CB	371-378	—	6AUG	AC	P / -	—	CHW
06 AUG	~0900	04	JB	S-8 / 25-105	334	368	34	CB	334-368	—	6 AUG	AC	P / -	—	CHW
06 AUG	~0930	04	JB	S-21 / 25-105	334	368	34	CB	334-368	—	8AUG	AC	P / -	—	CHW
06 AUG	~1800	04	JB	S-8 / 25-111	79	106	27	CB	79-106	—	8AUG	AC	P / -	—	CHW
* 06 AUG	~~1815~~ 1820 CB	04	JB	S-21 / 25-111	106	79	27	CB	106-79	—	8AUG	AC	P / -	—	CHW
					TOTAL (1)		256								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 1,804 (ft)

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©GEOSYNTEC CONSULTANTS FILE NO. 3-07-SSL REVIEWED BY: TBH

SHEET NO. 7 OF 26

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO. GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4+5 LINER

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (_±_psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
15 AUG	1645	Ø3	JB	S-22/RS-228	Ø	22	22	TBU	Ø-22	—	15 AUG	AC	P / —	—	CHW
15 AUG	1655	Ø3	JB	S-22/RS-228	22	Ø	22	TBU	22-Ø	—	15 AUG	AC	P / —	—	CHW
15 AUG	183Ø	Ø6	DL	S-9/RS-235	181	238	57	TBU	181-238	—	16 AUG	AC	P / —	—	CHW
15 AUG	19Ø5	Ø6	DL	RS-51/RS-235	238	226	12	TBU	238-226	—	16 AUG	AC	P / —	—	CHW
16 AUG	Ø83Ø	Ø6	DL	RS-51/RS-235	181	226	45	TBU	181-226	—	16 AUG	AC	P / —	—	CHW
16 AUG	Ø9Ø7	Ø6	DL	RS-51/RS-235	238	286	48	TBU	238-286	—	16 AUG	AC	P / —	—	CHW
16 AUG	Ø93Ø	Ø6	DL	S-9/RS-235	286	238	48	TBU	286-238	—	16 AUG	AC	P / —	—	CHW
16 AUG	1Ø45	Ø6	DL	S-9/RS-235	286	327	41	TBU	286-327	—	16 AUG	AC	P / —	—	CHW
16 AUG	1325	Ø6	DL	RS-51/RS-235	286	39Ø	1Ø4	TBU	286-390	—	16 AUG	AC	P / —	—	CHW
16 AUG	14Ø	Ø6	DL	S-9/RS-235	39Ø	327	63	TBU	390-327	—	16 AUG	AC	P / —	—	CHW
16 AUG	151Ø	Ø6	DL	S-9/RS-246	279	334	55	TBU	279-334	—	19 AUG	AC	P / —	—	CHW
16 AUG	16ØØ	Ø6	DL	S-8/RS-246	334	279	55	TBU	334-279	—	19 AUG	AC	P / —	—	CHW
17 AUG	Ø815	Ø6	DL	S-9/RS-246	334	364	3Ø	TBU	334-364	—	19 AUG	AC	P / —	—	CHW
					TOTAL (1)		602								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 2406 (ft)

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SHEET NO. 8 OF 26

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV

PROJECT NO.: GQ134 TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

YEAR: 2002

CONTRACTOR: ISTKE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
17 AUG	0845	06	DL	S-8/RS-246	364	334	30	TBW	364-334	—	19 AUG	AC	P	—	CHW
17 AUG	1000	06	DL	S-16/RS-250	121	77	44	TBW	121-77	—	19 AUG	AC	P	—	CHW
17 AUG	1040	06	DL	S-18/RS-250	77	121	44	TBW	77-121	—	19 AUG	AC	P	—	CHW
19 AUG	0930	06	DL	S-10/RS-257	36	6	30	TBW	36-6	—	19 AUG	AC	P	—	CHW
19 AUG	0945	06	DL	S-11/RS-257	6	36	30	TBW	6-36	—	19 AUG	AC	P	—	CHW
19 AUG	1015	06	DL	S-16/RS-258	5	30	25	TBW	5-30	—	19 AUG	AC	P	—	CHW
19 AUG	1040	06	DL	S-15/RS-268	5	30	25	TBW	5-30	—	19 AUG	AC	P	—	CHW
20 AUG	0840	03	JB	S-12/RS-275	274	374	100	TBW	—	CAPPED BY RS 397					CHW
[redacted]															
20 AUG	1030	03	JB	S-13/RS-275	274	316	42	TBW	—	CAPPED BY RS 397					CHW
20 AUG	1300	03	JB	S-13/RS-275	316	374	58	TBW	—	CAPPED BY RS 397					CHW
20 AUG	1400	06	DL	S-18/RS-276	0	57	57	TBW	0-57	—	21 AUG	AC	P	—	CHW
20 AUG	1430	06	DL	S-18/RS-277	65	77	12	TBW	65-77	—	21 AUG	AC	P	—	CHW
					TOTAL (1)		497								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 2903 (ft)

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SHEET NO. 9 OF 26

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV, CELLS 4 & 5

PROJECT NO.: GQ134 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (_±_psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
20 AUG	1440	06	DL	S-16/RS-277	77	65	12	TBY	77-65	—	21 AUG	AC	P / —	—	CHW
20 AUG	1450	06	DL	S-16/RS-276	0	57	57	TBY	0-57	—	21 AUG	AC	P / —	—	CHW
21 AUG	0950	06	DL	S-6/RS-249	0	69	69	TBY	0-69	—	25 AUG	AC	P / —	—	CHW
21 AUG	1030	06	DL	S-6/RS-249	0	69	69	TBY	0-69	—	25 AUG	AC	P / —	—	CHW
21 AUG	1330	06	DL	S-6/RS-249	69	256	187	TBY	69-256	—	25 AUG	AC	P / —	—	CHW
21 AUG	1530	06	DL	S-6/RS-249	256	69	187	TBY	256-69	—	25 AUG	AC	P / —	—	CHW
22 AUG	0845	06	DL	S21/RS-300	78	111	33	CHW	78-111	—	22 AUG	AC	P / —	—	CHW
22 AUG	0905	06	DL	S8/RS-300	111	78	33	CHW	111-78	—	22 AUG	AC	P / —	—	CHW
22 AUG	1305	06	DL	S-23/RS-301	0	22	22	TBY	0-22	—	22 AUG	AC	P / —	—	CHW
22 AUG	1320	06	DL	S-22/RS-301	22	0	22	TBY	22-0	—	22 AUG	AC	P / —	—	CHW
22 AUG	1345	03	JI	S-35/RCS Box	0	30	30	TBY	0-30	—	6 Sept	JH	P / —	—	CHW
22 AUG	1410	03	JI	S84/S85	41	54	13	CHW	41-54	—	6 Sept	JH	P / —	—	CHW
22 AUG	1420	03	JI	S-84/S-85 RCS BOX	0	30	30	TBY	0-30	—	6 Sept	JH	P / —	—	CHW
						TOTAL (1)	764								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 3667 (ft)

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SHEET NO. 10 OF 26

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF) (EXTRUSION)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cells 4 & 5

PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

YEAR: 2002

CONTRACTOR: ISTREC Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
22AUG	1435	03	JI	584 LDS Box	0	30	30	CHW	0-30	—	6 Sept	JH	P / —	—	CHW
23AUG	1000	03	RJ	56/RS249	329	297 ~~300~~	32 ~~29~~	CHW	297-329	—	25AUG	AC	P / —	—	CHW
23AUG	1105	06	DL	56/RS249	297	292	5	CHW	297-292	—	25AUG	AC	P / —	—	CHW
23AUG	1305	06	DL	56/RS249	292	256	36	CHW	292-256	—	25AUG	AC	P / —	—	CHW
23AUG	1305	03	RJ	54/RS249	256	302	46	CHW	256-302	—	25AUG	AC	P / —	—	CHW
23AUG	1300	03	RJ	54/RS249	302	311	9	CHW	302-311	—	25AUG	AC	P / —	—	CHW
23AUG	1340	03	RJ	55/RS249	311	316	5	CHW	311-316	—	25AUG	AC	P / —	—	CHW
23AUG	1345	03	RJ	54/RS324	0	22	22	TBW	0-22	—	25AUG	AC	P / —	—	CHW
23AUG	1355	03	RJ	5-5/RS324	22	0	22	TBW	22-0	—	25AUG	AC	P / —	—	CHW
23AUG	1505	06	DL	56/RS249	329	383	54	CHW	329-383	—	25AUG	AC	P / —	—	CHW
23AUG	1520	03	RJ	56/RS249	316	350	34	CHW	316-350	—	25AUG	AC	P / —	—	CHW
23AUG	1530	06	DL	55/RS249	383	350	33	CHW	383-350	—	25AUG	AC	P / —	—	CHW
24AUG	0850	06	DL	57/RS336	313	345	32	CHW	313-345	—	28AUG	AC	P / —	—	CHW
					TOTAL (1)		360								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 4027 (ft)

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SHEET NO. 11 OF 26

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cells 4 & 5 PROJECT NO.: G01341 TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (±psi for 5 min.)	VACUUM BOX (sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
24AUG	0910	03	RJ	S20/RS336	313	344	31	CHW	313-344	—	28AUG	AC	P	—	CHW
24AUG	0915	06	DL	S20/RS336	345	344	1	CHW	345-344	—	28AUG	AC	P	—	CHW
24AUG	1010	06	DL	S5/RS248 RS337	380	389	9	CHW	380-389	—	25AUG	AC	P	—	CHW
24AUG	1015	06	DL	S3/RS337	388	380	8	CHW	388-380	—	25AUG	AC	P	—	CHW
24AUG	1035	06	DL	RS338/RS248	389	383	6	CHW	389-383	—	25AUG	AC	P	—	CHW
24AUG	1040	06	DL	S6/RS338	389	374	15	CHW	389-374	—	25AUG	AC	P	—	CHW
24AUG	1050	06	DL	RS338/RS248	374	383	9	CHW	374-383	—	25AUG	AC	P	—	CHW
24AUG	1055	06	DL	S3/RS337	380	370	10	CHW	380-370	—	25AUG	AC	P	—	CHW
24AUG	1100	06	DL	RS337/RS248	370	380	10	CHW	370-380	—	25AUG	AC	P	—	CHW
24AUG	1305	06	DL	RS247/RS340	375	390	15	CHW	375-390	—	25AUG	AC	P	—	CHW
24AUG	1315	06	DL	S2/RS340	390	375	15	CHW	390-375	—	25AUG	AC	P	—	CHW
24AUG	1330	06	DL	RS242/RS342	326	338	12	CHW	326-338	—	27AUG	AC	P	—	CHW
24AUG	1340	06	DL	S5/RS342	338	315	23	CHW	338-315	—	27AUG	AC	P	—	CHW
				TOTAL (1)			164								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 4191 (ft)

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SHEET NO. 12 OF 26

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cells 4 & 5

PROJECT NO.: GQ1341 TASK NO.: 04J

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (±psi for 5 min.)	VACUUM BOX (sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
24AUG	1365	06	DL	S4 / RS342	315	319	4	CHW	315-319	—	27AUG	AC	P	—	CHW
24AUG	1425	03	RJ	RS248 / RS342	326	275	51	CHW	326-275	—	27AUG	AC	P	—	CHW
24AUG	1430	06	DL	S4 / RS342	319	280	39	CHW	319-280	—	27AUG	AC	P	—	CHW
24AUG	1500	03	RJ	RS245 / RS342	275	202	73	CHW	275-202	—	27AUG	AC	P	—	CHW
24AUG	1505	06	DL	S4 / RS342	280	194	86	CHW	280-194	—	27AUG	AC	P	—	CHW
24AUG	1615	03	RJ	RS248 / RS342	202	165	37	CHW	202-165	—	27AUG	AC	P	—	CHW
24AUG	1615	06	DL	S4 / RS342	194	~~214~~ 186	~~20~~ 8	CHW	194-186	—	27AUG	AC	P	—	CHW
25 Aug	1417	03	RJ	S-1 / 353 RS-348	322	360	38	JW	322-360	—	30 AUG	AC	P	—	CHW
25 Aug	1430	~~03~~ ~~RS-348~~	RJ	TIS-24 / 353 RS-348	360	348	12	JW	360-348	—	30AUG	AC	P	—	CHW
25 Aug	1443	06	DL	S-4 / 350 RS-349	140	115	25	JW	140-115	—	27AUG	AC	P	—	CHW
* 25 Aug	1450	03	RJ	TIS-25 / RS-353	348	332	16	JW	348-332	—	30AUG	AC	P	—	CHW
25 Aug	1500	03	RJ	S-1 / 353 RS-348	360	390	CHW 30 ~~60~~	JW	360-390	—	30AUG	AC	P	—	CHW
25 Aug	1458	06	DL	RS249 / RS-350	115	140	25	JW	115-140	—	27AUG	AC	P	—	CHW
					TOTAL (1)		444								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 4635 (ft)

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SHEET NO. 13 OF 26

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: 6Q1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV CELL 4+5 LINER

YEAR: 2002

PRIMARY: ☐ SECONDARY: ☒ OTHER: ☐

CONTRACTOR: ISTRE Co

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
25 Aug	1608	06	DL	RS-113 / RS352	4	18	14	JW	4-18	—	28 AUG	AC	P	—	CHW
25 Aug	1614	06	DL	S-1 / RJ 352	4	18	14	JW	4-18	—	28 AUG	AC	P	—	CHW
26AUG	0855	06	DL	S4 / R342	5	186	181	CHW	5-186	—	27 AUG	AC	P	—	CHW
26AUG	0940	03	JI	RS 248 / RS342	5	165	160	CHW	5-165	—	27 AUG	AC	P	—	CHW
26AUG	1320	06	DL	TI 526 / RS353	362	371	9	CHW	362-371	—	30 AUG	AC	P	—	CHW
26AUG	1330	06	DL	TI 527 / RS353	371	387	16	CHW	371-387	—	30 AUG	AC	P	—	CHW
26AUG	1505	03	JI	RS 340 / R249	302	315	13	CHW	302-315	—	29AUG	AC	P	—	CHW
26AUG	1510	03	JI	S-6 / RS340	315	302	13	CHW	315-302	—	29AUG	AC	P	—	CHW
26AUG	1625	03	JI	S85 / RS379	345	312	33	CHW	345-312	—	5Sept	JH	P	—	CHW
27AUG	0945	03	JI	S88 / RS379	345	312	33	CHW	345-312 ~~312-345~~	CHW	5Sept ~~29AUG~~	JH ~~AC~~	P ~~P~~	— ~~—~~	CHW ~~CHW~~
27AUG	1455	06	DL	S6/S7	0	5	5	CHW	0-5	—	3Sept	SSC	P	—	CHW
28AUG	0840	06	DL	S7/S20	6	0	6	CHW	0-6	—	30 AUG	AC	P	—	CHW
28AUG	1030	03	JI	S12 / RS397	386	350	36	CHW	386-350	—	30 AUG	AC	P	—	CHW
					TOTAL (1)		533								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 5168 (ft)

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SHEET NO. 14 OF 26

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF) (EXTRUSION)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell 4 & 5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (±psi for 5 min.)	VACUUM BOX (sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
28 Aug	1305	03	JI	512/RS397	350	273	77	CHW	350-273	—	30 AUG	AC	P	—	CHW
28 Aug	1345	03	JI	513/RS397	273	350	77	CHW	273-350	—	30 AUG	AC	P	—	CHW
28 Aug	1435	03	JI	513/RS397	350	386	36	CHW	350-386	—	30 AUG	AC	P	—	CHW
28 Aug	1520	03	JI	RS62/RS408	369	385	16	CHW	369-385	—	7 Sept	JH	P	—	CHW
28 Aug	1535	03	JI	514/RS408	385	369	16	CHW	369-385 CAPPED BY RS CHW		7 Sept	JH	P	—	CHW
28 Aug	1548	03	JI	521/RS409	332	376	44	CHW	376-332	—	30 AUG	AC	P	—	CHW
28 AUG	1610	03	JI	521/RS410	376	377	1	CHW	376-377	—	30 AUG	AC	P	—	CHW
28 AUG	1611	03	JI	526/RS410	377	391	14	CHW	377-391	—	30 AUG	AC	P	—	CHW
28 AUG	1705	03	JI	RS410/570	391	390	1	CHW	391-390	—	30 AUG	AC	P	—	CHW
28 AUG	1708	03	JI	58/RS410	390	381	9	CHW	390-381	—	30 AUG	AC	P	—	CHW
28 AUG	1715	03	JI	58/RS409	381	332	49	CHW	381-332	—	30 AUG	AC	P	—	CHW
ES 29 AUG	1100	03	JI	58/570	359	345	14	CHW	345-359	—	9 Sept	TS	P	—	CHW
IS 29 AUG	1120	03	JI	59/571	345	322	23	CHW	345-322	—	6 Sept	JH	P	—	CHW
					TOTAL (1)		377								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 5545 (ft)

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF) (EXTRUSION)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5

PROJECT NO.: G0134 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE Co.

	PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
	DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (_±_psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
IS	29AUG	1135	Ø3	JI	S10/572	313'	300	13'	CHW	300-313	—	6Sept	AG JH	P	—	CHW
IS	29AUG	1215	Ø3	JI	S10/S11/573	300	285	15'	CHW	285-300	—	7 Sept	JH	P	—	CHW
	29AUG	1410	Ø3	JI	RS249/RS431	300	254	46	CHW	300-254	—	29AUG	AC	P	—	CHW
	29AUG	1430	Ø3	JI	S4/RS431	254	300	46	CHW	254-300	—	29AUG	AC	P	—	CHW
IS	29AUG	1535	Ø3	JI	S3/569	46	62	16	CHW	46-62	—	3 Sept	SSC	P	—	CHW
IS	29AUG	1555	Ø3	JI	S5/581	69	72	3	CHW	69-72	—	3 Sept	SSC	P	—	CHW
IS	29AUG	1610	Ø3	JI	S6/581	74	79	5	CHW	74-79	—	3 Sept	SSC	P	—	CHW
IS	29AUG	1620	Ø3	JI	S5/581	79	86	7	CHW	79-86	—	3 Sept	SSC	P	—	CHW
IS	29AUG	1645	Ø3	JI	S6/582	86	96	10	CHW	86-96	—	3Sept	SSC	P	—	CHW
IS	30AUG	Ø930	Ø3	TS	S18/585	168	157	11	CHW	168-157	—	4Sept	SSC	P	—	CHW
	30AUG	Ø940	Ø3	TS	S18/S19	388	380	8	CHW	388-380	—	4Sept	SSC	P	—	CHW
IS	30AUG	Ø945	Ø3	TS	S18/585	157	151	6	CHW	157-151	—	4Sept	SSC	P	—	CHW
IS	30AUG	Ø955	Ø3	TS	S19/584	161	129	22	CHW	151-129	—	4Sept	SSC	P	—	CHW
						TOTAL (1)		208								

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase III Cell 4 & 5 (EXTRUSION)

PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

YEAR: 2002

CONTRACTOR: ISTRE CO.

	PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
	DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (±psi for 5 min.)	VACUUM BOX (sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
TIS	30AUG	1025	03	TS	57/583	129	108	21	CHW	108-129		3 Sept	SSC	P		CHW
TIS	30AUG	1110	03	TS	56/582	108	96	12	CHW	96-108		3 Sept	SSC	P		CHW
	3 Sept	0925	03	TS	510/511 573	285	280	5	CHW	280-285		7 Sept	JH	P		CHW
	3 Sept	0945	06	DL	58/379	312	237	75	CHW	312-237		5 Sept	JH	P		CHW
TIS	3 Sept	0935	03	TS	512/574	280	259	21	CHW	259-280		7 Sept	JH	P		CHW
TIS	3 Sept	0955	03	TS	513/575	255	253	6	CHW	259-253		7 Sept	JH	P		CHW
	3 Sept	1035	06	DL	588/379	237	295	58	CHW	237-295		5 Sept	JH	P		CHW
	3 Sept	1055	03	TS	513/575	253	235	18	CHW	235-253		7 Sept	JH	P		CHW
	3 Sept	1330	06	DL	588/379	295	312	17	CHW	312-295		5 Sept	JH	P		CHW
	3 Sept	1335	03	~~DL~~ TS	514/586	239	217	22	CHW	217-239		7 Sept	JH	P		CHW
TIS	3 Sept	1400	03	TS	515/587	217	200	17	CHW	200-217		6 Sept	JH	P		CHW
TIS	3 Sept	1500	03	TS	517/587	200	194	6	CHW		CAPPED BY	RS 508				CHW
TIS	3 Sept	1520	03	TS	517/588	194	177	17	CHW	194-177		4 Sept	JH	P		CHW
							TOTAL (1)	295								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 6048 (ft)

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SHEET NO. 17 OF 26

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell 4 & 5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (___psi for 5 min.)	VACUUM BOX (___sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
3 Sept	1600	03	TS	518/585	177	173	4	CHW	177-173	—	4 Sept	—	P	—	CHW
3 Sept	1605	03	TS	518/RS379	173	171	2	CHW	173-171	—	4 Sept	SSC	P	—	CHW
3 Sept	1610	03	TS	518/585	171	168	3	CHW	171-168	—	4 Sept	SSC	P	—	CHW
4 Sept	1320	06	DL	TIS-72/567	0	57	57	CHW	057	—	10 Sept	TS	P	—	CHW
4 Sept	1320	03	TS	TIS-35/567	338	318	20	CHW	- CAPPED BY RS 510						CHW
4 Sept	1340	03	TS	567/TIS-36	318	296	22	CHW	- CAPPED BY RS 510						CHW
4 Sept	1405	03	TS	567/TIS-37	296	276	20	CHW	- CAPPED BY RS 510						CHW
4 Sept	1415	06	DL	567/TIS-51	57	79	22	CHW	57-79	—	10 Sept	TS	P	—	CHW
4 Sept	1430	03	TS	567/TIS38	276	256	20	CHW	- CAPPED BY RS 510						CHW
4 Sept	1435	06	DL	567/TIS-50	79	102	23	CHW	79-102	—	10 Sept	TS	P	—	CHW
4 Sept	1455	06	DL	567/TIS-49	102	125	23	CHW	102-125	—	10 Sept	TS	P	—	CHW
4 Sept	1500	03	TS	567/TIS39	256	235	21	CHW	- CAPPED BY RS 510						CHW
4 Sept	1510	06	DL	567/TIS48	125	148	23	CHW	125-148	—	10 Sept	TS	P	—	CHW
					TOTAL (1)		260								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 6308 (ft)

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SHEET NO. 18 OF 26

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase II Cell 4 & 5

PROJECT NO.: G01341 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
4 Sept	1510	03	TS	567/TI 540	235	215	20	CHW	CAPPED BY RS 510						CHW
4 Sept	1520	06	DL	567/TI 547	148	171	23	CHW	148-171		10 Sept	TS	P / —		CHW
4 Sept	1540	06	DL	567/TI 541	194	200	6	CHW	194-200		10 Sept	JH	P / —		CHW
4 Sept	1600	06	DL	567/TI 542	171	194	23	CHW	171-194		10 Sept	TS	P / —		CHW
4 Sept	1630	03	TS	567/TI 541	215	200	15	CHW	CAPPED BY RS 510						CHW
5 Sept	0900	06	DL	586/RS 502	0	55	55	CHW	0-55		7 Sept	JH	P / —		CHW
5 Sept	0940	06	DL	575/RS502	0	85	85	CHW	0-85		7 Sept	JH	P / —		CHW
5 Sept	1330	06	DL	575/RS502	85	100	15	CHW	85-100		7 Sept	JH	P / —		CHW
5 Sept	1350	06	DL	586/RS502	100	55	45	CHW	100-55		7 Sept	JH	P / —		CHW
5 Sept	1625	06	DL	521/576	366	381	15	CHW	366-381		9 Sept	TS	P / —		CHW
5 Sept	1635	06	DL	523/576	381	388	7	CHW	381-388		9 Sept	TS	P / —		CHW
5 Sept	1640	06	DL	523/577	388	404	16	CHW	388-404		9 Sept	TS	P / —		CHW
						TOTAL (1)	325								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 6633 (ft)

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 041

DESCRIPTION: Phase IV Cell 4 & 5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
6 Sept	1315	06	DL	S18/RS 508	168	177	9	CHW	168-177	—	6 Sept	JH	P	—	CHW
6 Sept	1325	06	DL	S17/RS 508	177	199	22	CHW	177-199	—	6 Sept	JH	P	—	CHW
6 Sept	1345	06	DL	RS 475 / RS 508	199	202	3	CHW	199-202	—	6 Sept	JH	P	—	CHW
6 Sept	1350	06	DL	S15 / RS 508	202	204	2	CHW	202-204	—	6 Sept	JH	P	—	CHW
6 Sept	1355	06	DL	S87 / RS 508	204	194	10	CHW	204-194	—	6 Sept	JH	P	—	CHW
6 Sept	1415	06	DL	S88 / RS 508	194	~~172~~ 173	21	CHW	194-173	—	6 Sept	JH	P	—	CHW
6 Sept	1425	06	DL	RS 379 / RS 508	173	171	2	CHW	173-171	—	6 Sept	JH	P	—	CHW
6 Sept	1435	06	DL	S85 / RS 508	171	168	3	CHW	171-168	—	6 Sept	JH	P	—	CHW
6 Sept	1505	06	DL	TI S35 / RS 510	338	318	20	CHW	318-338	—	10 Sept	TS	P	—	CHW
6 Sept	1525	06	DL	TI S36 / RS 510	318	296	22	CHW	296-318	—	10 Sept	TS	P	—	CHW
6 Sept	1615	06	DL	TI S37 / RS 510	296	276	20	CHW	276-296	—	10 Sept	JH	P	—	CHW
6 Sept	1630	06	DL	TI S38 / RS 510	276	255	21	CHW	255-276	—	10 Sept	JH	P	—	CHW
6 Sept	1645	06	DL	TI S39 / RS 510	255	235	20	CHW	235-255	—	10 Sept	JH	P	—	CHW
						TOTAL (1)	~~178~~								

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NOTE: (1) SEAM LENGTH: THIS PAGE ~~176~~ 175 (ft) ACCUMULATED ~~6811~~ 6800 (ft)

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SHEET NO. 20 OF 26

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase II Cell 4 & 5 PROJECT NO.: GQ1341 TASK NO.: 04-1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (___psi for 5 min.)	VACUUM BOX (___sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
7 Sept	0915	06	DL	TJ540 RS510	235	216	19	CHW	216-235	—	10 Sept	JH	P / —	—	CHW
7 Sept	0930	06	DL	TJ541 RS510	216	200	16	CHW	200-216	—	10 Sept	JH	P / —	—	CHW
7 Sept	1005	06	DL	567 RS510	200	216	16	CHW	200-216	—	10 Sept	JH	P / —	—	CHW
7 Sept	1015	06	DL	567 RS510	216	235	23	CHW	216-235	—	10 Sept	JH	P / —	—	CHW
7 Sept	1023	06	DL	567 RS510	235	255	20	CHW	235-255	—	10 Sept	JH	P / —	—	CHW
7 Sept	1037	06	DL	567 RS510	255	278	23	CHW	~~CAPPED BY RS 512~~						CHW
7 Sept	1335	06	DL	567 RS510	278	338	60	CHW	278-286 / 286-338	CAPPED BY	10 Sept RS 512	JH	P / — / P / —	—	CHW / CHW
* 7 Sept	1600	06	DL	RS510 RS512	339	286	53	CHW	286-339	—	10 Sept	TS	P / —	—	CHW
8 Sept	1015	03	JI	S119 LDS	0	30	30	CHW	0-30	—	9 Sept	TS	P / —	—	CHW
8 Sept	1045	03	JI	S120 LCSR	0	15	15	CHW	0-15	—	9 Sept	TS	P / —	—	CHW
8 Sept	1100	03	JI	S119 LCSR	15	0	15	CHW	15-0	—	9 Sept	TS	P / —	—	CHW
8 Sept	1125	03	JI	S120 LCS	0	30	30	CHW	0-30	—	9 Sept	TS	P / —	—	CHW
8 Sept	1130	03	JI	S119 RS519	79	101	22	CHW	79-101	—	9 Sept	TS	P / —	—	CHW
					TOTAL (1)		395								

NOTE: (1) SEAM LENGTH: THIS PAGE

	SEAM NO.	BEGIN - END	ACT SEAM LENGTH	
* 7 Sept 1638 06 DL	567/RS512	286-339	53	VTOK 09 SEPT TS (PASS) CHW

(1) ACCUMULATED 7203 (1)

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SHEET NO. 21 OF 26

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase II Cell 4 & 5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (±psi for 5 min.)	VACUUM BOX (sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
8 Sept	1145	03	JI	520 RS519	101	79	22	CHW	101-79	—	9 Sept	JH	P / —	—	CHW
8 Sept	1220	06	DL	584 585	0	5	5	CHW	0-5	—	11 SEPT	JH	P / —	—	CHW
8 Sept	0910	03	JI	565 518	0	22	22	CHW	CAPPED BY RS 702	—				—	CHW
9 Sept	0925	03	JI	566 511	0	22	22	CHW	CAPPED BY RS 702	—				—	CHW
9 Sept	1445	06	DL	577 523	388 364	404 374	16	CHW	CAPPED BY RS 617 & RS 590	—				—	CHW
9 Sept	1500	06	DL	524 577	404 374	409 379	5	CHW	404-409	—	12 Sept	JH	P / —	—	CHW
9 Sept	1510	06	DL	524 578	409 379	428 398	19	CHW	409-428	—	12 Sept	TS	P / —	—	CHW
9 Sept	1530	06	DL	525 578	428 398	432 401	4	CHW	428-432	—	12 Sept	JS	P / —	—	CHW
9 Sept	1535	06	DL	525 579	432 401	451 421	19	CHW	432-451	—	12 Sept	TS	P / —	—	CHW
9 Sept	1555	06	DL	527 580	435 421	465 435	12	CHW	451-465	—	12 Sept	TS	P / —	—	CHW
9 Sept	1620	06	DL	527 516	465 435	471 444	6	CHW	465-471	—	12 Sept	TS	P / —	—	CHW
10 Sept	1020	06	DL	527 516	471 444	474 447	3	CHW	471-474	—	12 Sept	TS	P / —	—	CHW
10 Sept	1025	06	DL	528 516	474 447	486 457	12	CHW	474-486	—	12 Sept	TS	P / —	—	CHW
						TOTAL (1)	161								

NOTE: (1) SEAM LENGTH: THIS PAGE 161 (ft) ACCUMULATED 7370 (ft)

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SHEET NO. 22 OF 26

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase II Cell 4 & 5 PROJECT NO.: GQ1341 TASK NO.: 041

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__psi for 5 min.)	VACUUM BOX (__sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
10 Sept	1035	06	DL	528 / S117	486 / ~~457~~	496 / ~~467~~	10	CHW	486-496	—	12 Sept	JH	P / —	—	CHW
~~10 Sept~~	~~1100~~	~~06~~	~~DL~~	~~529 / S117~~	~~496 / 468~~	~~497 / 475~~	~~7~~	~~CHW~~							
10 Sept	1358	06	DL	576 / RS619	373	388	15	CHW	373-388	—	12 Sept	JH	P / —	—	CHW
10 Sept	1405	06	DL	577 / RS619	388	395	7	CHW	388-395	—	12 Sept	JH	P / —	—	CHW
10 Sept	1415	06	DL	521 / ~~RS619~~	366 / ~~373~~	373 / ~~379~~	7	CHW	366-373	—	12 Sept	JH	P / —	—	CHW
10 Sept	1420	06	DL	RS601 / RS619	379	382	3	CHW	379-382	—	12 Sept	TS	P / —	—	CHW
10 Sept	1425	06	DL	523 / RS619	382	404	22	CHW	382-404	—	12 Sept	TS	P / —	—	CHW
10 Sept	1432	06	DL	577 / RS619	395	404	9	CHW	395-404	—	12 Sept	TS	P / —	—	CHW
10 Sept	1440	06	DL	529 / S117	496 / ~~475~~	507 / ~~477~~	11	CHW	496-507	—	12 Sept	JH	P / —	—	CHW
10 Sept	1445	06	DL	529 / S118	507 / ~~477~~	509 / ~~481~~	2	CHW	507-509	—	12 Sept	TS	P / —	—	CHW
~~10 Sept~~	~~1455~~	~~06~~	~~DL~~	~~530 / S118~~	~~481~~	~~489~~	~~8~~	~~CHW~~							
10 Sept	1510	06	DL	530 / S118	509 / ~~487~~	529 / ~~509~~	20	CHW	509-529	—	12 Sept	TS	P / —	—	CHW
10 Sept	1525	06	DL	530 / S119	529 / ~~509~~	533 / ~~505~~	14	CHW	529-533	—	12 Sept	TS	P / —	—	CHW
					TOTAL (1)		110								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 7480 (ft)

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SHEET NO. 23 OF 26

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV

PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ☒ OTHER: ☐

YEAR: 2002

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
10Sept	1535	Ø6	DL	564/S119	~~533~~ ~~505~~	~~543~~ 543 ~~527~~	10 ~~8~~	CHW	533-543	—	12 Sept	TS	P / —	—	CHW
10Sept	1540	Ø6	DL	563/S119	543 ~~514~~	551 ~~522~~	8	CHW	543-551	—	12 Sept	JH	P / —	—	CHW
10Sept	1610	Ø6	DL	563/S120	551 ~~522~~	565 ~~536~~	14	CHW	551-565	—	12 Sept	TS	P / —	—	CHW
~~11Sept~~	~~0917~~	~~Ø6~~	~~DL~~	~~562/S120~~	~~536~~	~~565 614~~	~~8~~	~~CHW~~							
11Sept	0925	Ø6	DL	~~562~~ S120	565	573	8	CHW	565-573	—	13 Sept	TS	P / —	—	CHW
11Sept	0940	Ø6	DL	562/S121	573	587	14	CHW	573-587	—	13 Sept	JH	P / —	—	CHW
11Sept	0950	Ø6	DL	561/S121	587	595	8	CHW	587-595	—	13 Sept	TS	P / —	—	CHW
11Sept	1000	Ø6	DL	561/S122	595	609	14	CHW	609-~~614~~ 595	—	13 Sept	TS	P / —	—	CHW
11Sept	1015	Ø6	DL	560/S122	609	617	8	CHW	609-617	—	13 Sept	TS	P / —	—	CHW
11Sept	1028	Ø6	DL	S122/RS664	346	361	15	CHW	346-361	—	13 Sept	JH	P / —	—	CHW
11Sept	1040	Ø6	DL	S123/RS664	361	346	15	CHW	361-346	—	13 Sept	TS	P / —	—	CHW
11Sept	1049	Ø6	DL	560/S123	617	631	14	CHW	617-631	—	13 Sept	TS	P / —	—	CHW
11Sept	1059	Ø6	DL	559/S123	631	639	8	CHW	631-639	—	13 Sept	TS	P / —	—	CHW
					TOTAL (1)		136								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 7616 (ft)

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SHEET NO. 24 OF 26

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5 PROJECT NO.: G0134 TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
11 Sept	1105	Ø6	DL	555/5115	639	652	13	CHW	639-652	—	~~Ø14~~ 13 Sept	JH	P / —	—	CHW
11 Sept	1300	Ø6	DL	558/5114	652	675	23	CHW	652-675	—	13 Sept	TS	P / —	—	CHW
11 Sept	1340	Ø6	DL	557/5113	675	696	21	CHW	675-696	—	13 Sept	JH	P / —	—	CHW
11 Sept	1410	Ø6	DL	556/5112	696	718	22	CHW	696-718	—	13 Sept	JH	P / —	—	CHW
~~13 Sept~~	~~1440~~	~~Ø6~~	~~DL~~	~~5702/5727~~	~~0~~	~~22~~	~~22~~	~~CHW~~							
12 Sept	1510	Ø3	DL	5110/5702	0	22	22	CHW	Ø-22	—	CAPPED BY	RS727	P / —	—	CHW
12 Sept	1525	Ø3	DL	5111/5702	0	22	22	CHW	Ø-22	—	CAPPED BY	RS727	P / —	—	CHW
12 Sept	1535	Ø3	DL	566/5702	0	22	22	CHW	Ø-22	—	CAPPED BY	RS727	P / —	—	CHW
12 Sept	1545	Ø3	DL	565/5702	0	22	22	CHW	Ø-22	—	CAPPED BY	RS727	— / —	—	CHW
13 Sept	1440	Ø3	DL	5702/5727	0	~~44~~	~~44~~	CHW	Ø-44	—	14 SEPT	JH	P / —	—	CHW
13 Sept	1457	Ø3	DL	5727/5110	0	22	22	CHW	Ø-22	—	14 SEPT	JH	P / —	—	CHW
13 Sept	1522	Ø3	DL	5111/5727	0	22	22	CHW	Ø-22	—	14 SEPT	JH	P / —	—	CHW
13 Sept	1548	Ø3	DL	5702/5727	0	44	44	CHW	Ø-44	—	14 SEPT	JH	P / —	—	CHW
					TOTAL (1)		299								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 7915 (ft)

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SHEET NO. 25 OF 26

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG (EXTRUSION)

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5

PROJECT NO.: G01341 TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

YEAR: 2002

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (___± ___psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
13 Sept	1622	03	DL	5110/5727	0	22	22	CHW	0-22	—	14 SEPT	JH	P	—	CHW
13 Sept	1650	03	DL	5111/5727	0	22	22	CHW	0-22	—	14 SEPT	JH	P	—	CHW
				TOTAL (1)			44								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 7959 (ft)

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SHEET NO. 26 OF 26

Primary

Fusion

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5

PROJECT NO.: GQ1341 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
11 Sept	1615	09	DW	P1/TIP6	7	68	61	CHW	7-68	32/30 0843-0848		HW 12 Sept	P		CHW
11 Sept	1635	09	DW	P1/TIP2	68	75	75	CHW	68-75	30/28 0955-1000		HW 12 Sept	P		CHW
11 Sept	1638	09	DW	P1/TIP3	75	98	23	CHW	75-98	33/32 1010-1015		HW 12 Sept	P		CHW
11 Sept	1648	09	DW	P1/TIP4	98	122	24	CHW	98-122	32/30 1000-1005 33/31 1010-1015		HW 12 Sept HW 12 Sept	P P		CHW
11 Sept	1659	09	DW	P1/TIP5	122	144	22	CHW	122-144	33/33 1000-1005		HW 12 Sept	P		CHW
11 Sept	1710	09	DW	P1/TIP10	144	168	24	CHW	144-168	29/26 1315-1320		HW 12 Sept	P		CHW
11 Sept	1720	09	DW	P1/TIP11	168	192	24	CHW	168-192	31/30 1325-1330 29/29 1315-1320		HW 12 Sept HW 12 Sept	P P		CHW
11 Sept	1740	09	DW	P1/TIP12	192	214	22	CHW	192-214	32/32 1325-1330 30/28 1555-1600		HW 12 Sept HW 12 Sept	P P		CHW
11 Sept	1750	09	DW	P1/TIP13	214	237	23	CHW	214-237	34/32 1555-1600		HW 12 Sept	P		CHW
11 Sept	1800	09	DW	P1/TIP14	237	261	24	CHW	237-261	29/28 1610-1615		HW 12 Sept	P		CHW
11 Sept	1807	09	DW	P1/TIP15	261	281	20	CHW	261-281	34/32 1610-1615		HW 12 Sept	P		CHW
11 Sept	1816	09	DW	P1/TIP16	281	304	23	CHW	281-304	29/27 1617-1622		HW 12 Sept	P		CHW
11 Sept	1824	09	DW	P1/TIP17	304	328	24	CHW	304-328	31/31 1617-1622		HW 12 Sept	P		CHW
					TOTAL (1)		~~382~~ 321								

NOTE: (1) SEAM LENGTH: THIS PAGE 321 (ft) ACCUMULATED ~~382~~ 321 (ft)

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SHEET NO. 1 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5 PROJECT NO.: GQ1341 TASK NO.: 04-1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
11 Sept	1832	Ø9	DW	P1/TIP18	328	350	22	CHW	328-350	29/28 1625-1630		HW 12 Sept	P / —		CHW
11 Sept	1841	Ø9	DW	P1/TIP19	350	374	24	CHW	350-374	32/30 1625-1630		HW 12 Sept	P / —		CHW
11 Sept	1850	Ø9	DW	P1/TIP20	374	388	14	CHW	374-388	29/28 1705-1710		HW 12 Sept	P / —		CHW
11 Sept	1857	Ø9	DW	P1/P2	4	387	383	CHW	4-387	33/32 1435-1440		HW 11 Sept	P / —		CHW
12 Sept	1000	Ø9	DW	P2/P3	Ø	391	391	CHW	Ø-391	33/33 1430-1435		HW 12 Sept	P / —		CHW
12 Sept	1300	Ø9	DW	P3/P4	Ø	386	386	CHW	0-386	31/31 1705-1710		HW 12 Sept	P / —		CHW
12 Sept	1425	11	SSC	P4/P5	Ø	385	385	CHW	0-182 182-385	33/32 1742-1747 33/33 1742-1747		HW 12 Sept HW 12 Sept	P / — P / —		CHW
12 Sept	1617	Ø9	DW	P5/P6	Ø	385	385	CHW	Ø-385	31/30 1350-1355		HW 13 Sept	P / —		CHW
12 Sept	1649	11	SSC	P6/P7	Ø	385	385	CHW	Ø-107 107-385	29/27 1325-1330 34/34 1350-1355		HW 13 Sept HW 13 Sept	P / — P / —		CHW
13 Sept	1305	11	SSC	P7/P8	Ø	388	388	CHW	Ø-388	31/31 1638-1643		HW 13 Sept	P / —		CHW
13 Sept	1315	Ø9	DW	P8/P9	402	Ø	402	CHW	Ø-402	33/33 1638-1643		HW 13 Sept	P / —		CHW
13 Sept	1446	11	SSC	P9/P10	402	Ø	402	CHW	Ø-402	34/33 1700-1705		HW 13 Sept	P / —		CHW
13 Sept	1505	Ø9	DW	P10/P11	402	Ø	402	CHW	Ø-402	34/33 1700-1705		HW 13 Sept	P / —		CHW
						TOTAL (1)	~~3567~~ 3969								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED ~~3888~~ 4290 (ft)

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

CONTRACTOR: Istre Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
13 Sept	1745	11	JI	P11/P12	400	0	400	CHW	0-400	31/31 1510-1515	—	HW 14 Sept	P	—	CHW
13 Sept	1735	09	DW	P12/P13	402	0	402	CHW	58-402	31/29 1610-1615	—	HW 16 Sept	P	—	
									0-58	31/30 1522-1527		HW 16 Sept	P	—	CHW
14 Sept	1335	11	SSC	P13/P14	390	0	390	CHW	0-390	32/32 1520-1525	—	HW 14 Sept	P	—	CHW
14 Sept	1415	09	DW	P14/P15	398	0	398	CHW	0-398	29/27 1625-1630	—	HW 16 Sept	P	—	CHW
16 Sept	1111	11	SSC	P15/P16	396	0	396	CHW	0-275	33/33 1731-1736	—	HW 16 Sept	P	—	
									275-396	28/26 1710-1715		HW 16 Sept	P	—	CHW
16 Sept	1340	09	DW	P8/RP-31	388	0	388	CHW	0-388	31/31 9:55-1000	—	HW 17 Sept	P	—	CHW
16 Sept	1500	11	SSC	P16/P17	400	0	400	CHW	0-400	35/34 1820-1825	—	HW 16 Sept	P	—	CHW
16 Sept	1600	09	DW	P7/RP31	0	388	388	CHW	0-388	30/28 1000-1005	—	HW 17 Sept	P	—	CHW
16 Sept	1800	09	DW	P18/P19	0	399	399	CHW	0-399	34/32 1325-1330	—	HW 17 Sept	P	—	CHW
16 Sept	1702	11	SSC	P17/P18	0	398	398	CHW	0-398	27/26 1330-1335	—	HW 17 Sept	P	—	CHW
17 Sept	0922	11	SSC	P19/P20	0	400	400	CHW	0-400	28/26 1420-1425	—	HW 17 Sept	P	—	CHW
17 Sept	0947	09	DW	P20/P21	0	400	400	CHW	0-400	34/33 1420-1425	—	HW 17 Sept	P	—	CHW
17 Sept	1135	11	SSC	P21/P22	0	399	399	CHW	0-399	33/32 1452-1457	—	HW 17 Sept	P	—	CHW
					TOTAL (1)		5158								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED ~~9046~~ 9448 CHW (ft)

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SHEET NO. 3 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (1)	QA ID	LOCATION (1)	AIR PRESSURE (±psi for 5 min.)	VACUUM BOX (sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
17Sept	1157	09	DW	P22/P23	5	402	397	CHW	5-402	32/31 1520-1525		HW 17Sept	P	—	CHW
17Sept	1355	11	SSC	P23/P24	4	399	395	CHW	4-399	34/34 0900-0905		HW 18 Sept	P	—	CHW
17Sept	1430	09	DW	P24/P25	0	392 ~~399~~	392 ~~399~~	CHW	0-392	32/32 0900-0905		HW 18Sept	P	—	CHW
17Sept	1645	11	SSC	P25/26	0	392	392	CHW	0-392	32/32 0930-0935		HW 18 Sept	P	—	CHW
17Sept	1559	09	DW	P26/P27	401	0	401	CHW	0-401	32/32 0930-0935		HW 18Sept	P	—	CHW
1/23 18Sept	0927	09	DW	P27/P28	401	0	401	CHW	~~0-146~~ 0-401	3 35/35 0850-0855		HW 19 Sept	P	—	CHW
18Sept	1034	11	SSC	P28/P29	400	0	400	CHW	0-400	35/35 0850-0855		HW 19Sept	P	—	CHW
18Sept	1132	09	DW	P29/P30	398	0	398	CHW	0-398	32/32 0927-0932		HW 19Sept	P	—	CHW
18Sept	1421	11	SSC	P30/P31	400	0	400	CHW	0-400	32/32 0927-0932		HW 19Sept	P	—	CHW
1/26 18Sept	1555	09	DW	P31/P32	400	0	400	CHW	0-146 146-400	32/32 1027-1032 32/31 1027-1032		HW 19Sept HW 19 Sept	P	—	CHW
19Sept	0946	09	DW	P33/P34	0	132	132	CHW	0-132	33/32 1335-1340		HW 19Sept	P	—	CHW
19Sept	1011	11	SSC	P34/P35	0	129	129	CHW	0-129	35/35 1353-1358		HW 19Sept	P	—	CHW
19Sept	1048	09	DW	P35/P36	0	129	129	CHW	0-129	35/35 1357-1402		HW 19Sept	P	—	CHW
						TOTAL (1)	4366								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (11) ACCUMULATED ~~13412~~ CHW 13814 (11)

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©GEOSYNTEC CONSULTANTS FILE NO. 3-07-SSL REVIEWED BY: TBH

SHEET NO. 4 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5

PROJECT NO.: 601341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

YEAR: 2002

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
19 Sept	1118	11	SSC	P36/P37	Ø	133	133	CHW	Ø-133	30/30 1413-1418		HW 19 Sept	P		CHW
19 Sept	1121	Ø9	DW	P37/P38	Ø	132	132	CHW	Ø-132	33/32 1420-1425		HW 19 Sept	P		CHW
19 Sept	1159	Ø9	DW	P38/P39	Ø	129	129	CHW	Ø-129	30/29 1453-1458		HW 19 Sept	P		CHW
19 Sept	1337	11	SSC	P39/P40	Ø	132	132	CHW	Ø-132	30/29 1453-1458		HW 19 Sept	P		CHW
19 Sept	1351	Ø9	DW	P40/P41	Ø	131	131	CHW	Ø-131	32/32 1127-1132		HW 19 Sept	P		CHW
19 Sept	1422	Ø9	DW	P41/P42	Ø	131	131	CHW	Ø-131	30/29 1145-1150		HW 19 Sept	P		CHW
19 Sept	1455	Ø9	DW	P42/P43	Ø	131	131	CHW	Ø-131	32/32 1146-1151		HW 19 Sept	P		CHW
✓ 23 Sept	1050	Ø9	DW	P44/P45	Ø	131	131	CHW	Ø-131	33/32 1510/1515		HW 23 Sept	P		CHW
✓ 23 Sept	1058	11	SSC	P45/P46	Ø	132	132	CHW	Ø-132	32/31 1515/1520		HW 23 Sept	P		CHW
✓ 23 Sept	1310	Ø9	DW	P43/P44	Ø	131	131	CHW	Ø-131	30/30 1505/1510		HW 23 Sept	P		CHW
✓ 23 Sept	1310	11	SSC	P46/P47	Ø	132	132	CHW	Ø-132	30/30 1515/1520		HW 23 Sept	P		CHW
23 Sept	1439	11	SSC	P33/P48	~~36~~ ~~Ø~~	~~96~~ 131	~~95~~ 95	CHW	36-131	33/32 1727/1732		HW 24 Sept	P		CHW
23 Sept	1442	Ø9	DW	P48/P49	Ø	61	61	CHW	Ø-61	30/30 1735/1740		HW 24 Sept	P		CHW
						TOTAL (1)	1601								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED ~~15013~~ CHW 15415 (ft)

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SHEET NO. 5 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase II Cell #4 & #5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
23 Sept	1507	09	DW	P50/P51	0	78	78	CHW	0-78	31/31 1832-1837		HW 23 Sept	P	—	CHW
23 Sept	1518	11	SSC	P51/P52	0	64	64	CHW	0-64	31/30 1820-1825		HW 23 Sept	P	—	CHW
23 Sept	1520	09	DW	P52/P53	0	47	47	CHW	0-47	31/31 1820-1825		HW 23 Sept	P	—	CHW
23 Sept	1542	11	SSC	P53/P54	0	46	46	CHW	0-46	30/29 1800-1805		HW 23 Sept	P	—	CHW
23 Sept	1543	09	DW	P54/P55	52	0	52	CHW	0-52	31/30 1800-1805		HW 23 Sept	P	—	CHW
23 Sept	1730	11	SSC	P32/P56	388	200	188	CHW	388-200	30/30 1507-1512		HW 24 Sept	P	—	CHW
23 Sept	1755	09	DW	P33/P56	200	0	200	CHW	200-0	32/31 1507-1512		HW 24 Sept	P	—	CHW
24 Sept	0958	11	SSC	P47/P56	388	367	21	CHW	367-388	32/32 1345-1350		HW 25 Sept	P	—	CHW
24 Sept	1003	11	SSC	P46/P56	367	345	22	CHW	367-345	30/30 1345-1350		HW 25 Sept	P	—	CHW
24 Sept	1008	11	SSC	P45/P56	345	323	22	CHW	323-345	27/27 1330-1335		HW 25 Sept	P	—	CHW
24 Sept	1013	11	SSC	P44/P56	323	301	22	CHW	323-301	31/30 1330-1335		HW 25 Sept	P	—	CHW
24 Sept	1020	11	SSC	P43/P56	301	279	22	CHW	279-301	32/31 1110-1115		HW 25 Sept	P	—	CHW
24 Sept	1027	11	SSC	P42/P56	279	257	22	CHW	279-257	30/30 1107-1112		HW 25 Sept	P	—	CHW
					TOTAL (1)		806								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED ~~15819~~ CHW 16221 (ft)

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SHEET NO. 6 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5

PROJECT NO.: G01341 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
24Sept	1034	11	SSC	P41/P56	257	235	22	CHW	235-257	34/34 1040-1045	—	HW 25Sept	P —	—	CHW
24Sept	1041	11	SSC	P40/P56	235	213	22	CHW	213-235	33/32 1040-1045	—	HW 25Sept	P —	—	CHW
24Sept	1048	11	SSC	P39/P56	213	191	22	CHW	191-213	32/31 1025-1030 29/29 1025-1030	—	HW 25Sept	P —	—	CHW
24Sept	1055	11	SSC	P38/P56	191	169	22	CHW	169-191	30/29 0950-0955	—	HW 24Sept	P —	—	CHW
24Sept	1102	11	SSC	P37/P56	169	147	22	CHW	147-169	33/33 0950-0955	—	HW 24Sept	P —	—	CHW
24Sept	1109	11	SSC	P36/P56	147	125	22	CHW	147-125	31/30 1420-1425	—	HW 24Sept	P —	—	CHW
24Sept	1116	11	SSC	P35/P56	125	103	22	CHW	103-125	32/32 0930-0935	—	HW 24Sept	P —	—	CHW
24Sept	1123	11	SSC	P34/P56	103	81	22	CHW	81-103	31/31 0930-0935	—	HW 24Sept	P —	—	CHW
24Sept	1130	11	SSC	P33/P56	81	59	22	CHW	81-59	31/30 1727-1732	—	HW 24Sept	P —	—	CHW
24Sept	1145	09	DW	P57/P58	0	47	47	CHW	48-119 119-0-48	34/33 1440-1445 Copied by RP 180	—	HW 24Sept	P —	—	CHW
24Sept	1210	09	DW	P57/P58	379	47	332	CHW	47-119 119-379	31/30 1440-1445 32/31 1455-1500	—	HW 24Sept	P —	—	CHW
24Sept	1332	09	DW	P58/P59	379	0	379	CHW	0-379	32/32 1435-1440	—	HW 1OCT	P —	—	CHW
24Sept	1334	11	SSC	P48/P51	0	14	14	CHW	0-14	33/33 1800-1805	—	HW 24Sept	P —	—	CHW
						TOTAL (1)	978								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED ~~16789~~ CHW 17191 (ft)

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SHEET NO. 7 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5

PROJECT NO.: GQ1341 TASK NO.: 041

YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (1)	QA ID	LOCATION (1)	AIR PRESSURE (__/__ psi for 5 min.)	VACUUM BOX (____ sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
24Sept	1340	11	SSC	P48/P52	14	34	20	CHW	14-34	33/32 1800-1805	—	HW 24Sept	P / —	—	CHW
24Sept	1349	11	SSC	P49/P52	34	44	10	CHW	34-44	33/31 1751-1756	—	HW 24Sept	P / —	—	CHW
24Sept	1358	11	SSC	P49/P53	44	71	27	CHW	44-71	33/33 1743-1748 32/31 1751-1756	—	HW 24Sept	P / —	—	CHW
24Sept	1409	11	SSC	P49/P54	71	100	29	CHW	71-100	32/31 1735-1740 32/31 1743-1748	—	HW 24Sept	P / —	—	CHW
24Sept	1419	11	SSC	P48/P55	100	129	29	CHW	100-129	31/30 1720-1725	—	HW 24Sept	P / —	—	CHW
24Sept	1427	11	SSC	P55/P56	63	0	63	CHW	0-63	30/30 1720-1725	—	HW 24Sept	P / —	—	CHW
24Sept	1533	09	DW	P59/P60	376	0	376	CHW	0-376	32/32 1415-1420	—	HW 1 OCT	P / —	—	CHW
24Sept	1624	11	SSC	P60/P61	379	0	379	CHW	0-379	32/31 1415-1420	—	HW 1 OCT	P / —	—	CHW
.2 24Sept	1709	09	DW	P61/P62	381	0	381	CHW	0-381	33/33 1445-1450	—	HW 1 OCT	P / —	—	CHW
* 24Sept	1755	11	SSC	P62/P63	381	0	381	CHW	0-212 212-381	33/32 1355-1400 31/31 1355-1400	—	HW 1 OCT	P / —	—	CHW
24Sept	1805	09	DW	P33/P50	0	22	22	CHW	0-22	33/32 1808-1813	—	HW 24Sept	P / —	—	CHW
24Sept	1810	09	DW	P33/P51	22	34	12	CHW	22-34	33/33 1808-1813	—	HW 24Sept	P / —	—	CHW
* 25Sept	0955	09	DW	P63/P64	379	~~0~~ ~~379~~	379	CHW	0-379	34/34 1145-1150	—	HW 1 OCT	P / —	—	CHW
						TOTAL (1)	2108								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (1) ACCUMULATED ~~18897~~ CHW 19299 (1)

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase III Cell #4 and #5

PROJECT NO.: GQ1341 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

CONTRACTOR: ISTRE Co.

	PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
	DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (___psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
*	25 Sept	1045	11	SSC	P64/P65	Ø	379	379	CHW	0-379	32/32 1140-1145		HW 1OCT	P		CHW
*	25 Sept	1124	09	DW	P65/P66	Ø	382	382	CHW	0-382	30/29 1140-1145		HW 1OCT	P		CHW
	25 Sept	1444	11	SSC	P66/P67	Ø	381	381	CHW	0-381	32/31 1110-1115		HW 1OCT	P		CHW
	25 Sept	1423	Ø9	DW	P67/P68	Ø	381	381	CHW	0-381	33/33 1110-1115		HW 1OCT	P		CHW
*	25 Sept	1620	#10	JI	P68/P69	Ø	171 ~~383~~	171 ~~383~~	CHW	0-50 50-171	33/31 1030-1035 32/31 1030-1035		HW 1OCT HW 1OCT	P		CHW
*	25 Sept	1602	Ø9	DW	P69/P70	Ø	384	384	CHW	0-75 75-384	32/31 0935-0940 34/33 1010-1015		HW 1OCT HW 1OCT	P P		CHW
*	25 Sept	1630	11	SSC	P70/P71	Ø	383	383	CHW	0-175 175-383	31/30 0945-0950 31/31 0945-0950		HW 1OCT	P		CHW
*	25 Sept	1735	Ø9	DW	P68/P69	171	383	212	CHW	171-383	30/29 1020-1025		HW 1OCT	P		CHW
	26 Sept	Ø73Ø	11	SSC	P71/P72	Ø	371	371	CHW	Ø-371	31/30 0935-0940		HW 1OCT	P		CHW
*	26 Sept	Ø73Ø	Ø9	DW/JI	P72/Ø73	Ø	377	377	CHW	0-87 87-377	31/30 0925-0930 30/30 0925-0930		HW 1OCT	P		CHW
1/45	30 Sept	1428	11	SSC	P73/P74	376	Ø	376	CHW	0-79 79-376	30/29 0915-0920 32/31 0915-0920		HW 1OCT HW 1OCT	P		CHW
	30 Sept	1516	Ø9	DW	P74/P75	376	Ø	376	CHW	Ø-376	30/29 1529-1534		HW 8OCT	P		CHW
	30 Sept	1635	11	SSC	P75/P76	375	Ø	375	CHW	0-100 100-375	33/32 1413-1418 32/32 1526-1536		HW 8OCT	P		CHW
							TOTAL (1)	4548								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED ~~23445~~ 23847 CHW (ft)

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SHEET NO. 9 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5

PROJECT NO.: GQ1341 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
30 Sept	1652	09	DW	P76/P77	375	0	375	CHW	0-275 275-375	33/33 1455-1500 32/32 1455-1500	—	HW 8 OCT	P	—	CHW
1 Oct	1003	09	DW	P47/P78	0	128	128	CHW	0-128	31/31 1045-1050	—	HW 8 OCT	P	—	CHW
1 Oct	1035	09	DW	P78/P79	0	134	134	CHW	0-134	32/32 1045-1050	—	HW 8 OCT	P	—	CHW
1 Oct	1114	09	DW	P80/P81	0	22	22	CHW	0-22	34/33 1010-1015	—	HW 8 OCT	P	—	CHW
1 Oct	1121	09	DW	P79/P81	0	17	17	CHW	0-17	30/30 1015-1020	—	HW 8 OCT	P	—	CHW
1 Oct	1126	09	DW	P79/P80	17	137	120	CHW	17-137	31/30 1025-1030	—	HW 8 OCT	P	—	CHW
1 Oct	1342	11	SSC	P57/IIP20	374	353	21	CHW	353-374	34/33 1052-1057	—	HW 8 OCT	P	—	CHW
1 Oct	1350	11	SSC	P57/IIP38	353	330	23	CHW	330-353	30/29 1052-1057	—	HW 8 OCT	P	—	CHW
1 Oct	1357	11	SSC	P57/IIP39	330	307	23	CHW	307-330	33/32 1039-1044	—	HW 8 OCT	P	—	CHW
1 Oct	1405	11	SSC	P57/IIP40	307	284	23	CHW	307-284	34/33 1039-1044	—	HW 8 OCT	P	—	CHW
1 Oct	1413	11	SSC	P57/IIP41	284	261	23	CHW	261-284	28/27 1020-1025	—	HW 8 OCT	P	—	CHW
1 Oct	1420	11	SSC	P57/IIP42	261	237	24	CHW	237-261	32/31 1020-1025	—	HW 8 OCT	P	—	CHW
1 Oct	1428	11	SSC	P57/IIP43	237	214	23	CHW	214-237	33/33 0945-0950	—	HW 8 OCT	P	—	CHW
					TOTAL (1)		956								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED ~~24401~~ CHW (ft) 24803

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SHEET NO. 10 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: GQ1341 TASK NO.: 04-1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (1)	QA ID	LOCATION (1)	AIR PRESSURE (_±_psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
1 OCT	1435	11	SSC	P57/TIP44	214	191	23	CHW	191-214	35/34 0945-0950		HW 8 OCT	P		CHW
1 OCT	1443	11	SSC	P57/TIP45	191	168	23	CHW	191-168	35/34 0930-0935		HW 8 OCT	P		CHW
1 OCT	1451	11	SSC	P57/TIP46	168	145	23	CHW	145-168	29/28 0930-0935		HW 8 OCT	P		CHW
1 OCT	1459	11	SSC	P57/TIP47	145	122	23	CHW	122-145	33/33 0915-0920		HW 8 OCT	P		CHW
1 OCT	1506	11	SSC	P57/TIP48	122	99	23	CHW	99-122	33/32 0915-0920		HW 8 OCT	P		CHW
1 OCT	1514	11	SSC	P57/TIP49	99	76	23	CHW	76-99	31/30 0905-0910		HW 8 OCT	P		CHW
1 OCT	1522	11	SSC	P57/TIP62	76	64	12	CHW	64-~~72~~76	32/32 0905-0910		HW 8 OCT	P		CHW
✓ 1 OCT	1342	09	DW	P81/P82	0	22	22	CHW	0-22	32/32 1005-1010		HW 9 OCT	P		CHW
✓ 1 OCT	1349	09	DW	P80/P82	22	143	121	CHW	22-143	31/30 0935-0940		HW 9 OCT	P		CHW
✓ 1 OCT	1420	09	DW	P82/P83	0	140	140	CHW	0-140	33/33 0935-0940		HW 9 OCT	P		CHW
* 1 OCT	1506	09	DW	P83/P84	0	137	137	CHW	0-137	34/34 0915-0920		HW 9 OCT	P		CHW
✓ 1 OCT	1538	09	DW	P84/P85	0	22	22	CHW	0-22	29/28 0850-0855		HW 9 OCT	P		CHW
1 OCT	1459	09	DW P80	P85	0	22	22	CHW	0-22	32/31 0850-0855		HW 9 OCT	P		CHW
					TOTAL (1)		614								

NOTE: (1) SEAM LENGTH: THIS PAGE

534 * P83/P85 - 09 DW 1 OCT 0-20 - 0-20 32/31 0850-0855 HW 8 OCT CHW

(1) ACCUMULATED ~~25015~~ CHW (1) 25417

0312

4943

©GEOSYNTEC CONSULTANTS FILE NO. 3-07-SSL REVIEWED BY: TBP

SHEET NO. 11 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase II Cell #4 & #5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (1)	QA ID	LOCATION (1)	AIR PRESSURE (±psi for 5 min.)	VACUUM BOX (sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
1 OCT	1543	Ø9	DW	P84/P86	22	137	115	CHW	22-137	30/29 0915-0920	—	HW 9 OCT	P / —	—	CHW
1 OCT	1616	Ø9	DW	P86/P87	Ø	139	139	CHW	0-139	33/33 1515-1520	—	HW 9 OCT	P / —	—	CHW
1 OCT	1656	Ø9	DW	P87/P89	0	12	12	CHW	Ø-12	32/31 1535-1540	—	HW 9 OCT	P / —	—	CHW
1 OCT	1648	Ø9	DW	P88/P89	0	22	22	CHW	0-22	35/34 1535-1540	—	HW 9 OCT	P / —	—	CHW
1 OCT	1659	Ø9	DW	P87/P88	Ø12	136	124	CHW	12-136	34/34 1515-1520	—	HW 8 OCT	P / —	—	CHW
1 OCT	1728	Ø9	DW	P89/P90	Ø	13	13	CHW	Ø-13	29/29 1545-1550	—	HW 9 OCT	P / —	—	CHW
1 OCT	1732	Ø9	DW	P88/P90	13	135	~~135~~ 122 CHW	CHW	13-82 82-135	29/28 1545-1550 31/31 1600-1605	—	HW 9 OCT	P / —	—	CHW
1 OCT	1801	Ø9	DW	P90/P91	0	139	139	CHW	0-73 73-139	32/32 1620-1625 35/35 1600-1605	—	HW 9 OCT	P / —	—	CHW
2 OCT	0851	11	JI/SSC	P72/P16	348	328	20	CHW	— Capped by RP 353						CHW
2 OCT	0857	11	JI/SSC	P15/P72	328	327	1	CHW	— Capped by RP 353						CHW
2 OCT	0857	11	JI/SSC	P15/P71	327	306	21	CHW	— Capped by RP 353						CHW
2 OCT	0903	11	JI/SSC	P14/P71	306	305	1	CHW	— Capped by RP 353						CHW
2 OCT	0903	11	JI SSC	P14/P70	305	284	21	CHW	— Capped by RP 353						CHW
					TOTAL (1)		~~763~~ CHW 750								

NOTE: (1) SEAM LENGTH: THIS PAGE 1 OCT P85/P86 (1) ACCUMULATED ~~25778~~ CHW 26167 (1)

000313

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©GEOSYNTEC CONSULTANTS FILE NO. 3-07-SSL REVIEWED BY: TBW

SHEET NO. 12 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
2 OCT	0903	11	JI/SSC	P13/P70	284	283	1	CHW	— Capped by RP 353						CHW
2 OCT	0914	11	JI/SSC	P13/P69	283	262	21	CHW	— Capped by RP 353						CHW
2 OCT	0921	11	JI/SSC	P12/P69	262	261	1	CHW	— Capped by RP 353						CHW
2 OCT	0921	11	JI/SSC	P12/P68	261	~~238~~ 240	~~22~~ 21	CHW	— Capped by RP 353						CHW
2 OCT	0927	11	JI/SSC	P11/P68	240	239	1	CHW	— Capped by RP 353						CHW
2 OCT	0928	11	JI/SSC	P11/P67	239	218	21	CHW	— Capped by RP 353						CHW
2 OCT	0940	11	JI/SSC	P10/P67	218	217	1	CHW	— Capped by RP 353						CHW
2 OCT	0941	11	JI/SSC	P10/P66	217	196	21	CHW	— Capped by RP 353						CHW
2 OCT	0949	11	JI/SSC	P9/P66	196	195	1	CHW	— Capped by RP 353						CHW
2 OCT	0950	11	JI/SSC	P9/P65	195	174	21	CHW	— Capped by RP 353						CHW
2 OCT	0959	11	JI/SSC	P8/P65	174	173	1	CHW	— Capped by RP 353						CHW
2 OCT	1000	11	JI/SSC	P8/P64	173	154	19	CHW	— Capped by RP 353						CHW
2 OCT	1009	11	JI/SSC	RP31/P64	154	152	2	CHW	— Capped by RP 353						CHW
					TOTAL (1)		132								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED ~~25910~~ CHW 26299 (ft)

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©GEOSYNTEC CONSULTANTS FILE NO. 3-07-SSL REVIEWED BY: TBN

SHEET NO. 13 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase II Cell #4 & #5

PROJECT NO.: G01341 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__psi for 5 min.)	VACUUM BOX (____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
2 OCT	1010	11	JI/SSC	RP31/P63	152	147	5	CHW	— Capped by RP 353 —						CHW
2 OCT	1013	11	JI/SSC	P7/P63	147	131	16	CHW	— Capped by RP 353 —						CHW
2 OCT	1021	11	JI/SSC	P6/P63	131	130	1	CHW	— Capped by RP 353 —						CHW
2 OCT	1022	11	JI/SSC	P6/P62	130	110	20	CHW	— Capped by RP 353 —						CHW
2 OCT	1034	11	JI/SSC	P5/P62	110	109	1	CHW	— Capped by RP 353 —						CHW
2 OCT	1035	11	JI/SSC	P5/P61	109	88	21	CHW	— Capped by RP 353 —						CHW
2 OCT	1045	11	JI/SSC	P4/P61	88	87	1	CHW	— Capped by RP 353 —						CHW
2 OCT	1046	11	JI/SSC	P4/P60	87	66	21	CHW	— Capped by RP 353 —						CHW
2 Oct	1058	11	JI/SSC	P3/P59	66	43	23	CHW	— Capped by RP 353 —						CHW
2 OCT	1108	11	JI/SSC	P2/P58	43	22	21	CHW	— Capped by RP 353 —						CHW
2 OCT	1118	11	JI/SSC	P1/P57	21	0	21	CHW	— Capped by RP 353 —						CHW
2 OCT	0905	09	DW	P91/P93	0	14	14	CHW	0-14	32/31	1627-1632	HW 9 OCT	P	—	CHW
2 OCT	0857	09	DW	P92/P93	0	22	22	CHW	0-22	33/33	1620-1625	HW 9 OCT	P	—	CHW
						TOTAL (1)	187								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED ~~26097~~ CHW 26486 (ft)

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5

PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

YEAR: 2002

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__/__ psi for 5 min.)	VACUUM BOX (_____ sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
2 OCT	0915	09	DW	P91/P92	14	138	124	CHW	14-138	32/31 1627-1632		HW 9 OCT	P	—	CHW
2 OCT	0956	09	DW	P93/P94	0	20	20	CHW	0-20	33/33 1635-1640		HW 9 OCT	P	—	CHW
2 OCT	1004	09	DW	P92/P94	20	140	120	CHW	20-140	33/33 1635-1640		HW 9 OCT	P	—	CHW
2 OCT	1042	09	DW	P94/P95	29	140	111	CHW	29-89 89-140	32/32 1747-1752 32/32 1747-1752		HW 9 OCT	P	—	CHW
2 OCT	1417	09	DW	P95/P96	139	27	112	CHW	27-139	33/33 1822-1827		HW 9 OCT	P	—	CHW
2 OCT	1440	11	SSC	P97/P98	66	0	66	CHW	0-66	31/31 1725-1730		HW 9 OCT	P	—	CHW
2 OCT	1439	09	DW	P98/P99	60	0	60	CHW	0-60	34/34 1735-1740		HW 9 OCT	P	—	CHW
2 OCT	1458	09	DW	P99/P100	41	0	41	CHW	0-41	34/34 1800-1805		HW 9 OCT	P	—	CHW
2 OCT	1506	11	SSC	P100/P101	28	0	28	CHW	0-28	32/32 1840-1845		HW 9 OCT	P	—	CHW
2 OCT	1518	09	DW	P101/P102	0	41	41	CHW	0-41	33/33 1130-1135		HW 11 OCT	P	—	CHW
2 OCT	1527	11	SSC	P102/P103	0	57	57	CHW	0-57	32/31 1325-1330		HW 11 OCT	P	—	TBW
2 OCT	1615	11	SSC	P103/P104	0	64	64	CHW	0-64	33/32 1000-1005		HW 18 OCT	P	—	TBW
2 OCT	1633	11	SSC	P95/P104	64	76	12	CHW	CAPPED BY RP 282 & RP 329						CHW
						TOTAL (1)	856								CHW

NOTE: (1) SEAM LENGTH: THIS PAGE _____

(ft) ACCUMULATED ~~26753~~ CHW 27342 (ft)

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SHEET NO. 15 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase III Cell #4 & #5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
2 OCT	1637	~~8~~ 11	SSC	P94/P104	76	98	22	CHW	CAPPED BY RP 282						CHW
2 OCT	1644	11	SSC	P93/P104	98	119	21	CHW	CAPPED BY RP 282						CHW
2 OCT	1650	11	SSC	P91/P104	119	141	22	CHW	CAPPED BY RP 282						CHW
2 OCT	1657	11	SSC	P90/P104	141	163	22	CHW	CAPPED BY RP 282						CHW
2 OCT	1704	11	SSC	P88/P104	163	185	22	CHW	CAPPED BY RP 282						CHW
2 OCT	1711	11	SSC	P87/P104	185	207	22	CHW	CAPPED BY RP 282						CHW
2 OCT	1716	11	SSC	P86/P104	207	229	22	CHW	CAPPED BY RP 282						CHW
2 OCT	1724	11	SSC	P84/P104	229	251	22	CHW	CAPPED BY RP 282						CHW
2 OCT	1730	11	SSC	P83/P104	251	272	21	CHW	- CAPPED BY RP 282						CHW
2 OCT	1738	11	SSC	P82/P104	272	294	22	CHW	- CAPPED BY RP 282						CHW
2 OCT	1746 ✗	11	SSC	P80/P104	294	316	22	CHW	- CAPPED BY RP 282						CHW
2 OCT	1752 ✗	11	SSC	P79/P104	316	336	20	CHW	- CAPPED BY RP 282						CHW
2 OCT	1759 ✗	11	SSC	P78/P104	336	358	22	CHW	- CAPPED BY RP 282						CHW
					TOTAL (1)		282								

NOTE: (1) SEAM LENGTH: THIS PAGE

✗ WELDING MACHINE #11 WAS ALREADY IN A CONTINUOUS TIE-IN SEAM AND DUE TO INDIVIDUAL ENTRIES FOR EVERY SEAM SEGMENT THE TRIAL SEAM WAS OVERRAN BY 15 MINUTES.

(ft) ACCUMULATED ~~27235~~ CHW 27624 (ft)

0 0 0 3 1 7

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: G01341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (±psi for 5 min.)	VACUUM BOX (sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
2 OCT	1635	09	DW	P104/P105	0	366	366	CHW	0-121	33/32 1315-1320	—	HW 12 OCT	P	—	CHW
									121-366	32/32 1315-1320	—	HW 12 OCT	P	—	
30 OCT	1110	09	DW	P103/P95	165	153	12 ~~8~~	CHW	153-165	32/32 1310-1315	—	HW 11 OCT	P	—	TBC
30 OCT	1115	09	DW	P95/P102	153'	145'	8	CHW	145-153	31/30 1310-1315	—	HW 11 OCT	P	—	TBC
30 OCT	1125	09	DW	P96/P102	145'	126'	19	CHW	126-145	32/31 1140-1145	—	HW 11 OCT	P	—	TBC
30 OCT	1135	09	DW	P96/P101	126'	101	25	CHW	101-126	32/31 1130-1135	—	HW 11 OCT	P	—	TBC
30 OCT	1148	09	DW	P96/P100	101'	73'	28'	CHW	73-101	32/32 1815-1820	—	HW 9 OCT	P	—	CHW
30 OCT	1159	09	DW	P96/P99	73	64	9	CHW	73-64	31/31 1815-1820	—	HW 9 OCT	P	—	CHW
30 OCT	1201	09	DW	P95/P99	64	42	22	CHW	42-64	33/32 1800-1805	—	HW 9 OCT	P	—	CHW
30 OCT	1211	09	DW	P95/P98	42	27	15	CHW	42-27	32/32 1735-1740	—	HW 9 OCT	P	—	CHW
30 OCT	1219	09	DW	P94/P97	19 ~~27~~	0	19 ~~27~~	CHW	0-19 ~~27~~	26/26 1705-1710	—	HW 9 OCT	P	—	CHW
30 OCT	1410	09	DW	P19/RP176	6	375	369 ~~375~~	CHW	6-375	34/32 1627-1632	—	HW 30 OCT	P	—	CHW
30 OCT	1410	11	SSC	P18/RP176	6	375	369	CHW	6-240, 240-375	33/33 1615-1620	—	HW 30 OCT	P	—	CHW
										32/32 1634-1639	—	HW 30 OCT	P	—	CHW
7 OCT	1430	09	JI	P105/P106	0	366	366	CHW	318-366	32/31 1345-1350	—	HW 12 OCT	P	—	CHW
									0-318	31/31 1500-1505	—	HW 12 OCT	P	—	CHW
				TOTAL (1)			~~1631~~ 1627	CHW							
30 OCT	1214	09	DW	P94/P98	27	19	8	CHW	19-27	34/34 1705-1710	—	HW 9 OCT	P	—	CHW

NOTE: (1) SEAM LENGTH: THIS PAGE

(II) ACCUMULATED ~~28866~~ 29251 CHW

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5

PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__psi for 5 min.)	VACUUM BOX (__sec.)	OPERATOR ID	PASS/FAIL	ACTION	QA ID
7 OCT	1430	11	SSC	P106/P107	Ø	363	363	CHW	350-363 350-Ø	32/31 1440-1445 33/32 1440-1445	—	HW 12 OCT	P —	—	CHW
7 OCT	1605	09	JI	P107/P108	Ø	364	364	CHW	364-275 0-275	31/31 1540-1545 32/32 0907-0912	—	HW 12 OCT HW 14 OCT	P — P —	—	CHW
7 OCT	1635	11	SSC	P108/P109	Ø	359	359	CHW	~~359-225~~ 0-225	32/32 1540-1545 32/32 0920-0925	—	HW 12 OCT HW 14 OCT	P — P —	—	CHW
* 8 OCT	1240	09	DW	P110/P111	Ø	377	377	CHW	377-217 0-217	32/32 1600-1605 32/32 1425-1430	—	HW 12 OCT HW 14 OCT	P — P —	—	CHW
* 8 OCT	1427	09	DW	P109/P110	Ø	364	364	CHW	364-250 0-250	26/25 1605-1610 33/33 1000-1005	—	HW 12 OCT HW 12 OCT	P — P —	—	CHW
8 OCT	1645	09	DW	P111/P114	373	Ø	373	CHW	~~373-225~~ 260-373 0-280	~~35/32 1540-1545~~ 32/32 1643-1648 26/26 1000-1020	—	~~HW 12 OCT~~ HW 12 OCT HW 14 OCT	~~P —~~ P — P —	—	CHW
9 OCT	0838	09	DW	P114/P115	369	Ø	369	CHW	369-275 0-275	35/34 1652-1657 34/34 1100-1105	—	HW 12 OCT HW 14 OCT	P — P —	—	CHW
9 OCT	1020	09	DW	P113/P115	367	200	167	CHW	367-225 200-225	33/32 1710-1715 32/31 1160-1105	—	HW 12 OCT HW 14 OCT	P — P —	—	CHW
11 OCT	1400	09	DW	P111/P112	364	Ø	364	TBH	Ø-364	35/35 1135-1140	—	HW 14 OCT	P —	—	CHW
11 OCT	1548	09	DW	P112/P113	364	Ø	364	TBH	Ø364	30/29 1135-1140	—	HW 14 OCT	P —	—	CHW
11 OCT	1653	11	SSC	P113/P115	200	Ø	200	TBH	Ø-200	32/31 1100-1105	—	HW 14 OCT	P —	—	CHW
* 12 OCT	1435	09	DW	P73/RP252	~~Ø~~ 4	377	373	CHW	4-377	33/33 1600-1605	—	HW 15 OCT	P —	—	CHW
* 12 OCT	1625	09	DW	P73/RP252	~~Ø~~ 4	377	373	CHW	4-377	34/33 1600-1605	—	HW 15 OCT	P —	—	CHW
						TOTAL (1)	~~4418~~ CHW 4410								

NOTE: (1) SEAM LENGTH: THIS PAGE 4410 (ft) ACCUMULATED ~~33284~~ CHW 33661 (ft)

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SHEET NO. 18 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: G01341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (_±_psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
14 OCT	1600	11	SSC	North PB/RP275	353	375	22	CHW	353-375	36/35 0940-0945	—	HW 15 OCT	P / —	—	CHW
14 oct	1602	09	DW	South PB/RP275	175	375	200	CHW	350-375 175-350	32/31 0910-0915 33/33 0852-0857	—	HW 15 OCT	P / —	—	CHW
14 OCT	1608	11	SSC	North PB/RP275	375	175	200	CHW	175-375	34/30 0852-0857	—	HW 15 OCT	P / —	—	CHW
14 OCT	1700	09	DW	South PB/RP275	375	353	22	CHW	353-375	33/33 0940-0945	—	HW 15 OCT	P / —	—	CHW
15 OCT	1120	09	DW	P104/RP282	239	358	119	CHW	239-282 282-358	33/32 1335-1340 34/33 1335-1340	—	HW 16 OCT	P / —	—	CHW
15 OCT	1335	09	DW	P84/RP282	239	250	11	CHW	239-250	34/33 1630-1635	—	HW 17 OCT	P / —	—	CHW
15 OCT	1339	09	DW	P88/RP282	250	272	22	CHW	250-272	34/34 1325-1330	—	HW 16 OCT	P / —	—	CHW
15 OCT	1345	09	DW	P82/RP282	272	294	22	CHW	272-294	32/32 1345-1350	—	HW 16 OCT	P / —	—	CHW
15 OCT	1350	09	DW	P80/RP282	294	316	22	CHW	294-316	34/33 1345-1350	—	HW 16 OCT	P / —	—	CHW
15 OCT	1358	09	DW	P79/RP282	316	338	22	CHW	316-338	31/30 1352-1357	—	HW 16 OCT	P / —	—	CHW
15 OCT	1404	09	DW	P78/RP282	338	358	20	CHW	338-358	33/32 1352-1357	—	HW 16 OCT	P / —	—	CHW
15 OCT	1420	09	DW	P56/P104	723	702	21	CHW	702-723	32/31 1635-1640	—	HW 16 OCT	P / —	—	CHW
15 OCT	1430	09	DW	P32/P105	702	680	22	CHW	680-702	33-32 1635-1640	—	HW 16 OCT	P / —	—	CHW
					TOTAL (1)		725								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED ~~34009~~ CHW (ft)
34386

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©GEOSYNTEC CONSULTANTS FILE NO. 3-07-SSL REVIEWED BY: TBW

SHEET NO. 19 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase III Cell #4 & #5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
15 OCT	1440	Ø9	DW	P31 P106	680	658	22	CHW	680-658	33/32 1643-1648	—	HW 16 OCT	P —	—	CHW
15 OCT	1449	Ø9	DW	P30 P107	658	636	22	CHW	636-658	34/34 1643-1648	—	HW 16 OCT	P —	—	CHW
15 OCT	1455	Ø9	DW	P29 P108	636	614	22	CHW	614-636	34/33 1650-1655	—	HW 16 OCT	P —	—	CHW
15 OCT	1504	Ø9	DW	P28 P109	614	592	22	CHW	592-614	31/30 1650-1655	—	HW 16 OCT	P —	—	CHW
15 OCT	1520	Ø9	DW	P27 P110	592	570	22	CHW	592-582 570-582	34/33 1657-1702 34/33 1008-1013	—	HW 16 OCT HW 17 OCT	P —	—	CHW
15 OCT	1538	Ø9	DW	P26 P111	570	548	22	CHW	548-570	33/32 1008-1013	—	HW 17 OCT	P —	—	CHW
* 15 OCT	1549	~~Ø~~11	DW	P25 P114	542 ~~548~~	526	16	CHW	526-542	32/31 1020-1025	—	HW 17 OCT	P —	—	CHW
15 OCT	1615	11	DW	P24 P115	526	504	22	CHW	504-526	31/30 1020-1025	—	HW 17 OCT	P —	—	CHW
15 OCT	1630	11	DW	P23 P113	504	482	22	CHW	482-504	32/32 1050-1055	—	HW 17 OCT	P —	—	CHW
15 OCT	1644	11	DW	P22 P112	482	459	23	CHW	459-482	34/33 1050-1055	—	HW 17 OCT	P —	—	CHW
15 OCT	1655	11	DW	P21 P77	459	437	22	CHW	437-459	33/32 1115-1120	—	HW 17 OCT	P —	—	CHW
15 OCT	1709	11	DW	P76 P20	437	425	12	CHW	425-437	31/31 1115-1120	—	HW 17 OCT	P —	—	CHW
16 OCT	1320	11	DW	P19 ~~P75~~	415	396	19 ~~20~~	CHW	396-415	32/31 1305-1310	—	HW 17 OCT	P —	—	CHW
				RP286 TOTAL (1)			268								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED ~~34277~~ 34654 CHW (ft)

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SHEET NO. 20 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: G01341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (1)	QA ID	LOCATION (1)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
* 16 OCT	1327	11	DW	~~P16~~ RP286	396	393	3	CHW	—	CAPPED	BY RP311	—	—	—	CHW
16 OCT	1329	11	DW	~~P18~~ RP286	393	371	22	CHW	371-393	34/34 1348-1358	—	HW 17 OCT	P	—	CHW
16 OCT	1334	11	DW	~~P17~~ RP286	371	349	22	CHW	349-371	30/30 1411-1416	—	HW 17 OCT	P	—	CHW
16 OCT	1345	11	DW	~~P76~~ RP286	415	393	22	CHW	393-415	31/30 1305-1310	—	HW 17 OCT	P	—	CHW
16 OCT	1354	11	DW	~~P74~~ RP286	393	371	22	CHW	371-393	33/33 1348-1353	—	HW 17 OCT	P	—	CHW
16 OCT	1403	11	DW	~~RP73~~ RP286	371	349	22	CHW	349-371	35/34 1411-1416	—	HW 17 OCT	P	—	CHW
17 OCT	1155	11	DW	~~P95~~ RP282	69	79	10	CHW	69-79	32/32 1715-1720	—	HW 17 OCT	P	—	CHW
17 OCT	1200	11	DW	~~P94~~ RP282	79	101	22	CHW	79-101	31/31 1707-1712	—	HW 17 OCT	P	—	CHW
17 OCT	1209	11	DW	~~P92~~ RP282	101	122	21	CHW	101-122	33/32 1707-1712	—	HW 17 OCT	P	—	CHW
17 OCT	1218	11	DW	~~P91~~ RP282	122	144	22	CHW	122-144	33/31 1700-1705	—	HW 17 OCT	P	—	CHW
17 OCT	1227	11	DW	~~P90~~ RP282	144	166	22	CHW	144-166	29/29 1700-1705	—	HW 17 OCT	P	—	CHW
17 OCT	1235	11	DW	~~P88~~ RP282	166	187	21	CHW	166-187	30/29 1655-1700	—	HW 17 OCT	P	—	CHW
17 OCT	1243	11	DW	~~P87~~ RP282	187	210	23	CHW	187-210	30/30 1655-1700	—	HW 17 OCT	P	—	CHW
					TOTAL (1)		254								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (1) ACCUMULATED ~~34531~~ CHW (1)
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SHEET NO. 21 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: G01341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
17 OCT	1249	11	DW	P86 RP282	210	231	21	CHW	210-231	32/32 1630-1635	—	HW 17 OCT	P / —	—	CHW
17 OCT	1254	11	DW	P84 RP282	231	240	9	CHW	231-240	34/33 1630-1635	—	HW 17 OCT	P / —	—	CHW
17 OCT	1259	11	DW	P104 RP282	69	240	171	CHW	69-240	34/33 1625-1630	—	HW 17 OCT	P / —	—	CHW
18 OCT	1435	13	DW	RP252 RP336	8	243	235	CHW	8-63 63-243	35/34 1720-1725 34/33 1740-1745	—	HW 18 OCT	P / —	—	CHW
18 OCT	1536	13	DW	P72 RP336	6	243	237	CHW	6-243	33/32 1740-1745	—	HW 18 OCT	P / —	—	CHW
21 OCT	1329	13	DW	P69 RP350	234	378	144	CHW	234-365 365-378	33/32 1440-1445 33/32 1440-1445	—	HW 21 OCT HW 21 OCT	P / — P / —	—	CHW
21 OCT	1424	13	DW	P68 RP350	234	378	144	CHW	234-365 365-378	33/33 1625-1630 30/30 1625-1630	—	HW 21 OCT HW 21 OCT	P / — P / —	—	CHW
21 OCT	1625	13	DW	P16 RP353	349	327	22	CHW	327-349	37/37 1655-1700	—	HW 22 OCT	P / —	—	CHW
21 OCT	1632	13	DW	P15 RP353	327	305	22	CHW	305-327	29/29 1030-1035	—	HW 23 OCT	P / —	—	CHW
21 OCT	1640	13	DW	P14 RP353	305	283	22	CHW	283-305	32/31 1045-1050	—	HW 23 OCT	P / —	—	CHW
21 OCT	1648	13	DW	P13 RP353	283	261	22	CHW	261-283	27/25 1050-1055	—	HW 23 OCT	P / —	—	CHW
21 OCT	1655	13	DW	P12 RP353	261	239	22	CHW	239-261	33/33 0935-0940	—	HW 23 OCT	P / —	—	CHW
21 OCT	1702	13	DW	P11 RP353	239	217	22	CHW	217-239	33/33 0935-0940	—	HW 23 OCT	P / —	—	CHW
					TOTAL (1)		1093								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED ~~35624~~ CHW 36001 (ft)

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SHEET NO. 22 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase III Cell #4 & #5

PROJECT NO.: G01341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

YEAR: 2002

CONTRACTOR: JSTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL		ACTION	QA ID
20 OCT	1711	13	DW	P10 RP353	217	195	22	CHW	195-217	33/33 0935-0940	—	HW 23 OCT	P	—	—	CHW
21 OCT	1718	13	DW	P9 RP353	195	173	22	CHW	185-195 173-185	33/33 0935-0940 34/34 1300-1305	—	HW 23 OCT HW 23 OCT	P P	—	—	CHW
21 OCT	1726	13	DW	P8 RP353	173	159	14	CHW	159-173	33/32 1300-1305	—	HW 23 OCT	P	—	—	CHW
22 OCT	1332	13	DW	P7 RP353	137	130	7	CHW	130-137	32/30 1342-1347	—	HW 23 OCT	P	—	—	CHW
22 OCT	1337	13	DW	P62 RP353	130	109	21	CHW	109-130	33/33 1341-1346	—	HW 23 OCT	P	—	—	CHW
22 OCT	1345	13	DW	P61 RP353	109	87	22	CHW	87-109	33/33 1341-1346	—	HW 23 OCT	P	—	—	CHW
22 OCT	1352	13	DW	P60 RP353	87	66	21	CHW	66-87	33/33 1341-1346	—	HW 23 OCT	P	—	—	CHW
22 OCT	1359	13	DW	P59 RP353	66	43	23	CHW	43-66	33/33 1341-1346	—	HW 23 OCT	P	—	—	CHW
22 OCT	1407	13	DW	P58 RP353	43	21	22	CHW	21-27 43-27	35/35 1542-1547 34/33 1530-1535	—	HW 23 OCT	P	—	—	CHW
22 OCT	1414	13	DW	P57 RP353	21	1	20	CHW	1-21	35/35 1542-1547	—	HW 23 OCT	P	—	—	CHW
22 OCT	1445	13	DW	RP352 RP353	349	346	3	CHW	346 CAPPED BY RP 351							CHW
22 OCT	1446	13	DW	P72 RP353	346	327	19	CHW	327-346	33/33 1655-1700	—	HW 22 OCT	P	—	—	CHW
22 OCT	1454	13	DW	P71 RP353	327	305	22	CHW	305-327	35/34 1745-1750	—	HW 22 OCT	P	—	—	CHW
					TOTAL (1)		238									

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 35146 (ft)

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SHEET NO. 23 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase II Cell #4 & #5

PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
10-22	1459	13	DW	P79/RP353	305	283	22	CHW	305-283	35/34 1745-1750	—	HW 22 OCT	P	—	CHW
22 OCT	1506	13	DW	P68/RP353	283	261	22	CHW	261-283	32/32 1008-1013	—	HW 23 OCT	P	—	CHW
22 OCT	1514	13	DW	P68/RP353	261	239	22	CHW	239-261	35/33 0950-0955	—	HW 23 OCT	P	—	CHW
22 OCT	1522	13	DW	P67/RP353	239	217	22	CHW	217-239	35/33 0950-0955	—	HW 23 OCT	P	—	CHW
22 OCT	1529	13	DW	P66/RP353	217	195	22	CHW	195-217	35/33 0950-0955	—	HW 23 OCT	P	—	CHW
22 OCT	1538	13	DW	P65/RP353	195	173	22	CHW	173-195	32/31 0935-0940	—	HW 23 OCT	P	—	CHW
22 OCT	1545	13	DW	P64/RP353	173	155	18	CHW	155-173	33/33 1437-1442	—	HW 23 OCT	P	—	CHW
22 OCT	1557	13	DW	P7/RP353	138	130	8	CHW	130-138	33/32 1448-1453	—	HW 23 OCT	P	—	CHW
22 OCT	1559	13	DW	P6/RP353	130	109	21	CHW	109-130	36/35 1448-1453	—	HW 23 OCT	P	—	CHW
22 OCT	1606	13	DW	P5/RP353	109	87	22	CHW	87-109	36/35 1512-1517	—	HW 23 OCT	P	—	CHW
22 OCT	1615	13	DW	P4/RP353	87	66	21	CHW	66-87	30/30 1512-1517	—	HW 23 OCT	P	—	CHW
22 OCT	1623	13	DW	P3/RP353	66	43	23	CHW	43-66	34/34 1522-1527	—	HW 23 OCT	P	—	CHW
22 OCT	1631	13	DW	P2/RP353	43	21	22	CHW	21-43	33/31 1522-1527	—	HW 23 OCT	P	—	CHW
						TOTAL (1)	267								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 35413 (ft)

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SHEET NO. 24 OF 25

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase II Cell # 4 & 5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
22OCT	1639	13	DW	R1 R0353	21	1	20	CHW	1-21	34/33 1550-1555	—	HW 23OCT	P	—	CHW
				TOTAL (1)			20								

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 35433 (ft)

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Extrusion

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase II Cell #4 & #5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

CONTRACTOR: ISTRE CO.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST						
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (__±__psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
18 Sept	0845	03	TB	P7/RP41	134	73	61	CHW	73-134	—	19 Sept	AC	P / —	—	CHW
18 Sept	1015	03	TB	P6/RP41	73	134	61	CHW	73-134	—	19 Sept	AC	P / —	—	CHW
2 Oct	0855	03	DL	P57/RP137	40	62	22	CHW	40-62	—	2 OCT	AC	P / —	—	CHW
2 OCT	0925	03	DL	T I P61/RP137	40	62	22	CHW	40-62	—	2 OCT	AC	P / —	—	CHW
7 OCT	1625	03	DL	T I P61/P57	0	42	42	CHW	0-42	—	22 OCT	SSC	P / —	—	CHW
7 OCT	1730	03	DL	P57/RP80	5	48	43	CHW	5-48	—	22 OCT	SSC	P / —	—	CHW
7 OCT	1755	03	DL	P58/RP80	5	48	43	CHW	5-48	—	22 OCT	SSC	P / —	—	CHW
8 OCT	1720	03	TB	LCSR Box/P110	0	30	30	CHW	0-30	—	22 OCT	SSC	P / —	—	CHW
12 OCT	1035	03	DL	LCS Box/P110	0	30	30	CHW	0-30	—	~~AC~~ 12 OCT	AC	P / —	—	CHW
15 OCT	1330	03	DL	LCSR Box/P64	0	30	30	CHW	0-30	—	12 OCT	AC	P / —	—	CHW
15 OCT	1355	03	DL	LCS Box/P64	0	30	30	CHW	0-30	—	22 OCT	SSC	P / —	—	CHW
22 OCT	1715	03	JI	P63/RP353	148	138	10	CHW	148-138	—	22 OCT	SSC	P / —	—	CHW
22 OCT	1721	03	JI	P7/RP353	138	158	20	CHW	138-158	—	23 OCT	SSC	P / —	—	CHW
						TOTAL (1)	444				23 OCT	SSC	P / —	—	CHW

NOTE: (1) SEAM LENGTH: THIS PAGE _____ (ft) ACCUMULATED 444 (ft)

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SHEET NO. 1 OF 2

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

PRODUCTION SEAM SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase II Cell #4 & 5

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

PROJECT NO.: GQ134L TASK NO.: 04.1

YEAR: 2002

CONTRACTOR: ISTRE Co.

PRODUCTION SEAM				LOCATION					NONDESTRUCTIVE TEST							
DATE (day/mo)	TIME	MACHINE NO.	OPERATOR ID	SEAM NO.	BEGIN	END	ACTUAL SEAM LENGTH (ft)	QA ID	LOCATION (ft)	AIR PRESSURE (___± ___psi for 5 min.)	VACUUM BOX (_____sec.)	OPERATOR ID	PASS/ FAIL	ACTION	QA ID
22 OCT	1745	03	JI	RP278 RP353	158	155	3	CHW	155-158	—	23 OCT	SSC	P	—	CHW
22 OCT	1749	03	JI	Pb4 RP352	155	152	3	CHW	152-155	—	23 OCT	SSC	P	—	CHW
22 OCT	1751	03	JI	Pb3 RP353	152	148	4	CHW	152-148	—	23 OCT	SCC	P	—	CHW
						TOTAL (1)	10								

NOTE: (1) SEAM LENGTH: THIS PAGE _____

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SHEET NO. 2 OF 2

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APPENDIX M

Geomembrane Destructive Seam Test Logs and Laboratory Test Results

Secondary

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV, CELLS 4+5 LINER PROJECT NO.: GQ1341 TASK NO.: 04-1

CONTRACTOR: 1STRE TEST REQUIREMENTS: EXTRUSION: PEEL - 84, SHEAR - 151 FUSION: PEEL - 115, SHEAR - 151 YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL	DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL	RE-TEST	QA ID
DS-1	E	—	Cells 3-5 5/4	34	04	JB	94(1)	—	—	— F	24 JUL 7/8	CB						1A	CB
2	—	F	5-1/5-2	267	02 (B)	DW	153/140	152/167	215/212	P —	24 JUL 24 JUL	CB	25 JUL	190	161	262	—	F 2A&B	CB
3	—	F	3/4	193	08	JB	142/170	150/150(1)	215/218	— F	24 JUL/—	CB						3B	CB
4	—	F	4/6	266	01	DW	168/146	147/167	172/204	P —	24 JUL 24 JUL	CB	25 JUL	187	176	254	—	(2) F 4A&B	CB
5	—	F	6/7	115	01	DW	PEELED IN FIELD			— F	24 JUL/—	CB						5A	CB
5B	—	F	3/4	164	08	JB	PEELED IN FIELD			— F	24 JULY —	TBK						5B	CB
5A	—	F	8/9	389	01	DW	154/141	140/154	169/171	P —	24 JULY	TBK	25 JUL	(CB) 24 195	190	244	P	—	CB
1A	E	—	5-1/5-1B	7	04	JB	117/134	136/118	186/186	P —	24 JUL/25 JUL	CB	26 JUL	128	173	242	—	(2) F 5A-1	CB
6	—	F	12/13	330 (CB) ~~326~~	(6 Gal) 2025	TS	136/128	—	208/217	P —	25 JULY	TBK	26 JUL	139	—	230	P	— —	CB
7	—	F	8/9	309	01	DW	160/150	134/164	145/223	P —	29 JUL 30 JUL	CB	31 JUL	188	166	239	—	(2) F 6A&B	CB
							149/139	156/159	209/204	P —	29 JUL 30 JUL	CB	31 JUL	176	172	245	—	(2) F 7A 5B	CB

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION ** - MACHINE #8 WELDED ONLY 3 SEAMS, WHICH WERE ALL REPAIRED OR RECONSTRUCTED.
ALL PANELS ARE ON SECONDARY UNLESS OTHERWISE NOTED.
(2) FAILED DUE TO SEAM SEPARATION (NON-FTB).

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV, CELLS 4+5 LINER — PROJECT NO.: GQ1341 — TASK NO.: 04.1

CONTRACTOR: ISTRE CO. — TEST REQUIREMENTS: FUSION: PEEL - 115 PPI, SHEAR - 151 PPI ; EXTRUSION: PEEL - 84 PPI, SHEAR - 151 PPI — YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
DS D.S. NO. (2)	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM (2)	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		RE-TEST	QA ID
DS-8	–	F	5-11/5-12	171	2025	TS	151/146	160/155	207/204	P	–	30 JUL / 30 JUL	CB	31 JUL	187	179	236	P	–	–	CB
DS-9	–	F	5-13/5-14	84	01	DW	161/155	154/168	226/224	P	–	30 JUL / 30 JUL	CB	31 JUL	194	188	241	P	–	–	CB
5A1	–	F	8/9	378	01	DW	/	(4)	/	–	F	30 JUL / –	CB							5A-2	CB
10	–	F	5-12	309	01	DW	143/176	150/163	204/205	P	–	30 JUL / 30 JUL	CB	31 JUL	193	187	239	P	–	–	CB
4A	–	F	4/6	279	01	DW	147/170	175/162	242/239	P	–	30 JULY / 30 JUL	CB	31 JUL	200	177	249	P	–	–	CB
4B	–	F	4/6	253	01	DW	162/164	174/143	230/235	P	–	30 JULY / 30 JUL	CB	31 JUL	185	185	249	–	F	**	CB
2A	–	F	1/2	280	01	DW	163/142	162/167	243/24	P	–	30 JULY / 30 JUL	CB	31 JUL	191	185	247	–	F	4A	CB
2B	–	F	1/2	255	01	DW	173/151	(3)/	229/232	–	F	30 JULY / –	CB							**	CB
11	–	F	9/10	338	01	DW	147/150	144/136	191/195	P	–	01 AUG / 01 AUG	TBY CB	02 AUG	160(3)	193	231	–	F	11A&B	CB
12	–	F	10/11	192	01	DW	150/138	116/150	184/181	P	–	01 AUG / 01 AUG	TBY CB	02 AUG	178	170	234	P	–	–	CB
13	E	–	18/19	225	04	JB	98/92	–/–	162/172	P	–	01 AUG / 01 AUG	TBY CB	02 AUG	138	–	200	P	–	–	CB
5A-2	–	F	8/9	360	01	DW	145/152	142/154	183/182	P	–	30 JULY	CB	31 JULY	181(3)	171(3)	244	P	F	7A-1	CB

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION ** - ALL PRIOR SEAMS WELDED BY THIS MACHINE WERE REPAIRED OR RECONSTRUCTED

(2) ALL PANELS ARE SECONDARY UNLESS OTHERWISE NOTED

(3) SEAM SEPARATION OCCURRED (NON-FTB) (4) DESTRUCT FAILS: INSUFFICIENT OVERLAP

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV, CELLS 4+5 LINER PROJECT NO.: GQ1341 TASK NO.: 04.1

CONTRACTOR: ISTEC CO. TEST REQUIREMENTS: FUSION: PEEL - 115 ppi SHEAR - 151 ppi ; EXTRUSION: PEEL - 84 ppi SHEAR - 151 ppi YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA							LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL	RE-TEST	QA ID
14	-	F	5-16 / 15-18	93	10	JI	(2)	-	-	-	F	01 AUG / -	CB						14A+B	CB
14A	-	F	16/18	83	10	JI	160/137	162/136	176/179	P	-	04 AUG / 05 AUG	CB	06 AUG	172	168	220	P	—	CB
14B	-	F	16/18	106	10	JI	154/133	221 (2) / -	- / -	-	F	04 AUG / —	CB						14B-1	CB
15	-	F	8/21	85	09	DW	119/153	129/158	145/198	P	-	04 AUG / 05 AUG	CB	06 AUG	186	154	244	P	—	CB
16	-	F	21/22	185	10	JI	113 (2) / -	- / -	- / -	-	F	04 AUG / —	CB						16A+B	CB
17	-	F	23/24	314	09	DW	135/138	141/139	157/151	P	-	04 AUG / 05 AUG	CB	06 AUG	174	174	191	P	—	CB
7A	-	F	8/9	296	01	DW	148/172	154/144	212/209	P	-	04 AUG / 05 AUG	CB	06 AUG	188	164 (2)	245	—	7A-1	CB
6A	-	F	12/13	318	2025	TS	160/191	156 (2) / 161	- / -	-	F	04 AUG / —	CB						6A-1	CB
6B	-	F	12/13	342	2025	TS	140 (2) / -	- / -	- / -	-	F	04 AUG / —	CB						**	CB
11B	-	F	9/25-51	351	01	DW	154/133	(2) / -	- / -	-	F	04 AUG / —	CB						11B-1	CB
11A	-	F	9/25-51	326	01	DW	137/130	(2) / -	- / -	-	F	04 AUG / —	CB						11A-1	CB

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION (2) FAILED DUE TO NON-FTB (SEAM SEPARATION)

** - ALL PRIOR SEAMS WELDED BY THIS MACHINE WERE REPAIRED OR RECONSTRUCTED. (GSE MACHINE 2025)

000334

4943

©GEO SYNTEC CONSULTANTS FILE NO. 3-10-DTL REVIEWED BY: TBY

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV, CELLS 4 & 5 LINER — PROJECT NO.: GQ1341 — TASK NO.: 04.1

CONTRACTOR: ISTRE CO. — TEST REQUIREMENTS: FUSION: PEEL - 115 PPI, SHEAR - 151 PPI ; EXTRUSION: PEEL - 84 PPI, SHEAR - 151 PPI — YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA							
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM (2)	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		RE-TEST	QA ID
18	-	F	5-7/5-20	328	10	JI	158/155	156/159	207/208	P	-	04 AUG / 05 AUG	CB	06 AUG	191	173 (3)	248	-	F	18A&B	CB
19	-	F	19/20	171	10	JI	154/127	145/145	194/195	P	-	04 AUG / 05 AUG	CB	06 AUG	176	180	246	P	-	—	CB
20	-	F	15/16	200	01	DW	153/162	143/162	180/178	P	-	04 AUG / 05 AUG	CB	06 AUG	187	176	219	P	-	—	CB
21	-	F	14/15	232	2025	TS	154/161	158/160	195/192	P	-	04 AUG / 05 AUG	CB	06 AUG	186	191	238	P	-	—	CB
22	-	F	10/11	22	01	DW	153/130 (3)	147/(2) (3)	-/-	-	F	04 AUG / —	CB	—						22A 22B	CB
23	-	F	25/27	41	09	JI DW	137/140	138/141	151/153	P	-	04 AUG / 05 AUG	CB	06 AUG	172	173	189	P	-	—	CB
24	-	F	27/28	332	09	JI	133/140	141/145	152/155	P	-	04 AUG / 05 AUG	CB	06 AUG	188	185	200	P	-	—	CB
25	-	F	29/30	271	09	DW	123/121	127/134	152/164	P	-	05 AUG / 05 AUG	CB	06 AUG	174	176	198	P	-	—	CB
26	-	F	28/29	200	10	JI	124/130	135/139	154/159	P	-	05 AUG / 05 AUG	CB	06 AUG	177	176	199	P	-	—	CB
27	E	-	45/48	367	04	JB	82/(3)	-/-	-/-	-	F	05 AUG / —	CB	—						27A&B	CB
6A1	-	F	12/13	293	2025	TS	151/119 (3)	-/-	-/-	-	F	05 AUG / —	CB	—						6A-2	CB

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION (2) ALL SEAMS ON SECONDARY LINER UNLESS OTHERWISE NOTED
(3) NON-RTB

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV, CELLS 4 & 5 LINER — PROJECT NO.: GQ1341 — TASK NO.: 04-1

CONTRACTOR: ISTRE — TEST REQUIREMENTS: FUSION: PEEL - 115 ppi, SHEAR - 151 ppi ; EXTRUSION: PEEL - 84 ppi, SHEAR - 151 ppi — YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM (2)	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		RE-TEST	QA ID
28	-	F	24/25	131	09	DW	150/139	140/137	153/165	P	-	05 AUG / 05 AUG	CB	06 AUG	177	176	199	P	-	—	CB
11A1	-	F	9/26 56	291	01	DW	130/137	122/124	185/189	P	-	05 AUG / 05 AUG	CB	06 AUG	160(3)	156	237	—	F	11A-2	CB
16B	-	F	7/20	385	10	JI	141/136	137/137	204/199	P	-	05 AUG / 05 AUG	CB	06 AUG	208	177	250	P	-	—	CB
16A	-	F	21/23	287	10	JI	140(3)/-	-/-	-/-	-	R	05 AUG / -	CB	06 AUG (CB)						16A-1	CB
29	-	F	32/33	77	09	DW	151/160	145/148	167/165	P	-	05 AUG / 05 AUG	CB	06 AUG	180	181	233	P	-	—	CB
30	-	F	38/39	52	10	JB	129/128	152/153	166/176	P	-	07 AUG / 07 AUG	CB	08 AUG	175	184	225	P	-	—	CB
16A1	-	F	21/23	356	10	JI	(3)/-	-/-	-/-	-	F	06 AUG / -	CB							16A-2	CB
22A	-	F	10/11	11	01	DW	203(3)/153	/	/	-	F	07 (CB) / 06 AUG	CB							22A-1	CB
22B	-	F	10/11	33	01	DW	193/208	142/145	200/189	P	-	06 AUG (CB) / 07 07 / 06 AUG	CB	08 AUG	179	163	231	P	-	—	CB
27A	E	-	CELL 3/4 25/48	335	04	JB	121/(CB)	~~111~~/(CB) 102	194/199	P	-	06 AUG (CB) / 07 07 / 06 AUG	CB	08 AUG	137(3)	-	204(3)	-	F	27A-1	CB
27B	E	-	1/24 48	~~352~~ 355 (CB)	04	JB	(3)/-	-/-	-/-	-	F	07 AUG / -	CB							27B-1	CB

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION (2) ALL SEAMS ON SECONDARY PANELS UNLESS OTHERWISE NOTED.
(3) ~~(3)~~ NON-FTB (CB)

0336

4943

GEO SYN CONSULTANTS FILE NO. 3-10-DTL REVIEWED BY: TBW

SHEET NO. 5 OF 14

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF) (CB) 04.1

LOCATION: FERNALD, OHIO PROJECT NO.: 60 1341 TASK NO.: ~~2002~~

DESCRIPTION: PHASE IV, CELLS 4+5 LINER YEAR: 2002

CONTRACTOR: ISTRE CO. TEST REQUIREMENTS: FUSION: PEEL-115, SHEAR 151, EXTRUSION: PEEL-84, SHEAR-151

PRIMARY: ☐ SECONDARY: ■ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. (D.S.) NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM (2)	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		RE-TEST	QA ID
31	–	F	43/44	15	09	DW	128/158	141/120	165/168	P	–	06AUG / 07AUG	CB	08AUG	180	159	230	P	–	—	CB
32	–	F	52/53	85	10	JI	142/140	165/151	190/181	P	–	07AUG / 07AUG	CB	08AUG	164	167	222	P	–	—	CB
6A2	–	F	12/13	278	2025	TS	133/168	163/175	197/194	P	–	07AUG / 07AUG	CB	08AUG	195	179	245	P	–	—	CB
18B	–	F	7/20	316	10	JI	181/189	181/169	206/217	P	–	07AUG / 07AUG	CB	08AUG	160	195	254	P	–	—	CB
18A	–	F	7/20	340	10	JI	214/189	167/148	207/212	P	–	07AUG / 07AUG	CB	08AUG	202	192	246	P	–	—	CB
22 (CB) (2241)	–	F	11/25-52	372	01	DW	(CB) 203 / 148	151 / 164	203 / 208	P	F	07AUG / 07 AUG (CB)	CB	08AUG	181	178	238	P	–	—	CB
27A1 (CB)	E	–	1/25-48	318	04	JB	141 / 141	101 / –	179 / 198	P	–	07AUG / 07AUG	CB	08AUG	156	–	233	P	–	—	CB
14B1	–	F	16/18	118	10	JI	153/161	145/159	182/187	P	–	07AUG / 07AUG	CB	08AUG	174	171	226	P	–	—	CB
16A2	–	F	21/23	370	10	JI	(3)/–	–/–	–/–	–	F	07AUG / –	CB	—	—	—	—	—		16A3	CB
33	–	F	1/25-115	77	09	DW (CB)	154/160	170/164	206/202	P	–	07AUG / 07AUG	CB	08AUG	176	176	235	P	–	—	CB
34	–	F	56/57	71	10	JI	159/155	156/147	223/224	P	–	07AUG / 07AUG	CB	10AUG	174	167	225	P	–	—	CB

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION (2) ALL SEAMS ON SECONDARY LINER (3) NON-FTB

00337

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV, CELLS 4+5 LINER PROJECT NO.: GQ1341 TASK NO.: 04.1

CONTRACTOR: ISTRE CO. TEST REQUIREMENTS: FUSION: ~~PEEL~~ - 115 ppi SHEAR - 151 ppi ; EXTRUSION: PEEL - 84 ppi SHEAR - 151 ppi YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. (D.S) NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM (2)	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		RE-TEST	QA ID
35	-	F	52/53	145	09	DW	164/166	173/162	196/214	P	-	07AUG / -	CB	08AUG	178	182	230	P	-	—	CB
~~11B1~~	~~-~~	~~F~~	~~15/16~~	~~27~~	~~01~~	~~DW~~	~~165/166~~	~~174/161~~	~~205/211~~	~~P~~	~~-~~	~~07AUG / 07AUG~~	~~CB~~								
11A2	-	F	9/125 51	184	01	DW	165/166	174/161	205/211	P	-	07AUG / 07AUG	CB	08AUG	180 CB ~~230~~	167	238	P	-	—	CB
7A1	-	F	8/9	283	01	DW	185/152	173/149	215/222	P	-	07AUG / 07AUG	CB	08AUG	182	157	246	P	-	—	CB
36	-	F	59/60	275	10	JI	160/163	165/159	240/228	P	-	07AUG / 09AUG	CB	10AUG	174	184	250	P	-	—	CB
37	-	F	58/59	150 CB ~~125~~	09 ~~DW~~	DW	180/152	181/154	230/238	P	-	07AUG / 09 09AUG	CB	10AUG	178	195	248	P	-	—	CB
11B1	-	F	15/16	27	01	DW	147/181	175/178	214/227	P	-	08AUG / 09AUG	CB	10AUG	185	174	217	P	-	—	CB
16A3	-	F	19/20	10	10	JI	174/165	175/161	256/261	P	-	08AUG / 09AUG	CB	10AUG	249	190	174	P	-	—	CB
38	-	F	62/63	369	09 CB ~~10~~	DW	153/142	136/146	180/187	P	- CB	08AUG / 09 09AUG	CB	10AUG	162	169	229	P	-	—	CB
39	-	F	63/64	158	10	JI	133/131	145/135	190/188	P	- CB	08AUG / 09 09AUG	CB	10AUG	161	150	239	P	-	—	CB
40	-	F	61/62	300	09	DW	150/128	127/149	177/175	P	- CB	08AUG / 09 09AUG	CB	10AUG	164	175	222	P	-	—	CB

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION (2) ALL PANELS SECONDARY
(3) NON-FTD

00338

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV, CELLS 4 & 5 LINER — PROJECT NO.: GQ1341 TASK NO.: 04.1

CONTRACTOR: ISTRE CO. — TEST REQUIREMENTS: FUSION: PEEL - 115 ppi, SHEAR - 151 ppi ; EXTRUSION: PEEL - 84 ppi, SHEAR - 151 ppi — YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. (D.S) NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM (2)	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		RE-TEST	QA ID
41	-	F	30/64	199	09	DW	165/152	153/160	169/166	P	-	09 AUG / 09 AUG	CB	10 AUG	183	179	209	P	-	—	CB
27A1	E	-	43/84 26/48	354	04	JO	130(3) / -	122 / -	- / -		F	09 AUG / -	CB							27A2	CB
42	-	F	49/56	282	10	DW	138/150	136/142	167/181	P	-	09 AUG / 09 AUG	CB	10 AUG	169	173	214	P	-	—	CB
43	-	F	37/56	173	10	DW	154/159	153/161	173/168	P	-	09 AUG / 09 AUG	CB	10 AUG	175	181	221	P	-	—	CB
44	-	F	59/65	376	10	DW	170/157	148/158	232/222	P	-	09 AUG / 09 AUG	CB	10 AUG	173	173	222	P	-	—	CB
45	-	F	21/25 178	56	09	DW	173/140	140/148	219/215	P	-	15 AUG / 09 AUG	CB	16 AUG	155	182	238	P	-	—	TBD
46	-	F	23/25(4) 139	319	09	DW	153/160	158/148	188/184	P	-	15 AUG	CB	16 AUG	178	177	211	P	-	—	TBD
47	-	F	68/69	268	09	DW	155/162	157/155	203/215	P	-	19 AUG	TBD	20 AUG	240	183	240	P	-	—	TBD
48	-	F	70/71	300	09	DW	133/130	128/132	169/167	P	-	16 AUG	TBD	17 AUG	168	173	239	P	-	—	TBD
49	-	F	72/73	175	09	DW	142/147	131/147	173/175	P	-	16 AUG	TBD	17 AUG	193	176	260	P	-	—	TBD
50	E	-	RS-51 RS-235	261	06	DL	139/136	—/—	173/169	P	-	16 AUG	TBD	17 AUG	163	—	219	P	-	—	TBD

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION (2) ALL SEAMS SECONDARY
(3) NON-FTB (4) SEAM 23/RS-179

00033

4943

GEO SYNTEC CONSULTANTS FILE NO. 3-10-DTL REVIEWED BY: TBD

SHEET NO. 8 OF 14

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE III, CELL 4+5 LINER PROJECT NO.: 6Q1341 TASK NO.: 4.1

CONTRACTOR: ISTRE CO. TEST REQUIREMENTS: EXTRUSION: PEEL - 84ppi SHEAR - 151 ppi FUSION: PEEL - 115ppi SHEAR - 151 ppi YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/ FAIL	DATE SAMPLED/ SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/ FAIL	RE-TEST	QA ID
51	–	F	S-73 / S-74	120'	10	DW	179/152	157/162	210/193	P	19 AUG	JW	27AUG	184	181	226	P	–	CHW
52	–	F	S-74 / S-75	300	10	DW	144/149	152/156	210/210	P	19 AUG	JW	27AUG	168	164	222	P	–	CHW
53	–	F	S-2 / RS-247	140	10	JI	117/165	123/176	184/182	P	19AUG	TBY	20AUG	186	149	229	P	–	TBY
54	–	F	S-3 / RS-247	347	09	DW	153/162	158/160	194/194	P	19 AUG	TBY	20AUG	197	183	232	P	–	TBY
55	E	F	S9 / RS-246	342	06	DL	106/89	—	164/162	P	19AUG	TBY	20AUG	113	—	225	P	–	TBY
27A-2	E	F	S-8 / RS-105	365	04	JB	123/127	—	186/186	P	20AUG	TBY	21AUG	21 PEEL	—	229	-	F	27A-3 TBY
56	E	F	S-13 / RS-275	310	03	JB	119/110	—	175/173	P	20AUG	TBY	21 AUG	132	—	230	P	–	TBY
57	–	F	S-3 / RS-248	78'	10	DW	146/147	139/134	164/168	P	22AUG	CHW	24 AUG	178	169	224	P	–	CHW
58	–	F	S-4 / RS-248	300	10	DW	Peel 148/163	Peel 170/149	Peel 211/212	F	22AUG	CHW						SBA&B	TBY
59	–	F	S-70 / S-71	225	09	DW	156/158	162/161	211/217	P	21 AUG	JW	27AUG	168	180	233	P	–	CHW
60	–	F	S-77 / S-78	75	10	DW				P	21 AUG	JW	27AUG	178	176	233	P	–	CHW

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV CELL 4+5 LINER — PROJECT NO.: 681341 TASK NO.: 4.1

CONTRACTOR: ISTRE Co — TEST REQUIREMENTS: EXTRUSION PEEL - 84 PPI SHEAR - 151 ppi; FUSION PEEL 115 PPI SHEAR 151 PPI — YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		RE-TEST	QA ID
61	-	F	S-80 / S-79	330	09	DW	165/140	145/146	200/207	P	-	21 AUG	JW	27AUG	162	174	221	P	-	—	CHW
27A3	E	—	S-21 / RS-105	342	04	JB	PEEL	—	—	-	F	21 AUG	TBH	—						27A-4	TBH
58A	—	F	S5 / RS-248	334	10	DW	148/141	120/158	175/176	P	—	23AUG	TBH	24AUG	174	147	217	P	-	—	CHW
58B	—	F	S3 / RS248	386	10	DW	144/141	146/127	179/188	P	—	23AUG	CHW	24AUG	171	174	231	P	-	—	CHW
27A4	E	—	S12 / RS275	278	03	JB	113/101	—	228/226	P	—	23AUG	CHW	24AUG	156 PEEL	—	246	—	F	23A5	CHW
62	—	F	S-87 / S-69	300	9	DW	158/16	167/168	222/221	P	—	23 AUG	JW	27AUG	180	173	240	P	-	—	CHW
63	-	F	S-82 / S-83	175	9	DW	174/149	155/153	201/213	P	—	23 AUG	JW	27AUG	170	176	218	P	-	—	CHW
64	-	F	S-84 / S-85	100	9	DW	187/147	189/146	221/214	P	—	4Sept	CHW	5Sept	198	164	242	P	-	—	CHW
65	-	F	S-87 / S-88	325	9	DW	149/157	136/177	209/208	P	—	23 AUG	JW	27AUG	173	178	237	P	-	—	CHW
66	-	F	S-86 / S-87	250	9	DW	176/178	136/177	211/213	P	-	23 AUG	JW	27AUG	197	173	212	P	-	—	CHW
67	-	F	S-75 / S-86	325	9	DW	151/163	156/142	211/211	P	—	23 AUG	JW	27AUG	166	177	222	P	-	—	CHW

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cells 4 & 5 PROJECT NO.: GQ1341 TASK NO.: 04.1

CONTRACTOR: Istre Co. TEST REQUIREMENTS: Extrusion - Peel - 84 ppi Shear - 151 ppi Fusion - Peel 115 Shear 151 YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		RE-TEST	QA ID
68	E	F	56 RS249	300	03	RJ	104/104	—	217/220	P	—	23 Aug	CHW	24 AUG	116 PEEL	—	226	~~P~~	F	68A 68B	CHW
69	E	F	S-4 RS249	128	06	DL	118/133	—	213/207	P	—	~~23~~ 23 Aug	CHW	24 AUG	138 PEEL	—	229	—	F	69A 69B	CHW
27AS 70	E	—	S-2 RS-275	285	03	JB	97/ PEEL	—	—		F	25 AUG	JW	—							
58B1	F	F	S-3 RS-348	365	10	DW	140/157	173/162	201/201	P	—	25 AUG	JW	27 AUG	174	187	220	P	—	56	CHW
69A	E	—	S-4 RS-349	118	06	DL	122/108	—	210/206	P	—	25 AUG	JW	27 AUG	129	—	229	P	—	—	CHW
69B	E	—	S-4 RS-249	138	06	DL	116/140	—	193/195	P	—	25 AUG	JW	27 AUG	162	—	235	P	—	—	CHW
68BA	E	—	S-4 RS249	256	03	RJ	92/96	—	198/189	P	—	25 AUG	JW	27 AUG	87/Peel	—	227	~~P~~	F	68A	CHW
68B	E	—	S-6 RS249	316	03	RJ	120/130	—	182/185	P	—	25 AUG	JW	27 AUG	114	—	225	P	—	—	CHW
70	E	—	S-4 RS-342 RS248	285	06	DL	114/116	—	205/209	P	—	26 AUG	CHW	27 AUG	139	—	219	P	—	—	CHW
71	E	—	S-1 RS342	127	03	JI	132/125	—	212/199	P	—	26 AUG	CHW	27 AUG	114	—	217	P	—	—	CHW
68A1	E	—	56 RS249	268'	03	RJ	93/107 ~~75~~	—	—	—	F	27 AUG	CHW	Failed			231	—	F	68A-2	CHW

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase II Cell 4 & 5 PROJECT NO.: G01341 TASK NO.: 04.1

CONTRACTOR: ISTRE Co. TEST REQUIREMENTS: FUSION: PEEL - 115 ppi SHEAR - 151 ppi ; EXTRUSION: PEEL - 84 ppi SHEAR - 151 ppi YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL	DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL	RE-TEST	QA ID
DS 68A2	E	—	S4 / ~~S245~~ S43	298	Ø3	RJ	109 / 116	—	197 / ~~203~~	P —	8-28	CHW	8-29	124	—	226	P —	—	CHW
DS 72	—	F	S112 / S56	237	Ø9	DW	158 / 157	154 / 153	203 / 204	P —	4Sept	JW	5Sept	179	175	234	P —	—	CHW
DS 73	—	F	S89 / S97	7Ø	Ø9	DW	142 / 153	162 / 138	204 / 204	P —	4Sept	JW	5Sept	159	177	221	P —	—	CHW
DS 74	—	F	S98 / S99	55	Ø9	DW	143 / 162	157 / 140	198 / 207	P —	4Sept	JW	5Sept	162	181	225	P —	—	CHW
DS 75	—	F	S110 / S110	104	Ø9	DW	153 / 159	158 / 172	192 / 203	P —	4Sept	JW	5Sept	180	178	229	P —	—	CHW
DS 76	—	F	S111 / S114	170	Ø9	DW	153 / 152	148 / 154	207 / 208	P —	4Sept	JW	5Sept	165	182	236	P —	—	CHW
DS 77	—	F	S115 / S112	300	Ø9	DW	156 / 153	173 / 153	205 / 190	P —	4Sept	JW	5Sept	175	177	229	P —	—	CHW
DS 78	—	F	S113 / S7	75	Ø9	DW	179 / 158	171 / 148	205 / 222	P —	4Sept	JW	5Sept	165	197	242	P —	—	CHW
DS 79	E	—	S83 / S67	Tie in Seam	116 Ø3	TS	122 / 118	—	200 / 204	P —	8-30	CHW	9-3	137	—	210	P —	—	CHW
DS 80	E	—	S67 / TTS4Ø	227	Ø3	TS	138 / 77	—	194 / 168	P —	4Sept	CHW	5Sept	119	AD WLD	212	— F	80-A ~~80-B~~ 80-B1	CHW CHW CHW
DS 80B	E	—	S67 / TTS3Ø	239	Ø3	TS	—	—	—	F	—		—	PEEL	—	in field			

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE II, CELLS 4 & 5 PROJECT NO.: GQ134 TASK NO.: 04.1

CONTRACTOR: ISTRE Co. TEST REQUIREMENTS: FUSION: PEEL - 115 ppi SHEAR - 151 ppi ; EXTRUSION: PEEL - 84 ppi SHEAR - 151 ppi YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA							
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL	DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL	RE-TEST	QA ID
DS 80B1	E	—	567 / 1156	312	03	TS	—	—	—	F				PEEL in field					
DS 80B2	E	—	515 / 587	200	03	TS	129 / 98	—	175 / 158	P	5 Sept	CHW	6 Sept	127	—	217	P	—	CHW
DS 81	E	—	528 / 577	392 / 380	06	DL	100 / 112	—	170 / 199	P	7 Sept	CHW	9 Sept	114	AD BRK A.D.	213	—	F	CHW
DS 82	E	—	567 / 1255	328	06	DL	—	—	—	F	Peeled								
DS 82B	E	—	567 / 1255	298	06	DL	102 / 117	—	196 / 197	P	9 Sept	CHW	9 Sept	127	—	217	P	—	CHW
DS 82A	E	—	567 / 1255	398	06	DL	182 / 109	107 / 167	198	P	9 Sept	CHW	9 Sept	123	AD BRK A.D.	219	—	F	CHW
DS 83	—	F	5116 / 5123	78	09	DW	173 / 149	168 / 143	192 / 207	P	9 Sept	CHW	10 Sept	170	155	236	—	P	CHW
DS 84	—	F	5122 / 5123	152	09	DW	153 / 155	146 / 148	198 / 202	P	9 Sept	CHW	10 Sept	167	170	227	P	—	CHW
DS 85	—	F	5121 / 5122	222	09	DW	141 / 151	150 / 166	201 / 198	P	9 Sept	CHW	10 Sept	167	164	227	P	—	CHW
DS 86	—	F	5119 / 5120	333	09	DW	154 / 162	163 / 156	204 / 209	P	9 Sept	CHW	10 Sept	172	155	223	P	—	CHW
DS 87	—	F	5116 / 5117	225	09	DW	164 / 190	163 / 192	224 / 216	P	9 Sept	CHW	10 Sept	198	175	236	P	—	CHW

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

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REVIEWED BY: TBY

SHEET NO. 13 OF 14

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV CELLS 4 & 5 PROJECT NO.: GQ134 TASK NO.: 04.1

CONTRACTOR: ISTME Co. YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ TEST REQUIREMENTS: FUSION: PEEL -115 ppi SHEAR-151 ppi ; EXTRUSION: PEEL -84 ppi SHEAR-151 ppi

SAMPLE DISTRIBUTION: LABORATORY: ■ RE-TEST: ☐ OTHER: ☐

ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL	DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL	RE-TEST	QA ID
DS 80A	E	—	S65	3			101	—	208										
DS 81B	E	—	S110 S71	369	03	JI	110		208	P —	9 Sept	CHW	10 Sept	148	—	220	F —	80A-1	CHW
DS 81A	E	—	S76 RS568	168	06	DL	141 / 142	—	225 / 219	P —	9 Sept	CHW	10 Sept	135	—	239	P —	—	CHW
DS 82A1	E	—	S18 RS510	338	06	DL	89 / 101	—	179 / 187	P —	9 Sept	CHW	10 Sept	150	—	215	P —	—	CHW
DS 82A	E	—	RS512 S66	18	06	DL	165 / 144	—	213 / 214	P —	9 Sept	CHW	10 Sept	141		232	P —	—	CHW
DS 88	E	—	S110 S63	1.50	03	JI	129 / 105	—	—	— F	115 Peeled								
DS 80A2	E	—	S120 S111	40	06	DL	114 / 65	—	202 / 198	P —	11 Sept	CHW	12 Sept	115	—	210	P —	80A-2	CHW
DS 80A3	E	—	RS702 S702	10	03	DL	29 / 136	—	219 / 188	F —	12 Sept	CHW	Peeled					—	CHW
			S727		03	DL	165	121 / 121	206 / 198	P —	13 Sept	CHW	14 Sept	144	—	209	P —	80A-3	CHW

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

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REVIEWED BY: TBH

SHEET NO. 14 OF 14

4943

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DS-2	260.8	BRK	187.9	SE 1	179.0	SE 1	
	260.7	BRK	188.3	SE 1	124.6	**AD**	-
	263.2	BRK	204.0	SE 1	159.7	**AD BRK**	
	264.4	BRK	192.8	SE 1	158.0	SE 1	
	261.2	BRK	179.6	**AD BRK**	184.4	SE 1	
DS-2A	247.7	BRK	189.4	SE 1	187.4	SE 1	
	248.4	BRK	194.7	SE 1	187.7	SE 1	-
	250.6	BRK	176.0	**AD BRK**	178.8	SE 1	
	249.9	BRK	195.9	SE 1	189.5	SE 1	
	248.3	BRK	200.5	SE 1	182.1	SE 1	
DS-4	262.7	BRK	191.5	SE 1	179.0	SE 1	
	252.5	BRK	183.5	SE 1	167.8	SE 1	-
	252.8	BRK	196.2	SE 1	179.4	SE 1	
	250.1	BRK	188.8	SE 1	179.0	SE 1	
	249.7	BRK	174.5	**AD BRK**	176.5	SE 1	
DS-4A	247.0	BRK	210.3	SE 1	180.8	SE 1	
	253.3	BRK	200.5	SE 1	175.8	SE 1	-
	250.2	BRK	196.0	SE 1	171.9	SE 1	
	249.5	BRK	192.8	SE 1	179.2	SE 1	
	245.1	BRK	198.0	SE 1	178.5	SE 1	
DS-4B	243.5	BRK	199.9	SE 1	149.6	SE 1	
	250.6	BRK	168.4	**AD BRK**	201.5	SE 1	-
	254.6	BRK	166.4	SE 1	193.6	SE 1	
	253.8	BRK	178.0	SE 1	182.6	SE 1	
	244.2	BRK	210.9	SE 1	197.4	SE 1	
DS-5A	236.2	BRK	143.1	SE 1	172.2	SE 1	
	242.4	BRK	140.3	SE 1	166.6	SE 1	-
	241.5	BRK	84.0	**AD**	182.5	SE 1	
	244.7	BRK	139.2	**AD**	174.1	SE 1	
	244.7	BRK	134.8	**AD**	171.3	SE 1	
DS-5A2	241.3	BRK	187.5	SE 1	163.3	SE 1	-
	246.8	BRK	173.8	SE 1	178.9	SE 1	
	247.0	BRK	187.8	**AD BRK**	167.6	SE 1	
	244.8	BRK	163.5	SE 1	172.7	SE 1	
	238.7	BRK	190.3	SE 1	170.6	SE 1	

1) PEEL (1) represents outer track or top flap.
2) PEEL (2) represents inner track or bottom flap.
3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DS-5B	243.2	BRK	197.4	SE 1	190.3	SE 1	
	241.9	BRK	190.1	SE 1	192.2	SE 1	-
	247.1	BRK	197.2	SE 1	188.6	SE 1	
	245.2	BRK	197.4	SE 1	185.0	SE 1	
	243.0	BRK	193.0	SE 1	191.7	SE 1	
DS-6	239.1	BRK	182.7	SE 1	123.8	**AD**	
	241.9	BRK	187.5	SE 1	171.6	SE 1	-
	240.8	BRK	193.5	SE 1	171.5	SE 1	
	238.6	BRK	190.2	SE 1	185.6	SE 1	
	236.0	BRK	184.8	SE 1	177.9	SE 1	
DS-6A2	236.3	BRK	194.6	SE 1	186.6	SE 1	
	249.3	BRK	194.8	SE 1	191.1	SE 1	-
	248.0	BRK	200.9	SE 1	164.6	SE 1	
	249.3	BRK	194.6	SE 1	190.4	SE 1	
	245.3	BRK	194.5	SE 1	163.4	SE 1	
DS-7	246.5	BRK	180.1	SE 1	166.2	SE 1	
	249.5	BRK	193.9	**AD BRK**	177.9	SE 1	-
	249.8	BRK	147.2	**AD BRK**	179.0	SE 1	
	243.1	BRK	166.9	**AD BRK**	160.6	SE 1	
	238.3	BRK	191.5	SE 1	174.8	SE 1	
DS-7A	245.1	BRK	183.7	SE 1	165.7	SE 1	
	245.0	BRK	195.0	SE 1	171.0	SE 1	-
	246.1	BRK	187.1	SE 1	164.8	**AD**	
	243.8	BRK	187.9	SE 1	152.3	**AD BRK**	
	244.1	BRK	190.1	SE 1	165.6	SE 1	
DS-7A1	243.2	BRK	183.8	SE 1	153.6	SE 1	
	249.0	BRK	188.0	SE 1	169.0	SE 1	-
	246.2	BRK	193.4	SE 1	154.7	SE 1	
	247.2	BRK	180.4	SE 1	160.6	SE 1	
	246.1	BRK	166.3	SE 1	146.4	SE 1	
DS-8	232.3	BRK	184.2	SE 1	191.9	SE 1	-
	237.1	BRK	189.4	SE 1	181.5	SE 1	
	238.4	BRK	187.0	SE 1	173.0	SE 1	
	233.9	BRK	187.4	SE 1	183.9	SE 1	
	237.4	BRK	187.6	SE 1	164.6	SE 1	

) PEEL (1) represents outer track or top flap.
:) P[illegible]2) represents inner track or bottom flap.
:) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DS-9	244.2	BRK	185.0	SE 1	190.3	SE 1	
	242.6	BRK	179.8	SE 1	187.1	SE 1	-
	241.5	BRK	204.0	SE 1	187.7	SE 1	
	238.6	BRK	211.8	SE 1	189.0	SE 1	
	238.1	BRK	191.6	SE 1	185.2	SE 1	
DS-10	237.0	BRK	189.2	SE 1	197.3	SE 1	
	241.6	BRK	206.7	SE 1	191.5	SE 1	-
	241.9	BRK	188.2	SE 1	184.9	SE 1	
	235.9	BRK	177.2	SE 1	168.3	SE 1	
	239.2	BRK	202.4	SE 1	193.5	SE 1	
DS-11	233.8	BRK	141.3	SE 1	198.8	SE 1	
	230.5	BRK	181.3	**AD BRK**	195.8	SE 1	-
	229.6	BRK	170.3	**AD BRK**	192.0	SE 1	
	232.6	BRK	145.3	**AD**	190.7	SE 1	
	230.0	BRK	181.4	**AD BRK**	189.9	SE 1	
DS-11A1	239.7	BRK	153.3	SE 1	167.0	SE 1	
	238.0	BRK	163.1	**AD BRK**	197.7	SE 1	-
	233.4	BRK	150.4	**AD BRK**	134.6	SE 1	
	236.4	BRK	166.9	**AD BRK**	135.5	SE 1	
	236.8	BRK	164.2	**AD BRK**	146.5	SE 1	
DS-11A2	240.8	BRK	172.2	SE 1	174.3	SE 1	
	237.1	BRK	178.5	SE 1	171.3	SE 1	-
	235.3	BRK	175.5	SE 1	124.7	SE 1	
	237.6	BRK	182.3	SE 1	189.1	SE 1	
	238.2	BRK	189.3	SE 1	174.2	SE 1	
DS-11B1	219.3	BRK	189.6	SE 1	194.4	SE 1	
	219.8	BRK	185.4	SE 1	169.1	SE 1	-
	217.8	BRK	189.4	SE 1	166.2	SE 1	
	216.1	BRK	176.2	SE 1	159.4	SE 1	
	216.0	BRK	186.2	SE 1	161.0	SE 1	
DS-12	235.6	BRK	170.0	SE 1	169.7	SE 1	-
	236.8	BRK	175.1	SE 1	167.4	SE 1	
	226.9	BRK	173.1	SE 1	177.2	SE 1	
	235.7	BRK	180.7	SE 1	166.1	SE 1	
	235.6	BRK	191.7	SE 1	167.2	SE 1	

1) [illegible] (1) represents outer track or top flap.
2) [illegible] (2) represents inner track or bottom flap.
3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD
GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DS-14A	223.5	BRK	168.9	SE 1	162.3	SE 1	
	222.0	BRK	169.4	SE 1	168.1	SE 1	-
	218.7	BRK	178.0	SE 1	171.4	SE 1	
	218.0	BRK	174.4	SE 1	184.6	SE 1	
	219.2	BRK	169.8	SE 1	157.5	SE 1	
DS-14B1	223.6	BRK	185.2	SE 1	181.8	SE 1	
	225.4	BRK	172.2	SE 1	176.8	SE 1	-
	228.7	BRK	169.0	SE 1	167.8	SE 1	
	229.4	BRK	171.9	SE 1	160.4	SE 1	
	224.2	BRK	173.7	SE 1	168.5	SE 1	
DS-15	246.5	BRK	191.6	SE 1	164.4	SE 1	
	246.7	BRK	181.7	SE 1	150.5	SE 1	-
	245.2	BRK	187.9	SE 1	148.9	SE 1	
	243.5	BRK	187.8	SE 1	155.5	SE 1	
	240.5	BRK	181.8	SE 1	155.3	SE 1	
DS-16A3	248.0	BRK	188.5	SE 1	176.9	SE 1	
	250.4	BRK	176.4	SE 1	174.5	SE 1	-
	252.4	BRK	210.7	SE 1	171.6	SE 1	
	252.0	BRK	190.6	SE 1	179.3	SE 1	
	245.2	BRK	188.0	SE 1	172.5	SE 1	
DS-16B	250.1	BRK	212.2	SE 1	170.3	SE 1	
	250.3	BRK	193.4	SE 1	170.6	SE 1	-
	251.1	BRK	210.5	SE 1	173.3	SE 1	
	248.6	BRK	211.3	SE 1	187.3	SE 1	
	251.5	BRK	215.4	SE 1	185.9	SE 1	
DS-17	192.1	BRK	173.7	SE 1	177.6	SE 1	
	191.5	BRK	177.7	SE 1	167.4	SE 1	-
	191.3	BRK	179.8	SE 1	176.5	SE 1	
	190.7	BRK	174.0	SE 1	177.4	SE 1	
	192.5	BRK	165.9	SE 1	174.0	SE 1	
DS-18	250.0	BRK	190.9	SE 1	185.0	SE 1	-
	245.8	BRK	190.8	SE 1	176.7	SE 1	
	250.0	BRK	193.9	SE 1	179.1	SE 1	
	246.0	BRK	184.4	SE 1	157.3	AD BRK	
	247.6	BRK	194.4	SE 1	169.7	SE 1	

1) [illegible] (1) represents outer track or top flap.
2) [illegible] (2) represents inner track or bottom flap.
3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DS-18A	243.6	BRK	195.6	SE 1	193.7	SE 1	
	243.8	BRK	202.5	SE 1	194.9	SE 1	-
	245.8	BRK	194.9	SE 1	191.9	SE 1	
	246.7	BRK	203.9	SE 1	198.0	SE 1	
	244.8	BRK	214.5	SE 1	179.7	SE 1	
DS-18B	256.2	BRK	198.2	SE 1	197.7	SE 1	
	254.8	BRK	202.5	SE 1	199.8	SE 1	-
	253.2	BRK	187.5	SE 1	200.1	SE 1	
	256.1	BRK	201.2	SE 1	187.7	SE 1	
	251.6	BRK	192.8	SE 1	187.4	SE 1	
DS-19	246.8	BRK	174.1	SE 1	179.2	SE 1	
	247.7	BRK	178.8	SE 1	179.3	SE 1	-
	246.4	BRK	181.6	SE 1	167.2	SE 1	
	245.9	BRK	163.9	SE 1	181.1	SE 1	
	244.8	BRK	182.2	SE 1	191.3	SE 1	
DS-20	220.8	BRK	191.0	SE 1	196.3	SE 1	
	221.3	BRK	173.7	SE 1	183.5	SE 1	-
	218.1	BRK	193.7	SE 1	183.0	SE 1	
	218.5	BRK	191.4	SE 1	158.7	SE 1	
	216.8	BRK	185.7	SE 1	159.7	SE 1	
DS-21	239.9	BRK	178.2	SE 1	196.0	SE 1	
	237.8	BRK	191.9	SE 1	193.5	SE 1	-
	238.1	BRK	189.3	SE 1	194.5	SE 1	
	236.7	BRK	187.6	SE 1	188.5	SE 1	
	237.8	BRK	186.9	SE 1	186.3	SE 1	
DS-22A1	237.7	BRK	175.5	SE 1	177.1	SE 1	
	238.5	BRK	186.8	SE 1	187.2	SE 1	-
	241.0	BRK	187.6	SE 1	172.0	SE 1	
	239.1	BRK	194.9	SE 1	172.7	SE 1	
	235.1	BRK	161.3	SE 1	180.5	SE 1	
DS-22B	230.3	BRK	195.3	SE 1	142.9	SE 1	-
	232.8	BRK	161.0	SE 1	168.0	SE 1	
	232.6	BRK	186.7	SE 1	170.2	SE 1	
	230.3	BRK	183.8	SE 1	166.7	SE 1	
	228.2	BRK	166.7	SE 1	165.6	SE 1	

1) [illegible] (1) represents outer track or top flap.
2) [illegible] (2) represents inner track or bottom flap.
3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DS-23	196.7	BRK	179.1	SE 1	178.1	SE 1	
	188.0	BRK	167.7	SE 1	176.2	SE 1	-
	190.4	BRK	169.8	SE 1	166.7	SE 1	
	188.2	BRK	168.6	SE 1	171.5	SE 1	
	184.3	BRK	177.2	SE 1	176.8	SE 1	
DS-24	203.3	BRK	186.1	SE 1	171.1	SE 1	
	200.8	BRK	196.8	SE 1	189.8	SE 1	-
	201.8	BRK	192.4	SE 1	188.8	SE 1	
	199.1	BRK	186.8	SE 1	187.0	SE 1	
	198.3	BRK	182.2	SE 1	187.8	SE 1	
DS-25	200.5	BRK	175.0	SE 1	174.3	SE 1	
	196.5	BRK	176.7	SE 1	179.2	SE 1	-
	197.9	BRK	173.8	SE 1	174.6	SE 1	
	198.7	BRK	174.7	SE 1	174.9	SE 1	
	199.4	BRK	171.4	SE 1	177.3	SE 1	
DS-26	201.9	BRK	192.6	SE 1	172.1	SE 1	
	201.0	BRK	174.5	SE 1	187.5	SE 1	-
	199.5	BRK	165.6	SE 1	176.0	SE 1	
	198.9	BRK	177.2	SE 1	175.4	SE 1	
	197.7	BRK	179.8	SE 1	169.1	SE 1	
DS-28	192.1	BRK	183.5	SE 1	174.6	SE 1	
	194.0	BRK	182.5	SE 1	178.8	SE 1	-
	193.0	BRK	181.2	SE 1	179.6	SE 1	
	191.8	BRK	183.6	SE 1	168.4	SE 1	
	185.6	BRK	183.7	SE 1	180.5	SE 1	
DS-29	233.2	BRK	182.2	SE 1	180.8	SE 1	
	232.6	BRK	181.0	SE 1	182.5	SE 1	-
	235.2	BRK	178.2	SE 1	173.0	SE 1	
	233.6	BRK	182.7	SE 1	188.1	SE 1	
	231.3	BRK	176.8	SE 1	181.7	SE 1	
DS-30	225.6	BRK	170.6	SE 1	178.7	SE 1	-
	224.1	BRK	171.9	SE 1	184.9	SE 1	
	228.0	BRK	173.2	SE 1	178.3	SE 1	
	227.5	BRK	180.6	SE 1	188.3	SE 1	
	221.5	BRK	180.7	SE 1	191.8	SE 1	

1) [illegible] (1) represents outer track or top flap.
2) [illegible] (2) represents inner track or bottom flap.
3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS
FUSION METHOD
GEOSYNTEC
FLUOR FERNALD
GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DS-31	233.7	BRK	183.3	SE 1	157.1	SE 1	
	231.0	BRK	178.7	SE 1	158.1	SE 1	-
	231.5	BRK	173.9	SE 1	161.1	SE 1	
	230.3	BRK	192.5	SE 1	156.6	SE 1	
	225.5	BRK	176.7	SE 1	163.3	SE 1	
DS-32	221.5	BRK	166.1	SE 1	168.4	SE 1	
	222.2	BRK	170.0	SE 1	172.0	SE 1	-
	223.5	BRK	160.0	SE 1	171.1	SE 1	
	223.1	BRK	159.6	SE 1	158.6	SE 1	
	219.1	BRK	165.0	SE 1	164.8	SE 1	
DS-33	234.5	BRK	177.7	SE 1	178.3	SE 1	
	235.6	BRK	176.7	SE 1	173.8	SE 1	-
	235.6	BRK	181.2	SE 1	179.0	SE 1	
	237.9	BRK	184.2	SE 1	177.5	SE 1	
	233.2	BRK	183.2	SE 1	175.4	SE 1	
DS-34	224.7	BRK	171.2	SE 1	158.4	SE 1	
	224.7	BRK	178.5	SE 1	163.2	SE 1	-
	226.6	BRK	179.9	SE 1	165.5	SE 1	
	225.9	BRK	164.1	SE 1	177.7	SE 1	
	225.8	BRK	176.5	SE 1	173.6	SE 1	
DS-35	232.5	BRK	171.7	SE 1	186.9	SE 1	
	236.5	BRK	179.3	SE 1	187.9	SE 1	-
	227.2	BRK	194.0	SE 1	182.2	SE 1	
	228.2	BRK	184.5	SE 1	179.3	SE 1	
	228.3	BRK	162.5	SE 1	176.3	SE 1	
DS-36	247.7	BRK	174.1	SE 1	184.7	SE 1	
	251.7	BRK	163.4	SE 1	196.3	SE 1	-
	252.0	BRK	175.8	SE 1	183.6	SE 1	
	250.5	BRK	180.7	SE 1	178.5	SE 1	
	247.2	BRK	177.5	SE 1	176.4	SE 1	
DS-37	246.4	BRK	180.1	SE 1	202.8	SE 1	-
	249.1	BRK	183.0	SE 1	201.6	SE 1	
	249.3	BRK	178.5	SE 1	195.0	SE 1	
	249.7	BRK	173.6	SE 1	185.4	SE 1	
	244.0	BRK	173.6	SE 1	190.5	SE 1	

1) [illegible] (1) represents outer track or top flap.
2) [illegible] (2) represents inner track or bottom flap.
3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS
FUSION METHOD
GEOSYNTEC
FLUOR FERNALD
GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DS-38	229.8	BRK	155.0	SE 1	171.4	SE 1	
	230.5	BRK	154.0	SE 1	162.9	SE 1	-
	232.7	BRK	154.8	SE 1	166.1	SE 1	
	231.4	BRK	168.5	SE 1	173.1	SE 1	
	224.8	BRK	179.7	SE 1	171.8	SE 1	
DS-39	239.7	BRK	158.4	SE 1	152.3	SE 1	
	240.6	BRK	167.4	SE 1	150.4	SE 1	-
	238.9	BRK	160.6	SE 1	152.2	SE 1	
	239.0	BRK	154.1	SE 1	150.0	SE 1	
	237.5	BRK	164.4	SE 1	148.1	SE 1	
DS-40	223.1	BRK	162.3	SE 1	164.3	SE 1	
	223.4	BRK	161.7	SE 1	168.0	SE 1	-
	222.7	BRK	163.9	SE 1	183.9	SE 1	
	223.6	BRK	168.3	SE 1	183.1	SE 1	
	217.9	BRK	167.5	SE 1	175.3	SE 1	
DS-41	207.8	BRK	186.2	SE 1	176.9	SE 1	
	209.4	BRK	179.4	SE 1	182.2	SE 1	-
	211.2	BRK	184.1	SE 1	177.3	SE 1	
	211.0	BRK	186.9	SE 1	175.5	SE 1	
	207.4	BRK	180.9	SE 1	185.4	SE 1	
DS-42	213.4	BRK	167.2	SE 1	178.9	SE 1	
	213.6	BRK	171.2	SE 1	167.5	SE 1	-
	212.0	BRK	164.3	SE 1	182.1	SE 1	
	214.9	BRK	168.5	SE 1	179.0	SE 1	
	215.4	BRK	172.8	SE 1	156.7	SE 1	
DS-43	219.7	BRK	172.1	SE 1	178.7	SE 1	
	224.7	BRK	164.3	SE 1	167.8	SE 1	-
	218.2	BRK	182.1	SE 1	187.4	SE 1	
	222.7	BRK	178.7	SE 1	187.2	SE 1	
	219.0	BRK	175.7	SE 1	188.2	SE 1	
DS-44	219.5	BRK	163.4	SE 1	167.9	SE 1	-
	221.8	BRK	178.5	SE 1	176.4	SE 1	
	225.7	BRK	181.3	SE 1	174.2	SE 1	
	223.6	BRK	170.9	SE 1	174.6	SE 1	
	220.0	BRK	171.1	SE 1	169.6	SE 1	

1) [illegible] (1) represents outer track or top flap.
2) [illegible] (2) represents inner track or bottom flap.
3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DS-45	238.2	BRK	184.5	SE 1	160.6	SE 1	
	239.1	BRK	179.0	SE 1	151.6	SE 1	-
	240.7	BRK	188.0	SE 1	157.6	SE 1	
	237.5	BRK	181.3	SE 1	151.9	SE 1	
	235.7	BRK	176.8	SE 1	155.6	SE 1	
DS-46	213.1	BRK	180.7	SE 1	179.5	SE 1	
	209.6	BRK	174.4	SE 1	177.3	SE 1	-
	209.4	BRK	178.6	SE 1	176.2	SE 1	
	211.4	BRK	180.6	SE 1	177.6	SE 1	
	210.6	BRK	177.1	SE 1	175.8	SE 1	
DS-47	241.7	BRK	172.4	SE 1	177.1	SE 1	
	242.4	BRK	179.0	SE 1	178.0	SE 1	-
	243.6	BRK	185.0	SE 1	185.7	SE 1	
	238.9	BRK	173.7	SE 1	193.3	SE 1	
	235.7	BRK	185.0	SE 1	180.2	SE 1	
DS-48	235.2	BRK	169.3	SE 1	173.8	SE 1	
	240.1	BRK	167.8	SE 1	173.7	SE 1	-
	241.4	BRK	165.6	SE 1	173.3	SE 1	
	240.4	BRK	170.1	SE 1	175.7	SE 1	
	235.9	BRK	167.9	SE 1	185.1	SE 1	
DS-49	258.3	BRK	190.0	SE 1	165.3	SE 1	
	261.8	BRK	199.6	SE 1	175.0	SE 1	-
	263.7	BRK	198.9	SE 1	179.0	SE 1	
	259.8	BRK	195.1	SE 1	187.1	SE 1	
	255.9	BRK	183.5	SE 1	171.2	SE 1	
DS-51	204.7	BRK	175.1	SE 1	178.1	SE 1	
	231.7	BRK	191.2	SE 1	179.8	SE 1	-
	231.6	BRK	189.3	SE 1	188.3	SE 1	
	230.7	BRK	181.0	SE 1	176.8	SE 1	
	230.2	BRK	184.7	SE 1	179.9	SE 1	
DS-52	222.0	BRK	169.9	SE 1	168.7	SE 1	-
	221.7	BRK	167.9	SE 1	159.9	SE 1	
	220.4	BRK	166.1	SE 1	174.0	SE 1	
	222.8	BRK	168.7	SE 1	158.9	SE 1	
	222.4	BRK	168.1	SE 1	159.5	SE 1	

1) PEEL (1) represents outer track or top flap.
2) PEEL (2) represents inner track or bottom flap.
3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD
GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DS-53	229.8	BRK	185.1	SE 1	142.8	SE 1	
	230.6	BRK	176.1	SE 1	176.1	SE 1	-
	231.0	BRK	189.0	SE 1	155.8	SE 1	
	227.2	BRK	188.6	SE 1	125.0	SE 1	
	227.0	BRK	191.7	SE 1	147.1	SE 1	
DS-54	237.0	BRK	196.5	SE 1	184.6	SE 1	
	231.5	BRK	194.2	SE 1	183.5	SE 1	-
	231.8	BRK	203.2	SE 1	178.1	SE 1	
	232.0	BRK	203.7	SE 1	179.9	SE 1	
	230.1	BRK	188.2	SE 1	190.5	SE 1	
DS-57	225.6	BRK	175.6	SE 1	156.6	SE 1	
	227.3	BRK	170.7	SE 1	151.5	SE 1	-
	225.5	BRK	180.0	SE 1	186.9	SE 1	
	223.5	BRK	176.8	SE 1	177.3	SE 1	
	220.3	BRK	188.2	SE 1	174.9	SE 1	
DS-58A	225.9	BRK	184.2	SE 1	146.4	SE 1	
	225.4	BRK	170.6	SE 1	150.3	SE 1	-
	226.2	BRK	188.3	SE 1	148.1	SE 1	
	178.5	BRK	159.6	SE 1	144.7	SE 1	
	228.4	BRK	168.1	SE 1	146.8	SE 1	
DS-58B	232.1	BRK	181.7	SE 1	165.3	SE 1	
	230.4	BRK	181.6	SE 1	166.4	SE 1	-
	233.3	BRK	179.7	SE 1	193.6	SE 1	
	230.8	BRK	130.3	AD BRK	173.1	SE 1	
	226.9	BRK	182.9	SE 1	170.2	SE 1	
DS-58B1	221.3	BRK	176.0	SE 1	187.5	SE 1	
	221.7	BRK	176.5	SE 1	196.4	SE 1	-
	220.3	BRK	171.1	SE 1	178.5	SE 1	
	219.8	BRK	171.4	SE 1	185.8	SE 1	
	217.6	BRK	175.7	SE 1	186.4	SE 1	
DS-59	233.0	BRK	168.1	SE 1	179.0	SE 1	-
	232.5	BRK	167.4	SE 1	178.7	SE 1	
	233.8	BRK	164.9	SE 1	178.9	SE 1	
	232.8	BRK	167.0	SE 1	176.9	SE 1	
	232.0	BRK	170.5	SE 1	186.6	SE 1	

1) [illegible] (1) represents outer track or top flap.
2) [illegible] (2) represents inner track or bottom flap.
3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD
GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DS-60	235.6	BRK	172.9	SE 1	169.4	SE 1	
	235.0	BRK	180.7	SE 1	177.2	SE 1	-
	230.5	BRK	169.7	SE 1	180.1	SE 1	
	231.5	BRK	180.8	SE 1	173.9	SE 1	
	232.6	BRK	183.9	SE 1	179.1	SE 1	
DS-61	221.7	BRK	163.2	SE 1	185.1	SE 1	
	220.4	BRK	164.8	SE 1	165.9	SE 1	-
	218.1	BRK	160.7	SE 1	167.5	SE 1	
	221.7	BRK	160.9	SE 1	174.4	SE 1	
	223.8	BRK	160.8	SE 1	179.5	SE 1	
DS-62	241.5	BRK	182.9	SE 1	171.1	SE 1	
	241.6	BRK	179.8	SE 1	171.1	SE 1	-
	240.3	BRK	177.6	SE 1	169.9	SE 1	
	238.7	BRK	180.0	SE 1	180.2	SE 1	
	239.3	BRK	178.0	SE 1	173.3	SE 1	
DS-63	219.7	BRK	169.6	SE 1	178.8	SE 1	
	216.5	BRK	183.3	SE 1	172.2	SE 1	-
	217.4	BRK	174.8	SE 1	182.3	SE 1	
	218.5	BRK	166.2	SE 1	177.7	SE 1	
	217.4	BRK	156.7	SE 1	166.7	SE 1	
DS-64	245.4	BRK	202.9	SE 1	167.4	SE 1	
	242.3	BRK	201.3	SE 1	161.9	SE 1	-
	240.8	BRK	192.8	SE 1	162.7	SE 1	
	241.1	BRK	197.1	SE 1	165.4	SE 1	
	238.0	BRK	197.4	SE 1	162.6	SE 1	
DS-65	234.7	BRK	171.2	SE 1	174.2	SE 1	
	241.5	BRK	174.1	SE 1	179.6	SE 1	-
	238.8	BRK	177.9	SE 1	179.6	SE 1	
	237.2	BRK	173.1	SE 1	178.8	SE 1	
	233.4	BRK	169.2	SE 1	178.3	SE 1	
DS-66	232.0	BRK	201.8	SE 1	176.1	SE 1	-
	233.8	BRK	201.5	SE 1	166.4	SE 1	
	234.0	BRK	191.8	SE 1	163.0	SE 1	
	130.9	BRK	192.3	SE 1	178.8	SE 1	
	228.9	BRK	195.5	SE 1	180.1	SE 1	

1) P[illegible] (1) represents outer track or top flap.
2) [illegible] (2) represents inner track or bottom flap.
3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD
GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DS-67	224.3	BRK	171.0	SE 1	178.6	SE 1	
	224.4	BRK	163.3	SE 1	182.1	SE 1	-
	223.4	BRK	166.6	SE 1	172.9	SE 1	
	219.7	BRK	166.1	SE 1	172.0	SE 1	
	219.9	BRK	162.3	SE 1	180.3	SE 1	
DS-72	238.0	BRK	181.9	SE 1	173.1	SE 1	
	234.2	BRK	176.0	SE 1	176.0	SE 1	-
	226.8	BRK	173.0	SE 1	178.7	SE 1	
	235.3	BRK	179.4	SE 1	171.8	SE 1	
	234.5	BRK	184.9	SE 1	173.2	SE 1	
DS-73	220.3	BRK	160.0	SE 1	177.5	SE 1	
	222.2	BRK	153.5	SE 1	177.2	SE 1	-
	222.1	BRK	160.2	SE 1	173.8	SE 1	
	221.5	BRK	165.8	SE 1	178.7	SE 1	
	218.3	BRK	153.6	SE 1	176.6	SE 1	
DS-74	226.0	BRK	162.6	SE 1	167.7	SE 1	
	225.9	BRK	163.9	SE 1	196.8	SE 1	-
	223.8	BRK	168.1	SE 1	189.5	SE 1	
	223.5	BRK	156.7	SE 1	186.8	SE 1	
	223.8	BRK	158.2	SE 1	164.9	SE 1	
DS-75	231.3	BRK	177.9	SE 1	171.3	SE 1	
	230.2	BRK	181.6	SE 1	174.9	SE 1	-
	232.3	BRK	189.5	SE 1	171.2	SE 1	
	225.6	BRK	171.3	SE 1	180.4	SE 1	
	226.2	BRK	181.4	SE 1	190.8	SE 1	
DS-76	237.6	BRK	172.4	SE 1	185.4	SE 1	
	237.7	BRK	166.4	SE 1	183.6	SE 1	-
	236.8	BRK	162.3	SE 1	180.7	SE 1	
	234.5	BRK	159.2	SE 1	180.1	SE 1	
	235.8	BRK	164.9	SE 1	181.8	SE 1	
DS-77	231.3	BRK	179.3	SE 1	170.8	SE 1	-
	231.5	BRK	173.6	SE 1	194.7	SE 1	
	230.6	BRK	175.4	SE 1	172.3	SE 1	
	225.5	BRK	175.1	SE 1	181.0	SE 1	
	224.1	BRK	172.4	SE 1	164.3	SE 1	

1) PEEL (1) represents outer track or top flap.
2) PEEL (2) represents inner track or bottom flap.
3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DS-78	244.2	BRK	202.8	SE 1	171.8	SE 1	
	242.7	BRK	194.0	SE 1	166.0	SE 1	-
	242.8	BRK	193.0	SE 1	166.4	SE 1	
	239.1	BRK	195.0	SE 1	156.8	SE 1	
	239.2	BRK	200.4	SE 1	163.5	SE 1	
DS-83	235.9	BRK	167.4	SE 1	164.5	SE 1	
	235.8	BRK	168.7	SE 1	155.9	SE 1	-
	235.9	BRK	161.6	SE 1	153.5	SE 1	
	234.8	BRK	187.4	SE 1	146.7	SE 1	
	235.3	BRK	163.9	SE 1	153.0	SE 1	
DS-84	225.3	BRK	169.8	SE 1	174.9	SE 1	
	227.7	BRK	160.8	SE 1	171.0	SE 1	-
	228.0	BRK	165.7	SE 1	163.6	SE 1	
	228.1	BRK	172.9	SE 1	171.5	SE 1	
	225.8	BRK	165.5	SE 1	166.5	SE 1	
DS-85	228.2	BRK	163.9	SE 1	154.5	SE 1	
	228.9	BRK	163.6	SE 1	156.4	SE 1	-
	227.6	BRK	167.1	SE 1	165.5	SE 1	
	227.0	BRK	169.3	SE 1	175.5	SE 1	
	223.9	BRK	168.7	SE 1	167.0	SE 1	
DS-86	222.3	BRK	166.7	SE 1	158.3	SE 1	
	224.6	BRK	193.9	SE 1	155.3	SE 1	-
	223.2	BRK	170.1	SE 1	160.2	SE 1	
	222.8	BRK	165.9	SE 1	153.5	SE 1	
	223.4	BRK	162.0	SE 1	147.1	SE 1	
DS-87	236.9	BRK	191.0	SE 1	175.2	SE 1	
	237.7	BRK	179.7	SE 1	187.0	SE 1	-
	238.7	BRK	208.8	SE 1	175.2	SE 1	
	236.1	BRK	201.8	SE 1	169.4	SE 1	
	234.0	BRK	207.2	SE 1	168.9	SE 1	
-	-	-	-	-	-	-	-
	-	-	-	-	-	-	
	-	-	-	-	-	-	
	-	-	-	-	-	-	
	-	-	-	-	-	-	

) PEEL (1) represents outer track or top flap.
) PEEL (2) represents inner track or bottom flap.
) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS EXTRUSION METHOD
GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (1)	PEEL STRENGTH (ppi)	PEEL BREAK CODE (1)	REMARKS
DS-1A	231.9	BRK 2	132.5	SE 3	-
	229.4	SE 2	135.3	SE 3	
	233.0	BRK 1	135.8	SE 3	
	229.8	BRK 1	151.0	SE 3	
	224.0	BRK 1	139.3	SE 3	
DS-13	199.5	BRK 1	131.0	SE 3	-
	206.0	BRK 1	126.9	SE 3	
	191.5	BRK 1	140.9	SE 3	
	209.1	BRK 1	138.0	SE 3	
	194.2	BRK 1	153.6	SE 3	
DS-27A	212.3	BRK 1	195.5	SE 3	-
	211.9	BRK 1	131.8	SE 3	
	208.5	BRK 1	165.5	SE 3	
	202.5	**AD WLD**	49.0	**AD WLD**	
	185.4	**AD WLD**	147.3	SE 3	
DS-27A2	235.1	BRK 2	117.7	**AD 1**	-
	231.9	BRK 1	128.0	**AD BRK**	
	225.9	BRK 2	114.2	SE 3	
	222.6	BRK 2	124.9	SE 3	
	228.0	BRK 2	121.9	SE 3	
DS-27A4	247.3	BRK 2	156.7	SE 3	-
	245.4	BRK 2	181.9	**AB BRK**	
	247.4	BRK 2	146.6	SE 3	
	248.2	BRK 2	156.8	SE 3	
	241.9	BRK 2	137.8	**AD 1**	
DS-27B1	230.3	BRK 2	170.1	SE 3	-
	234.1	BRK 2	146.7	SE 3	
	235.1	BRK 2	154.5	SE 3	
	235.6	BRK 1	159.3	SE 3	
	233.0	BRK 2	151.4	SE 3	
DS-50	218.8	BRK 2	194.5	SE 3	-
	220.1	BRK 2	144.4	SE 3	
	217.7	BRK 2	146.2	SE 3	
	217.2	BRK 2	160.0	SE 3	
	221.9	BRK 2	169.3	SE 3	

(1) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DESUM

SUMMARY OF DESTRUCTIVE TEST RESULTS
EXTRUSION METHOD

GEOSYNTEC
FLUOR FERNALD
GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (1)	PEEL STRENGTH (ppi)	PEEL BREAK CODE (1)	REMARKS
DS-55	226.3	BRK 2	124.3	SE 3	-
	226.8	BRK 2	113.2	SE 3	
	225.8	BRK 2	114.7	SE 3	
	226.1	BRK 2	96.3	SE 3	
	220.6	BRK 2	116.3	SE 3	
DS-56	229.6	BRK 2	106.9	SE 3	-
	233.5	BRK 1	135.9	SE 3	
	232.2	BRK 2	140.1	SE 3	
	220.2	BRK 2	127.3	SE 3	
	232.5	BRK 2	148.1	SE 3	
DS-68	229.3	BRK2	112.2	SE 3	-
	227.1	BRK2	116.4	SE 3	
	226.7	BRK2	124.0	SE 3	
	226.9	BRK2	65.7	SE 3	
	218.2	**AD 1**	159.1	SE 3	
DS-68A	225.6	BRK 2	100.1	**AD 1**	-
	229.2	BRK 2	41.7	**AD 1**	
	227.3	BRK 2	75.2	**AD 1**	
	226.6	BRK 2	106.9	SE 3	
	224.7	BRK 2	111.8	SE 3	
DS-68A1	231.5	BRK 2	100.5	SE 3	-
	231.1	BRK 2	49.5	SE 3	
	232.6	BRK 2	100.3	SE 3	
	233.0	BRK 2	117.6	SE 3	
	226.9	SE 2	74.5	SE 3	
DS-68A2	227.9	BRK 1	108.5	SE 3	-
	230.4	SE 2	118.5	SE 3	
	234.1	BRK 1	125.6	SE 3	
	221.4	SE 2	132.8	SE 3	
	216.9	BRK 1	132.7	SE 3	
DS-68B	228.7	BRK 2	86.1	SE 3	-
	227.0	BRK 2	116.7	SE 3	
	224.8	BRK 2	128.0	SE 3	
	222.4	BRK 2	128.7	SE 3	
	222.4	BRK 2	108.8	SE 3	

(1) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DESUM

SUMMARY OF DESTRUCTIVE TEST RESULTS EXTRUSION METHOD
GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (1)	PEEL STRENGTH (ppi)	PEEL BREAK CODE (1)	REMARKS
DS-69	207.5	SE 2	162.8	AD WLD	-
	233.7	SE 2	113.3	AD WLD	
	230.6	SE 2	147.0	SE 3	
	236.6	SE 2	131.1	SE 3	
	236.7	BRK 2	136.0	SE 3	
DS-69A	230.5	BRK 2	150.7	SE 3	-
	230.3	BRK 2	101.7	SE 3	
	228.6	BRK 2	136.8	SE 3	
	227.2	BRK 2	127.2	SE 3	
	228.0	BRK 2	126.1	SE 3	
DS-69B	232.6	BRK 2	177.6	SE 3	-
	234.6	BRK 2	174.9	SE 3	
	239.3	BRK 2	152.6	SE 3	
	238.5	BRK 2	160.3	SE 3	
	231.5	BRK 2	145.1	SE 3	
DS-70	219.5	BRK 2	152.4	SE 3	-
	219.9	BRK 2	135.0	SE 3	
	220.0	BRK 2	143.0	SE 3	
	220.7	BRK 2	128.1	SE 3	
	217.0	BRK 2	137.1	SE 3	
DS-71	216.8	BRK 1	113.9	SE 3	-
	218.8	BRK 1	105.1	SE 3	
	215.8	SE 2	102.3	SE 3	
	218.1	BRK 1	125.4	SE 3	
	215.2	BRK 1	121.8	SE 3	
DS-79	209.9	BRK 1	146.4	SE 3	-
	204.9	BRK 1	145.2	SE 3	
	201.0	SE 1	126.9	SE 3	
	218.6	BRK 1	138.7	SE 3	
	217.3	BRK 1	127.1	SE 3	
DS-80	212.0	BRK 2	93.9	AD WLD	-
	211.8	BRK 1	124.2	SE 3	
	213.3	BRK 1	123.5	SE 3	
	211.0	BRK 1	121.9	SE 3	
	213.6	BRK 1	129.9	SE 3	

(1) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DESUM

SUMMARY OF DESTRUCTIVE TEST RESULTS EXTRUSION METHOD
GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (1)	PEEL STRENGTH (ppi)	PEEL BREAK CODE (1)	REMARKS
DS-80A	220.3	BRK 2	137.6	AD 1	-
	222.6	BRK 2	160.3	SE 3	
	216.1	BRK 2	138.0	SE 3	
	223.4	BRK 2	142.1	AD BRK	
	218.2	BRK 2	143.0	SE 3	
DS-80A3	207.3	BRK 2	154.5	SE 3	-
	208.1	BRK 2	145.1	SE 3	
	207.9	BRK 2	144.1	SE 3	
	208.8	BRK 2	144.4	SE 3	
	211.8	BRK 2	130.2	SE 3	
DS-80B2	210.9	BRK 1	149.6	SE 3	-
	220.7	BRK 1	118.0	SE 3	
	211.8	AD WLD	122.9	SE 3	
	223.6	BRK 1	124.9	SE 3	
	216.2	BRK 1	122.0	SE 3	
DS-81	213.1	BRK 2	117.7	AD BRK	-
	213.4	BRK 2	89.0	AD 1	
	212.6	BRK 2	116.0	SE 3	
	212.3	BRK 2	127.1	AD WLD	
	213.4	BRK 2	119.5	AD 1	
DS-81A	213.4	BRK 1	145.6	SE 3	-
	216.7	BRK 1	159.0	SE 3	
	218.7	BRK 1	161.0	SE 3	
	218.1	BRK 1	131.9	SE 3	
	210.3	BRK 1	150.8	SE 3	
DS-81B	238.6	BRK 2	155.1	SE 3	-
	231.8	BRK 2	137.0	SE 3	
	239.9	BRK 2	117.3	SE 3	
	238.2	BRK 2	127.2	SE 3	
	244.7	BRK 2	138.9	SE 3	
DS-82A	225.2	BRK 1	95.5	SE 3	-
	220.1	BRK 1	114.4	AD BRK	
	222.7	SE 1	130.8	SE 3	
	224.8	BRK 1	118.2	AD 1	
	204.1	SE 1	153.6	SE 3	

(1) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DESUM

SUMMARY OF DESTRUCTIVE TEST RESULTS EXTRUSION METHOD
GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (1)	PEEL STRENGTH (ppi)	PEEL BREAK CODE (1)	REMARKS
DS-82A1	231.1	BRK 2	160.8	SE 3	-
	234.9	BRK 2	139.8	SE 3	
	234.2	BRK 2	137.3	SE 3	
	233.6	BRK 2	124.8	SE 3	
	227.6	BRK 2	141.2	SE 3	
DS-82B	215.0	BRK 1	121.7	SE 3	-
	216.8	BRK 1	137.2	SE 3	
	218.4	BRK 1	120.0	SE 3	
	217.5	BRK 1	130.0	SE 3	
	218.1	BRK 1	127.9	SE 3	
DS-88	204.7	BRK 1	129.3	SE 3	-
	210.5	BRK 1	107.3	SE 3	
	214.3	BRK 1	108.4	SE 3	
	206.2	BRK 1	92.7	SE 3	
	214.6	BRK 1	136.3	SE 3	
-	-	-	-	-	-
	-	-	-	-	
	-	-	-	-	
	-	-	-	-	
	-	-	-	-	
-	-	-	-	-	-
	-	-	-	-	
	-	-	-	-	
	-	-	-	-	
	-	-	-	-	
-	-	-	-	-	-
	-	-	-	-	
	-	-	-	-	
	-	-	-	-	
	-	-	-	-	
-	-	-	-	-	-
	-	-	-	-	
	-	-	-	-	
	-	-	-	-	
	-	-	-	-	

(1) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DESUM

Primary

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5 PROJECT NO.: GQ1341 TASK NO.: 04.1

CONTRACTOR: ISTRE Co. TEST REQUIREMENTS: Extrusion: Peel-84ppi Shear-151ppi Fusion: 105ppi Shear 151ppi YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL	DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL	RE-TEST	QA ID
1	—	F	TIP4/P1	102'	09	DW	165/175	176/164	189/195	P —	11 Sept	CHW	12 Sept	188	176	210	P —	—	CHW
2	—	F	P2/P3	360'	09	DW	186/170	192/190	238/237	P —	12 Sept	CHW	13 Sept	173	187	238	P —	—	CHW
3	—	F	P4/P5	150'	11	SSC	178/176	154/177	199/203	P —	12 Sept	CHW	13 Sept	186	165	238	P —	—	CHW
4	—	F	P6/P7	106'	11	SSC	198/167	157/173	219/213	P —	12 Sept	CHW	13 Sept	189	167	243	F —	AD BRK 4A & 4B	CHW
5	—	F	P8/P9	300'	09	DW	158/169	165/167	239/229	P —	13 Sept	JW	14 Sept	177	192	238	P —	—	CHW
6	—	F	P7/P8	166'	11	SSC	171/174	177/184	215/215	P —	13 Sept	JW	14 Sept	195	187	234	P —	—	CHW
7	—	F	P10/P11	200'	09	DW	184/170	162/173	218/225	P —	13 Sept	JW	14 Sept	171	190	235	P —	—	CHW
4A	—	F	P6/P7	116'	11	SSC	152/174	178/165	221/249	P —	13 Sept	JW	14 Sept	188	167	240	F —	AD BRK 4A!	CHW
4B	—	F	P6/P7	96'	11	SSC	179/189	165/173	224/225	P —	13 Sept	JW	14 Sept	192	169	240	F —	AD BRK 4B!	CHW
8	—	F	P11/P12	136'	11	~~SSC~~ JI	167/178	171/171	229/239	P —	17 Sept	JW	18 Sept	180	192	235	P —	—	CHW
9	—	F	P12/P13	371'	09	DW	176/163	185/173	241/238	P —	17 Sept	JW	18 Sept	190	186	240	P —	—	CHW

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: G01341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & 5

YEAR: 2002

CONTRACTOR: _____ TEST REQUIREMENTS: FUSION: PEEL - 115 ppi SHEAR - 151 ppi ; EXTRUSION: PEEL - 84 ppi SHEAR - 151 ppi

PRIMARY: ■ SECONDARY: ☐ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER: _____

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		RE-TEST	QA ID
[redacted]	—	F	P13/P14	235	11	SSC	162/165	~~229/210~~	229/210	P	—	16 Sept	CHW	17 Sept	192	182	244	P	—	—	CHW
[redacted]	—	F	P14/P15	193	09	DW	136/169	~~226/231~~	226/231	P	—	16 Sept	CHW	17 Sept	190	183	238	P	—	—	CHW
[redacted]	—	F	P6/P7	126	11	SSC	201/164	148/167	—	P	—	16 Sept	CHW	17 Sept	202	173	246	P	—	—	CHW
[redacted]	—	F	P6/P7	86	11	SSC	178/175	178/179	—	P	—	16 Sept	CHW	17 Sept	199	173	247	P	—	—	CHW
12	—	F	P8/P8B	158	09	DW	185/193	188/200	218/203	P	—	17 Sept	SW	18 Sept	187	197	225	P	—	—	CHW
13	—	F	P15/P16	282	11	SSC	159/183	184/170	226/234	P	—	16 Sept	CHW	17 Sept	202	187	238	P	—	—	CHW
[redacted]	—	F	P16/P17	125	11	SSC	183/175	202/185	227/234	P	—	17 Sept	SW	18 Sept	195	198	235	P	—	—	CHW
15	—	F	P17/P18	381	09	DW	181/157	184/153	236/233	P	—	18 Sept	CHW	19 Sept	193	182	246	P	—	—	CHW
16	—	F	P18/P19	378	09	DW	174/152	176/110	Peel 178/159 ~~229/225~~	F	Peel	18 Sept	CHW	19 Sept	175	158	246	—	F	AD BRK /GA/BB	CHW
* [redacted]	—	F	P20/P21	114	09	DW	173/181	191/167	225/233	P	—	18 Sept	CHW	19 Sept	192	170	238	P	—	—	CHW
18	—	F	P21/P22	275	11	SSC	194/193	181/188	237/237	P	—	18 Sept	CHW	19 Sept	193	183	243	P	—	—	CHW

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

*DP 16 - peeled 6 - 110 - severe peel

*DP 15 - trimmed off at 375'

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 YEAR: 2002

CONTRACTOR: ISTRE Co. TEST REQUIREMENTS: FUSION: PEEL - 115 ppi SHEAR - 151 ppi ; EXTRUSION: PEEL - 84 ppi SHEAR - 151 ppi

PRIMARY: ■ SECONDARY: ☐ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL	DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL	RE-TEST	QA ID
* 19 ✓	—	F	P22/P23	303'	09	DW	178/184	165/168	229/227	P —	18 Sept	CHW	19 Sept	185	182	234	P —	—	CHW
✓ 20 ✓	—	F	P24/P25	345'	09	DW	167/181	162/166	226/224	P —	18 Sept	CHW	19 Sept	177	169	227	P —	—	CHW
21 ✓	—	F	P25/P26	150'	11	SSC	179/157	184/163	219/212	P —	18 Sept	CHW	19 Sept	185	162	227	P —	—	CHW
22 ✓	—	F	P26/P27	150'	09	DW	161/170	163/171	219/221	P —	18 Sept	CHW	19 Sept	168	172	218	P —	—	CHW
✓ 23 ✓	—	F	P28/P29	325'	11	SSC	157/170	155/162	~~157/170~~ 201/198	P	19 Sept	CHW	20 Sept	173	175	227	P —	—	CHW
24 ✓	—	F	P29/P30	75'	09	DW	186/177	178/175	223/220	P —	19 Sept	CHW	20 Sept	172	185	232	P —	—	CHW
25 ✓	—	F	P30/P31	88	11	SSC	161/179	160/161	215/220	P —	19 Sept	CHW	20 Sept	180	173	226	P —	—	CHW
✓ 26 ✓	—	F	P31/P32	350	09	DW	154/154	168/183	214/211	P —	19 Sept	CHW	20 Sept	163	173	220	P —	—	CHW
16 CB 27 ✓	—	F	P37/P38	25	09	DW	165/155	165/166	215/221	P —	23 Sept	CHW	24 Sept	175	169	214	P —	—	CHW
✓ 28 ✓	—	F	P41/P42	71	09	DW	184/176	164/164	~~184/176~~ 226/220	P —	23 Sept	CHW	24 Sept	177	166	221	P —	—	CHW
16A ✓	—	F	P18/P19	388	09	DW	167/164	180/165	252/248	— P	23 Sept	CHW	24 Sept	191	184	246	P —	—	CHW

[redacted]

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

16A peeled - 164

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©GEOSYNTEC CONSULTANTS FILE NO. 3-10-DTL REVIEWED BY: TBY SHEET NO. 3 OF 12

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: Ø4.1

DESCRIPTION: Phase II Cell #4 & #5 YEAR: 2002

CONTRACTOR: ISTRE Co. TEST REQUIREMENTS: FUSION: PEEL - 115 ppi SHEAR - 131 ppi ; EXTRUSION: PEEL - 84 ppi SHEAR - 151 ppi

PRIMARY: ■ SECONDARY: ☐ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		RE-TEST	QA ID
16B	—	F	P18/P19	368'	Ø9	DW	179/158	175/151	231/230	—	P	23 Sept	CHW	24 Sept	191	153	241	—	F	16B1	CHW
29	—	F	P46/P47	19'	11	SSC	173/184	176/152	207/210	—	P	23 Sept	CHW	24 Sept	176	164	221	P	—	—	CHW
30	—	F	P51/P52	9	11	SSC	184/171	159/161	221/228	—	P	24 Sept	CHW	25 Sept	188	171	228	P	—	—	CHW
31	—	F	P56/P32	190	Ø9	DW	159/167	162/160	218/214	—	P	24 Sept	CHW	25 Sept	173	173	220	P	—	—	CHW
32	—	F	P36/P56	143	11	SSC	184/178	161/157	216/211	—	P	24 Sept	CHW	25 Sept	175	169	209	P	—	—	CHW
16B1	—	F	P18/P19	356'	Ø9	DW	182/153	182/172	242/238	P	—	24 Sept	CHW	25 Sept	190	179	243	—	F	16B2	CHW
33	—	F	P57/P58	122	Ø9	DW	152/172	163/177	221/225	P	—	20 OCT	CHW	30 OCT	183	191	241	P	—	—	CHW
34	—	F	P58/P59	227	Ø9	DW	163/176	162/177	228/229	P	—	20 OCT	CHW	30 OCT	192	200	245	P	—	—	CHW
35	—	F	P60/P61	353	11	SSC	180/184	163/177	234/232	P	—	20 OCT	CHW	30 OCT	183	188	240	P	—	—	CHW
36	—	F	P61/P62	275	Ø9	DW	163/165	189/170	243/238	P	—	20 OCT	CHW	30 OCT	177	196	237	P	—	—	CHW
16B2	—	F	P18/P19	346	Ø9	DW	149/168	176/155 / 32/178	—	F	—	28 Sept	Failed Peel in field				—		F	16B3	CHW

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

16B - peeled (151)

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GEOSYNTEC CONSULTANTS FILE NO. 3-10-DTL REVIEWED BY: TBW SHEET NO. 4 OF 12

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 YEAR: 2002

CONTRACTOR: ISTRE Co. TEST REQUIREMENTS: FUSION: PEEL - 115 ppi SHEAR - 151 ppi ; EXTRUSION: PEEL - 84 ppi SHEAR - 151 ppi

PRIMARY: ■ SECONDARY: ☐ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/ FAIL		DATE SAMPLED/ SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/ FAIL	RE-TEST	QA ID
1663 ✓	—	F	P18/P19	326	09	DW	173/158	148/158	207/216	F	—	9-30	CHW	Peeled in field				F	1664	CHW
1664 ✓	—	F	P18/P19	314	09	DW	159/168	179/163	—	F	—	9-30	CHW	Peeled in field				F	1665	CHW
1665 ✓	—	F	P18/P19	300	09	DW	155/175	171/177	—	F	—	30 Sept	CHW	Peeled in field				F	1666	CHW
1666 ✓	—	F	P18/P19	278	09	DW	130/134	168/154	—	F	—	30 Sept	CHW	Peeled in field				F	1667	CHW
1667 ✓	—	F	P18/P19	255	09	DW	159/149	105/175	—	F	—	30 Sept	CHW	Peeled in field				F	1668	CHW
1668 ✓	—	F	P18/P19	234	09	DW	152/164	167/142 169/172	Peel 169/142	P	—	30 Sept	CHW	10 OCT	183	171	243	AD F	1669	CHW
37 ✓	—	F	P62/P63	218	~~09~~ 11	~~DW~~ SSC	167/170	178/161	237/235	P	—	2 OCT	CHW	3 OCT	183	174	245	P —	—	CHW
38 ✓	—	F	P63/P64	220	09	DW	156/176	163/157	229/234	P	—	2 OCT	CHW	3 OCT	176	182	252	P —	—	CHW
39 ✓	—	F	P65/P66	175	09	DW	185/150	176/166	242/232	P	—	2 OCT	CHW	3 OCT	203	184	250	P —	—	CHW
40 ✓	—	F	P66/P67	175	11	SSC	173/151	171/162	225/235	P	—	2 OCT	CHW	3 OCT	197	170	241	P —	—	CHW
41 ✓	—	F	P68/P69	10	10	JI/DW	192/166	153/169	228/224	P	—	2 Oct	CHW	3 OCT	192	166	244	P —	—	CHW

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

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GEOSYNTEC CONSULTANTS FILE NO. 3-10-DTL REVIEWED BY: TBV SHEET NO. 5 OF 12

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: GQ1341 TASK NO.: 04.1

CONTRACTOR: ISTRE Co. TEST REQUIREMENTS: FUSION: PEEL - 115 ppi SHEAR - 151 ppi ; EXTRUSION: PEEL - 84 ppi SHEAR - 151 ppi YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL	DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL	RE-TEST	QA ID
42	—	F	P69/P70	75	09	DW	152/162	154/184	218/235	P —	2 OCT	CHW	3 OCT	194	188	245	P —	—	CHW
43	—	F	P70/P71	173	11	SSC	178/168	178/155	226/230	P —	2 OCT	CHW	3 OCT	189	174	243	P —	—	CHW
44	—	F	P72/P73	225	09	JI/DW	143/175	170/137	228/231	F —	1 OCT	—	Peeled in Field				F	44A, 44B	CHW
[illegible]	—	F	P73/P74	297	11	SSC	161/162	162/158	215/222	P —	2 OCT	CHW	3 OCT	177	185	240	P —	—	CHW
[illegible]	—	F	P75/P76	100	11	SSC	164/160	160/173	218/220	P —	4 OCT	CHW	7 OCT	173	185	241	P —	—	CHW
168	—	F	P8/P9	187	09	DW	144/182	154/190	159/176	F	Peeled in Field						F	168A	CHW
[illegible]	—	F	P37/P42	243	11	SSC	174/192	188/173	210/212	P —	1 OCT	CHW	2 OCT	201	198	236	P —	—	CHW
168 10	—	F	P8/P9	157	09	DW	~~174/149~~ 160	~~188/173~~	~~210/212~~	F	1 OCT	CHW	Peeled in Field				F	168B	CHW
168 11	—	F	P8/P9	8	09	DW	146/178	161/158	153/170 176/155	P —	1 OCT	CHW	2 OCT	205	179	258	P —	—	CHW
48	—	F	P13/P69	274	11	JI/SSC	163/171	164/61	—	F	7 OCT	—	Peeled in Field				F	48A, 48B	CHW
49	—	F	P44/P45	Crest 86	09	DW	164/172	164/154	231/216	P —	4 OCT	CHW	7 OCT	171	178	234	P —	—	CHW

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

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GEO SYNTEC CONSULTANTS FILE NO. 3-10-DTL REVIEWED BY: TBW

SHEET NO. 6 OF 12

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: GQ1341 TASK NO.: 04.1

CONTRACTOR: ISTRE Co. TEST REQUIREMENTS: FUSION: PEEL - 115 ppi SHEAR - 151 ppi ; EXTRUSION: PEEL - 84 ppi SHEAR - 151 ppi YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/ FAIL	DATE SAMPLED/ SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/ FAIL	RE-TEST	QA ID
50	✓	F	P90/P91	74	Ø9	DW	163/151	154/164	208/215	P	4 Oct	JW	7 OCT	180	165	228	P	—	CHW
51	✓	F	P86/P86	28	Ø9	DW	164/149	148/143	203/200	P	4 Oct	JW	7 OCT	175	169	227	P	—	CHW
52	✓	F	P80/P82	119	Ø9	DW	158/163	158/139	227/217	P	4 Oct	JW	7 OCT	~~169~~ 167	166	221	P	—	CHW
53	✓	F	P78/P79	275	11	SSC	164/158	178/161	209/211	P	4 Oct	JW	7 OCT	176	185	241	P	—	CHW
54	✓	F	P82/P104	275	11	SSC	165/133	~~140~~ 156	~~120~~ 164	F	—	JW	—	PEELED IN FIELD			F	54A5,48	JW
55	✓	F	P18/RP17	240	11	SSC	193/195	177/180	174/179	P	3 OCT	CHW	4 OCT	198	200	247	P	—	CHW
44A	✓	F	P73/P73	235	09	DW	166/177	159/141	—	F			Peeled in Field				F	44A1	CHW
44B	✓	F	P73/P73	235	09	DW	130/150	—	—	F			Peeled in Field				F	44B1	CHW
54A	✓	F	P82/P104	290	11	SSC	154/146	157/143	—	F			Peeled in Field				F	54A1	CHW
54B	✓	F	P83/P104	265	11	SSC	154/176	147	—	F			Peeled in Field				F	54B1	CHW
55A	✓	F	P18/RP17	19	11	SSC	174/169	182/174	—	F			Peeled in Field				F	54A2	CHW

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

GEOSYNTEC CONSULTANTS FILE NO. 3-10-DTL REVIEWED BY: TBH

SHEET NO. 7 OF 12

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase II Cell #4 & #5 YEAR: 2002

CONTRACTOR: ISTRE Co. TEST REQUIREMENTS: FUSION: PEEL - 115 ppi SHEAR - 151 ppi ; EXTRUSION: PEEL - 84 ppi SHEAR - 151 ppi

PRIMARY: ■ SECONDARY: ☐ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL		RE-TEST	QA ID
[redacted]	—	F	P18 P176	29	11	SSC	157/163	154/167	207/214	P	—	7 OCT	CHW	8 OCT	178	178	234	P	—	—	CHW
48A2	—	F	P13 P69	265	11	JI/SSC	138/146	148/132	214/216	F	—	Peeled in Field							F	48A1	CHW
48B2	—	F	P14 P70	286 ~~265~~	11	JI/SSC	169/171	156/171	189/201	F	—	Peeled in Field							F	48B1	CHW
54B1	—	F	P83 P104	253	11	SSC	143/152	149/146	181/190	P	—	11 OCT	TBW	14 OCT	169	172	220	F	—	54B2	CHW
48B1	—	F	P14 P70	299	11	JI SSC	PEEL	PEEL	—	—	F	—	TBW	PEELED IN FIELD					F	48B2	TBW
48A1	—	F	P17 P69	254	11	JI SSC	PEEL	PEEL	—	—	F	—	TBW	PEELED IN FIELD					F	48A2	TBW
44A1	—	F	P72 P73	248	09	DW	PEEL	PEEL	—	—	F	—	TBW	PEELED IN FIELD					F	44A2	TBW
44B1	—	F	P72 P73	203	09	DW	PEEL	PEEL	—	—	F	—	TBW	PEELED IN FIELD					F	44B2	TBW
[redacted]	—	F	P104 P105	123	09	DW	147/174	156/175	204/216	P	—	12 OCT	CHW	14 OCT	185	168	231	P	—	—	CHW
[redacted]	—	F	P105 P106	317	09	JI	157/154	167/151	208/208	P	—	12 OCT	CHW	14 OCT	191	175	212	P	—	—	CHW
[redacted]	—	F	P106 P107	350	11	SSC	155/152	163/157	223/215	P	—	12 OCT	CHW	14 OCT	185	167	231	P	—	—	CHW

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: Ø4.1

DESCRIPTION: Phase IV Cell #4 and #5 YEAR: 2ØØ2

CONTRACTOR: ISTRE Co. TEST REQUIREMENTS: FUSION: PEEL - 115 ppi SHEAR - 151 ppi ; EXTRUSION: PEEL - 84 ppi SHEAR - 151 ppi

PRIMARY: ■ SECONDARY: ☐ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL	DATE SAMPLED/SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/FAIL	RE-TEST	QA ID
59	—	F	P107/P108	275	Ø9	JI	153/158	172/150	216/222	P —	12 OCT	CHW	14 OCT	183	164	226	P —	—	CHW
60	—	F	P108/P109	224	11	SSC	174/148	178/153	218/219	P —	12 OCT	CHW	14 OCT	191	167	233	P —	—	CHW
~~61~~		~~F~~	~~P106/P105~~	~~150~~	~~Ø9~~	~~JI~~													
61	—	F	P109/P110	250	Ø9	DW	170/137	180/142	213/226	P —	12 OCT	CHW	14 OCT	183	162	226	P —	—	CHW
62	—	F	P110/P111	215	Ø9	DW	166/147	165/149	203/216	P —	12 OCT	CHW	14 OCT	186	172	223	P —	—	CHW
63	—	F	P111/P114	285	Ø9	DW	164/156	159/151	195/201	P —	12 OCT	CHW	14 OCT	176	169	209	P —	—	CHW
64	—	F	P114/P115	275	Ø9	DW	156/148	157/152	213/221	P —	12 OCT	CHW	14 OCT	171	166	223	P —	—	CHW
65	—	F	P113/P115	225	~~11~~ 09	~~SSC~~ DW	156/139	151/143	216/234	P —	12 OCT	CHW	14 OCT	167	172	226	P —	—	CHW
66	—	F	P113/P113	125	Ø9	DW	164/150	159/163	206/211	P —	12 OCT	CHW	14 OCT	174	173	218	P —	—	CHW
67	—	F	P77/P112	200	Ø9	DW	154/160	166/157	217/206	P —	12 OCT	CHW	14 OCT	169	179	226	P —	—	CHW
68	—	F	P72/RP252	225	Ø9	DW	169/175	162/154	240/230	P —	14 OCT	CHW	16 OCT	175	179	242	~~P~~ F	Peel 68A/68B	CHW

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: Ø4.1

DESCRIPTION: Phase IV Cell # 4 & #5

YEAR: 2002

CONTRACTOR: ISTRE Co. TEST REQUIREMENTS: FUSION: PEEL - 115 ppi SHEAR - 151 ppi ; EXTRUSION: PEEL - 80 ppi SHEAR - 151 ppi

PRIMARY: ■ SECONDARY: ☐ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/ FAIL	DATE SAMPLED/ SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/ FAIL	RE-TEST	QA ID
[illegible]	✓	F	P84/P04	~~310~~ 239	11	SSC	158/175	168/166	211/221	P	14 OCT	CHW	16 OCT	178	175	229	F	54B3	CHW
[illegible]	✓	F	P68/P69	372	Ø9	DW	134/190	164/164	226/214	F	Peel 14 OCT	CHW	16 OCT	175	172	256	F	44B3	CHW
[illegible]	✓	F	P74/P75	375	Ø9	DW	136/151	174/165	234/241	P	~~Peel~~ 14 OCT	CHW	16 OCT	185	186	245	P	—	CHW
48B2	✓	F	P57/P62	73	11	SSC	191/189	186/177	231/214	P	15 OCT	CHW	16 OCT	198	192	223	P	—	CHW
[illegible]	✓	F	P07/P10	63	11	SSC	178/177	166/169	232/228	P	14 OCT	CHW	16 OCT	178	172	236	P	—	CHW
69	✓	F	P64 Matt RP275	350	11	SSC	179/172	168/160	229/221	P	14 OCT	CHW	16 OCT	178	175	235	P	—	CHW
[illegible]	✓	F	P104 RP282	281	Ø9	DW	160/184	173/177	197/221	P	15 OCT	CHW	16 OCT	172	181	240	P	—	CHW
[illegible]	✓	F	P22 P10	583	Ø9	DW	169/170	197/191	234/221	P	15 OCT	CHW	16 OCT	184	181	219	P	—	CHW
68A	✓	F	P72 RP252	238	Ø9	DW	206/166	176/173	227/219	P	16 OCT	CHW	17 OCT	182	186	233	P	—	CHW
68B	✓	F	P72 RP252	213	Ø9	DW	112/181	129/178	231/216	F	Peeled in Field						F	68B1	CHW
[illegible]	✓	F	P68/P69	363	Ø9	DW	210/156	193/168	211/214	F	Peeled in Field		17 OCT				F	44B4	CHW

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: G01341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & 5

YEAR: 2002

CONTRACTOR: ISTRE Co. TEST REQUIREMENTS: FUSION: PEEL-115ppi SHEAR-151ppi ; EXTRUSION: PEEL -84ppi SHEAR-151ppi

PRIMARY: ■ SECONDARY: ☐ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA							
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/ FAIL		DATE SAMPLED/ SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/ FAIL		RE-TEST	QA ID
[redacted]	—	F	P103/P104	68	11	SSC	166/168	203/157	234/216	P	—	16 OCT	CHW	17 OCT	180	170	237	P	—	—	CHW
[redacted]	—	F	P67/P69	350	Ø9	DW	169/106	189/176	237/218	*	F	Peeled in field						F		4485	CHW
68B1	—	F	P72/RP252	195	Ø9	DW	195/166	88/104	231/222	—	F	Peeled in field						F		68B2	CHW
68B2	—	F	P72/RP252	184	Ø9	DW	164/146	136/171	237/221	—	F	Peeled in field						F		68B3	CHW
[redacted]	—	F	P68/P69	315 ~~334~~	Ø9	DW	186/131	187/116	231/216	—	F	Peeled in field						F		4486	CHW
[redacted]	—	F	P68/P69	290	Ø9	DW	171/168	136/179	216/219	—	F	Peeled in field						F		4487	CHW
[redacted]	—	F	P73/RP252	370	Ø9	DW	191/184	143/128	239/246	P	—	17 OCT	CHW	18 OCT	189	174	239	P	—	—	CHW
4487	—	F	P68/P69	265	Ø9	DW	178/157	156/178	217/236	—	F	Peeled in field 18 OCT						F		4488	CHW
[redacted]	—	F	P68/P69	237	Ø9	DW	171/183	153/168	238/209	P	—	18 OCT	CHW	19 OCT	191	183	249	P	—	—	CHW
7-2	—	F	RP252/RP336	63	13	DW	177/170	178/184	237/240	P	—	18 OCT	CHW	19 OCT	181	200	241	P	—	—	CHW
7-3	—	F	P62/RP350	289	13	DW	158/166	161/166	241/250	P	—	21 OCT	CHW	22 OCT	179	171	229	P	—	—	CHW

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

DESTRUCTIVE TEST LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 YEAR: 2002

CONTRACTOR: ISTRE CO. TEST REQUIREMENTS: FUSION: PEEL - 115 PPI SHEAR - 151 PPI EXTRUSION: PEEL - 84 PPI SHEAR - 151 PPI

PRIMARY: ■ SECONDARY: ☐ RE-TEST: ☐ OTHER: ☐

SAMPLE DISTRIBUTION: LABORATORY: ■ ARCHIVE: ■ INSTALLER: ■ OTHER:

SAMPLE DATA							FIELD DATA						LABORATORY DATA						
D.S. NO.	TRACK (1) SINGLE	TRACK (1) DOUBLE	LOCATION SEAM	LOCATION DISTANCE (ft)	MACH NO.	OPER ID	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/ FAIL	DATE SAMPLED/ SHIPPED (day/mo)	QA ID	DATE OF RESULTS (day/mo)	AVG PEEL (PPI/PSI) INSIDE	AVG PEEL (PPI/PSI) OUTSIDE	AVG SHEAR (PPI/PSI)	PASS/ FAIL	RE-TEST	QA ID
[illegible]	—	F	PS4 RP353	182	13	DW	188/160	184/166	240/233	P —	21 OCT	CHW	22 OCT	203	183	254	P —	—	CHW
750	—	F	PS4 RP353	28	13	DW	149/172	138/169	231/246	P —	22 OCT	CHW	23 OCT	182	185	231	P —	—	CHW

NOTES: (1) TRACK TYPES: E = EXTRUSION F = FUSION

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SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD
GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DP-1	204.7	BRK	189.5	SE 1	185.7	SE 1	
	202.0	BRK	190.8	SE 1	176.4	SE 1	-
	216.2	BRK	188.0	SE 1	169.8	SE 1	
	212.7	BRK	186.8	SE 1	174.6	SE 1	
	216.8	BRK	185.7	SE 1	172.0	SE 1	
DP-2	237.8	BRK	192.1	SE 1	167.0	SE 1	
	238.1	BRK	184.6	SE 1	168.3	SE 1	-
	238.2	BRK	194.3	SE 1	189.0	SE 1	
	237.8	BRK	179.6	SE 1	175.2	SE 1	
	236.7	BRK	184.4	SE 1	165.6	SE 1	
DP-3	237.1	BRK	190.9	SE 1	168.3	SE 1	
	237.3	BRK	192.1	SE 1	169.1	SE 1	-
	237.3	BRK	178.4	SE 1	164.0	SE 1	
	238.4	BRK	181.5	SE 1	162.1	SE 1	
	239.2	BRK	189.1	SE 1	163.1	SE 1	
DP-4	242.6	BRK	192.9	SE 1	175.8	SE 1	
	243.7	BRK	191.1	SE 1	197.2	SE 1	-
	243.0	BRK	190.3	SE 1	130.0	**AD BRK**	
	243.8	BRK	187.3	SE 1	161.1	SE 1	
	240.5	BRK	184.6	SE 1	169.0	SE 1	
DP -4A	239.3	BRK	192.1	SE 1	165.9	SE 1	
	239.3	BRK	192.7	SE 1	172.2	SE 1	-
	240.1	BRK	183.1	SE 1	165.9	SE 1	
	239.9	BRK	191.1	SE 1	165.5	**AD BRK**	
	240.8	BRK	179.1	SE 1	163.5	SE 1	
DP-4A1	245.6	BRK	197.7	SE 1	169.1	SE 1	
	244.0	BRK	209.4	SE 1	165.3	SE 1	-
	248.1	BRK	204.2	SE 1	177.7	SE 1	
	247.8	BRK	201.1	SE 1	177.2	SE 1	
	244.7	BRK	198.9	SE 1	175.1	SE 1	
DP-4B	239.6	BRK	192.3	SE 1	168.5	SE 1	-
	240.8	BRK	184.0	SE 1	171.2	SE 1	
	242.2	BRK	201.5	SE 1	168.0	**AD BRK**	
	240.6	BRK	180.4	SE 1	175.3	SE 1	
	236.2	BRK	199.4	SE 1	161.7	SE 1	

) PEEL (1) represents outer track or top flap.
) PEEL (2) represents inner track or bottom flap.
) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD
GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DP-4B1	244.8	BRK	198.1	SE 1	169.1	SE 1	
	247.5	BRK	201.1	SE 1	175.0	SE 1	-
	245.9	BRK	196.9	SE 1	176.3	SE 1	
	248.5	BRK	204.3	SE 1	171.3	SE 1	
	245.9	BRK	196.9	SE 1	172.6	SE 1	
DP-5	238.0	BRK	174.5	SE 1	187.1	SE 1	
	240.3	BRK	177.5	SE 1	183.2	SE 1	-
	240.1	BRK	178.6	SE 1	195.7	SE 1	
	240.2	BRK	173.5	SE 1	204.1	SE 1	
	235.1	BRK	179.0	SE 1	190.4	SE 1	
DP-6	234.9	BRK	185.2	SE 1	174.3	SE 1	
	234.6	BRK	208.0	SE 1	195.6	SE 1	-
	234.3	BRK	199.9	SE 1	195.7	SE 1	
	233.8	BRK	192.2	SE 1	183.4	SE 1	
	233.2	BRK	190.4	SE 1	186.6	SE 1	
DP-7	237.1	BRK	170.9	SE 1	200.8	SE 1	
	236.3	BRK	172.0	SE 1	188.4	SE 1	-
	236.5	BRK	173.2	SE 1	174.3	SE 1	
	235.2	BRK	193.1	SE 1	200.5	SE 1	
	232.3	BRK	175.9	SE 1	184.7	SE 1	
DP-8	235.4	BRK	185.2	SE 1	192.6	SE 1	
	236.0	BRK	175.2	SE 1	195.3	SE 1	-
	236.0	BRK	175.2	SE 1	191.5	SE 1	
	235.2	BRK	178.5	SE 1	194.1	SE 1	
	234.6	BRK	185.0	SE 1	187.3	SE 1	
DP-9	239.1	BRK	207.2	SE 1	184.4	SE 1	
	241.3	BRK	188.7	SE 1	185.7	SE 1	-
	241.5	BRK	181.9	SE 1	181.3	SE 1	
	240.0	BRK	191.3	SE 1	186.3	SE 1	
	238.5	BRK	183.0	SE 1	190.5	SE 1	
DP-10	245.5	BRK	200.9	SE 1	183.9	SE 1	-
	246.2	BRK	203.9	SE 1	183.7	SE 1	
	245.2	BRK	195.7	SE 1	188.0	SE 1	
	243.4	BRK	179.9	SE 1	181.7	SE 1	
	241.5	BRK	177.5	SE 1	174.1	SE 1	

1) PEEL (1) represents outer track or top flap.
2) PEEL (2) represents inner track or bottom flap.
3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DP-11	239.2	BRK	195.0	SE 1	175.3	SE 1	
	233.7	BRK	181.5	SE 1	186.7	SE 1	-
	237.7	BRK	185.6	SE 1	190.6	SE 1	
	239.6	BRK	183.6	SE 1	181.3	SE 1	
	238.0	BRK	203.0	SE 1	177.8	SE 1	
DP-12	224.6	BRK	190.1	SE 1	200.4	SE 1	
	223.5	BRK	190.5	SE 1	196.0	SE 1	-
	225.8	BRK	189.2	SE 1	194.6	SE 1	
	224.6	BRK	186.8	SE 1	194.6	SE 1	
	226.0	BRK	179.2	SE 1	198.0	SE 1	
DP-13	238.3	BRK	197.6	SE 1	183.5	SE 1	
	238.9	BRK	201.6	SE 1	185.5	SE 1	-
	238.9	BRK	201.5	SE 1	190.3	SE 1	
	236.8	BRK	205.9	SE 1	188.8	SE 1	
	237.7	BRK	204.2	SE 1	188.0	SE 1	
DP-14	236.0	BRK	193.2	SE 1	203.0	SE 1	
	224.0	BRK	204.8	SE 1	184.2	SE 1	-
	239.6	BRK	189.6	SE 1	200.7	SE 1	
	237.7	BRK	188.9	SE 1	204.7	SE 1	
	237.3	BRK	198.1	SE 1	198.1	SE 1	
DP-15	248.8	BRK	196.3	SE 1	174.8	SE 1	
	241.1	BRK	196.0	SE 1	162.0	SE 1	-
	249.2	BRK	193.6	SE 1	186.4	SE 1	
	248.8	BRK	187.7	SE 1	214.2	SE 1	
	244.5	BRK	192.1	SE 1	174.3	SE 1	
DP-16	246.4	BRK	185.5	SE 1	172.2	SE 1	
	247.4	BRK	181.4	SE 1	165.6	**AD BRK**	-
	249.3	BRK	180.4	SE 1	115.3	**AD BRK**	
	245.8	BRK	137.4	**AD BRK**	170.0	SE 1	
	243.4	BRK	188.6	SE 1	169.8	SE 1	
DP-16A	249.3	BRK	186.3	SE 1	180.3	SE 1	-
	250.2	BRK	196.6	SE 1	179.1	SE 1	
	244.6	BRK	196.2	SE 1	187.7	SE 1	
	244.8	BRK	185.4	SE 1	185.5	SE 1	
	240.5	BRK	188.4	SE 1	189.0	SE 1	

) PEEL (1) represents outer track or top flap.
) PEEL (2) represents inner track or bottom flap.
) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS
FUSION METHOD
GEOSYNTEC
FLUOR FERNALD
GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DP-16B	242.2	BRK	203.2	SE 1	170.2	SE 1	
	240.2	BRK	196.0	SE 1	153.8	SE 1	-
	242.0	BRK	190.7	SE 1	122.9	**AD BRK**	
	240.1	BRK	170.1	SE 1	159.8	SE 1	
	238.5	BRK	196.4	SE 1	155.9	SE 1	
DP-16B1	244.7	BRK	190.6	SE 1	163.1	SE 1	-
	240.3	BRK	191.7	SE 1	178.7	SE 1	
	246.0	BRK	199.7	SE 1	165.4	**AD BRK**	
	241.9	BRK	183.1	**AD BRK**	157.6	**AD BRK**	
	244.0	BRK	186.4	SE 1	188.3	SE 1	
DP-16B8	243.3	BRK	177.1	SE 1	152.4	**AD**	-
	243.7	BRK	162.4	SE 1	175.7	SE 1	
	242.8	BRK	202.8	SE 1	178.0	SE 1	
	243.1	BRK	188.7	SE 1	174.5	SE 1	
	242.7	BRK	185.7	SE 1	173.6	SE 1	
DP-16 B11	254.5	BRK	201.2	SE 1	179.9	SE 1	-
	256.9	BRK	214.3	SE 1	173.2	SE 1	
	259.5	BRK	200.3	SE 1	182.0	SE 1	
	260.2	BRK	204.5	SE 1	176.5	SE 1	
	256.9	BRK	206.8	SE 1	181.9	SE 1	
DP-17	239.6	BRK	194.1	SE 1	172.0	SE 1	-
	239.7	BRK	189.2	SE 1	173.3	SE 1	
	237.3	BRK	190.6	SE 1	175.6	SE 1	
	237.3	BRK	192.5	SE 1	164.8	SE 1	
	236.4	BRK	193.5	SE 1	165.2	SE 1	
DP-18	244.2	BRK	189.4	SE 1	183.4	SE 1	-
	244.9	BRK	196.9	SE 1	172.2	SE 1	
	245.8	BRK	193.4	SE 1	179.7	SE 1	
	242.4	BRK	196.7	SE 1	180.8	SE 1	
	239.9	BRK	189.3	SE 1	200.5	SE 1	
							-
DP-19	234.1	BRK	173.7	SE 1	170.7	SE 1	
	233.4	BRK	190.4	SE 1	166.5	SE 1	
	235.1	BRK	186.8	SE 1	179.9	SE 1	
	234.4	BRK	188.4	SE 1	194.2	SE 1	
	231.8	BRK	183.5	SE 1	199.0	SE 1	

(1) PEEL (1) represents outer track or top flap.
(2) PEEL (2) represents inner track or bottom flap.
(3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DP-20	229.3	BRK	172.9	SE 1	169.1	SE 1	
	228.1	BRK	184.4	SE 1	166.8	SE 1	-
	225.4	BRK	172.2	SE 1	167.2	SE 1	
	225.7	BRK	178.5	SE 1	176.0	SE 1	
	224.9	BRK	177.2	SE 1	164.9	SE 1	
DP-21	229.3	BRK	190.0	SE 1	164.0	SE 1	
	229.3	BRK	189.8	SE 1	160.6	SE 1	-
	228.1	BRK	191.2	SE 1	159.1	SE 1	
	227.4	BRK	172.5	SE 1	162.9	SE 1	
	220.3	BRK	183.4	SE 1	163.3	SE 1	
DP-22	220.8	BRK	166.6	SE 1	168.2	SE 1	
	219.8	BRK	167.6	SE 1	172.5	SE 1	-
	218.8	BRK	169.1	SE 1	174.5	SE 1	
	217.4	BRK	176.7	SE 1	159.8	SE 1	
	214.9	BRK	158.9	SE 1	184.0	SE 1	
DP-23	226.7	BRK	165.2	SE 1	179.1	SE 1	
	228.2	BRK	159.5	SE 1	178.3	SE 1	-
	226.9	BRK	175.3	SE 1	174.7	SE 1	
	225.8	BRK	177.7	SE 1	169.2	SE 1	
	227.1	BRK	177.9	SE 1	174.0	SE 1	
DP-24	232.0	BRK	186.7	SE 1	169.0	SE 1	
	231.7	BRK	176.1	SE 1	195.4	SE 1	-
	232.7	BRK	165.9	SE 1	188.3	SE 1	
	232.4	BRK	163.5	SE 1	185.9	SE 1	
	229.3	BRK	168.6	SE 1	184.6	SE 1	
DP-25	225.6	BRK	175.0	SE 1	168.1	SE 1	
	227.2	BRK	189.0	SE 1	177.6	SE 1	-
	226.0	BRK	182.8	SE 1	173.4	SE 1	
	225.3	BRK	177.3	SE 1	174.5	SE 1	
	225.4	BRK	174.2	SE 1	171.1	SE 1	
DP-26	219.7	BRK	187.2	SE 1	168.2	SE 1	-
	220.0	BRK	157.7	SE 1	165.0	SE 1	
	220.1	BRK	156.1	SE 1	177.4	SE 1	
	218.3	BRK	153.0	SE 1	181.6	SE 1	
	220.1	BRK	163.2	SE 1	170.3	SE 1	

1) PEEL (1) represents outer track or top flap.
2) PEEL (2) represents inner track or bottom flap.
3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DP-27	216.7	BRK	175.5	SE 1	165.1	SE 1	
	215.0	BRK	175.2	SE 1	167.5	SE 1	-
	212.6	BRK	173.9	SE 1	176.5	SE 1	
	213.3	BRK	170.8	SE 1	170.9	SE 1	
	213.5	BRK	180.8	SE 1	166.9	SE 1	
DP-28	221.1	BRK	184.5	SE 1	182.4	SE 1	
	222.0	BRK	182.9	SE 1	154.3	SE 1	-
	222.2	BRK	179.7	SE 1	154.8	SE 1	
	221.6	BRK	175.0	SE 1	153.9	SE 1	
	219.3	BRK	160.8	SE 1	184.5	SE 1	
DP-29	223.7	BRK	177.2	SE 1	164.2	SE 1	
	222.0	BRK	184.8	SE 1	160.3	SE 1	-
	219.6	BRK	172.9	SE 1	160.5	SE 1	
	218.5	BRK	172.3	SE 1	157.6	SE 1	
	220.8	BRK	174.8	SE 1	159.2	SE 1	
DP-30	229.3	BRK	182.0	SE 1	172.9	SE 1	
	227.1	BRK	188.9	SE 1	169.2	SE 1	-
	226.7	BRK	198.7	SE 1	172.6	SE 1	
	228.6	BRK	190.5	SE 1	168.7	SE 1	
	228.5	BRK	181.7	SE 1	169.5	SE 1	
DP-31	220.7	BRK	177.6	SE 1	168.7	SE 1	
	218.7	BRK	185.6	SE 1	178.4	SE 1	-
	221.6	BRK	174.7	SE 1	169.0	SE 1	
	218.9	BRK	161.3	SE 1	173.8	SE 1	
	220.9	BRK	164.1	SE 1	172.6	SE 1	
DP-32	211.0	BRK	173.4	SE 1	171.3	SE 1	
	201.3	BRK	167.6	SE 1	167.8	SE 1	-
	210.9	BRK	180.4	SE 1	156.8	SE 1	
	210.2	BRK	176.9	SE 1	168.3	SE 1	
	210.5	BRK	177.3	SE 1	178.7	SE 1	
DP-33	240.3	BRK	181.3	SE 1	189.2	SE 1	-
	242.4	BRK	184.2	SE 1	191.6	SE 1	
	243.9	BRK	186.7	SE 1	191.6	SE 1	
	240.5	BRK	179.2	SE 1	186.2	SE 1	
	239.5	BRK	183.0	SE 1	194.1	SE 1	

1) PEEL (1) represents outer track or top flap.
2) PEEL (2) represents inner track or bottom flap.
3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD
GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DP-34	237.7	BRK	183.6	SE 1	198.2	SE 1	
	247.9	BRK	188.5	SE 1	193.6	SE 1	-
	245.2	BRK	187.2	SE 1	209.4	SE 1	
	248.7	BRK	211.9	SE 1	195.5	SE 1	
	243.5	BRK	190.1	SE 1	201.8	SE 1	
DP-35	240.9	BRK	182.4	SE 1	191.8	SE 1	
	240.9	BRK	182.8	SE 1	178.4	SE 1	-
	239.1	BRK	188.2	SE 1	182.3	SE 1	
	240.0	BRK	183.6	SE 1	204.4	SE 1	
	237.9	BRK	179.5	SE 1	185.5	SE 1	
DP-36	239.6	BRK	177.1	SE 1	205.4	SE 1	
	237.6	BRK	181.0	SE 1	196.1	SE 1	-
	238.4	BRK	174.1	SE 1	203.9	SE 1	
	237.9	BRK	172.7	SE 1	183.9	SE 1	
	233.6	BRK	178.7	SE 1	192.2	SE 1	
DP-37	248.3	BRK	180.6	SE 1	176.6	SE 1	
	247.2	BRK	184.2	SE 1	172.7	SE 1	-
	244.6	BRK	190.9	SE 1	176.0	SE 1	
	241.7	BRK	184.2	SE 1	172.1	SE 1	
	245.4	BRK	177.0	SE 1	172.7	SE 1	
DP-38	251.5	BRK	173.2	SE 1	187.0	SE 1	
	252.8	BRK	172.2	SE 1	184.8	SE 1	-
	252.3	BRK	185.8	SE 1	168.5	SE 1	
	253.0	BRK	173.3	SE 1	182.3	SE 1	
	250.5	BRK	176.8	SE 1	186.6	SE 1	
DP-39	250.2	BRK	195.6	SE 1	193.7	SE 1	
	249.3	BRK	206.3	SE 1	176.6	SE 1	-
	250.5	BRK	205.5	SE 1	181.4	SE 1	
	252.2	BRK	201.8	SE 1	211.0	SE 1	
	247.8	BRK	203.7	SE 1	159.7	SE 1	
DP-40	239.9	BRK	204.8	SE 1	164.8	SE 1	-
	240.1	BRK	194.3	SE 1	170.6	SE 1	
	242.7	BRK	196.8	SE 1	171.1	SE 1	
	244.8	BRK	194.6	SE 1	175.1	SE 1	
	239.7	BRK	194.1	SE 1	168.6	SE 1	

1) PEEL (1) represents outer track or top flap.
2) PEEL (2) represents inner track or bottom flap.
3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DP-41	243.0	BRK	196.4	SE 1	171.6	SE 1	
	245.1	BRK	190.3	SE 1	184.0	SE 1	-
	246.0	BRK	193.6	SE 1	163.6	SE 1	
	246.0	BRK	189.0	SE 1	165.7	SE 1	
	239.5	BRK	190.0	SE 1	146.7	SE 1	
DP-42	245.8	BRK	193.4	SE 1	199.3	SE 1	
	245.0	BRK	194.2	SE 1	182.7	SE 1	-
	245.2	BRK	195.3	SE 1	185.5	SE 1	
	246.0	BRK	192.6	SE 1	178.6	SE 1	
	240.7	BRK	193.4	SE 1	205.4	SE 1	
DP-43	243.1	BRK	196.5	SE 1	174.0	SE 1	
	243.1	BRK	185.7	SE 1	180.7	SE 1	-
	244.4	BRK	193.0	SE 1	177.9	SE 1	
	241.6	BRK	185.2	SE 1	165.3	SE 1	
	244.2	BRK	186.6	SE 1	173.4	SE 1	
DP-44-A2	246.2	BRK	184.6	SE 1	187.9	SE 1	
	244.3	BRK	179.4	SE 1	192.9	SE 1	-
	243.6	BRK	190.1	SE 1	178.5	SE 1	
	245.7	BRK	190.0	SE 1	189.3	SE 1	
	244.0	BRK	180.9	SE 1	181.4	SE 1	
DP-44-B2	252.7	BRK	133.6	**AD BRK**	164.0	**AD BRK**	
	257.3	BRK	191.7	SE 1	166.4	SE 1	-
	254.5	BRK	182.8	SE 1	181.2	SE 1	
	256.6	BRK	177.3	SE 1	171.3	**AD BRK**	
	257.0	BRK	189.4	SE 1	175.4	SE 1	
DP-44B8	247.0	BRK	192.3	SE 1	180.4	SE 1	
	248.3	BRK	195.0	SE 1	181.8	SE 1	-
	251.3	BRK	186.8	SE 1	176.3	SE 1	
	249.1	BRK	186.8	SE 1	191.4	SE 1	
	248.8	BRK	193.9	SE 1	184.4	SE 1	
DP-45	242.0	BRK	177.2	SE 1	179.5	SE 1	-
	242.7	BRK	182.0	SE 1	175.0	SE 1	
	240.8	BRK	173.0	SE 1	189.7	SE 1	
	237.4	BRK	173.3	SE 1	187.4	SE 1	
	234.8	BRK	180.1	SE 1	195.6	SE 1	

(1) PEEL (1) represents outer track or top flap.
(2) PEEL (2) represents inner track or bottom flap.
(3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS
FUSION METHOD

GEOSYNTEC
FLUOR FERNALD
GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DP-46	241.1	BRK	176.2	SE 1	184.2	SE 1	
	240.7	BRK	174.5	SE 1	193.6	SE 1	-
	241.1	BRK	176.8	SE 1	180.8	SE 1	
	241.6	BRK	172.3	SE 1	190.2	SE 1	
	241.7	BRK	166.9	SE 1	174.7	SE 1	
DP-47	234.4	BRK	205.1	SE 1	198.4	SE 1	
	235.7	BRK	200.9	SE 1	200.3	SE 1	-
	236.7	BRK	200.1	SE 1	198.6	SE 1	
	239.2	BRK	201.4	SE 1	195.7	SE 1	
	233.6	BRK	197.9	SE 1	197.0	SE 1	
DP-48-A2	238.2	BRK	178.7	SE 1	187.5	SE 1	
	236.6	BRK	181.6	SE 1	179.4	SE 1	-
	236.3	BRK	171.5	SE 1	175.2	SE 1	
	235.5	BRK	154.7	SE 1	174.6	SE 1	
	232.6	BRK	171.8	SE 1	175.5	SE 1	
DP-48-B2	219.6	BRK	206.7	SE 1	195.8	SE 1	
	223.8	BRK	195.2	SE 1	192.1	SE 1	-
	226.6	BRK	194.0	SE 1	191.7	SE 1	
	223.8	BRK	195.7	SE 1	191.3	SE 1	
	222.3	BRK	196.4	SE 1	190.2	SE 1	
DP-49	232.9	BRK	177.0	SE 1	175.5	SE 1	
	237.4	BRK	176.0	SE 1	176.0	SE 1	-
	235.7	BRK	173.6	SE 1	173.5	SE 1	
	232.3	BRK	161.8	SE 1	175.9	SE 1	
	234.1	BRK	165.4	SE 1	188.0	SE 1	
DP-50	229.8	BRK	182.0	SE 1	171.5	SE 1	
	230.1	BRK	181.4	SE 1	185.2	SE 1	-
	227.4	BRK	178.6	SE 1	155.3	SE 1	
	229.8	BRK	179.5	SE 1	160.4	SE 1	
	224.0	BRK	179.0	SE 1	155.0	SE 1	
DP-51	225.4	BRK	170.6	SE 1	164.0	SE 1	-
	227.7	BRK	191.3	SE 1	169.0	SE 1	
	228.2	BRK	168.6	SE 1	166.1	SE 1	
	228.6	BRK	169.3	SE 1	175.2	SE 1	
	225.1	BRK	177.6	SE 1	169.4	SE 1	

(1) PEEL (1) represents outer track or top flap.
(2) PEEL (2) represents inner track or bottom flap.
(3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS
FUSION METHOD

GEOSYNTEC
FLUOR FERNALD
GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DP-52	223.6	BRK	171.7	SE 1	161.6	SE 1	
	219.2	BRK	167.1	SE 1	164.0	SE 1	-
	221.5	BRK	176.6	SE 1	164.7	SE 1	
	220.5	BRK	159.6	SE 1	157.5	SE 1	
	218.4	BRK	160.8	SE 1	163.2	SE 1	
DP-53	242.1	BRK	176.2	SE 1	186.3	SE 1	
	240.7	BRK	178.8	SE 1	201.3	SE 1	-
	242.7	BRK	171.2	SE 1	178.9	SE 1	
	240.8	BRK	177.7	SE 1	177.6	SE 1	
	238.4	BRK	174.4	SE 1	178.8	SE 1	
DP-54-A2	234.6	BRK	172.4	SE 1	175.5	SE 1	
	235.0	BRK	178.6	SE 1	184.1	SE 1	-
	234.2	BRK	172.2	SE 1	164.0	SE 1	
	231.7	BRK	184.0	SE 1	182.5	SE 1	
	233.3	BRK	180.7	SE 1	182.1	SE 1	
DP-54-B1	219.6	BRK	169.6	SE 1	170.3	SE 1	
	212.8	BRK	170.6	SE 1	175.3	SE 1	-
	222.5	BRK	171.9	SE 1	171.1	SE 1	
	224.8	BRK	151.3	**AD BRK**	171.0	SE 1	
	220.3	BRK	176.8	SE 1	170.6	SE 1	
DP-54-B2	227.7	BRK	185.1	SE 1	180.3	SE 1	
	233.0	BRK	175.5	SE 1	179.7	SE 1	-
	231.5	BRK	174.2	SE 1	179.8	SE 1	
	220.1	BRK	175.0	SE 1	156.5	**AD BRK**	
	230.7	BRK	178.4	SE 1	180.0	SE 1	
DP-54-B3	236.2	BRK	177.1	SE 1	174.0	SE 1	
	233.4	BRK	186.9	SE 1	169.4	SE 1	-
	240.3	BRK	163.4	SE 1	173.5	SE 1	
	238.1	BRK	190.7	SE 1	167.6	SE 1	
	234.8	BRK	180.1	SE 1	163.9	SE 1	
DP-55	247.5	BRK	198.8	SE 1	200.6	SE 1	-
	245.1	BRK	188.2	SE 1	191.5	SE 1	
	247.7	BRK	198.9	SE 1	205.3	SE 1	
	248.5	BRK	205.7	SE 1	197.6	SE 1	
	248.3	BRK	198.9	SE 1	202.5	SE 1	

1) PEEL (1) represents outer track or top flap.
2) PEEL (2) represents inner track or bottom flap.
3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD
GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DP-56	228.6	BRK	190.5	SE 1	156.6	SE 1	
	231.8	BRK	174.5	SE 1	169.6	SE 1	-
	233.5	BRK	183.0	SE 1	174.3	SE 1	
	230.1	BRK	196.4	SE 1	167.5	SE 1	
	228.8	BRK	180.2	SE 1	171.0	SE 1	
DP-57	212.6	BRK	204.2	SE 1	182.3	SE 1	
	208.5	BRK	188.6	SE 1	178.9	SE 1	-
	211.2	BRK	175.9	SE 1	168.3	SE 1	
	214.7	BRK	206.4	SE 1	172.2	SE 1	
	210.7	BRK	180.7	SE 1	175.7	SE 1	
DP-58	231.0	BRK	187.8	SE 1	170.9	SE 1	
	230.3	BRK	187.5	SE 1	165.3	SE 1	-
	229.8	BRK	180.8	SE 1	171.1	SE 1	
	233.2	BRK	180.7	SE 1	162.5	SE 1	
	230.1	BRK	186.6	SE 1	166.8	SE 1	
DP-59	228.5	BRK	184.5	SE 1	166.4	SE 1	
	229.1	BRK	185.8	SE 1	163.8	SE 1	-
	226.2	BRK	185.9	SE 1	164.0	SE 1	
	224.5	BRK	176.3	SE 1	162.3	SE 1	
	223.0	BRK	180.5	SE 1	165.9	SE 1	
DP-60	235.5	BRK	192.1	SE 1	167.6	SE 1	
	232.8	BRK	194.4	SE 1	163.4	SE 1	-
	233.6	BRK	188.7	SE 1	168.4	SE 1	
	231.6	BRK	187.5	SE 1	165.3	SE 1	
	232.5	BRK	191.0	SE 1	167.8	SE 1	
DP-61	228.8	BRK	186.5	SE 1	164.5	SE 1	
	229.2	BRK	181.7	SE 1	166.3	SE 1	-
	227.2	BRK	179.2	SE 1	159.0	SE 1	
	224.1	BRK	180.6	SE 1	159.3	SE 1	
	219.8	BRK	184.8	SE 1	162.8	SE 1	
DP-62	224.3	BRK	188.7	SE 1	156.1	SE 1	-
	222.2	BRK	193.0	SE 1	186.5	SE 1	
	222.7	BRK	186.8	SE 1	191.1	SE 1	
	222.7	BRK	190.2	SE 1	158.8	SE 1	
	221.0	BRK	169.2	SE 1	169.7	SE 1	

(1) PEEL (1) represents outer track or top flap.
(2) PEEL (2) represents inner track or bottom flap.
(3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

OCTOBER 2002

023-3313

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD
GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DP-63	210.3	BRK	171.3	SE 1	170.0	SE 1	
	210.1	BRK	182.2	SE 1	172.6	SE 1	-
	209.7	BRK	169.3	SE 1	171.4	SE 1	
	208.2	BRK	181.8	SE 1	165.7	SE 1	
	206.6	BRK	175.9	SE 1	163.2	SE 1	
DP-64	220.6	BRK	186.4	SE 1	168.1	SE 1	
	223.3	BRK	167.1	SE 1	170.7	SE 1	-
	226.7	BRK	166.0	SE 1	163.9	SE 1	
	222.6	BRK	166.7	SE 1	160.4	SE 1	
	221.3	BRK	169.4	SE 1	166.7	SE 1	
DP-65	223.8	BRK	172.0	SE 1	182.8	SE 1	
	229.0	BRK	167.2	SE 1	173.5	SE 1	-
	226.7	BRK	165.6	SE 1	176.8	SE 1	
	226.2	BRK	168.9	SE 1	163.1	SE 1	
	224.7	BRK	160.9	SE 1	162.8	SE 1	
DP-66	219.3	BRK	177.9	SE 1	166.7	SE 1	
	221.7	BRK	168.1	SE 1	174.4	SE 1	-
	217.8	BRK	178.0	SE 1	191.4	SE 1	
	217.8	BRK	174.8	SE 1	166.3	SE 1	
	214.7	BRK	170.6	SE 1	166.6	SE 1	
DP-67	225.1	BRK	169.8	SE 1	181.0	SE 1	
	228.0	BRK	171.1	SE 1	186.0	SE 1	-
	224.8	BRK	170.9	SE 1	173.0	SE 1	
	227.5	BRK	166.3	SE 1	172.2	SE 1	
	223.2	BRK	168.3	SE 1	183.7	SE 1	
DP-68	240.2	BRK	184.3	SE 1	168.9	SE 1	
	244.2	BRK	158.9	AD BRK	182.2	SE 1	-
	241.2	BRK	189.7	SE 1	190.7	SE 1	
	244.2	BRK	174.0	SE 1	183.9	SE 1	
	239.6	BRK	166.7	SE 1	169.4	SE 1	
DP-68A	234.6	BRK	181.7	SE 1	187.2	SE 1	-
	235.2	BRK	184.5	SE 1	185.1	SE 1	
	234.0	BRK	171.9	SE 1	186.2	SE 1	
	231.4	BRK	181.5	SE 1	188.9	SE 1	
	229.1	BRK	189.7	SE 1	181.7	SE 1	

(1) PEEL (1) represents outer track or top flap.
(2) PEEL (2) represents inner track or bottom flap.
(3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS
FUSION METHOD

GEOSYNTEC
FLUOR FERNALD
GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppi)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppi)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppi)	PEEL (2) BREAK CODE (3)	REMARKS
DP-68B3	238.9	BRK	188.9	SE 1	166.3	SE 1	
	239.1	BRK	190.0	SE 1	177.3	SE 1	-
	239.7	BRK	188.6	SE 1	187.0	SE 1	
	239.6	BRK	188.2	SE 1	169.4	SE 1	
	236.9	BRK	187.7	SE 1	172.1	SE 1	
DP-69	237.6	BRK	179.3	SE 1	171.9	SE 1	
	236.7	BRK	187.2	SE 1	171.4	SE 1	-
	235.1	BRK	181.4	SE 1	180.7	SE 1	
	234.2	BRK	162.7	SE 1	175.2	SE 1	
	233.3	BRK	178.8	SE 1	177.6	SE 1	
DP-70	239.8	BRK	171.9	SE 1	184.8	SE 1	
	240.5	BRK	174.7	SE 1	179.4	SE 1	-
	241.2	BRK	175.1	SE 1	184.5	SE 1	
	241.1	BRK	169.0	SE 1	173.5	SE 1	
	236.3	BRK	170.3	SE 1	181.4	SE 1	
DP-71	219.2	BRK	190.1	SE 1	184.6	SE 1	
	220.1	BRK	181.7	SE 1	185.4	SE 1	-
	219.2	BRK	182.2	SE 1	174.4	SE 1	
	222.8	BRK	178.5	SE 1	179.3	SE 1	
	213.2	BRK	187.5	SE 1	181.8	SE 1	
DP-72	237.2	BRK	178.3	SE 1	194.8	SE 1	
	240.8	BRK	180.4	SE 1	204.6	SE 1	-
	242.2	BRK	181.2	SE 1	205.4	SE 1	
	241.6	BRK	183.9	SE 1	198.8	SE 1	
	241.3	BRK	179.9	SE 1	194.9	SE 1	
DP-73	229.5	BRK	183.8	SE 1	174.0	SE 1	
	229.6	BRK	185.1	SE 1	174.9	SE 1	-
	229.8	BRK	174.4	SE 1	168.4	SE 1	
	229.1	BRK	172.4	SE 1	162.3	SE 1	
	228.7	BRK	176.9	SE 1	173.9	SE 1	
DP-74	259.1	BRK	203.6	SE 1	185.7	SE 1	-
	253.8	BRK	206.2	SE 1	182.1	SE 1	
	249.7	BRK	203.5	SE 1	185.6	SE 1	
	255.2	BRK	198.2	SE 1	182.9	SE 1	
	252.7	BRK	203.1	SE 1	176.7	SE 1	

1) PEEL (1) represents outer track or top flap.
2) PEEL (2) represents inner track or bottom flap.
3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

SUMMARY OF DESTRUCTIVE TEST RESULTS FUSION METHOD
GEOSYNTEC FLUOR FERNALD GEORGIA

SAMPLE NUMBER	SHEAR STRENGTH (ppl)	SHEAR BREAK CODE (3)	PEEL (1) STRENGTH (ppl)	PEEL (1) BREAK CODE (3)	PEEL (2) STRENGTH (ppl)	PEEL (2) BREAK CODE (3)	REMARKS
DP-75	228.6	BRK	175.5	SE 1	182.2	SE 1	
	238.7	BRK	190.9	SE 1	187.4	SE 1	-
	233.2	BRK	185.1	SE 1	194.9	SE 1	
	229.1	BRK	186.1	SE 1	186.3	SE 1	
	225.8	BRK	171.6	SE 1	174.3	SE 1	
-	-	-	-	-	-	-	
	-	-	-	-	-	-	-
	-	-	-	-	-	-	
	-	-	-	-	-	-	
	-	-	-	-	-	-	
-	-	-	-	-	-	-	
	-	-	-	-	-	-	-
	-	-	-	-	-	-	
	-	-	-	-	-	-	
	-	-	-	-	-	-	
-	-	-	-	-	-	-	
	-	-	-	-	-	-	-
	-	-	-	-	-	-	
	-	-	-	-	-	-	
	-	-	-	-	-	-	
-	-	-	-	-	-	-	
	-	-	-	-	-	-	-
	-	-	-	-	-	-	
	-	-	-	-	-	-	
	-	-	-	-	-	-	
-	-	-	-	-	-	-	
	-	-	-	-	-	-	-
	-	-	-	-	-	-	
	-	-	-	-	-	-	
	-	-	-	-	-	-	
-	-	-	-	-	-	-	-
	-	-	-	-	-	-	
	-	-	-	-	-	-	
	-	-	-	-	-	-	
	-	-	-	-	-	-	

(1) PEEL (1) represents outer track or top flap.
(2) PEEL (2) represents inner track or bottom flap.
(3) BREAK CODES BASED ON MODES ILLUSTRATED IN ATTACHED FIGURE.

DFSUM

000330

APPENDIX N

Geomembrane Repair Summary Logs

Secondary

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 + 5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
19 JUL	—	CELL 3 S-7	58	1' FROM S	RS-1	G	E	1.5	—	—	04	JB	CB	CAPPED BY		RS-48	—	TBH
19 JUL	CB —	CELL 3 S-7	61	4' F.S.	RS-2	G	E	0.5	—	—	04	JB	CB	24 JULY	HW	P	— VTOK	TBH
~~19 JUL~~	~~CELL 3 FI-S7/CELL 3 S-5/S-1~~	~~—~~	~~INT~~	~~—~~	~~RS-3~~	~~P~~	~~E~~	~~—~~	~~—~~	~~1~~								
22 JUL	CELL 3 S-5/CELL 3 S-7/S-1	~	INT	—	RS-3	P	E	1.5	1	—	04	JB	CB	CAPPED BY		RS-48	—	TBH
22 JUL	CELL 3 S-7/CELL 3 S-8/S-1	—	INT	—	RS-4	P	E	—	—	1.5	04	JB	CB	CAPPED BY		RS-48	—	TBH
22 JUL	CELL 3 S-8/CELL 3 S-9/S-1	—	INT	—	RS-5	P	E	—	—	1	04	JB	CB	CAPPED BY		RS-48	—	TBH
23 JUL	—	S-1	84	4 F.N.	RS-6	P	E	—	—	1	04	JB	CB	24 JULY	HW	P	— VTOK	TBH
23 JUL	—	S-1	98	4 F.N.	RS-7	P	E	—	—	1.5	04	JB	CB	24 JULY	HW	P	— VTOK	TBH
23 JUL	CELL 3 S-9/CELL 3 S-10/S-1	—	INT	—	RS-8	P	E	—	—	1.5	04	JB	CB	CAPPED BY		RS-48	—	TBH
23 JUL	CELL 3 S-10/CELL 3 S-11/S-1	—	INT	—	RS-9	P	E	—	—	1.5	04	JB	CB	CAPPED BY		RS-48	—	TBH
23 JUL	—	S-1	125	3 FN	RS-10	P	E	—	—	1.5	04	JB	CB	24 JULY	HW	P	— VTOK	TBH
23 JUL	—	S-1	123	6 FN	RS-11	P	E	—	—	1	04	JB	CB	24 JULY	HW	P	— VTOK	TBH
23 JUL	—	S-1	125	9 FN	RS-12	P	E	1.5	1	—	04	JB	CB	24 JULY	HW	P	— VTOK	TBH
23 JUL	—	CELL 3 S-9	98	1. F.S.	RS-13	P CB	E	0.3	—	—	04	JB	CB	CAPPED BY		RS-48	—	TBH
23 JUL	—	S-1	131	17 FN	RS-14	P	E	—	—	1	04	JB	CB	24 JULY	HW	P	— VTOK	TBH

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

CB

4943

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REVIEWED BY: TBH

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ134 TASK NO.: 041

DESCRIPTION: PHASE IV, CELLS 4 + 5 LINER

YEAR: 2002

PRIMARY: ☐ SECONDARY: ☒ OTHER: ☐

INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				QA ID
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	
23 JUL	–	S-1	124	3 FS	RS-15	P	E	–	–	1	04	JB	CB	24 JULY	HW	P –	VTOK	TBK
23 JUL	CELL3/CELL3 S-11/S-12/S-1	–	INT	–	RS-16	P	E	–	–	1.5	04	JB	CB	CAPPED	BY	RS-48 —		TBK
23 JUL	CELL3 S-12/S-1	–	165-179	–	RS-17	P	E	14	2.5	–	04	JB	CB	24 JULY	HW	P –	VTOK	TBK
23 JUL	–	S-1	166	3 F.S.	RS-18	P	E	–	–	1	04	JB	CB	24 JULY	HW	P –	VTOK	TBK
23 JUL	CELL3/CELL3 S-12/S-13/S-1	–	INT	–	RS-19	P	E	–	–	1	04	JB	CB	CAPPED	BY	RS-48 —		TBK
23 JUL	CELL3/CELL3 S-13/S-14/S-1	–	INT	–	RS-20	P	E	4	2 4 CB	–	04	JB	CB	CAPPED	BY	RS-48 —		TBK
23 JUL	CELL3/CELL3 S-14/S-15/S-1	–	INT	–	RS-21	P	E	–	–	1	04	JB	CB	CAPPED	BY	RS-48 —		TBK
23 JUL	CELL3/CELL3 S-15/S-16/S-1	–	INT	–	RS-22	P	E	–	–	1	04	JB	CB	CAPPED	BY	RS-48 —		TBK
CB 23 JUL	–	S-1	251	7 F.N	RS-23	P	E	–	–	1	04	JB	CB	24 JULY	HW	P –	VTOK	TBK
23 ~~24~~ JUL	–	S-1	264	3 FS	RS-24	P	E	–	–	1	04	JB	CB	24 JULY	HW	P –	VTOK	TBK
23 JUL	CELL3/CELL3 S-16/S-17/S-1	–	INT	–	RS-25	P	E	–	–	1	04	JB	CB	CAPPED	BY	RS-48 —		TBK
23 JUL	CELL3/CELL3 S-17/S-18/S-1	–	INT	–	RS-26	P	E	–	–	1	04	JB	CB	CAPPED	BY	RS-48 —		TBK
23 JUL	CELL3/CELL3 S-18/S-25/S-1	–	INT	–	RS-27	P	E	–	–	1	04	JB	CB	CAPPED	BY	RS-48 —		TBK
23 JUL	–	CELL3 S-25	337	–	RS-28	G	E	1	–	–	04	JB	CB	24 JULY	HW	P –	VTOK	TBK
23 JUL	CELL3/CELL3 S-25/S-26/S-1	–	INT	–	RS-29	P	E	9	2	–	04	JB	CB	CAPPED	BY	RS-48 —		TBK

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4+5 LINER YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
23 JUL	CELL3 S-26/CELL3 S-27/S-1	-	INT	-	RS-30	P	E	-	-	1	04	JB	CB	CAPPED BY RS-48			TBK
23 JUL	S-1/CELL3 S-27	-	385-395	-	RS-31	P	E	10	2	-	04	JB	CB	CAPPED BY RS-48			TBK
23 JUL	-	S-3	386	3 FN	RS-32	P	E	-	-	1	04	JB	CB	25AUG	AC	P -	CHW
23 JUL	S-3/S-5	-	373-394	-	RS-33	C	E	21	2	-	04	JB	CB	CAPPED BY RS 248			CHW
23 JUL	-	S-3	380	2 FS	RS-34	P	E	-	-	1	04	JB	CB	CAPPED BY RS 337			CHW
23 JUL	-	S-3	371	2 FS	RS-35	P	E	4	2	-	04	JB	CB	25AUG	AC	P -	CHW
23 JUL	-	S-3	358	2 FS	RS-36	P	E	4	1	-	04	JB	CB	25AUG	AC	P -	CHW
23 JUL	-	S-3	334	2 FS	RS-37	P	E	3	2	-	04	JB	CB	26AUG	AC	P -	CHW
23 JUL	-	S-3	319	8 FS	RS-38	P	E	-	-	1	04	JB	CB	24 JULY	HW	P - VTOK	TBK
23 JUL	-	S-3	311	9 FS	RS-39	P	E	-	-	1	04	JB	CB	24 JULY	HW	P - VTOK	TBK
23 JUL	-	S-3	311	3 FS	RS-40	P	E	-	-	1	04	JB	CB	24 JULY	HW	P - VTOK	TBK
23 JUL	-	S-4	303	3 FN	RS-41	P	E	-	-	1	04	JB	CB	24 JULY	HW	P - VTOK	TBK
23 JUL	-	S-3	304	9 FS	RS-42	P	E	-	-	1	04	JB	CB	24 JULY	HW	P - VTOK	TBK
23 JUL	-	S-3	284	9 FS	RS-43	P	E	-	-	2	04	JB	CB	24 JULY	HW	P - VTOK	TBK
23 JUL	S-1/S-2	-	267	-	RS-44	DS-2	E	4	2	-	04	JB	CB	24 JULY	HW	P - VTOK	TBK

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ134 TASK NO.: Ø4.1

DESCRIPTION: CELLS 4 & 5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
24 JUL	CELL3 S-5 / S-1	–	34	–	RS-45	DS-1	5	2	–	04	JB	CB	CAPPED BY		RS-48	—	TBW
24 JUL	S-1 / S-2	–	0-16	–	RS-46	C	16	2	–	04	JB	CB	25 JULY	SC	P	–	VTOK	CB
24 JULY	S-2 A.T. SKIRT	–	Ø-5	–	RS-47	S	5	22	–	Ø4	JB	TBW	24 JULY	HW	P	–	VTOK	TBW
24 JULY	S-1 / CELL3 TIE-IN	–	Ø-378	–	RS-48	C	378	3	–	Ø6	JB	TBW	6 AUG	AC	P	–	—	CHW
25 JULY	S-2 / S-3	–	Ø-9	–	RS-49	P	9	2	–	Ø4	JB	TBW	26 JUL	JH	P	–	VTOK	CB
25 JULY	S-1 / RS-48	–	7	–	RS-50	P	6	2	–	Ø4	JB	TBW	25 JUL	SC	P	–	VTOK	CB
29 JUL 30 CB	S-9 / S-10	–	4-392	–	RS-51	C	388	3	–	01	DW	CB	SEE FUSION SEAMING LOG					CB
29 JUL	S-11 / S-12	–	230-395	–	RS-52	C	165	2	–	01	DW	CB	↓	↓	↓	↓	↓	CB
30 JUL	S-13 / S-14	–	84	–	RS-53	DS-9	5	3	–	04	JI	CB	31 JUL	AC	P	–	VTOK	CB
30 JUL	S-12 / S-13	–	29	–	RS-54	P	3	2	–	04	JI	CB	31 JUL	AC	P	–	VTOK	CB
30 JUL	–	S-11	14	2 F.N	RS-55	G	1	–	–	04	JI	CB	31 JUL	AC	P	–	VTOK	CB
30 JUL	–	S-11	21	9 F.N	RS-56	G	2	–	–	04	JI	CB	31 JUL	AC	P	–	VTOK	CB
30 JUL	–	S-11	43	6 F.N	RS-57	G	1	–	–	04	JI	CB	31 JUL	AC	P	–	VTOK	CB
30 JUL	–	S-11	47	6 F.N	RS-58	G	1	–	–	04	JI	CB	31 JUL	AC	P	–	VTOK	CB
30 JUL	–	S-13	181	8 F.N	RS-59	P	–	–	2	04	JI	CB	31 JUL	AC	P	–	VTOK	CB

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO. GQ1341 TASK NO.: ~~2002~~ 04.1 (CB)

DESCRIPTION: PHASE IV, CELLS 4+5 LINER

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTREE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				QA ID
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	
30 JUL	S-12/S-13	-	217	-	RS-60	P	E	-	-	2	04	JI	CB	31 JUL	SC	P -	VTOK	CB
30 JUL	S-11/S-12	-	171	-	RS-61	P (DS-8)	E	5	3	-	04	JI	CB	31 JUL	AC	P -	VTOK	CB
30 JUL	S-11/S-12	-	229	-	RS-62	P	E	6	2	-	04	JI	CB	31 JUL	AC	P -	VTOK	CB
30 JUL	S-12/RS-52	-	309	-	RS-63	DS-10	E	6	2	-	04	JI	CB	31 JUL	AC	P -	VTOK	CB
30 JUL	S-11/RS-52	-	329	-	RS-64	P	E	3	2	-	04	JI	CB	31 JUL	AC	P -	VTOK	CB
30 JUL	S-12/S-13	-	306	-	RS-65	P	E	-	-	2	04	JI	CB	31 JUL	SC	P -	VTOK	CB
30 JUL	-	S-13	315	2 F.S.	RS-66	P	E	-	-	1	04	JI	CB	31 JUL	SC	P -	VTOK	CB
30 JUL	S-12/S-13	-	330	-	RS-67	DS-6	E	5	2	-	04	JI	CB	31 JUL	AC	P -	VTOK	CB
30 JUL	-	S-13	219	2 F.N.	RS-68	P	E	-	-	2	04	JI	CB	31 JUL	SC	P -	VTOK	CB
30 JUL	-	S-13	384	2 F.N.	RS-69	P	E	2	1	-	04	JI	CB	31 JUL	SC	P -	VTOK	CB
30 JUL	-	S-13	381	2 F.S.	RS-70	P	E	-	-	1	04	JI	CB	31 JUL	SC	P -	VTOK	CB
30 JUL	-	S-12	388	2 F.N.	RS-71	P	E	2	1	-	04	JI	CB	31 JUL	AC	P -	VTOK	CB
30 JUL	-	S-12	385	1 F.S.	RS-72	P	E	-	-	1	04	JI	CB	31 JUL	SC	P -	VTOK	CB
30 JUL	-	S-11	~~362~~ 385	3 F.S.	RS-73	P	E	-	-	2	04	JI	CB	31 JUL	SC	P -	VTOK	CB
30 JUL	-	S-10	~~377~~ 376	2 F.N.	RS-74	P	E	-	-	1	04	JI	CB	31 JUL	SC	P -	VTOK	CB

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 041

DESCRIPTION: PHASE IV, CELLS 4+5 LINER

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTEE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING					QA ID
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL		ACTION	
30 JUL	–	S-10	369	4 F.N.	RS-75	P	E	–	–	1	04	JI	CB	31 JUL	SC	P	–	VTOK	CB
30 JUL	–	S-10	376	2 F.S	RS-76	P	E	–	–	1	04	JI	CB	31 JUL	AC	P	–	VTOK	CB
30 JUL	–	S-10	378	3 F.S	RS-77	P	E	–	–	2	04	JI	CB	31 JUL	AC	P	–	VTOK	CB
30 JUL	–	S-9	383	3 F.N.	RS-78	P	E	–	–	2	04	JI	CB	31 JUL	AC	P	–	VTOK	CB
30 JUL	–	S-8	386	3 F.N.	RS-79	P	E	–	–	1	04	JI	CB	31 JUL	AC	P	–	VTOK	CB
30 JUL	S-8/S-9	–	DS-SA2 - 390	–	RS-80	C	E	28	2	–	04	JI	CB	31 JUL	AC	P	–	VTOK	CB
30 JUL	–	S-14	388	3 F.S.	RS-81	P	E	–	–	1	04	JI	CB	31 JUL	AC	P	–	VTOK	CB
30 JUL	–	S-15	380	2 F.S.	RS-82	P	E	–	–	1	04	JI	CB	31 JUL	AC	P	–	VTOK	CB
30 JUL	–	S-9	381	1 F.S.	RS-83	P	E	–	–	1	04	JI	CB	31 JUL	AC	P	–	VTOK	CB
30 JUL	S-8/S-9	–	330	–	RS-84	P	E	4	2	–	04	JI	CB	31 JUL	AC	P	–	VTOK	CB
31 JUL	S-18/S-19	–	5	–	RS-85	P	E	2	2	–	Ø4	JB	TBW	Ø2 AUG	AC	P	–	VTOK	TBW
31 JUL	S-18/S-19	–	56	–	RS-86	P	E	2	2	–	Ø4	JB	TBW	Ø2 AUG	AC	P	–	VTOK	TBW
31 JUL	S-18/S-19	–	82	–	RS-87	P	E	3	2	–	Ø4	JB	TBW	Ø2 AUG	AC	P	–	VTOK	TBW
30 JUL	S-8/S-9	–	309	–	RS-88	DS-7	E	5	2	–	04	JI	CB	31 JUL	AC	P	–	VTOK	CB
05 AUG	CELL 3 S-25/CELL 3 S-26/RS-48	–	INT	–	RS-89	P	E	12	4	–	04	JB	CB	6 AUG	AC	P	–	–	JW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO. 6Q1341 TASK NO.: 041

DESCRIPTION: PHASE IV, CELLS 4+5 LINER YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
05 AUG	S-23/S-24	-	314	-	RS-90 DS-17	E	5	2	-	04	JB	CB	08 AUG	AC	P -	VTOK	CB
05 AUG	-	S-23	364	2 FN	RS-91 P	E	-	-	2	04	JB	CB	06 AUG	AC	P -	VTOK	CB
05 AUG	-	S-23	365	3 FS	RS-92 P	E	-	-	2	04	JB	CB	06 AUG	AC	P -	VTOK	CB
05 AUG	-	S-24	367	2 FN	RS-93 P	E	-	-	2	04	JB	CB	06 AUG	AC	P -	VTOK	CB
05 AUG	-	S-24	364	3 FS	RS-94 P	E	-	-	2	04	JB	CB	08 AUG	AC	P -	VTOK	CB
05 AUG	S-1/RS-48	-	367	-	RS-95 DS-27	E	4	2	-	04	JB	CB	CAPPED	BY	RS 353	—	CHW
06 AUG	-	S-25	366	3 F.N.	RS-96 P	E	-	-	2	04	JB	CB	08 AUG	AC	P -	VTOK	CB
06 AUG	-	S-25	364	4 F.S.	RS-97 P	E	-	-	2	04	JB	CB	08 AUG	AC	P -	VTOK	CB
06 AUG	-	S-27	365	5 F.N.	RS-98 P	E	-	-	2	04	JB	CB	08 AUG	AC	P -	VTOK	CB
06 AUG	00039 -	S-27	370	4 F.S.	RS-99 P	E	-	-	2	04	JB	CB	08 AUG	AC	P -	VTOK	CB
06 AUG	-	S-29	367	3 F.N.	RS-100 P	E	-	-	2	04	JB	CB	08 AUG	AC	P -	VTOK	CB
06 AUG	-	S-30	370	4 F.N.	RS-101 P	E	-	-	2	04	JB	CB	08 AUG	AC	P -	VTOK	CB
06 AUG	-	S-30	370	20 F.N.	RS-102 P	E	-	-	2	04	JB	CB	15 AUG	AC	P -	VTOK	TBC
05 AUG	S-25/S-27	-	275	-	RS-103 P	E	3	2	-	04	JB	CB	08 AUG	AC	P -	VTOK	CB
05 AUG	S-27/S-28	-	332	-	RS-104 DS-24	E	4	2	-	04	JB	CB	08 AUG	AC	P -	VTOK	CB

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 LINER

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING					
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL		ACTION	QA ID
06 AUG	S-8/S-21	-	334-370	-	RS-105	C	E	36	2	-	04	JB	CB	06 AUG + 08 AUG	AC	P	-	VTOK	CB
06 AUG	S-8/S-21	-	314	-	RS-106	P	E	4	2	-	04	JB	CB	07 AUG	AC	P	-	VTOK	CB
06 AUG	S-8/S-21	-	297	-	RS-107	P	E	2	2	-	04	JB	CB	08 AUG	AC	P	-	VTOK	CB
06 AUG	S-8/S-9	-	289	-	RS-108	P	E	6	2	-	04	JB	CB	08 AUG	AC	P	-	VTOK	CB
06 AUG	S-8/S-9	-	278	-	RS-109	P	E	3	1	-	04	JB	CB	08 AUG	AC	P	-	VTOK	CB
06 AUG	S-8/S-9	-	171	-	RS-110	P	E	2	2	-	04	JB	CB	08 AUG	AC	P	-	VTOK	CB
06 AUG	S-8/S-21	-	29-106	-	RS-111	C	E	27	2	-	04	JB	CB	08 AUG	AC	P	-	VTOK	CB
06 AUG	S-8/S-9	-	48	-	RS-112	P	E	-	-	2	04	JB	CB	08 AUG	AC	P	-	VTOK	CB
06 AUG	S-8/S-21/S-26	-	INT	-	RS-113	P	E	-	-	3	04	JB	CB	08 AUG	AC	P	-	VTOK	CB
06 AUG	S-8/S-9/S-26	-	INT	-	RS-114	P	E	3	2	-	04	JB	CB	08 AUG	AC	P	-	VTOK	CB
07 AUG	S-1/S-2	-	0-393	-	RS-115	C	F	393	2	-	09	DW	CB	SEE FUSION SEAMING LOG					CB
06 AUG	-	S-8	124	12 FS	RS-116	P	E	-	-	1	04	JB	CB	08 AUG	AC	P	-	VTOK	CB
08 AUG	S-23/S-24	-	310	-	RS-117	P	E	-	-	2	04	JB	CB	08 AUG	AC	P	-	VTOK	CB
08 AUG	S-23/S-24	-	318	-	RS-118	P	E	2	2	-	04	JB	CB	08 AUG	AC	P	-	VTOK	CB
08 AUG	S-27/S-28	-	336	-	RS-119	P	E	2	2	-	04	JB	CB	08 AUG	AC	P	-	VTOK	CB

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4+5 LINER YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ INSTALLER: ISTEC Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)	RS-			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
08 AUG	S-27/S-28	-	328	-	RS-120	P	E	2	2	-	04	JB	CB	08 AUG	AC	P -	VTOK	CB
08 AUG	-	S-27	326	2 F.S.	RS-121	P	E	-	-	2	04	JB	CB	08 AUG	AC	P -	VTOK	CB
08 AUG	S-25/S-27	-	278	-	RS-122	P	E	-	-	2	04	JB	CB	08 AUG	AC	P -	VTOK	CB
08 AUG	S-25/S-27	-	272	-	RS-123	P DS-25	E	2	2	-	04	JB	CB	08 AUG	AC	P -	VTOK	CB
08 AUG	S-29/S-30	-	271	-	124	P	E	4	2	-	04	JB	CB	19 AUG	AC	P -	VTOK	TBK
08 AUG	S-28/S-29	-	200	-	125	DS-26	E	5	2	-	04	JB	CB	15 AUG	AC	P -	VTOK	TBK
08 AUG	S-24/S-25	-	131	-	126	DS-28	E	5	2	-	04	JB	CB	08 AUG	AC	P -	VTOK	CB
08 AUG	S-22/S-24	-	108	-	127	P	E	-	-	1	04	JB	CB	08 AUG	AC	P -	VTOK	CB
08 AUG	S-25/S-27	-	41	-	128	DS-23	E	5	2	-	04	JB	CB	16 AUG	AC	P -	VTOK	TBK
08 AUG	-	S-29	32	8 F.S.	129	G	E	-	-	1	04	JB	CB	16 AUG	AC	P -	VTOK	TBK
08 AUG	S-22/S-24	-	48	-	130	P	E	9	2	-	04	JB	CB	08 AUG	AC	P -	VTOK	CB
08 AUG	-	S-22	65	8 F.S.	131	P	E	-	-	1	04	JB	CB	08 AUG	AC	P -	VTOK	CB
08 AUG	-	S-8	82	12 F.S.	132	P	E	-	-	1	04	JB	CB	08 AUG	AC	P -	VTOK	CB
08 AUG	S-43/S-44	-	62-69	-	133	P	E	7	2	-	04	JB	CB	12 AUG	SW	P -	VTOK	SW
09 AUG	S-43/S-44	-	15	-	134	DS-31	E	4	2	-	04	JB	CB	13 AUG	AC	P -	VTOK	CB

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: 601341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4+5 LINER

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
09 AUG	S-43/44/45 JW	—	INT	-	135	P	E	—	—	2	04	JB	CB	12 AUG	JH	P —	VTOK	JW
09 AUG	S-41/42/46	-	INT	-	136	P	E	—	-	2	04	JB	CB	12 AUG	AC	P —	VTOK	JW
09 AUG	S-41/42/44	—	INT	-	137	P	E	-	—	2	04	JB	CB	12 AUG	JH	P —	VTOK	JW
09 AUG	S-41/44/45	-	INT	-	138	P	E	2	1	—	04	JB	CB	12 AUG	JH	P —	VTOK	JW
09 AUG	S-31/41/45	—	INT	—	139	P	E	2	2	—	04	JB	CB	15 AUG	AC	P —	VTOK	TBV
09 AUG	S-32/S-33	—	77	—	140	DS-29	E	4	2	—	04	JB	CB	12 AUG	AC	P —	VTOK	JW
09 AUG	S-34/35/36	—	INT	—	141	P	E	2	2	—	04	JB	CB	12 AUG	AC	P —	VTOK	CB
09 AUG	S-35/36/37	-	INT	-	142	P	E	—	—	2	04	JB	CB	12 AUG	AC	P —	VTOK	CB
09 AUG	S-38/S-39	-	52	-	143	DS-30	E	4	2	—	04	JB	CB	12 AUG	AC	P —	VTOK	CB
09 AUG	—	S-39	51	14 F.E.	144	G	E	—	—	1	04	JB	CB	12 AUG	AC	P —	VTOK	CB
09 AUG	S-39/40/47	—	INT	—	145	P	E	—	—	2	04	JB	CB	12 AUG	AC	P —	VTOK	CB
09 AUG	S-40/47/48	-	INT	-	146	P	E	—	—	2	04	JB	CB	12 AUG	AC	P —	VTOK	CB
09 AUG	S-50/S-51	-	43-57	-	147	C	E	14	2	—	04	JB	CB	12 AUG	AC	P —	VTOK	CB
09 AUG	S-51/52/53	—	INT	-	148	P	E	3	2	-	04	JB	CB	12 AUG	AC	P	VTOK	JW
09 AUG	S-52/S-53	-	85	-	149	DS-32	E	5	3	-	04	JB	CB	12 AUG	AC	P —	VTOK	CB

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: ~~2000~~ 04.1

DESCRIPTION: PHASE IV, CELLS 4+5 LINER YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM (SECONDARY PANELS)	PANEL	DIST. (ft)	OFFSET (ft)	RS-			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
09 AUG	–	S-39	15	5 F.W.	150	P	E	-	-	2	04	JB	CB	12 AUG	AC	P	VTOK	JW
09 AUG	–	S-39	8	4 F.W.	151	G	E	3	-	-	04	JB	CB	12 AUG	AC	P	VTOK	JW
10 AUG	S-41/46/56	-	INT	-	152	P	E	-	-	2	04	JI	CB	12 AUG	AC	P	VTOK	JW
10 AUG	S-31/41/56	-	INT	-	153	P	E	-	-	2	04	JI	CB	12 AUG	AC	P	VTOK	JW
10 AUG	S-31/32/56	-	INT	-	154	P	E	-	-	2	04	JI	CB	12 AUG	AC	P	VTOK	JW
10 AUG	S-32/33/56	-	INT	-	155	P	E	-	-	2	04	JI	CB	12 AUG	AC	P	VTOK	JW
10 AUG	S-33/34/56	-	INT	-	156	P	E	-	-	2	04	JI	CB	12 AUG	AC	P	VTOK	JW
10 AUG	S-34/35/56	-	INT	-	157	P	E	-	-	2	04	JI	CB	12 AUG	AC	P	VTOK	JW
10 AUG	35/37/56	-	INT	-	158	P	E	-	-	2	04	JI	CB	12 AUG	AC	P	VTOK	JW
10 AUG	37/56	-	173	-	159	DS-43	E	4	3	-	04	JI	CB	12 AUG	AC	P	VTOK	JW
10 AUG	37/38/56	-	INT	-	160	P	E	-	-	2	04	JI	CB	12 AUG	AC	P	VTOK	JW
10 AUG	38/39/56	-	INT	-	161	P	E	-	-	2	04	JI	CB	12 AUG	AC	P	VTOK	JW
10 AUG	39/40/56	-	INT	-	162	P	E	-	-	2	04	JI	CB	13 AUG	AC	P	VTOK	JW
10 AUG	40/48/56	-	INT	-	163	P	E	-	-	2	04	JI	CB	13 AUG	AC	P	VTOK	JW
10 AUG	48/49/56	-	INT	-	164	P	E	-	-	2	04	JI	CB	13 AUG	AC	P	VTOK	JW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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CB (11)

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Cells 4&5 Liner

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: Istre

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)	RS-			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
10 AUG	49/56	-	282	-	165	DS-42	E	4	2	-	04	JI	CB	13 AUG	AC	P -	VTOK	JW
10 AUG	-	S47	52	11 FW	166	G	E	1	-	-	04	JI	CB	12 AUG	AC	P -	VTOK	CB
10 AUG	49/50/56	-	INT	-	167	P	E	-	-	2	04	JI	CB	13 AUG	AC	P -	VTOK	JW
10 AUG	50/52/~~53~~ 56	-	INT	-	168	P	E	4	2	-	04	JI	CB	13 AUG	AC	P -	VTOK	JW
10 AUG	52/53/56	-	INT	-	169	P	E	-	-	2	04	JI	CB	13 AUG	AC	P -	VTOK	JW
10 AUG	53/54/56	-	INT	-	170	P	E	5	2	-	04	JI	CB	12 AUG	AC	P -	VTOK	CB
12 AUG	34/36/65	-	INT	-	171	P	E	2	2	-	04	JB	JW	13 AUG	AC	P -	VTOK	JW
12 AUG	36/37/65	-	INT	-	172	P	E	2	2	-	04	JB	JW	13 AUG	AC	P F	REPAIRED (RS-189)	JW
12 AUG	65/66	-	196	-	173	P	E	2	2	-	04	JB	JW	12 AUG	AC	P -	VTOK	JW
12 AUG	37/38/65	-	INT	-	174	P	E	2	2	-	04	JB	JW	12 AUG	AC	P -	VTOK	CB
12 AUG	-	66	148	1 FW	175	P	E	1	2	-	04	JB	JW	13 AUG	AC	P -	VTOK	JW
12 AUG	38/39/65	-	INT	-	176	P	E	2	2	-	04	JB	JW	12 AUG	AC	P -	VTOK	CB
12 AUG	39/47/65	-	INT	-	177	P	E	-	-	2	04	JB	CB	12 AUG	AC	P -	VTOK	CB
13 AUG	21/22	-	0-213	-	178	C	F	213	2	-	09	DW	JW	SEE FUSION SEAMING LOG				TBD
13 AUG	21/23	-	213-364	-	179	C	F	144	2	-	09	DW	JW	SEE FUSION SEAMING LOG				TBD

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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REVIEWED BY: TBD

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 041

DESCRIPTION: Cells 4+5 Liner

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: Istre Co.

DATE (day/mo)	LOCATION: SEAM	LOCATION: PANEL	LOCATION: DIST. (ft)	LOCATION: OFFSET (ft)	REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE: LENGTH (ft)	SIZE: WIDTH (ft)	SIZE: DIA (ft)	WELDER ID: MACH NO.	WELDER ID: OPER ID	QA ID	NON-DESTRUCTIVE TESTING: DATE (day/mo)	NON-DESTRUCTIVE TESTING: OPER ID	NON-DESTRUCTIVE TESTING: PASS/ FAIL	NON-DESTRUCTIVE TESTING: ACTION	NON-DESTRUCTIVE TESTING: QA ID
~~30JUL~~	~~S-8/S-9~~	~~–~~	~~309~~	~~–~~	~~180~~	~~DS-7~~	~~E~~	~~5~~	~~3~~	~~–~~	~~JI~~						
13AUG	S-22/S-23		353-371	–	180	C	~~E~~ F	18	2	–	09	DW	CB	SEE FUSION SEAMING LOG			TBL
30 JUL	S-8/S-9	–	309	–	181	DS-7	E	5	3	–	04	JI	CB	31JUL	AC	P –	OK	CB
14 ~~13~~ AUG	31/41/45	–	1N7	–	182	P	E	2	3	–	04	JB	JW	15AUG	AC	P –	—	TBL
14 ~~13~~ AUG	31/45/65	–	1N7	–	183	P	E	2	4	–	04	JB	JW	15AUG	AC	P –	—	TBL
14 ~~13~~ AUG	31/65	–	75	–	184	P	E	2	4	–	06	DL	JW	15AUG	AC	P –	—	TBL
14 ~~13~~ AUG	31/32/65	–	1N7	–	185	P	E	2	1	–	06	DL	JW	15AUG	AC	P –	—	TBL
14 ~~13~~ AUG	32/33/65	–	1N7	–	186	P	E	2	2	–	06	DL	JW	15AUG	AC	P –	—	TBL
14 ~~13~~ AUG	33/34/65	–	1N7	–	187	P	E	2	2	–	06	DL	JW	17AUG	HW	P –	—	TBL
14 ~~13~~ AUG	65/66	–	137	–	188	P	E	2	5	–	06	DL	JW	17AUG	HW	P –	—	TBL
14 ~~13~~ AUG	36/37/65	–	1N7	–	189	G	E	1	–	–	06	DL	JW	15AUG	AC	P –	—	TBL
14 ~~13~~ AUG	56/57	–	71	–	190	DS-34	E	2	5	–	06	DL	JW	17AUG	HW	P –	—	TBL
14 ~~13~~ AUG	58/59	–	150	–	191	DS-37	E	2	5	–	06	DL	JW	15AUG	AC	P –	—	TBL
CB 14 ~~13~~ AUG	54/55/56	–	1N7	–	192	P	E	2	1	–	06	DL	JW	15AUG	AC	P –	—	TBL
14 ~~13~~ AUG	–	56	387	2FS	193	P	E	2	1	–	06	DL	JW	15AUG	AC	P –	—	TBL

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: 691741 TASK NO.: 41

DESCRIPTION: PHASE IV CELL 4+5 LINER YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ INSTALLER: ISTAR Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL S-	DIST. (ft)	OFFSET (ft)	RS			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
14 AUG	–	56	387	5 F.N.	194	P	E	1	1	–	06	DL	JW	15 AUG	AC	P –	—	TBC
14 AUG	–	57	387	2 F.S.	195	P	E	1	1	–	06	DL	JW	15 AUG	AC	P –	—	TBC
14 AUG	–	57	385	3 F.N.	196	P	E	3	2	–	06	DL	CB	15 AUG	AC	P –	—	TBC
14 AUG	–	58	385	4 F.S.	197	P	E	–	–	2	06	DL	CB	15 AUG	AC	P –	—	TBC
14 AUG	–	59	375	3 F.S.	198	P	E	–	–	2	06	DL	CB	15 AUG	AC	P –	—	TBC
14 AUG	–	59	376	4 F.N.	199	P	E	–	–	2	06	DL	CB	15 AUG	AC	P –	—	TBC
14 AUG	–	60	380	4 F.S.	200	P	E	–	–	2	06	DL	CB	15 AUG	AC	P –	—	TBC
14 AUG	–	60	377	4 F.N.	201	P	E	–	–	2	06	DL	CB	15 AUG	AC	P –	—	TBC
14 AUG	–	61	381	4 F.S.	202	P	E	2 –	1 –	2 –	06	DL	CB	15 AUG	AC	P –	—	TBC
14 AUG	–	61	381	4 F.N.	203	P	E	–	–	2	06	DL	CB	15 AUG	AC	P –	—	TBC
14 AUG	–	62	384	4 F.S.	204	P	E	–	–	2	06	DL	CB	15 AUG	AC	P –	—	TBC
14 AUG	–	62	383	5 F.N.	205	P	E	–	–	1	06	DL	CB	15 AUG	AC	P –	—	TBC
14 AUG	–	63	383	4 F.S.	206	P	E	2	2	–	06	DL	CB	15 AUG	AC	P –	—	TBC
14 AUG	62/63	–	369	–	207	DS-38	E	5	2	–	06	DL	CB	15 AUG	AC	P –	—	TBC
14 AUG	–	62	369	7 F.N.	208	P	E	–	–	2	06	DL	CB	15 AUG	AC	P –	—	TBC

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: CELLS 4+5 LINER YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ INSTALLER: ISTEK Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
15 AUG	S-61/S-62	—	300	—	RS-209	DS-16 (P)	E	6	2	—	06	DL	TBC	15 AUG	AC	P —	—	TBC
15 AUG	S-63/S-64	—	158	—	RS-210	DS-39	E	5	2	—	03	JB	TBC	15 AUG	AC	P —	—	TBC
15 AUG	S-30/S-64	—	199	—	RS-211	DS-41	E	6	2	—	03	JB	TBC	15 AUG	AC	P —	—	TBC
15 AUG	8 —	S-62	220	9' S OF 62/63	RS-212	G	E	1	—	—	03	JB	TBC	15 AUG	AC	P —	—	TBC
15 AUG	S-30/S-64	—	225	—	RS-213	P	E	—	—	2	03	JB	TBC	15 AUG	AC	P —	—	TBC
15 AUG	S-59/S-60	—	277	—	RS-214	DS-36	E	6	2	—	06	DL	TBC	19 AUG	AC	P —	—	TBC
15 AUG	—	S-29	82	CENTER OF PANEL	RS-215	P	E	—	—	1	03	JB	TBC	16 AUG	AC	P —	—	TBC
15 AUG	S-23/S-24	—	365	—	RS-216	P	E	6	2	—	06	DL	TBC	19 AUG	AC	P —	—	TBC
15 AUG	S-23/RS-179/ RS-180	—	353	—	RS-217	P	E	2	2	—	06	DL	TBC	19 AUG	AC	P —	—	TBC
15 AUG	S-21/RS-179 RS-180	—	352	—	RS-218	P	E	6	2	—	06	DL	TBC	19 AUG	AC	P —	—	TBC
15 AUG	S-21/S-23 RS-180	—	371	—	RS-219	P	E	3	3	—	06	DL	TBC	19 AUG	AC	P —	—	TBC
15 AUG	S-23/RS-179	—	319	—	RS-220	DS-46	E	6	2	—	06	DL	TBC	19 AUG	AC	P —	—	SW
15 AUG	S-21/S-22 RS-178	"L" SHAPED	150	TO CENTER OF SEAM	RS-221	(P)	E	15	2	—	03	JB	TBC	15 AUG	AC	P —	—	TBC
15 AUG	S-21/RS-178	—	193	—	RS-222	(P)	E	—	—	1	03	JB	TBC	15 AUG	AC	P —	—	TBC
15 AUG	S-21/RS-178	—	200	—	RS-223	(P)	E	—	—	1	03	JB	TBC	15 AUG	AC	P —	—	TBC

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
15 AUG	S-21/RS-178	—	94	—	RS-224 (P)	E	—	—	1	03	JB	TBC	15 AUG	AC	P	—	TBC
15 AUG	S-21/RS-178	—	56	—	RS-225 DS-06	E	6	2	—	03	JB	TBC	15 AUG	AC	P	—	TBC
15 AUG	S-22/RS-178	—	57	—	RS-226 (P)	E	4	2	—	03	JB	TBC	15 AUG	AC	P	—	TBC
15 AUG	S-21/S-22 S-23/RS-179	—	213	—	RS-227 (P)	E	5	5	—	06	DL	TBC	15 AUG	AC	P	—	TBC
15 AUG	S-22/S-23	—	0-22	—	RS-228 (C)	E	22	2	—	03	JB	TBC	15 AUG	AC	P	—	TBC
15 AUG	S-22/23/24 RS-228	—	214	—	RS-229 (P)	E	3	2	—	03	JB	TBC	15 AUG	AC	P	—	TBC
15 AUG	S-23/RS-179	—	213-234	—	RS-230 (P)	E	21	2	—	06	DL	TBC	15 AUG	AC	P	—	TBC
15 AUG	—	S-21	203	CENTER	RS-231 (P)	E	—	—	1	06	DL	TBC	15 AUG	AC	P	—	TBC
15 AUG	—	S-9	192	4' S OF S-9/RS-51	RS-232 (G)	E	1	—	—	03	JB	TBC	16 AUG	AC	P	—	TBC
15 AUG	S-10/RS-51	—	192	—	RS-233 DS-12	E	6	2	—	03	JB	TBC	16 AUG	AC	P	—	TBC
15 AUG	S-14/S-15	—	232	—	RS-234 DS-21	E	6	2	—	03	JB	TBC	16 AUG	AC	P	—	TBC
15 AUG	S-9/RS-51	—	181-390	—	RS-235 (C)	E	209	2	—	06	DL	TBC	16 AUG	AC	P	—	TBC
15 AUG	S-14/S-15	—	240	—	RS-236 (P)	E	—	—	2	03	JB	TBC	16 AUG	AC	P	—	TBC
15 AUG	S-14/S-15	—	258	—	RS-237 (P)	E	—	—	1	03	JB	TBC	16 AUG	AC	P	—	TBC
15 AUG	S-18/S-19	—	225	—	RS-238 DS-13	E	6	2	—	03	JB	TBC	16 AUG	AC	P	—	TBC

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV, Cells 4 & 5 PROJECT NO.: GQ1344 TASK NO.: 041

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
16 AUG	S-19/S-20	—	173	—	RS-239	DS-19	6	2	—	~~[illegible]~~	JB	TBK	16 AUG	AC	P	—	TBK
16 AUG	S-15/S-16	—	200	—	RS-240	DS-20	6	2	—	03	JB	TBK	16 AUG	AC	P	—	TBK
16 AUG	—	S-12	198	5' N. OF S-11/12	RS-241	P	—	—	1	03	JB	TBK	16 AUG	AC	P	—	TBK
16 AUG	S-30/S-64	—	90	—	RS-242	(P)	—	—	1	03	JB	TBK	16 AUG	AC	P	—	TBK
16 AUG	S-23/RS-228 S-24/RS-229	—	216	—	RS-243	P	—	—	1	03	JB	TBK	16 AUG	AC	P	—	TBK
16 AUG	S-10/RS-51 RS-235	—	366	—	RS-244	P	4	3	—	06	DL	TBK	29 AUG	AC	P	—	CHW
16 AUG	RS-51/RS-235	—	261	—	RS-245	DS-20	6	2	—	06	DL	TBK	16 AUG	AC	P	—	JW
16 AUG	S-8/S-9	—	279-364	—	RS-246	(C)	85	2	—	06	DL	TBK	19 AUG	AC	P	—	JW
17 AUG	S-2/S-3	—	8-394	—	RS-247	(C)	394	4	—	09 DW	DW	TBK	SEE FUSION	SEAMING LOG			TBK
17 AUG	S-3/S-4/S-5	—	0-390	—	RS-248	(C)	390	4	—	02	JI	TBK	SEE FUSION	SEAMING LOG			TBK
17 AUG	S-4/S-5/S-6	—	0-390	—	RS-249	(C)	390	4	—	10	JI	TBK	SEE FUSION	SEAMING LOG			TBK
17 AUG	S-16/S-18	—	77-121	—	RS-250	(C)	44	2	—	~~[illegible]~~ 06	~~[illegible]~~ DL	TBK	25 AUG	AC	P	—	CHW
19 AUG	S-9/RS-51	—	122	—	RS-251	P	6	2	—	06	DL	TBK	19 AUG	AC	P	—	TBK
19 AUG	—	S-11	73	3' S of S-11/S-10	RS-252	G	1	—	—	06	DL	TBK	19 AUG	AC	P	—	TBK
19 AUG	S-9/S-10	—	47	—	RS-253	P	4	2	—	06	DL	TBK	19 AUG	AC	P	—	TBK

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
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(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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REVIEWED BY: TBK

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV, CELLS 4 & 5

PROJECT NO.: GQ134 TASK NO.: WT.1

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
19 AUG	S-9/S-10	—	40	—	RS-254	(P) E	—	—	1	06	DL	TBY	19 AUG	AC	P —	—	TBY
19 AUG	S-9/S-10	—	38	—	RS-255	(G) E	1	—	—	06	DL	TBY	19 AUG	AC	P —	—	TBY
19 AUG	S-9/S-10	—	33	—	RS-256	(G) E	1	—	—	06	DL	TBY	19 AUG	AC	P —	—	TBY
19 AUG	S-10/S-11	—	6-36	—	RS-257	(C) E	30	2	—	06	DL	TBY	19 AUG	AC	P —	—	TBY
19 AUG	S-15/S-16	—	5-30	—	RS-258	(C) E	25	2	—	06	DL	TBY	19 AUG	AC	P —	—	TBY
19 AUG	S-10/RS-51	—	146	—	RS-259	P E	10	5	—	06	DL	TBY	19 AUG	AC	P —	—	JW
19 AUG	S-16/S-18	—	60	—	RS-260	P E	9	2	—	06	DL	TBY	19 AUG	AC	P —	—	TBY
19 AUG	—	S-16	34	2' S. of S-16/S-18	RS261	P E	—	—	1	06	DL	TBY	19 AUG	AC	P —	—	JW
19 AUG	—	S-16	34	3' N. of S-15/S-16	RS262	P E	—	—	1	06	DL	TBY	19 AUG	AC	P —	—	JW
19 AUG	S-6/S-7	—	115	—	RS263	P E	—	—	2	06	DL	TBY	CAPPED	BY	RS 299	—	CHW
19 AUG	—	S-7	50	8' N. of S-7/S20	RS264	P E	—	—	2	06	DL	TBY	27 AUG	AC	P —	—	CHW
19 AUG	S-1/RS-115	—	78	—	RS265	P E	6	2	—	06	DL	TBY	24 AUG	AC	P —	—	JW
19 AUG	S-1/RS 115	—	95	—	RS266	P G	1	—	—	06	DL	TBY	24 AUG	AC	P —	—	JW
19 AUG	S-2/RS115	—	145	—	RS267	P E	4	2	—	06	DL	TBY	24 AUG	AC	P —	—	JW
19 AUG	S-2/RS247	—	145	—	RS268	P E	5	2	—	06	DL	TBY	24 AUG	AC	P —	—	JW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV, CELLS 4 & 5 PROJECT NO.: GQ1341 TASK NO.: Ø4.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ YEAR: 2ØØ2

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
19 AUG	S11/S12	—	44	—	RS268	G	E	1	—	—	Ø6	DL	CHW	19 AUG	AC	P —	—	TBW
19 AUG	—	S4	86	1' S. of S-4/RS269	RS270	P	E	—	—	1	Ø6	DL	CHW	23 AUG	AC	P —	—	JW
19 AUG	S3/RS248	—	55	—	RS271	P	E	5	2	—	Ø6	DL	CHW	23 AUG	AC	P —	—	JW
19 AUG	S2/RS247	—	165	—	RS272	P	E	3	2	—	Ø6	DL	CHW	24 AUG	AC	P —	—	JW
19 AUG	S-16/S-15	—	78	—	RS273	P	E	8	3	—	Ø6	DL	CHW	21 AUG	AC	P —	—	TBW
19 AUG	S-9/RS246	—	342	—	RS274	P	E	6	2	—	Ø6	DL	CHW	29 AUG	AC	P —	—	JW
2Ø AUG	S-12/S-13	—	274-374	—	RS-275	C	E	1ØØ	2	—	Ø3	JB	TBW	CAPPED BY RS 397			—	CHW
2Ø AUG	S-16/S-18	—	Ø-57	—	RS-276	C	E	57	2	—	Ø6	DL	TBW	21 AUG	AC	P —	—	TBW
2Ø AUG	S-16/S-18	—	65-77	—	RS-277	C	E	12	2	—	Ø6	DL	TBW	21 AUG	AC	P —	—	JW
* 2Ø AUG	—	S-12	315	CENTER	RS-278	P	E	—	—	1	Ø3	JB	TBW	30 AUG	AC	P —	—	CHW
* 2Ø AUG	S-13/RS-275	—	31Ø	—	RS-279	DS-56	E	6	2	—	Ø3	JB	TBW	1/2 CAPPED BY RS 397			—	CHW
2Ø AUG	—	S-13	3Ø9	1' S. OF S-13/14	RS-280	P	E	—	—	1	Ø3	JB	TBW	30 AUG	AC	P —	—	CHW
2Ø AUG	S-15/S-16/S-17	—	358	—	RS-281	P	E	6	2	—	Ø3	JB	TBW	30 AUG	AC	P —	—	CHW
2Ø AUG	S-47/S-48/S-46	—	255	—	RS-282	P	E	—	—	1	Ø3	JB	TBW	2ØAUG	AC	P —	—	CHW
2Ø AUG	S-48/S-49/S-65	—	277	—	RS-283	P	E	—	—	1	Ø3	JB	TBW	2ØAUG	AC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

REVIEWED BY: TBW

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
20 AUG	S-49/S-50/S-65	—	299	—	RS-284	(P)	E	—	—	1	03	JB	TBU	20 AUG	AC	P —	—	CHW
20 AUG	S-50/S-51/S-65	—	322	—	RS-285	(P)	E	—	—	1	03	JB	TBU	25 AUG	AC	P —	—	JW
20 AUG	S-51/S-53/S-65	—	344	—	RS-286	(P)	E	—	—	1	03	JB	TBU	20 AUG	AC	P —	—	CHW
20 AUG	S-53/S-54/S-65	—	367	—	RS-287	(P)	E	—	—	1	03	JB	TBU	20 AUG	AC	P —	—	CHW
20 AUG	S-54/S-65	—	376	—	RS-288	DS-44	E	6	2	—	03	JB	TBU	20 AUG	AC	P —	—	CHW
20 AUG	—	S-65	382	1' S. OF S-54/65	RS-289	P	E	—	—	1	03	JB	TBU	20 AUG	AC	P —	—	CHW
20 AUG	S-54/S-55/S-65	—	388	—	RS-290	P	E	—	—	1	03	JB	TBU	20 AUG	AC	P —	—	CHW
20 AUG	—	S-65	380	1' N. OF S-65/66	RS-291	P	E	—	—	1	03	JB	TBU	20 AUG	AC	P —	—	CHW
20 AUG	—	S-66	389	1' S OF S-65/66	RS-292	P	E	—	—	1	03	JB	TBU	20 AUG	AC	P —	—	CHW
20 AUG	—	S-66	389	2' S OF S-65/66	RS-293	P	E	—	—	1	03	JB	TBU	20 AUG	AC	P —	—	CHW
20 AUG	S-10/S-51	—	100	—	RS-294	P	E	—	—	1	06	DL	TBU	21 AUG	AC	P —	—	TBU
20 AUG	S-16/S-18	—	122	—	RS-295	P	E	—	—	2	06	DL	TBU	20 AUG	AC	P —	—	JW
20 AUG	S-19/S-20	—	171	—	RS-296	P	E	—	—	1	06	DL	TBU	22 AUG	AC	P —	—	JW
20 AUG	S-19/S-20	—	179	—	RS-297	P	E	—	—	1	06	DL	TBU	22 AUG	AC	P —	—	JW
20 AUG	—	S-7	173	3' N. OF S-7/S-20	RS-298	P	E	—	—	1	06	DL	TBU	22 AUG	AC	P —	—	JW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS FILE NO. 3-09-RSL

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4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV, CELLS 4 & 5

PROJECT NO.: GQ134 TASK NO.: Ø41

YEAR: 2ØØ2

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
2ØAUG	S-6/S-7	—	115	—	RS-299 DS-5	E	6	2	—	Ø6	DL	TBY	22AUG	AC	P —	—	CHW
22AUG	S21/S58	—	78	—	RS-300 CHW	RC	3Ø	3	—	Ø6	DL	CHW	22AUG	AC	P —	—	CHW
22AUG	S-22/S-23	—	Ø-22	—	RS-301	C	22	4	—	Ø6	DL	TBY	22AUG	AC	P —	—	CHW
22AUG	—	S-B5	54	FROM S-B4 OFS-B5 TO 1.5'N	RS-302	P	17	2	—	Ø3	JI	TBY	6Sept	JH	P —	—	CHW
22AUG	S84/S85	—	54	—	RS303	P	4	2	—	Ø3	JI	CHW	6Sept	JH	P —	—	CHW
22AUG	S19/S2Ø	—	1Ø1	—	RS304	P	3	2	—	Ø6	DL	CHW	26AUG	AC	P —	—	TBY
22AUG	S3/RS248	—	78	—	RS305	P DS 57	4	2	—	Ø6	DL	CHW	23AUG	AC	P —	—	CHW
22AUG	S4/RS248	—	62	—	RS306	P	—	—	2	Ø6	DL	CHW	CAPPED	BY RS342		—	CHW
22AUG	S3/RS248	—	61	—	RS307	P	—	—	2	Ø6	DL	CHW	23AUG	AC	P —	—	CHW
22AUG	S3/RS248	—	53	—	RS308	P	—	—	2	Ø6	DL	CHW	23AUG	AC	P —	—	CHW
22AUG	S88/S85	—	55	—	RS309	P	8	2	—	Ø3	JI	CHW	6Sept	JH	P —	—	CHW
22AUG	S2/RS115	—	92	—	RS31Ø	P	2	1	—	Ø6	DL	CHW	24AUG	AC	P —	—	CHW
22AUG	S1/RS115	—	82	—	RS311	P	—	—	1	Ø6	DL	CHW	24AUG	AC	P —	—	CHW
22AUG	S1/RS115	—	73	—	RS312	P	—	—	1	Ø6	DL	CHW	24AUG	AC	P —	—	CHW
22AUG	S2/RS115	—	57	—	RS313	P	12	2	—	Ø6	DL	CHW	24AUG	AC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM,
R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 0461

DESCRIPTION: Phase II, Cells 4 & 5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTRG CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
22AUG	—	S2	93	4' N. of S2/RS247	RS314	~~E~~ G	~~G~~ E	1'	—	—	Ø6	DL	CHW	24AUG	AC	P —	—	CHW
22AUG	S2/RS247	—	144	—	RS315	P	E	—	—	1	Ø6	DL	CHW	24AUG	AC	P —	—	CHW
22AUG	S2/RS247	—	148	—	RS316	P	E	—	—	1	Ø6	DL	CHW	24AUG	AC	P —	—	CHW
23AUG	S2/RS247	—	168	—	RS317	P	E	—	—	1	Ø6	DL	CHW	24AUG	AC	P —	—	CHW
23AUG	S2/RS247	—	163	—	RS318	P	E	—	—	1	Ø6	DL	CHW	24AUG	AC	P —	—	CHW
23AUG	S2/RS115	—	142	—	RS319	P	E	—	—	1	Ø6	DL	CHW	24AUG	AC	P —	—	CHW
23AUG	S2/RS115	—	148	—	RS320	P	E	—	—	1	Ø6	DL	CHW	24AUG	AC	P —	—	CHW
23AUG	S2/RS247	—	253	—	RS321	P	E	15	3	—	Ø6	DL	CHW	27AUG	AC	P —	—	CHW
23AUG	S2/RS247	—	316	—	RS322	P	E	2	1	—	Ø6	DL	CHW	27AUG	AC	P —	—	JW
23AUG	S4/RS249	—	302	—	RS323	P	E	5	2	—	Ø3	RJ	CHW	24AUG	AC	P —	—	CHW
23AUG	S4/S5	—	0-22	—	RS324	C	E	22	3	—	Ø3	RJ	CHW	25AUG	AC	P —	—	CHW
23AUG	S3/RS248	—	334	—	RS325	P	E	5	2	—	Ø3	RJ	CHW	26AUG	AC	P —	—	CHW
23AUG	S1/RS115	—	340	—	RS326	E	G	1	—	—	Ø3	RJ	CHW	25AUG	AC	P —	—	CHW
✓ 23AUG	—	S-18	342	Center	RS327	P	E	2	1	—	Ø3	RJ	CHW	4Sept	SSC	P —	—	CHW
✓ 23AUG	←	S-18	378	6' N. of S-17/S-18	RS328	P	E	—	—	2	Ø3	RJ	CHW	4Sept	SSC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase II Cells 4 & 5 PROJECT NO.: GQ1341 TASK NO.: Ø4.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION: SEAM	LOCATION: PANEL	LOCATION: DIST. (ft)	LOCATION: OFFSET (ft)	REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE: LENGTH (ft)	SIZE: WIDTH (ft)	SIZE: DIA (ft)	WELDER ID: MACH NO.	WELDER ID: OPER ID	QA ID	NON-DESTRUCTIVE TESTING: DATE (day/mo)	NON-DESTRUCTIVE TESTING: OPER ID	NON-DESTRUCTIVE TESTING: PASS/ FAIL	NON-DESTRUCTIVE TESTING: ACTION	NON-DESTRUCTIVE TESTING: QA ID
23AUG	S16/S17/S18	—	358	—	RS 329 P	E	7	3	—	Ø3	RJ	CHW	30AUG	AC	P —	—	CHW
23AUG	—	S-18	379	3' S. of S-18/S-19	RS 330 P	E	—	—	2	Ø3	RJ	CHW	4 Sept	SSC	P —	—	CHW
23AUG	—	S-19	375	3' N. of S-18/S-19	RS331 P	E	—	—	2	Ø3	RJ	CHW	4 Sept	SSC	P —	—	CHW
23AUG	—	S-19	375	1' S. of S19/S20	RS332 P	E	—	—	2	Ø3	RJ	CHW	4 Sept	SSC	P —	—	CHW
23AUG	S12/RS275	—	278	—	RS333 P DS274A	E	5	2	—	Ø3	RJ	CHW	CAPPED BY RS 397			—	
23AUG	S4/RS249	—	128	—	RS334 P DS69	E	5	2	—	Ø6	DL	CHW	CAPPED BY RS 350			—	CHW
23AUG	S6/RS249	—	300	—	RS335 P DS68	E	5	2	—	Ø3	RJ	CHW	24AUG	AC	P —	—	CHW
24AUG	S7/S20	—	313-345	—	RS336 P	E	32	3	—	Ø6	DL	CHW	25AUG	AC	P —	—	CHW
24AUG	S3/RS248	—	370-389	—	RS337 C	E	19	3	—	Ø6	DL	CHW	25AUG	AC	P —	—	CHW
24AUG	S5/RS248	—	375-389	—	RS338 C	E	14	3	—	Ø6	DL	CHW	25AUG	AC	P —	—	CHW
24AUG	S3/RS 248	—	356	—	RS339 P	E	5	1	—	Ø6	DL	CHW	25AUG	AC	P —	—	CHW
24AUG	S2/RS247	—	375-390	—	RS340 C	E	15	2	—	Ø6	DL	CHW	25AUG	AC	P —	—	CHW
24AUG	S3/RS248	—	338	—	RS341 P	E	2	1	—	Ø6	DL	CHW	25AUG	AC	P —	—	CHW
24AUG	S5/RS248 S4/RS342	—	Ø-338	—	RS342 C	E	338	3	—	Ø6	DL	CHW	26AUG	AC	P —	—	CHW
25 AUG	S-2/RS-115	-	249	—	343 RS343 P	E	2	2	—	Ø3	RJ	JW	27AUG	AC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
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(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ 1341 TASK NO.: 4.1

DESCRIPTION: PHASE IV CELL 4+5 LINER

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTRE Co

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)	RS-			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
25 AUG	S-2/RS-115	-	249	-	344	P	E	2	7	-	03	RJ	JW	27 Aug	AC	P	—	CHW
25 AUG	S-1/RS-115	-	266	-	345	P	E	2	5	-	03	RJ	JW	27 Aug	AC	P	—	CHW
25 AUG	S-2/RS-247	-	314	-	346	P	E	2	4	-	03	RJ	JW	28 Aug	AC	P	—	CHW
25 AUG	S-3/RS-247	-	350	-	DS-54 347	P	E	2	5	-	03	RJ	JW	25 AUG	AC	P	—	CHW
25 AUG	S-1/S-2/RS 115	-	347	-	348	P	E	2	5	-	03	RJ	JW	25 AUG	AC	P	—	CHW
* 25 AUG	S-1/RS-49	-	315	-	349	P	E	2	17	-	03	RJ	JW	30 AUG	AC	P	—	CHW
* 25 AUG	S-4/RS 249	-	140	-	DS-69, 69A, 69B 350	P	E	2	25	-	06	DL	JW	27 Aug	AC	P	—	CHW
25 AUG	S-2/RS-115	-	4	-	351	P	E	2	4	-	06	DL	JW	28 Aug	AC	P	—	CHW
25 AUG	S-1/RS-115	-	4-18	-	352	P	E	2	18	-	06	DL	JW	28 Aug	AC	P	—	CHW
* 25 AUG	S-1/T1-S26/T1S-25	-	332-390	-	353	C	E	2	CHW 4/ ~~5/58~~	-	03	RJ	JW	30 Aug	AC	P	—	CHW
26 AUG	S67/T1 S-27/T1S-25	—	390-400	—	RS 354	P	E	10	3	—	06	DL	CHW	3 Sept	SCC	P	—	CHW
26 AUG	RS-248/RS342	—	127	—	RS DS-71 355	P	E	5	2	—	03	JI	CHW	26 AUG	AC	P	—	CHW
26 AUG	S4/RS342	—	285	—	DS-70 RS-356	P	E	5	2	—	03	JI	CHW	26 AUG	AC	P	—	CHW
* 26 AUG	—	S1	363	4' NOF S1/RS115	RS357	G	E	1	—	—	06	DL	CHW	30 AUG	AC	P	—	CHW
26 AUG	S2, RS158-1 / S67, S-68	—	390		RS358	P	E	6	2	—	06	DL	CHW	3 Sept	SSC	P	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
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(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

* RS-350 – DS-69, DS 69A, DS69B

GEO SYNTEC CONSULTANTS FILE NO. 3-09-RSL

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase II Cell 4 & 5

PROJECT NO.: GQ1341 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
26AUG	—	S68	345	3'S of S67/S68	RS 359	P	E	—	—	1	Ø6	DL	CHW	3Sept	SSC	P	—	CHW
26AUG	S-6/RS249	—	307	—	RS 360	C	E	13	2	—	Ø3	JI	CHW	29AUG	AC	P	—	CHW
26AUG	—	S68	345	3'N of S68/S69	RS 361	P	E	—	—	2	Ø6	DL	CHW	3Sept	SSC	P	—	CHW
26AUG	S4/RS249	—	257	—	RS/DS 68A 362	P	E	7	3	—	Ø3	JI	CHW	29AUG	AC	P	—	CHW
26AUG	S6/S7	—	326	—	RS 363	P	E	—	—	1	Ø3	JI	CHW	3Sept	SSC	P	—	CHW
26AUG	S68/S69	—	345	—	RS 364	P	E	2	1	—	Ø6	DL	CHW	3Sept	SSC	P	—	CHW
26AUG	—	S69	341	3'S of S68/S69	RS 365	P	E	—	—	3	Ø6	DL	CHW	3Sept	SSC	P	—	CHW
26AUG	—	S69	340	3'N of S69/S81	RS 366	P	E	—	—	3	Ø6	DL	CHW	3Sept	SSC	P	—	CHW
26AUG	—	S-6	378	6'S of S6/RS249	RS 367	P	E	12	12	—	Ø3	JI	CHW	30AUG	AC	P	—	CHW
26AUG	S3/RS248	—	375	—	RS 368	P	E	9	2	—	Ø6	DL	CHW	30AUG	AC	P	—	CHW
26AUG	S7/S2Ø	—	384	—	RS 369	P	E	5	2	—	Ø3	JI	CHW	4Sept	SSC	P	—	CHW
26AUG	—	S-83	332	3'S of S82/S83	RS 37Ø	P	E	—	—	3	Ø6	DL	CHW	3Sept	SSC	P	—	CHW
26AUG	—	S83	332	1'S of S82/S83	RS 371	G	E	1	—	—	Ø6	DL	CHW	3Sept	SSC	P	—	CHW
26AUG	—	S-83	332	4'N of S83/S84	RS 372	P	E	—	—	3	Ø3	JI	CHW	4Sept	SSC	P	—	CHW
26AUG	—	S-83	334	1'N of S83/S84	RS 373	G	E	1	—	—	Ø3	JI	CHW	4Sept	SSC	P	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEO SYNTEC CONSULTANTS FILE NO. 3-09-RSL

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SHEET NO. 25 OF 49

4943

0441

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
26AUG	—	S84	334	1'S of S83/S84	RS 374	P	E	E	—	2	Ø3	JI	CHW	4Sept 25Aug	SSC	P —	—	CHW
26AUG	—	S84	334	3'N of S84/S85	RS 375	P	E	—	—	2	Ø3	JI	CHW	4 Sept	SSC	P —	—	CHW
26AUG	—	S85	336	1'S of S84/S85	RS 376 DS-62	P	E	—	—	2	Ø3	JI	CHW	4Sept	SSC	P —	—	CHW
26AUG	S69/S81	—	300	—	RS377	P	E	5	2	—	Ø6	DL	CHW	4Sept	SSC	P —	—	CHW
26AUG	—	S85	334	3'N of S85/RS379	RS378	P	E	—	—	2	Ø3	JI	CHW	4 SEPT	SSC	P —	—	JW
26AUG	S85/S88	—	237-345	—	RS379	C	E	108	2	—	Ø3	JI	CHW	5Sept	JH	P —	—	CHW
27AUG	—	S-88	319	3'S of S88/RS379	RS380	P	E	—	—	3	Ø3	JI	CHW	4Sept	JH	P —	—	CHW
27AUG	—	S-88	339	4'S of S88/RS379	RS381	P	E	—	—	2	Ø3	JI	CHW	4Sept	JH	P —	—	CHW
27AUG	—	S-88	339	5'N. of S87/S88	RS382	P	E	2	1	—	Ø3	JI	CHW	4Sept	JH	P —	—	CHW
27AUG	—	S87	339	5'S of S87/S88	RS383	P	E	—	—	1	Ø3	JI	CHW	4Sept	JH	P —	—	CHW
27AUG	S87/S-88	—	325	—	RS384 DS 66	P	E	5	2	—	Ø3	JI	CHW	4Sept	JH	P —	—	CHW
27AUG	S87/S-86	—	248	—	RS385	P	E	5	2	—	Ø3	JI	CHW	6Sept	JH	P —	—	CHW
27AUG	—	S-87	343	3'N of S86/87	RS386	P	E	—	—	2	Ø3	JI	CHW	6Sept	JH	P —	—	CHW
27AUG	—	S86	340	3'S of S86/S87	RS387	P	E	—	—	2	Ø3	JI	CHW	6Sept	JH	P —	—	CHW
27AUG	—	S86	340	3'N of S75/S86	RS388	P	E	—	—	2	Ø3	JI	CHW	6Sept	JH	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase III, Cells 4 & 5

PROJECT NO.: GQ1341 TASK NO.: 041

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: Istre Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
27AUG	—	S86	299	1' N of S75/S86	RS 389	P	E	—	—	1	Ø3	JI	CHW	6Sept	JH	P	—	CHW
27AUG	EAST Anchor Trench Skirt	S-1	4	—	RS 390	S	E		6'	—	Ø6	DL	CHW	28AUG	AC	P	—	CHW
27AUG	~~S/2~~ S2/RS247	—	5	—	RS 391	P	E	3	2	—	Ø6	DL	CHW	28 AUG	AC	P	—	CHW
27AUG	S3/RS247	—	5	—	RS 392	P	E	2	2	—	Ø6	DL	CHW	28 AUG	AC	P	—	CHW
27AUG	S6/S7	—	5	—	RS 393	P	E	4	2	—	Ø6	DL	CHW	3Sept	SSC	P	—	CHW
28AUG	S7/S20	—	7	—	RS 394	P	E	—	—	2	Ø6	DL	CHW	3Sept	SSC	P	—	CHW
28AUG	S19/S20	—	1ø	—	RS 395	P	E	3	2	—	Ø6	DL	CHW	3Sept	SSC	P	—	CHW
28AUG	S19/S20	—	3	—	RS 396	P	E	4	3	—	Ø6	DL	CHW	3Sept	SSC	P	—	CHW
28AUG	S12/S13	—	273-386	—	RS 397	C	E	113	3	—	Ø3	JI	CHW	30AUG	AC	P	—	CHW
28AUG	S18/S16	—	3	—	RS 398	P	E	3	2	—	Ø6	DL	CHW	3Sept	SSC	P	—	CHW
28AUG	S15/S16	—	4	—	RS 399	P	E	4	2	—	Ø6	DL	CHW	3Sept	SSC	P	—	CHW
28AUG	S14/S15	—	5	—	RS 400	P	E	2	2	—	Ø6	DL	CHW	3Sept	SSC	P	—	CHW
28AUG	S13/S14	—	Ø	—	RS 401	P	E	—	—	1	Ø6	DL	CHW	3Sept	SSC	P	—	CHW
28AUG	S19/S20	—	0-3	—	RS402	G	E	3	—	—	Ø6	DL	CHW	3Sept	SSC	P	—	CHW
28AUG	S14/S15	—	0-4	—	RS403	G	E	4	—	—	Ø6	DL	CHW	3Sept	SSC	P	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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REVIEWED BY: TBM

SHEET NO. 27 OF 49

4943

0119

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV, Cell #4 & #5 PROJECT NO.: G01341 TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ YEAR: 2002

INSTALLER: ISTEC CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
28AUG	S11/S12	—	6	—	RS 404	P	E	—	—	1	Ø6	DL	CHW	3Sept	SSC	P —	—	CHW
28AUG	East Anchor Trench Skirt	S12	0/5	—	RS 405	S	E	22	6	—	Ø6	DL	CHW	3Sept	SSC	P —	—	CHW
28AUG	S12/S13	—	6	—	RS 406	P	E	2	1	—	Ø6	DL	CHW	3Sept	SSC	P —	—	CHW
28AUG	S12/S13	—	2	—	RS 407	P	E	3	2	—	Ø6	DL	CHW	3Sept	SSC	P —	—	CHW
28AUG	S11/RS52	—	364-385	—	RS 408	C	E	16	2	—	Ø3	JI	CHW	7Sept	JH	P —	—	CHW
28AUG	~~S18~~ S8/S21	—	332-377	—	RS 409	C	E	45	4	—	Ø3	JI	CHW	30AUG	AC	P —	—	CHW
TIS 28AUG	S8/S70/S76/ S21/RS409	—	377-391	—	RS 410	C	E	14	5	—	Ø3	JI	CHW	30AUG	AC	P —	—	CHW
28AUG	EAST ANCHOR TRENCH SKIRT	S9/S10/ S11	0/5	—	RS 411	P	E	3	6	—	Ø6	DL	CHW	3Sept	SSC	P —	—	CHW
29AUG	~~S8~~/S9/S-26	—	6	—	RS 412	P	E	4	6	—	Ø6	DL	CHW	3Sept	SSC	P —	—	CHW
29AUG	~~S8~~/S21/S-26	—	6	—	RS 413	P	E	36	3	—	Ø6	DL	CHW	5Sept	JH	P —	—	CHW
29AUG	—	S70	336	3" N of S70/S76	RS 414	P	E	—	—	2	Ø3	JI	CHW	9Sept	TS	P —	—	CHW
29AUG	—	S70	343	Center 3" S of S70/S71	RS 415	G	E	1	—	—	Ø3	JI	CHW	9Sept	TS	P —	—	CHW
29AUG	—	S70	336		RS 416	P	E	—	—	2	Ø3	JI	CHW	9Sept	TS	P —	—	CHW
29AUG	S70/S71	—	300	—	RS 417	P	E	5	2	—	Ø3	JI	CHW	9Sept	TS	P —	—	CHW
TIS 29AUG	S8/S70/S71	—	345	—	RS 418	P	E	—	—	1	Ø3	JI	CHW	6Sept	JH	P —	CHW	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG EXTRUSION

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV, Cell 4 & 5 PROJECT NO.: GR1341 TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE Co.

	DATE (day/mo)	LOCATION: SEAM	LOCATION: PANEL	LOCATION: DIST. (ft)	LOCATION: OFFSET (ft)	REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE: LENGTH (ft)	SIZE: WIDTH (ft)	SIZE: DIA (ft)	WELDER ID: MACH NO.	WELDER ID: OPER ID	QA ID	NON-DESTRUCTIVE TESTING: DATE (day/mo)	NON-DESTRUCTIVE TESTING: OPER ID	NON-DESTRUCTIVE TESTING: PASS/ FAIL	NON-DESTRUCTIVE TESTING: ACTION	NON-DESTRUCTIVE TESTING: QA ID
IS	29AUG	58/59/571/ RS 80	—	342	—	RS 419	P	E	—	—	2	03	JI	CHW	6 Sept	JH	P / —	—	CHW
IS	29AUG	59/571/572 RS 235/RS61	—	320	—	RS 420	P	E	5	2	—	03	JI	CHW	6 Sept	JH	P / —	—	CHW
IS	29AUG	510/572/ RS51	—	317'	—	RS 421	P	E	6	3	—	03	JI	CHW	6 Sept	JH	P / —	—	CHW
	29AUG	—	572	339	3' N. of 571/572	RS 422	P	E	—	—	1	03	JI	CHW	6 Sept	JH	P / —	—	CHW
	29AUG	—	572	339	3' S of 572/573	RS 423	P	E	—	—	1	03	JI	CHW	6 Sept	JH	P / —	—	CHW
IS	29AUG	572/573/510	—	300	—	RS 424	P	E	—	—	3	03	JI	CHW	6 Sept	JH	P / —	—	CHW
IS	29AUG	510/511/573	—	298	—	RS 425	P	E	—	—	1	03	JI	CHW	6 Sept	JH	P / —	—	CHW
	29AUG	—	573	336	3' N of 572/573	RS 426	P	E	—	—	2	03	JI	CHW	6 Sept	JH	P / —	—	CHW
	29AUG	—	573	336	3' S of 573/574	RS 427	P	E	—	—	2	03	JI	CHW	7 Sept	JH	P / —	—	CHW
*	29AUG	521/522	—	7	—	RS 428	P	E	7	2	—	06	DL	CHW	7 Sept	JH	P / —	—	CHW
*	29AUG	522/521	—	6	—	RS 429	P	E	—	—	1	06	DL	CHW	5 Sept	JH	P / —	—	CHW
	29AUG	EAST ANCHOR TRENCH SKIRT	522/524 525	5	—	RS 430	P	E	27	5	—	06	DL	CHW	5 Sept	JH	P / —	—	CHW
	29AUG	54/RS249	—	264-300	—	RS 431	C	E	46	2	—	03	JI	CHW	5 Sept	JH	P / —	—	CHW
	29AUG	525/527	—	5	Ø	RS 432	P	E	—	—	2	06	DL	CHW	29 Aug	GAC	P / —	—	CHW
	29AUG	EAST Anchor Trench Skirt	527	6	Ø	RS 433	S	E	15	6	—	06	DL	CHW	5 Sept	JH	P / —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5 PROJECT NO.: G01341 TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE Co.

	DATE (day/mo)	LOCATION: SEAM	PANEL	DIST. (ft)	OFFSET (ft)	REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE: LENGTH (ft)	WIDTH (ft)	DIA (ft)	WELDER ID: MACH NO.	OPER ID	QA ID	NON-DESTRUCTIVE TESTING: DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
*	29AUG	S6/RS245	5 —	335	—	RS 434 P	E	—	—	2	Ø3	JI	CHW	3Sept	SSC	P —	—	CHW
TIS	29AUG	S2/S68/RS247/ S69/RS364	—	394	—	RS 435 P	E	4	2	—	Ø3	JI	CHW	3Sept	SSC	P —	—	CHW
TIS	29AUG	S3/S69/RS247	—	394	—	RS 436 P	E	2	1	—	Ø3	JI	CHW	3Sept	SSC	P —	—	CHW
TIS	29AUG	S69/S8/S3/ RS337/RS338/S6	—	390	—	RS 437 P	E	8	2	—	Ø3	JI	CHW	3Sept	SSC	P —	—	CHW
	29AUG	—	S5	385	Center	RS 438 P	E	13	2	—	Ø3	JI	CHW	30AUG	AC	P —	—	CHW
	29AUG	S6/RS249	—	339	—	RS 439 P	E	—	—	2	Ø3	JI	CHW	29AUG	AC	P —	—	CHW
TIS	29AUG	~~S/84~~ S5/S81	—	79	—	RS 440 P	E	—	—	1	Ø3	JI	CHW	3Sept	SSC	P —	—	CHW
TIS	29AUG	S5/S6/S81/S82	—	86	—	RS 441 P	E	2	1	—	Ø3	JI	CHW	3Sept	SSC	P —	—	CHW
TIS	29AUG	S5/S6/S81/S82	—	94		RS 442 P	E	2	1	—	Ø3	JI	CHW	3Sept	SSC	P —	—	CHW
	29AUG	EAST ANCHOR TRENCH SKIRT	S-29	5	—	RS 443 S	E	2~~3~~	6	—	Ø6	DL	CHW	5Sept	JH	P —	—	CHW
	29AUG	S70/S63/S64	—	10	—	RS 444 P	E	10	6	—	Ø6	DL	CHW	5Sept	JH	P —	—	CHW
	29AUG	EAST ANCHOR TRENCH SKIRT	S59/S60 S61	6	—	RS 445 S	E	45	6	—	Ø6	DL	CHW	5Sept	JH	P —	—	CHW
TIS	30AUG	S18/S19/S85	—	157 ~~389~~ CHW		RS 446 P	E	—	—	2	Ø3	TS	CHW	4Sept	SSC	P —	—	CHW
TIS	30AUG	S19/S84/S85	—	151	—	RS 447 P	E	—	—	2	Ø3	TS	CHW	4Sept	SSC	P —	—	CHW
TIS	30AUG	S19/S20/S84	—	136	—	RS 448 P	E	—	—	2	Ø3	TS	CHW	4Sept	SSC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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REVIEWED BY: TBJ

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0422

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE Co.

	DATE (day/mo)	LOCATION SEAM	PANEL	DIST. (ft)	OFFSET (ft)	REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE LENGTH (ft)	WIDTH (ft)	DIA (ft)	WELDER ID MACH NO.	OPER ID	QA ID	NON-DESTRUCTIVE TESTING DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
	30AUG	S20/S84	—	130	—	RS 449 P	E	—	—	2	03	TS	CHW	3Sept	SSC	P –	—	CHW
	30AUG	S20/S7/S83/S84	—	129'	—	RS 450 P	E	—	—	1	03	TS	CHW	3Sept	SSC	P –	—	CHW
TIS	30AUG	S7/S83	—	116'	—	RS DS79 451 P	E	5	2	—	03	TS	CHW	3Sept	SSC	P –	—	CHW
TIS	30AUG	S6/S7/S83 S82	—	108	—	RS 452 P	E	5	2	—	03	TS	CHW	3Sept	SSC	P –	—	CHW
	30AUG	East Anchor Trench Skirt	Sacrificial +S667	6	—	RS 453 S	E	210	7	—	06	DL	CHW	5Sept	JH	P –	—	CHW
		S65/S45/S44/S43/S46/S56/S57/S58																
	30AUG	S65/S66	—	6	—	RS 454 P	E	—	—	2	06	DL	CHW	5Sept	JH	P –	—	CHW
	30AUG	S65/S66	—	8	—	RS 456 P	E	—	—	2	06	DL	CHW	5Sept	JH	P –	—	CHW
	3Sept	S68/S69	—	186	—	RS 456 P	E	5	2	—	06	DL	CHW	5Sept	JH	P –	—	CHW
	3Sept	S68/S69	—	268	—	RS DS47 457 P	E	6	2	—	06	DL	CHW	4Sept	SSC	P –	—	CHW
	3Sept	S82/S83	—	175	—	RS DS63 458 P	E	5	2	—	06	DL	CHW	4Sept	SSC	P –	—	CHW
IS	3Sept	S73/S74/RS408	—	282	—	RS 459 P	E	4	2	—	06	DL	CHW	4Sept	SSC	P –	—	CHW
IS	3Sept	S12/S13/S74/S75 RS397	—	259	—	RS 460 P	E	5	2	—	03	TS	CHW	7Sept	JH	P –	—	CHW
IS	3Sept	S13/S75	—	254	—	RS 461 P	E	—	—	2	03	TS	CHW	7Sept	JH	P –	—	CHW
	3Sept	S	S74	345	3' N of S73/S74	RS 462 P	E	—	—	2	03	TS	CHW	7Sept	JH	P –	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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REVIEWED BY: TBy

SHEET NO. 31 OF 49

000423

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5 PROJECT NO.: G0134L TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ YEAR: 2000

INSTALLER: JSTREE Co.

	DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
		SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
	3Sept	—	S-74	345	4' S of S74/S75	RS 463	P	E	—	—	2	Ø3	TS	CHW	7Sept	JH	P —	—	CHW
	3Sept	S74/S75	—	300	—	RS 464	P	E	8	2	—	Ø3	TS	CHW	7Sept	JH	P —	—	CHW
	3Sept	S75/S86	—	325	DS 67	RS 465	P	E	8	2	—	Ø3	TS	CHW	6Sept	JH	P —	—	CHW
	3Sept	S75/S86	—	341	—	RS 466	P	E	3	2	—	Ø3	TS	CHW	7Sept	JH	P —	—	CHW
IS	3Sept	S13/S14/S75/S86	—	239	T-Shaped	RS 467	P	E	9	2 to 8	—	Ø3	TS	CHW	7Sept	JH	P —	—	CHW
	3Sept	S84/S85	—	100	DS64	RS 468	P	E	6	2	—	Ø6	DL	CHW	6Sept	JH	P —	—	CHW
IS	3Sept	S14/S15/S86/S87	—	217	—	RS 469	P	E	5	3	—	Ø3	TS	CHW	6Sept	JH	P —	—	CHW
IS	3Sept	S15/S87	—	214	—	RS 470	P	E	5	2	—	Ø3	TS	CHW	6Sept	JH	P —	—	CHW
	3Sept	S84/S85	—	45	—	RS 471	P	E	—	—	1	Ø6	DL	CHW	~~CAPPED~~ CAPPED BY RS 500				
	3Sept	S75/S86	—	170	—	RS 472	P	E	12	2	—	Ø6	DL	CHW	6Sept	JH	P —	—	CHW
	3Sept	S75/S86	—	220	—	RS 473	P	E	6	2	—	Ø6	DL	CHW	6Sept	JH	P —	—	CHW
	3Sept	S75/S86	—	263		RS 474	P	E	8	2	—	Ø6	DL	CHW	6Sept	JH	P —	—	CHW
IS	3Sept	S15/S17/S87	—	197	—	RS 475	P	E	7	3	—	Ø3	TS	CHW	4Sept	JH	P —	—	CHW
IS	3Sept	S17/S87/S88	—	192	—	RS 476	P	E	—	—	2	Ø3	TS	CHW	4Sept	JH	P —	—	CHW
IS	3Sept	S17/S88	—	189	—	RS 477	P	E	—	—	2	Ø3	TS	CHW	4Sept	JH	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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SHEET NO. 32 OF 49

0004424

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: Ø4.1

DESCRIPTION: Phase IV Cell 4 & 5 YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ INSTALLER: ISTRE Co.

	DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
		SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
S	3 Sept	S17/S88	—	186	—	RS 478	P	E	3	2	—	Ø3	TS	CHW	4 Sept	JH	P	—	CHW
S	3 Sept	S17/S88	—	181	—	RS 479	P	E	—	—	2	Ø3	TS	CHW	4 Sept	SSC	P	—	CHW
	3 Sept	S72/S73	—	175	DS49	RS 480	P	E	5	2	—	Ø6	DL	CHW	7 Sept	JH	P	—	CHW
	3 Sept	S73/S74	—	118	DS51	RS 481	P	E	5	2	—	Ø6	DL	CHW	7 Sept	JH	P	—	CHW
	3 Sept	S73/S74	—	73	—	RS 482	P	E	3	2	—	Ø6	DL	CHW	7 Sept	JH	P	—	CHW
	3 Sept	S17/S18	—	384	—	RS 483	P	E	2	1	—	Ø3	TS	CHW	4 Sept	SSC	P	—	CHW
S	3 Sept	S17/S18/S88	—	178	—	RS 484	P	E	3	2	—	Ø3	TS	CHW	4 Sept	SSC	P	—	CHW
	4 Sept	S67/RS364/TI S-35	—	338	—	RS 485	P	E	—	—	2	Ø3	TS	CHW	CAPPED BY RS 510			—	CHW
	4 Sept	S67/TI S-34/TI S-36	—	318	—	RS 486	P	E	—	—	2	Ø3	TS	CHW	CAPPED BY RS 510			—	CHW
	4 Sept	S67/TI S-37/TI 36	—	296	—	RS 487	P	E	—	—	2	Ø3	TS	CHW	CAPPED BY RS 510			—	CHW
	4 Sept	S67/TI S-72/TI S-51	—	57	—	RS 488	P	E	—	—	2	Ø6	DL	CHW	10 Sept	TS	P	—	CHW
	4 Sept	S67/TI S37/TI S38	—	276	—	RS 489	P	E	—	—	2	Ø3	DL	CHW	10 Sept	TS	P	—	CHW
	4 Sept	S67/TI S-51/TI S-50	—	79	—	RS 490	P	E	—	—	2	Ø6	DL	CHW	10 Sept	TS	P	—	CHW
	4 Sept	S67/TI S-50/TI S49	—	102	—	RS 491	P	E	—	—	2	Ø6	DL	CHW	10 Sept	TS	P	—	CHW
	4 Sept	S67/TI S38/TI S39	—	256	—	RS 492	P	E	4	2	—	Ø3	TS	CHW	CAPPED BY RS 510			—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV, Cells 4 & 5 YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				QA ID
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	
4Sept	S67/TI S39	—	250	—	RS 493 P	E	10	1	—	Ø3	TS	CHW	10Sept	JH	P —	—	CHW
4Sept	S67/TI S49/TI S48	—	125	—	RS 494 P	E	—	—	2	Ø6	DL	CHW	10Sept	TS	P —	—	CHW
4Sept	S67/TI S39/TI S40	—	235	—	RS 495 P	E	3	2	—	Ø3	TS	CHW	10Sept	JH	P —	—	CHW
4Sept	S67/TI S48/TI S47	—	148	—	RS 496 P	E	—	—	2	Ø6	DL	CHW	10Sept	TS	P —	—	CHW
4Sept	S67/TI S40/TI S41	—	215	—	RS 497 P	E	—	—	2	Ø3	TS	CHW	CAPPED	BY RS	510	—	CHW
4Sept	S67/TI S40	—	227	DS 80	RS 498 P	E	4	2	—	Ø3	TS	CHW	CAPPED	BY RS	510	—	CHW
4Sept	S67/S41/TI S42/TI	—	194	—	RS 499 P	E	—	—	2	Ø3	TS	CHW	10Sept	JH	P —	—	CHW
4Sept	S67/TI S42/TI S47	—	171	—	RS 500 P	E	—	—	2	Ø3	TS	CHW	10Sept	JH	P —	—	CHW
4Sept	—	S14	388	2'S OF S14/S15	RS 501 P	E	2	2	—	Ø3	TS	CHW	6Sept	JH	P —	—	CHW
5Sept	S86/S75	—	0-100	—	RS 502 C	E	100	2	—	Ø6	DL	CHW	7Sept	JH	P —	—	CHW
5Sept	—	S84/S85/RS 302	41/52	—	RS 503 P	E	28	2	—	Ø6	DL	CHW	6Sept	JH	P —	—	CHW
5Sept	S77/S78	—	77	DS 60	RS 504 P	E	5	2	—	Ø6	DL	CHW	9Sept	JH	P —	—	CHW
5Sept	S70/S76	—	225	DS59	RS 505 P	E	5	2	—	Ø6	DL	CHW	9Sept	TS	P —	—	CHW
5Sept	S21/S22/S76 3	—	381	—	RS 506 P	E	—	—	2	Ø6	DL	CHW	9Sept	TS	P —	—	CHW
5Sept	S22/S76/S77 3	—	388	—	RS 507 P	E	—	—	2	Ø6	DL	CHW	9Sept	TS	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV, Cell 4 & 5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: JSTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
6 Sept	S15/RS475/S87/S88/RS379/S85	S18/S17	168-204	—	RS 508	C	E	36	4	—	Ø6	DL	CHW	6 Sept	JH	P	—	CHW
6 Sept	—	S88	330	Center	RS 509	G	E	2	—	—	Ø6	DL	CHW	6 Sept	JH	P	—	CHW
6 Sept	S67/TIS-35,36,37,38,39,40,41	—	200-338	—	RS 510	C	E	138	8	—	Ø6	DL	CHW	10 Sept	JH	P	—	CHW
7 Sept	S67/RS518	—	328'	DS82	RS 511	P	E	5	2	—	Ø6	DL	CHW	C. APPED BY RS512				CHW
7 Sept	RS510/~~RS~~ S-67	—	286-339	—	RS 512	C	E	53	3	—	Ø6	DL	CHW	10 Sept	JH	P	—	CHW
8 Sept	S67/TIS72	—	0-4	—	RS 513	P	E	3	3	—	Ø6	DL	CHW	10 Sept	TS	P	—	CHW
8 Sept	S67/S68	—	Ø	—	RS 514	P	E	—	—	1	Ø6	DL	CHW	10 Sept	JH	P	—	CHW
8 Sept	~~S69~~ West Anchor Trench Skirt	S69	0-6	—	RS 515	S	E	6	22	—	Ø6	DL	CHW	11 Sept	JH	P	—	CHW
8 Sept	S119/S120/LCSR Box	—	50	—	RS 516	P	E	—	—	2	Ø3	JI	CHW	9 Sept	TS	P	—	CHW
8 Sept	S120/LCSR Box	—	48	—	RS 517	P	E	3	1	—	Ø3	JI	CHW	9 Sept	TS	P	—	CHW
8 Sept	S120/LCS/LCSR Box	—	45	—	RS 518	P	E	2	1	—	Ø3	JI	CHW	9 Sept	TS	P	—	CHW
8 Sept	S119/S120	—	79-101	—	RS 519	C	E	22	2	—	Ø3	JI	CHW	9 Sept	TS	P	—	CHW
8 Sept	S119/S120	—	125	—	RS 520	P	E	5	2	—	Ø3	JI	CHW	9 Sept	TS	P	—	CHW
8 Sept	S81/S82	—	Ø	—	RS 521	P	E	—	—	1	Ø6	DL	CHW	11 Sept	TS	P	—	CHW
9 Sept	S82/S83	—	Ø	—	RS 522	P	E	—	—	1	Ø6	DL	CHW	11 Sept	TS	P	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell 4 & 5 YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ INSTALLER: ITREE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
8 Sept	S83/S84	—	0	—	RS 523	P	E	—	—	1	06	DL	CHW	11 Sept	TS	P	—	—	CHW
8 Sept	S84/S85	—	5	—	RS 524	P	E	—	—	2	06	DL	CHW	11 Sept	TS	P	—	—	CHW
8 Sept	S119/S120	—	155	—	RS 525	P	E	14	2	—	03	JI	CHW	11 Sept	JH	P	—	—	CHW
8 Sept	S121/S122	—	50	—	RS 526	P	E	3	2	—	03	JI	CHW	14 Sept	TS	P	—	—	CHW
9 Sept	S85/S88	—	0-6	—	RS 527	P	E	6	2	—	06	DL	CHW	11 Sept	TS	P	—	—	CHW
9 Sept	S87/S88	—	0-3	—	RS 528	P	E	3	2	—	06	DL	CHW	11 Sept	TS	P	—	—	CHW
9 Sept	S87/S86	—	0-5	—	RS 529	P	E	5	1	—	06	DL	CHW	11 Sept	TS	P	—	—	CHW
9 Sept	S55/S65/S110	—	345	—	RS 530	P	E	6	2	—	03	JI	CHW	9 Sept	TS	P	—	—	CHW
9 Sept	S65/S66/S110/S111	—	346	—	RS 531	P	E	2	1	—	03	JI	CHW	9 Sept	TS	P	—	—	CHW
9 Sept	—	~~Sacrificial 366~~ Sacrificial	350	2' S. of S66	RS 532	P	E	2	1	—	03	JI	CHW	9 Sept	TS	P	—	—	CHW
9 Sept	—	—	350	15' S of ~~S66 Sacrificial~~	RS 533	P	E	2	1	—	03	JI	CHW	9 Sept	TS	P	—	—	CHW
9 Sept	S66/S111 351	—	340	—	RS 534	P	E	2	1	—	03	JI	CHW	9 Sept	TS	P	—	—	CHW
9 Sept	—	S111	330	2' N. of S111/S51	RS 535	P	E	—	—	2	03	JI	CHW	9 Sept	TS	P	—	—	CHW
9 Sept	—	S111	330	2' S. of S110/S111	RS 536	P	E	2	1	—	03	JI	CHW	9 Sept	TS	P	—	—	CHW
9 Sept	—	S110	338	5' N. of S110/S111	RS 537	P	E	2	1	—	03	JI	CHW	9 Sept	TS	P	—	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GR1341 TASK NO.: 04.1

DESCRIPTION: Phase IV, Cell 4 & 5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
9 Sept	S65/S110	—	~~314~~ 5	—	RS 538	~~DS~~ P	E	5	2	—	Ø3	JI	CHW	9 Sept	TS	P —	—	CHW
9 Sept	—	S110	337	5's of S55/S110	RS 539	P	E	—	—	2	Ø3	JI	CHW	9 Sept	TS	P —	—	CHW
9 Sept	S55/S89/S110	—	334	—	RS 540	P	E	—	—	2	Ø3	JI	CHW	9 Sept	TS	P —	—	CHW
9 Sept	S89/S90/S110	—	312	—	RS 541	P	E	—	—	2	Ø3	JI	CHW	9 Sept	TS	P —	—	CHW
9 Sept	S90/S91/S110	—	290	—	RS 542	P	E	—	—	2	Ø3	JI	CHW	9 Sept	TS	P —	—	CHW
9 Sept	S91/S92/S110	—	269	—	RS 543	P	E	3	2	—	Ø3	JI	CHW	9 Sept	TS	P —	—	CHW
9 Sept	—	S73/S74 S75	0- 6	—	RS 544	S	E	68	7	—	Ø6	DL	CHW	11 Sept	TS	P —	—	CHW
9 Sept	S70/S71	—	0-4	—	RS 545	P	E	4	2	—	Ø6	DL	CHW	11 Sept	TS	P —	—	CHW
9 Sept	S78/S79	—	6	—	RS 546	P	E	—	—	1	Ø6	DL	CHW	14 Sept	TS	P —	—	CHW
9 Sept	S116/S80	—	~~65~~	—	RS 547	P	E	—	—	2	Ø6	DL	CHW	14 Sept	TS	P —	—	CHW
9 Sept	S92/S93/S110	—	247	—	RS 548	P	E	—	—	2	Ø3	JI	CHW	9 Sept	TS	P —	—	CHW
9 Sept	S93/S94/S110	—	225	—	RS 549	P	E	2	1	—	Ø3	JI	CHW	9 Sept	TS	P —	—	CHW
9 Sept	S94/S95/S110	—	203	—	RS 550	P	E	—	—	2	Ø3	JI	CHW	9 Sept	TS	P —	—	CHW
9 Sept	S95/S96/S110	—	181	—	RS 551	P	E	—	—	2	Ø3	JI	CHW	9 Sept	TS	P —	—	CHW
9 Sept	S119/S120	—	8	—	RS 552	P	E	8	2	1	Ø6	DL	CHW	14 Sept	TS	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 041

DESCRIPTION: Phase II Cell 4 & 5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ☒ OTHER: ☐

INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
9Sept	S95/S96/S112	—	183	—	RS 553 P	E	—	—	2	Ø3	JI	CHW	9Sept	JH	P —	—	CHW
9Sept	S94/S95/S112	—	205	—	RS 554 P	E	—	—	2	Ø3	JI	CHW	9Sept	JH	P —	—	CHW
9Sept	S93/S94/S112	—	227	—	RS 555 P	E	—	—	2	Ø3	JI	CHW	9Sept	JH	P —	—	CHW
9Sept	S93/S112	—	237	DS72	RS 556 P	E	5	2	—	Ø3	JI	CHW	9Sept	JH	P —	—	CHW
9Sept	S92/S93/S112	—	Int 249	—	RS 557 P	E	—	—	2	Ø3	JI	CHW	9Sept	JH	P —	—	CHW
9Sept	S91/S92/S112	—	Int	—	RS 558 P	E	—	—	2	Ø3	JI	CHW	9Sept	JH	P —	—	CHW
9Sept	S90/S91/S112	—	Int 294	—	RS 559 P	E	—	—	2	Ø3	JI	CHW	9Sept	JH	P —	—	CHW
9Sept	S89/S90/S112	—	Int 316	—	RS 560 P	E	—	—	2	Ø3	JI	CHW	9Sept	JH	P —	—	CHW
9Sept	—	S112	336	3' N of S89/S112	RS 561 P	E	—	—	2	Ø3	JI	CHW	9Sept	JH	P —	—	CHW
9Sept	S55/S89/S112	—	Int 352	—	RS 562 P	E	—	—	2	Ø3	JI	CHW	9Sept	TS	P —	—	CHW
9Sept	S55/S89	—	70	DS73	RS 563 P	E	5	2	—	Ø3	JI	CHW	9Sept	TS	P —	—	CHW
9Sept	~~S11~~	S112	336	4' S of S112/S113	RS 564 P	E	—	—	2	Ø3	JI	CHW	9Sept	TS	P —	—	CHW
9Sept	—	S113	340	5' N of S112/S113	RS 565 P	E	—	—	2	Ø3	JI	CHW	13Sept	TS	P —	—	CHW
9Sept	—	S113	340	5' S of S113/S114	RS 566 P	E	—	—	2	Ø3	JI	CHW	13Sept	TS	P —	—	CHW
9Sept	—	S114	340	5' N of S113/S114	RS 567 P	E	—	—	2	Ø3	JI	CHW	13Sept	TS	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ134L TASK NO.: Ø4.1

DESCRIPTION: Phase IV Cell 4 & 5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
9Sept	—	S114	340	4' S of S114/S115	RS 568	P	E	—	—	2	Ø3	JI	CHW	13 Sept	TS	P —	—	CHW
9Sept	—	S115	335	4' N of S114/S115	RS 569	P	E	—	—	2	Ø3	JI	CHW	13 Sept	TS	P —	—	CHW
9Sept	—	S123	335	4' N of S115/S123	RS 570	P	E	2	1	—	Ø3	JI	CHW	13 Sept	TS	P —	—	CHW
9Sept	—	S123	335	4' S of S122/S123	RS 571	P	E	2	1	Ø	Ø3	JI	CHW	13 Sept	TS	P —	—	CHW
9Sept	—	S122	333	4' N of S123/S122	RS 572	P	E	2	1	Ø	Ø3	JI	CHW	13 Sept	TS	P —	—	CHW
9Sept	—	S122	333	4' S of S122/S121	RS 573	P	E	2	1	Ø	Ø3	JI	CHW	13 Sept	TS	P —	—	CHW
9Sept	—	S121	334	4' N of S121/S122	RS 574	P	E	2	1	Ø	Ø3	JI	CHW	13 Sept	TS	P —	—	CHW
9Sept	—	S123	310	8' N of S115/S123	RS 575	G	E	1	—	—	Ø3	JI	CHW	13 Sept	TS	P —	—	CHW
9Sept	S114/S115	—	300	DS 77	RS 576	P	E	5	2	—	Ø3	JI	CHW	13 Sept	TS	P —	—	CHW
9Sept	—	S119	340	3' S of S118 S119	RS 577	P	E	2	1	—	Ø6	DL	CHW	12 Sept	TS	P —	—	CHW
9Sept	—	S117	340	3' N of S117/S118	RS 578	P	E	2	1	—	Ø6	DL	CHW	12 Sept	TS	P —	—	CHW
9Sept	—	S117	340	3' S of S116/S117	RS 579	P	E	2	1	—	Ø6	DL	CHW	12 Sept	TS	P —	—	CHW
9Sept	S116/S117	—	352	—	RS 580	P	E	—	—	1	Ø6	DL	CHW	CAPPED BY	P	12 Sept JH		CHW
9Sept	—	S116	349	3' N of S116/S117	RS 581	P	E	—	—	1	Ø6	DL	CHW	12 Sept	TS	P	—	CHW
9Sept	—	S116	349	4' S of S116/S80	RS 582	P	E	—	—	2	Ø6	DL	CHW	12 Sept	TS	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM,
R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: G01341 TASK NO.: 04.1

DESCRIPTION: Phase II Cell 4 & 5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: TSTRE Co.

	DATE (day/mo)	LOCATION: SEAM	LOCATION: PANEL	LOCATION: DIST. (ft)	LOCATION: OFFSET (ft)	REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE: LENGTH (ft)	SIZE: WIDTH (ft)	SIZE: DIA (ft)	WELDER ID: MACH NO.	WELDER ID: OPER ID	QA ID	NON-DESTRUCTIVE TESTING: DATE (day/mo)	NDT: OPER ID	NDT: PASS/ FAIL	NDT: ACTION	NDT: QA ID
IS	9 Sept	~~522~~ 580/516	—	~~INT~~ 465	—	RS583	P	E	—	—	2	Ø6	DL	CHW	12 Sept	JH	P	—	CHW
	9 Sept	—	580	351	1' S of 579/580	RS 584	P	E	—	—	2	Ø6	DL	CHW	12 Sept	JH	P	—	CHW
IS	9 Sept	525/527 579/580	—	INT 451	—	RS 585	P	E	—	—	2	Ø6	DL	CHW	12 Sept	JH	P	—	CHW
	9 Sept	524/525 578/579	—	INT ~~378~~ 408	—	RS 586	P	E	5	2	Ø	Ø6	DL	CHW	12 Sept	TS	P	—	CHW
	9 Sept	—	578	349	4' N of 579/578	RS 587	P	E	2	1	—	Ø6	DL	CHW	12 Sept	JH	P	—	CHW
	9 Sept	—	578	350	2' S of 577/578	RS 588	P	E	2	—	—	Ø6	DL	CHW	12 Sept	TS	P	—	CHW
IS	9 Sept	524/527 578	—	INT ~~379~~ 409	—	RS 589	P	E	[illegible]	—	2	Ø6	DL	CHW	12 Sept	JH	P	—	CHW
IS	9 Sept	523/524 577	—	INT ~~379~~ 404	—	RS 590	P	E	—	—	2	Ø6	DL	CHW	11 Sept	TS	P	—	CHW
	9 Sept	—	577	350	4' No of 577/578	RS 591	P	E	—	—	2	Ø6	DL	CHW	11 Sept	TS	P	—	CHW
	9 Sept	522/577	—	390	DS81	RS 592	P	E	5	2	—	Ø6	DL	CHW	7 Sept	TS	P	—	CHW
	9 Sept	—	577	357	2' S of 576/577	RS 593	P	E	—	—	2	Ø6	DL	CHW	11 Sept	TS	P	—	CHW
	9 Sept	—	576	354	4' N of 576/577	RS 594	P	E	—	—	2	Ø6	DL	CHW	11 Sept	TS	P	—	CHW
	9 Sept	521/576	—	~~378~~ 369	DS 81B	RS 595	P	E	5	2	—	Ø6	DL	CHW	11 Sept	TS	P	—	CHW
	9 Sept	—	576	355	2' S of RS410/576	RS 596	P	E	2	1	—	Ø6	DL	CHW	11 Sept	TS	P	—	CHW
	10 Sept	RS510/RS12	—	337	DS 82A1	RS 597	P	E	5	2	—	Ø6	DL	CHW	10 Sept	TS	P	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

4332

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5

PROJECT NO.: G01341 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTRE. Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
10 Sept	518/RS508	—	168'	DS81A	RS 598	P	E	5	2	—	Ø6	DL	CHW	10 Sept	TS	P	—	CHW
10 Sept	—	S113	346	Center	RS 599	G	E	1	—	—	Ø3	JI	CHW	13 Sept	TS	P	—	CHW
10 Sept	—	S23	372	Center	RS 600	G	E	1	—	—	Ø6	DL	CHW	11 Sept	TS	P	—	CHW
10 Sept	521/523 576	—	340	—	RS 601	P	E	5	3	—	Ø6	DL	CHW	12 Sept	TS	P	—	CHW
10 Sept	—	S79	335	Center	RS 602	G	E	1	—	—	Ø6	DL	CHW	12 Sept	JH	P	—	CHW
10 Sept	579 580	—	330	—	RS 603	P	E	5	2	—	Ø6	DL	CHW	12 Sept	JH	P	—	CHW
10 Sept	527/528 S116	—	441 ~~445~~	—	RS 604	P	E	9	2	—	Ø6	DL	CHW	12 Sept	JH	P	—	CHW
10 Sept	527/528 S116	—	444 ~~447~~	—	RS 605	P	E	—	—	2	Ø6	DL	CHW	12 Sept	JH	P	—	CHW
10 Sept	528/S116 S117	—	486 ~~457~~	—	RS 606	P	E	—	—	2	Ø6	DL	CHW	12 Sept	TS	P	—	CHW
10 Sept	528/528 S117	—	446 ~~468~~	—	RS 607	P	E	—	—	2	Ø6	DL	CHW	12 Sept	TS	P	—	CHW
10 Sept	S110/S111	—	173	DS 76	RS 608	P	E	5	2	—	Ø3	JI	CHW	16 Sept	TS	P	—	CHW
10 Sept	596/597 S110	—	159	—	RS 609	P	E	—	—	2	Ø3	JI	CHW	16 Sept	TS	P	—	CHW
10 Sept	597/598 S110	—	138	—	RS 610	P	E	—	—	2	Ø3	JI	CHW	16 Sept	TS	P	—	CHW
10 Sept	598/599 S110	—	116	—	RS 611	P	E	3	2	—	Ø3	JI	CHW	16 Sept	TS	P	—	CHW
10 Sept	599/S110	—	104	DS75	RS 612	P	E	5	2	—	Ø3	JI	CHW	16 Sept	TS	P	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
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R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5 PROJECT NO.: G01341 TASK NO.: 04.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE. CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
10 Sept	S99/S100/S110	—	94	—	RS 613	P	E	—	—	2	Ø3	JI	CHW	16 Sept	JH	P	—	CHW
10 Sept	S100/S102 S110	—	72	—	RS 614	P	E	3	2	—	Ø3	JI	CHW	16 Sept	JH	P	—	CHW
10 Sept	S102/S109 S110	—	64	—	RS 615	P	E	—	—	2	Ø3	JI	CHW	16 Sept	JH	P	—	CHW
10 Sept	S102/S108 S109	—	58	—	RS 616	P	E	2	1	—	Ø3	JI	CHW	16 Sept	JH	P	—	CHW
10 Sept	S111 S52	—	80	—	RS 617	P	E	5	2	—	Ø3	JI	CHW	16 Sept	JH	P	—	CHW
10 Sept	S102/S103 S108	—	53	—	RS 618	P	E	6	2	—	Ø3	JI	CHW	16 Sept	TS	P	—	CHW
10 Sept	S21/S23/ S76/S77/RS60	—	373- 395 401	—	RS 619	C	E	31	2	—	Ø6	DL	CHW	16 Sept	JH	P	—	CHW
10 Sept	S29/S117/ S118	—	477 507	—	RS 620	P	E	3	2	—	Ø6	DL	CHW	12 Sept	TS	P	—	CHW
10 Sept	S29/S30/S118	—	452 509	—	RS 621	P	E	6	2	—	Ø6	DL	CHW	12 Sept	TS	P	—	CHW
10 Sept	S98/S99/S112	—	117	—	RS 622	P	E	—	—	2	Ø3	JI	CHW	12 Sept	TS	P	—	CHW
10 Sept	S99/S100/S112	—	95	—	RS 623	P	E	—	—	2	Ø3	JI	CHW	16 Sept	TS	P	—	CHW
10 Sept	S100/S101/ S112	—	74	—	RS 624	P	E	3	2	—	Ø3	JI	CHW	16 Sept	TS	P	—	CHW
10 Sept	S101/S104/S105 S112	—	52	—	RS 625	P	E	3	2	—	Ø3	JI	CHW	16 Sept	TS	P	—	CHW
10 Sept	—	S105	25	3's of S105/S112	RS 626	P	E	—	—	2	Ø3	JI	CHW	16 Sept	TS	P	—	CHW
10 Sept	S104/S105/ S106	—	52	—	RS 627	P	E	3	2	—	Ø3	JI	CHW	16 Sept	JH	P	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
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(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

REVIEWED BY: TBM

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ131 TASK NO.: 4.1

DESCRIPTION: Phase II Cell 4 & 5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
10 Sept	S104/S106	—	30	—	RS 628	P	~~P~~ E	—	—	2	Ø3	JI	CHW	16 Sept	JH	P/—	—	CHW
10 Sept	S103/S104/ S106/S107	—	30	—	RS 629	P	E	4	3	—	Ø3	JI	CHW	16 Sept	JH	P/—	—	CHW
10 Sept	S101/S102/ S103/S104	—	36	—	RS 630	P	E	3	2	—	Ø3	JI	CHW	16 Sept	JH	P/—	—	CHW
10 Sept	S100/S101 S102	—	36	—	RS 631	P	E	3	2	—	Ø3	JI	CHW	16 Sept	JH	P/—	—	CHW
10 Sept	S103/S107/ S108	—	36	—	RS 632	P	E	3	2	—	Ø3	JI	CHW	16 Sept	JH	P/—	—	CHW
10 Sept	S103/S107	—	51	—	RS 633	P	E	3	2	—	Ø3	JI	CHW	16 Sept	JH	P/—	—	CHW
10 Sept	S106/S107	—	2	—	RS 634	P	E	—	—	2	Ø3	JI	CHW	16 Sept	TS	P/—	—	CHW
10 Sept	S105/S106	—	2	—	RS 635	P	E	—	—	2	Ø3	JI	CHW	16 Sept	TS	P/—	—	CHW
10 Sept	S105/S112	—	2	—	RS 636	P	E	2	1	—	Ø3	JI	CHW	16 Sept	TS	P/—	—	CHW
10 Sept	S112/S113	~~PS~~	75	DS78	RS 637	P	E	5	2	—	Ø3	JI	CHW	16 Sept	TS	P/—	—	CHW
10 Sept	S97/S98/S112	—	140	—	RS 638	P	E	—	—	2	Ø3	JI	CHW	16 Sept	TS	P/—	—	CHW
10 Sept	S96/S97/S112	—	162	—	RS 639	P	E	—	—	2	Ø3	JI	CHW	16 Sept	TS	P/—	—	CHW
10 Sept	—	S108	352	3' N of S116/S119	RS 640	P	E	—	—	2	Ø6	DL	CHW	12 Sept	TS	P/—	—	CHW
10 Sept	—	S118	352	3' S of S117/S118	RS 641	P	E	—	—	2	Ø6	DL	CHW	12 Sept	TS	P/—	—	CHW
10 Sept	S30/S64/S119/ S118	—	~~S33~~ ~~S95~~	—	RS 642	P	E	5	2	Ø	Ø6	DL	CHW	12 Sept	TS	P/—	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: G01341 TASK NO.: 04.1

DESCRIPTION: Phase II Cell 4 & 5

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: JSTRE. Co.

	DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
		SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
	10Sept	—	S119	360	Center	RS 643	P	E	—	—	2	Ø6	DL	CHW	12Sept	JH	P —	—	CHW
IS	10Sept	S64/S119	—	~~610~~ 537	—	RS 644	P	E	3	2	—	Ø6	DL	CHW	12Sept	JH	P —	—	CHW
IS	10Sept	S63/S64/S119	—	~~514~~ 543	—	RS 645	P	E	—	—	1	Ø6	DL	CHW	12Sept	TS	P —	—	CHW
IS	10Sept	S63/S119/S120	—	~~523~~ 553	—	RS 646	P	E	4	4	—	Ø6	DL	CHW	12Sept	JH	P —	—	CHW
	10Sept	S62/S63/S120	—	~~536~~ 565	—	RS 647	P	E	—	—	2	Ø6	DL	CHW	12Sept	JH	P —	—	CHW
	10Sept	S115/S123	—	78	DS83	RS 648	P	E	6	2	—	Ø3	JI	CHW	16Sept	TS	P —	—	CHW
IS	11Sept	S63/S120	—	~~532~~ 559	DS88	RS 649	P	E	4	2	—	Ø6	DL	CHW	12Sept	JH	P —	—	CHW
	11Sept	—	S119	340	6' N of S119/S120	RS 650	P	E	—	—	2	Ø6	DL	CHW	12Sept	TS	P —	—	CHW
	11Sept	S119/S120	—	348	—	RS 651	P	E	4	2	—	Ø6	DL	CHW	12Sept	TS	P —	—	CHW
	11Sept	S119/S120	—	339	—	RS 652	P	E	—	—	2	Ø6	DL	CHW	12Sept	TS	P —	—	CHW
	11Sept	S119/S120	—	335	—	RS 653	P	E	5	2	—	Ø6	DL	CHW	12Sept	TS	P —	—	CHW
	11Sept	—	S121	333	4' S of S120/S121	RS 654	P	E	2	1	—	Ø6	DL	CHW	13Sept	TS	P —	—	CHW
	11Sept	—	S120	339	4' N of S120/S121	RS 655	P	E	2	1	—	Ø6	DL	CHW	12Sept	JH	P —	—	CHW
OK	11Sept	—	S120	339	3' S of S119/S120	RS 656	P	E	2	1	—	Ø6	DL	CHW	12Sept	TS	P —	—	CHW
	11Sept	S62/S120/S121	—	573	—	RS 657	P	E	2	1	—	Ø6	DL	CHW	12Sept	TS	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV, CELLS 4 & 5

PROJECT NO.: GQ134 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: INSTRE Co.

	DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
		SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
IS	11 Sept	561/562/5121	—	587	—	RS 658	P	E	—	—	2	Ø6	DL	CHW	13 Sept	JH	P	—	CHW
	11 Sept	—	5121	349	Center	RS 659	P	E	—	—	3	Ø6	DL	CHW	13 Sept	JH	P	—	CHW
IS	11 Sept	561/5121/5122	—	595	—	RS 660	P	E	3	2	—	Ø6	DL	CHW	13 Sept	JH	P	—	CHW
IS	11 Sept	560/561/5122	—	609	—	RS 661	P	E	—	—	2	Ø6	DL	CHW	13 Sept	JH	P	—	CHW
IS	11 Sept	560/5122	—	611	—	RS 662	P	E	5	2	—	Ø6	DL	CHW	13 Sept	JH	P	—	CHW
	11 Sept	IC Berm 597/598	—	52	DS74	RS 663	P	E	5	2	—	Ø6	DL	CHW	16 Sept	TS	P	—	CHW
	11 Sept	5122/5123	—	346-361	—	RS 664	E	E	15	2	—	Ø6	DL	CHW	13 Sept	JH	P	—	CHW
	11 Sept	559/560/5123	—	631	—	RS 665	P	E	—	—	2	Ø6	DL	CHW	13 Sept	TS	P	—	CHW
	11 Sept	559/5115/5123	—	639	—	RS 666	P	E	6	2	—	Ø6	DL	CHW	13 Sept	TS	P	—	CHW
	11 Sept	559/5115	—	651	—	RS 667	P	E	5	1	—	Ø6	DL	CHW	13 Sept	TS	P	—	CHW
	11 Sept	558/559/5114/5115	—	652	—	RS 668	P	E	3	2	—	Ø6	DL	CHW	13 Sept	TS	P	—	CHW
	11 Sept	557/558 5113/5114	—	675	—	RS 669	P	E	3	2	—	Ø6	DL	CHW	13 Sept	TS	P	—	CHW
	11 Sept	556/557 5112/5113	—	696	—	RS 670	P	E	3	2	—	Ø6	DL	CHW	13 Sept	JH	P	—	CHW
	11 Sept	—	5112	347	2'S of 5112/5113	RS 671	P	E	—	—	1	Ø6	DL	CHW	13 Sept	JH	P	—	CHW
	11 Sept	5115/5123	—	243	—	RS 672	P	E	3	2	—	Ø3	JI	CHW	11 Sept	JH	P	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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REVIEWED BY: TBW

4943

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase III Cell 4 & 5

PROJECT NO.: G01341 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ☐ SECONDARY: ☒ OTHER: ☐

INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
11 Sept	S115/S123	—	285	—	RS 673	P	E	2	1	—	Ø3	JI	CHW	11 Sept	TS	P —	—	CHW
11 Sept	S115/S123	—	290	—	RS 674	P	E	—	—	2	Ø3	JI	CHW	11 Sept	JH	P —	—	CHW
11 Sept	S122/S123	—	211	—	RS 675	P	E	—	—	2	Ø3	JI	CHW	11 Sept	JH	P —	—	CHW
11 Sept	S122/S123	—	217	—	RS 676	P	E	—	—	2	Ø3	JI	CHW	11 Sept	TS	P —	—	CHW
11 Sept	S122/S123	—	275	—	RS 677	P	E	—	—	2	Ø3	JI	CHW	11 Sept	TS	P —	—	CHW
11 Sept	S122/S123	—	294	—	RS 678	P	E	2	1	—	Ø3	JI	CHW	11 Sept	TS	P —	—	CHW
11 Sept	S121/S122	—	290	—	RS 679	P	E	2	1	—	03	JI	CHW	11 Sept	TS	P —	—	CHW
11 Sept	S121/S122	—	265	—	RS 680	P	E	—	—	2	Ø3	JI	CHW	11 Sept	TS	P —	—	CHW
11 Sept	S121/S122	—	241	—	RS 681	P	E	3 ~~6~~	2	—	Ø3	JI	CHW	11 Sept	TS	P —	—	CHW
11 Sept	S121/S122	—	231	—	RS 682	P	E	3	1	—	Ø3	JI	CHW	11 Sept	TS	P —	—	CHW
11 Sept	S121/S122	—	179	—	RS 683	P	E	—	—	2	Ø3	JI	CHW	11 Sept	JH	P —	—	CHW
11 Sept	S121/S122	—	151	—	RS 684	P	E	—	—	2	Ø3	JI	CHW	11 Sept	JH	P —	—	CHW
11 Sept	S122/S123	—	153	DS 84	RS 685	P	E	5	2	2	Ø3	JI	CHW	11 Sept	JH	P —	—	CHW
11 Sept	S121/S122	—	197	—	RS 686	P	E	3	2	—	Ø3	JI	CHW	11 Sept	TS	P —	—	CHW
11 Sept	S120/S121	—	194	—	RS 687	P	E	3	2	—	Ø3	JI	CHW	11 Sept	JH	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM,
R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5 PROJECT NO.: GQ1341 TASK NO.: 004.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE. Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
11 Sept	S119/S120	—	175	—	RS 688	P	E	6	2	—	Ø3	JI	CHW	11 Sept	TS	P	—	CHW
11 Sept	S121/S122	—	221	DS85	RS 689	P	E	16	2	—	Ø3	JI	CHW	11 Sept	TS	P	—	CHW
11 Sept	E —	S120	165	4's of S120/S119	RS 690	P	E	—	—	2	Ø3	JI	CHW	13 Sept	TS	P	—	CHW
11 Sept	S118/S119	—	200	—	RS 691	P	E	—	—	1	Ø3	JI	CHW	11 Sept	JH	P	—	CHW
11 Sept	S117/S118	—	200	—	RS 692	P	E	—	—	1	Ø3	JI	CHW	11 Sept	JH	P	—	CHW
11 Sept	S116/S117	—	200	—	RS 693	P	E	3	1	—	Ø3	JI	CHW	11 Sept	JH	P	—	CHW
11 Sept	S116/S117	—	218	—	RS 694	P	E	2	1	—	Ø3	JI	CHW	11 Sept	JH	P	—	CHW
11 Sept	S116/S117	—	225	—	RS 695	P	E	5	1	—	Ø3	JI	CHW	11 Sept	JH	P	—	CHW
11 Sept	S116/S117	—	300	—	RS 696	P	E	2	1	—	Ø3	JI	CHW	12 Sept	JH	P	—	CHW
11 Sept	S118/S119	—	360	—	RS 697	P	E	—	—	1	Ø3	JI	CHW	12 Sept	TS	P	—	CHW
11 Sept	S119/S120	—	360	—	RS 698	P	E	—	—	1	Ø3	JI	CHW	12 Sept	TS	P	—	CHW
11 Sept	S119/S120	—	350	—	RS 699	P	E	4	2	—	Ø3	JI	CHW	12 Sept	TS	P	—	CHW
11 Sept	S119/S120	—	346	—	RS 700	P	E	—	—	1	Ø3	JI	CHW	12 Sept	JH	P	—	CHW
11 Sept	S119/S120	—	344	—	RS 701	P	E	—	—	1	03	JI	CHW	12 Sept	TS	P	—	CHW
* 12 Sept	S65/S66 S110/S111	—	344	—	RS 702	C	E	44	3	—	Ø3	DL	CHW	CAPPED	BY	RS 728	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
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(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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SHEET NO. 47 OF 49

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5

PROJECT NO.: GQ1341 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
12 Sept	~~S55~~/S112	~~S56~~	81	Across Panel	RS 703	P	E	11	3	—	Ø3	DL	CHW	13 Sept	TS	P	—	CHW
12 Sept	S115/S123	—	325	—	RS 704	P	E	—	—	2	Ø3	DL	CHW	13 Sept	TS	P	—	CHW
12 Sept	S115/S123	—	304	—	RS 705	P	E	2	1	—	Ø3	DL	CHW	13 Sept	TS	P	—	CHW
12 Sept	S122/S123	—	329	—	RS 706	P	E	7	1	—	Ø3	DL	CHW	13 Sept	TS	P	—	CHW
12 Sept	S122/S123	—	340	—	RS 707	P	E	—	—	1	Ø3	DL	CHW	13 Sept	JH	P	—	CHW
12 Sept	S121/S122	—	330	—	RS 708	P	E	—	—	2	Ø3	DL	CHW	13 Sept	TS	P	—	CHW
12 Sept	S120/S121	—	355	—	RS 709	P	E	—	—	1	Ø3	DL	CHW	13 Sept	TS	P	—	CHW
12 Sept	S80/S116	—	300	—	RS 710	G	E	1	—	—	Ø3	DL	CHW	12 Sept	JN	P	—	CHW
12 Sept	—	S77	295	Center	RS 711	P	E	—	—	2	Ø3	DL	CHW	12 Sept	JH	P	—	CHW
12 Sept	S122/S123	—	115	—	RS 712	P	E	—	—	2	Ø3	DL	CHW	14 Sept	JH	P	—	CHW
12 Sept	S122/S123	—	83	—	RS 713	P	E	—	3	—	Ø3	DL	CHW	14 Sept	JH	P	—	CHW
12 Sept	S121/S122	~~50~~	50	—	RS 714	P	E	—	—	1	Ø3	DL	CHW	14 Sept	JH	P	—	CHW
12 Sept	S121/S122	~~47~~	47	—	RS 715	P	E	—	—	1	Ø3	DL	CHW	14 Sept	JH	P	—	CHW
12 Sept	S122/S123	—	39	—	RS 716	P	E	—	—	1	Ø3	DL	CHW	14 Sept	JH	P	—	CHW
12 Sept	S122/S123	—	23	—	RS 717	P	E	—	—	1	Ø3	DL	CHW	14 Sept	JH	P	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
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(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4&5 PROJECT NO.: G01341 TASK NO.: 02.1

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
12 Sept	S121/S122	—	6	—	RS 718	P	E	—	—	1	Ø3	DL	CHW	14 Sept	TS	P	—	—	CHW
12 Sept	S115/S123	—	6	—	RS 719	P	E	3	2	—	Ø3	DL	CHW	16 Sept	JH	P	—	—	CHW
12 Sept	S114/S115	—	6	—	RS 720	P	E	3	2	—	Ø3	DL	CHW	16 Sept	JH	P	—	—	CHW
12 Sept	—	S114	6	—	RS 721	S	E	22	6	—	Ø3	DL	CHW	16 Sept	JH	P	—	—	CHW
12 Sept	S120/S121	—	5	—	RS 722	P	E	—	—	1	Ø3	DL	CHW	14 Sept	TS	P	—	—	CHW
* 13 Sept	S119/S120	—	59-79	—	RS 723	P	E	22.5	20	—	Ø3	DL	CHW	13 Sept	TS	P	—	—	CHW
13 Sept	—	S123	135	center	RS 724	P	E	—	—	2	Ø3	DL	CHW	14 Sept	TS	P	—	—	CHW
13 Sept	~~S123~~	S123	55	across center 2' of	RS 725	G	E	20	—	—	Ø3	DL	CHW	14 Sept	TS	P	—	—	CHW
13 Sept	—	S58	387	S58/S59 across	RS 726	P	E	3	2	—	Ø3	DL	CHW	13 Sept	TS	P	—	—	CHW
13 Sep	S65/S66 S110/S111	—	344	panels	RS 727	C	E	44	4	—	Ø3	DL	CHW	14 Sept	TS	P	—	—	CHW
13 Sep	S121/S122	—	70	—	RS 728	P	E	3	2	—	Ø3	DL	CHW	14 Sept	TS	P	—	—	CHW
13 Sep	S102/S727	—	5	—	RS 729	P	E	5	2	—	Ø3	DL	CHW	14 Sept	TS	P	—	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

* GCL was placed under RS 723 (Skid Sheet) PER RCI.

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SHEET NO. 49 OF 49

Primary

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & 5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
14 Sept	P10/P11	—	200	DP7	RP-1	P	E	5	2	—	Ø3	DL	CHW	17 Sept	TS	P	—	CHW
14 Sept	P8/P9	—	300	DP5	RP-2	P	E	5	2	—	Ø3	DL	CHW	17 Sept	TS	P	—	CHW
14 Sept	P-7/P-8	—	165	DP6	RP-3	P	E	5	2	—	Ø3	DL	CHW	CAPPED	BY RP31		—	CHW
14 Sept	P4/P5	—	182	—	RP4	P	E	4	2	—	Ø3	DL	CHW	17 Sept	TS	P	—	CHW
14 Sept	P4/P5	—	150	DP3	RP5	P	E	5	2	—	Ø3	TB	CHW	17 Sept	TS	P	—	CHW
14 Sept	P2/P3	—	365	DP2	RP6	P	E	5	2	—	Ø3	DL	CHW	17 Sept	JH	P	—	CHW
14 Sept	—	P1	381	5' N of P1/P2	RP7	P	E	—	—	2	Ø3	DL	CHW	17 Sept	JH	P	—	CHW
14 Sept	—	P1	381	3' S of P1/TI P20	RP8	P	E	—	—	2	Ø3	DL	CHW	17 Sept	JH	P	—	CHW
14 Sept	P1/TI P20 / TI P19	P1	374	—	RP9	P	E	—	—	2	Ø3	DL	CHW	17 Sept	JH	P	—	CHW
14 Sept	P1/TI P19 / TI P18	—	350	—	RP10	P	E	—	—	2	Ø3	DL	CHW	17 Sept	JH	P	—	CHW
14 Sept	P1/TI P18 / TI P17	—	328	—	RP11	P	E	—	—	2	Ø3	DL	CHW	17 Sept	JH	P	—	CHW
14 Sept	P1/TI P17 / TI P16	—	304	—	RP12	P	E	—	—	2	Ø3	DL	CHW	17 Sept	JH	P	—	CHW
14 Sept	P1/TI P16 / TI P15	—	281	—	RP13	P	E	—	—	2	Ø3	DL	CHW	17 Sept	JH	P	—	CHW
14 Sept	P1/TI P15 / TI P14	—	261	—	RP14	P	E	—	—	2	Ø3	DL	CHW	17 Sept	JH	P	—	CHW
14 Sept	P1/TI P14 / TI P13	—	237	—	RP15	P	E	—	—	2	Ø3	TB	CHW	17 Sept	JH	P	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: 601341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

INSTALLER: ISTKE Co.

DATE (day/mo)	LOCATION: SEAM	LOCATION: PANEL	LOCATION: DIST. (ft)	LOCATION: OFFSET (ft)	REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE: LENGTH (ft)	SIZE: WIDTH (ft)	SIZE: DIA (ft)	WELDER ID: MACH NO.	WELDER ID: OPER ID	QA ID	NON-DESTRUCTIVE TESTING: DATE (day/mo)	NON-DESTRUCTIVE TESTING: OPER ID	NON-DESTRUCTIVE TESTING: PASS/ FAIL	NON-DESTRUCTIVE TESTING: ACTION	NON-DESTRUCTIVE TESTING: QA ID
14 Sept	P1/TIP13 TIP14	—	212	—	RP 16	P	E	—	—	2	Ø3	DL	CHW	17 Sept	JH	P —	CHW
14 Sept	P1/TIP12	—	193	—	RP 17	P	E	—	—	2	Ø3	DL	CHW	17 Sept	JH	P —	CHW
14 Sept	P1/TIP11 TIP12	—	190	—	RP 18	P	E	—	—	2	Ø3	DL	CHW	17 Sept	JH	P —	CHW
14 Sept	P1/TIP11	—	170	—	RP 19	P	E	2	1	—	Ø3	DL	CHW	17 Sept	JH	P —	CHW
14 Sept	P1/TIP10	—	166	—	RP 20	P	E	2	2	—	Ø3	TB	CHW	17 Sept	JH	P —	CHW
14 Sept	P1/TIP10 TIP5	—	144	—	RP 21	P	E	—	—	2	Ø3	DL	CHW	17 Sept	JH	P —	CHW
14 Sept	—	P2	387	5' S of P1/P2	RP 22	P	E	—	—	2	Ø3	DL	CHW	17 Sept	JH	P —	CHW
14 Sept	—	P2	387	4' N of P2/P3	RP 23	P	E	—	—	2	Ø3	DL	CHW	17 Sept	JH	P —	CHW
14 Sept	P1/TIP5 TIP4	—	121	—	RP 24	P	E	5	2	—	Ø3	DL	CHW	17 Sept	JH	P —	CHW
14 Sept	P1/TIP4	—	102	DP1	RP 25	P	E	5	3	—	Ø3	DL	CHW	17 Sept	JH	P —	CHW
14 Sept	P1/TIP3 TIP4	—	97	~~DP1~~	RP 26	P	E	—	—	2	Ø3	DL	CHW	17 Sept	JH	P —	CHW
14 Sept	P1/TIP3	—	79	—	RP 27	P	E	3	2	—	Ø3	DL	CHW	17 Sept	TS	P —	CHW
14 Sept	P1/TIP2	—	73	—	RP 28	P	E	3	2	—	Ø3	DL	CHW	17 Sept	TS	P —	CHW
14 Sept	P1/TIP2	—	68	—	RP 29	P	E	3	2	—	Ø3	DL	CHW	17 Sept	TS	P —	CHW
14 Sept	P1/TIP6	—	52	—	RP 30	P	E	1	1	—	Ø3	DL	CHW	17 Sept	TS	P —	CHW

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NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell 4 & 5 PROJECT NO.: GQ1341 TASK NO.: Ø4.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

INSTALLER: ISTREC Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
16 Sept	P7/P8	—	0-388	—	RP 31*	C	F	388	6	—	Ø9	DW	CHW	A.T.O.K.	HW	P	—	
17 Sept	P13/P14	—	235	DP10	RP 32	P	E	5	2	—	Ø3	DL	CHW	17 Sept	TS	P	—	CHW
17 Sept	P15/P16	—	275	—	[redacted]	P	E	5	2	—	Ø3	DL	CHW	17 Sept	TS	P	—	CHW
* 17 Sept	P15/P16	—	282	DP13	[redacted]	P	E	5	2	—	Ø3	DL	CHW	17 Sept	TS	P	—	CHW
17 Sept	P14/P15	—	193	DP11	RP 35	P	E	5	2	—	Ø3	DL	CHW	17 Sept	TS	P	—	CHW
17 Sept	P8/RP31	—	160	DP12	RP 36	P	E	5	2	—	Ø3	DL	CHW	17 Sept	TS	P	—	CHW
17 Sept	P11/P12	—	136'	DP8	RP 37	P	E	5	2	—	Ø3	DL	CHW	17 Sept	TS	P	—	CHW
17 Sept	P16/P17	—	125'	DP14	RP 38	P	E	5	2	—	Ø3	DL	CHW	17 Sept	TS	P	—	CHW
17 Sept	P12/P13	—	58'	—	RP 39	P	E	—	—	3	Ø3	DL	CHW	17 Sept	TS	P	—	CHW
17 Sept	P12/P13	DP9	368'	—	[redacted]	P	E	5	2	—	Ø3	DL	CHW	17 Sept	TS	P	—	CHW
17 Sept	P6/P7	—	73'-134'	—	RP 41	C	E	61	3	—	Ø3	TB	CHW	17 Sept	TS	P	—	CHW
18 Sept	P21/P22	~~DP18~~	275	DP18	[redacted]	P	E	5	2	—	Ø3	TB	CHW	19 Sept	AC	P	—	CHW
18 Sept	P18/P19	—	375	DP16	[redacted]	P	E	5	2	—	Ø3	TB	CHW	19 Sept	AC	P	—	CHW
18 Sept	P17/P18	—	381	DP15	[redacted]	P	E	5	2	—	Ø3	TB	CHW	Capped By RP 176			—	CHW
23 Sept	P1/TIP6	—	7	—	RP 45	P	E	2	1	—	Ø3	TB	CHW	Trimmed off			—	CHW
														24 Sept	AC	P	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM,
R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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SHEET NO. 3 OF 27

* RP31 = Cap over P6/P7 to install 16 ~~fabric~~ GEOTEXTILE. TBW 02/18

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & 5 PROJECT NO.: G0341 TASK NO.: 04-1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
23 Sept	P7/RP31	—	5	—	RP 46	P	E	5	2	—	Ø3	TB	CHW	24 Sept	AC	P —	—	CHW
23 Sept	P8/RP31	—	5	—	RP 47	P	E	—	—	2	Ø3	TB	CHW	24 Sept	AC	P —	—	CHW
23 Sept	P1/P2	—	7	—	RP 48	P	E	—	—	1	Ø3	TB	CHW	24 Sept	AC	P —	—	CHW
24 Sept	P26/P27	—	15ø	DP22	RP 49	P	E	5	2	—	Ø3	TB	CHW	24 Sept	AC	P —	—	CHW
24 Sept	P25/P26	—	15ø	DP21	RP 50	P	E	5	2	—	Ø3	TB	CHW	24 Sept	AC	P —	—	CHW
24 Sept	P31/P32	—	146	—	RP 51	P	E	11	2	—	Ø3	TB	CHW	24 Sept	AC	P —	—	CHW
24 Sept	P30/P31	—	87	DP25	RP 52	P	E	4	2	—	Ø3	TB	CHW	24 Sept	AC	P —	—	CHW
24 Sept	P31/P32	—	350	DP26	[illegible]	P	E	5	2	—	Ø3	TB	CHW	24 Sept	AC	P —	—	CHW
24 Sept	P28/P29	—	~~352~~ 325	DP23	[illegible]	P	E	5	2	—	Ø3	TB	CHW	24 Sept	AC	P —	—	CHW
24 Sept	P18/P19	—	368	DP16B	[illegible]	P	E	5	2	—	Ø3	TB	CHW	24 Sept	AC	(P) F	Rewelded VBK	CHW
25 Sept	P29/P30	—	75	DP24	RP 56	P	E	5	2	—	Ø3	TB	CHW	CAPPED	BY RP176	—	—	CHW
25 Sept	P33/P48/P55/P56	—	59	—	RP 57	P	E	4	2	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P49/P54/P55	—	Int	—	RP 58	P	E	5	2	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P49/P54	—	Int 30	—	RP 59	P	E	3	2	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P49/P53/P54	—	Int	—	RP 60	P	E	—	—	1	03	TB	CHW	25 Sept	AC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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000446

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: G01341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
25 Sept	P49/P53	—	Int 30	—	RP 61	P	E	4	2	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P49/P52/P53	—	Int	—	RP 62	P	E	2	1	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P48/P49/P52	—	Int	—	RP 63	P	E	2	1	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P48/P51/P52	—	Int	—	RP 64	P	E	—	—	2	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P33/P48/P51	—	Int	—	RP 65	P	E	4	2	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P33/P50/P51	—	Int	—	RP 66	P	E	—	—	2	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P33/P34/P56	—	81 Int	—	RP 67	P	E	—	—	2	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P34/P35/P56	—	103 Int	—	RP 68	P	E	2	1	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	—	P35	128	1' S of P35/P36	RP 69	P	E	—	—	2	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	—	P35	128	1' E of P35/P36	RP 70	P	E	2	1	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P35/P36 P56	—	125 Int	—	RP 71	P	E	2	1	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P36/P37 P56	—	147 Int	DP 32	RP 72	P	E	5	2	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	—	P36	118	Center	RP 73	P	E	2	1	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	—	P36	126	Center	RP 74	P	E	2	1	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P37/P38 P56	—	169 Int	—	RP 75	P	E	2	1	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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000447

4946

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
25 Sept	P38/P39 P56	—	191 INT	—	RP76	EP	E	2	1	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	—	P39	129	3' W of P38/P39	RP77	P	E	2	1	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P32/P56	—	190	DP31	RP 78	P	E	5	2	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P32/P56	—	200	—	RP 79	P	E	—	—	3	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P39/P56	—	208	—	RP 80	P	E	2	1	~~1~~	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P39/P40	—	108	—	RP 81	P	E	3	2	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P39/P40/P56	—	INT 213	—	RP 82	P	E	2	1	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P40/P41/P56	—	INT 235	—	RP 83	P	E	2	1	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	—	P41	129	3' W of P40/P41	RP 84	P	E	2	1	—	Ø3	TB	CHW	25 Sept	AC	P F	Leak-Reweldered & VTOK	CHW
25 Sept	P41/P42/P56	—	INT 257	—	[redacted]	P	E	2	1	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P42/P43/P56	—	INT 279	—	[redacted]	P	E	2	1	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P43/P44/P56	—	INT 301	—	[redacted]	P	E	2	1	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P44/P45/P56	—	INT 323	—	[redacted]	P	E	3	1	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P45/P46/P56	—	INT 345	—	[redacted]	P	E	2	1	—	Ø3	TB	CHW	25 Sept	AC	P —	—	CHW
25 Sept	P46/P47/P56	—	INT 367	—	[redacted]	P	E	2	1	—	Ø3	TB	CHW	28 Sept	HW	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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SHEET NO. 6 OF 27

000448

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE Co

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
25Sept	P24/P25	—	347	DP20	[redacted]	P E	5	2	—	Ø3	TB	CHW	25Sept	AC	P —	—	CHW
25Sept	P46/P47	—	19	DP29	[redacted]	P E	5	2	—	Ø3	TB	CHW	28Sept	HW	P —	—	CHW
25Sept	P41/P42	—	71	DP28	[redacted]	P E	5	2	—	Ø3	TB	CHW	28Sept	HW	P —	—	CHW
28Sept	P20/P21	—	114	DP17	[redacted]	P E	5	2	—	Ø3	DL ~~TB~~	CHW	28Sept	AC	P —	—	CHW
28Sept	P37/P38	—	25	DP27	[redacted]	P E	5	2	—	Ø3	DL	CHW	28Sept	HW	P —	—	CHW
28Sept	P51/P52	—	10	DP30	[redacted]	P E	5	2	—	Ø3	DL	CHW	28Sept	HW	P —	—	CHW
28Sept	~~P72~~	P73	367	3'N of P73/P74	[redacted]	P E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
28Sept	—	P73	367	3'S of P72/P73	[redacted]	P E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
28Sept	—	P72	365	3'N of P72/P73	[redacted]	P E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
28Sept	—	P72	365	3'S of P71/P72	[redacted]	P E	—	—	1	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
28Sept	—	P71	364	3'N of P71/P72	[redacted]	P E	—	—	2	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
28Sept	—	P71	364	3'S of P71/P70	[redacted]	P E	—	—	2	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
28Sept	—	P71	364	Center	[redacted]	G E	1	—	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
28Sept	—	P70	368	3'N of P71/P70	[redacted]	P E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
28Sept	—	P70	368	3'S of P69/P70	[redacted]	P E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: G0134L TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
28 Sept	—	P69	369	4' N of P69/P70	[redacted]	P	E	—	—	1	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
28 Sept	—	P69	369	3' S of P68/P69	[redacted]	P	E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
28 Sept	—	P68	369	4' N of P68/P69	[redacted]	P	E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
28 Sept	P22 P23	—	300	DP19	[redacted]	P	E	5	2	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
30 Sept	P21/P22	—	3	—	[redacted]	P	E	—	—	1	Ø3	DL	CHW	1 OCT	AC	P —	—	CHW
30 Sept	P22/P23	—	9	—	[redacted]	P	E	5	2	—	Ø3	DL	CHW	1 OCT	AC	P —	—	CHW
30 Sept	P23/P24	—	8	—	[redacted]	P	E	10	2	—	03	DL	CHW	1 OCT	AC	P —	—	CHW
30 Sept	P19/P20	—	3	—	[redacted]	P	E	—	—	1	Ø3	DL	CHW	1 OCT	AC	P —	—	CHW
30 Sept	P20/P21	—	3	—	[redacted]	G	E	4	—	—	Ø3	DL	CHW	1 OCT	AC	P —	—	CHW
1 OCT	P73/P74	—	80	—	[redacted]	P	E	3	2	—	Ø3	DL	CHW	2 OCT	AC	P —	—	CHW
1 OCT	P72/P73	—	94	—	[redacted]	P	E	3	2	—	Ø3	DL	CHW	20 OCT	HW	P —	—	CHW
1 OCT	P72/P73	—	225	DP44	[redacted]	P	E	6	2	—	Ø3	DL	CHW	CAPPED	BY RP	252	—	CHW
1 OCT	P73/P74	—	291	DP45	[redacted]	P	E	5	2	—	Ø3	DL	CHW	CAPPED	BY RP	252	—	CHW
1 OCT	P69/P70	—	252	—	[redacted]	P	E	2	1	—	Ø3	DL	CHW	21 OCT	SSC	P —	—	CHW
1 OCT	P68/P69	—	172	—	[redacted]	P	E	4	2	—	Ø3	DL	CHW	21 OCT	SSC	P —	—	CHW
														3 OCT	AC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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SHEET NO. 8 OF 27

000250

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE. Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
1 OCT	P70/P71	—	173	DP43	[redacted]	P	E	8	2	—	Ø3	DL	CHW	3 OCT	AC	P —	—	CHW
1 OCT	P69/P70	—	75	DP42	[redacted]	P	E	5	2	—	Ø3	DL	CHW	21 OCT	SSC	P —	—	CHW
1 OCT	P68/P69	—	49	—	[redacted]	P	E	4	2	—	Ø3	DL	CHW	21 OCT	SSC	P —	—	CHW
1 OCT	P66/P67	—	175	DP40	[redacted]	P	E	5	2	—	Ø3	DL	CHW	3 OCT	AC	P —	—	CHW
1 OCT	P65/P66	—	175	DP39	[redacted]	P	E	5	2	—	Ø3	DL	CHW	3 OCT	AC	P —	—	CHW
1 OCT	P63/P64	—	229	DP38	[redacted]	P	E	5	2	—	Ø3	DL	CHW	3 OCT	AC	P —	—	CHW
1 OCT	P62/P63	—	211	—	[redacted]	P	E	Ø2	1	—	Ø3	DL	CHW	2 OCT	AC	P —	—	CHW
1 OCT	P62/P63	—	220	DP37	[redacted]	P	E	5	2	—	Ø3	DL	CHW	2 OCT	AC	P —	—	CHW
1 OCT	P61/P62	—	275	DP36	[redacted]	P	E	5	2	—	Ø3	DL	CHW	2 OCT	AC	P —	—	CHW
1 OCT	P58/P59	—	227	DP34	[redacted]	P	E	5	2	—	Ø3	DL	CHW	2 OCT	AC	P —	—	CHW
1 OCT	P57/TFP42	—	243	DP47	[redacted]	P	E	5	2	—	Ø3	DL	CHW	2 OCT	AC	P —	—	CHW
1 OCT	P57/P58	—	123	DP33	[redacted]	P	E	5	2	—	Ø3	DL	CHW	23 OCT	SSC	P —	—	CHW
1 OCT	P56/P55	—	4	—	[redacted]	P	E	—	—	1	Ø3	DL	CHW	3 OCT	AC	P —	—	CHW
1 OCT	P13/P14	—	4	—	[redacted]	P	E	—	—	1	Ø3	DL	CHW	1 OCT	AC	P —	—	CHW
1 OCT	P10/P11	—	3	—	[redacted]	P	E	—	—	1	Ø3	DL	CHW	1 OCT	AC	P	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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SHEET NO. 9 OF 27

0004451

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5

PROJECT NO.: G01341 TASK NO.: 041

YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

INSTALLER: TSTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
1 OCT	P8/RP31	—	6	—	[redacted]	P	E	5	3	—	Ø3	DL	CHW	1 OCT	AC	P	—	CHW
2 OCT	P57/TIP61	—	40-62	—	[redacted]	C	E	22	3	—	Ø3	DL	CHW	2 OCT	AC	P	F Leak Reweld VTOK	CHW
2 OCT	P68/P69	—	10	DP41	[redacted]	P	E	5	2	—	Ø3	DL	CHW	21 OCT	SSC	P	—	CHW
2 OCT	~~P74~~	P74	366	3'S of P73/P74	[redacted]	P	E	—	—	1	Ø3	DL	CHW	11 OCT	AC	P	—	CHW
2 OCT	—	P74	366	4'N of P74/P75	[redacted]	P	E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P	F Leak Reweld-VTOK	CHW
2 OCT	—	P75	364	3'S of P74/P75	[redacted]	P	E	—	—	2	Ø3	DL	CHW	11 OCT	AC	P	—	CHW
2 OCT	—	P75	364	5'N of P75/P76	[redacted]	P	E	—	—	2	Ø3	DL	CHW	11 OCT	AC	P	—	CHW
2 OCT	—	P76	367	4'S of P75/P76	[redacted]	P	E	—	—	2	Ø3	DL	CHW	11 OCT	AC	P	—	CHW
2 OCT	—	P76	359	Center	[redacted]	P	E	—	—	2	Ø3	DL	CHW	11 OCT	AC	P	—	CHW
2 OCT	—	P77	356	4'S of P74/P77	[redacted]	P	E	—	—	2	Ø3	DL	CHW	11 OCT	AC	P	—	CHW
2 OCT	—	P77	356	5'N of South Edge	[redacted]	P	E	—	—	2	Ø3	DL	CHW	11 OCT	AC	P	—	CHW
2 OCT	—	P68	369	5'S of P67/P68	[redacted]	P	E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P	—	CHW
2 OCT	—	P67	367	5'N of P67/P68	[redacted]	P	E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P	—	CHW
2 OCT	—	P67	367	4'S of P66/P67	[redacted]	P	E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P	—	CHW
2 OCT	—	P66	369	5'N of P66/P67	[redacted]	P	E	3	2	—	Ø3	DL	CHW	11 OCT	AC	P	F Leak-VTOK Reweld	CHW
																P	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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SHEET NO. 10 OF 27

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: G01341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
2 OCT	—	P66	369	4'S of P65/P66	[redacted]	P	E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
2 OCT	—	P66	367	≈P65/P66	[redacted]	P	E	—	—	1	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
2 OCT	—	P65	369	≈5'N of P65/P66	[redacted]	P	E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
2 OCT	—	P65	369	≈4'S of P64/P65	[redacted]	P	E	—	—	2	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
2 OCT	—	P64	369	≈3'N of P64/P65	[redacted]	P	E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P F	Leak Reweld	CHW VTOK
2 OCT	—	P64	369	≈3'S of P63/P64	[redacted]	P	E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
2 OCT	—	P63	364	≈4'N of P63/P64	[redacted]	P	E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
2 OCT	—	P63	364	≈5'S of P62/P63	[redacted]	P	E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
2 OCT	—	P62	366	≈6'N of P62/P63	[redacted]	P	E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
2 OCT	—	P62	366	≈4'S of P61/P62	[redacted]	P	E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
2 OCT	—	P61	369	≈5'N of P61/P62	[redacted]	P	E	2	1	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
2 OCT	—	P61	369	≈3'S of P60/P61	[redacted]	P	E	2	1	—	Ø3	DL	CHW	23 OCT	SSC	P —	—	CHW
2 OCT	—	P60	367	≈5'N of P61/P62	[redacted]	P	E	—	—	2	Ø3	DL	CHW	23 OCT	SSC	P —	—	CHW
2 OCT	—	P60	367	≈3'S of P59/P60	[redacted]	P	E	2	1	—	Ø3	DL	CHW	23 OCT	SSC	P —	—	CHW
2 OCT	—	P59	365	≈3'N of P59/P60	[redacted]	P	E	2	1	—	Ø3	DL	CHW	23 OCT	SSC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5

YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

INSTALLER: ISTRE. CO.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
2 OCT	—	P59	365	≈4'S of P58/P59	RP [illegible]	P	E	2	1	—	Ø3	DL	CHW	23 OCT	SSC	P	—	—	CHW
2 OCT	—	P58	368	≈4'N of P58/P59	RP [illegible]	P	E	2	1	—	Ø3	DL	CHW	4 OCT	AC	P	—	—	CHW
2 OCT	—	P58	368	≈4'S of P57/P58	RP [illegible]	P	E	2	1	—	Ø3	DL	CHW	3 OCT	AC	P	—	—	CHW
2 OCT	—	P57	368	≈4'N of P57/P58	RP [illegible]	P	E	2	1	—	Ø3	DL	CHW	3 OCT	AC	P	—	—	CHW
2 OCT	—	P57	368 INT	≈3'S of P57/IIP20	RP 170	P	E	2	1	—	Ø3	DL	CHW	3 OCT	AC	P	—	—	CHW
2 OCT	P1/P57 ~~IIP19/IIP20~~	~~P57~~		—	RP [illegible]	R	E	11	5	—	Ø3	DL	CHW	3 OCT	AC	P	—	—	CHW
2 OCT	—	P58	374	Center	RP [illegible]	P	E	—	—	2	Ø3	DL	CHW	3 OCT	AC	P	—	—	CHW
2 OCT	P2/P3 P58/P59	—	376	INT	RP [illegible]	P	E	—	—	2	Ø3	DL	CHW	3 OCT	AC	P	—	—	CHW
2 OCT	P60/P61	—	352	DP35	RP [illegible]	P	E	5	2	—	Ø3	DL	CHW	23 OCT	SSC	P	—	—	CHW
2 OCT	P3/P4 P59/P60	—	66	INT	RP [illegible]	P	E	5	2	—	Ø3	DL	CHW	removed and capped by RP 353					CHW
3 OCT	P18/P19	—	0-375	—	RP [illegible]	C	EF	375	4	—	Ø9 Ø11	DW SSC	CHW	9 OCT	AC	P	—	—	CHW
3 OCT	P18/P19	—	8	—	RP [illegible]	P	E	6	5	—	Ø3	DL	CHW	7 OCT	AC	P	—	—	CHW
3 OCT	P18/RP176	—	240	DP55	RP [illegible]	P	E	5	2	—	Ø3	DL	CHW	7 OCT	AC	P	—	—	CHW
7 OCT	P18/RP176	—	25	DP54A1 DP54A2	RP [illegible]	P	E	17	2	—	Ø3	DL	CHW	7 OCT	AC	P	—	—	CHW
7 OCT	P57/P58	—	5-48	—	RP [illegible]	C	E	48	3	—	Ø3	DL	CHW	22 OCT	SSC	P	—	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase II Cell #4 & #5

YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

INSTALLER: ISTRE. Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
8 Oct	P57/TIP62	—	66	—	[illegible]	P	E	—	—	1	Ø3	TB	CHW	22 OCT ~~[illegible]~~	SSC	P —	—	CHW
8 Oct	P57/TIP62 & TIP49 P57	—	76	INT	[illegible]	P	E	—	—	1	Ø3	TB	CHW	22 OCT	SSC	P F	Leak Repaired VTOK	CHW
8 Oct	TIP49/TIP48 P57	—	99	INT	[illegible]	P	E	—	—	2	Ø3	TB	CHW	22 OCT	SSC	P F	Leak Repaired VTOK	CHW
8 Oct	TIP48/TIP47 P57	—	122	INT	[illegible]	P	E	—	—	2	Ø3	TB	CHW	23 OCT	SSC	P —	—	CHW
8 Oct	TIP47/TIP46 P57	—	145	INT	[illegible]	P	E	—	—	1	Ø3	TB	CHW	23 OCT	SSC	P F	Leak Repaired VTOK	CHW
8 Oct	TIP46/TIP45 P57	—	168	INT	[illegible]	P	E	—	—	1	Ø3	TB	CHW	23 OCT	SSC	P —	—	CHW
8 Oct	TIP45/TIP44 P57	—	191	INT	[illegible]	P	E	—	—	1	Ø3	TB	CHW	23 OCT	SSC	P F	Leak Repaired VTOK	CHW
8 Oct	TIP44/TIP43 P57	—	214	INT	[illegible]	P	E	—	—	1	Ø3	TB	CHW	23 OCT	SSC	P —	—	CHW
8 Oct	TIP43/TIP42 P57	—	237	INT + RP131	[illegible]	P	E	5	2	[illegible]	Ø3	TB	CHW	23 OCT	SSC	P —	—	CHW
8 Oct	TIP42 P57	—	246	—	[illegible]	P	E	—	—	1	Ø3	TB	CHW	23 OCT	SSC	P —	—	CHW
8 Oct	TIP43/TIP41 P57	—	261	INT	[illegible]	P	E	—	—	1	Ø3	TB	CHW	23 OCT	SSC	P F	Leak Repaired VTOK	CHW
8 Oct	TIP41/TIP40 P57	—	284	INT	[illegible]	P	E	—	—	1	Ø3	TB	CHW	23 OCT	SSC	P —	—	CHW
8 Oct	TIP40/TIP39 P57	—	307	INT	[illegible]	P	E	—	—	1	Ø3	TB	CHW	23 OCT	SSC	P —	—	CHW
8 Oct	TIP39/TIP38 P57	—	330	INT	[illegible]	P	E	—	—	1	Ø3	TB	CHW	23 OCT	SSC	P —	—	CHW
8 Oct	TIP38/TIP20 P57	—	353	INT	[illegible]	P	E	—	—	2	Ø3	TB	CHW	23 OCT	SSC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO — PROJECT NO.: 681341 TASK NO.: 04.1

DESCRIPTION: Phase II Cell #4 & #5 — YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ — INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				QA ID
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	
8 Oct	P57 TIP20/RP171	—	374	—	[redacted]	P E	—	—	1	Ø3	TB	CHW	23 OCT	SSC	P F	LEAK-REWELDED V.T.OK	CHW
8 OCT	P76/P77	—	275	DP53	[redacted]	P E	5	2	—	Ø3	TB	CHW	20 OCT	HW	P —	—	CHW
8 OCT	P75/P76	—	100	DP46	[redacted]	P E	5	2	—	Ø3	TB	CHW	20 OCT	HW	P —	—	CHW
9 OCT	P84/P85/P86	—	25	DP51 INT	[redacted]	P E	7	2	—	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	P84/P86	—	48	—	[redacted]	P E	3	2	—	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	P83/P84/P85	—	20	INT	[redacted]	P E	—	—	2	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	P84/P86	—	91	—	[redacted]	P E	4	2	—	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	—	P83	87	1' N of P82/P83	[redacted]	G E	1	—	—	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	P80/P81/P82	—	22	INT	[redacted]	P E	—	—	2	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	P79/P80/P81	—	21	INT	[redacted]	P E	—	—	2	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	P80/P82	—	120	DP 52	[redacted]	P E	5	2	—	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	—	P82	18'	center	[redacted]	G E	1	—	—	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	—	P104	353	2' N of P104/P78	[redacted]	P E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	—	P56	384	1' N of P56/P47	[redacted]	P E	—	—	2	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	—	P56	384	3'5 of P32/P56	[redacted]	P E	—	—	2	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase III Cell #4 and Cell #5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
9 OCT	—	P104	353	3' S of P104/P105	[redacted]	P	E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P	—	CHW
9 OCT	—	P105	353	3' N of P104/P105	[redacted]	P	E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P	—	CHW
9 OCT	—	P105	357	3' S of P105/P106	[redacted]	P	E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P	—	CHW
9 OCT	—	P105	355	3' S of P105/P106	[redacted]	P	E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P	—	CHW
9 OCT	—	P106	350	5' N of P105/P106	[redacted]	P	E	—	—	2	Ø3	DL	CHW	9 OCT	AC	P	—	CHW
9 OCT	—	P106	350	4' S of P106/P107	[redacted]	P	E	—	—	2	Ø3	DL	CHW	9 OCT	AC	P	—	CHW
9 OCT	—	P107	352	3' N of P106/P107	[redacted]	P	E	—	—	2	Ø3	DL	CHW	9 OCT	AC	P	—	CHW
9 OCT	—	P107	352	3' S of P107/P108	[redacted]	P	E	—	—	2	Ø3	DL	CHW	9 OCT	AC	P	—	CHW
9 OCT	—	P108	351	5' N of P107/P108	[redacted]	P	E	—	—	2	Ø3	DL	CHW	9 OCT	AC	P	—	CHW
9 OCT	—	P108	351	5' S of P108/P109	[redacted]	P	E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P	—	CHW
9 OCT	—	P109	348	4' N of P108/P109	[redacted]	P	E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P	—	CHW
9 OCT	—	P109	348	3' S of P109/P110	[redacted]	P	E	—	—	2	Ø3	DL	CHW	9 OCT	AC	P	—	CHW
9 OCT	—	P114	361	4' N of P114/P114	[redacted]	P	E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P	—	CHW
9 OCT	—	P114	361	4' S of P114/P115	[redacted]	P	E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P	—	CHW
9 OCT	—	P115	360	4' N of P114/P115	[redacted]	P	E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: 6Q134 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
9 OCT	—	P115	360	4'S of P113/P115	RP 226	P E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	—	P113	353	5'N of P113/P115	RP 227	P E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	—	P113	353	5'S of P112/P113	RP 228	P E	—	—	2	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	—	P112	354	4'N of P112/P113	RP 229	P E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	—	P112	354	4'S of P77/P112	RP 230	P E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	P87/P88/P89	—	12	INT	RP 231	P E	—	—	2	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	P88/P89/P90	—	12	INT	RP 232	P E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	P88/P90	—	79	[illegible]	RP 233	P E	—	—	2	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	P90/P91	[illegible]	73	DP 50	RP 234	P E	5	2	—	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	P86	—	7	Center	RP 235	G E	1	—	—	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	P91/P92/P93	—	20	INT	RP 236	P E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	P92/P93/P94	—	20	INT	RP 237	P E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	P94/P97/P98	—	60	INT	RP 238	P E	2	1	—	Ø3	DL	CHW	9 OCT	AC	P —	—	CHW
9 OCT	P94/P95/P98	—	60	INT	RP 239	P E	4	3	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
9 OCT	P95/P98/P99	—	52	INT	RP 240	P E	3	2	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM,
R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase III Cell #4 & #5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
9 OCT	P94/P95	—	85	DP 49	[illegible]	P E	5	2	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
9 OCT	P95/P96/P99	—	47	INT	[illegible]	P E	2	1	—	03	DL	CHW	11 OCT	AC	P —	—	CHW
9 OCT	P96/P99/P100	—	41	INT	RP 243	P E	3	1	—	Ø3	DL	CHW	11 OCT	AC	P —	—	CHW
9 OCT	P96/100	—	28	INT	RP 244	P E	4	3	—	03	DL	CHW	11 OCT	AC	P —	—	CHW
11 OCT	P96/P100/P101	—	101	INT.	RP 245	P E	2	2	—	Ø6	DL	TBW	11 OCT	AC	P —	—	CHW
11 OCT	P96/P-1Ø1	—	1Ø6	—	RP 246	P E	2	2	—	Ø6	DL	TBW	11 OCT	AC	P —	—	CHW
11 OCT	P96/P101/P102	—	126	INT	RP 247	P E	1	1	—	Ø6	DL	TBW	11 OCT	AC	P —	—	CHW
11 OCT	P96/P-1Ø2	—	131	—	RP 248	P E	2	2	—	Ø6	DL	TBW	11 OCT	AC	P —	—	CHW
11 OCT	P95/P96/P1Ø2	—	145	INT	RP 249	P E	3	2	—	Ø6	DL	TBW	11 OCT	AC	P —	—	CHW
11 OCT	P95/P1Ø2/P1Ø3	—	153	INT.	RP 250	P E	1	1	—	Ø6	DL	TBW	11 OCT	AC	P —	—	CHW
12 OCT	P73/P74	—	10	—	RP 251	P E	2	1	—	Ø8	DL	CHW	20 OCT	HW	P —	—	CHW
12 OCT	P72/P73	—	0-377	—	RP 252	C EF	377	4	—	Ø9	DW	CHW	See Production Seaming Log				CHW
14 OCT	P104/P105	—	123	DP 56	RP 253	P E	5	2	—	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
14 OCT	P105/P106	—	173	—	RP 254	P E	2	1	—	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
14 OCT	P105/P106	—	318	DP 57	RP 255	P E	5	2	—	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM,
R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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SHEET NO. 17 OF 27

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: G01341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

INSTALLER: ESTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
14 OCT	P106/P107	—	350	DP 58	[illegible]	P	E	5	2	—	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
14 OCT	[illegible]	P109	358	Center	[illegible]	P	E	—	—	1	Ø3	DL	CHW	17 OCT	SSC	P —	—	CHW
14 OCT	P107/P108	—	275	DP 59	[illegible]	P	E	5	2	—	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
14 OCT	P108/P109	—	64	—	[illegible]	P	E	4	2	—	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
14 OCT	P108/P109	—	225	DP 60	[illegible]	P	E	5	2	—	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
14 OCT	P109/P110	—	250	DP 61	[illegible]	P	E	5	2	—	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
14 OCT	P111/P114	—	282	DP 63	[illegible]	P	E	5	2	—	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
14 OCT	P106/P107	—	93	—	[illegible]	P	E	3	2	—	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
14 OCT	P110/P111	—	216	DP 62	[illegible]	P	E	5	2	—	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
14 OCT	P110/P111	—	114	—	[illegible]	P	E	5	2	—	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
14 OCT	P110/P111/ LCSR Box	—	70	INT	[illegible]	P	E	—	—	2	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
14 OCT	P110/P111	—	63	—	[illegible]	P	E	—	—	2	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
14 OCT	—	P111	202	≈ 6' N of P110/P111	[illegible]	G	E	Ø1	—	—	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
14 OCT	P113/P115	—	225	DP 65	[illegible]	P	E	5	2	—	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
14 OCT	P114/P115	—	275	DP 64	[illegible]	P	E	5	2	—	Ø3	DL	CHW	20 OCT	HW	P —	—	CHW
													CHW	18 OCT	SSC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM,
R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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SHEET NO. 18 OF 27

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV & Cell #4 & #5 PROJECT NO.: _____ TASK NO.: _____

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ _____ YEAR: _____

INSTALLER: _____

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
14 OCT	P113/P115	—	198	—	[redacted]	P E	2	1	—	Ø3	DL	CHW	20 OCT	HW	P —	—	CHW
14 OCT	P113/P115	—	181	—	[redacted]	P E	3	1	—	Ø3	DL	CHW	20 OCT	HW	P —	—	CHW
14 OCT	P112/P113	—	125	DP66	[redacted]	P E	5	2	—	Ø3	DL	CHW	20 OCT	HW	P —	—	CHW
14 OCT	P77/P112	—	~~200~~	DP67	[redacted]	P E	5	2	—	Ø3	DL	CHW	20 OCT	HW	P —	—	CHW
14 OCT	—	P64	W175 → 375	E375 → 353	[redacted]	C ~~E~~ F	222	4	—	Ø9	DW	CHW	See production seaming			fusion	CHW
14 OCT	P68/P69	—	375	DP44B2	[redacted]	P E	5	2	—	Ø3	DL	CHW	capped by RP350			—	CHW
14 OCT	P74/P75	—	375	DP44A2	[redacted]	P E	5	2	—	Ø3	DL	CHW	21 OCT	SSC	P —	—	CHW
14 OCT	P97/P98	—	63	DP48A2	[redacted]	P E	5	2	—	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
15 OCT	P63/P64/RP275	—	175	—	[redacted]	P E	23	3	—	Ø3	DL	CHW	21 OCT	SSC	P —	—	CHW
15 OCT	P64 North/RP275	—	350	DP 69	[redacted]	P E	5	2	—	Ø3	DL	CHW	23 OCT	SSC	P —	—	CHW
15 OCT	P64 North/RP275	—	367	—	[redacted]	P E	5	2	—	Ø3	DL	CHW	23 OCT	SSC	P —	—	CHW
15 OCT	P104/[redacted]	—	~~339~~ 358	—	[redacted]	C ~~E~~ F	119	4	—	09	DW	CHW	See production seaming			fusion	CHW
15 OCT	P7/~~P8, P9, P10, P11, P12, P13, P14, P31~~ RP275	—	353	—	[redacted]	P E	34	3	—	Ø3	DL	CHW	23 OCT	SSC	P —	—	CHW
15 OCT	P63/P64/LCSR Box	—	63	—	[redacted]	P E	8	2	—	Ø3	DL	CHW	22 OCT	SSC	P —	—	CHW
15 OCT	P57/TIP62	—	69	DP 48B2	[redacted]	P E	9	2	—	Ø3	DL	CHW	22 OCT	SSC	(P) F	Leak Rewelded VTOK	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

RP282 = P104 w/ panels over cell #5 & 6 IC Berm P78-P84

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SHEET NO. 19 OF 27

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase III Cell #4 & #5 PROJECT NO.: G01341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE. CO.

DATE (day/mo)	LOCATION: SEAM	PANEL	DIST. (ft)	OFFSET (ft)	REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE: LENGTH (ft)	WIDTH (ft)	DIA (ft)	WELDER ID: MACH NO.	OPER ID	QA ID	NON-DESTRUCTIVE TESTING: DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
16 OCT	P18/P74/P17/P73																
16 OCT	P19/P75	—	376	INT	[redacted] C	F	68	4	—	11	DW	CHW	See production seaming Fusion Seam Removed to ≈ 228' - capped by RP336				CHW
15 18 OCT	P72/RP252	—	225	DP68	[redacted] P	E	8	3	—	Ø3	DL	CHW					
17 OCT	P83/P84/RP282 P104	—	249	INT	[redacted] P	E	3	2	—	Ø6	JI	CHW	17 OCT	SSC	P	—	CHW
17 OCT	P82/P83/RP282	—	270	INT	[redacted] P	E	3	2	—	Ø6	JI	CHW	17 OCT	SSC	P	—	CHW
17 OCT	P104/RP282	—	283	DP70	[redacted] P	E	5	2	—	Ø6	JI	CHW	17 OCT	SSC	P	—	CHW
17 OCT	P80/P82/RP282	—	294	INT	[redacted] P	E	—	—	2	Ø6	JI	CHW	17 OCT	SSC	P	—	CHW
17 OCT	P79/P80/RP282	—	316	INT	[redacted] P	E	—	—	2	Ø3	JI	CHW	17 OCT	SSC	P	—	CHW
17 OCT	P78/P79/RP282	—	338	INT	[redacted] P	E	—	—	2	Ø3	JI	CHW	17 OCT	SSC	P	—	CHW
17 OCT	P56/P47/P78/P104 RP252	—	360 ~~370~~	INT	[redacted] P	E	9	5	—	Ø3	JI	CHW	17 OCT	SSC	P	—	CHW
17 OCT	P32/P56/P104/P105	—	358	INT	[redacted] P	E	—	—	5	Ø3	JI	CHW	17 OCT	SSC	P	—	CHW
17 OCT	—	P32	388 ~~370~~	3'S of P31/P32	[redacted] P	E	2	1	—	Ø3	JI	CHW	17 OCT	SSC	P	—	CHW
17 OCT	P31/P32/P105/P106	—	360	INT	[redacted] P	E	3	2	—	Ø3	JI	CHW	17 OCT	SSC	P	—	CHW
17 OCT	P30/P31/P106/P107	—	362	INT	[redacted] P	E	4	2	—	Ø3	JI	CHW	17 OCT	SSC	P	—	CHW
17 OCT	P29/P30/P107/P108	—	362	INT	[redacted] P	E	5	2	—	Ø3	JI	CHW	17 OCT	SSC	P	—	CHW
17 OCT	—	P29	385	1'N of P29/P30	[redacted] P	E	13	2	—	Ø3	JI	CHW	17 OCT	SSC	P	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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SHEET NO. 20 OF 27

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5

PROJECT NO.: GQ1341 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
17 OCT	P28/P29/P108/P109	—	361	—	[redacted] P	E	15	2	—	Ø3	JI	CHW	17 OCT	SSC	P —	—	CHW
17 OCT	P27/P28/P109/P110	—	362	—	[redacted] P	E	—	—	3	Ø3	JI	CHW	17 OCT	SSC	P —	—	CHW
17 OCT	P27/P110	—	362	DP 71	[redacted] P	E	5	2	—	Ø3	JI	CHW	17 OCT	SSC	P —	—	CHW
17 OCT	P26/P27/P110/P111	—	362	—	[redacted] P	E	3	2	—	Ø3	JI	CHW	17 OCT	SSC	P —	—	CHW
17 OCT	P25/P26/P111/P114	—	362	—	[redacted] P	E	10	2	—	Ø3	JI	CHW	17 OCT	SSC	P —	—	CHW
17 OCT	—	P25	383	2'N of P25/P26	[redacted] P	E	15	2	—	Ø3	JI	CHW	17 OCT	SSC	P —	—	CHW
17 OCT	—	P25	388	5'N of P25/P26	[redacted] P	E	—	—	2	Ø3	JI	CHW	17 OCT	SSC	P —	—	CHW
17 OCT	P73/P74/RP286	—	376	INT	[redacted] P	E	—	—	2	Ø3	TB	CHW	21 OCT	SSC	P —	—	CHW
17 OCT	P17/P18/RP286	—	375	INT	[redacted] P	E	—	—	2	Ø3	TB	CHW	21 OCT	SSC	P —	—	CHW
17 OCT	P74/P75/RP286	—	376	INT	[redacted] P	E	5	2	—	Ø3	TB	CHW	21 OCT	SSC	P —	—	CHW
17 OCT	P18/P19/RP176/RP286	—	376	INT	[redacted] P	E	5	2	—	03	TB	CHW	20 OCT	HW	P —	—	CHW
17 OCT	P19/P20/P75/P76/RP286		377	INT	[redacted] P	E	12	5	—	Ø3	TB	CHW	20 OCT	HW	P —	—	CHW
17 OCT	—	P76	368	2'N of P20/P76	[redacted] P	E	—	—	2	Ø3	TB	CHW	20 OCT	HW	P —	—	CHW
17 OCT	P20/P21/P76/P77	—	363	INT	[redacted] P	E	3	2	5	Ø3	TB	CHW	18 OCT	SSC	P —	—	CHW
17 OCT	P21/P22/P77/P112	—	363	INT	[redacted] P	E	7	2	—	Ø3	TB	CHW	18 OCT	SSC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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SHEET NO. 21 OF 27

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5

PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

YEAR: 2002

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
17 OCT	P22/P23/P112/P113	—	362	INT	[redacted]	P	E	3	2	—	Ø3	TB	CHW	18 OCT	SSC	P —	—	CHW
17 OCT	P23/P24/P113/P115	—	363	INT	[redacted]	P	E	2	1	—	Ø3	TB	CHW	18 OCT	SSC	P —	—	CHW
17 OCT	P24/P25/P114/P115	—	362	INT	[redacted]	P	E	3	2	—	Ø3	TB	CHW	18 OCT	SSC	P —	—	CHW
17 OCT	P25/P114	—	362	5'S of RP318	[redacted]	P	E	—	—	1	Ø3	TB	CHW	18 OCT	SSC	P —	—	CHW
17 OCT	—	P25	387	5'S of P24/P25	[redacted]	P	E	2	1	—	Ø3	TB	CHW	18 OCT	SSC	P —	—	CHW
17 OCT	P84/P104/RP282	—	240	OPS4R2	[redacted]	P	E	5	3	—	Ø3	JI	CHW	18 OCT	SSC	P —	—	CHW
17 OCT	P86/P87/RP282	—	210	INT	[redacted]	P	E	—	—	2	Ø3	JI	CHW	18 OCT	SSC	P —	—	CHW
17 OCT	P87/P88/RP282	—	187	INT	[redacted]	P	E	—	—	1	Ø3	JI	CHW	18 OCT	SSC	P —	—	CHW
17 OCT	P88/P90/RP282	—	166	INT	[redacted]	P	E	—	—	2	Ø3	JI	CHW	18 OCT	SSC	P —	—	CHW
17 OCT	P90/P91/RP282	—	144	INT	[redacted]	P	E	—	—	1	Ø3	JI	CHW	18 OCT	SSC	P —	—	CHW
17 OCT	P91/P92/RP282	—	122	INT	[redacted]	P	E	—	—	1	Ø3	JI	CHW	18 OCT	SSC	P —	—	CHW
17 OCT	P92/P94/RP282	—	101	INT	[redacted]	P	E	—	—	1	Ø3	JI	CHW	18 OCT	SSC	P —	—	CHW
17 OCT	P94/P95/RP282	—	79	INT	[redacted]	P	E	—	—	2	Ø3	JI	CHW	18 OCT	SSC	P —	—	CHW
17 OCT	P95/P103/P104/RP282		69	INT	[redacted]	P	E	6	5	—	Ø3	JI	CHW	18 OCT	SSC	P —	—	CHW
17 OCT	P84/P86/RP282	—	231	INT	[redacted]	P	E	—	—	1	Ø3	JI	CHW	18 OCT	SSC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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1943

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
18 OCT	P105/P106	—	5	—	[redacted]	P E	—	—	1	Ø3	TB	CHW	21 OCT	SSC	P —	—	CHW
18 OCT	P100/P101	—	4	—	[redacted]	P E	—	—	1	Ø3	TB	CHW	21 OCT	SSC	P —	—	CHW
18 OCT	P103/P104/P104 ←		0-6	—	[redacted]	S E	25	7	—	Ø3	TB	CHW	18 OCT	SSC	P —	—	CHW
18 OCT	P107/P108	—	0-5	—	[redacted]	P E	5	2	—	Ø3	TB	CHW	21 OCT	SSC	P —	—	CHW
18 OCT	P113/P115	—	0-4	—	[redacted]	P E	5	2	—	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
18 OCT	P72/RP252	—	0-243	—	[redacted]	C F	243	4	—	13	DW	CHW	See production scaning fusion				CHW
* 18 OCT	—	P25	314	2'8 of P24/P25	[redacted]	G E	1	—	—	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
18 OCT	P68/P69	—	3	—	[redacted]	P E	[illegible]	—	1	Ø3	DL	CHW	22 OCT	SSC	P —	—	CHW
18 OCT	—	P115	19	2'5 of P113/P115	[redacted]	G E	1	—	—	Ø3	DL	CHW	20 OCT	HW	P —	—	CHW
18 OCT	P72/P71/P73 RP252/RP336 ←		7	—	[redacted]	S E	25	7	—	Ø3	DL	CHW	21 OCT	SSC	F	Leak	CHW
18 OCT	P72/P73/RP252/RP336	—	9	INT	[redacted]	P E	6	3	—	Ø3	DL	CHW	21 OCT	SSC	P —	—	CHW
18 OCT	P113/P115	—	350	—	[redacted]	P E	3	1	—	Ø3	DL	CHW	18 OCT	SSC	P —	—	CHW
20 OCT	—	P90	128	Center	[redacted]	P E	—	—	2	Ø3	JI	CHW	21 OCT	SSC	P —	—	CHW
20 OCT	RP252/RP336	—	63	DP72	[redacted]	P E	5	2	—	Ø3	JI	CHW	21 OCT	SSC	P —	—	CHW
20 OCT	—	P73	145	2'5 of P73/RP252	[redacted]	P E	5	1	—	Ø3	JI	CHW	21 OCT	SSC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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RP 337 = end of RP306 where a leak was detected.

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: G01341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
20 OCT	P72/RP336	—	243	—	[redacted]	P E	—	—	1	Ø3	JI	CHW	10-21	SSC	P —	—	CHW
20 OCT	RP262/RP336	—	243	—	[redacted]	P E	—	—	1	Ø3	JI	CHW	10-21	SSC	P —	—	CHW
20 OCT	Rainflap on IC Berm of Cell #5 & #6				RP 348	C E	15' ~~212~~ 238'	12	—	Ø3	JI	CHW	10-21	SSC	P —	—	CHW
21 OCT	—	P17	373	Center	[redacted]	P E	—	—	1	Ø3	TB	CHW	10-21	SSC	P —	—	CHW
21 OCT	P68/P69	—	234-378	—	[redacted]	C F	144	4	—	13	DW	CHW	See production seaming			fusion	CHW
21 OCT	P73/RP252	—	372	DP68B3	[redacted]	P E	5	2	—	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
21 OCT	P69/RP350	—	281	DP73	[redacted]	P E	5	2	—	Ø3	TB	CHW	21 OCT	SSC	P —	—	CHW
21 OCT	EW TIE IN Cell #4	—	349-~~199~~	—	[redacted]	C F	349 ~~198~~	4	—	13	DW	CHW	23 OCT	SSC	P —	—	CHW
22 OCT	P68/P69/RP350	—	239	—	[redacted]	P E	6	4	—	Ø3	TB	CHW	23 OCT 139'-194'	SSC	P F	Leak-rewelded VTOK	CHW
22 OCT	P68/P69/RP350	—	362	—	[redacted]	P E	5	4	—	Ø3	TB	CHW	22 OCT	SSC	P —	—	CHW
22 OCT	P64/RP275/RP353	—	158	INT	[redacted]	P E	4	2	—	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
22 OCT	P3/RP275/RP353	—	158	INT	[redacted]	P E	4	2	—	Ø3	JI	CHW	23 OCT	SSC	P —	—	CHW
22 OCT	P63/RP353	—	138	—	[redacted]	P E	—	—	1	Ø3	JI	CHW	24 OCT	SSC	P —	—	CHW
22 OCT	P7/RP353	—	138	—	[redacted]	P E	—	—	1	Ø3	JI	CHW	23 OCT	SSC	P —	—	CHW
22 OCT	P64/RP353	—	167	—	[redacted]	P E	3	2	—	Ø3	JI	CHW	23 OCT	SSC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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REVIEWED BY: TBW

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5

PROJECT NO.: G01341 TASK NO.: 04-1

YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
23 OCT	P16/P15/P73/P72 RP353/RP286/RP252		369	INT	[redacted]	P	E	7	4	—	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
23 OCT	P71/P72/RP353	—	369	INT	[redacted]	P	E	2	1	—	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
23 OCT	P71/RP353	—	369	1' North of P71/P72	[redacted]	P	E	—	—	1	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
23 OCT	—	P71	368'	Center	[redacted]	P	E	—	—	1	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
23 OCT	P70/P71/RP353	—	374	INT	[redacted]	P	E	—	—	1	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
23 OCT	P15/P16/RP353	—	371	INT	[redacted]	P	E	5	3	—	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
23 OCT	P69/P70/RP353	—	375	INT	[redacted]	P	E	3	2	—	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
23 OCT	P68/P69/RP350 RP353	—	376	INT	[redacted]	P	E	7	2	—	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
23 OCT	P67/P68/RP353	—	376	INT	[redacted]	P	E	—	—	1	Ø3	TB	CHW	23 OCT	SSC	P —	—	CHW
23 OCT	P66/P67/RP353	—	377	INT	[redacted]	P	E	—	—	1	Ø3	TB	CHW	23 OCT	SSC	P —	—	CHW
23 OCT	P10/P11/RP353	—	378	INT	[redacted]	P	E	—	—	1	Ø3	TB	CHW	23 OCT	SSC	P —	—	CHW
23 OCT	P11/P12/RP353	—	378	INT	[redacted]	P	E	—	—	1	Ø3	TB	CHW	23 OCT	SSC	P —	—	CHW
23 OCT	P12/P13/RP353	—	377	INT	[redacted]	P	E	2	1	—	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
23 OCT	P13/P14/RP353	—	377	INT	[redacted]	P	E	3	2	—	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
23 OCT	P14/P15/RP353	—	376	INT	[redacted]	P	E	—	—	1	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S= ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

4943

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5

PROJECT NO.: 6Q134 TASK NO.: 04.1

YEAR: 2002

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)		REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)				LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
23 OCT	P65/P66/RP353	—	377	INT	[redacted]	P	E	—	—	2	Ø3	DW	CHW	23 OCT	SSC	P	—	CHW
23 OCT	P9/P10/RP353	—	376	INT	[redacted]	P	E	—	—	1	Ø3	DW	CHW	23 OCT	SSC	P	—	CHW
23 OCT	P9/RP353	—	184	DP74	[redacted]	P	E	5	2	—	Ø3	DW	CHW	23 OCT	SSC	P	—	CHW
23 OCT	P64/P65/RP353	—	376	INT	[redacted]	P	E	—	—	2	Ø3	DW	CHW	23 OCT	SSC	P	—	CHW
23 OCT	P8/P9/RP353	—	376	INT	[redacted]	P	E	3	2	—	Ø3	DW	CHW	23 OCT	SSC	P	—	CHW
23 OCT	P62/P63/RP353	—	377	INT	[redacted]	P	E	—	—	1	Ø3	DW	CHW	23 OCT	SSC	P	—	CHW
23 OCT	P61/P62/RP353	—	377	INT	[redacted]	P	E	—	—	1	Ø3	DW	CHW	24 OCT	SSC	P	—	CHW
23 OCT	P60/P61/RP353	—	378	INT	[redacted]	P	E	—	—	2	Ø3	DW	CHW	24 OCT	SSC	P	—	CHW
23 OCT	P59/P60/RP353	—	375	INT	[redacted]	P	E	—	—	2	Ø3	DW	CHW	24 OCT	SSC	P	—	CHW
23 OCT	P4/P9/RP353	—	375	INT	[redacted]	P	E	2	1	—	Ø3	TB	CHW	24 OCT	SSC	P	—	CHW
23 OCT	P5/P6/RP352	—	375	INT	[redacted]	P	E	—	—	2	Ø3	TB	CHW	24 OCT	SSC	P	—	CHW
23 OCT	P4/P5/RP353	—	375	INT	[redacted]	P	E	—	—	2	Ø3	TB	CHW	24 OCT	SSC	P	—	CHW
23 OCT	P3/P4/RP353	—	375	INT	[redacted]	P	E	—	—	2	Ø3	TB	CHW	24 OCT	SSC	P	—	CHW
23 OCT	P2/P3/RP353	—	375	INT	[redacted]	P	E	2	1	—	Ø3	TB	CHW	24 OCT	SSC	P	—	CHW
23 OCT	P58/P59/RP353	—	374	INT	[redacted]	P	E	4	2	—	Ø3	TB	CHW	24 OCT	SSC	P	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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REVIEWED BY: TBP

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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

REPAIR SUMMARY LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: Phase IV Cell #4 & #5 PROJECT NO.: GQ1341 TASK NO.: 04.1

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ YEAR: 2002

INSTALLER: ISTRE Co.

DATE (day/mo)	LOCATION				REPAIR NO./ CODE (1)	REPAIR TYPE (2)	SIZE			WELDER ID		QA ID	NON-DESTRUCTIVE TESTING				
	SEAM	PANEL	DIST. (ft)	OFFSET (ft)			LENGTH (ft)	WIDTH (ft)	DIA (ft)	MACH NO.	OPER ID		DATE (day/mo)	OPER ID	PASS/ FAIL	ACTION	QA ID
23 OCT	P1/P2/RP353	—	371	—	[redacted]	P	E	—	—	2	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
23 OCT	P58/RP353	—	328	DP 75	[redacted]	P	E	5	2	—	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
23 OCT	P57/P58/RP353	—	21	INT	[redacted]	P	E	—	—	1	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
23 OCT	P —	P57	373	Center	[redacted]	P	E	—	—	1	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
23 OCT	P1/P57/RP171/ RP353	—	2	INT	[redacted]	P	E	7	3	—	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
23 OCT	—	P73	20	7' North of P73/P74	[redacted]	P	E	—	—	2	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
24 OCT	P57 TIP49/TIP62	—	76	INT	[redacted]	P	E	2	1	—	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
24 OCT	P57 TIP46/TIP47	—	145	INT	[redacted]	P	E	—	—	1	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
24 OCT	P57/TIP61	—	0-6	—	[redacted]	P	E	5	4	—	Ø3	TB	CHW	24 OCT	SSC	P —	—	CHW
31 OCT	—	P73	15	Center	RP 400	P	E	4	2	—	Ø3	TB	CHW	31 OCT	SSC	P —	—	CHW

NOTES: (1) REPAIR NO.: REPAIRS SHOULD BE NUMBERED SEQUENTIALLY.
(1) REPAIR CODES: P = PATCH, C = CAP, S = ANCHOR TRENCH EXTENSION (SKIRT), DS = DESTRUCTIVE SAMPLE, G = GRIND & WELD, T = TOPPING ALONG FUSION SEAM, R = RECONSTRUCTION
(2) REPAIR TYPES: E = EXTRUSION, F = FUSION

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REVIEWED BY: TBY

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49443

APPENDIX O

Geomembrane Seam and Repair Location Logs

Secondary

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5

DATE: ___ day ___ month ___ year

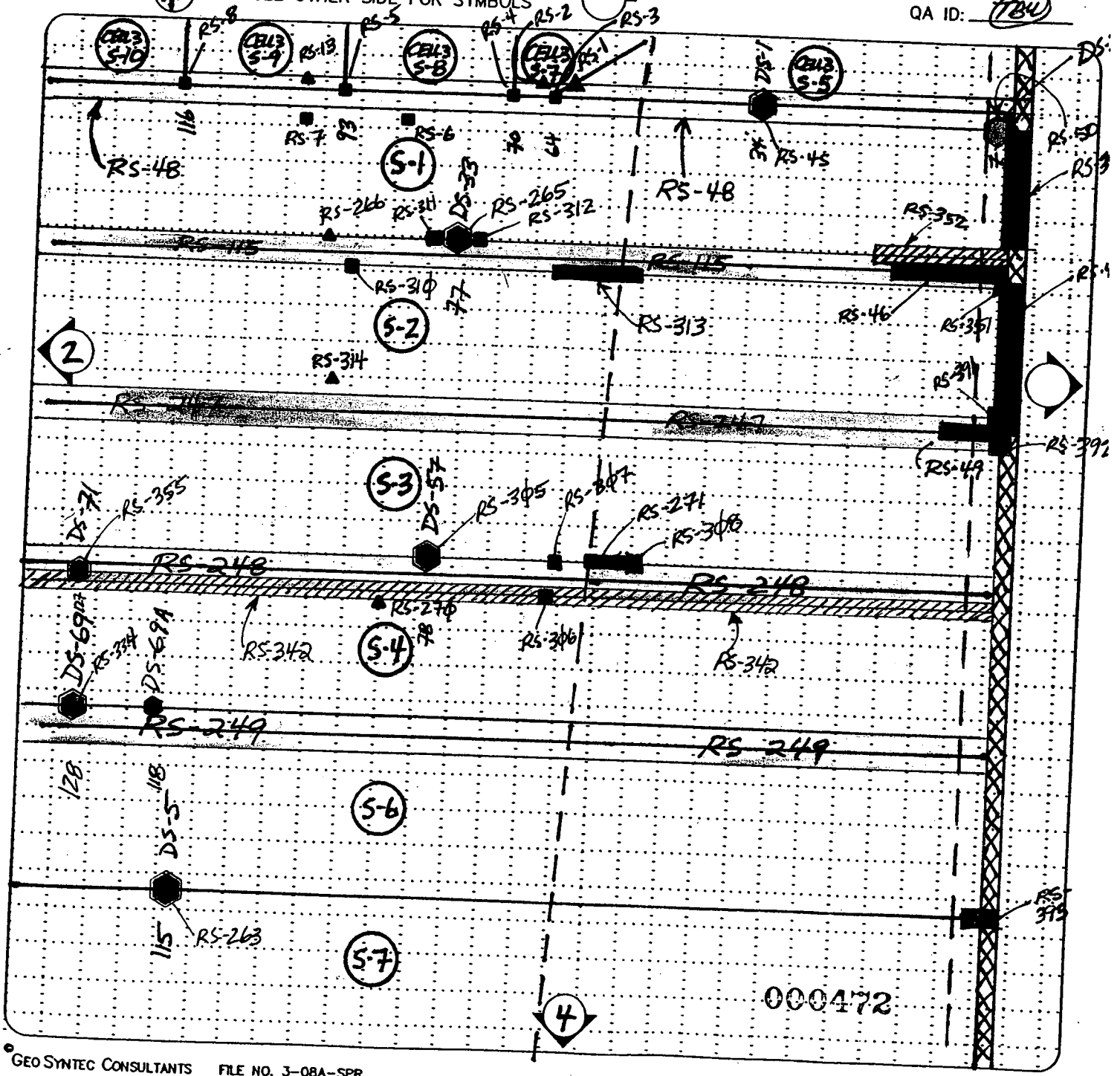
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBW



GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

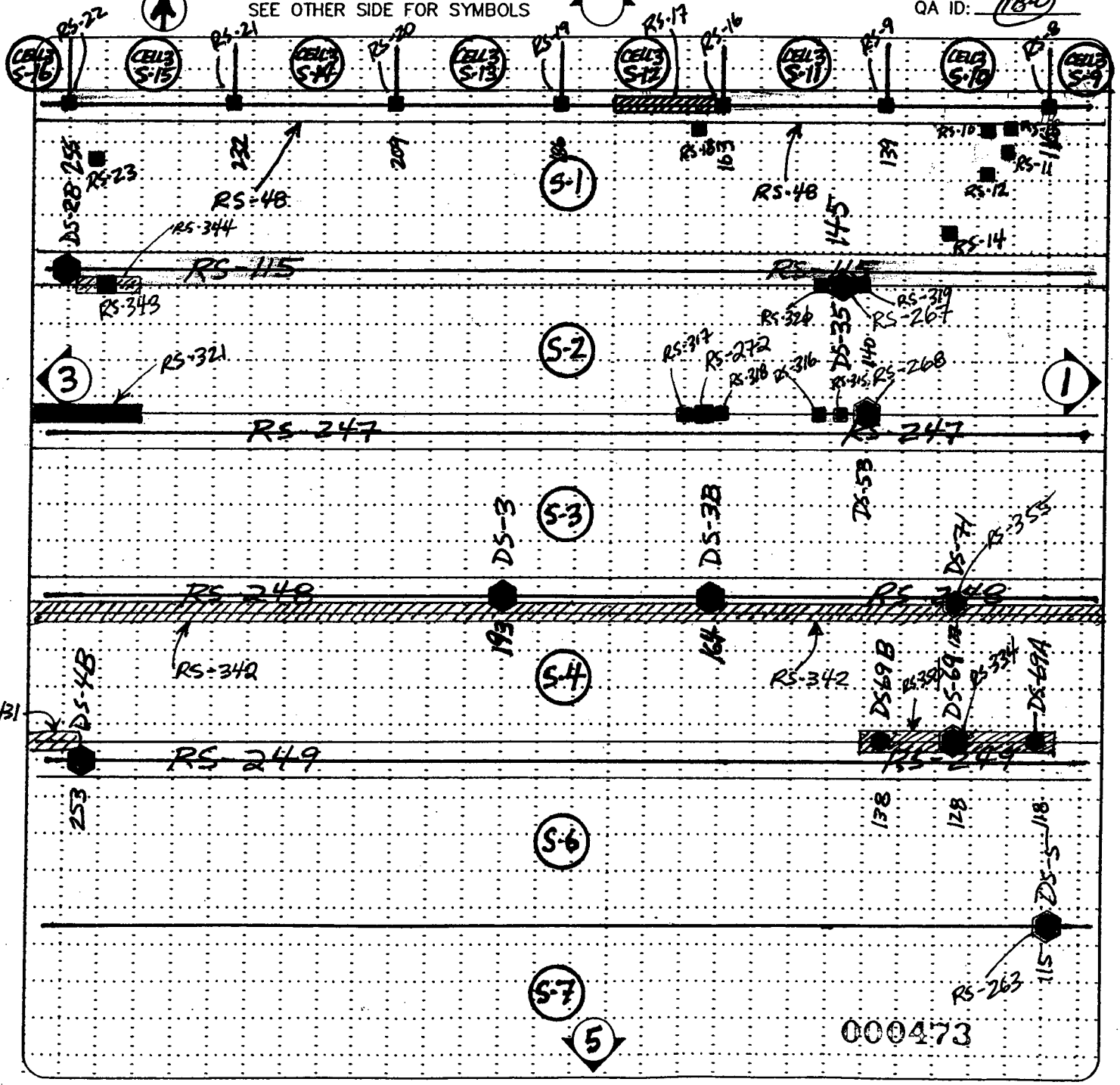
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBW



GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GR134 TASK NO.: 041

DESCRIPTION: PHASE IV, CELLS 4&5 DATE: — day — month — year

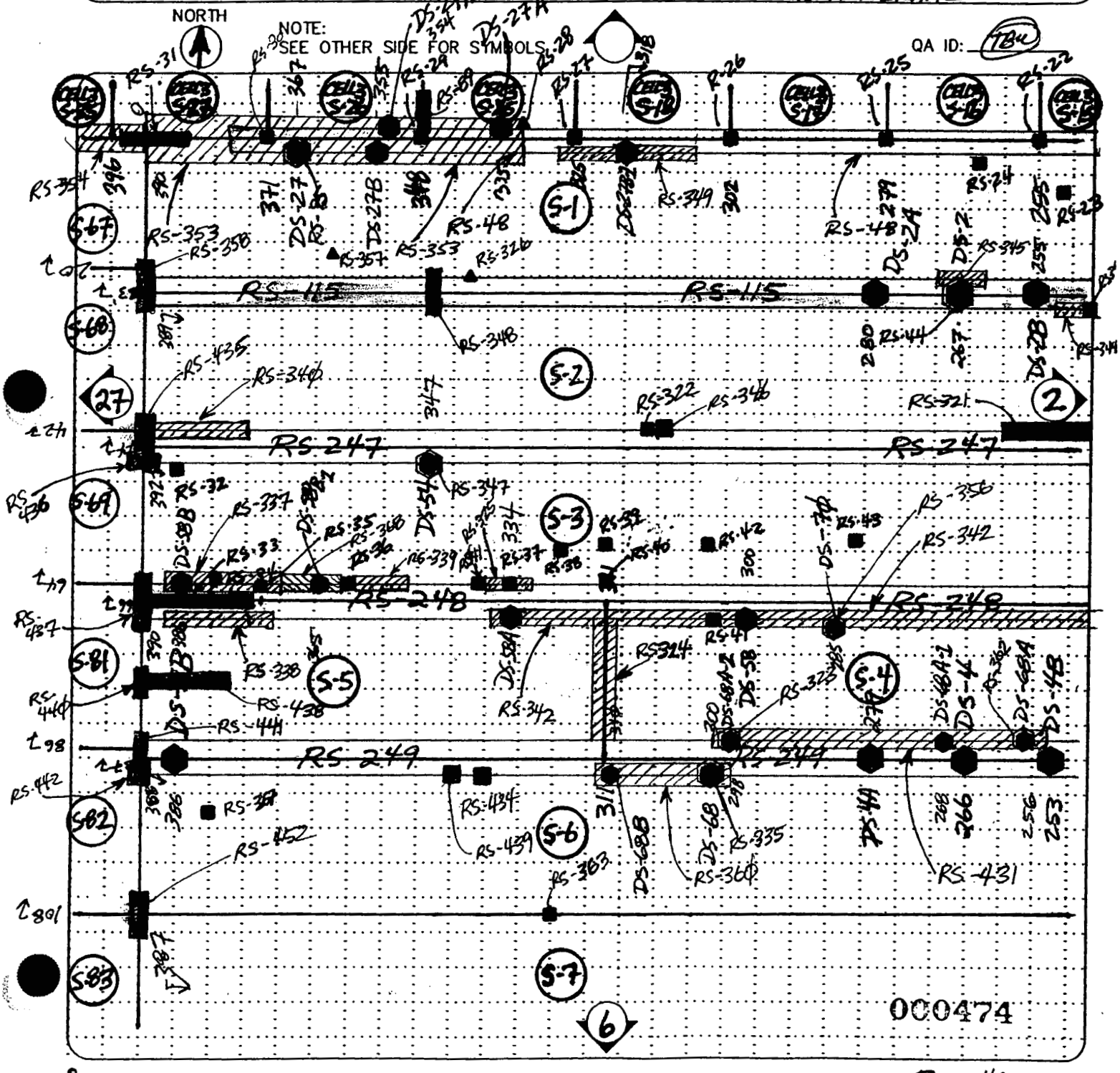
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE: SEE OTHER SIDE FOR SYMBOLS

QA ID: TBW



000474

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4&5 DATE: ___ day ___ month ___ year

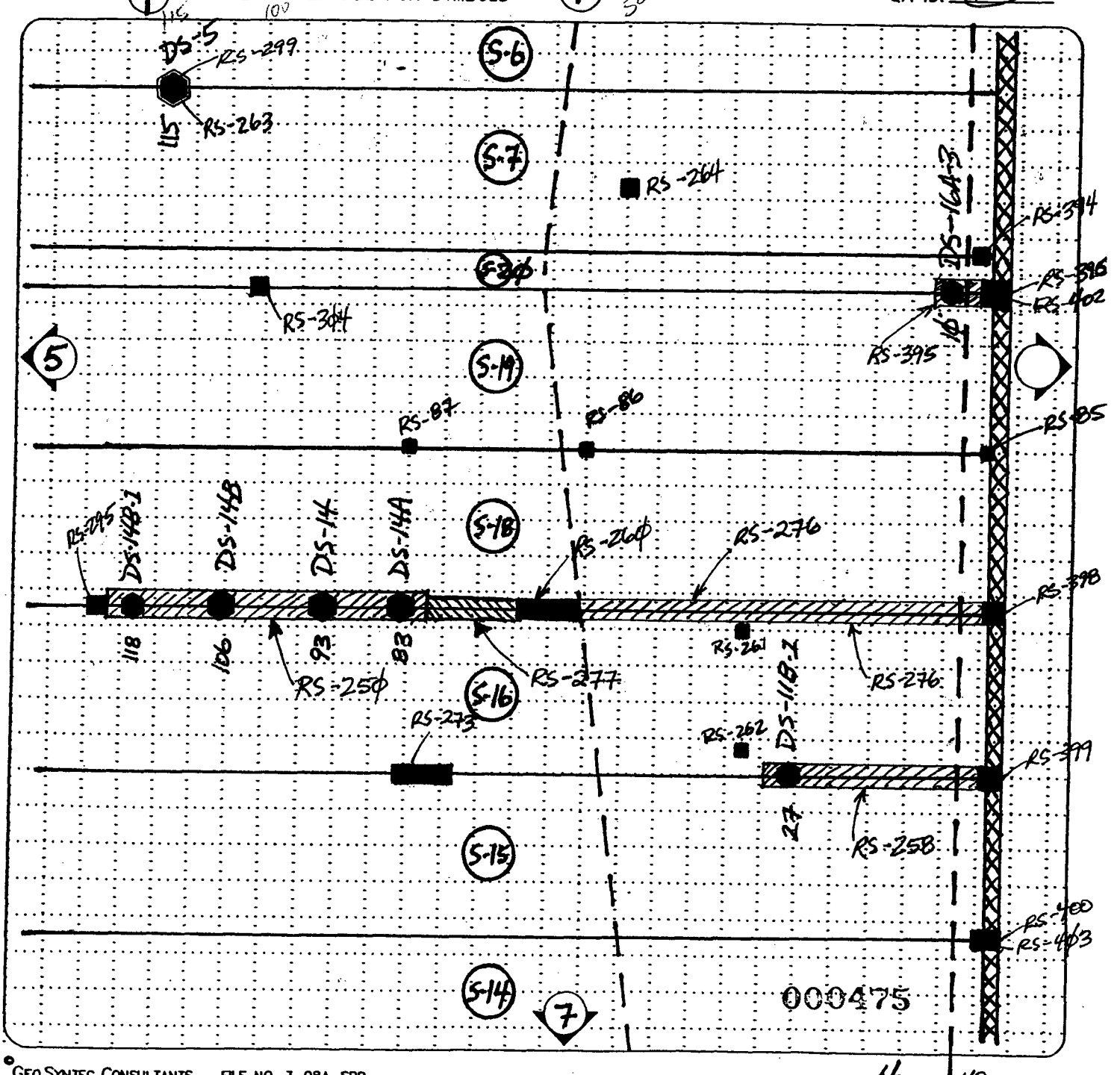
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBK



4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

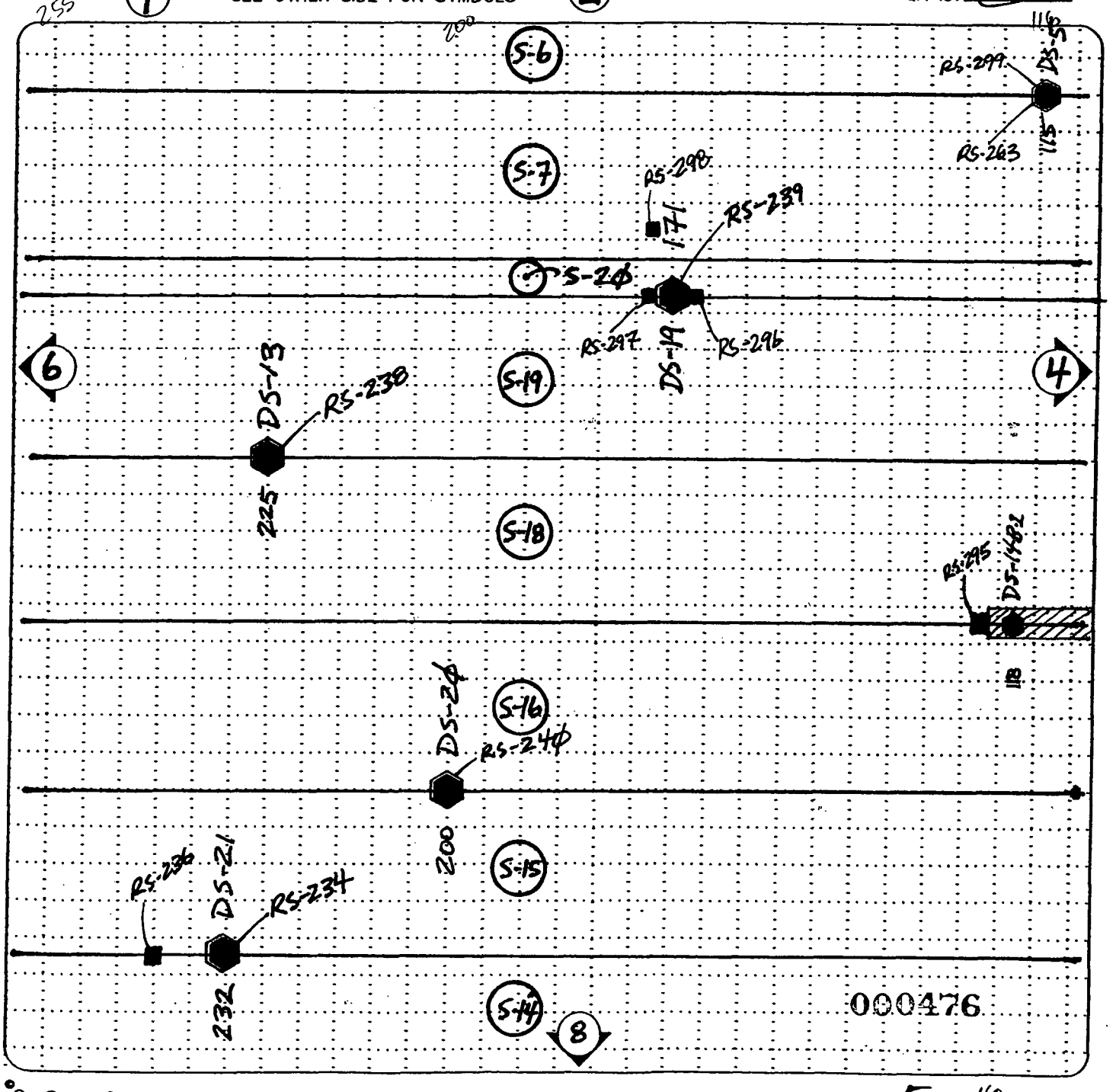
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBD



000476

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: ___ day ___ month ___ year

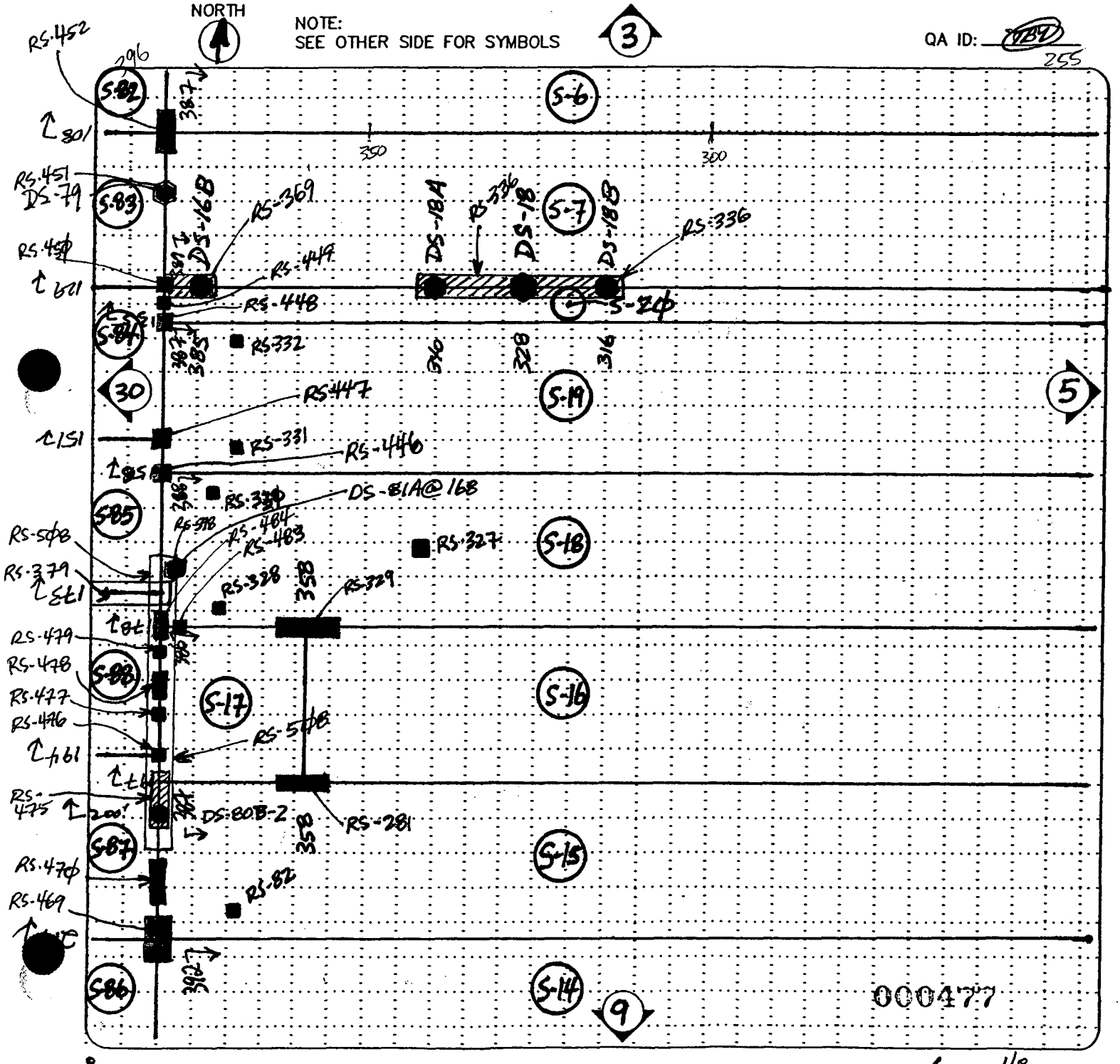
CONTRACTOR: ISTRE Co.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80 MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE: SEE OTHER SIDE FOR SYMBOLS

QA ID: VBD



000477

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 041

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

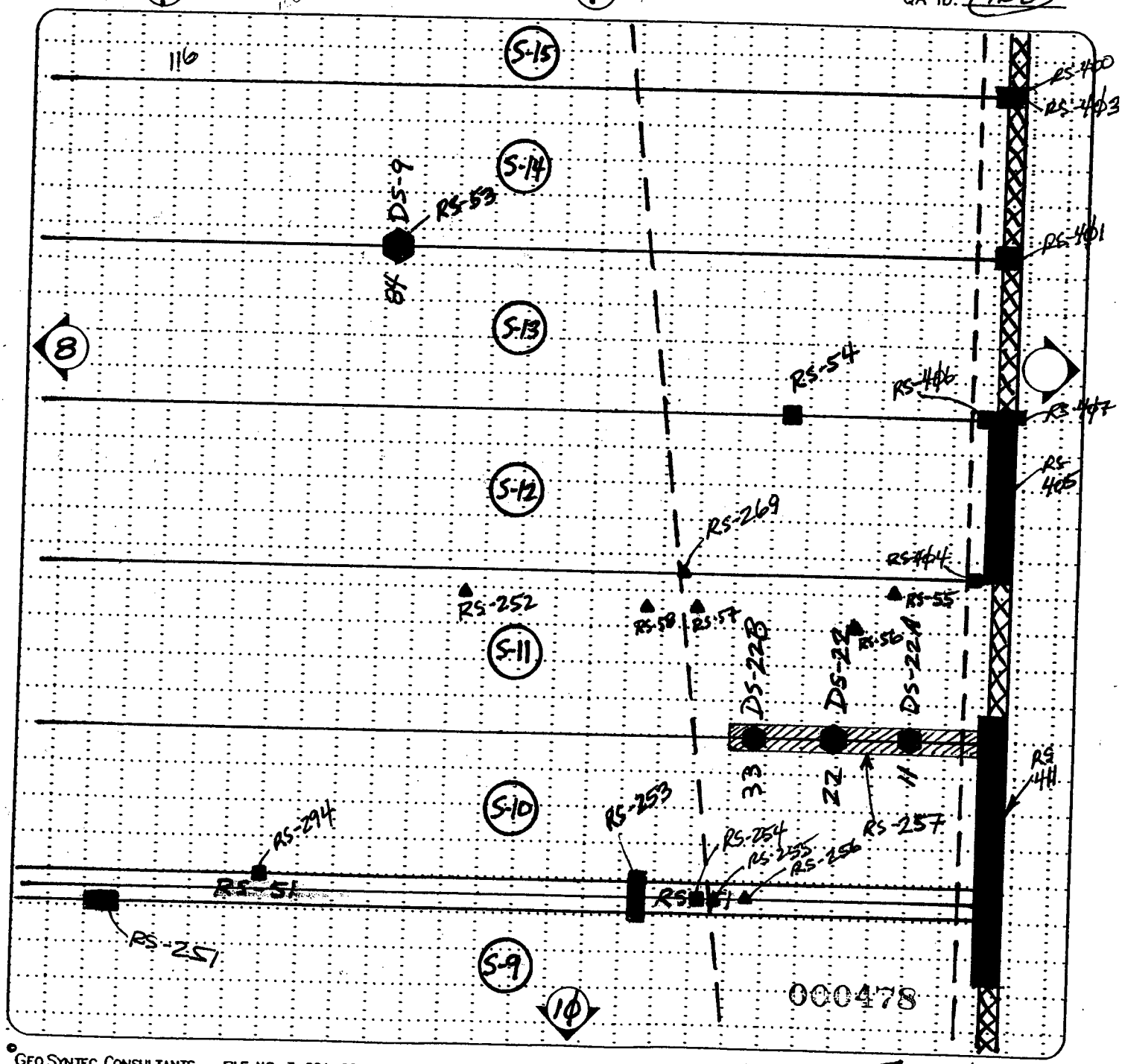
CONTRACTOR: ISTRE Co.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBD



4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

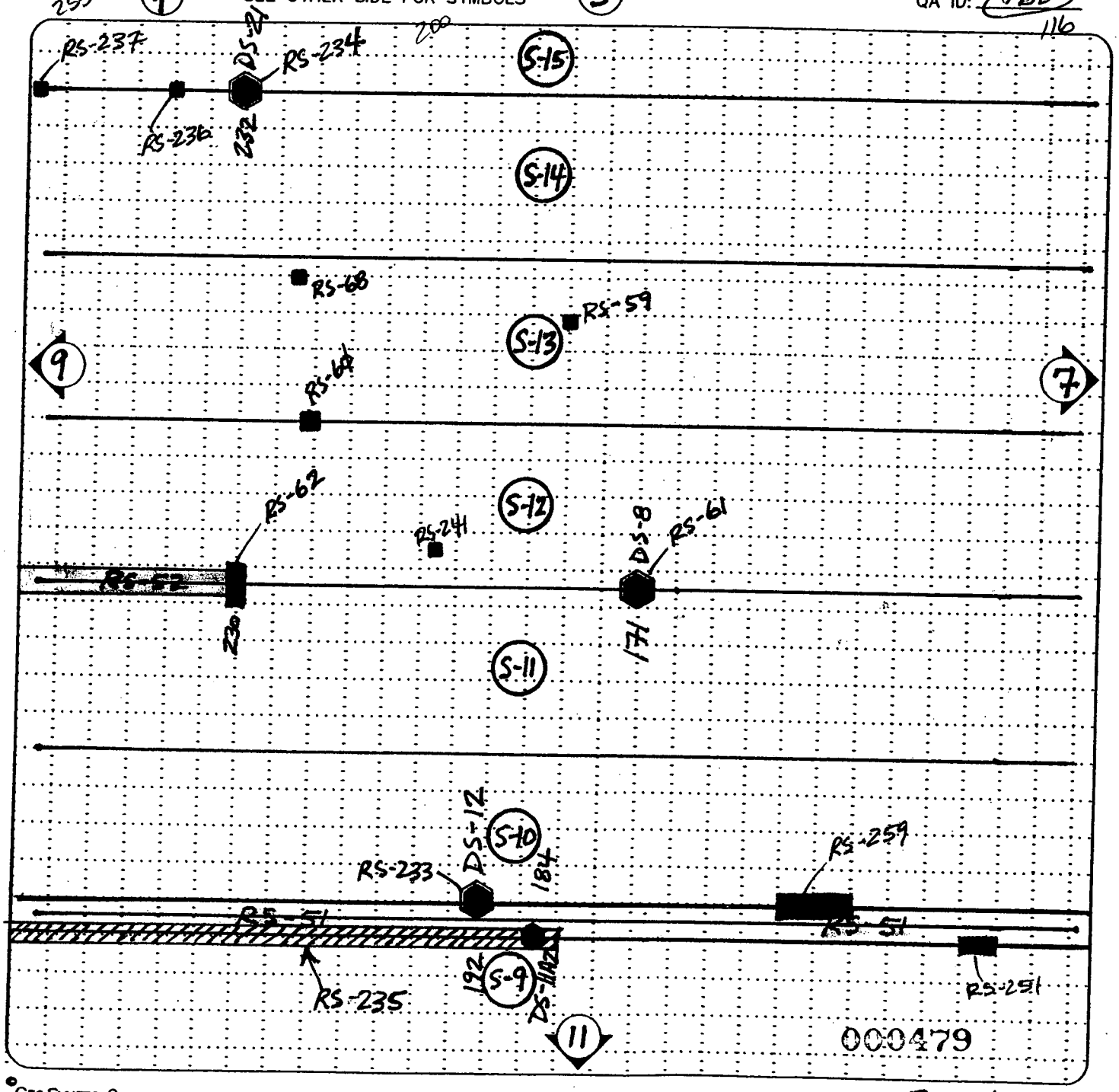
CONTRACTOR: ISTRE Co.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBD



000479

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

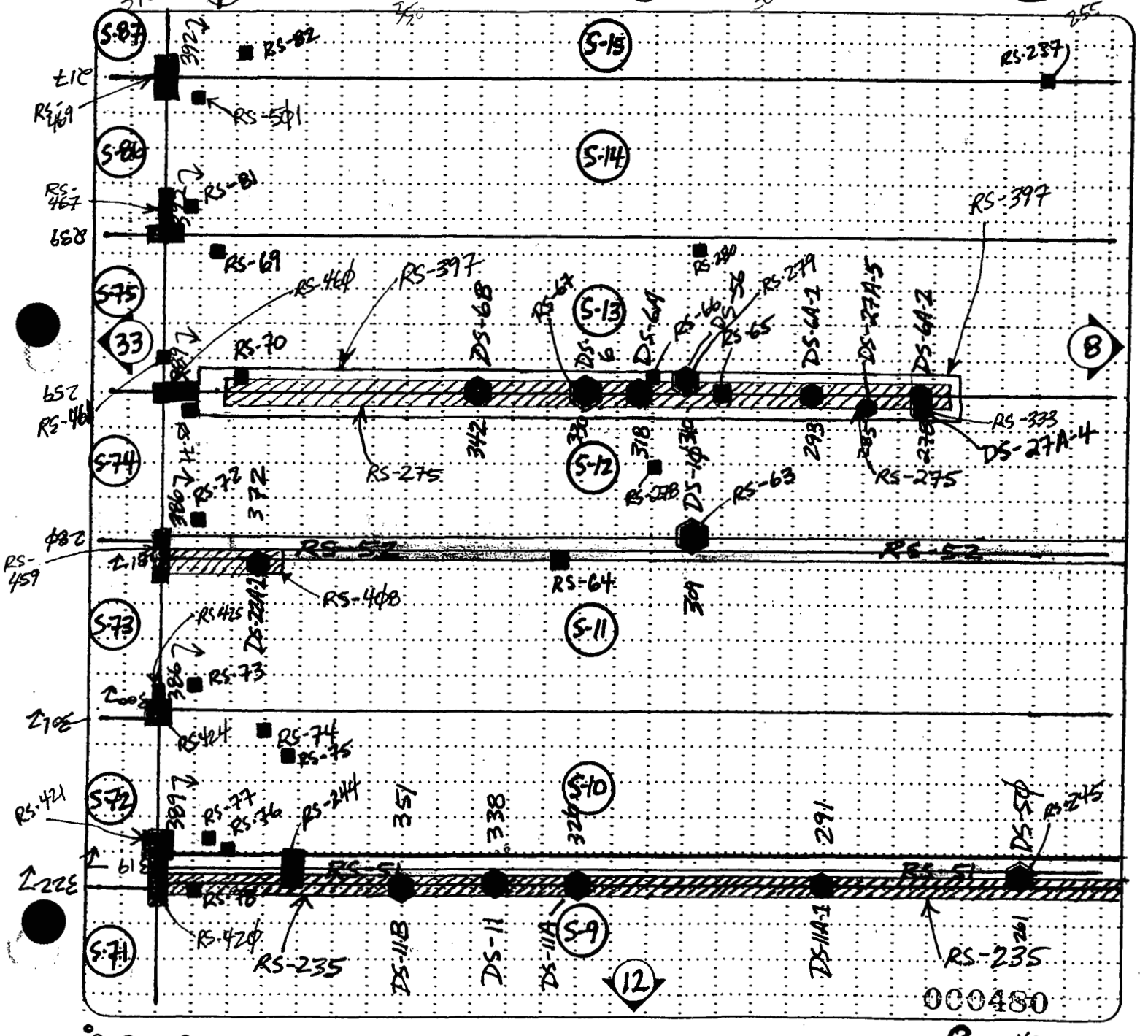
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBY



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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 041

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

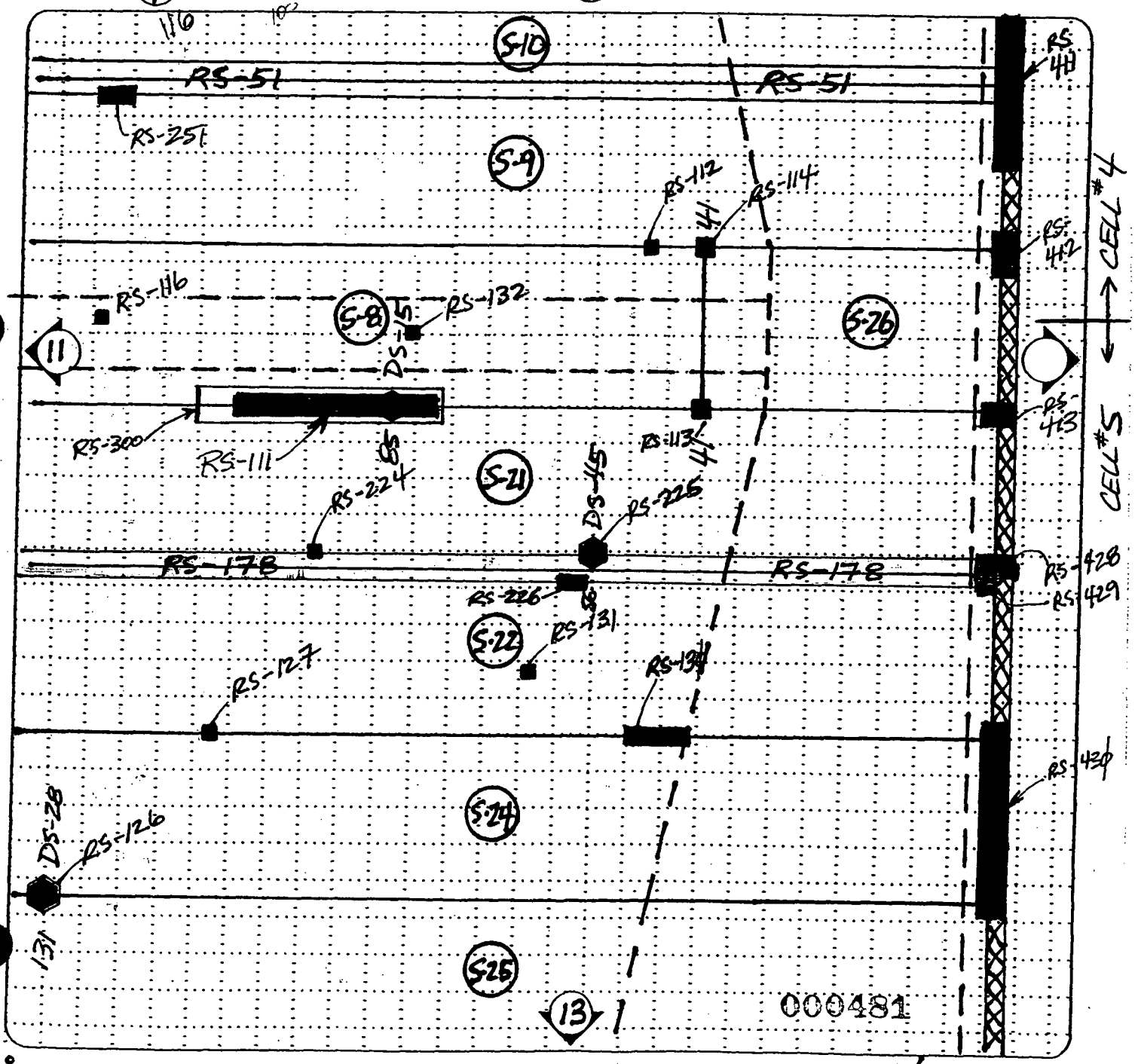
CONTRACTOR: ISTRE Co.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBW



GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

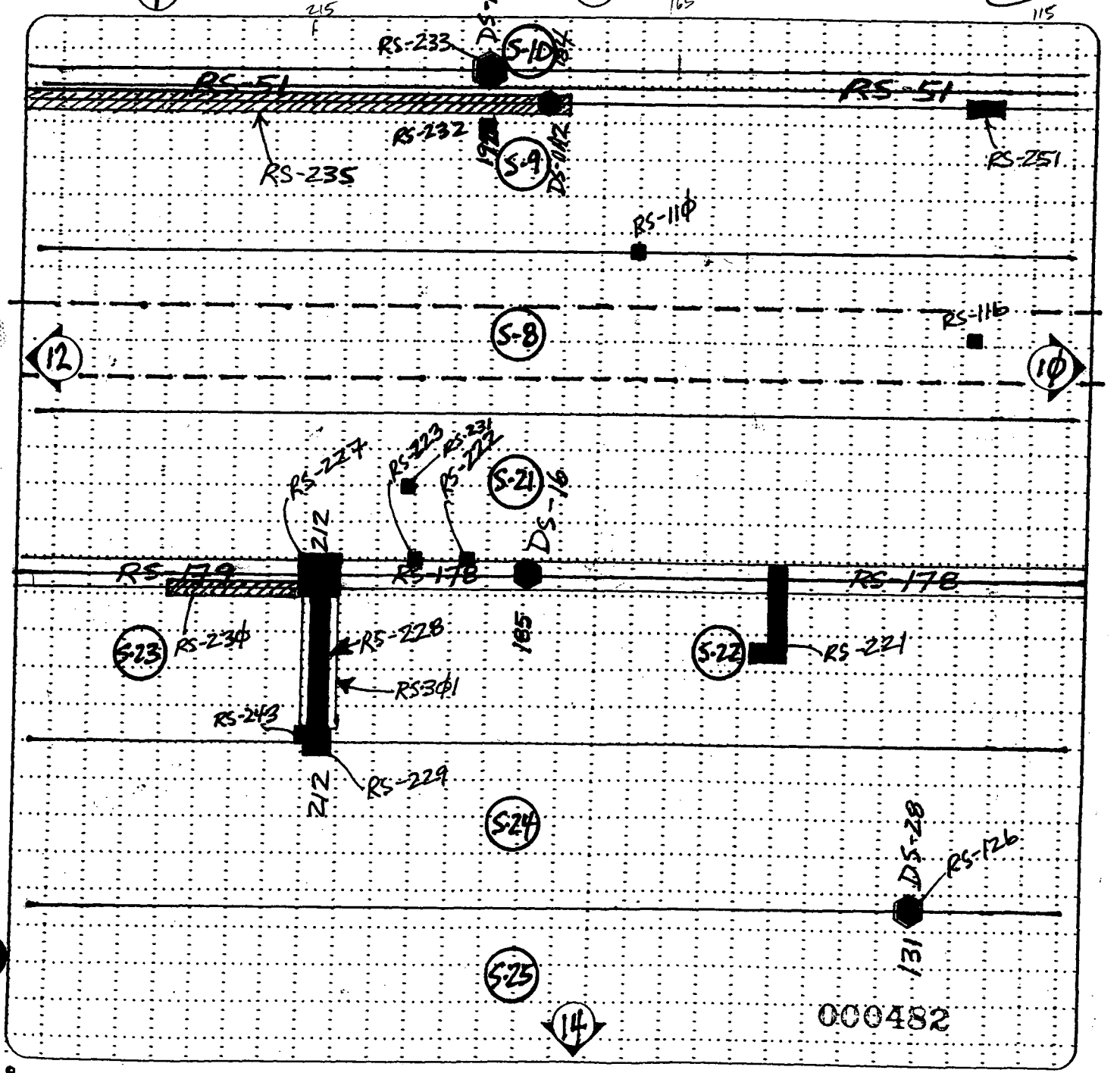
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBM



000482

GeoSyntec Consultants

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

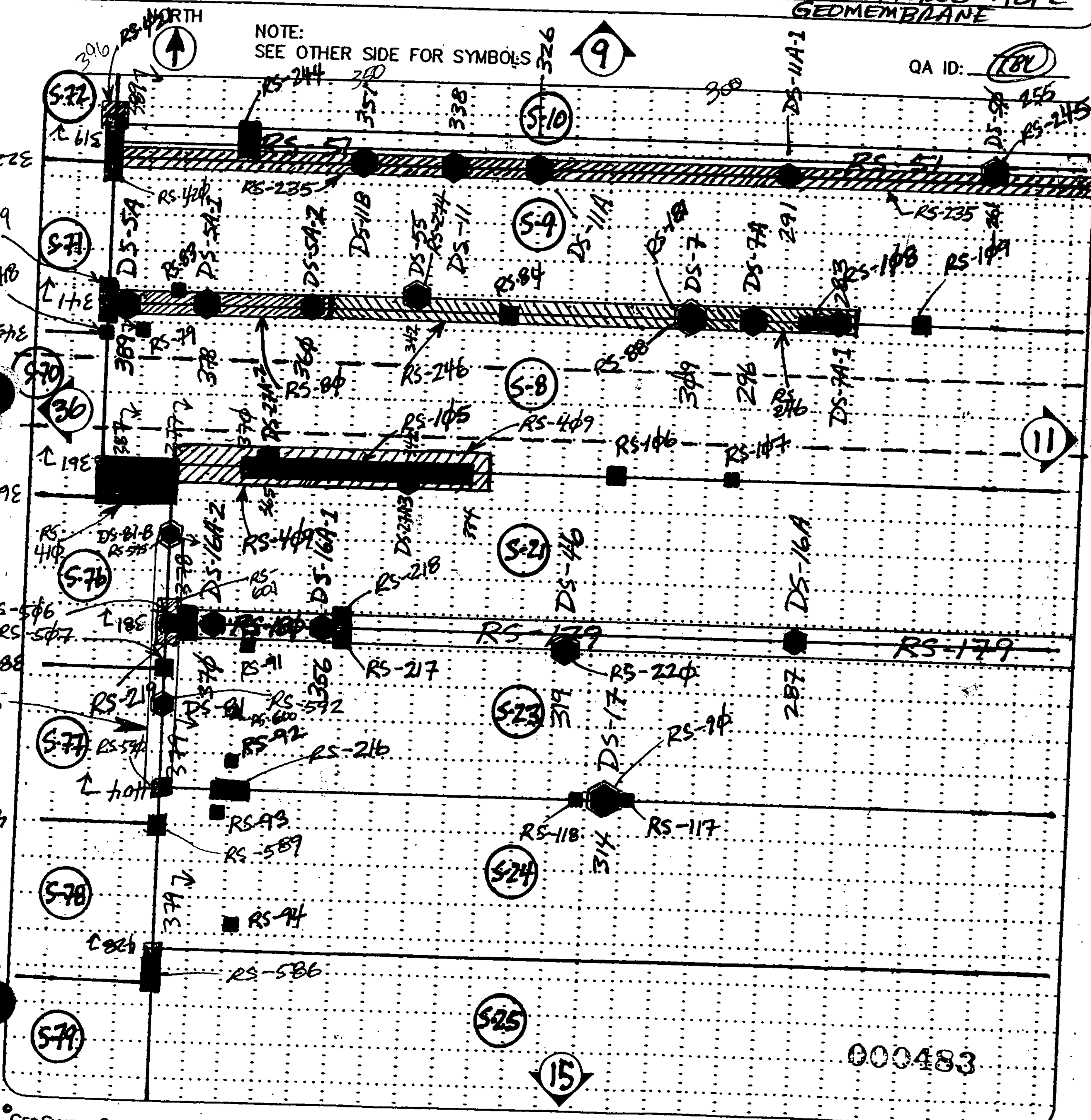
PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5

DATE: — day — month — year

CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE



000483

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: ___ day ___ month ___ year

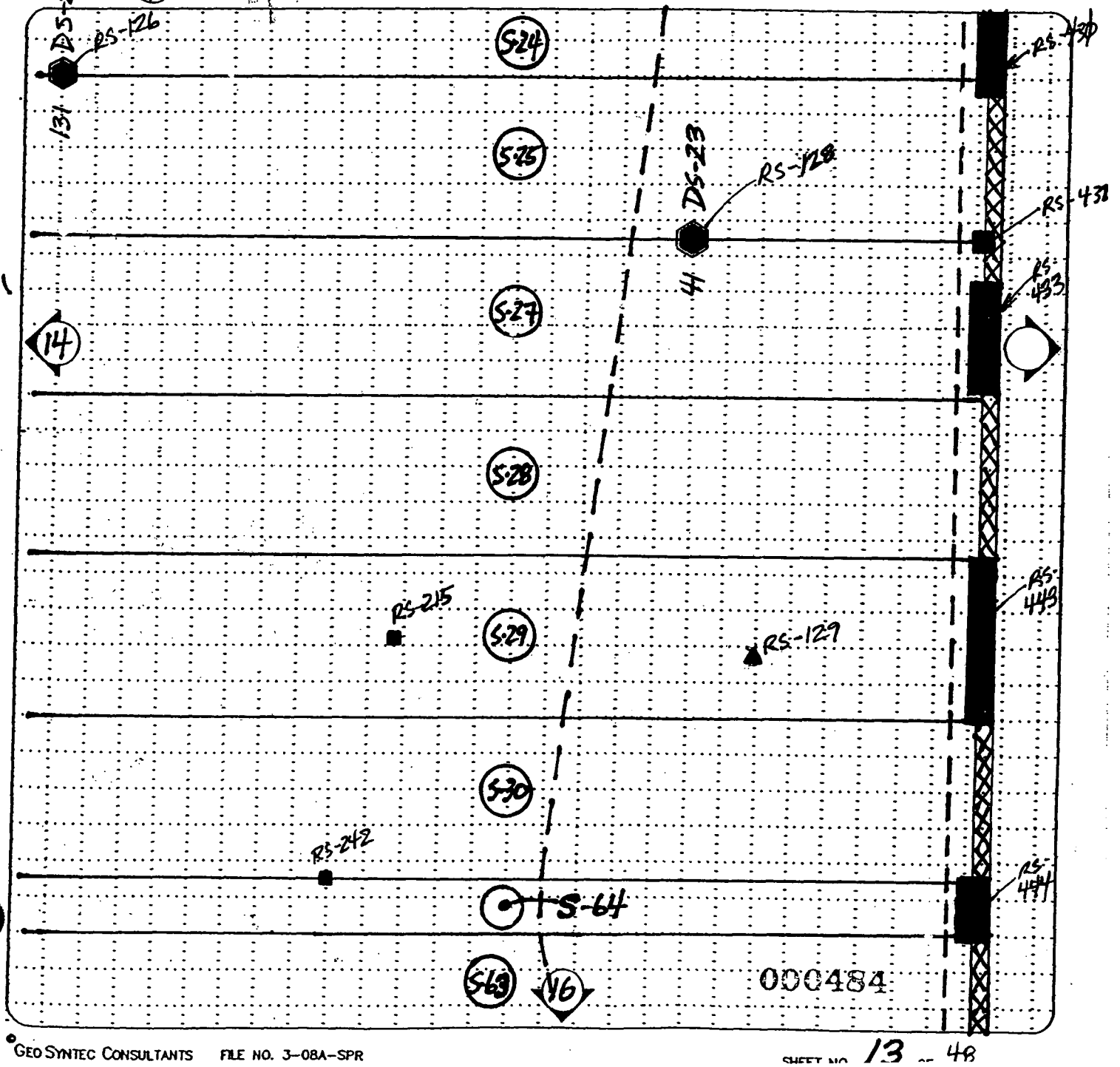
CONTRACTOR: ISTRE Co.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE: SEE OTHER SIDE FOR SYMBOLS

QA ID: TBR



000484

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 041

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: ___ day ___ month ___ year

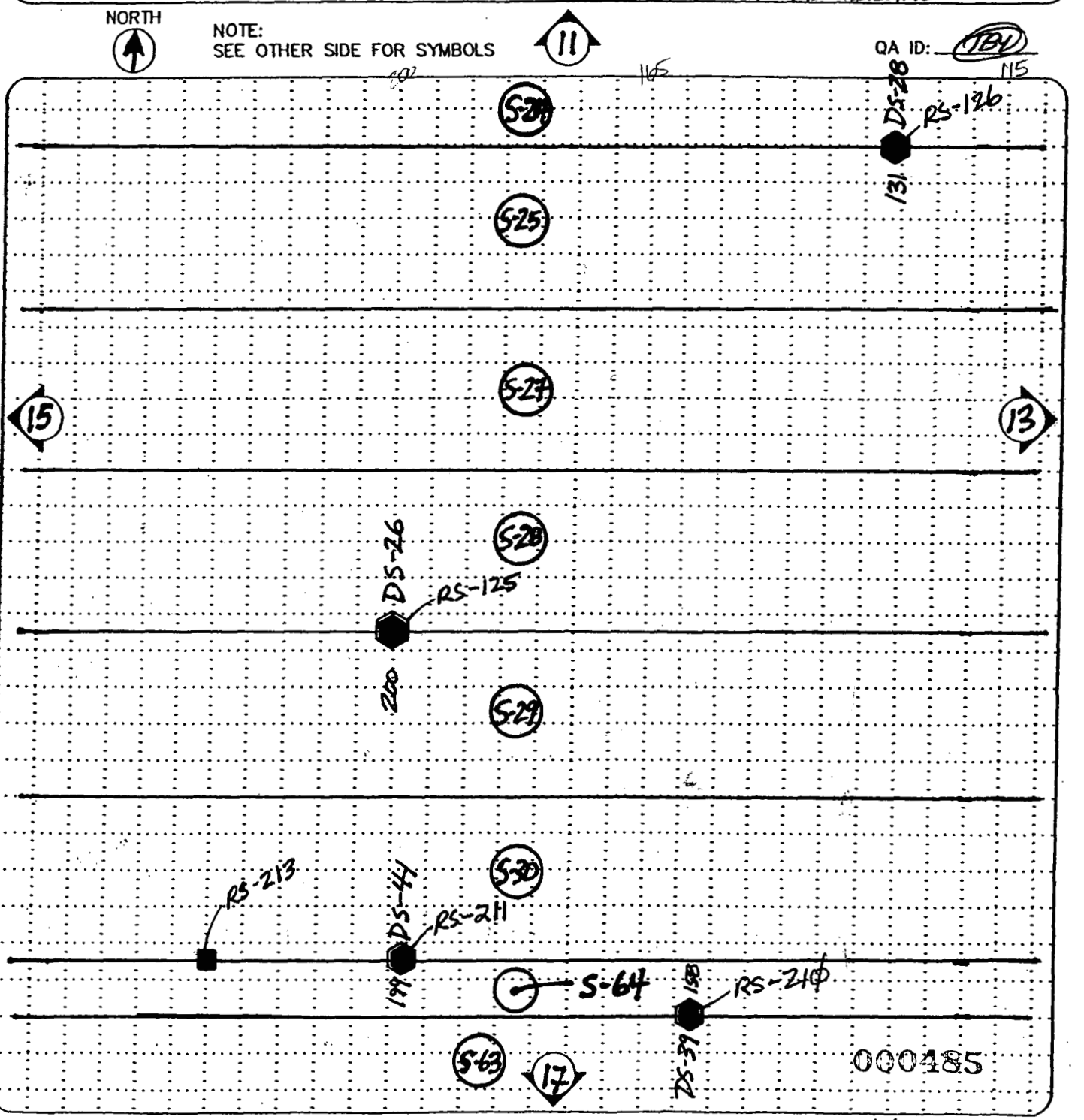
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBD



000485

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

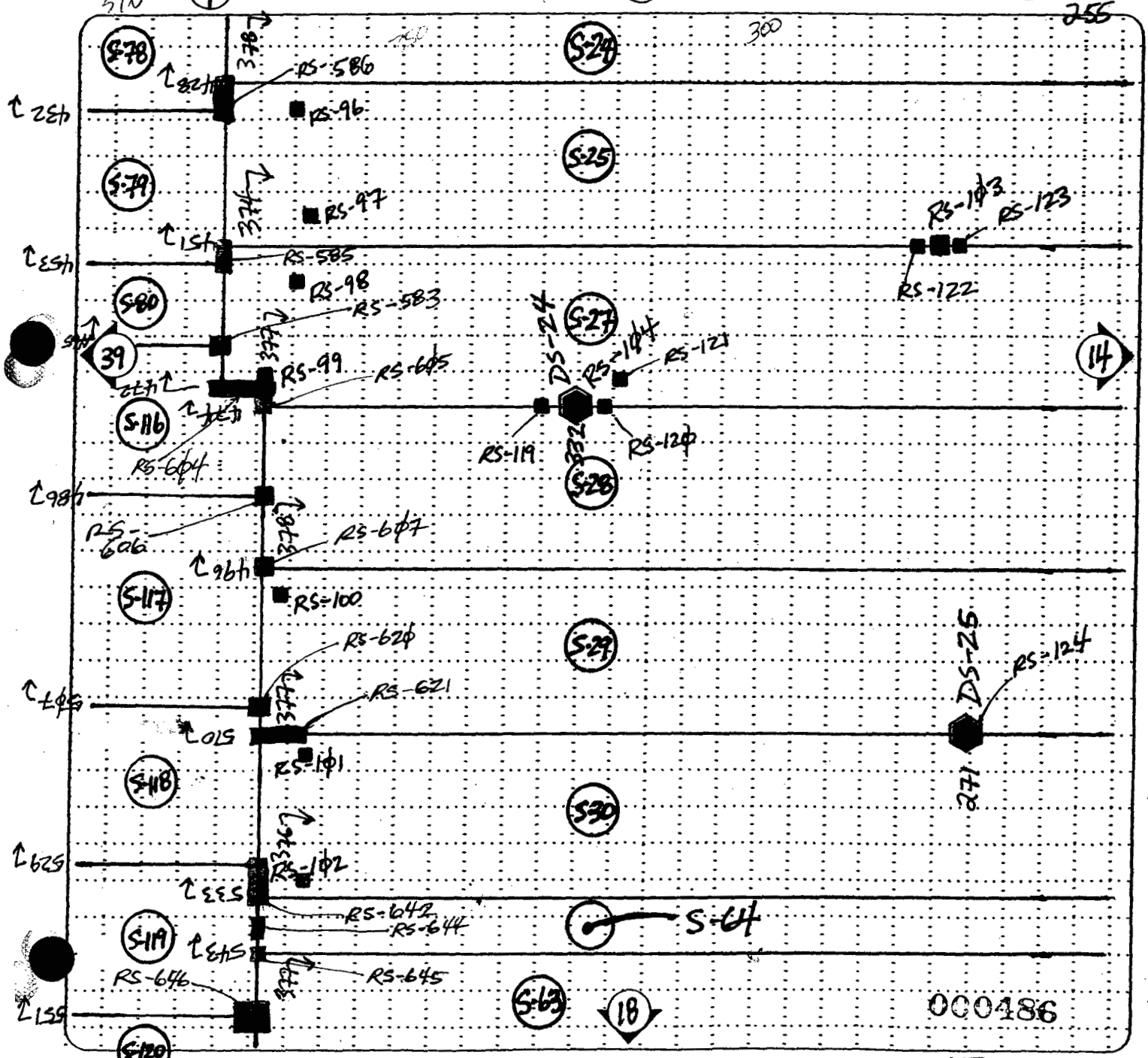
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE: SEE OTHER SIDE FOR SYMBOLS

QA ID: TBU



GEO SYNTEC CONSULTANTS FILE NO. 3-08A-SPR

SHEET NO. 15 OF 48

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 041

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

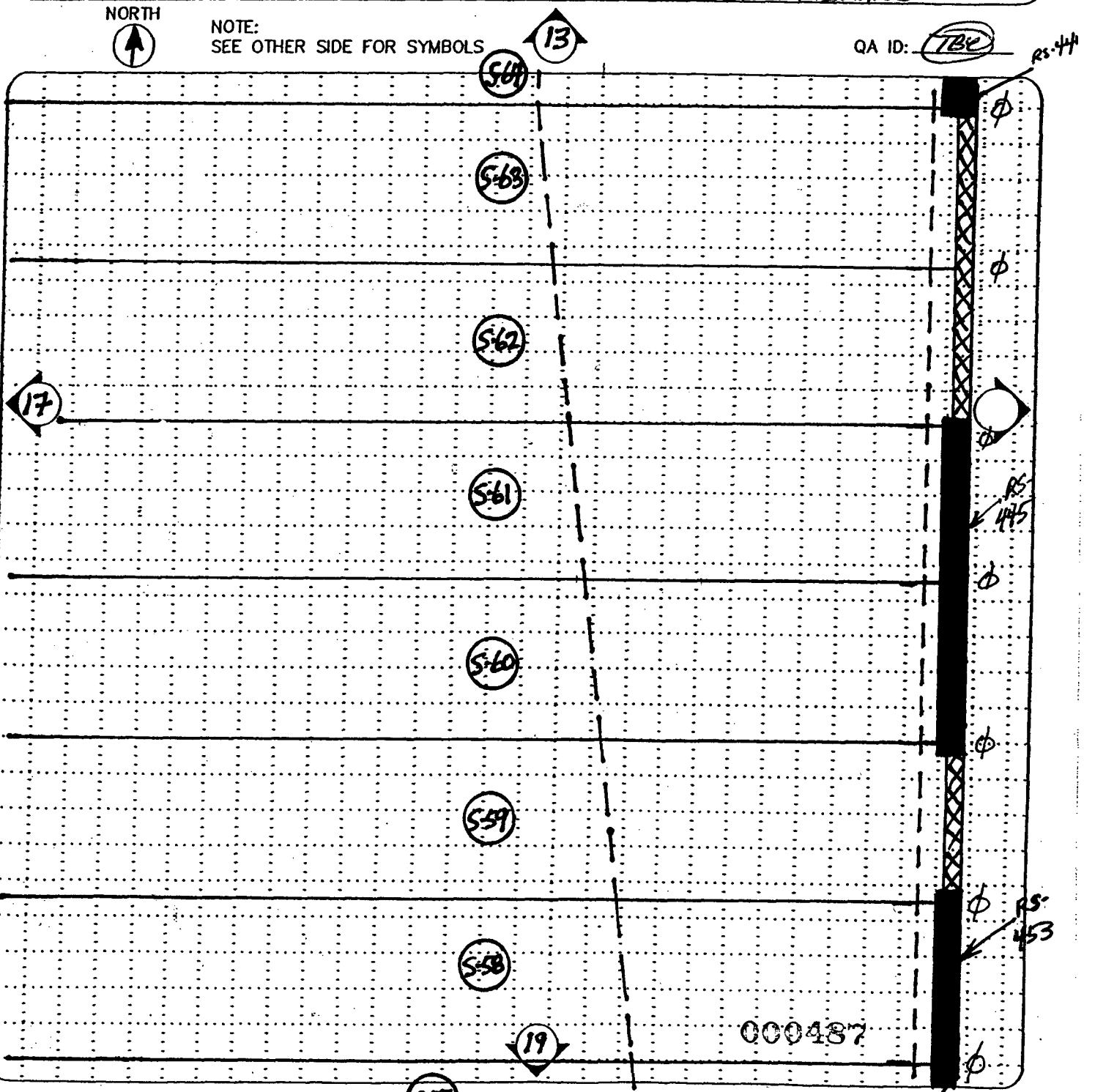
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBC



GEO SYNTEC CONSULTANTS FILE NO. 3-08A-SPR

SHEET NO. 16 OF 48

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 041

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

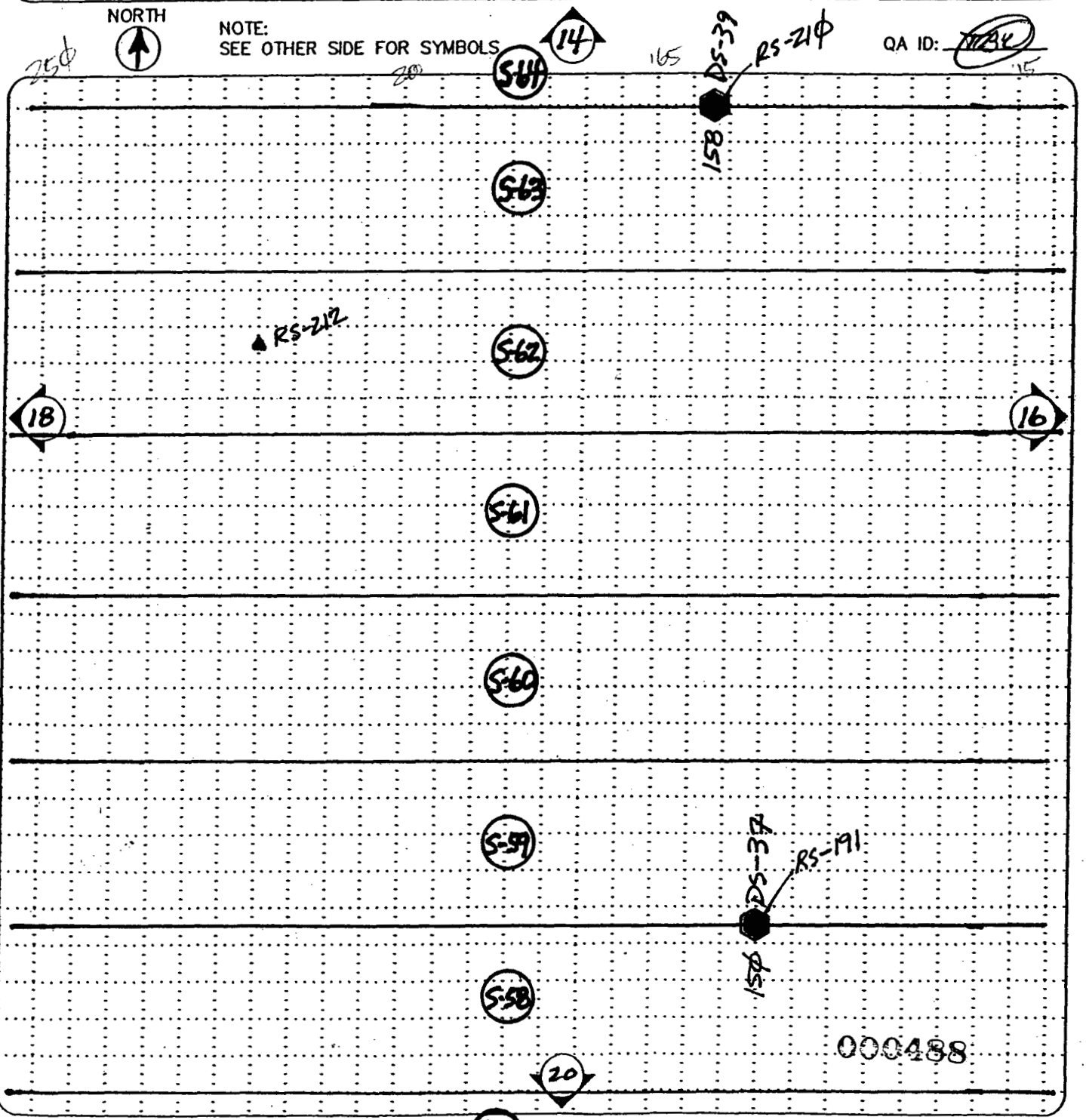
CONTRACTOR: ISTRE Co.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: [illegible]



000488

GeoSyntec Consultants | **FLUOR FERNALD, INC.**

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

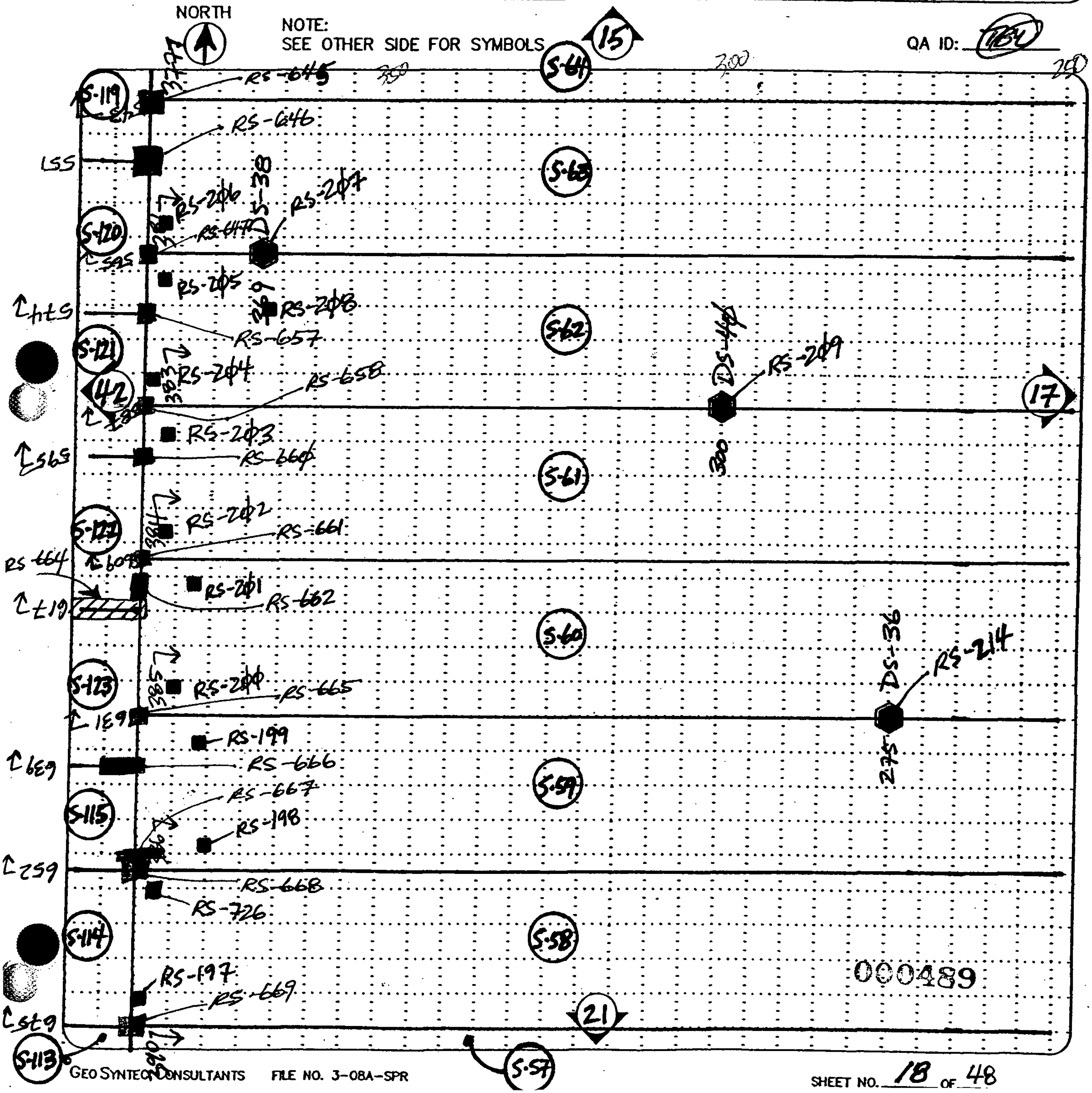
CONTRACTOR: ISTRE Co.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: [illegible]



000489

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, Cells 4 & 5 DATE: — day — month — year

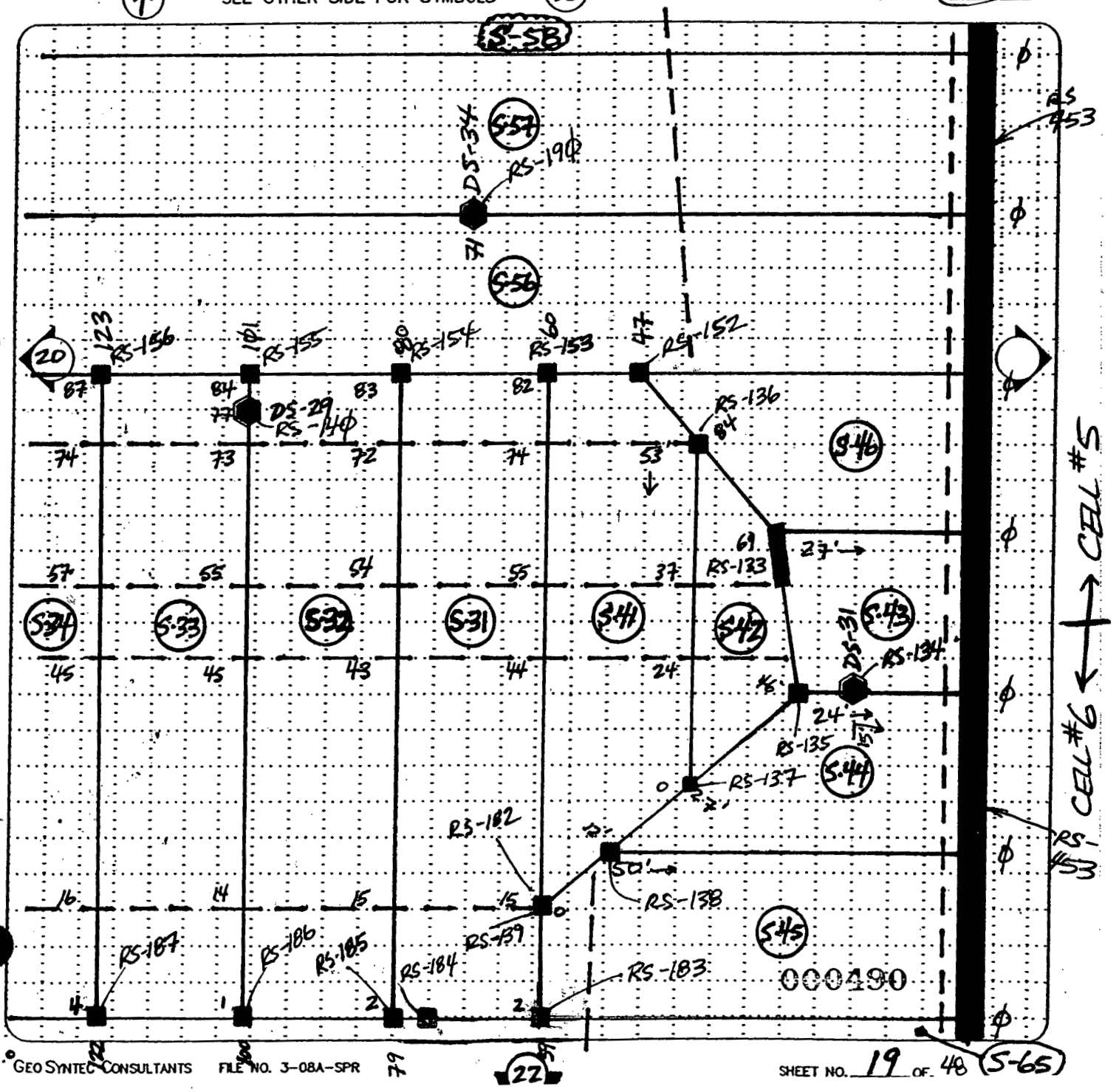
CONTRACTOR: ISTRE Co.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBD



4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

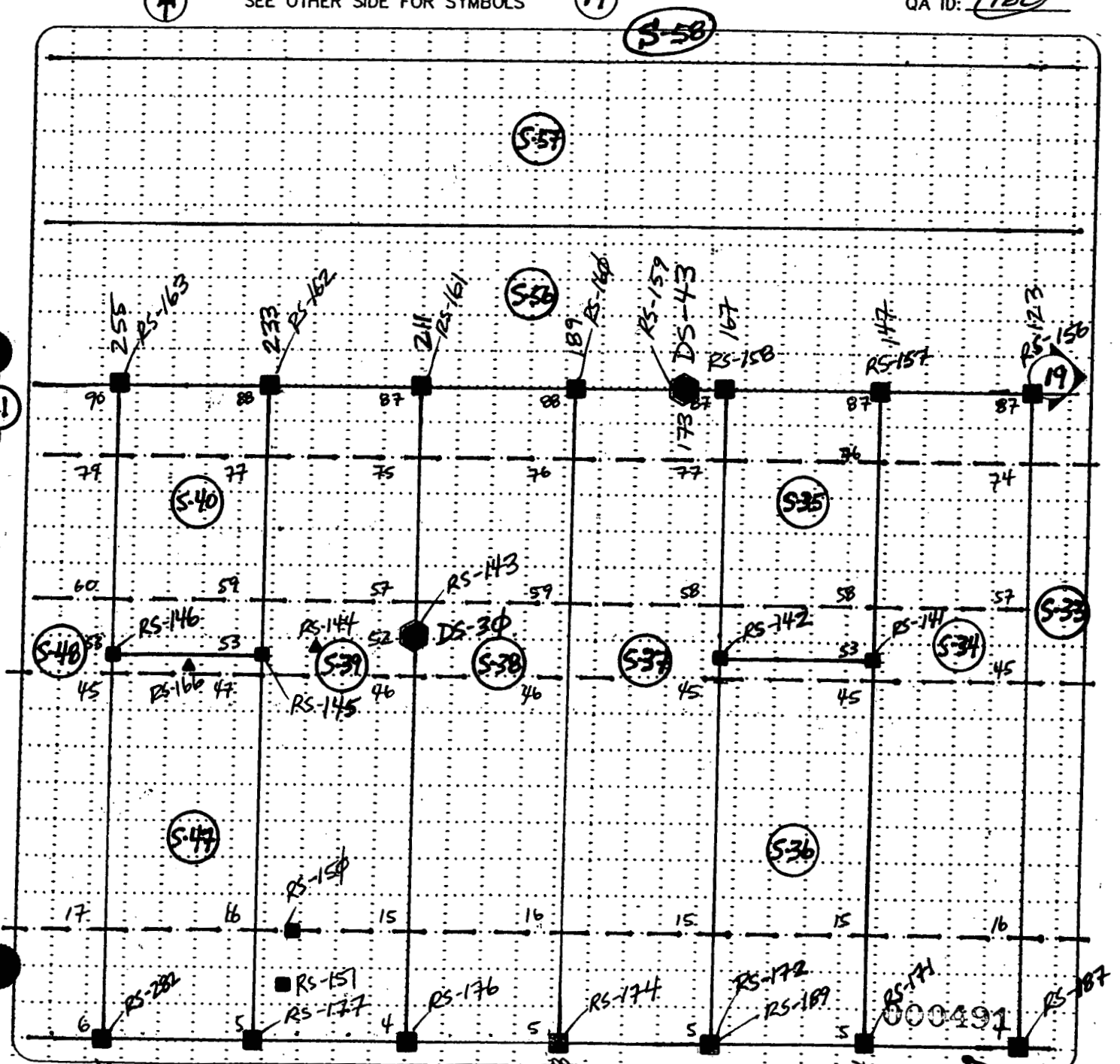
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBC



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4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: ___ day ___ month ___ year

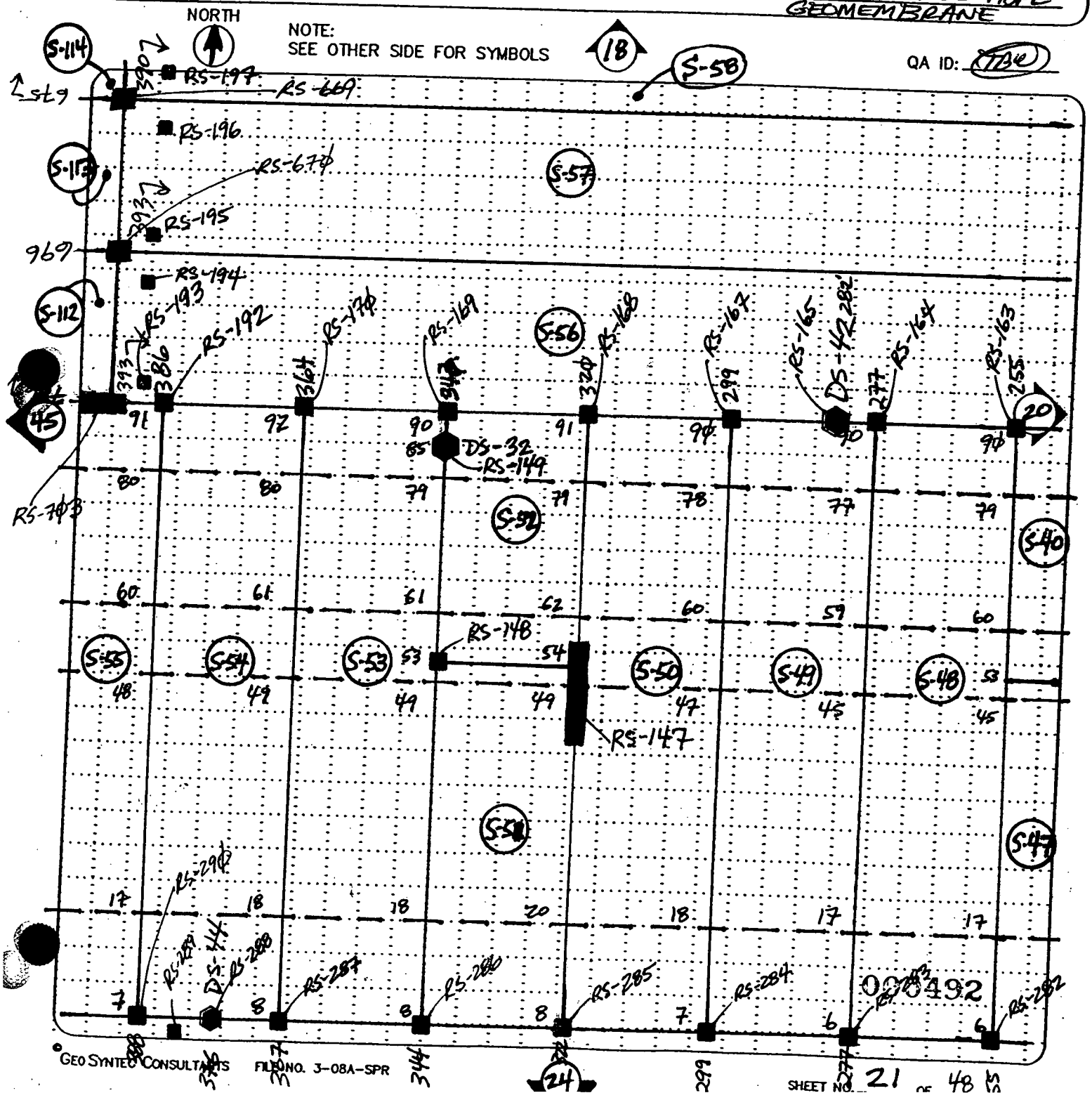
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80 MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBW



GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

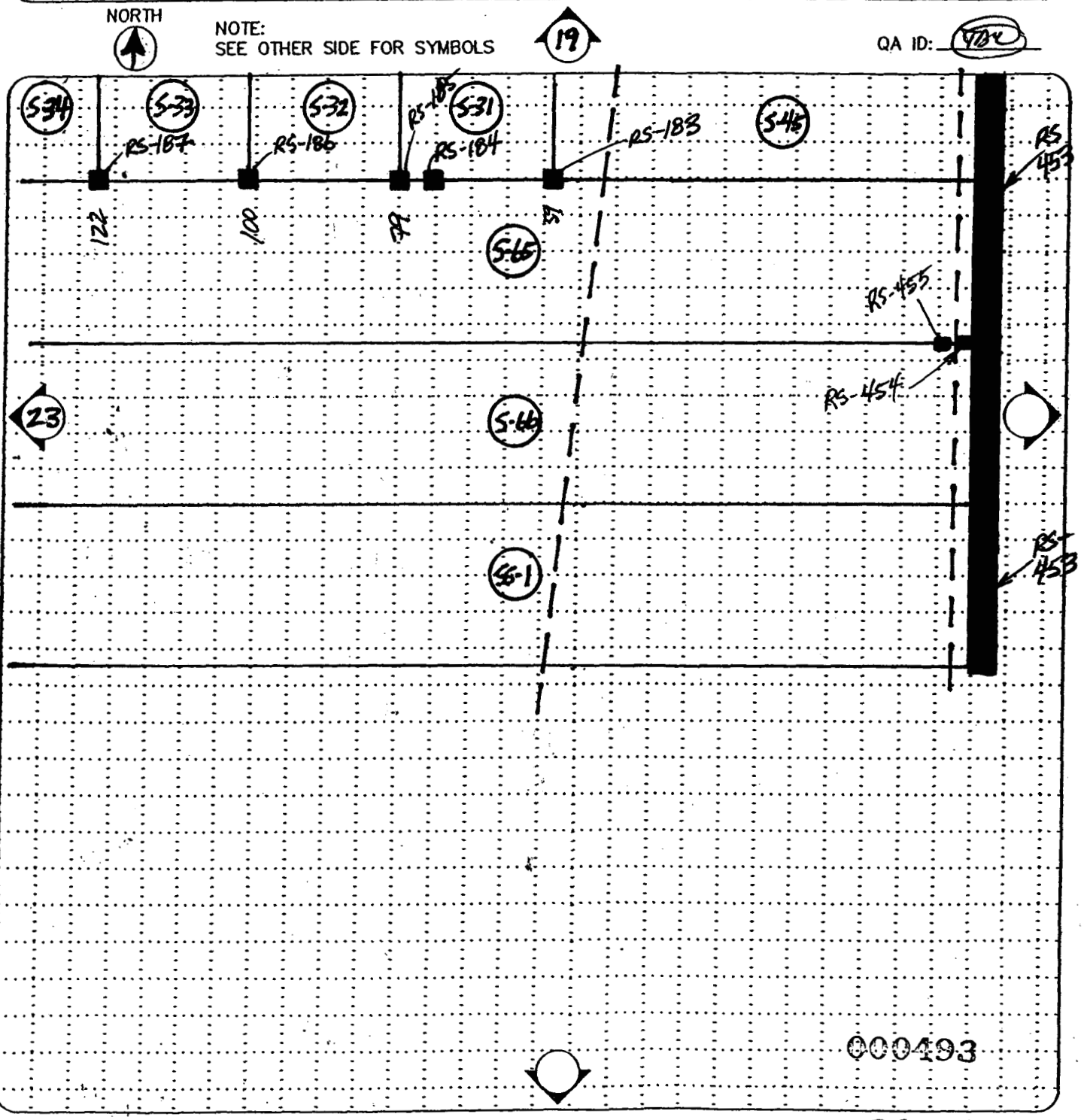
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: YBU



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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

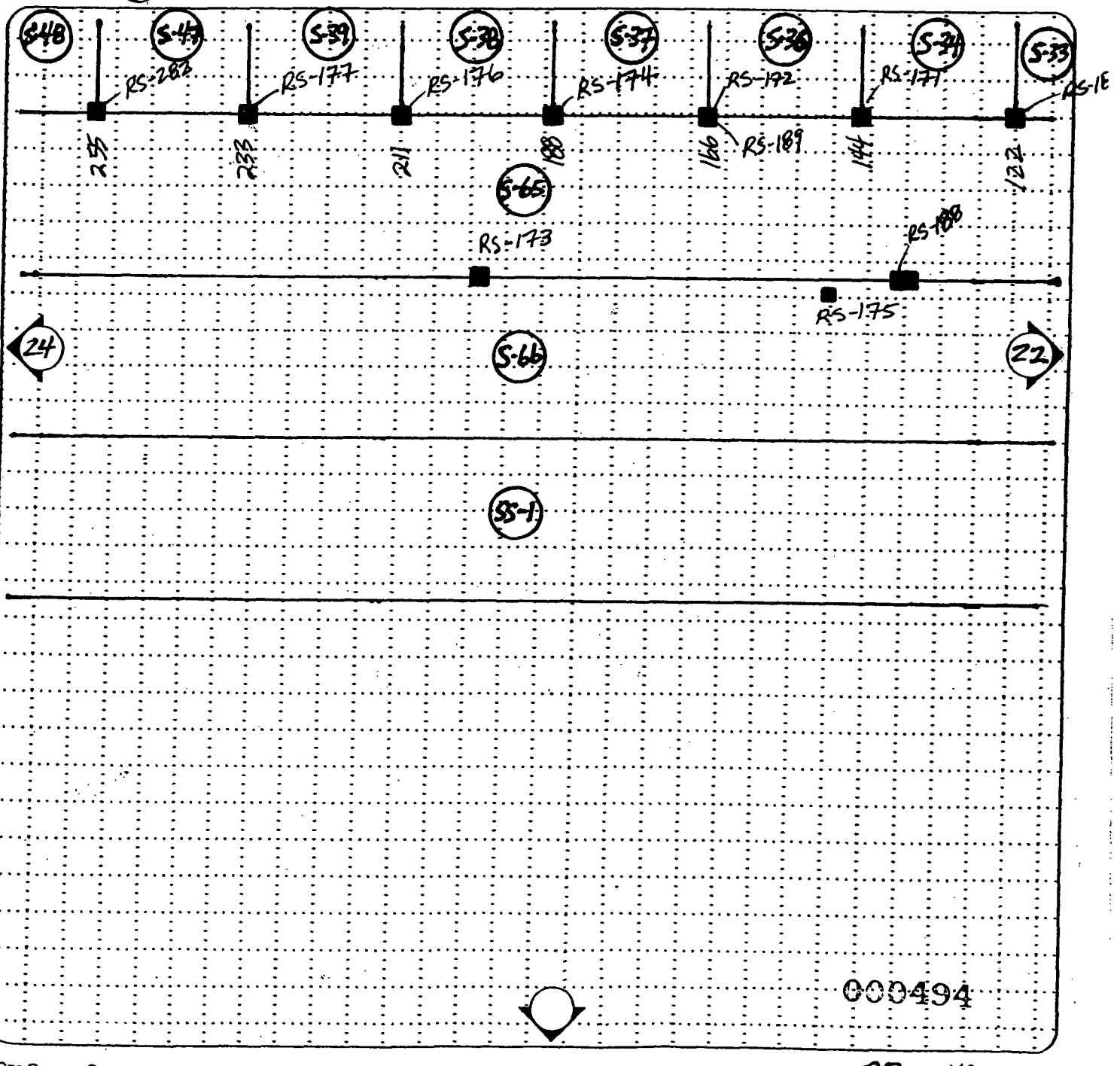
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBL



000494

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: ___ day ___ month ___ year

CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

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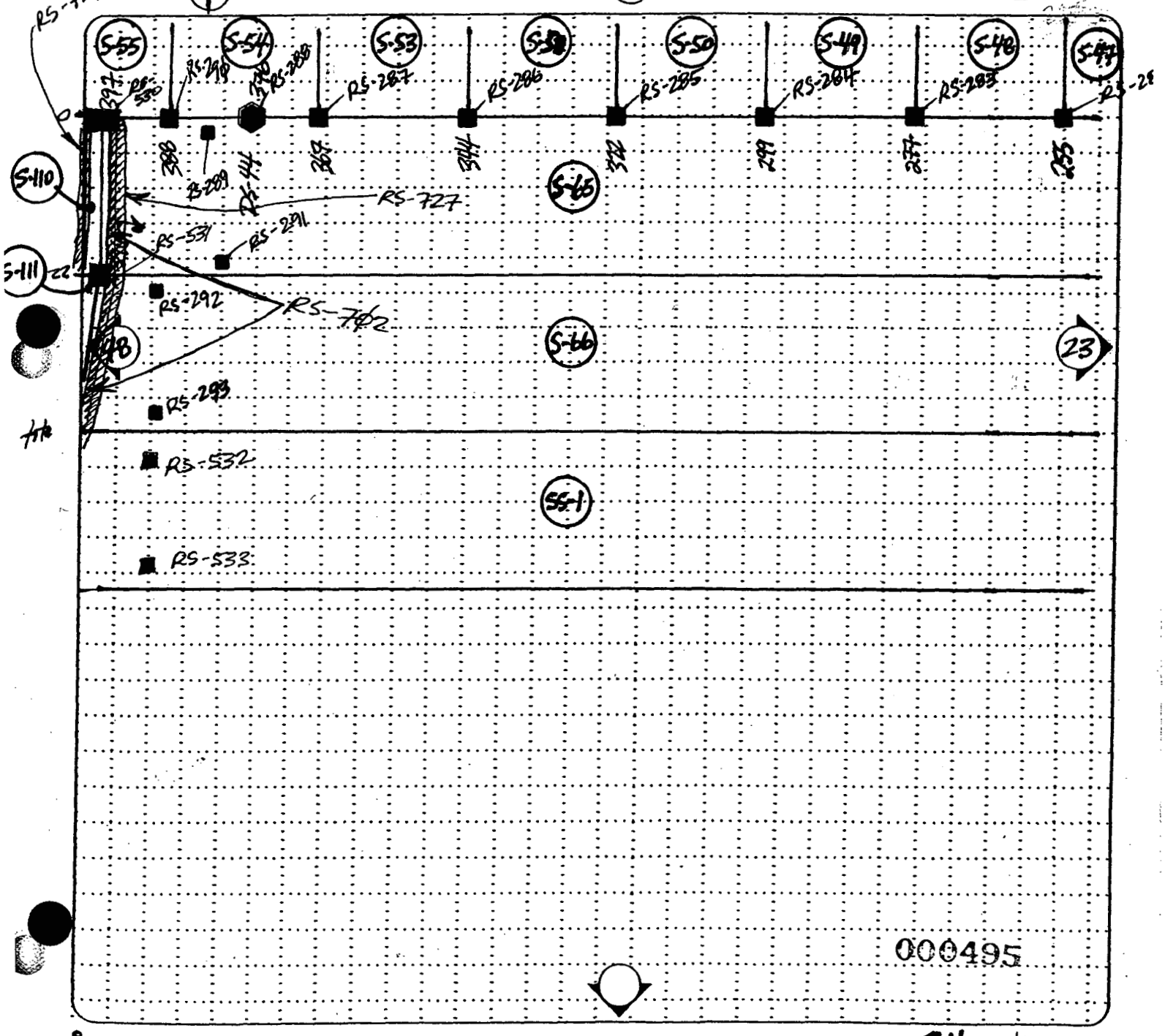


000495

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

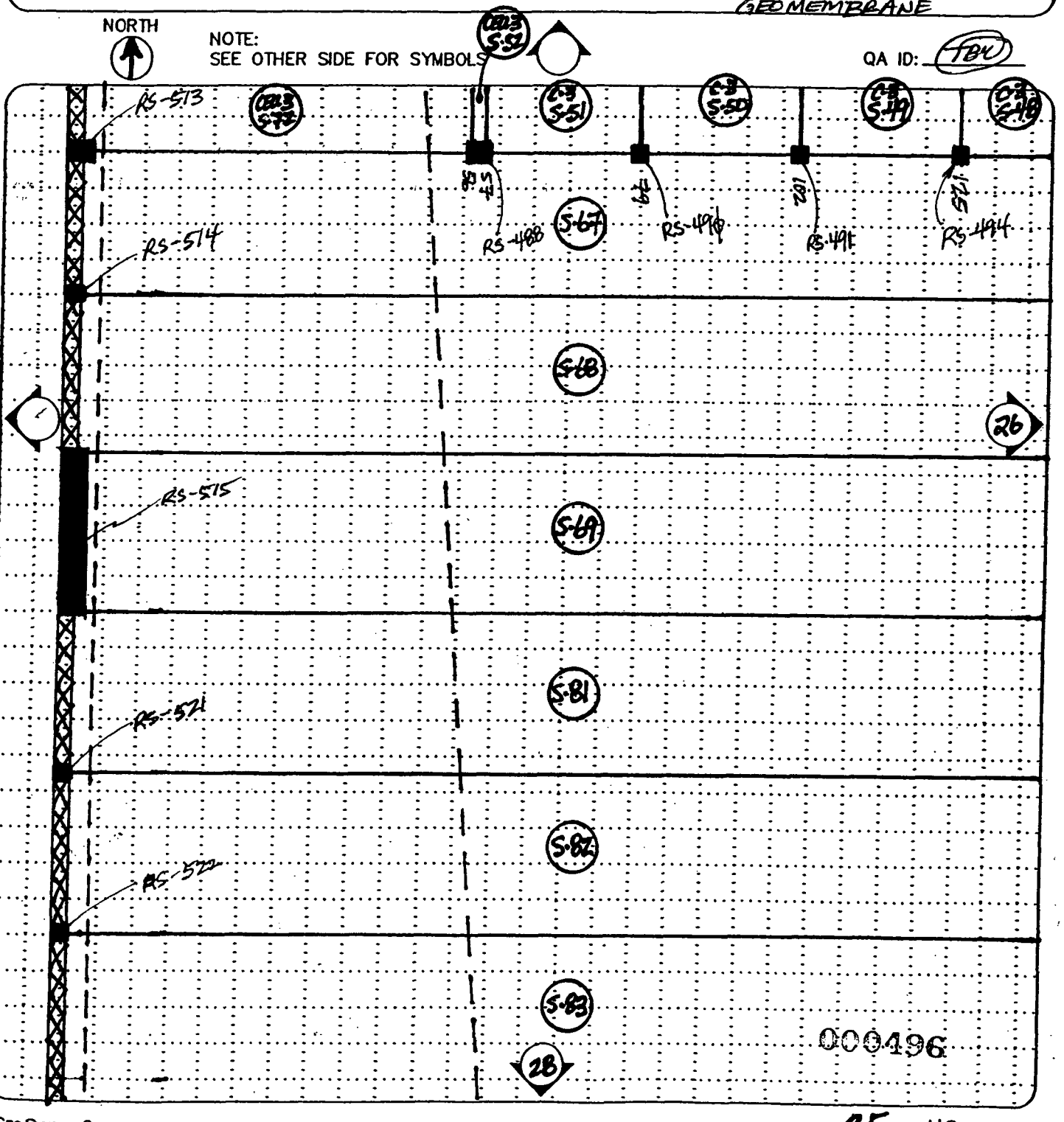
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBD



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4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

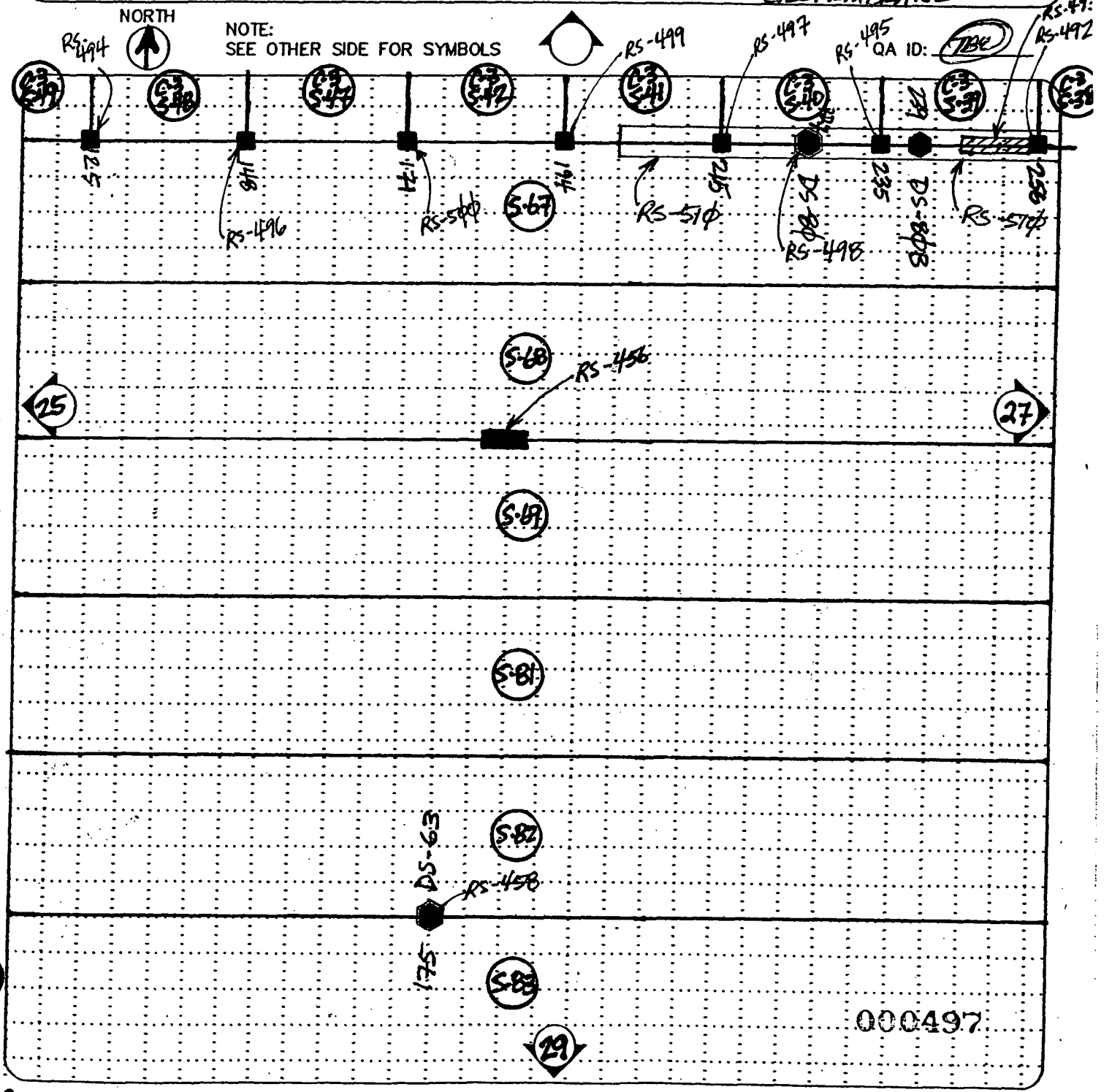
PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 041

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

CONTRACTOR: THE ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE



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4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

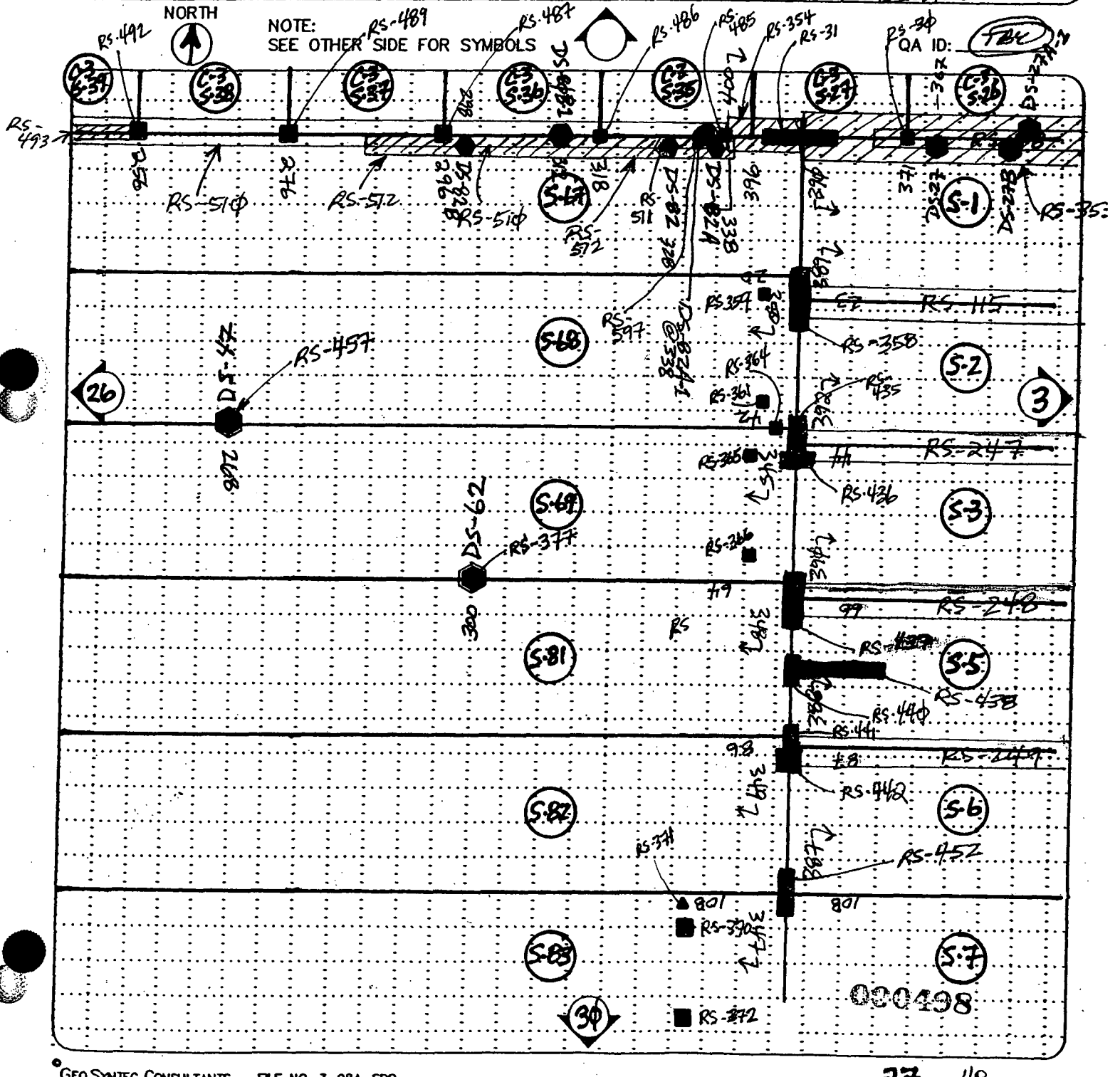
PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

CONTRACTOR: ISTRE Co.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE



1943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

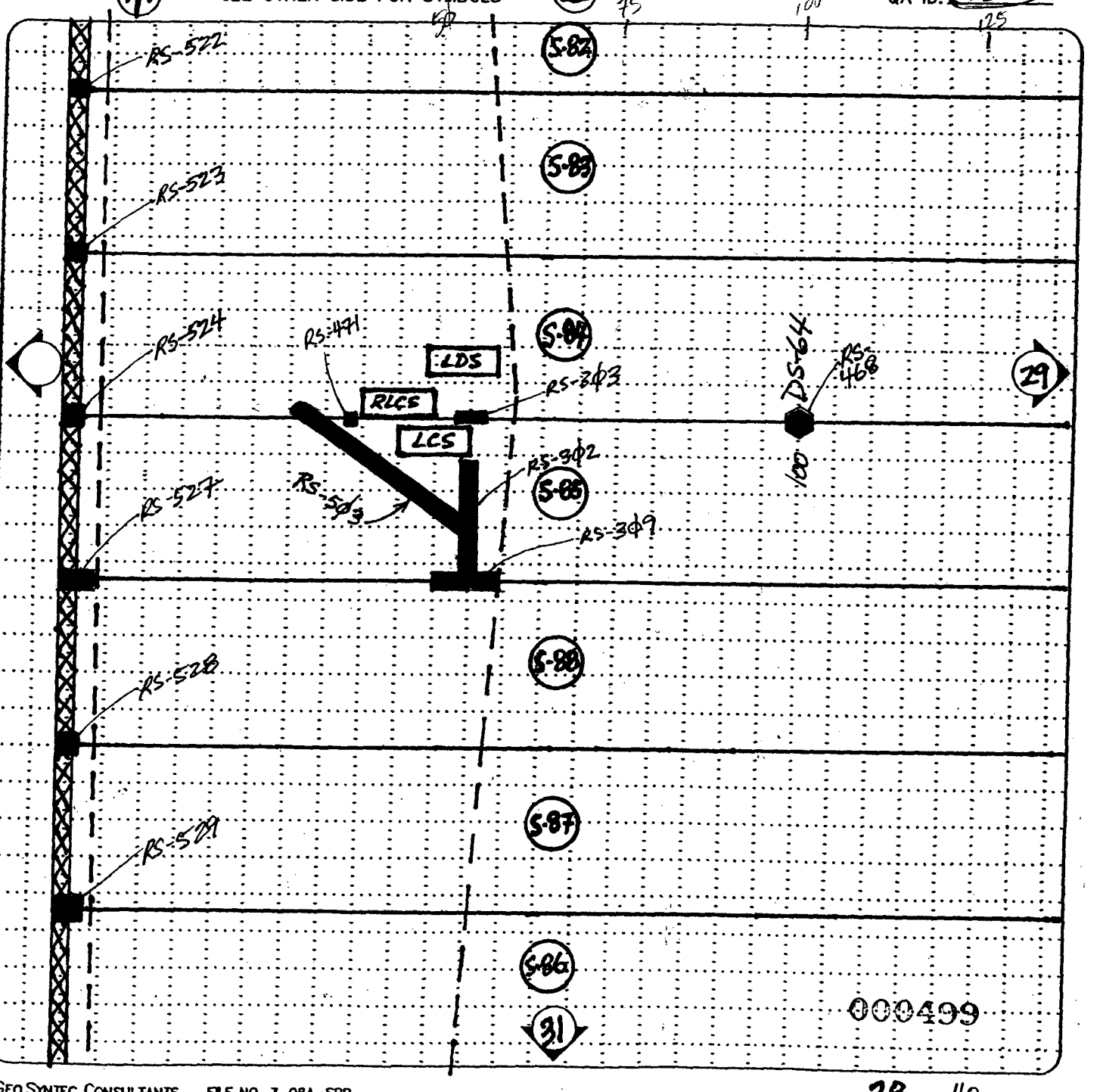
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 60-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBD



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4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

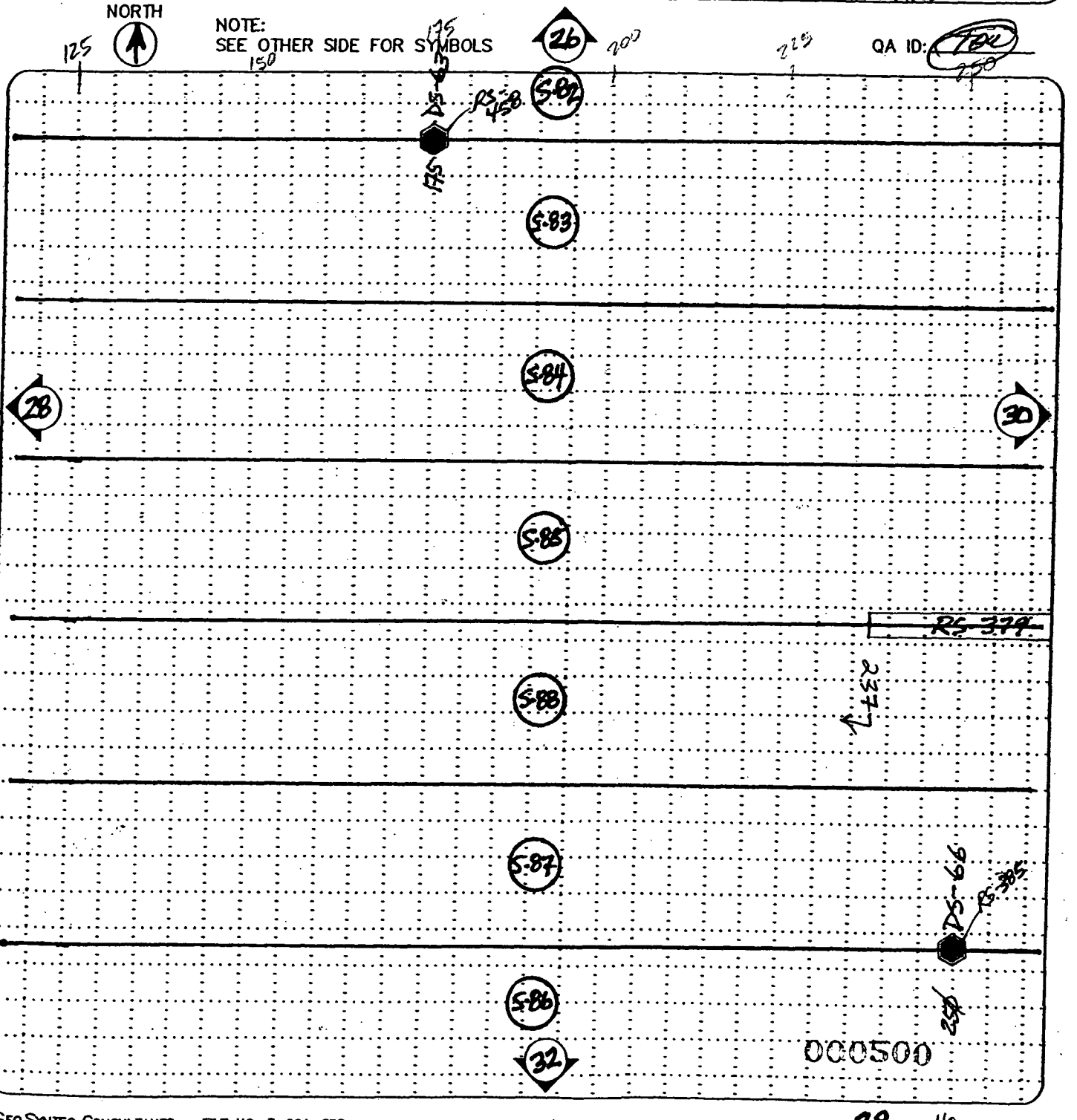
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBW



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4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: 6Q1341 TASK NO.: 041

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

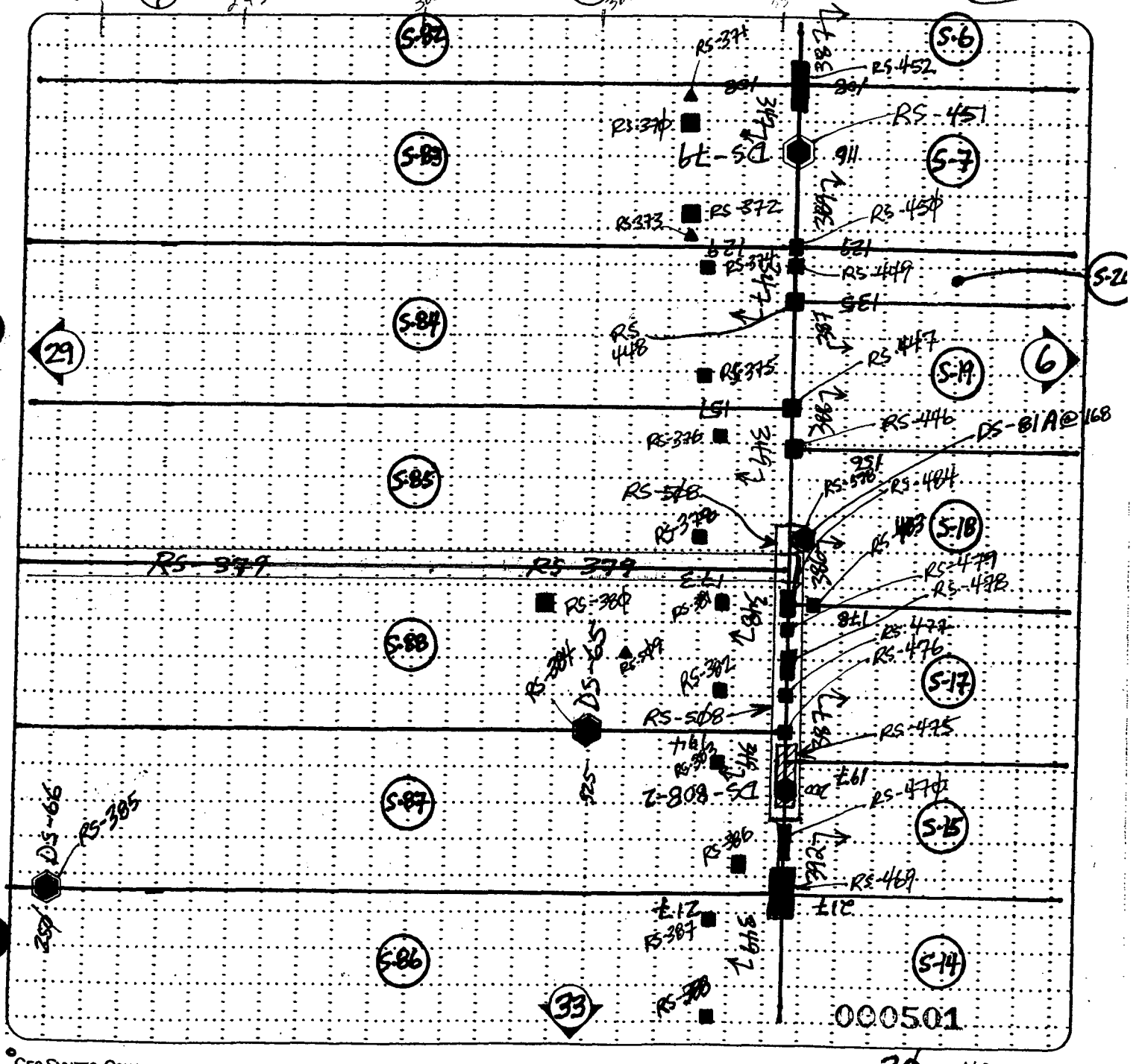
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE.

NORTH

NOTE: SEE OTHER SIDE FOR SYMBOLS

QA ID: RBY



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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

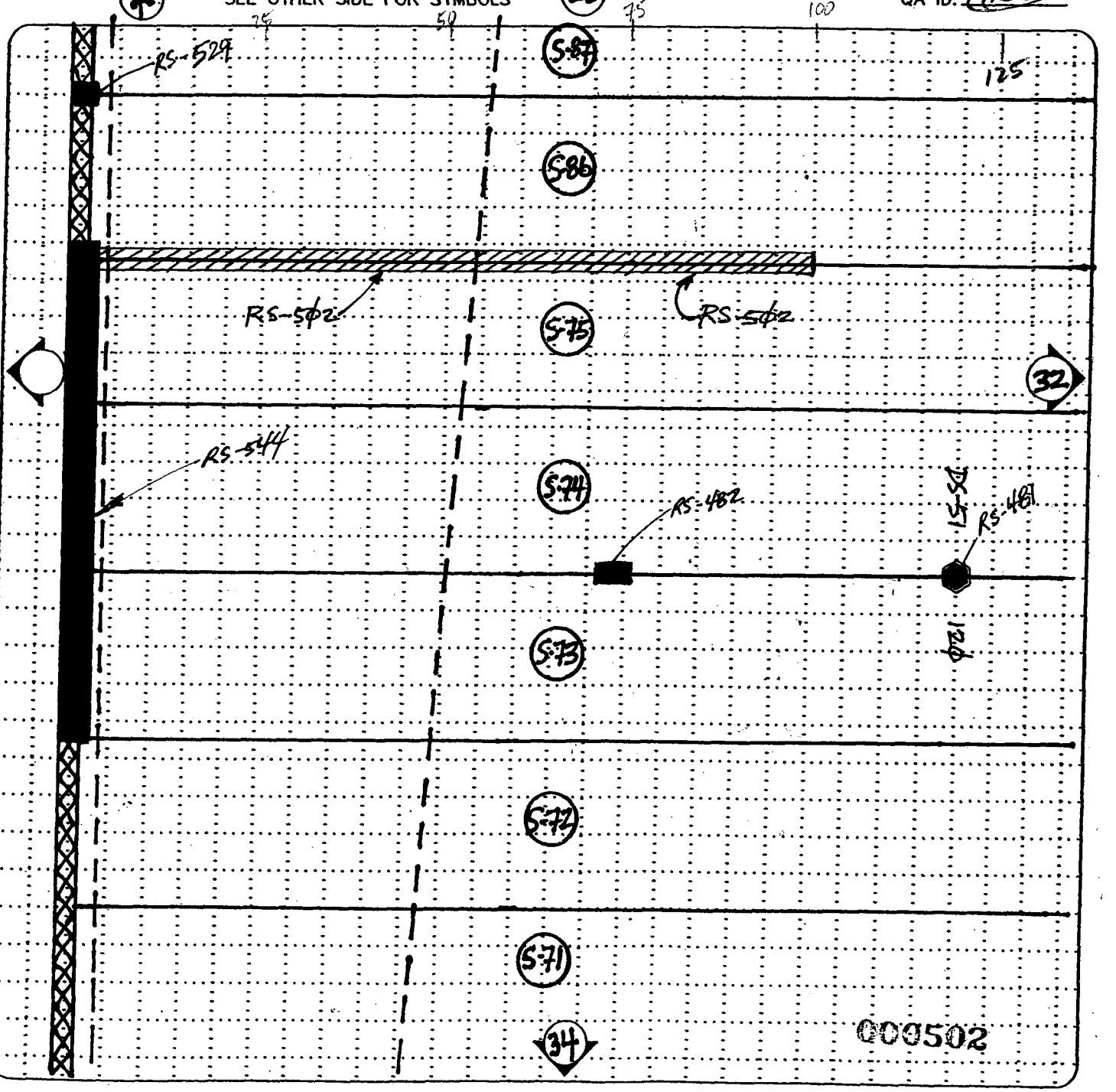
CONTRACTOR: ISTRE Co.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBW



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4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

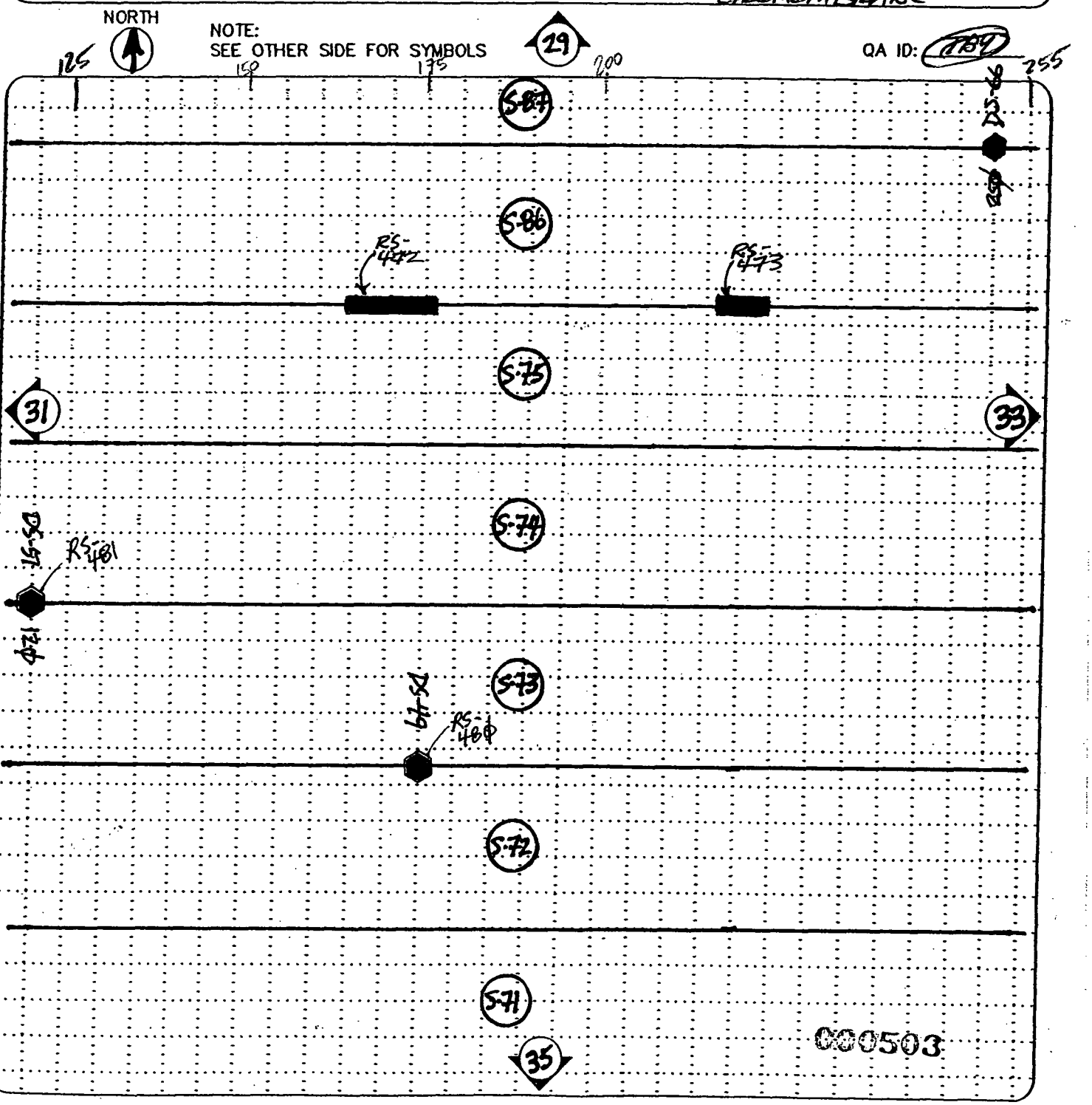
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBD



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4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 041

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

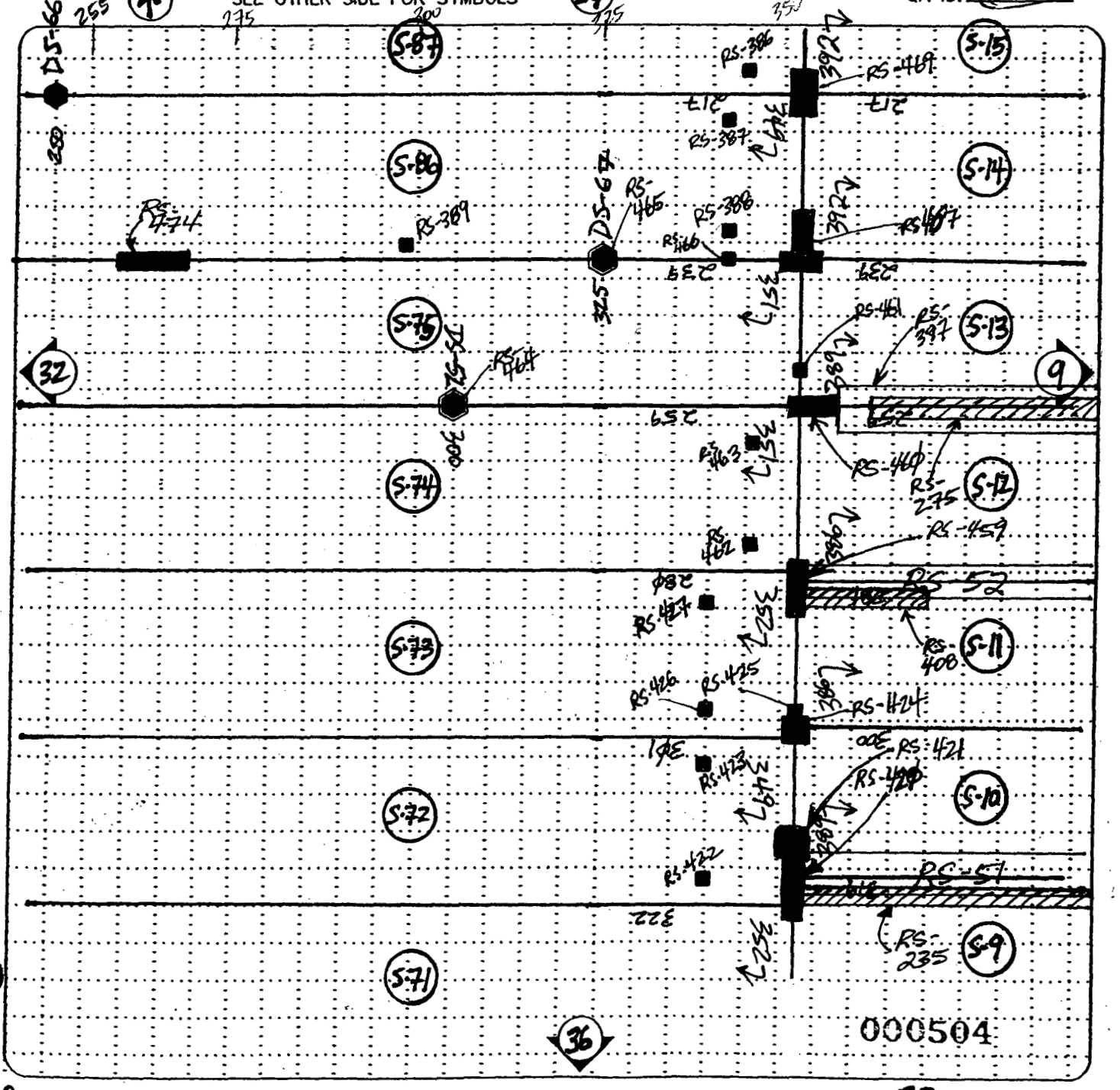
CONTRACTOR: ISTRE Co.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TDW



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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

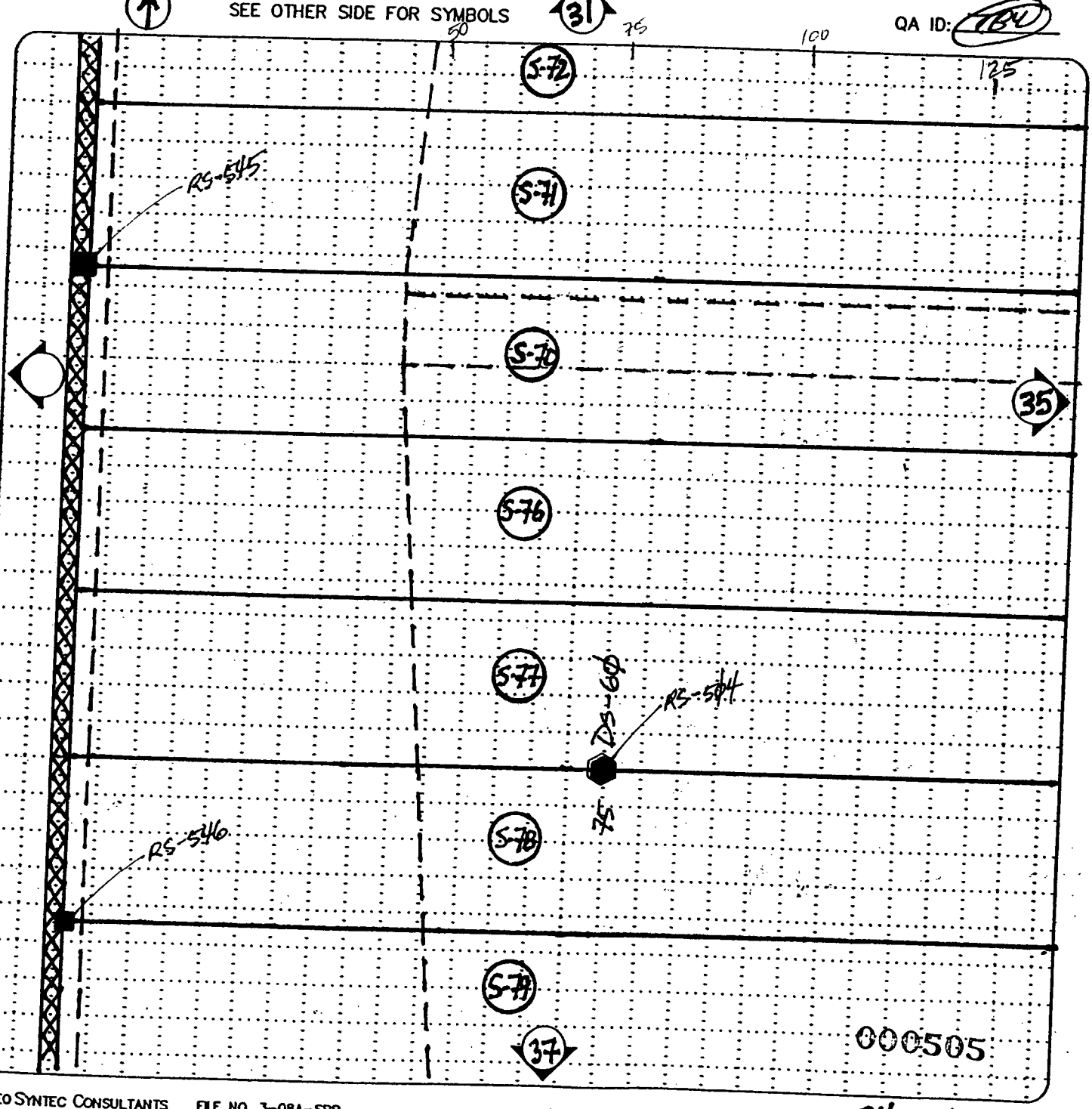
CONTRACTOR: ISTRE Co.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBD



000505

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: ___ day ___ month ___ year

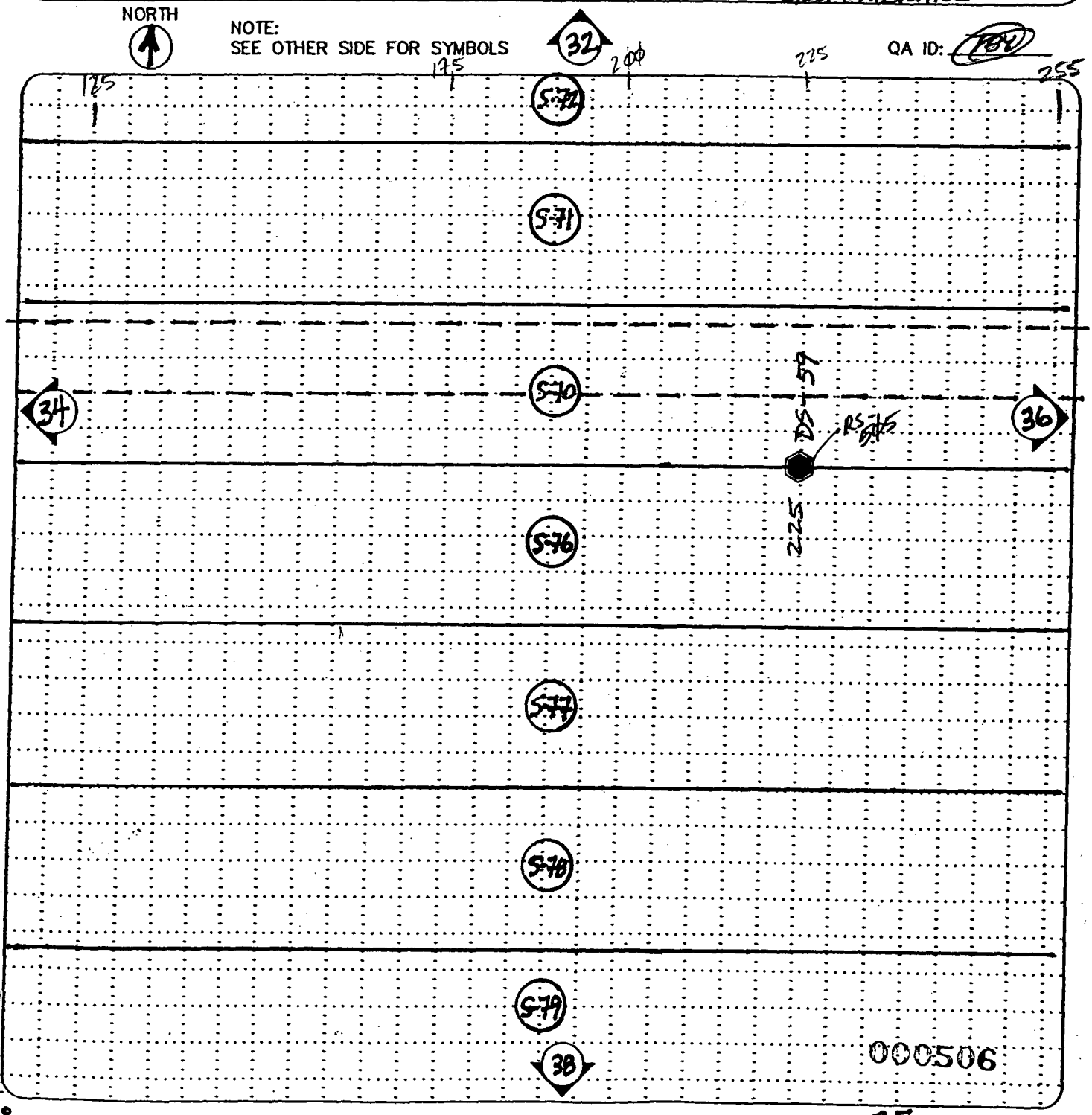
CONTRACTOR: ISTRE Co.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: 100



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GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: ___ day ___ month ___ year

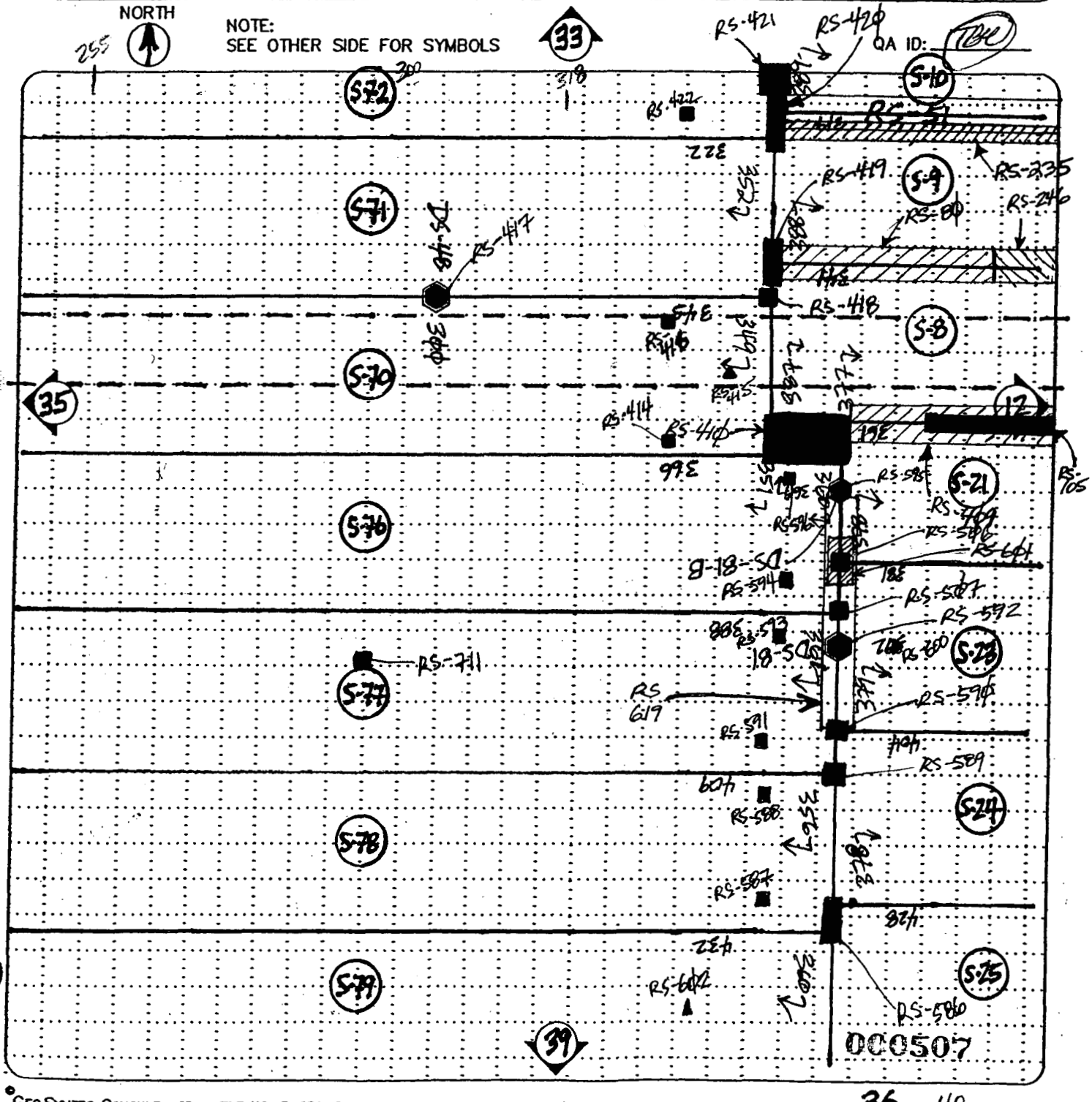
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBC



4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

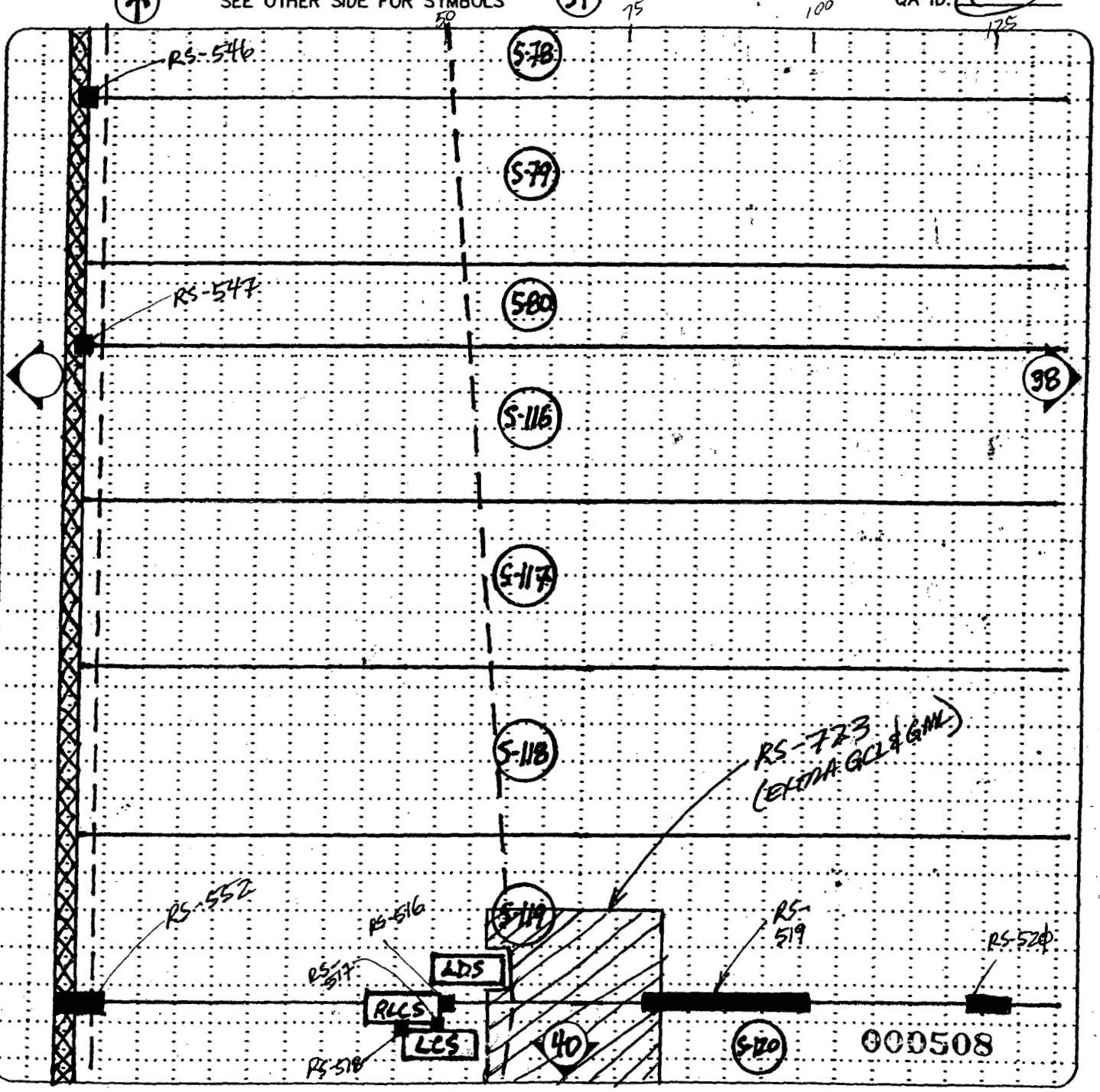
CONTRACTOR: ISTRE Co.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBL



000508

GEOSYNTEC CONSULTANTS FILE NO. 3-08A-SPR

SHEET NO. 37 of 48

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO

DESCRIPTION: PHASE IV, CELLS 4 & 5 PROJECT NO.: GQ1341 TASK NO.: 04.1

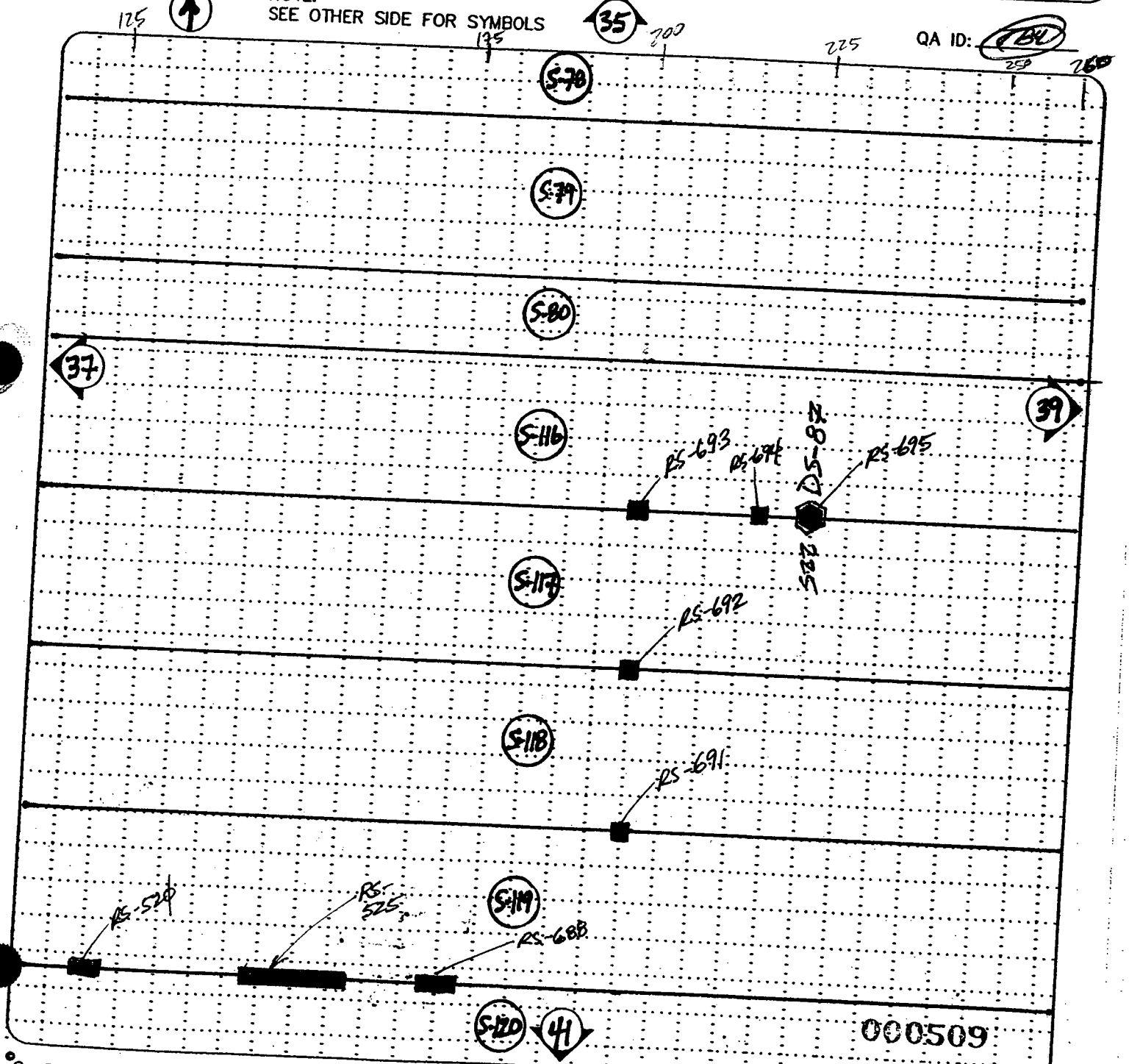
CONTRACTOR: ISTRE CO. DATE: — day — month — year

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBL



000509

GEO SYNTEC CONSULTANTS FILE NO. 3-08A-SPR

SHEET NO. 38 OF 48

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

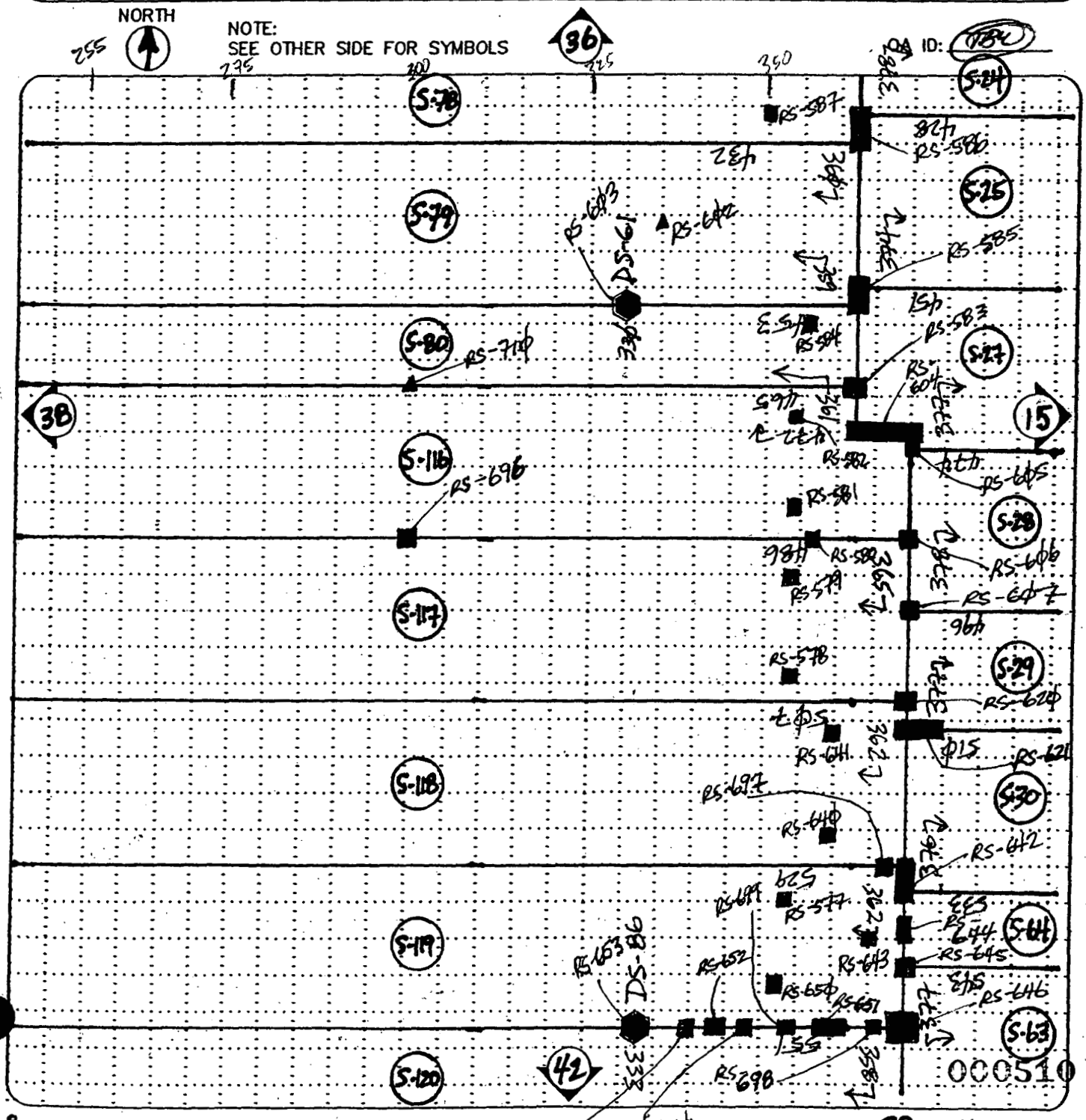
DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: ___ day ___ month ___ year

CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS



4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

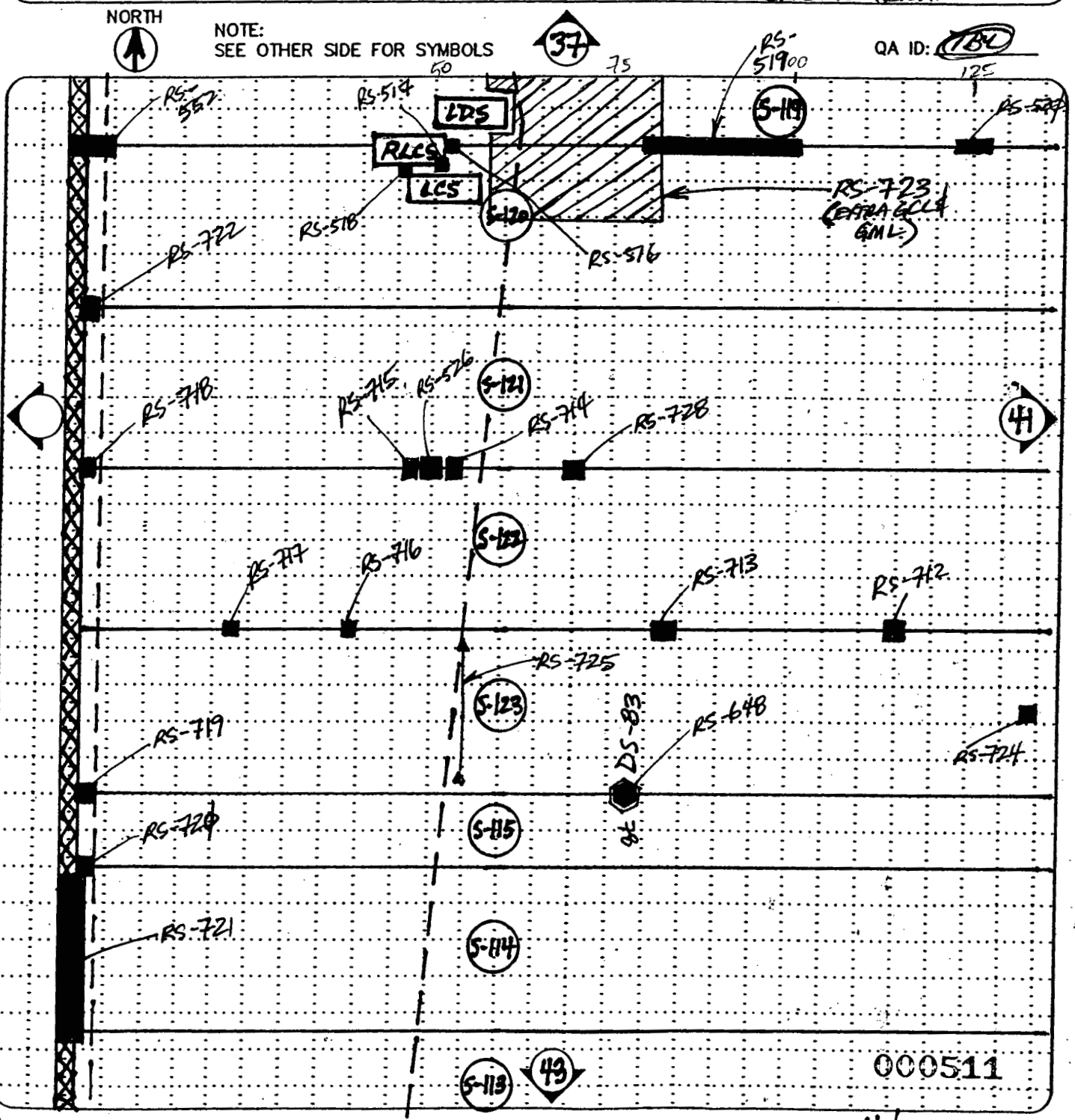
CONTRACTOR: ISTME CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBC



000511

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 041

DESCRIPTION: PHASE IV, CELLS 4&5 DATE: — day — month — year

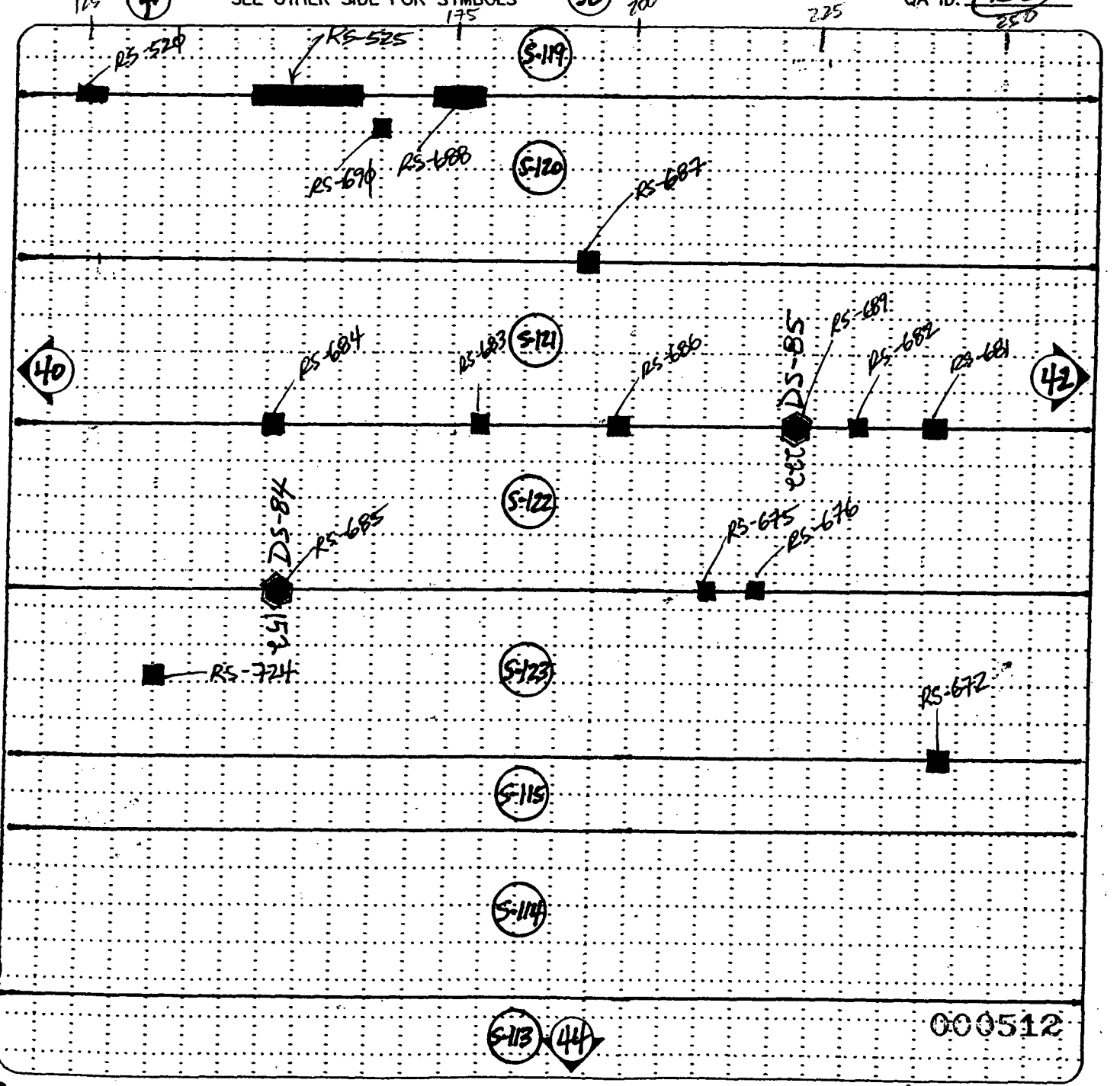
CONTRACTOR: ISTRE Co.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TRW



000512

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

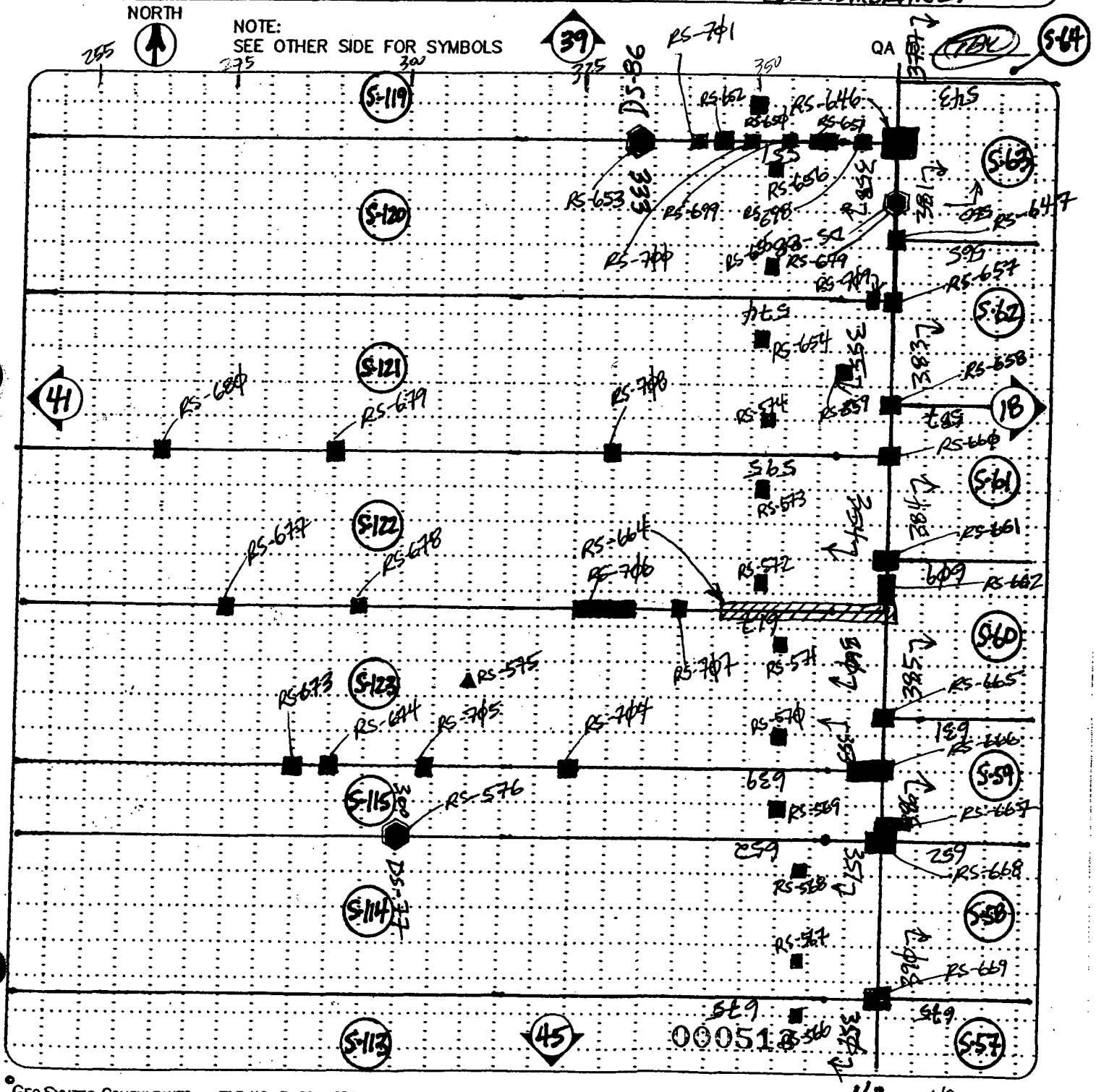
PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 041

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

CONTRACTOR: ISTNE Co.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE.



GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

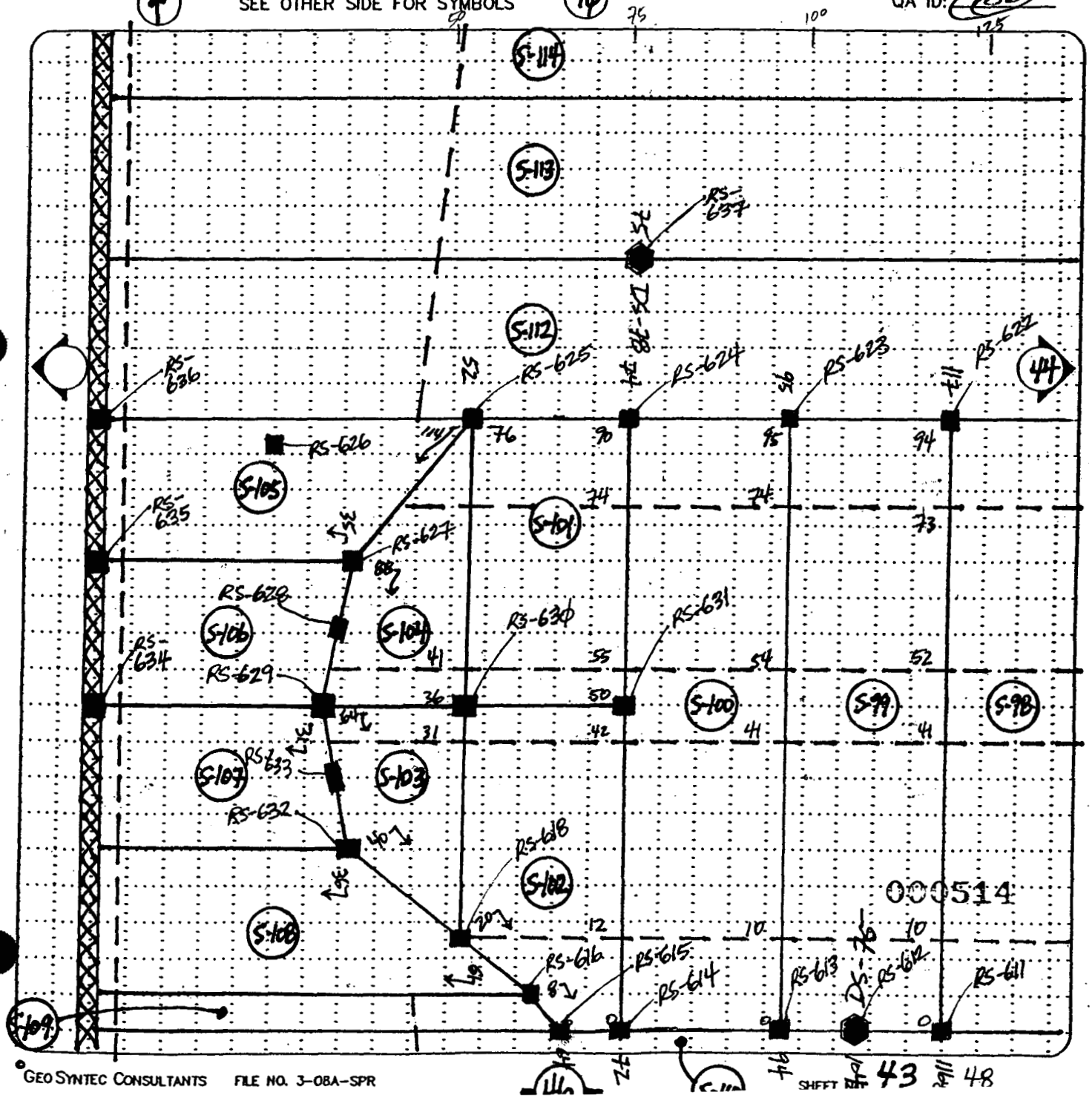
CONTRACTOR: ISTPE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBU



000514

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1344 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

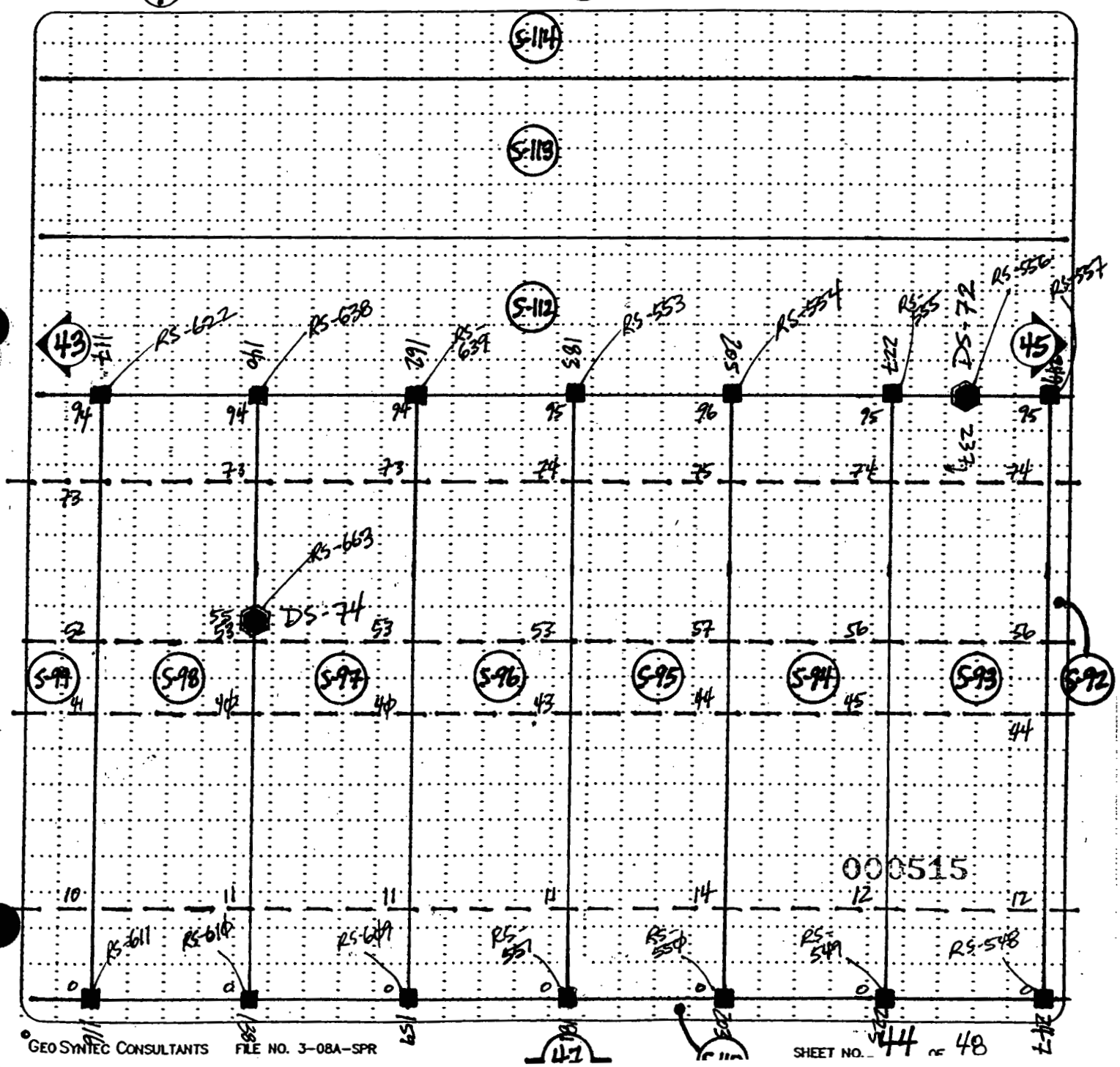
CONTRACTOR: ISTRE Co.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBD



4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

CONTRACTOR: ISTRE CO.

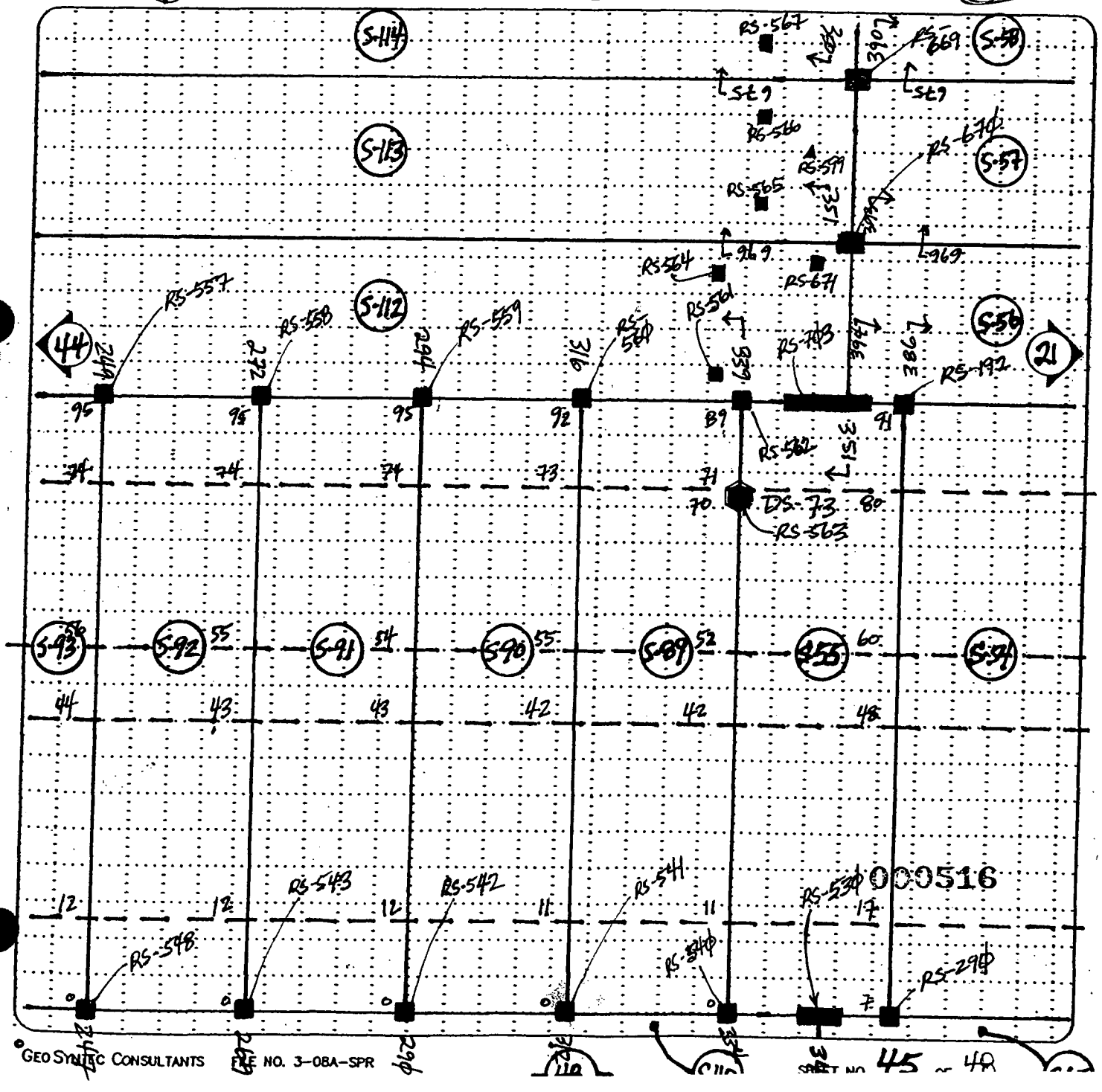
PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

42

QA ID: 180



000516

GEOSYNTEC CONSULTANTS FILE NO. 3-08A-SPR SHEET NO. 45 ~ 48

GEOSYNTEC CONSULTANTS

4943

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

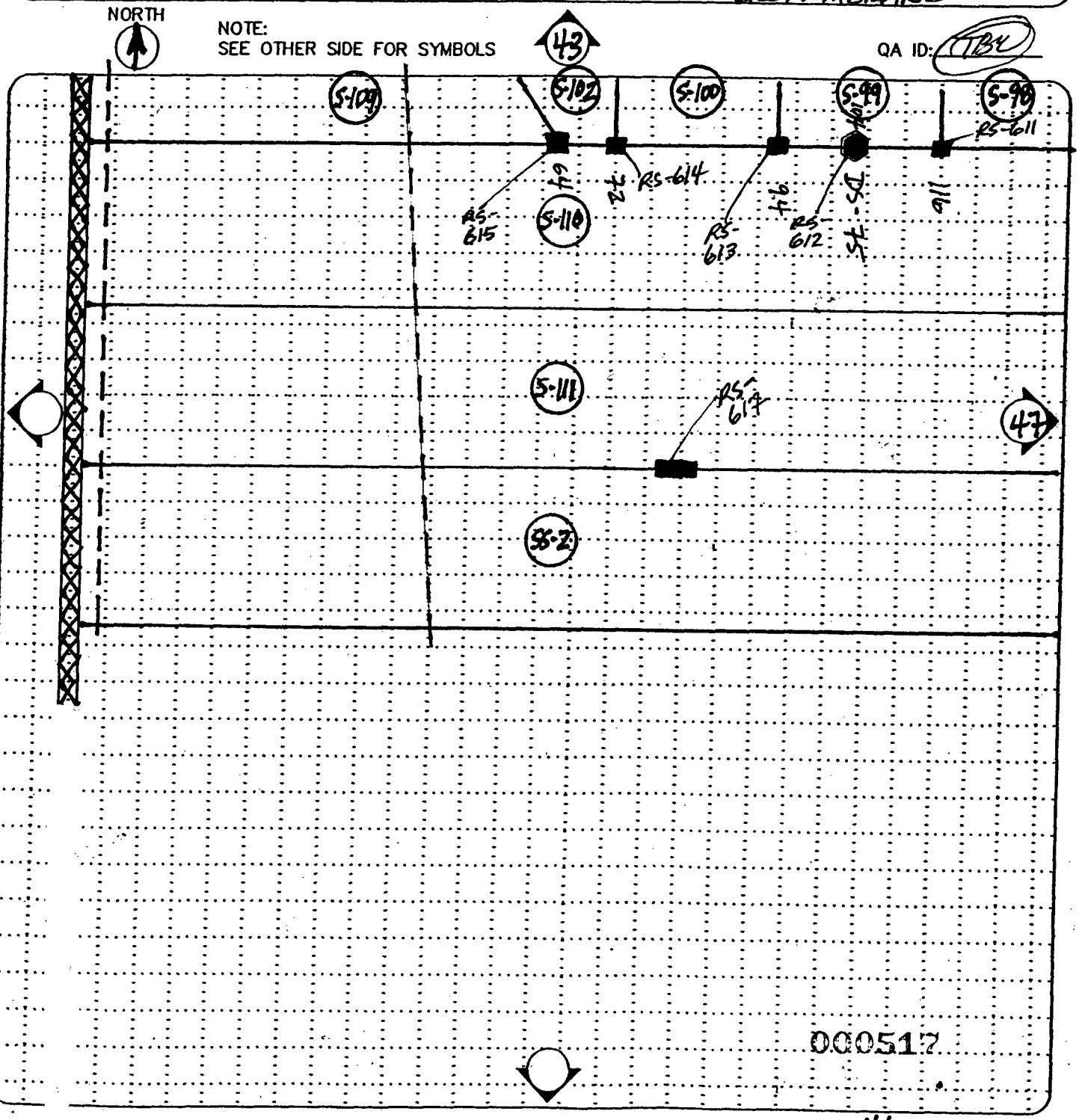
PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ134 TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: — day — month — year

CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE



000517

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

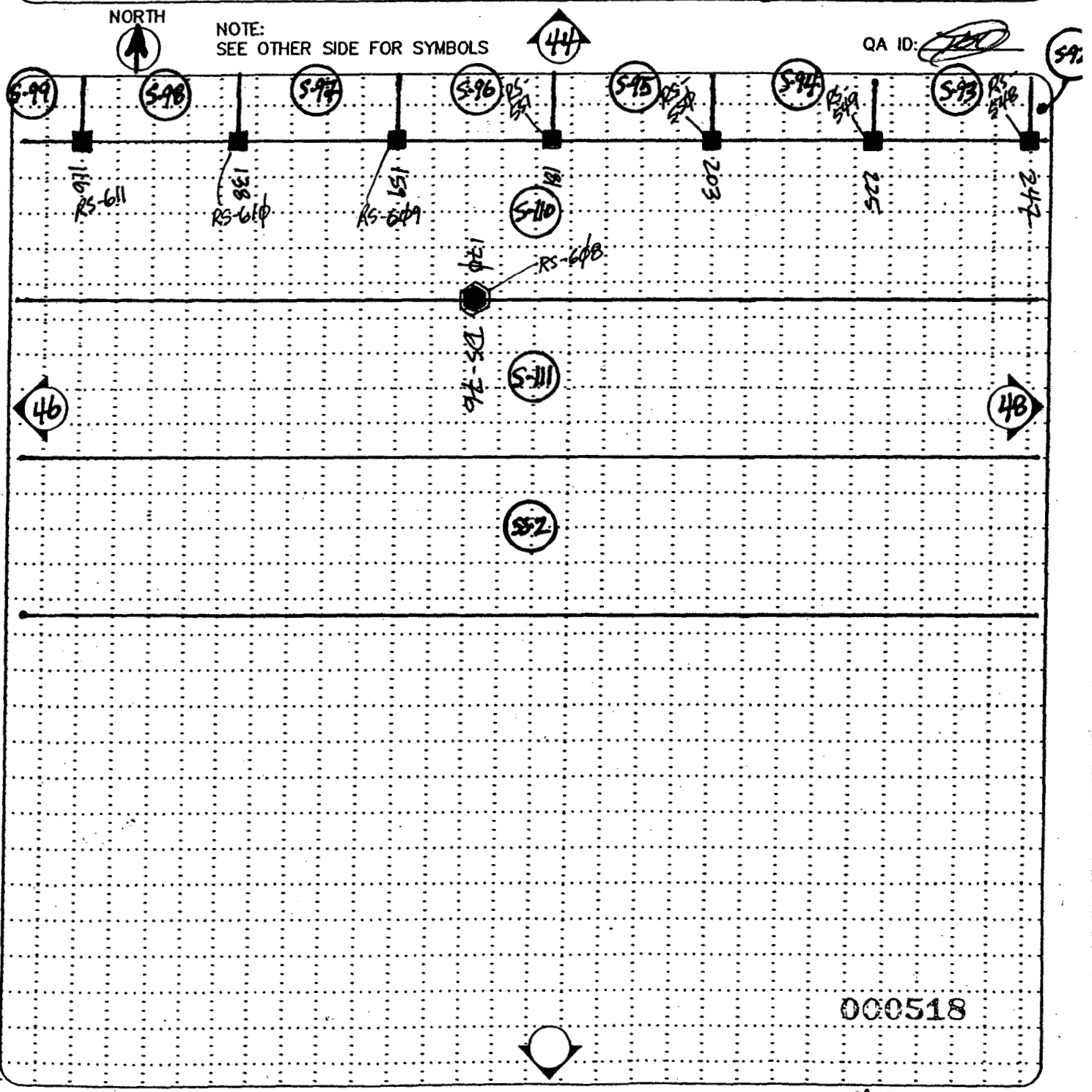
PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: 6013H TASK NO.: 04.1

DESCRIPTION: PHASE IV, CELLS 4&5 DATE: — day — month — year

CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE



000518

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GR1341 TASK NO.: 041

DESCRIPTION: PHASE IV, CELLS 4 & 5 DATE: ___ day ___ month ___ year

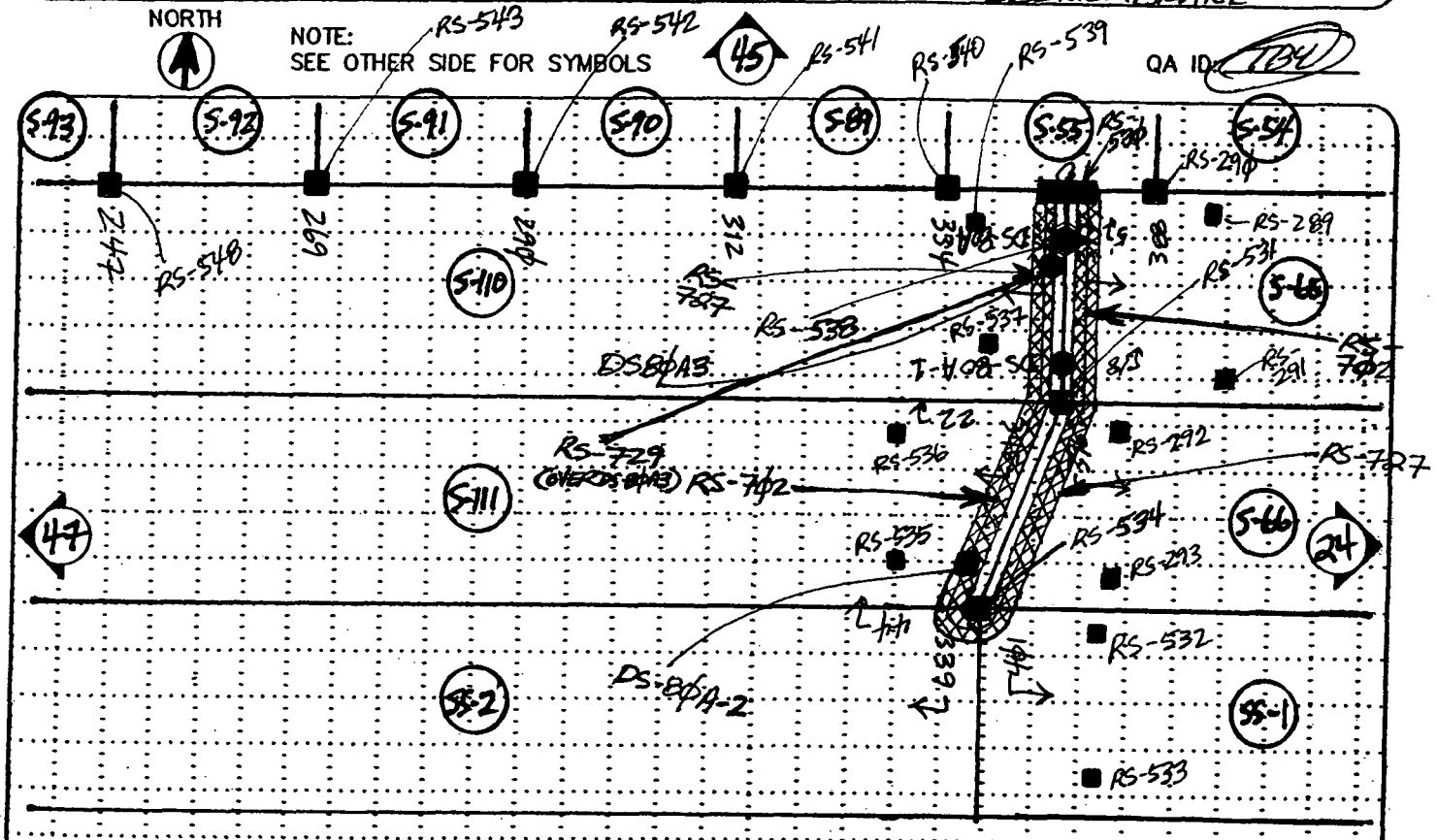
CONTRACTOR: ISTRE CO.

PRIMARY: ☐ SECONDARY: ■ OTHER: ☐ PRODUCT TYPE: 80-MIL TEXTURED HDPE GEOMEMBRANE

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: TBU



000519

Primary

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 041

DESCRIPTION: Phase IV Cell #4 & #5 DATE: — day — month — year

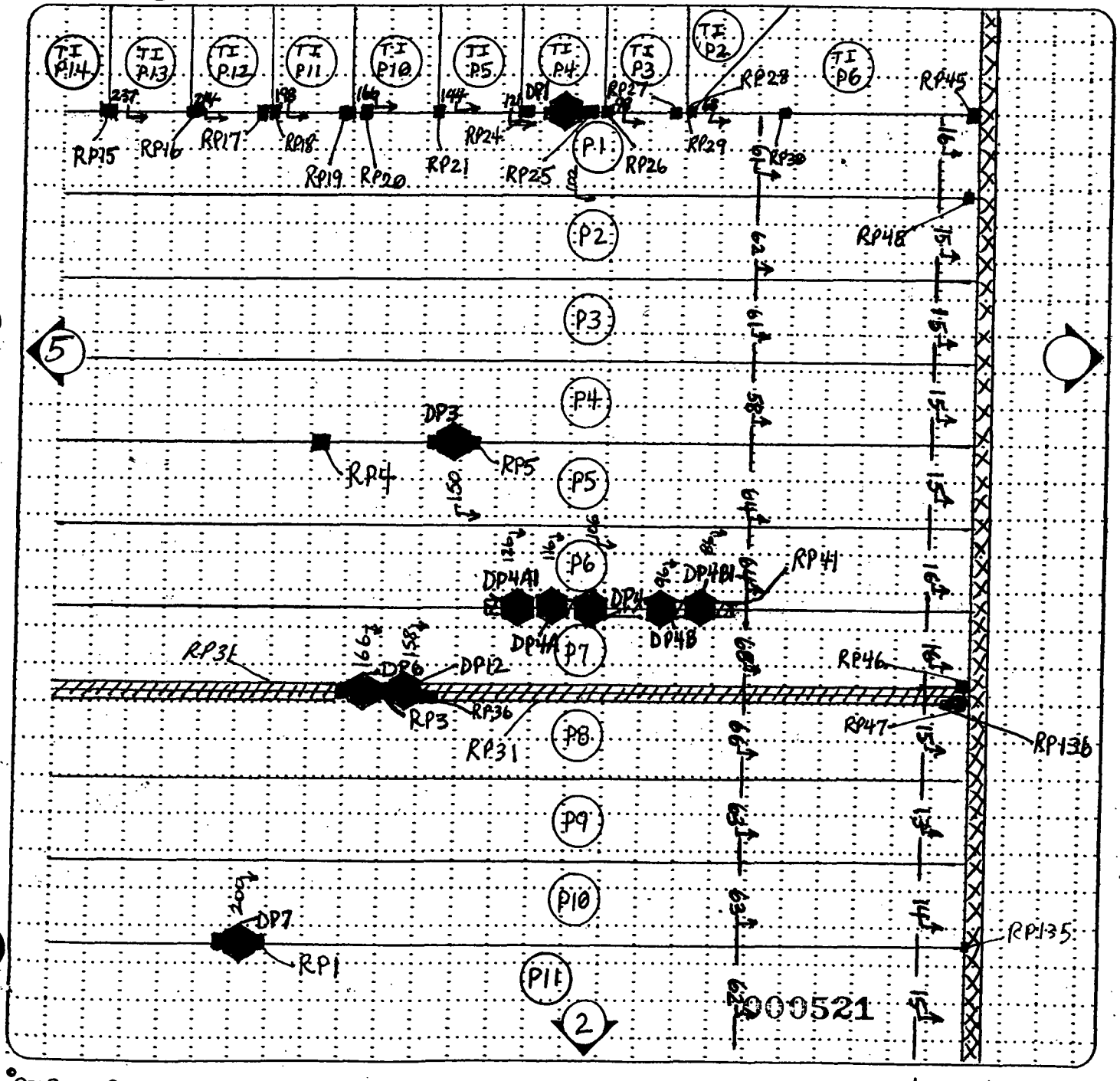
CONTRACTOR: ISTRE Co.

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ PRODUCT TYPE: 80mil Textured HDPE Geomembrane

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: CHW



GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 DATE: — day — month — year

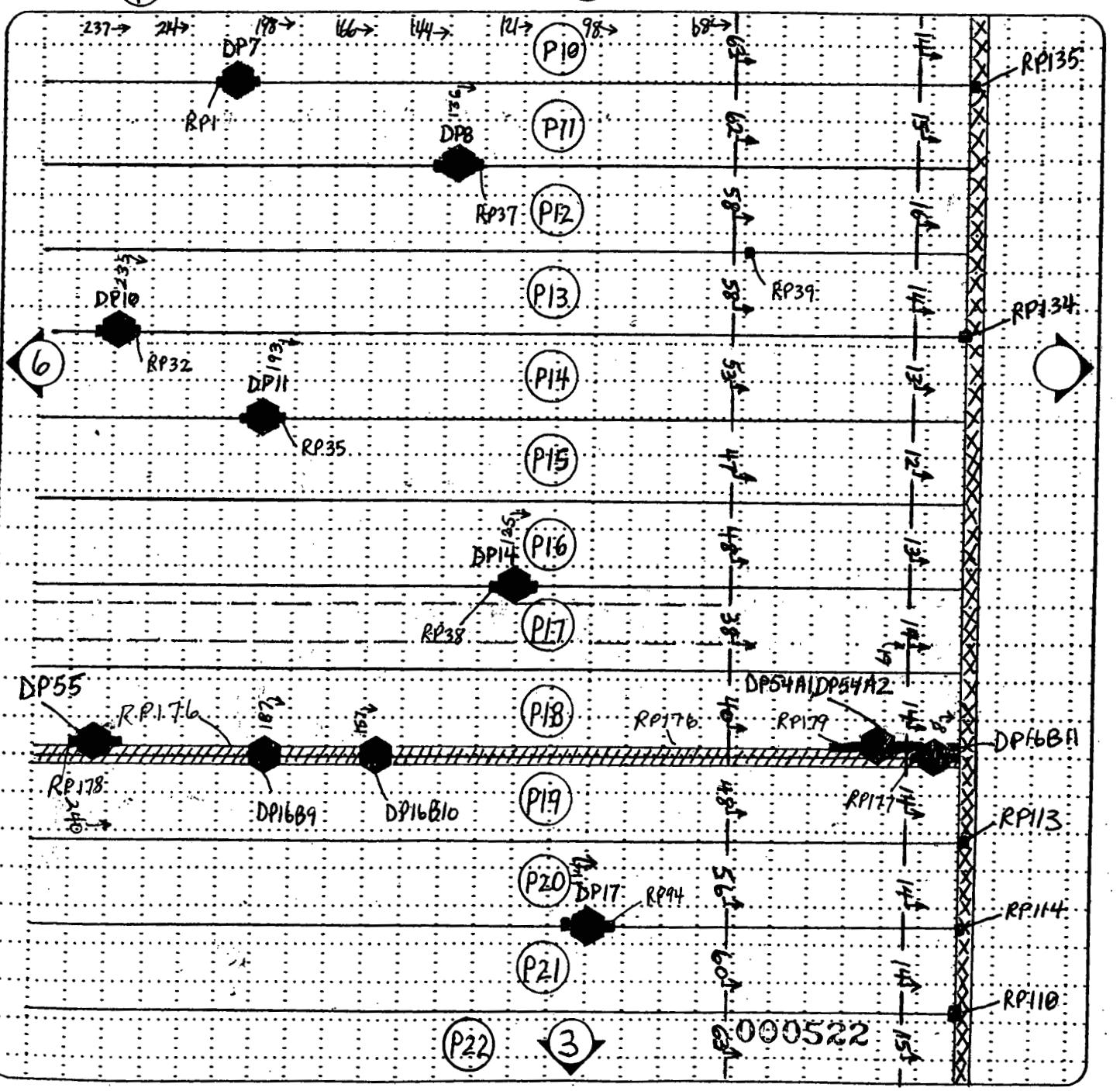
CONTRACTOR: ISTRE Co.

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ PRODUCT TYPE: 80mil Textured HDPE Geomembrane

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: CHW



4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 DATE: ___ day ___ month ___ year

CONTRACTOR: ISTRE Co.

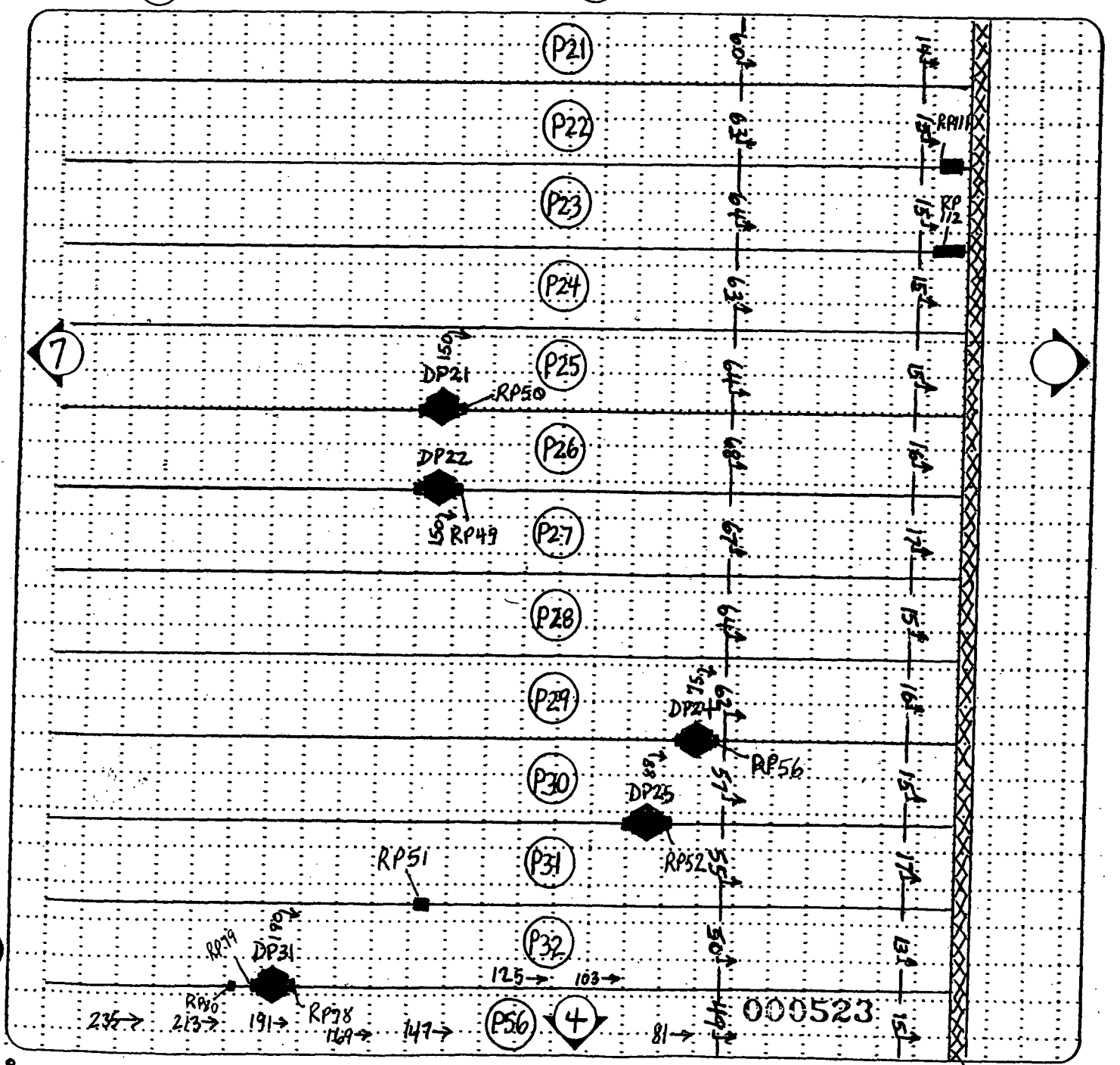
PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ PRODUCT TYPE: 80mil Textured HDPE Geomembrane

NORTH (1)

NOTE:
SEE OTHER SIDE FOR SYMBOLS

(2)

QA ID: GHW



GEOSYNTEC CONSULTANTS FILE NO. 3-08A-SPR

SHEET NO. 3 OF 12

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 DATE: — day — month — year

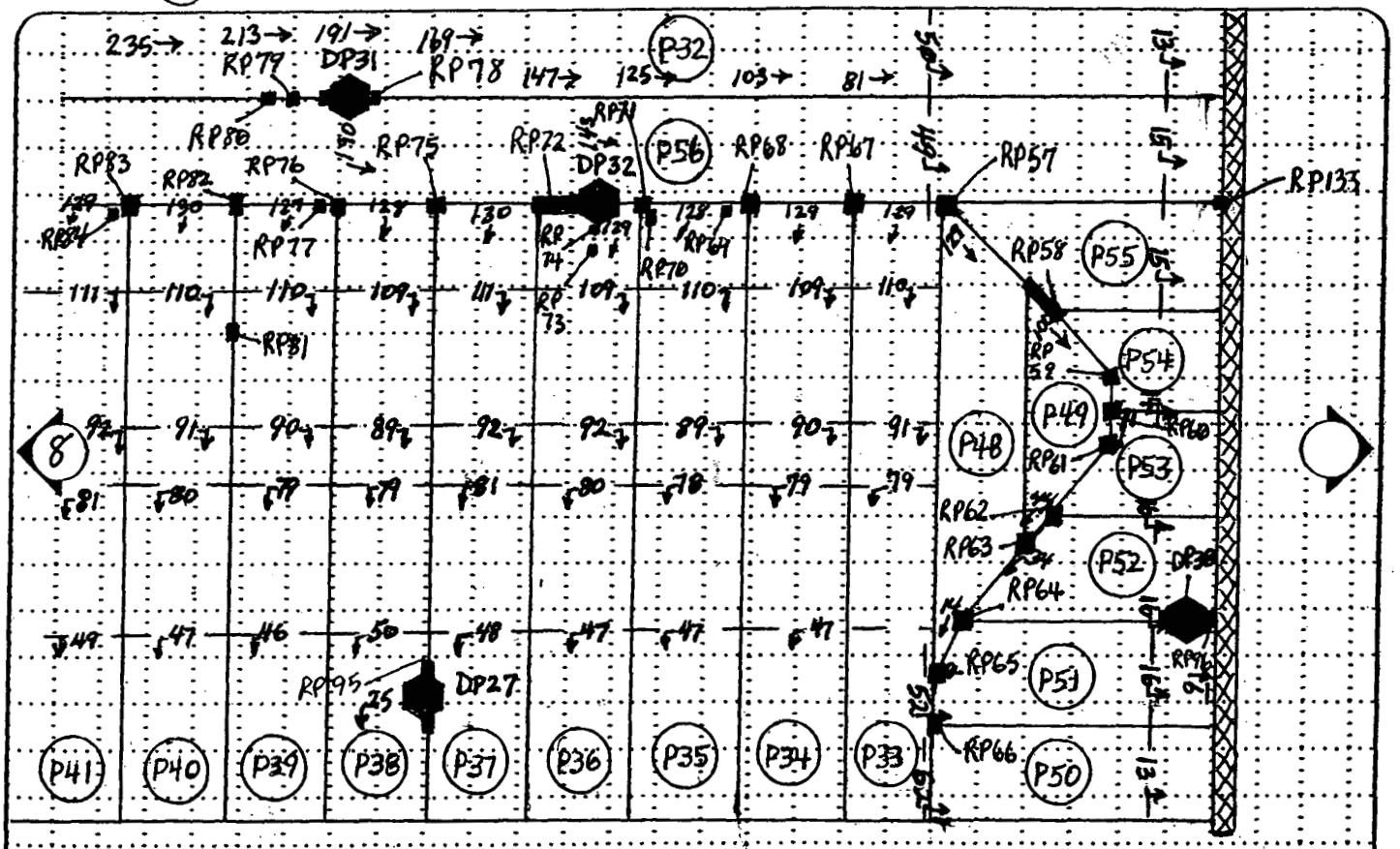
CONTRACTOR: ISTRE Co.

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ PRODUCT TYPE: 80mil Textured HDPE Geomembrane

NORTH (1)

NOTE:
SEE OTHER SIDE FOR SYMBOLS (3)

QA ID: CHW



000524

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 041

DESCRIPTION: Phase III Cell #4 & #5 DATE: — day — month — year

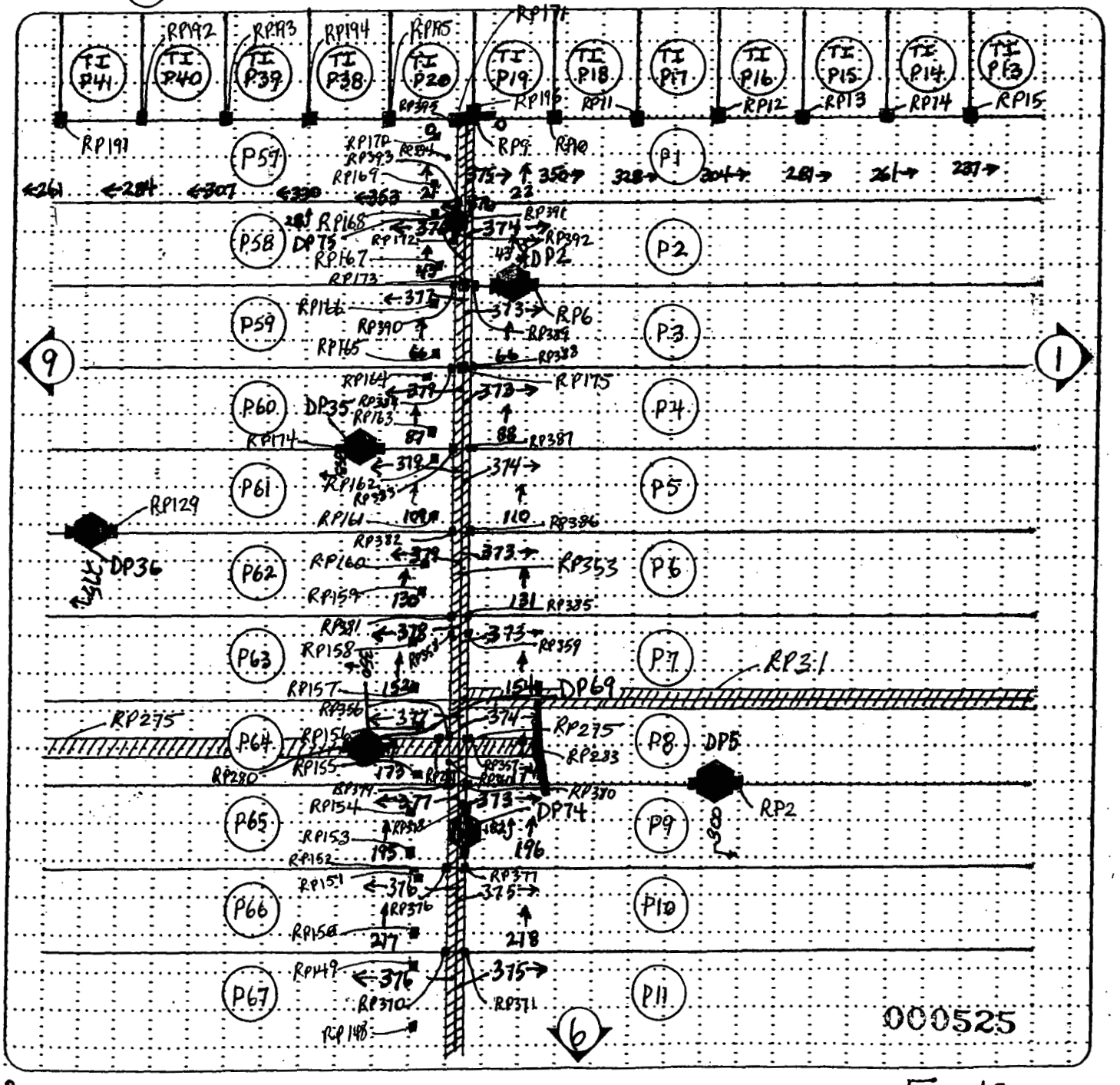
CONTRACTOR: ISTRE Co.

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ PRODUCT TYPE: 80 mil Textured HDPE Geomembrane

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: CHW



4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 DATE: — day — month — year

CONTRACTOR: ISTRE Co.

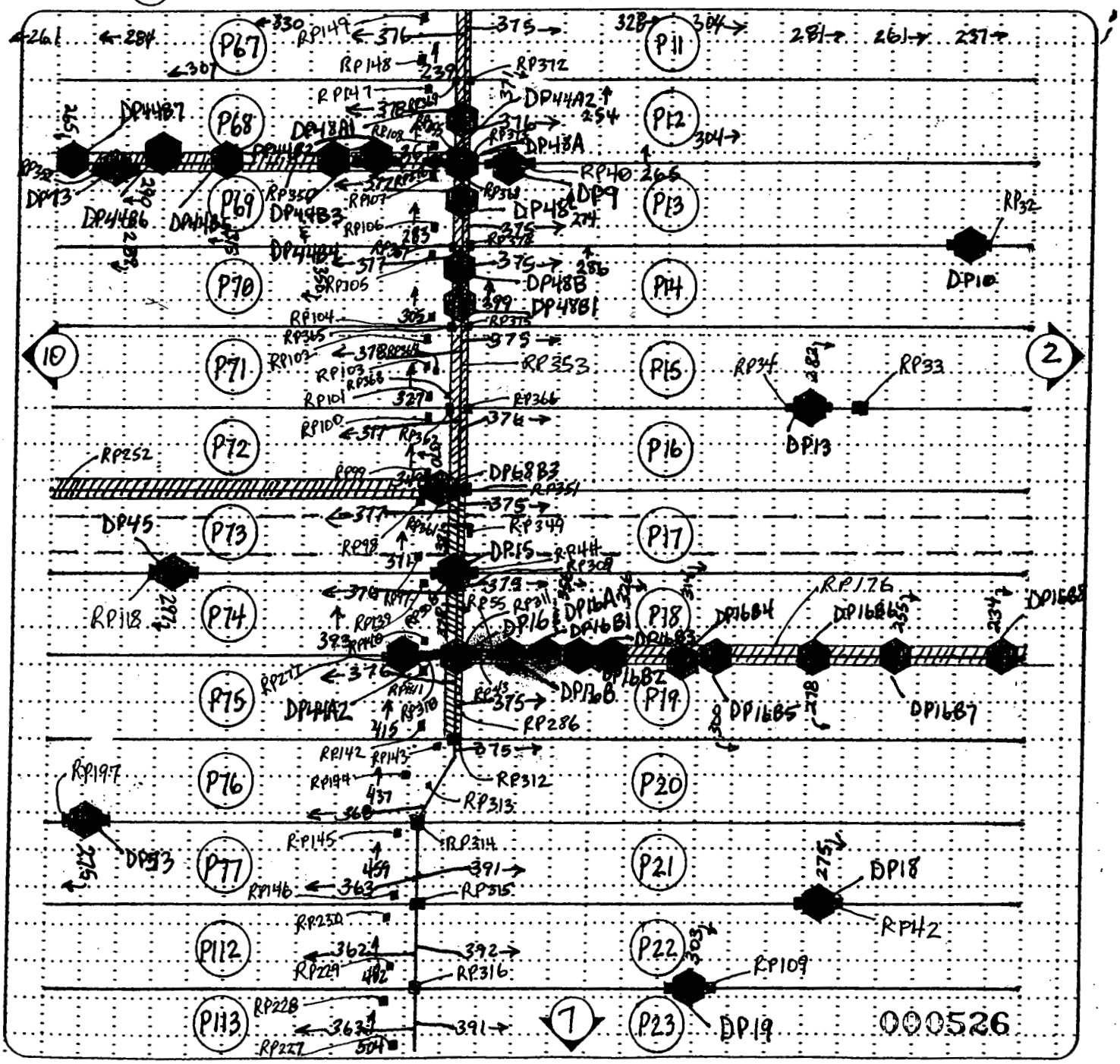
PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ PRODUCT TYPE: 80 mil Textured HDPE Geomembrane

NORTH (1)

NOTE:
SEE OTHER SIDE FOR SYMBOLS

(5)

QA ID: CHW



4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 DATE: — day — month — year

CONTRACTOR: ISTRE

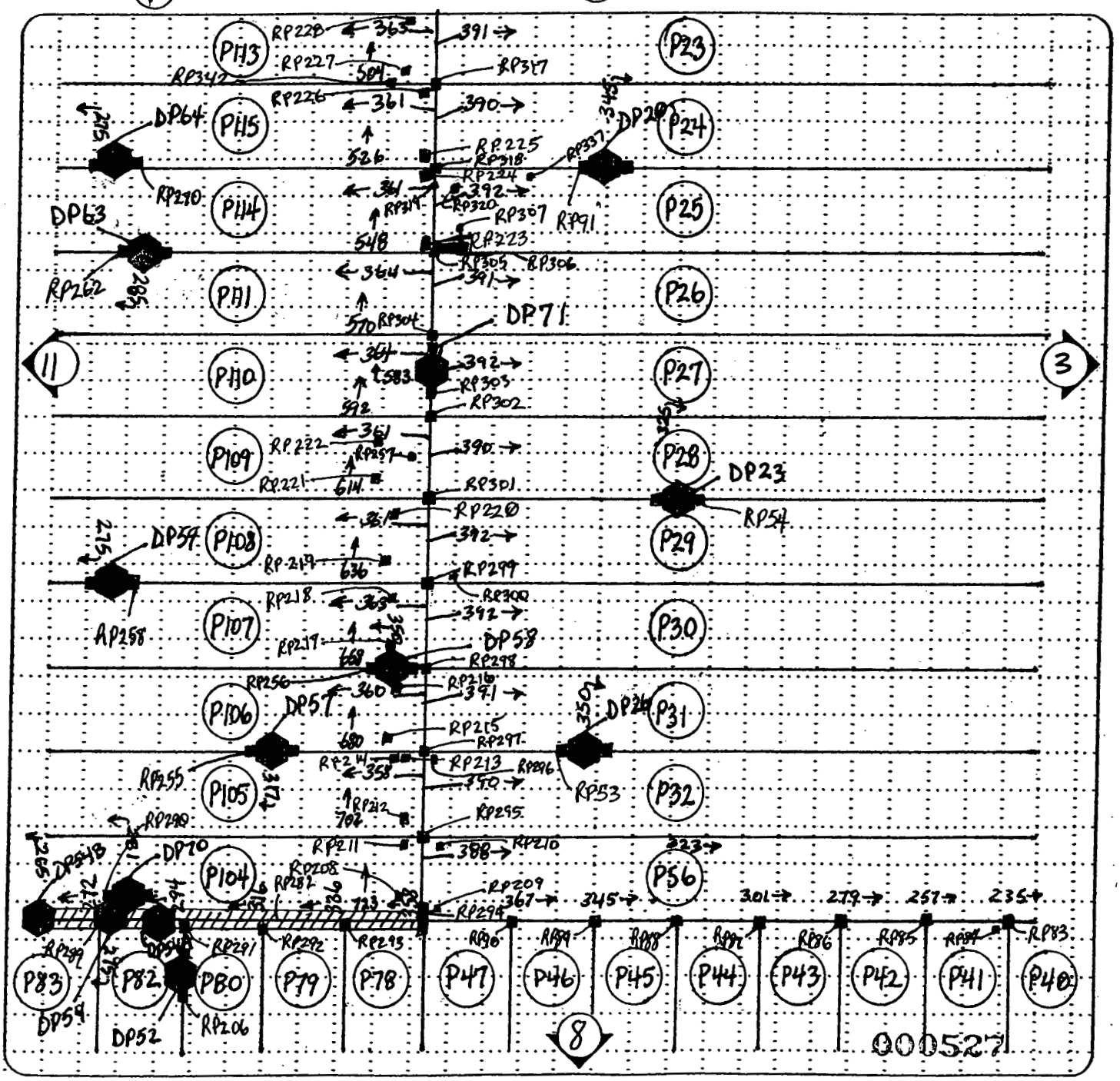
PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ PRODUCT TYPE: 80 mil Textured HDPE Geomembrane

NORTH (1)

NOTE:
SEE OTHER SIDE FOR SYMBOLS

(6)

QA ID: CHW



000527

GEOSYNTEC CONSULTANTS FILE NO. 3-08A-SPR

SHEET NO. 7 OF 12

4943

GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 DATE: — day — month — year

CONTRACTOR: ISTRE Co.

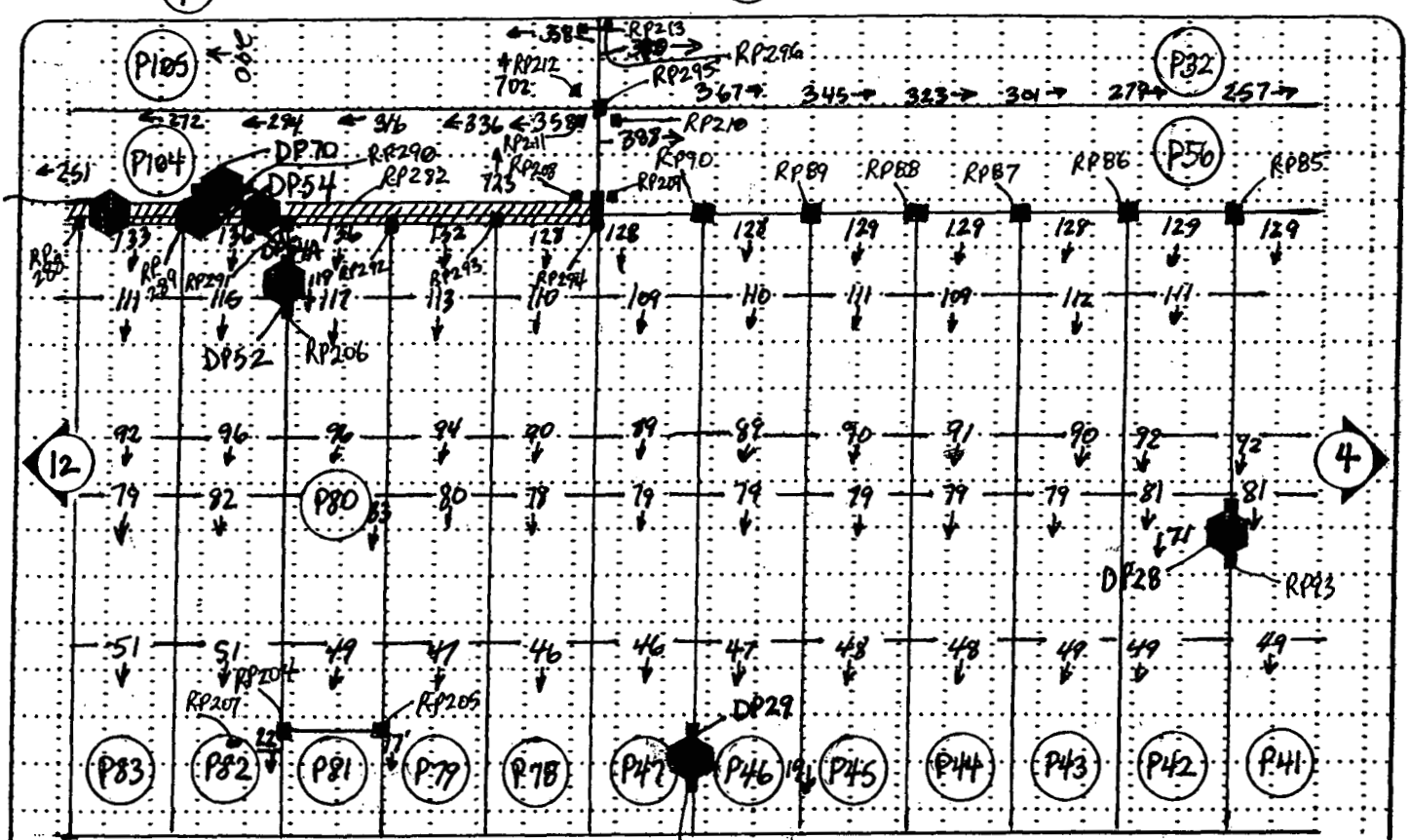
PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ PRODUCT TYPE: 80 mil Textured HDPE Geomembrane

NORTH (1)

NOTE:
SEE OTHER SIDE FOR SYMBOLS

(7)

QA ID: CHW



000528

GEOSYNTEC CONSULTANTS

4943
FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase III Cell #4 & #5 DATE: — day — month — year

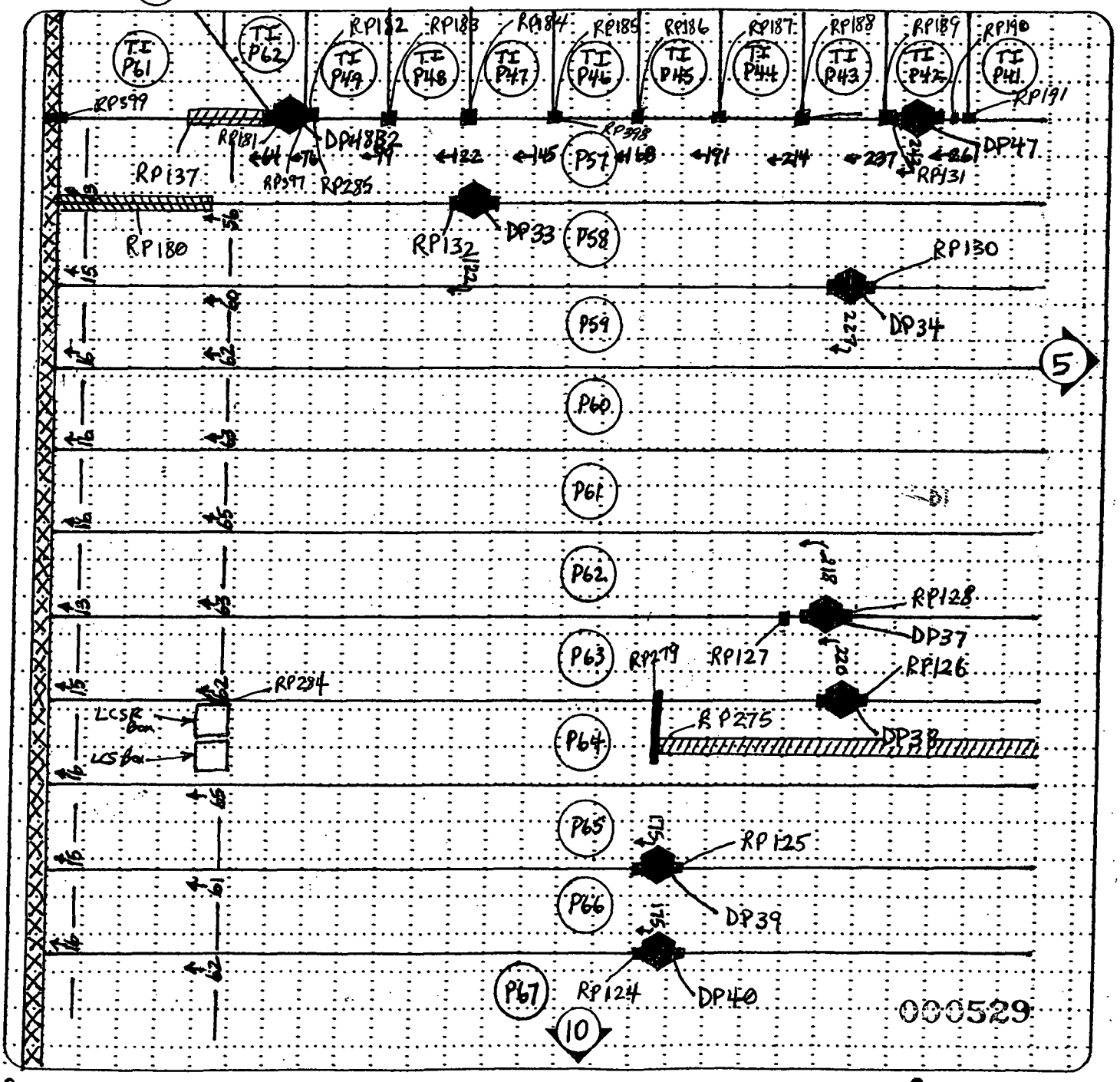
CONTRACTOR: ISTRE Co.

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ PRODUCT TYPE: 80 mil Textured HDPE Geomembrane

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: CHW



GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 DATE: — day — month — year

CONTRACTOR: ISTRE CO.

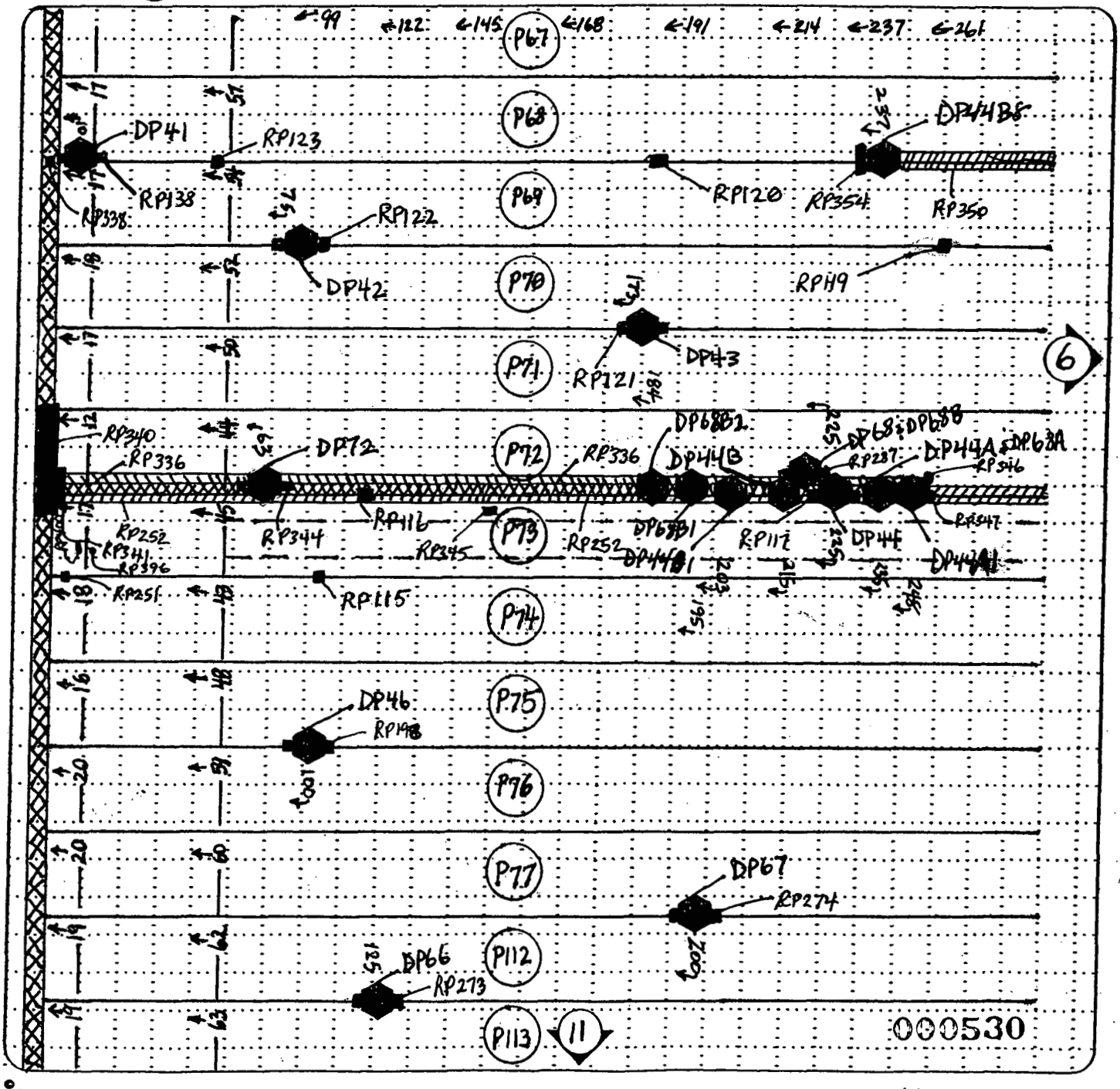
PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ PRODUCT TYPE: 80 mil Textured HDPE Geomembrane

NORTH (1)

NOTE:
SEE OTHER SIDE FOR SYMBOLS

(9)

QA ID: CHW



GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 041

DESCRIPTION: Phase IV Cell #4 & #5 DATE: — day — month — year

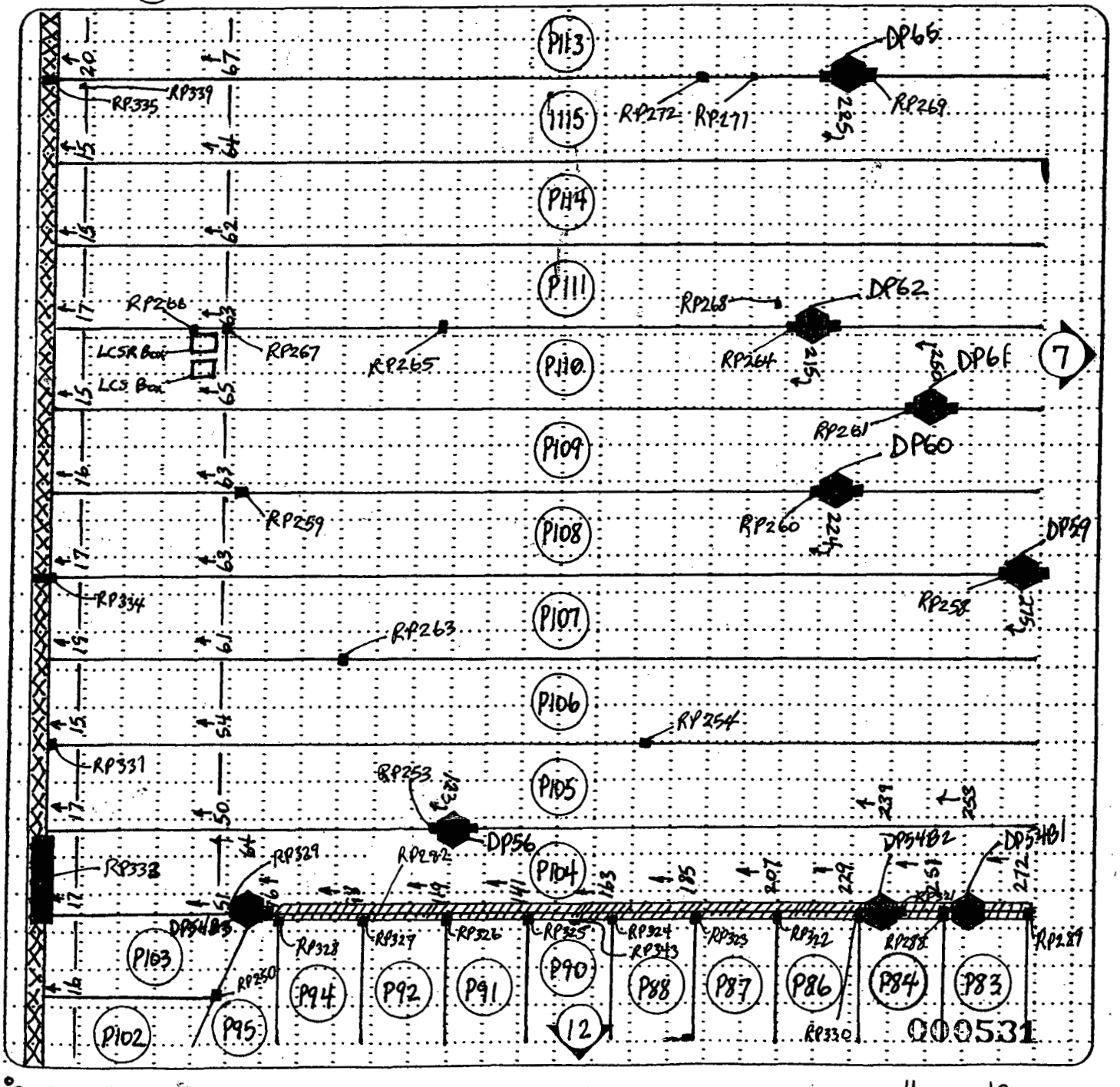
CONTRACTOR: ISTRE CO.

PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ PRODUCT TYPE: 80 mil Textured HDPE Geomembrane

NORTH

NOTE:
SEE OTHER SIDE FOR SYMBOLS

QA ID: CHW



GEOSYNTEC CONSULTANTS

FLUOR FERNALD, INC.

SEAM AND PANEL REPAIR LOCATION LOG

PROJECT: ON-SITE DISPOSAL FACILITY (OSDF)

LOCATION: FERNALD, OHIO PROJECT NO.: GQ1341 TASK NO.: 04.1

DESCRIPTION: Phase IV Cell #4 & #5 DATE: 2 — day — month — year

CONTRACTOR: ISTRE CO.

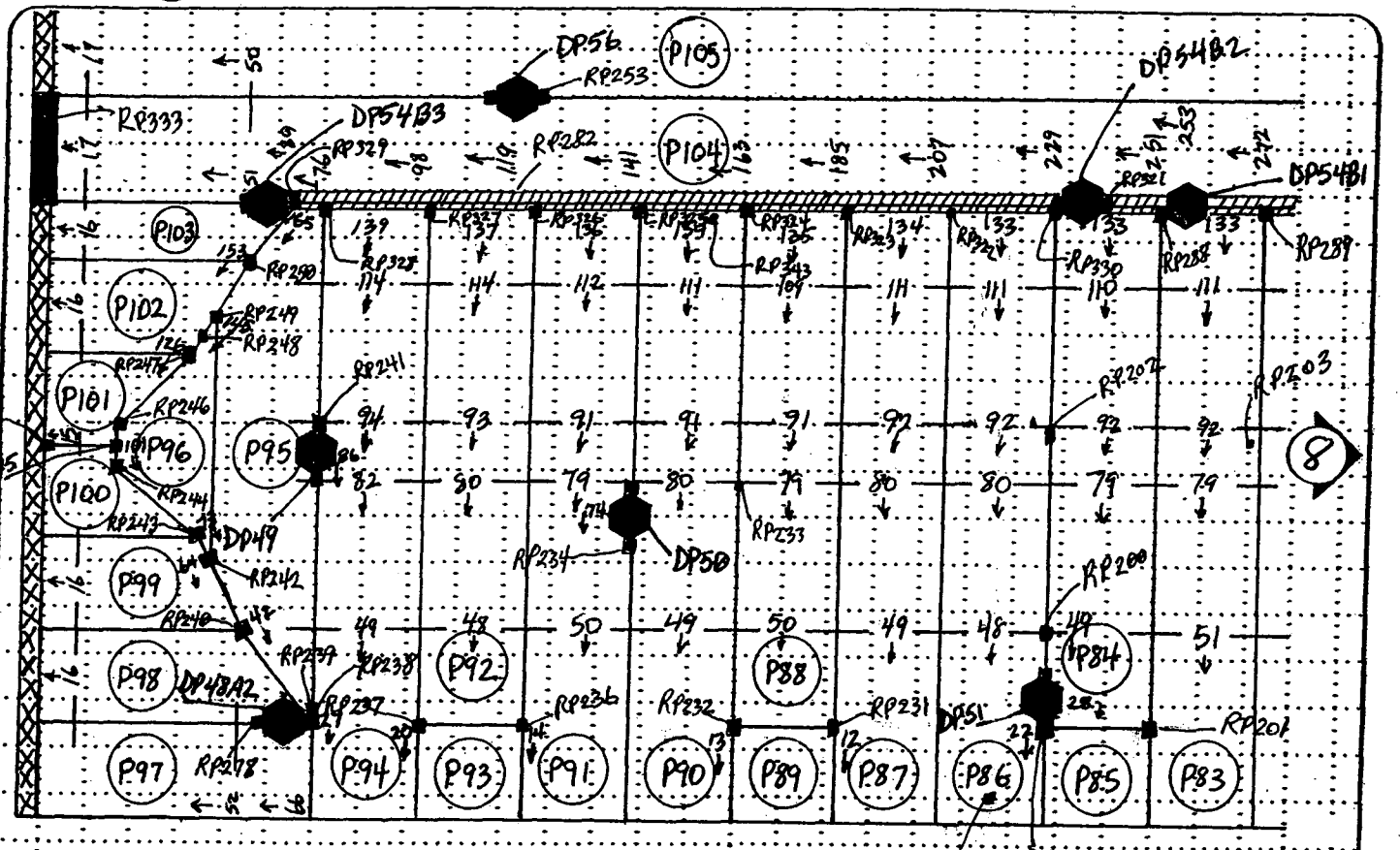
PRIMARY: ■ SECONDARY: ☐ OTHER: ☐ PRODUCT TYPE: 80 mil Textured HDPE Geomembrane

NORTH (1)

NOTE:
SEE OTHER SIDE FOR SYMBOLS

(11)

QA ID: CHW



000532

APPENDIX P

Electrical Leak Detection Test Report

SUPPLIER DOCUMENT SUBMITTAL

FDF PROJECT NO.: 20104	CONTRACT NO: PHIV	SUBMITTAL NO. 20104-PHIV-02770-011	REV: 01	Date: 12/09/02	Page 1 of 7

FROM:
Leak Location Services, Inc.
16124 University Oak
San Antonio, Texas 78249
SIGNATURE: Daren Laine — Daren L. Laine

TO: FDF ENGINEERING/CONSTRUCTION DOCUMENT CONTROL (ECDC), MS 52-7
RECEIVED BY: Teresa Schwab DATE: 12/10/02

			DOCUMENT FAMILY									SUBMITTAL TYPE				SUBMITTAL ACTION		
QTY	DOCUMENT NUMBER	REV	PRO	H&S	MED	TRG	CON	ENG	QAC	OPER	TITLE/DESCRIPTION	DRFT	CFC	INF	ASSOCIATED SPECIFICATION	A	B	C
7	PHIV-02770-011	1						X			Electrical Leak Detection Testing Report		X		02770-1.04 H	X		

REVIEW DISTRIBUTION

NAME	MS	NAME	MS	NAME	MS
Document Control					
Chuck VanAlstine (Approver)	64				
Gregg Johnson	64				
Kwasi Badu-Twenenboah (GEOSYNTEC)	38				
Bill Zebick	64				
Mike Godber	64				
Don Pfister (DOE)	45				

NO COMMENTS: ✓ COMMENTS: (PLEASE USE SPACE BELOW FOR COMMENTS OR INDICATE IF ATTACHMENTS)

000534

RECEIVED BY: Chuck VanAlstine DATE: 12/13/02
(SIGN/DATE AND RETURN A COPY TO ECDC, MS 52-7)

SUBMITTAL TYPE: (BY SUPPLIER)
CFC - CERTIFIED FOR CONSTRUCTION
INF - INFORMATION/RECORD
DRFT - DRAFT/PRELIMINARY

SUBMITTAL ACTION CODE: (BY FDF)
A - Conforms to the Subcontract Requirements
B - Minor Comments - Incorporate and Resubmit
C - Revise and Resubmit (SEE COMMENTS)

ORIGINAL

4943

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Rev. 3: 05/14/1999, CT-2.4.2

LEAK LOCATION SERVICES, INC.

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December 9, 2002

Mr. Chuck Van Arsdale
Fluor Fernald, Inc.
P. O. Box 538704
Cincinnati, OH 45253-8704

Fax: (513) 648-4528

Subject: Revision 1 Final Report for "Leak Location Survey of the DOE On-Site Disposal Facility Landfill Cells 4 and 5 Primary HDPE Liner Located Near Hamilton, Ohio";
LLSI Project No. 210A
FDF Project No. 20104

INFORMATION ONLY

Dear Mr. Van Arsdale:

Leak Location Services, Inc. conducted an electrical leak location survey of the On-Site Disposal Facility (OSDF) landfill cells 4 and 5 primary HDPE liner located at the DOE facility near Hamilton, Ohio. These newly constructed landfill cells are approximately 7 acres each and are double-composite lined with an 80-mil textured HDPE geomembrane liner and a geosynthetic clay liner (GCL). The electrical leak detection testing was performed on the primary bare geomembrane prior to placement of the geotextile cushion and subsequent upper protective soil layers. This report describes the results of the final leak location survey conducted on approximately 650,000 sq. ft of the bare primary liner.

I. SURVEY RESULTS

A. First Survey

On September 24, 2002 through September 28, 2002 Martin Morales and Herman Flores of Leak Location Services, Inc. conducted an electrical leak location survey of the eastern-half of the On-Site Disposal Facility (OSDF) landfill cells 4 and 5 primary HDPE liner.

No leaks were located in the eastern-half of landfill cells 4 and 5 primary HDPE geomembrane liner. Figure 1 shows the area that was surveyed by the LLSI field crew during this first survey.

[X] A-Conforms to the Subcontract Requirements
[ ] B-Minor Comment - Incorporate and Resubmit
[ ] C-Revise and Resubmit
Sig: _____ Date: 12/13/02

B. Second Survey

On October 09, 2002, Herman Flores of Leak Location Services, Inc. conducted an electrical leak location survey of the areas that had not been tested in the eastern-half of cells 4 and 5 during the first survey. In addition, a small area was retested because the destructive seam test failed to pass. Therefore, a cap strip of the failed seam was tested.

No leaks were located in the areas that had not been previously tested in the eastern-half or of cell 5 along the cap strip. Figure 1 shows the area that was tested by the LLSI field personnel during the second survey.

C. Third Survey

On October 18, 2002 through October 24, 2002 Martin Morales and Herman Flores of Leak Location Services, Inc. conducted an electrical leak location survey of the western-half of the On-Site Disposal Facility (OSDF) landfill cells 4 and 5 primary HDPE liner.

Sixteen leaks were located in the western-half of landfill cells 4 and 5 primary HDPE geomembrane liner. Figure 1 shows the area that was surveyed by the LLSI field crew and the location of the leaks. The cell midpoint was overlapped by approximately 15 feet. Table 1 lists the locations and descriptions of the leaks. Leak number 3 was marked for repair by the CQA consultant. However, the repair of leak number 3 was not completed prior to conducting the leak location survey. Leak number 5 through leak number 16 were located on the western half of cell 4 along the tie-in seam of cell 3. This area was tested at the request of Fluor Fernald, Inc. prior to the completion of the nondestructive vacuum box testing of the welded seam and the certification by the third-party QA engineer. LLSI survey personnel retested the leaks that were repaired to verify that there were no additional leaks present near the repairs.

II. CALIBRATION OF EQUIPMENT

The leak location survey equipment was tested for proper operation and functionality at the beginning and end of each day and the equipment operation was routinely tested during the course of the work day. This test consisted of passing the squeegee sensor over a known hole in the primary liner to test operation and functionality of the equipment. In addition, a second test was performed to check the calibration of the equipment by placing a 0.0625 inch-diameter hole on a test pad placed on earth ground outside the testing area. These tests were documented and witnessed by a representative of the CQA engineer. The testing was performed in accordance with Fluor Fernald's Technical Specifications, Construction Quality Assurance Plan, Construction Drawings, and approved Electrical Leak Detection testing work plan.

TABLE 1. LOCATIONS AND DESCRIPTIONS OF THE LEAKS

Leak Number	Leak Location	Leak Description
1	Located on panel* # 111 near the tie-end between the east and west cells.	Failed weld on patch* # 306 repaired and resurveyed.
2	Located on panel # 103.	1/4-inch knife cut, repaired and resurveyed.
3	Located on panel # 74 near the tie-end between the east and west cells	A small rock puncture, repaired and resurveyed.
4	Located on panel # 73	A small kink in the liner, repaired and resurveyed.
5	Located on the tie-end patch # 137 between cells 3 and 4	Failed patch, repaired and resurveyed
6	Located on the tie-end patch # 137 between cells 3 and 4	Failed patch, repaired and resurveyed
7	Located on the tie-end patch # 137 between cells 3 and 4	Failed patch, repaired and resurveyed
8	Located on the tie-end patch # 285 between cells 3 and 4	Failed patch, repaired and resurveyed
9	Located on the tie-end patch # 285 between cells 3 and 4	Failed patch, repaired and resurveyed
10	Located on the tie-end patch # 285 between cells 3 and 4	Patch was not completely finished. Repaired and resurveyed
11	Located on the tie-end patch # 285 between cells 3 and 4.	Failed patch, repaired and resurveyed
12	Located on the tie-end patch # 182 between cells 3 and 4	Failed patch, repaired and resurveyed
13	Located on the tie-end patch # 185 between cells 3 and 4	Failed patch, repaired and resurveyed
14	Located on the tie-end patch # 183 between cells 3 and 4	Failed patch, repaired and resurveyed
15	Located on the tie-end patch # 187 between cells 3 and 4	Failed patch, repaired and resurveyed
16	Located on the tie-end patch # 187 between cells three and 4	Patch failed repaired and resurveyed

* For the location of panel and patch numbers, see figure 1.

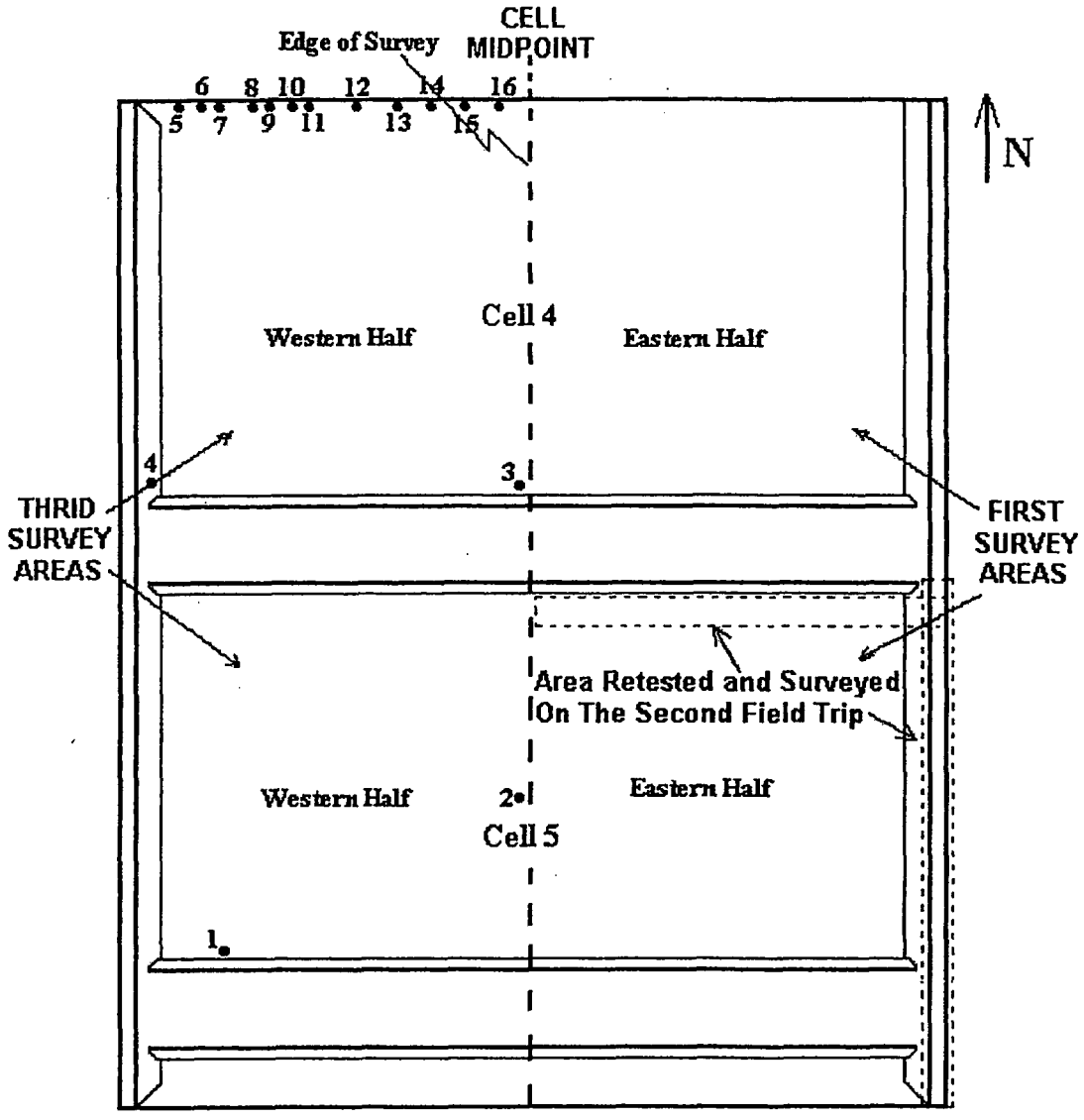

FIGURE 1. DRAWING OF CELLS 4 AND 5 SHOWING THE APPROXIMATE AREA SURVEYED AND THE APPROXIMATE LOCATION OF THE LEAKS

III. LEAK LOCATION PROCEDURES

A. General

The water puddle test for bare liners was used to test the On-Site Disposal Facility landfill cells 4 and 5. This method detects electrical current flowing through holes in the geomembrane liner that are filled with water or other earth materials. A water puddle test sensor was used to systematically spread the water over the top surface of the liner and a low voltage leak power supply was used to energize the water with electrical current. The low voltage leak power supply is connected to an electrode placed in leak detection soil drainage layer located below the primary liner and the water puddle sensor head. When a hole in the liner is encountered water will fill the

hole or contact the soils in the hole and electrical current will flow between the electrodes located above and below the primary liner. The change in electrical current is monitored using an LLSI leak detector that converts the increase in the current to an audible tone indication.

B. Water Puddle Leak Detection Sensitivity

LLSI has redesigned the leak detection electronics to obtain a higher leak detection sensitivity while utilizing a lower excitation voltage. In addition, we have incorporated the self-contained excitation power supply within the hand-held leak detection electronics. This modification eliminated the requirements of using a gasoline-powered portable motor generator to supply 120 volt A.C. power to an external stand-alone leak location power supply.

When conducting an electrical leak location survey the measured electrical signal of a leak located in the geomembrane is directly proportional to the excitation voltage and the sensitivity of the detector electronics. Therefore, the excitation voltage can be decreased if the sensitivity of the detector electronics is increased. This can be achieved without lowering leak detection performance.

The previous excitation voltage that was used at the Fluor Fernald site was 30 volts D.C. with a leak detector sensitivity of 50 microamperes or greater for a full scale reading (600,000 volts per ampere or less). The system was redesigned to operate using a self-contained power supply producing an excitation voltage of 18 volts with a full scale detector sensitivity range of 23 to 2.25 microamperes (780,000 to 8,000,000 volts per ampere). The detector setting for the leak detection survey at the Fluor Fernald site was adjusted to 6 microamperes for full scale (3,000,000 volts per ampere).

The redesigned leak location system electronics has an increased sensitivity range that is 1.3 to 13.3 greater than the previous system electronics. However, the leak location surveys that were currently being conducted of the cells 4 and 5 located at the Fluor Fernald site were using a detection sensitivity that is adjusted to five times the sensitivity of the previous surveys conducted by LLSI at the same site. This sensitivity may have to be occasionally readjusted to reduce nuisance background noise, but in no case will the detection sensitivity be less than the detection sensitivity used on previous surveys.

C. Liner Wrinkles

The electrical leak location method detects electrical paths through the geomembrane material. This electrical conduction path is provided by soil, water or other electrical conductors bridging the geomembrane material and contacting the earth materials placed above and below the geomembrane. If the geomembrane is not in complete contact with the supporting earth materials then an electrical conduction path may not exist and leaks may not be detected.

Typically geomembranes are covered with earth materials such as water or soil. The weight of these materials helps to hold the geomembrane against the supporting sub-grade. In addition, the cover material keeps the geomembrane from exposure to the sun which helps to limit

excessive wrinkling of the geomembrane material due to thermal expansion. However, a bare geomembrane does not have the advantage of the cover materials to help limit the wrinkling due to thermal expansion of the geomembrane material.

Bare liner water puddle surveys are conducted when the liner material is completely contacting the underlying geosynthetic clay liner (gcl). When wrinkles are encountered measures are taken to ensure the liner is laying flat against the supporting material. These measures include:

- Using additional personnel to walk in front of the squeegee; and
- Surveying during the cooler time of the day.

Therefore, bare liner surveys are conducted during the cooler hours of the day or very early morning hours when the liner material is tight and in complete contact with the supporting sub-grade. In the areas where there were wrinkles in the liner of cells 4 and 5, Fluor Fernald provided additional personnel to walk in front of and along the side of the squeegee to insure the liner was in complete contact with underlying geosynthetic clay liner (gcl). In addition, in areas where wrinkles were encountered, this area was resurveyed during the first part of the morning when liner was flat against the gcl and wrinkles would be minimized. Therefore, a thorough survey of the areas affected by geomembrane wrinkles was conducted of cells 4 and 5 primary geomembrane.

If there are any questions regarding the leak location survey or this report, please contact us at (210) 408-1241. We appreciate the opportunity to have been of service once again to the Fluor Fernald, Inc on this project.

Very truly yours,

Daren L. Laine for:

Herman Flores
Project Manager

Approved:

Daren L. Laine

Daren L. Laine
President