APPENDIX K

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: Ford Cell 2 MI

PROJECT NUMBER: 917-1203

OWNER: Ford Motor Co

LOCATION: Allen Park, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: 6963E to 6706E, and 15 out from Toe of South Slope

NATIONAL SEAL REPRESENTATIVE:

Date: 7-20-92

Signature: James Scott Smith

Name: James Scott Smith

Title: Supt.

OWNERS REPRESENTATIVE:

Date: 7-20-92

Signature: Thomas A. Heasley

Name: Thomas A. Heasley

Title: CQA officer

Company: Golder Construction Services

4C

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: Ford Cell 2 MI

PROJECT NUMBER: 917-1203

OWNER: Ford Motor Co

LOCATION: Allen Park, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: 6706E To 6645E, and 15' out from toe of the S.W. corner

NATIONAL SEAL REPRESENTATIVE:

Date: 7-20-92

Signature: James Scott Smith

Name: James Scott Smith

Title: Supt

OWNERS REPRESENTATIVE:

Date: 7-20-92 1538

Signature: Thomas A. Heasley

Name: Thomas Heasley

Title: CQA officer

Company: Golder Construction Services

4/C

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: Ford Cell 2 MI

PROJECT NUMBER: 917-1207

OWNER: Ford Motor Co.

LOCATION: Allen Park, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company; and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: 3418N to 3740N; and ~~15 out~~ THE

~~from toe of west 2:1 slope~~ to 6800 E

NATIONAL SEAL REPRESENTATIVE:

Date: 7-22-92

Signature: [signature]

Name: James Scott Smith

Title: Supt

OWNERS REPRESENTATIVE:

Date: 7-22-92 (730)

Signature: Thomas A. Heasley

Name: Thomas Heasley

Title: COR officer

Company: Golder Const. Services

4003

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: Ford Cell 2 MI

PROJECT NUMBER: 917-1207

OWNER: Ford Motor Co

LOCATION: Allen Park, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: 3418 N to 3740 N; and ~~15 00~~ TAB ~~from Toe of West Sit Slope~~ To 6800 E

NATIONAL SEAL REPRESENTATIVE:

Date: 7-22-92

Signature: James Scott Smith

Name: James Scott Smith

Title: Supt

OWNERS REPRESENTATIVE:

Date: 7-22-92 (730)

Signature: Thomas A. Heasley

Name: Thomas Heasley

Title: CQA Officer

Company: Golder Const. Services

400

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: Ford Cell 2 MI

PROJECT NUMBER: 917-1203

OWNER: Ford Motor Co.

LOCATION: Allen Park, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: 3740 N to 3835 N ; and 10' out from the toe of the West Slope

NATIONAL SEAL REPRESENTATIVE:

Date: 7-24-92

Signature: [signature]

Name:

Title:

OWNERS REPRESENTATIVE:

Date: 7-24-92 (1535)

Signature: Thomas A. Heasley

Name: Thomas A. Heasley

Title: CQA Officer

Company: Golder Construction Co.

4/6

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: Ford Cell 2 MI

PROJECT NUMBER: 917-1203

OWNER: Ford Motor Co

LOCATION: Allen Park, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: 3835N TO 6846E; and from Toe of North Slope ~~Pt.~~ TO 3740N

NATIONAL SEAL REPRESENTATIVE:

Date: 7-25-92

Signature: James Scott Smith

Name: James Scott Smith

Title: Supt.

OWNERS REPRESENTATIVE:

Date: 7-25-92 (7:25)

Signature: Thomas A. Heasley

Name: Thomas A Heasley

Title: CQA Officer

Company: Golder Const. Services

4a

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD CELL II M1

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO.

LOCATION: ALLEN PARK MICH

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: 6846E to 6980E: And from NORTH ANCHOR TRENCH to 3740 N

NATIONAL SEAL REPRESENTATIVE:

Date: 7-27-92

Signature: [signature] 1:00 pm

Name: JAMES SCOTT SMITH

Title: Supt.

OWNERS REPRESENTATIVE:

Date: 7-27-92

Signature: [signature] TAH

Name: JAMES A. LOFTUS

Title: SR. ENG. TECH

Company: GOLDEN CONST. SERVICES

NSC to REPAIR WET AREA AT NORTHWEST CORNER OF 2:1 SLOPE

4C

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD / CELL 2 / MI

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO

LOCATION: ALLEN PARK MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: E6980 to E7150 FROM NORTH ANCHOR TRENCH to 10' SOUTH OF 2:1 toe

NATIONAL SEAL REPRESENTATIVE:

Date: 7-28-92

Signature: James Scott Smith 8:50 AM

Name: JAMES SCOTT SMITH

Title: SUPT.

OWNERS REPRESENTATIVE:

Date: 7-28-92

Signature: James A. Loftus

Name: JAMES A. LOFTUS

Title: SR. ENG TECH

Company: GCS

4cc.

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD/CELL 2/MI

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO.

LOCATION: ALLEN PARK, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: NORTH SLOPE E7150 TO 3880 NON THE EAST 15' SHELF AT THE ANCHOR TRENCH; TO 10' OUT FROM THE TOE OF THE NORTH + EAST 2:1 SLOPE

NATIONAL SEAL REPRESENTATIVE:

Date: 7-29-92

Signature: [signature]

Name: James Scott Smith

Title: Supt

OWNERS REPRESENTATIVE:

Date: 7-29-92 (1530)

Signature: Thomas A. Heasley

Name: Thomas Heasley

Title: CQA Officer

Company: Golder Const. Services

4C

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD / CELL II / MI

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO.

LOCATION: ALLEN PARK MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: FROM 3880N to 3750N EAST Slope FROM ARTESIAN ANCHOR TRENCH to 10' WEST OF the EAST 2:1 SLOPE FROM NORTH 4:1 ANCHOR TRENCH to N3880, EAST TOP OF Slope Anchor to 10' WEST OF TOE AT 2:1 Slope

NATIONAL SEAL REPRESENTATIVE:

Date: 8-4-92

Signature: James Scott Smith

Name: JAMES SCOTT SMITH

Title: SUPT.

OWNERS REPRESENTATIVE:

Date: ~~8-3-92~~ 8-4-92

Signature: James A. Loftus

Name: JAMES A. LOFTUS

Title: SR. ENG TECH

Company: GCS

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD CELL II MI

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO.

LOCATION: ALLEN PARK, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: N3750 to N3680 FROM ARTESIAN ANCHOR TRENCH TO 10' WEST OF EAST 2:1 TOE OF SLOPE

NATIONAL SEAL REPRESENTATIVE:

Date: 8-5-92

Signature: James Scott Smith

Name: JAMES SCOTT SMITH

Title: SUPT

OWNERS REPRESENTATIVE:

Date: 8-5-92

Signature: James A. Lyons

Name: JAMES A. LYONS

Title: SR. ENGR. TECH

Company: GCS

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD / CELL II / MI

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO

LOCATION: ALLEN PARK, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: EAST SLOPE FROM N3750 to N3680, TOP OF SLOPE to ARTESIAN ANCHOR TRENCH

NATIONAL SEAL REPRESENTATIVE:

Date: 8-6-92

Signature: James Scott Smith

Name: James Scott Smith

Title: Supt.

OWNERS REPRESENTATIVE:

Date: 8-6-92

Signature: James Loftus

Name: JAMES LOFTUS

Title: SR ENGR TECH

Company: GCS

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD / CELL II / MI

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO

LOCATION: ALLEN PARK, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: FROM N3680 to N3600, FROM ARTESIAN ANCHOR TRENCH to 10' WEST OF TOE OF 2:1, FROM TOP ANCHOR TRENCH TO ARTESIAN ANCHOR TRENCH

NATIONAL SEAL REPRESENTATIVE:

Date: 8-7-92

Signature: Randy Brush

Name: RANDY BRUSH

Title: ACT. SUPT

OWNERS REPRESENTATIVE:

Date: 8-7-92

Signature:

Name: JAMES A. LOFTUS

Title: SR. ENGR. TECH

Company: G.C.S.

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD CELL II M1

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO.

LOCATION: ALLEN PARK, MICHIGAN

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: FROM N3600 on the EAST SLOPE to E7310 on the SOUTH SLOPE, FROM ARTESIAN ANCHOR TRENCH to top of 2:1 SLOPE (SOUTH SLOPE). ~~[illegible]~~

NATIONAL SEAL REPRESENTATIVE:

Date: 8-10-92

Signature: [signature]

Name: Randy BRUSH

Title: SUPT.

OWNERS REPRESENTATIVE:

Date: 8-10-92

Signature: [signature]

Name: JAMES A. LOFTUS

Title: SR. ENGR. TECH

Company: GCS

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD / CELL II / MI

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO.

LOCATION: ALLEN PARK, MICH

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

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Area Being Accepted: CELL FLOOR FROM the EAST 2:1 SLOPE to E 7200 COORDINATE LINE. SOUTH 70' Shelf FROM E 7300 to E 7200, TOP ANCHOR TRENCH to CELL FLOOR

NATIONAL SEAL REPRESENTATIVE:

Date: 8-15-92

Signature: James Scott Smith 630 A

Name: James Scott Smith

Title: SUPT.

OWNERS REPRESENTATIVE:

Date: 8-15-92

Signature: James A. Loftus

Name: JAMES A. LOFTUS

Title: SR. ENGR. TECH

Company: G.C.S.

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD / CELL II / MI

PROJECT NUMBER: 917-1203

OWNER: FORD motor Co.

LOCATION: ALLEN PARK, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: SOUTH SLOPE FROM E 7200 to E 6948 63
FROM ANCHOR TRENCH to 10' NORTH OF SOUTH 2:1 SLOPE
EAST 7200 to 7150 FROM SOUTH 2:1 SLOPE to TIE-IN 5'
- SOUTH OF the NORTH 2:1 SLOPE, SOUTH 2:1 SLOPE to N 3730 coordin

NATIONAL SEAL REPRESENTATIVE:

Date: 8-16-92

Signature: James Scott Smith

Name: James Scott Smith

Title: Supt

OWNERS REPRESENTATIVE:

Date: 8-16-92

Signature: James A. Loftus

Name: JAMES A. LOFTUS

Title: SR. ENGR. TECH

Company: GCS

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD / CELL II / mi

PROJECT NUMBER: 917-1203

OWNER: FORD motor Co.

LOCATION: ALLEN PARK, mi

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: From the N3730 Line to 5' SOUTH of the NORTH 2:1 SLOPE, E7150 to E6945
63

NATIONAL SEAL REPRESENTATIVE:

Date: 8-17-92

Signature: James Scott Smith

Name: James Scott Smith

Title:

OWNERS REPRESENTATIVE:

Date: 8-17-92

Signature: James A. Loftus

Name: JAMES A. LOFTUS

Title: SR. ENGR. TECH

Company: GCS

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD / CELL II / MI

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO.

LOCATION: ALLEN

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: EAST Slope From the N3600 AROUND SOUTHEAST CORNER to the EAST 7300. FROM TOP anchor trench to 10' WEST OF EAST 2:1 Slope. SOUTH Slope ARTESIAN ANCHOR TRENCH to 10' NORTH OF SOUTH 2:1 SLOPE

NATIONAL SEAL REPRESENTATIVE:

Date: 8-12-92 330 PM

Signature: James Scott Smith

Name: JAMES SCOTT SMITH

Title: SUPT.

OWNERS REPRESENTATIVE:

Date: 8-12-92

Signature: James A. Loftus

Name: JAMES A. LOFTUS

Title: SR ENGR. TECH

Company: GCS

4C

APPENDIX L

JUNE 1993 917-1203

SECONDARY GEOMEMBRANE PANEL DEPLOYMENT SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

PANEL NUMBER	ROLL NUMBER	BATCH NUMBER	DATE DEPLOYED	VISUAL PANEL INSPECTION	TYPICAL OVERLAP (in.)	APPROX. DEPLOYED LENGTH	AVERAGE PANEL THICKNESS	
							LEAD	TRAIL
S001	2F2114	5085	07/21/92	OK	6	164	81	82
S002	2F2114	5085	07/21/92	OK	6	161	82	81
S003	2F2114	5085	07/21/92	OK	6	161	81	82
S004	2F2114	5085	07/21/92	OK	6	162	82	81
S005	2F2114	5085	07/21/92	OK	6	161	81	82
S006	2F2209	5085	07/21/92	OK	6	160	83	83
S007	2F2209	5085	07/21/92	OK	6	160	83	83
S008	2F2209	5085	07/21/92	OK	6	159	83	83
S009	2F2209	5085	07/21/92	OK	6	159	83	82
S010	2F2209	5085	07/21/92	OK	6	160	82	81
S011	2F2211	5085	07/21/92	OK	6	159	81	81
S012	2F2211	5085	07/21/92	OK	6	159	81	81
S013	2F2211	5085	07/21/92	OK	6	149	81	81
S014	2F2211	5085	07/21/92	OK	6	123	81	82
S015	2F2211	5085	07/21/92	OK	6	108	82	81
S016	2F2211	5085	07/21/92	OK	6	94	81	82
S017	2F2205	5085	07/22/92	OK	6	69	82	82
S018	2F2205	5085	07/22/92	OK	6	69	82	82
S019	2F2205	5085	07/22/92	OK	6	55	82	81
S020	2F2211	5085	07/22/92	OK	6	45	81	82
S021	2F2205	5085	07/22/92	OK	6	28	81	82
S022	2F2205	5085	07/22/92	OK	6	17	82	82
S023	2F2205	5085	07/22/92	OK	6	38	82	81
S024	2F2205	5085	07/22/92	OK	6	59	81	82
S025	2F2205	5085	07/22/92	OK	6	59	82	81

SECONDARY GEOMEMBRANE PANEL DEPLOYMENT SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

PANEL NUMBER	ROLL NUMBER	BATCH NUMBER	DATE DEPLOYED	VISUAL PANEL INSPECTION	TYPICAL OVERLAP (in.)	APPROX. DEPLOYED LENGTH	AVERAGE PANEL THICKNESS	
							LEAD	TRAIL
S026	2F2205	5085	07/22/92	OK	6	70	81	81
S027	2F2205	5085	07/22/92	OK	6	110	81	82
S028	2F2205	5085	07/22/92	OK	6	133	82	81
S029	2F2205	5085	07/22/92	OK	6	68	82	82
S030	2F2205	5085	07/22/92	OK	6	79	82	80
S031	2F2305	5085	07/22/92	OK	6	164	80	82
S032	2F2305	5085	07/22/92	OK	6	175	82	80
S033	2F2305	5085	07/22/92	OK	6	321	82	80
S034	2F2305	5085	07/22/92	OK	6	75	82	80
S035	2F2206	5085	07/24/09	OK	6	247	81	81
S036	2F2206	5085	07/24/09	OK	6	320	81	81
S037	2F2206	5085	07/24/09	OK	6	240	81	81
S038	2F2611	5087	07/24/09	OK	6	81	81	81
S039	2F2611	5087	07/24/09	OK	6	320	81	82
S040	2F2611	5087	07/24/92	OK	6	320	82	81
S041	2F2611	5087	07/24/92	OK	6	89	81	81
S042	2F2113	5085	07/24/92	OK	6	231	82	81
S043	2F2113	5085	07/24/92	OK	6	320	81	80
S044	2F2113	5085	07/24/92	OK	6	272	80	82
S045	2F2115	5085	07/25/92	OK	6	50	81	81
S046	2F2115	5085	07/25/92	OK	6	214	81	82
S047	2F2115	5085	07/25/92	OK	6	214	82	82
S048	2F2115	5085	07/25/92	OK	6	185	82	82
S049	2F2115	5085	07/25/92	OK	6	110	82	82
S050	2F2706	5087	07/25/92	OK	6	74	81	82

JUNE 1993 917-1203

SECONDARY GEOMEMBRANE PANEL DEPLOYMENT SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

PANEL NUMBER	ROLL NUMBER	BATCH NUMBER	DATE DEPLOYED	VISUAL PANEL INSPECTION	TYPICAL OVERLAP (in.)	APPROX. DEPLOYED LENGTH	AVERAGE PANEL THICKNESS	
							LEAD	TRAIL
S051	2F2706	5087	07/25/92	OK	6	185	82	82
S052	2F2706	5087	07/25/92	OK	6	185	82	81
S053	2F2706	5087	07/25/92	OK	6	185	81	82
S054	2F2706	5087	07/25/92	OK	6	185	82	81
S055	2F2212	5085	07/25/92	OK	6	178	82	82
S056	2F2212	5085	07/25/92	OK	6	169	82	81
S057	2F2212	5085	07/25/92	OK	6	157	81	81
S058	2F2212	5085	07/25/92	OK	6	135	81	81
S059	2F2212	5085	07/25/92	OK	6	47	81	81
S060	2F2212	5085	07/25/92	OK	6	28	81	82
S061	2F2212	5085	07/25/92	OK	6	34	81	82
S062	2F2212	5087	07/25/92	OK	6	164	82	82
S063	2F2212	5087	07/25/92	OK	6	164	82	81
S064	2F2212	5087	07/25/92	OK	6	164	81	80
S065	2F2212	5087	07/25/92	OK	6	82	80	81
S066	2F2212	5087	07/25/92	OK	6	78	81	81
S067	2F2307	5085	07/25/92	OK	6	35	81	81
S068	2F2307	5085	07/25/92	OK	6	49	81	81
S069	2F2307	5085	07/25/92	OK	6	22	81	81
S070	2F2307	5085	07/25/92	OK	6	44	81	80
S071	2F2307	5085	07/25/92	OK	6	46	80	81
S072	2F2307	5085	07/25/92	OK	6	61	81	81
S073	2F2307	5085	07/25/92	OK	6	76	81	82
S074	2F2307	5085	07/25/92	OK	6	76	82	81
S075	2F2307	5085	07/25/92	OK	6	76	81	81

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SECONDARY GEOMEMBRANE PANEL DEPLOYMENT SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

PANEL NUMBER	ROLL NUMBER	BATCH NUMBER	DATE DEPLOYED	VISUAL PANEL INSPECTION	TYPICAL OVERLAP (in.)	APPROX. DEPLOYED LENGTH	AVERAGE PANEL THICKNESS	
							LEAD	TRAIL
S076	2F2307	5085	07/25/92	OK	6	76	81	80
S077	2F2307	5085	07/25/92	OK	6	76	80	81
S078	2F2307	5085	07/25/92	OK	6	76	81	82
S079	2F2307	5085	07/25/92	OK	6	76	82	81
S080	2F2215	5085	07/28/92	OK	6	287	83	82
S081	2F2215	5085	07/28/92	OK	6	287	82	83
S082	2F2215	5085	07/28/92	OK	6	263	83	83
S083	2F2213	5085	07/28/92	OK	6	319	83	84
S084	2F2213	5085	07/28/92	OK	6	56	84	82
S085	2F2213	5085	07/28/92	OK	6	320	82	83
S086	2F2213	5085	07/28/92	OK	6	134	83	83
S087	2F2308	5085	07/28/92	OK	6	188	83	83
S088	2F2308	5085	07/28/92	OK	6	320	83	83
S089	2F2308	5085	07/28/92	OK	6	320	83	83
S090	2F2216	5085	07/28/92	OK	6	320	83	82
S091	2F2216	5085	07/28/92	OK	6	178	82	83
S092	2F2216	5085	07/28/92	OK	6	178	83	82
S093	2F2216	5085	07/28/92	OK	6	104	82	83
S094	2F2813	5087	07/28/92	OK	6	77	83	84
S095	2F2813	5087	07/28/92	OK	6	182	84	84
S096	2F2813	5087	07/28/92	OK	6	182	84	83
S097	2F2813	5087	07/28/92	OK	6	181	83	83
S098	2F2813	5087	07/28/92	OK	6	182	83	83
S099	2F2813	5087	07/28/92	OK	6	49	83	82
S100	2F2810	5087	07/28/92	OK	6	134	83	83

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SECONDARY GEOMEMBRANE PANEL DEPLOYMENT SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

PANEL NUMBER	ROLL NUMBER	BATCH NUMBER	DATE DEPLOYED	VISUAL PANEL INSPECTION	TYPICAL OVERLAP (in.)	APPROX. DEPLOYED LENGTH	AVERAGE PANEL THICKNESS	
							LEAD	TRAIL
S101	2F2810	5087	07/28/92	OK	6	182	83	82
S102	2F2810	5087	07/28/92	OK	6	180	82	84
S103	2F2810	5087	07/28/92	OK	6	287	84	84
S104	2F2816	5087	07/29/92	OK	6	178	82	84
S105	2F2816	5087	07/29/92	OK	6	178	84	84
S106	2F2816	5087	07/29/92	OK	6	176	84	83
S107	2F2816	5087	07/29/92	OK	6	178	83	83
S108	2F2816	5087	07/29/92	OK	6	134	83	82
S109	2F2712	5087	07/29/92	OK	6	39	82	84
S110	2F2712	5087	07/29/92	OK	6	166	84	83
S111	2F2712	5087	07/29/92	OK	6	166	83	83
S112	2F2713	5087	08/04/92	OK	6	230	82	81
S113	2F2713	5087	08/04/92	OK	6	230	81	81
S114	2F2713	5087	08/04/92	OK	6	207	81	82
S115	2F2306	5085	08/04/92	OK	6	204	81	81
S116	2F2306	5085	08/04/92	OK	6	203	81	82
S117	2F2306	5085	08/04/92	OK	6	199	82	81
S118	2F2306	5085	08/04/92	OK	6	182	82	81
S119	2F2708	5087	08/04/92	OK	6	172	82	81
S120	2F2708	5087	08/04/92	OK	6	165	81	81
S121	2F2708	5087	08/04/92	OK	6	136	81	81
S122	2F2712	5087	08/04/92	OK	6	165	81	82
S123	2F2712	5087	08/04/92	OK	6	167	82	81
S124	2F2708	5087	08/04/92	OK	6	230	81	81
S125	2F2708	5087	08/05/92	OK	6	114	81	82

SECONDARY GEOMEMBRANE PANEL DEPLOYMENT SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

PANEL NUMBER	ROLL NUMBER	BATCH NUMBER	DATE DEPLOYED	VISUAL PANEL INSPECTION	TYPICAL OVERLAP (in.)	APPROX. DEPLOYED LENGTH	AVERAGE PANEL THICKNESS	
							LEAD	TRAIL
S126	2F2704	5087	08/05/92	OK	6	116	81	81
S127	2F2704	5087	08/05/92	OK	6	228	81	81
S128	2F2704	5087	08/05/92	OK	6	230	81	81
S129	2F2704	5087	08/05/92	OK	6	190	81	81
S130	2F2710	5087	08/05/92	OK	6	232	81	82
S131	2F2710	5087	08/05/92	OK	6	232	82	82
S132	2F2710	5087	08/05/92	OK	6	41	81	80
S133	2F2316	5085	08/06/92	OK	6	220	81	81
S134	2F2316	5085	08/06/92	OK	6	220	81	81
S135	2F2316	5085	08/06/92	OK	6	149	81	82
S136	2F2316	5085	08/06/92	OK	6	157	82	81
S137	2F2702	5087	08/06/92	OK	6	76	81	81
S138	2F2702	5087	08/06/92	OK	6	170	81	81
S139	2F2702	5087	08/06/92	OK	6	226	81	81
S140	2F2702	5087	08/06/92	OK	6	182	81	81
S141	2F2702	5087	08/06/92	OK	6	110	81	81
S142	2F2313	5085	08/06/92	OK	6	95	81	81
S143	2F2313	5085	08/06/92	OK	6	60	81	81
S144	2F2313	5085	08/06/92	OK	6	32	81	82
S145	2F2313	5085	08/06/92	OK	6	17	82	82
S146	2F2313	5085	08/06/92	OK	6	25	82	82
S147	2F2313	5085	08/06/92	OK	6	16	81	81
S148	2F2313	5085	08/06/92	OK	6	39	81	81
S149	2F2313	5085	08/06/92	OK	6	39	81	80
S150	2F2313	5085	08/06/92	OK	6	17	80	81

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SECONDARY GEOMEMBRANE PANEL DEPLOYMENT SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

PANEL NUMBER	ROLL NUMBER	BATCH NUMBER	DATE DEPLOYED	VISUAL PANEL INSPECTION	TYPICAL OVERLAP (in.)	APPROX. DEPLOYED LENGTH	AVERAGE PANEL THICKNESS	
							LEAD	TRAIL
S151	2F2313	5085	08/06/92	OK	6	25	81	81
S152	2F2313	5085	08/06/92	OK	6	16	81	81
S153	2F2313	5085	08/06/92	OK	6	39	81	82
S154	2F2313	5085	08/07/92	OK	6	225	81	81
S155	2F2313	5085	08/07/92	OK	6	184	81	81
S156	2F2309	5085	08/07/92	OK	6	41	82	81
S157	2F2309	5085	08/07/92	OK	6	225	81	81
S158	2F2309	5085	08/07/92	OK	6	219	81	80
S159	2F2309	5085	08/07/92	OK	6	215	80	80
S160	2F2311	5085	08/12/92	OK	6	136	81	81
S161	2F2311	5085	08/12/92	OK	6	105	81	81
S162	2F2311	5085	08/12/92	OK	6	80	81	81
S163	2F2311	5085	08/12/92	OK	6	61	81	81
S164	2F2311	5085	08/12/92	OK	6	36	81	81
S165	2F2311	5085	08/12/92	OK	6	27	81	81
S166	2F2311	5085	08/12/92	OK	6	147	81	81
S167	2F2311	5085	08/12/92	OK	6	166	81	81
S168	2F2311	5085	08/12/92	OK	6	55	81	81
S169	2F2415	5086	08/12/92	OK	6	127	81	82
S170	2F2415	5086	08/12/92	OK	6	211	82	81
S171	2F2415	5086	08/12/92	OK	6	211	81	81
S172	2F2415	5086	08/12/92	OK	6	211	81	81
S173	2F2415	5086	08/12/92	OK	6	211	81	81
S174	2F2715	5087	08/12/92	OK	6	166	81	82
S176	2F2715	5087	08/12/92	OK	6	66	82	82

SECONDARY GEOMEMBRANE PANEL DEPLOYMENT SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

PANEL NUMBER	ROLL NUMBER	BATCH NUMBER	DATE DEPLOYED	VISUAL PANEL INSPECTION	TYPICAL OVERLAP (in.)	APPROX. DEPLOYED LENGTH	AVERAGE PANEL THICKNESS	
							LEAD	TRAIL
S177	2F2715	5087	08/12/92	OK	6	66	82	81
S178	2F2715	5087	08/12/92	OK	6	65	81	81
S179	2F2715	5087	08/12/92	OK	6	65	81	81
S180	2F2715	5087	08/12/92	OK	6	166	81	81
S181	2F2715	5087	08/12/92	OK	6	114	81	82
S182	2F2416	5086	08/15/92	OK	6	137	81	82
S183	2F2416	5086	08/15/92	OK	6	201	82	82
S184	2F2416	5086	08/15/92	OK	6	212	82	82
S185	2F2416	5086	08/15/92	OK	6	235	82	82
S186	2F2510	5086	08/15/92	OK	6	269	82	82
S187	2F2510	5086	08/15/92	OK	6	281	82	82
S188	2F2510	5086	08/15/92	OK	6	297	82	82
S189	2F2501	5086	08/16/92	OK	6	320	82	82
S190	2F2501	5086	08/16/92	OK	6	343	82	82
S191	2F2501	5086	08/16/92	OK	6	162	82	82
S192	2F2617	5087	08/16/92	OK	6	182	82	82
S193	2F2617	5087	08/16/92	OK	6	350	82	82
S194	2F2617	5087	08/16/92	OK	6	308	82	82
S195	2F2515	5086	08/16/92	OK	6	40	82	82
S196	2F2515	5086	08/16/92	OK	6	202	82	82
S197	2F2515	5086	08/16/92	OK	6	207	82	82
S198	2F2515	5086	08/16/92	OK	6	201	82	82
S199	2F2515	5086	08/16/92	OK	6	161	82	82
S200	2F2512	5086	08/16/92	OK	6	48	82	82
S201	2F2512	5086	08/16/92	OK	6	202	82	82

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SECONDARY GEOMEMBRANE PANEL DEPLOYMENT SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

PANEL NUMBER	ROLL NUMBER	BATCH NUMBER	DATE DEPLOYED	VISUAL PANEL INSPECTION	TYPICAL OVERLAP (in.)	APPROX. DEPLOYED LENGTH	AVERAGE PANEL THICKNESS	
							LEAD	TRAIL
S202	2F2512	5086	08/16/92	OK	6	185	82	82
S203	2F2512	5086	08/16/92	OK	6	138	82	82
S204	2F2512	5086	08/16/92	OK	6	138	83	82
S205	2F2512	5086	08/16/92	OK	6	32	82	81
S206	2F2512	5086	08/16/92	OK	6	40	81	81
S207	2F2607	5086	08/16/92	OK	6	47	83	82
S208	2F2607	5086	08/16/92	OK	6	54	82	81
S209	2F2607	5086	08/16/92	OK	6	65	81	81
S210	2F2607	5086	08/17/92	OK	6	67	81	82
S211	2F2607	5086	08/17/92	OK	6	66	82	82
S212	2F2607	5086	08/17/92	OK	6	69	82	82
S213	2F2607	5086	08/17/92	OK	6	61	82	81
S214	2F2607	5086	08/17/92	OK	6	50	81	82
S215	2F2607	5086	08/17/92	OK	6	35	82	82
S216	2F2607	5086	08/17/92	OK	6	22	82	83
S217	2F2607	5086	08/17/92	OK	6	12	83	83
S218	2F2607	5086	08/17/92	OK	6	30	83	81
S219	2F2607	5086	08/17/92	OK	6	45	81	82
S220	2F2607	5086	08/17/92	OK	6	65	82	82
S221	2F2607	5086	08/17/92	OK	6	73	82	82
S222	2F2506	5086	08/17/92	OK	6	315	82	81
S223	2F2506	5086	08/17/92	OK	6	219	81	82
S224	2F2506	5086	08/17/92	OK	6	207	82	82
S225	2F2506	5086	08/17/92	OK	6	43	82	82
S226	2F2506	5086	08/17/92	OK	6	34	82	83

SECONDARY GEOMEMBRANE PANEL DEPLOYMENT SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

PANEL NUMBER	ROLL NUMBER	BATCH NUMBER	DATE DEPLOYED	VISUAL PANEL INSPECTION	TYPICAL OVERLAP (in.)	APPROX. DEPLOYED LENGTH	AVERAGE PANEL THICKNESS	
							LEAD	TRAIL
S227	2F2615	5087	08/17/92	OK	6	42	82	82
S228	2F2615	5087	08/17/92	OK	6	42	82	82
S229	2F2615	5087	08/17/92	OK	6	43	82	82
S230	2F2615	5087	08/17/92	OK	6	43	82	82
S231	2F2615	5087	08/17/92	OK	6	42	82	81
S232	2F2615	5087	08/17/92	OK	6	30	81	82
S233	2F2615	5087	08/17/92	OK	6	45	82	82
S234	2F2615	5087	08/17/92	OK	6	122	82	81
S235	2F2615	5087	08/17/92	OK	6	145	82	82
S236	2F2615	5087	08/17/92	OK	6	42	82	82
S237	2F2615	5087	08/17/92	OK	6	40	82	82
S238	2F2615	5087	08/17/92	OK	6	20	82	81
S239	2F2812	5087	08/17/92	OK	6	130	82	82
S240	2F2812	5087	08/17/92	OK	6	130	82	82
S241	2F2812	5087	08/17/92	OK	6	130	82	82
S242	2F2812	5087	08/17/92	OK	6	130	82	82
S243	2F2812	5087	08/17/92	OK	6	130	82	82
S244	2F2812	5087	08/17/92	OK	6	130	82	82
S245	2F2812	5087	08/17/92	OK	6	26	82	82
S246	2F2812	5087	08/17/92	OK	6	12	82	82
S247	2F2402	5085	08/17/92	OK	6	130	82	81
S248	2F2402	5085	08/17/92	OK	6	130	82	82
S249	2F2402	5085	08/17/92	OK	6	130	82	82
S250	2F2402	5085	08/17/92	OK	6	26	82	82
S251	2F2402	5085	08/17/92	OK	6	12	82	82

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SECONDARY GEOMEMBRANE PANEL DEPLOYMENT SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

PANEL NUMBER	ROLL NUMBER	BATCH NUMBER	DATE DEPLOYED	VISUAL PANEL INSPECTION	TYPICAL OVERLAP (in.)	APPROX. DEPLOYED LENGTH	AVERAGE PANEL THICKNESS	
							LEAD	TRAIL
S252	2F2402	5085	08/17/92	OK	6	130	82	81
S253	2F2402	5085	08/17/92	OK	6	170	81	82
S254	2F2402	5085	08/17/92	OK	6	60	82	82
S255	2F2813	5087	08/17/92	OK	6	125	82	82
S256	2F2813	5087	08/17/92	OK	6	200	82	82
S257	2F2813	5087	08/17/92	OK	6	205	82	82
S258	2F2813	5087	08/17/92	OK	6	223	82	82
S259	2F2813	5087	08/17/92	OK	6	68	82	82
S260	2F2813	5087	08/17/92	OK	6	68	82	82
S261	2F2615	5087	08/17/92	OK	6	160	81	82
S262	2F2810	5087	08/17/92	OK	6	165	82	82
S263	2F2810	5087	08/17/92	OK	6	165	82	82

APPENDIX M

M.1

FUSION METHOD

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GEOMEMBRANE TRIAL SEAM SUMMARY
FUSION METHOD - SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER	DATE	TIME TESTED	WELDER ID. MACHINE NUMBER	WELDER ID. TECH	APPROX. AMBIENT TEMP.(F)	DIGITAL SET TEMP.	RESULTS PEEL INSIDE	RESULTS PEEL OUTSIDE	SHEAR	QA MON	REMARKS
TF-01	07/21/92	1300	1320	138	75	700	P1/P1/F1	P1/P1/--	--	LEL	FAIL, SEE RETEST TF-01R1
TF-01R1	07/21/92	1340	1320	138	75	700	P1/P1P/1	P1/P1P/1	P2	LEL	
TF-02	07/21/92	1310	1404	325	75	700	P1/P1P/1	P1/P1/P1	P2	LEL	
TF-03	07/21/92	1405	1319	45	75	700	P1/P1/P1	F1/--/--	--	CAW	FAIL,SEE RETEST TF-03R1
TF-03R1	07/21/92	1420	1319	45	75	700	P1/--/--	P1/P1/P1	P2	CAW	
TF-04	07/21/92	1625	1404	325	75	700	P1/P1/P1/	P1/P1/P1	P2	CAW	
TF-05	07/21/92	1645	1320	138	75	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-06	07/21/92	1910	1203	325	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-07	07/21/92	2010	1320	138	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-08	07/21/92	2020	1203	325	70	700	P1/P1/P1	P1/F1/P1	--	CAW	FAIL,TECH DID NOT WELD
TF-01	07/22/92	0845	1203	325	55	700	P1/P1/P1	P1/P1/--	--	CAW	FAIL,SEE RETEST TF-01R1
TF-01R1	07/22/92	0910	1203	325	55	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-02	07/22/92	1340	1320	138	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-03	07/22/92	1422	1203	325	75	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-04	07/22/92	1820	1320	138	67	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-05	07/22/92	1830	1203	325	67	700	F3/--/--	--/--/-	--	CAW	FAIL,TECH DID NOT WELD
TF-06	07/22/92	1830	1319	45	67	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-01	07/24/92	0800	1320	138	64	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-02	07/24/92	0800	1404	325	64	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-03	07/24/92	1000	1320	138	64	700	P1/F1/--	P1/--/--	--	LEL	FAIL,SEE RETEST TF-03R1
TF-03R1	07/24/92	1150	1320	138	67	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-04	07/24/92	1030	1203	138	64	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-05	07/24/92	1300	1404	325	70	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-06	07/24/92	1545	1320	138	72	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-07	07/24/92	1240	1404	325	72	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-01	07/25/92	0755	1240	325	65	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-02	07/25/92	0820	1320	138	67	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-03	07/25/92	1830	1404	45	68	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-04	07/25/92	1100	1240	325	75	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-05	07/25/92	1120	1320	138	75	700	P1/P1/P1	P1/P1/P1	P2	LEL	

"S_TFSEAM.WK1" disk 1

JUNE 1993

917-1203

GEOMEMBRANE TRIAL SEAM SUMMARY
FUSION METHOD – SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER	DATE	TIME TESTED	WELDER ID. MACHINE NUMBER	WELDER ID. TECH	APPROX. AMBIENT TEMP.(F)	DIGITAL SET TEMP.	RESULTS PEEL INSIDE	RESULTS PEEL OUTSIDE	SHEAR	QA MON	REMARKS
TF-06	07/25/92	1600	1240	325	80	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-07	07/25/92	1620	1320	138	80	700	P1/P1/P1	P1/P1/P1	--	LEL	FAIL; SEE RETEST TF-07R1
TF-07R1	07/25/92	1650	1320	138	80	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-08	07/25/92	1730	1404	138	80	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-09	07/25/92	1735	1319	45	80	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-10	07/25/92	1955	1404	138	75	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-11	07/25/92	2000	1240	325	75	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-12	07/25/92	2040	1319	45	75	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-01	07/27/92	1648	1404	138	78	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-02	07/27/92	1720	1240	325	78	700	P1/P1/P1	P1/P1/P1	P2	LEL	
TF-01	07/28/92	0800	1404	18	72	710	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-02	07/28/92	0810	1240	325	72	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-03	07/28/92	0945	1240	325	75	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-04	07/28/92	1320	1404	138	78	710	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-05	07/28/92	1330	1319	5	78	700	P1/P1/--	P1/--/--	--	CAW	FAIL; SEE RETEST TF-05R1
TF-05R1	07/28/92	1400	1319	5	78	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-06	07/28/92	1440	1240	325	78	700	P1/F1/--	P1/--/--	--	CAW	FAIL; SEE RETEST TF-06R1
TF-06R1	07/28/92	1500	1240	325	78	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-07	07/28/92	1500	1404	138	78	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-08	07/28/92	1630	1240	325	77	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-09	07/28/92	1700	1404	138	77	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-10	07/28/92	1900	1319	45	77	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-11	07/28/92	EOD	1319	45	--	700	P1/P1/P1	P1/P1/P1	P2	TAH	
TF-12	07/28/92	EOD	1404	138	--	700	P1/P1/P1	P1/P1/P1	P2	TAH	
TF-13	07/28/92	EOD	1240	325	--	700	P1/P1/P1	P1/P1/P1	P2	TAH	
TF-01	07/29/92	1330	1404	138	78	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-02	07/29/92	1335	1240	325	78	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-03	07/29/92	1500	1240	325	78	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-04	07/29/92	1720	1240	325	78	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-05	07/29/92	1810	1240	325	76	700	P1/P1/P1	P1/P1/P1	P2	CAW	

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GEOMEMBRANE TRIAL SEAM SUMMARY
FUSION METHOD – SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER	DATE	TIME TESTED	WELDER ID. MACHINE NUMBER	WELDER ID. TECH	APPROX. AMBIENT TEMP.(F)	DIGITAL SET TEMP.	RESULTS PEEL INSIDE	RESULTS PEEL OUTSIDE	SHEAR	QA MON	REMARKS
TF-01	08/01/92	0900	1319	BJ	68	700	P1/--/--	--/--/--	--	TAH	FAIL; SEE RETEST TF-O1R1
TF-01R1	08/01/92	0930	1319	BJ	68	700	P1/P1/P1	P1/P1/P1	P2	TAH	
TF-02	08/01/92	1400	1319	BJ	68	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-01	08/04/92	1530	1404	BJ	69	710	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-02	08/04/92	1540	1240	325	69	710	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-03	08/04/92	1625	1203	PV	69	700	P1/P1/F1	P1/P1/--	--	CAW	FAIL,SEE RETEST TF-03R1
TF-03R1	08/04/92	1645	1203	PV	69	700	P1/P1/F1	P1/P1/--	--	CAW	FAIL,SEE RETEST TF-03R2
TF-03R2	08/04/92	1710	1203	PV	69	700	P1/P1/P1	P1/P1/P1	P2	CAW	PASS,SEE TF-03R3
TF-03R3	08/04/92	1715	1203	PV	69	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-04	08/04/92	1755	1404	BJ	69	710	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-05	08/04/92	1800	1240	325	69	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-06	08/04/92	1910	1319	45	69	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-07	08/04/92	EOD	1319	45	69	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-08	08/04/92	EOD	1240	325	69	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-09	08/04/92	EOD	1203	PV	69	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-10	08/04/92	EOD	1404	BJ	69	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-01	08/05/92	0800	1203	PV	65	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-02	08/05/92	0825	1404	BJ	65	710	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-03	08/05/92	1035	1404	BJ	70	710	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-04	08/05/92	1040	1203	PV	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-05	08/05/92	1130	1404	BJ	72	710	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-06	08/05/92	1155	1203	PV	75	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-07	08/05/92	1320	1404	BJ	78	710	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-01	08/06/92	0845	1404	BJ	67	710	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-02	08/06/92	1010	1240	325	71	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-03	08/06/92	1240	1404	BJ	75	710	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-04	08/06/92	1300	1240	325	75	710	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-05	08/06/92	1350	1404	BJ	75	710	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-06	08/06/92	1700	1404	BJ	75	710	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-07	08/06/92	1800	1404	BJ	70	700	P1/P1/P1	P1/P1/P1	P2	AWJ	

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GEOMEMBRANE TRIAL SEAM SUMMARY
FUSION METHOD – SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER	DATE	TIME TESTED	WELDER ID. MACHINE NUMBER	WELDER ID. TECH	APPROX. AMBIENT TEMP.(F)	DIGITAL SET TEMP.	RESULTS PEEL INSIDE	RESULTS PEEL OUTSIDE	SHEAR	QA MON	REMARKS
TF-08	08/06/92	1800	1319	BJ	70	700	P1/P1/P1	P1/P1/P1	P2	AWJ	
TF-09	08/06/92	1830	1240	325	70	700	P1/P1/P1	P1/P1/P1	P2	AWJ	
TF-10	08/06/92	1920	1319	BJ	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-11	08/06/92	1950	1240	325	70	710	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-01	08/07/92	1610	1404	BJ	80	700	P1/P1/--	P1/F2/--	--	CAW	FAIL, SEE RETEST 01R1
TF-01R1	08/07/92	1630	1404	BJ	80	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-02	08/07/92	1700	1240	146	75	700	P1/P1/--	F1/--/--	--	CAW	FAIL, SEE RETEST 02R1
TF-02R1	08/07/92	1720	1240	146	75	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-03	08/07/92	2000	1240	146	73	700	P1/F2/--	P1/P1/--	--	CAW	FAIL, TECH DID NOT WELD
TF-01	08/10/92	1740	1240	146	90	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-02	08/10/92	1750	1404	BJ	90	700	P1/F2/--	P1/F2/--	--	CAW	FAIL, TECH DID NOT WELD
TF-01	08/11/92	1730	1404	BJ	95	710	F1/--/--	F1/--/--	--	CAW	FAIL, NO WELDING TODAY
TF-01	08/12/92	1430	1404	BJ	78	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-02	08/12/92	1440	1240	JS	78	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-03	08/12/92	2000	1240	JS	73	700	FAIL	FAIL	--	CAW	FAIL, NO RETEST - RAIN
TF-04	08/12/92	2003	1404	BJ	73	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-01	08/15/92	1345	1240	325	70	700	P1/P1/--	P1/F2/--	--	CAW	FAIL, SEE RETEST TF-01R1
TF-01R1	08/15/92	1420	1240	325	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-02	08/15/92	1400	1404	JS	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-03	08/15/92	1410	1319	BJ	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-04	08/15/92	1620	1404	JS	70	700	P1/P1/P1	P1/P1/P1	P2	SRS	
TF-05	08/15/92	1704	1240	325	70	700	F2/P1/P1	P1/P1/F2	--	SRS	END OF DAY - NO RETEST
TF-06	08/15/92	EOD	1319	BJ	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-01	08/16/92	1405	1240	325	70	700	P1/F2/--	F2/--/--	--	CAW	FAIL, SEE RETEST TF-01R1
TF-01R1	08/16/92	1440	1240	325	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-02	08/16/92	1400	1404	JS	70	700	P1/F2/--	F2/--/--	--	CAW	FAIL, SEE RETEST TF-02R1
TF-02R1	08/16/92	1445	1404	JS	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-03	08/16/92	1500	1205	208	74	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-04	08/16/92	1550	1203	JF	75	700	F2/--/--	--/--/--	--	CAW	
TF-05	08/16/92	1800	1319	BJ	73	700	P1/P1/P1	P1/P1/P1	P2	CAW	

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GEOMEMBRANE TRIAL SEAM SUMMARY
FUSION METHOD - SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER	DATE	TIME TESTED	WELDER ID. MACHINE NUMBER	WELDER ID. TECH	APPROX. AMBIENT TEMP.(F)	DIGITAL SET TEMP.	RESULTS PEEL INSIDE	RESULTS PEEL OUTSIDE	SHEAR	QA MON	REMARKS
TF-06	08/16/92	1800	1240	325	73	700	P1/P1/P1	P1/P1/--	--	CAW	FAIL, SEE RETEST TF-06R1
TF-06R1	08/16/92	1900	1240	325	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-07	08/16/92	1845	1205	208	73	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-08	08/16/92	EOD	1404	JS	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-09	08/16/92	EOD	1205	208	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-10	08/16/92	EOD	1319	BJ	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-11	08/16/92	EOD	1240	325	70	700	P2/P2/--	P1/F2/--	--	CAW	FAIL, SEE RETEST TF-11R1
TF-11R1	08/16/92	EOD	1240	325	70	700	P1/P1/--	F2/F2/--	--	CAW	END OF DAY - NO RETEST
TF-01	08/17/92	1015	1319	BJ	68	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-02	08/17/92	1020	1404	JS	68	700	P1/P1/P1	P1/P1/P1	P2	CAW	RESET WELDER - RETEST
TF-02R1	08/17/92	1040	1404	JS	68	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-03	08/17/92	1025	1240	325	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-04	08/17/92	1330	1240	325	75	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-05	08/17/92	1340	1404	JS	75	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-06	08/17/92	1340	1319	BJ	75	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-07	08/17/92	1600	1203	325	75	700	P1/P1/F2	P1/P1/--	--	CAW	FAIL, SEE RETEST TF-07R1
TF-07R1	08/17/92	1620	1203	325	75	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-08	08/17/92	1900	1319	BJ	73	700	P1/P1/F2	P1/P1/F2	--	CAW	FAIL, SEE RETEST TF-08R1
TF-08R1	08/17/92	1930	1319	BJ	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-09	08/17/92	1900	1404	JS	73	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-10	08/17/92	1940	1240	325	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-11	08/17/92	2015	1203	317	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-01	08/18/92	810	1319	BJ	65	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-02	08/18/92	820	1404	JS	65	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-03	08/18/92	1320	1404	JS	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	
TF-04	08/18/92	1330	1319	BJ	70	700	P1/P1/P1	P1/P1/P1	P2	CAW	

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M.2

EXTRUSION METHOD

JUNE 1993

917-1203

GEOMEMBRANE TRIAL SEAM SUMMARY
EXTRUSION METHOD – SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER	DATE	TIME TESTED	AMBIENT TEMP. (F)	WELDER ID. MACH. NUMBER	WELDER ID. TECH.	MACHINE TEMP.(C) BAR.	MACHINE TEMP.(C) NOZ.	RESULTS PEEL	RESULTS SHEAR	QA MONITOR	REMARKS
TX-01	07/21/92	1615	75	042	145	6	230	F1/--/--	--	CAW	FAIL, SEE RETEST TX-01R1
TX-01R1	07/21/92	1655	75	042	145	5	225	P1/P1/P1	P2	CAW	
TX-01	07/22/92	855	55	042	145	6	230	P1/P1/P1	P2	CAW	
TX-02	07/22/92	1350	75	042	145	5.5	225	P1/P1/P1	P2	CAW	
TX-03	07/22/92	1430	75	070	LEM	5	225	P1/P1/P1	P2	CAW	
TX-04	07/22/92	1440	75	070	398	5	225	P1/P1/P1	P2	CAW	
TX-01	07/24/92	820	64	042	145	5.5	225	P1/P1/P1	FAIL	LEL	FAIL, SEE RETEST TX-01R1
TX-01R1	07/24/92	845	64	042	145	5	225	P1/P1/P1	P2	LEL	
TX-02	07/24/92	830	64	070	LEM	6	227	P1/P1/P1	P2	LEL	
TX-03	07/24/92	850	64	070	398	6	227	F1/--/--	--	LEL	FAIL, SEE RETEST TX-03R1
TX-03R1	07/24/92	910	64	070	398	6	227	P1/P1/P1	P2	LEL	
TX-04	07/24/92	1315	70	042	145	6	225	F1/--/--	--	LEL	FAIL, SEE RETEST TX-04R1
TX-04R1	07/24/92	1330	70	042	145	6	225	P1/P1/P1	P2	LEL	
TX-05	07/24/92	1315	70	070	398	5.5	225	P1/P1/P1	P2	LEL	
TX-06	07/24/92	1320	70	070	LEM	5.5	225	P1/P1/P1	P2	LEL	
TX-07	07/24/92	1650	72	042	145	5	225	P1/P1/P1	P2	LEL	
TX-08	07/24/92	1720	72	070	398	5.5	225	P1/P1/P1	P2	LEL	
TX-09	07/24/92	1725	72	070	LEM	5.5	225	P1/P1/P1	P2	JAL	
TX-10	07/24/92	1900	68	111	138	5.5		P1/P1/P1	P2	LEL	
TX-01	07/25/92	750	65	070	398	5	225	P1/F1/--	--	CAW	FAIL, SEE RETEST TX-01R1
TX-01R1	07/25/92	810	65	070	398	5	225	P1/P1/P1	P2	CAW	
TX-02	07/25/92	805	65	042	145	4.5	220	P1/P1/P1	P2	CAW	
TX-03	07/25/92	820	67	070	LEM	6	227	P1/P1/P1	P2	CAW	
TX-04	07/25/92	1320	78	070	LEM	4.5	220	P1/P1/P1	FAIL	CAW	FAIL, SEE RETEST TX-04R1
TX-04R1	07/25/92	1345	78	070	LEM	4.5	220	P1/P1/P1	P2	CAW	
TX-05	07/25/92	1325	78	070	398	4.5	220	P1/P1/P1	P2	CAW	
TX-06	07/25/92	1330	78	042	145	4	220	P1/P1/P1	P2	CAW	
TX-07	07/25/92	1700	80	070	398	4.5	220	P1/P1/P1	P2	CAW	
TX-08	07/25/92	1710	80	042	145	4.5	220	P1/P1/P1	P2	CAW	
TX-09	07/25/92	1725	80	070	LEM	4.5	220	P1/P1/P1	P2	CAW	
TX-01	07/27/92	800	67	070	398	5.5	225	P1/P1/P1	P2	CAW	
TX-02	07/27/92	810	69	070	LEM	5.5	225	P1/P1/P1	P2	LEL	
TX-03	07/27/92	815	69	042	145	4.5	220	P1/P1/P1	P2	LEL	
TX-04	07/27/92	1315	78	070	398	5.5	225	P1/P1/P1	P2	LEL	
TX-05	07/27/92	1320	78	070	LEM	5.5	225	P1/P1/P1	P2	LEL	
TX-06	07/27/92	1330	78	042	145	4	220	P1/P1/P1	P2	LEL	

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917-1203

GEOMEMBRANE TRIAL SEAM SUMMARY
EXTRUSION METHOD – SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER	DATE	TIME TESTED	AMBIENT TEMP. (F)	WELDER ID. MACH. NUMBER	WELDER ID. TECH.	MACHINE TEMP.(C) BAR.	MACHINE TEMP.(C) NOZ.	RESULTS PEEL	RESULTS SHEAR	QA MONITOR	REMARKS
TX-07	07/27/92	1710	84	042	145	4	220	P1/P1/P1	P2	LEL	
TX-08	07/27/92	1930	78	042	145	4	220	P1/P1/P1	P2	LEL	
TX-09	07/27/92	1930	78	070	LEM	5.5	225	P1/P1/P1	P2	LEL	
TX-10	07/27/92	1940	78	070	398	5.5	225	P1/P1/P1	P2	AWJ	
TX-01	07/28/92	820	72	042	145	4.5	220	P1/P1/P1	P2	CAW	
TX-02	07/28/92	920	72	070	398	5.5	225	P1/P1/P1	P2	CAW	
TX-03	07/28/92	930	72	070	LEM	5.5	225	P1/P1/P1	P2	CAW	
TX-04	07/28/92	1530	78	042	145	4.5	225	P1/P1/P1	P2	CAW	
TX-05	07/28/92	1445	78	070	LEM	5	220	P1/P1/P1	P2	CAW	
TX-06	07/28/92	1710	78	042	145	4.5	225	P1/P1/P1	P2	CAW	
TX-07	07/28/92	1730	76	070	398	4	220	P1/P1/P1	P2	CAW	
TX-08	07/28/92	2040	70	042	145	4.5	225	P1/P1/P1	P2	TAH	
TX-09	07/28/92	2045	70	070	398	4	220	P1/P1/P1	P2	TAH	
TX-10	07/28/92	EOD	70	042	145	4.5	225	P1/P1/P1	P2	TAH	
TX-01	07/29/92	830	55	032	LEM	5.5	227	P1/P1/P1	P2	AWJ	
TX-02	07/29/92	830	55	032	398	5	227	P1/P1/P1	P2	AWJ	
TX-03	07/29/92	830	55	042	145	5	220	P1/P1/P1	P2	AWJ	
TX-04	07/29/92	1325	78	032	398	5	225	P1/P1/P1	P2	CAW	
TX-05	07/29/92	1328	78	042	145	4.5	220	P1/P1/P1	P2	CAW	
TX-06	07/29/92	1335	78	032	LEM	4.5	225	P1/P1/P1	P2	CAW	
TX-07	07/29/92	1800	76	032	LEM	4.5	225	P1/P1/P1	P2	CAW	
TX-08	07/29/92	1805	76	032	398	4.5	225	P1/P1/P1	P2	CAW	
TX-09	07/29/92	1820	76	042	145	4	220	P1/P1/P1	P2	CAW	
TX-01	07/30/92	750	68	042	145	4	220	P1/P1/P1	P2	CAW	
TX-01	08/01/92	1740	73	032	JF	5	220	P1/P1/P1	P2	CAW	
TX-01	08/03/92	900	55	042	145	4	220	P1/P1/P1	P2	AWJ	
TX-02	08/03/92	1030	60	109	398	4.5	225	P1/P1/P1	P2	AWJ	
TX-03	08/03/92	1110	60	109	LEM	4	225	P1/P1/P1	P2	AWJ	
TX-04	08/03/92	1330	78	109	398	4	220	P1/P1/P1	P2	CAW	
TX-05	08/03/92	1340	78	042	145	3.5	218	P1/P1/P1	P2	CAW	
TX-06	08/03/92	1345	78	109	LEM	4	220	P1/P1/P1	P2	CAW	
TX-01	08/04/92	800	61	042	145	4.5	220	P1/P1/P1	P2	CAW	
TX-02	08/04/92	820	61	109	398	4	220	FAIL	FAIL	CAW	FAIL, TECH DID NOT WELD
TX-03	08/04/92	830	61	109	LEM	4	225	P1/P1/P1	P2	CAW	
TX-04	08/04/92	1610	69	042	145	4	220	P1/P1/P1	P2	CAW	
TX-0[illegible]	08/04/92	1615	69	111	398	4.5	225	P1/P1/P1	P2	CAW	

GEOMEMBRANE TRIAL SEAM SUMMARY
EXTRUSION METHOD – SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER	DATE	TIME TESTED	AMBIENT TEMP. (F)	WELDER ID. MACH. NUMBER	WELDER ID. TECH.	MACHINE TEMP.(C) BAR.	MACHINE TEMP.(C) NOZ.	RESULTS PEEL	RESULTS SHEAR	QA MONITOR	REMARKS
TX-06	08/04/92	1630	69	111	LEM	4	225	P1/P1/P1	P2	CAW	
TX-07	08/04/92	EOD	69	042	145	4	220	P1/P1/P1	P2	CAW	
TX-08	08/04/92	EOD	69	111	LEM	4	225	P1/P1/P1	P2	CAW	
TX-01	08/05/92	815	65	111	LEM	5	225	P1/P1/P1	P2	CAW	
TX-02	08/05/92	830	65	111	398	5	225	P1/P1/P1	P2	CAW	
TX-03	08/05/92	915	65	042	145	4	220	P1/P1/P1	P2	CAW	
TX-04	08/05/92	1330	78	111	398	4	220	P1/P1/P1	P2	CAW	
TX-05	08/05/92	1340	78	111	LEM	4	220	P1/P1/P1	P2	CAW	
TX-06	08/05/92	1345	78	042	145	3.5	218	P1/P1/P1	P2	CAW	
TX-07	08/05/92	1720	78	042	145	3.5	218	P1/P1/P1	P2	CAW	
TX-08	08/05/92	1730	78	111	398	4	220	P1/P1/P1	P2	CAW	
TX-01	08/06/92	810	67	042	145	4	225	P1/P1/P1	P2	CAW	
TX-02	08/06/92	812	67	111	398	5	225	F1/--/--	--	CAW	FAIL. SEE RETEST TX-02R1
TX-02R1	08/06/92	842	67	111	398	6	225	FAIL	FAIL	CAW	FAIL. SEE RETEST TX-02R2
TX-02R2	08/06/92	906	68	111	398	6	225	P1/P1/P1	P2	CAW	
TX-03	08/06/92	912	68	042	LEM	4	225	P1/P1/P1	P2	CAW	
TX-04	08/06/92	1022	71	042	LEM	4.5	225	P1/P1/P1	P2	CAW	
TX-05	08/06/92	1230	75	042	145	4	220	P1/P1/P1	P2	CAW	
TX-06	08/06/92	1235	75	111	398	6	225	P1/P1/P1	P2	CAW	
TX-07	08/06/92	1800	70	042	LEM	4	220	P1/P1/P1	P2	CAW	
TX-08	08/06/92	1800	70	042	145	4	220	P1/P1/P1	P2	CAW	
TX-09	08/06/92	1800	70	111	398	5	225	P1/P1/P1	P2	CAW	
TX-10	08/06/92	1940	70	111	398	5	225	P1/P1/P1	P2	CAW	
TX-01	08/07/92	805	70	111	398	5.5	225	P1/P1/P1	P2	CAW	
TX-02	08/07/92	815	68	042	145	4.5	225	P1/P1/P1	P2	CAW	
TX-03	08/07/92	1334	70	111	398	4	225	P1/P1/P1	P2	CAW	
TX-04	08/07/92	1335	70	042	145	4	220	P1/P1/P1	P2	CAW	
TX-05	08/07/92	1820	73	111	398	4	225	P1/P1/F1	--	CAW	FAIL, TECH DIN NOT WELD
TX-06	08/07/92	1830	73	111	LEM	4	225	P1/P1/P1	P2	CAW	
TX-07	08/07/92	1840	73	042	145	4	220	P1/P1/P1	P2	CAW	
TX-08	08/07/92	1850	73	111	398	4	225	P1/P1/P1	P2	CAW	
TX-01	08/10/92	800	76	111	398	5	225	P1/P1/P1	P2	CAW	
TX-02	08/10/92	845	76	042	145	4.5	225	P1/P1/P1	P2	CAW	
TX-03	08/10/92	955	80	042	145	4.5	225	P1/P1/P1	P2	CAW	
TX-04	08/10/92	1340	92	111	398	4	220	P1/P1/P1	P2	CAW	
TX-05	08/10/92	1345	92	042	145	4	220	P1/P1/P1	P2	CAW	

GEOMEMBRANE TRIAL SEAM SUMMARY
EXTRUSION METHOD – SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER	DATE	TIME TESTED	AMBIENT TEMP. (F)	WELDER ID. MACH. NUMBER	WELDER ID. TECH.	MACHINE TEMP.(C) BAR.	MACHINE TEMP.(C) NOZ.	RESULTS PEEL	RESULTS SHEAR	QA MONITOR	REMARKS
TX-06	08/10/92	EOD	92	042	145	4	220	P1/P1/P1	P2	CAW	
TX-01	08/11/92	1335	78	042	145	4	220	P1/P1/P1	P2	CAW	
TX-02	08/11/92	1340	78	042	398	4	220	P1/P1/P1	P2	CAW	
TX-03	08/11/92	EOD	78	042	145	4	220	P1/P1/P1	P2	CAW	
TX-01	08/12/92	1530	75	042	145	4	220	P1/P1/P1	P2	CAW	
TX-01	08/14/92	800	61	111	398	5.5	225	P1/P1/P1	P2	CAW	
TX-02	08/14/92	810	61	042	145	5	225	P1/P1/P1	P2	CAW	
TX-03	08/14/92	1320	62	111	398	5.5	225	P1/P1/F1	--	CAW	FAIL, SEE RETSET TX-03R1
TX-03R1	08/14/92	1330	62	111	398	5.5	225	P1/P1/P1	P2	CAW	
TX-04	08/14/92	1330	62	042	145	5	225	P1/P1/P1	P2	CAW	
TX-05	08/14/92	EOD	65	111	398	5.5	225	P1/P1/P1	P2	CAW	
TX-06	08/14/92	EOD	65	042	145	5	225	P1/P1/P1	P2	CAW	
TX-01	08/15/92	820	60	111	398	5.5	225	P1/P1/P1	P2	CAW	
TX-02	08/15/92	840	60	042	145	5	225	P1/P1/P1	P2	CAW	
TX-03	08/15/92	1330	70	042	145	5	225	P1/F2/--	--	CAW	FAIL, SEE RETSET TX-03R1
TX-03R1	08/15/92	1350	70	042	145	5	225	P1/P1/P1	P2	CAW	
TX-04	08/15/92	1500	70	111	398	5	225	P1/P1/P1	P2	CAW	
TX-06	08/15/92	EOD	70	042	145	5	225	P1/P1/P1	P2	CAW	TEST NUMBER TX-05 SKIPPED
TX-07	08/15/92	EOD	70	111	398	5.5	225	P1/P1/P1	P2	CAW	
TX-01	08/16/92	740	65	042	145	5	225	P1/P1/P1	P2	CAW	
TX-02	08/16/92	800	65	111	398	5.5	225	P1/P1/P1	P2	CAW	
TX-03	08/16/92	1315	70	111	398	5.5	225	P1/P1/P1	P2	CAW	
TX-04	08/16/92	1330	70	042	145	5	225	P1/P1/P1	P2	CAW	
TX-05	08/16/92	1730	75	042	145	5	225	P1/P1/P1	P2	CAW	
TX-06	08/16/92	1830	73	111	398	5.5	225	P1/P1/P1	P2	CAW	
TX-07	08/16/92	EOD		042	145	5	225	P1/P1/P1	P2	CAW	
TX-08	08/16/92	EOD		111	398	5.5	225	P1/P1/P1	P2	CAW	
TX-01	08/17/92	800	62	042	145	5	225	P1/P1/P1	--	CAW	FAIL, SEE RETEST TX-01R1
TX-01R1	08/17/92	820	62	042	145	5	225	P1/P1/P1	P2	CAW	
TX-02	08/17/92	830	62	111	398	5.5	225	P1/P1/P1	P2	CAW	
TX-03	08/17/92	1400	75	042	145	5	225	P1/P1/P1	P2	CAW	
TX-04	08/17/92	1625	75	111	398	5	225	P1/P1/P1	P2	CAW	
TX-01	08/18/92	800	65	111	398	5.5	225	P1/P1/P1	P2	CAW	
TX-02	08/18/92	810	65	042	145	5	225	P1/P1/P1	P2	CAW	
TX-03	08/18/92	1000	70	085	145	5	225	P1/P1/P1	P2	CAW	
TX-04	08/18/92	1500	70	111	398	5.5	225	P1/P1/P1	P2	CAW	

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GEOMEMBRANE TRIAL SEAM SUMMARY
EXTRUSION METHOD – SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER	DATE	TIME TESTED	AMBIENT TEMP. (F)	WELDER ID. MACH. NUMBER	WELDER ID. TECH.	MACHINE TEMP.(C) BAR.	MACHINE TEMP.(C) NOZ.	RESULTS PEEL	RESULTS SHEAR	QA MONITOR	REMARKS
TX-05	08/18/92	1515	68	109	145	5.5	225	P1/P1/P1	P2	CAW	
TX-01	08/19/92	1800	60	109	145	6	225	P1/P1/P1	P2	CAW	
TX-02	08/19/92	1815	60	111	398	5.5	225	P1/P1/P1	P2	CAW	
TX-03	08/19/92	1330	75	111	398	5	225	P1/P1/P1	P2	CAW	
TX-04	08/19/92	1340	75	109	145	6	225	P1/P1/P1	--	CAW	FAIL, SEE RETEST TX-04R1
TX-04R1	08/19/92	1400	75	109	145	5	225	P1/P1/P1	P2	CAW	
TX-05	08/19/92	EOD		109	145	6	225	P1/P1/P1	P2	CAW	
TX-06	08/19/92	EOD		111	398	5.5	225	P1/P1/P1	P2	CAW	
TX-01	08/20/92	800	65	082	145	5	225	P1/P1/P1	--	CAW	FAIL, SEE RETEST TX-01R1
TX-01R1	08/20/92	835	65	082	145	5	225	P1/P1/P1	P2	CAW	
TX-02	08/20/92	840	65	111	398	5.5	225	P1/P1/P1	P2	CAW	
TX-03	08/20/92	1330	75	082	145	5	225	P1/P1/P1	P2	CAW	
TX-04	08/20/92	EOD		028	JAD	7	240	P1/P1/P1	P2	CAW	
TX-05	08/20/92	EOD		082	145	5	225	P1/P1/P1	P2	CAW	
TX-01	08/21/92	810	70	082	145	6	225	P1/P1/P1	P2	CAW	
TX-02	08/21/92	1400	78	028	145	5	220	P1/P1/P1	P2	CAW	
TX-03	08/21/92	1400	78	398	398	4.5	220	P1/P1/P1	P2	CAW	
TX-04	08/21/92	EOD		111	398	4.5	220	P1/P1/P1	P2	CAW	
TX-05	08/21/92	EOD		028	145	5	220	P1/P1/P1	P2	CAW	
TX-01	08/22/92	800	69	028	145	6	225	P1/P1/P1	P2	CAW	
TX-02	08/22/92	805	69	111	LEM	6.5	225	P1/P1/P1	P2	CAW	
TX-03	08/22/92	915	73	111	LEM	6.5	225	P1/P1/P1	P2	CAW	
TX-04	08/22/92	1540	70	111	398	4	220	P1/P1/P1	P2	CAW	
TX-05	08/22/92	1550	70	111	LEM	5	220	P1/P1/P1	P2	CAW	
TX-06	08/22/92	1650	70	028	145	6	225	P1/P1/P1	P2	CAW	
TX-01	08/24/92	830	69	111	LEM	6	225	P1/P1/P1	P2	BIE	
TX-02	08/24/92	1530	75	111	398	5.5	220	P1/P1/P1	P2	BIE	
TX-03	08/24/92	1530	75	111	LEM	5.5	220	P1/P1/P1	P2	BIE	
TX-04	08/24/92	1510	75	047	145	6	225	P1/P1/P1	P2	BIE	
TX-05	08/24/92	1830	70	047	145	6	225	P1/P1/P1	P2	BIE	

APPENDIX N

N.1

FUSION METHOD

GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S001/002	07/21/92	1450	74	CAW	325	1404	700	699	161	DS-01	07/21/92	LEL
S001/033A	07/22/92	1945	62	LEL	45	1319	700	680	15		07/25/92	LEL
S001/262	08/18/92	1056	70	CAW	JS	1404	700	700	145	DS-85	08/18/92	CAW
S002/003	07/24/92	1050	67	LEL	138	1203	700	696	91		07/25/92	LEL
S002/003	07/22/92	1740	74	CAW	325	1203	700	700	155	DS-08	07/25/92	LEL
S002/003	07/21/92	1457	74	CAW	138	1320	700	701	161	DS-02,N1,P1	07/25/92	LEL
S002/003	07/24/92	0900	70	LEL	138	1320	700	699	64		07/25/92	LEL
S002/033	07/22/92	1946	62	LEL	45	1319	700	682	7		07/25/92	LEL
S002/033A	07/22/92	1946	62	LEL	45	1319	700	682	7		07/25/92	LEL
S003/004	07/21/92	1510	74	CAW	325	1404	700	699	162		07/21/92	LEL
S003/033	07/22/92	1947	62	LEL	45	1319	700	699	12		07/25/92	LEL
S004/005	07/22/92	1435	74	CAW	325	1203	700	700	160	DS-02N2	07/22/92	LEL
S004/005	07/21/92	1520	74	CAW	138	1320	700	700	161		07/22/92	LEL
S004/033	07/22/92	1948	62	LEL	45	1319	700	696	14		07/25/92	LEL
S005/006	07/21/92	1540	74	CAW	325	1404	700	699	161		07/21/92	LEL
S005/033	07/22/92	1952	62	LEL	45	1319	700	699	14	DS-10	07/25/92	LEL
S006/007	07/21/92	1550	74	CAW	138	1320	700	700	160	DS-03	07/21/92	LEL
S006/033	07/22/92	1954	62	LEL	45	1319	700	699	13		07/25/92	LEL
S007/008	07/21/92	1630	74	CAW	325	1404	700	700	159	DS-04	07/21/92	LEL
S007/033	07/22/92	1957	61	LEL	45	1319	700	698	14		07/25/92	LEL
S008/009	07/21/92	1640	74	CAW	138	1320	700	700	159		07/21/92	AWJ
S008/033	07/22/92	1959	61	LEL	45	1319	700	697	14	DS-O3N1	07/25/92	LEL
S009/010	07/21/92	1710	74	CAW	325	1404	700	696	160		07/21/92	AWJ
S009/033	07/22/92	2001	60	LEL	45	1319	700	697	14		07/25/92	LEL
S010/011	07/21/92	1730	74	CAW	138	1320	700	700	159		07/21/92	AWJ
S010/033	07/22/92	1943	67	CAW	138	1320	700	700	15		07/25/92	LEL
S011/012	07/21/92	1810	70	CAW	325	1404	700	694	149		07/21/92	AWJ
S011/032	07/22/92	1941	62	LEL	45	1319	700	701	15		07/25/92	LEL
S011/033	07/22/92	1940	67	CAW	138	1320	700	700	2		07/25/92	AWJ
S012/013	07/21/92	1930	70	CAW	138	1320	700	686	137	DS-05	07/21/92	AWJ

NOTES: filename"S_FUSWLD.WK1"

1) THE SEAM TEST DATE SHOWN REPRESENTS THE DATE WHEN THE SEAM NON-DESTRUCTIVE TESTING WAS COMPLETED, AND DOES NOT REPRESENT THE TESTING OF INDIVIDUAL SEAM SEGMENTS.

2) SEAMS S112/124 AND S208/209 WERE FAST LIESTERED AND SUBSEQUENTLY CAPPED DUE TO WEATHER. NO TRIAL SEAM WAS REQUIRED PRIOR TO LIESTERING THE PANELS.

GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S012/031	07/22/92	1940	62	LEL	45	1319	700	701	22		07/25/92	LEL
S012/032	07/22/92	1941	62	LEL	45	1319	700	701	2		07/25/92	LEL
S013/014	07/21/92	1930	70	CAW	325	1203	700	689	120		07/21/92	AWJ
S013/029	07/22/92	1934	62	LEL	45	1319	700	700	19		07/25/92	LEL
S013/031	07/22/92	1935	62	LEL	45	1319	700	700	1		07/25/92	LEL
S014/015	07/21/92	1930	70	CAW	325	1203	700	696	108		07/21/92	AWJ
S014/028	07/22/92	1931	62	LEL	45	1319	700	699	14		07/25/92	LEL
S014/029	07/22/92	1933	62	LEL	45	1319	700	700	4		07/25/92	LEL
S015/016	07/21/92	1950	70	CAW	138	1320	700	686	94		07/21/92	AWJ
S015/027	07/22/92	1929	64	LEL	45	1319	700	699	7		07/25/92	LEL
S015/028	07/22/92	1930	63	LEL	45	1319	700	701	9		07/25/92	LEL
S016/017	07/22/92	1435	74	CAW	138	1320	700	675	83		07/22/92	LEL
S016/027	07/22/92	1928	64	LEL	45	1319	700	699	19		07/25/92	LEL
S017/018	07/22/92	1450	74	CAW	325	1203	700	700	69	DS-06P1	07/22/92	LEL
S017/026	07/22/92	1927	65	LEL	45	1319	700	699	21		07/25/92	LEL
S017/027	07/22/92	1928	64	LEL	45	1319	700	699	1		07/25/92	LEL
S018/019	07/22/92	1500	74	CAW	325	1203	700	699	55	DS-06,N1	07/22/92	LEL
S018/024	07/22/92	1926	67	LEL	45	1319	700	697	2		07/25/92	AWJ
S018/025	07/22/92	1926	67	LEL	45	1319	700	701	20		07/25/92	AWJ
S018/026	07/22/92	1927	67	LEL	45	1319	700	701	1		07/25/92	AWJ
S019/020	07/22/92	1450	74	CAW	138	1320	700	700	45		07/22/92	LEL
S019/024	07/22/92	1924	67	LEL	45	1319	700	697	19		07/22/92	AWJ
S020/021	07/22/92	1505	74	CAW	138	1320	700	696	28		07/22/92	LEL
S020/023	07/22/92	1918	67	LEL	45	1319	700	698	18		07/25/92	AWJ
S020/024	07/22/92	1923	67	LEL	45	1319	700	698	3		07/25/92	AWJ
S021/022	07/22/92	1515	74	CAW	325	1203	700	699	17		07/22/92	LEL
S021/023	07/22/92	1916	67	LEL	45	1319	700	692	17		07/25/92	AWJ
S022/023	07/22/92	1915	67	LEL	45	1319	700	692	11		07/25/92	AWJ
S023/024	07/22/92	1525	74	CAW	138	1320	700	690	38		07/22/92	LEL
S024/025	07/22/92	1525	74	CAW	325	1203	700	686	59		07/22/92	LEL

NOTES: filename"S_FUSWLD.WK1"

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2) SEAMS S112/124 AND S208/209 WERE FAST LIESTERED AND SUBSEQUENTLY CAPPED DUE TO WEATHER. NO TRIAL SEAM WAS REQUIRED PRIOR TO LIESTERING THE PANELS.

GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S025/026	07/22/92	1535	76	CAW	138	1320	700	693	70	DS-07	07/22/92	LEL
S026/027	07/22/92	1545	74	CAW	325	1203	700	693	87		07/22/92	LEL
S027/028	07/22/92	1606	76	CAW	138	1320	700	695	110		07/22/92	AWJ
S028/029	07/22/92	1645	74	CAW	325	1203	700	691	68	DS-08P1	07/22/92	AWJ
S028/030	07/22/92	1640	74	CAW	325	1203	700	698	79		07/22/92	AWJ
S029/030	07/22/92	1635	76	CAW	138	1320	700	696	14		07/22/92	AWJ
S029/031	07/22/92	1700	74	CAW	138	1320	700	696	65		07/22/92	AWJ
S030/031	07/22/92	1650	74	CAW	138	1320	700	699	79		07/22/92	AWJ
S031/032	07/22/92	1745	74	CAW	138	1320	700	695	160		07/22/92	AWJ
S032/033	07/22/92	1830	67	CAW	138	1320	700	691	172	DS-09	07/22/92	AWJ
S033A/034	07/24/92	1150	67	LEL	138	1320	700	700	34		07/24/92	AWJ
S033A/262	08/18/92	1122	70	CAW	BJ	1319	700	700	5		08/22/92	SRS
S033A/263	08/18/92	1120	70	CAW	BJ	1319	700	700	11		08/22/92	SRS
S033/033A	07/24/92	1100	67	LEL	138	1203	700	696	14		07/25/92	AWJ
S033/034	07/24/92	1215	67	LEL	138	1320	700	700	35		07/24/92	CAW
S033/035	07/24/92	1100	64	LEL	325	1404	700	692	247	DS-13	07/24/92	CAW
S034/035	07/24/92	1045	64	LEL	325	1404	700	692	14		07/24/92	CAW
S034/036	07/24/92	1315	70	LEL	138	1320	700	699	70		07/24/92	CAW
S034/263	08/18/92	1124	70	CAW	BJ	1319	700	653	15		08/22/92	SRS
S035/036	07/24/92	1330	70	LEL	138	1320	700	699	67		07/24/92	AWJ
S035/036	07/24/92	1125	80	LEL	325	1404	700	692	253	DS-14	07/24/92	AWJ
S036/037	07/24/92	1325	70	LEL	325	1404	700	700	175		07/24/92	AWJ
S036/037	07/24/92	1350	70	LEL	138	1320	700	699	145	DS-11	07/24/92	AWJ
S036/038	07/24/92	1315	70	LEL	325	1404	700	698	81		07/24/92	AWJ
S036/263	08/18/92	1127	70	CAW	BJ	1319	700	656	15		08/22/92	SRS
S037/038	07/24/92	1150	67	LEL	325	1404	700	698	14		07/24/92	AWJ
S037/039	07/24/92	1420	70	LEL	138	1320	700	699	148		07/24/92	AWJ
S037/039	07/24/92	1400	67	LEL	325	1404	700	697	117	DS-15	07/24/92	AWJ
S037/263	08/18/92	1130	70	CAW	BJ	1319	700	700	15		08/22/92	SRS
S038/039	07/24/92	1350	70	LEL	325	1404	700	695	81		07/24/92	AWJ

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2) SEAMS S112/124 AND S208/209 WERE FAST LIESTERED AND SUBSEQUENTLY CAPPED DUE TO WEATHER. NO TRIAL SEAM WAS REQUIRED PRIOR TO LIESTERING THE PANELS.

GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S039/040	07/24/92	1410	70	LEL	325	1404	700	699	172		07/24/92	AWJ
S039/040	07/24/92	1440	70	LEL	138	1320	700	699	148		07/24/92	AWJ
S039/263	08/18/92	1132	70	CAW	BJ	1319	700	700	15	DS-86P1	08/22/92	SRS
S040/041	07/24/92	1510	72	LEL	138	1320	700	700	87	DS-12	07/24/92	AWJ
S040/042	07/24/92	1520	72	LEL	138	1320	700	700	58		07/24/92	AWJ
S040/042	07/24/92	1440	70	LEL	325	1404	700	692	173		07/24/92	AWJ
S040/263	08/18/92	1134	70	CAW	BJ	1319	700	--	15		CAPPED BY 36C	
S041/042	07/24/92	1500	70	LEL	138	1320	700	700	14		07/25/92	TAH
S041/043	07/24/92	1605	72	LEL	138	1320	700	697	87		07/25/92	TAH
S041/263	08/18/92	1137	70	CAW	BJ	1319	700	--	15		CAPPED BY 36C	
S042/043	07/24/92	1515	72	LEL	325	1404	700	698	175	DS-16	07/24/92	CAW
S042/043	07/24/92	1650	72	LEL	138	1320	700	697	56		07/24/92	CAW
S043/044	07/24/92	1650	72	LEL	138	1320	700	700	94		07/24/92	AWJ
S043/044	07/24/92	1540	72	LEL	325	1404	700	690	178		07/24/92	AWJ
S043/045	07/25/92	0845	72	CAW	325	1240	700	697	50		07/25/92	CAW
S043/263	08/18/92	1140	70	CAW	BJ	1319	700	--	15		CAPPED BY 36C	
S044/045	07/25/92	0840	72	CAW	325	1240	700	697	14		07/25/92	CAW
S044/046	07/25/92	0910	73	CAW	138	1320	700	702	52		07/25/92	CAW
S044/046	07/25/92	0850	73	CAW	138	1320	700	698	178	DS-17	07/25/92	CAW
S044/083	07/28/92	1929	76	CAW	45	1319	700	699	15		07/30/92	CAW
S044/084	07/28/92	1929	76	CAW	45	1319	700	700	15		07/30/92	CAW
S044/085	07/28/92	1928	76	CAW	45	1319	700	700	15		07/30/92	CAW
S044/086	07/28/92	1926	76	CAW	45	1319	700	700	8		07/30/92	CAW
S045/086	07/28/92	1925	76	CAW	45	1319	700	700	7		07/30/92	CAW
S045/088	07/28/92	1923	76	CAW	45	1319	700	696	14		07/30/92	CAW
S045/089	07/28/92	1920	76	CAW	45	1319	700	698	14		07/30/92	CAW
S045/090	07/28/92	1918	76	CAW	45	1319	700	700	15		07/30/92	CAW
S045/263	08/18/92	1142	70	CAW	BJ	1319	700	--	15		CAPPED BY 36C	
S046/047	07/25/92	0915	73	CAW	45	1404	700	701	51	DS-18	07/25/92	CAW
S046/047	07/25/92	0855	73	CAW	45	1404	700	699	178		07/25/92	CAW

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GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S046/084	07/28/92	1930	76	CAW	45	1319	700	696	15		07/30/92	CAW
S047/048	07/25/92	0905	73	CAW	325	1240	700	700	181		07/25/92	CAW
S047/080	07/28/92	1952	76	CAW	45	1319	700	698	14		07/30/92	CAW
S047/081	07/28/92	1949	76	CAW	45	1319	700	696	14		07/30/92	CAW
S047/084	07/28/92	1931	76	CAW	45	1319	700	696	15		07/30/92	CAW
S047/103	07/28/92	1953	76	CAW	45	1319	700	700	3		07/30/92	CAW
S048/049	07/25/92	0920	74	CAW	138	1320	700	700	110		07/25/92	CAW
S048/050	07/25/92	0935	74	CAW	138	1320	700	698	72		07/25/92	CAW
S048/103	07/28/92	2004	76	CAW	45	1319	700	696	15		07/30/92	CAW
S049/050	07/25/92	0930	74	CAW	325	1240	700	698	14		07/25/92	CAW
S049/051	07/25/92	0940	74	CAW	325	1240	700	698	110		07/25/92	TAH
S050/051	07/25/92	0950	74	CAW	325	1240	700	699	74	DS-19P1	07/25/92	CAW
S050/103	07/28/92	2006	76	CAW	45	1319	700	700	15	DS-36	07/30/92	CAW
S051/052	07/25/92	0955	74	CAW	138	1320	700	700	181		07/25/92	CAW
S051/103	07/28/92	2008	74	CAW	45	1319	700	701	15		07/30/92	CAW
S052/053	07/25/92	1135	78	CAW	325	1240	700	700	177	DS-19,N1	07/25/92	CAW
S052/103	07/28/92	2009	74	CAW	45	1319	700	701	15		07/30/92	CAW
S053/054	07/25/92	1140	78	CAW	138	1320	700	698	176	DS-20,P1	07/25/92	CAW
S053/103	07/28/92	2012	74	CAW	45	1319	700	700	15		07/30/92	CAW
S054/055	07/25/92	1420	78	CAW	325	1240	700	701	176		07/27/92	CAW
S054/103	07/28/92	2014	74	CAW	45	1319	700	700	15		07/30/92	CAW
S055/056	07/25/92	1440	78	CAW	138	1320	700	699	176	DS-20N1	07/27/92	CAW
S055/103	07/28/92	2016	74	CAW	45	1319	700	696	15		07/30/92	CAW
S056/057	07/25/92	1510	78	CAW	325	1240	700	698	155	DS-21	07/27/92	CAW
S056/059	07/25/92	1835	76	CAW	45	1319	700	698	43		07/29/92	BIE
S056/103	07/28/92	2018	74	CAW	45	1319	700	697	15		07/30/92	CAW
S057/058	07/25/92	1530	80	CAW	325	1240	700	687	161		07/27/92	CAW
S057/059	07/25/92	1828	76	CAW	45	1319	700	696	10		07/29/92	CAW
S058/059	07/25/92	1808	78	CAW	45	1319	700	700	15		07/29/92	CAW
S058/060	07/25/92	1812	78	CAW	45	1319	700	700	15		07/29/92	CAW

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GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S058/061	07/25/92	1720	80	CAW	325	1240	700	699	167		07/27/92	CAW
S058/103	07/28/92	2045	74	TAH	45	1319	700	647	14		07/30/92	CAW
S059/060	07/25/92	1755	78	CAW	45	1319	700	698	28		07/29/92	CAW
S059/103	07/28/92	2040	74	TAH	45	1319	700	647	22		07/30/92	CAW
S060/103	07/28/92	2043	74	TAH	45	1319	700	647	9		07/30/92	CAW
S061/062	07/25/92	1740	80	CAW	45	1404	700	700	164		07/27/92	CAW
S061/103	07/28/92	2048	74	TAH	45	1319	700	647	14		07/30/92	CAW
S062/063	07/25/92	1800	78	CAW	325	1240	700	701	165	DS-22	07/27/92	CAW
S062/103	07/28/92	2050	74	TAH	45	1319	700	647	14		07/30/92	CAW
S063/064	07/25/92	1805	78	CAW	45	1404	700	700	165		07/27/92	CAW
S063/103	07/28/92	2053	74	TAH	45	1319	700	647	14		07/30/92	CAW
S064/065	07/25/92	1825	78	CAW	325	1240	700	701	81		07/25/92	CAW
S064/074	07/25/92	2017	74	CAW	45	1319	700	700	15		07/29/92	CAW
S064/075	07/25/92	2020	74	CAW	45	1319	700	703	15		07/29/92	CAW
S064/076	07/25/92	2022	74	CAW	45	1319	700	699	15		07/29/92	CAW
S064/077	07/25/92	2028	74	CAW	45	1319	700	698	15		07/29/92	CAW
S064/078	07/25/92	2031	74	CAW	45	1319	700	698	15		07/29/92	CAW
S064/079	07/25/92	2033	74	CAW	45	1319	700	701	15	DS-24	07/29/92	CAW
S064/103	07/28/92	2055	74	TAH	45	1319	700	647	14		07/30/92	CAW
S065/066	07/25/92	1840	78	CAW	45	1404	700	698	59		07/25/92	CAW
S065/073	07/25/92	2015	74	CAW	45	1319	700	691	22		07/29/92	AWJ
S066/067	07/25/92	1835	78	CAW	325	1240	700	701	48		07/25/92	CAW
S066/072	07/25/92	2013	74	CAW	45	1319	700	690	20		07/29/92	AWJ
S067/068	07/25/92	1845	78	CAW	45	1404	700	699	28	DS-23	07/25/92	CAW
S067/070	07/25/92	2010	74	CAW	45	1319	700	693	5		07/29/92	AWJ
S067/071	07/25/92	2012	74	CAW	45	1319	700	691	18		07/29/92	AWJ
S068/069	07/25/92	1855	78	CAW	45	1404	700	700	15		07/25/92	CAW
S068/070	07/25/92	2008	75	CAW	45	1319	700	693	19		07/29/92	AWJ
S069/070	07/25/92	2005	74	CAW	45	1319	700	691	7		07/29/92	AWJ
S070/071	07/25/92	1900	78	CAW	325	1240	700	700	24		07/25/92	CAW

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GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S071/072	07/25/92	1900	78	CAW	45	1404	700	705	39		07/25/92	CAW
S072/073	07/25/92	1905	74	CAW	45	1404	700	698	54		07/29/92	CAW
S073/074	07/25/92	1905	78	CAW	325	1240	700	699	70		07/25/92	CAW
S074/075	07/25/92	1920	74	CAW	45	1404	700	701	73		07/25/92	CAW
S075/076	07/25/92	1928	74	CAW	325	1240	700	700	73		07/25/92	CAW
S076/077	07/25/92	1930	74	CAW	45	1404	700	700	73		07/25/92	CAW
S077/078	07/25/92	1933	74	CAW	325	1240	700	700	73	DS-26P1	07/25/92	CAW
S078/079	07/25/92	1935	74	CAW	45	1404	700	700	73		07/25/92	CAW
S079/103	07/28/92	2058	74	TAH	45	1319	700	650	73		07/29/92	AWJ
S080/081	07/28/92	0905	72	CAW	325	1240	700	699	109	DS-26,N1	07/28/92	AWJ
S080/081	07/28/92	0820	72	CAW	138	1404	700	710	170	DS-25	07/28/92	AWJ
S080/103	07/28/92	1645	76	CAW	138	1404	700	700	107		07/29/92	AWJ
S080/103	07/28/92	1630	76	CAW	138	1404	700	699	280	DS-35	07/29/92	AWJ
S081/082	07/28/92	1000	72	CAW	325	1240	700	700	81		07/28/92	AWJ
S081/082	07/28/92	0855	72	CAW	138	1404	700	708	176		07/28/92	AWJ
S081/084	07/28/92	0920	72	CAW	325	1240	700	699	26		07/29/92	AWJ
S082/083	07/28/92	1030	74	CAW	325	1240	700	699	82		07/28/92	AWJ
S082/083	07/28/92	0930	72	CAW	138	1404	700	710	176		07/28/92	AWJ
S082/084	07/28/92	0850	72	CAW	325	1404	700	700	15		07/28/92	AWJ
S083/084	07/28/92	1020	74	CAW	325	1240	700	699	57		07/29/92	AWJ
S083/085	07/28/92	0940	72	CAW	138	1404	700	708	176	DS-27	07/28/92	AWJ
S083/085	07/28/92	1040	74	CAW	325	1240	700	700	139	DS-28	07/28/92	AWJ
S085/086	07/28/92	1115	76	CAW	325	1240	700	699	133		07/28/92	AWJ
S085/087	07/28/92	1020	72	CAW	138	1404	700	709	184		07/28/92	AWJ
S086/087	07/28/92	1110	76	CAW	325	1240	700	700	14		07/28/92	AWJ
S086/088	07/28/92	1130	76	CAW	325	1240	700	699	133		07/28/92	AWJ
S087/088	07/28/92	1050	74	CAW	138	1404	700	710	184	DS-29	07/28/92	AWJ
S088/089	07/28/92	1310	76	CAW	325	1240	700	692	139	DS-30	07/28/92	AWJ
S088/089	07/28/92	1115	76	CAW	138	1404	700	709	184		07/28/92	AWJ
S089/090	07/28/92	1130	76	CAW	138	1404	700	708	180		07/28/92	AWJ

NOTES: filename"S_FUSWLD.WK1"

1) THE SEAM TEST DATE SHOWN REPRESENTS THE DATE WHEN THE SEAM NON-DESTRUCTIVE TESTING WAS COMPLETED, AND DOES NOT REPRESENT THE TESTING OF INDIVIDUAL SEAM SEGMENTS.

2) SEAMS S112/124 AND S208/209 WERE FAST LIESTERED AND SUBSEQUENTLY CAPPED DUE TO WEATHER. NO TRIAL SEAM WAS REQUIRED PRIOR TO LIESTERING THE PANELS.

GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S089/090	07/28/92	1330	78	CAW	325	1240	700	699	144		07/28/92	AWJ
S090/091	07/28/92	1330	78	CAW	138	1404	700	709	178	DS-31	07/28/92	AWJ
S090/259	08/18/92	1147	70	CAW	BJ	1319	700	660	68	DS-86	08/20/92	CAW
S090/260	08/18/92	1200	70	CAW	BJ	1319	700	684	48	DS-86N1	08/20/92	CAW
S090/263	08/18/92	1144	70	CAW	BJ	1319	700	650	12		CAPPED BY 36C	
S091/092	07/28/92	1350	78	CAW	138	1404	700	710	178		07/28/92	AWJ
S091/258	08/18/92	0850	65	CAW	BJ	1319	700	660	7		CAPPED BY 34E	
S092/093	07/28/92	1540	78	CAW	138	1404	700	698	104	DS-32	07/28/92	AWJ
S092/094	07/28/92	1520	78	CAW	138	1404	700	699	70		07/28/92	AWJ
S092/257	08/18/92	0854	65	CAW	BJ	1319	700	661	5		CAPPED BY 34E	
S092/258	08/18/92	0851	65	CAW	BJ	1319	700	650	5		CAPPED BY 34E	
S093/094	07/28/92	1530	78	CAW	138	1404	700	700	14		07/28/92	AWJ
S093/095	07/28/92	1530	78	CAW	325	1240	700	699	104		07/28/92	AWJ
S093/256	08/18/92	0857	65	CAW	BJ	1319	700	665	8		CAPPED BY 34E	
S093/257	08/18/92	0855	65	CAW	BJ	1319	700	665	8		CAPPED BY 34E	
S094/095	07/28/92	1522	78	CAW	325	1240	700	700	70		07/28/92	AWJ
S095/096	07/28/92	1600	78	CAW	138	1404	700	700	182		07/28/92	CAW
S095/255	08/18/92	0859	65	CAW	BJ	1319	700	670	8		CAPPED BY 34E	
S095/256	08/18/92	0858	65	CAW	BJ	1319	700	670	7	DS-84P2	CAPPED BY 34E	
S096/097	07/28/92	1540	78	CAW	325	1240	700	700	182	DS-33	07/28/92	AWJ
S096/253	08/18/92	0901	65	CAW	BJ	1319	700	680	8		CAPPED BY 34E	
S096/255	08/18/92	0900	65	CAW	BJ	1319	700	680	7		CAPPED BY 34E	
S097/098	07/28/92	1600	78	CAW	325	1240	700	700	182		07/28/92	AWJ
S097/252	08/18/92	0904	65	CAW	BJ	1319	700	685	7		CAPPED BY 34E	
S097/253	08/18/92	0902	65	CAW	BJ	1319	700	686	8		CAPPED BY 34E	
S098/099	07/28/92	1715	78	CAW	325	1240	700	700	49		07/28/92	AWJ
S098/100	07/28/92	1700	78	CAW	325	1240	700	698	134		07/28/92	AWJ
S098/249	08/18/92	0906	65	CAW	BJ	1319	700	690	8		CAPPED BY 34E	
S098/252	08/18/92	0905	65	CAW	BJ	1319	700	685	7		CAPPED BY 34E	
S099/100	07/28/92	1650	78	CAW	325	1240	700	700	14		07/28/92	AWJ

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2) SEAMS S112/124 AND S208/209 WERE FAST LIESTERED AND SUBSEQUENTLY CAPPED DUE TO WEATHER. NO TRIAL SEAM WAS REQUIRED PRIOR TO LIESTERING THE PANELS.

GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S099/101	07/28/92	1725	78	CAW	138	1404	700	698	49		07/28/92	AWJ
S099/248	08/18/92	0909	65	CAW	BJ	1319	700	700	12		CAPPED BY 34E	
S099/249	08/18/92	0907	65	CAW	BJ	1319	700	690	4		CAPPED BY 34E	
S100/101	07/28/92	1720	78	CAW	138	1404	700	703	132		07/28/92	AWJ
S101/102	07/28/92	1730	78	CAW	325	1240	700	699	182	DS-34	07/29/92	CAW
S101/247	08/18/92	0911	65	CAW	BJ	1319	700	700	12		CAPPED BY 34E	
S101/248	08/18/92	0910	65	CAW	BJ	1319	700	700	3		CAPPED BY 34E	
S102/104	07/29/92	1615	78	CAW	325	1240	700	700	178	DS-38	07/29/92	CAW
S102/244	08/18/92	0913	65	CAW	BJ	1319	700	690	11		CAPPED BY 34C	
S102/247	08/18/92	0912	65	CAW	BJ	1319	700	685	3		CAPPED BY 34C	
S104/105	07/29/92	1415	78	CAW	138	1404	700	710	178		07/29/92	CAW
S104/243	08/18/92	0915	65	CAW	BJ	1319	700	690	12		CAPPED BY 34C	
S104/244	08/18/92	0914	65	CAW	BJ	1319	700	690	4		CAPPED BY 34C	
S105/106	07/29/92	1430	78	CAW	325	1240	700	700	176		07/29/92	CAW
S105/242	08/18/92	0919	65	CAW	BJ	1319	700	698	12	DS-84P1	CAPPED BY 34C	
S105/243	08/18/92	0917	65	CAW	BJ	1319	700	690	3		CAPPED BY 34C	
S106/107	07/29/92	1505	78	CAW	325	1240	700	700	176	DS-37	07/29/92	CAW
S106/241	08/18/92	0920	65	CAW	BJ	1319	700	695	14	DS-84	CAPPED BY 37D	
S106/242	08/18/92	0920	65	CAW	BJ	1319	700	698	1		CAPPED BY 37D	
S107/108	07/29/92	1630	78	CAW	138	1404	700	710	134		07/29/92	CAW
S107/109	07/29/92	1702	78	CAW	138	1404	700	710	37		07/29/92	CAW
S107/240	08/18/92	0922	65	CAW	BJ	1319	700	697	14		CAPPED BY 37D	
S107/241	08/18/92	0922	65	CAW	BJ	1319	700	695	1		CAPPED BY 37D	
S108/109	07/29/92	1700	78	CAW	138	1404	700	710	14		07/29/92	CAW
S108/110	07/29/92	1711	78	CAW	138	1404	700	710	134	DS-39	07/29/92	CAW
S109/110	07/29/92	1722	78	CAW	138	1404	700	710	37		07/29/92	CAW
S109/239	08/18/92	0923	65	CAW	BJ	1319	700	700	15		CAPPED BY 37D	
S109/240	08/18/92	0923	65	CAW	BJ	1319	700	697	1		CAPPED BY 37D	
S110/111	07/29/92	1725	78	CAW	325	1240	700	700	176		07/29/92	CAW
S110/195	08/16/92	1815	70	BFM	BJ	1319	700	700	13		08/21/92	SRS

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2) SEAMS S112/124 AND S208/209 WERE FAST LIESTERED AND SUBSEQUENTLY CAPPED DUE TO WEATHER. NO TRIAL SEAM WAS REQUIRED PRIOR TO LIESTERING THE PANELS.

GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S111/123	08/04/92	1929	68	CAW	BJ	1404	710	711	167	DS-43	08/04/92	CAW
S111/193	08/16/92	1820	70	BFM	BJ	1319	700	700	13		08/20/92	SRS
S112/113	08/04/92	1710	68	CAW	BJ	1404	710	698	231		08/04/92	CAW
S112/190	08/16/92	1825	70	BFM	BJ	1319	700	680	14		08/20/92	SRS
S113/114	08/04/92	1720	68	CAW	325	1240	700	700	211	DS-40	08/04/92	CAW
S113/122	08/04/92	2020	68	CAW	45	1319	700	696	24		08/07/92	AWJ
S113/190	08/16/92	1830	70	BFM	BJ	1319	700	700	3		08/21/92	SRS
S114/115	08/04/92	1735	68	CAW	PV	1203	700	699	204		08/04/92	CAW
S114/122	08/04/92	2018	68	CAW	45	1319	700	699	15		08/07/92	AWJ
S115/116	08/04/92	1800	68	CAW	BJ	1404	710	709	192	DS-41	08/04/92	CAW
S115/122	08/04/92	2015	68	CAW	45	1319	700	693	15		08/07/92	AWJ
S116/117	08/04/92	1805	68	CAW	PV	1203	700	695	187	DS-42	08/04/92	CAW
S116/122	08/04/92	2012	68	CAW	45	1319	700	698	15		08/07/92	AWJ
S117/118	08/04/92	1815	68	CAW	325	1240	700	695	182		08/04/92	CAW
S117/122	08/04/92	2009	68	CAW	45	1319	700	697	15		08/07/92	AWJ
S118/119	08/04/92	1833	68	CAW	BJ	1404	710	711	172	DS-43P1	08/04/92	CAW
S118/122	08/04/92	2007	68	CAW	45	1319	700	696	15		08/07/92	AWJ
S119/120	08/04/92	1840	68	CAW	325	1240	700	699	172		08/04/92	CAW
S119/122	08/04/92	2005	68	CAW	45	1319	700	690	15		08/07/92	AWJ
S120/121	08/04/92	1846	68	CAW	PV	1203	700	689	136		08/04/92	CAW
S120/122	08/04/92	2002	68	CAW	45	1319	700	680	15		08/07/92	AWJ
S121/122	08/04/92	2000	68	CAW	45	1319	700	680	21		08/07/92	AWJ
S122/123	08/04/92	1940	68	CAW	325	1240	700	700	167	DS-44	08/04/92	CAW
S123/191	08/16/92	1830	70	BFM	BJ	1319	700	700	13		08/20/92	SRS
S124/125	08/05/92	0926	65	CAW	BJ	1404	710	710	114		08/05/92	AWJ
S124/126	08/05/92	0915	65	CAW	BJ	1404	710	711	116	DS-43N1	08/05/92	AWJ
S124/189	08/16/92	1845	70	BFM	BJ	1319	700	673	4		08/20/92	CAW
S124/190	08/16/92	1840	70	BFM	BJ	1319	700	665	11		08/20/92	CAW
S125/126	08/05/92	0940	68	CAW	BJ	1404	710	710	14		08/05/92	AWJ
S125/127	08/05/92	0932	67	CAW	PV	1203	700	700	114	DS-45	08/05/92	AWJ

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GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S125/189	08/16/92	1850	70	BFM	BJ	1319	700	692	15		08/20/92	CAW
S126/127	08/05/92	0918	67	CAW	PV	1203	700	698	116		08/05/92	AWJ
S127/128	08/05/92	0957	68	CAW	BJ	1404	710	708	230	DS-46	08/05/92	AWJ
S127/188	08/15/92	1734	70	CAW	BJ	1319	700	693	6		08/19/92	SRS
S127/189	08/16/92	1855	70	BFM	BJ	1319	700	697	8		08/20/92	CAW
S128/129	08/05/92	1000	68	CAW	PV	1203	700	699	190		08/05/92	AWJ
S128/132	08/05/92	1020	70	CAW	PV	1203	700	698	41		08/05/92	AWJ
S128/188	08/15/92	1736	70	CAW	BJ	1319	700	680	15		08/19/92	SRS
S129/130	08/05/92	1050	70	CAW	BJ	1404	710	710	190		08/05/92	AWJ
S129/132	08/05/92	1018	70	CAW	PV	1203	700	693	15		08/05/92	AWJ
S130/131	08/05/92	1105	71	CAW	PV	1203	700	700	233	DS-47	08/05/92	AWJ
S130/132	08/05/92	1105	70	CAW	BJ	1404	710	710	38		08/05/92	AWJ
S130/186	08/15/92	1743	70	CAW	BJ	1319	700	697	2		08/19/92	SRS
S130/187	08/15/92	1740	70	CAW	BJ	1319	700	693	12		08/19/92	SRS
S131/133	08/06/92	1900	74	CAW	325	1240	700	699	201		08/07/92	CAW
S131/186	08/15/92	1745	70	CAW	BJ	1319	700	700	15		08/19/92	SRS
S132/187	08/15/92	1738	70	CAW	BJ	1319	700	680	11		08/19/92	SRS
S132/188	08/15/92	1737	70	CAW	BJ	1319	700	680	5		08/19/92	SRS
S133/134	08/06/92	1310	74	CAW	325	1240	700	700	220		08/06/92	CAW
S133/185	08/15/92	1705	70	CAW	BJ	1319	700	697	7		08/19/92	SRS
S133/186	08/15/92	1745	70	CAW	BJ	1319	700	695	6		08/19/92	SRS
S134/135	08/06/92	1355	74	CAW	BJ	1404	710	709	221	DS-48	08/06/92	CAW
S134/185	08/15/92	1655	70	CAW	BJ	1319	700	690	7		08/19/92	SRS
S135/136	08/06/92	1400	74	CAW	325	1240	700	698	149	DS-49	08/06/92	CAW
S135/137	08/06/92	1420	74	CAW	325	1240	700	680	76		08/06/92	CAW
S135/184	08/15/92	1704	70	CAW	BJ	1319	700	662	9		08/19/92	SRS
S135/185	08/15/92	1702	70	CAW	BJ	1319	700	697	7		08/19/92	SRS
S136/137	08/06/92	1415	74	CAW	BJ	1404	710	710	15		08/06/92	CAW
S136/138	08/06/92	1430	74	CAW	BJ	1404	710	711	149		08/06/92	CAW
S137/138	08/06/92	1455	74	CAW	BJ	1404	710	710	76		08/06/92	CAW

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GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S137/183	08/15/92	1713	70	CAW	BJ	1319	700	675	5		08/19/92	SRS
S137/184	08/15/92	1710	70	CAW	BJ	1319	700	670	10	DS-64	08/19/92	SRS
S138/139	08/06/92	1840	74	CAW	BJ	1319	700	699	43		08/14/92	BIE
S138/140	08/06/92	1445	74	CAW	325	1240	700	685	175		08/06/92	CAW
S138/183	08/15/92	1714	70	CAW	BJ	1319	700	675	2		08/19/92	SRS
S139/140	08/06/92	1830	74	CAW	BJ	1319	700	699	32		08/14/92	BIE
S139/141	08/06/92	1600	74	CAW	BJ	1404	710	710	120		08/06/92	CAW
S139/154	08/07/92	1820	73	CAW	BJ	1404	710	710	217		08/07/92	CAW
S139/183	08/15/92	1650	70	CAW	BJ	1319	700	690	10		08/19/92	SRS
S140/141	08/06/92	1820	74	CAW	BJ	1319	700	700	36	DS-51	08/14/92	BIE
S140/142	08/06/92	1814	74	CAW	BJ	1319	700	699	37		08/14/92	CAW
S140/143	08/06/92	1808	74	CAW	BJ	1319	700	698	38		08/14/92	CAW
S140/144	08/06/92	1804	74	CAW	BJ	1319	700	698	31		08/14/92	CAW
S141/142	08/06/92	1532	74	CAW	BJ	1404	710	710	106	DS-50	08/06/92	CAW
S142/143	08/06/92	1530	74	CAW	325	1240	700	699	75	DS-52	08/06/92	CAW
S143/144	08/06/92	1515	74	CAW	BJ	1404	710	705	28		08/06/92	CAW
S145/146	PANELS 145 THROUGH 153 WERE REMOVED											
S145/148	PANELS 145 THROUGH 153 WERE REMOVED											
S146/147	PANELS 145 THROUGH 153 WERE REMOVED											
S147/148	PANELS 145 THROUGH 153 WERE REMOVED											
S148/149	PANELS 145 THROUGH 153 WERE REMOVED											
S149/153	PANELS 145 THROUGH 153 WERE REMOVED											
S150/151	PANELS 145 THROUGH 153 WERE REMOVED											
S150/153	PANELS 145 THROUGH 153 WERE REMOVED											
S151/152	PANELS 145 THROUGH 153 WERE REMOVED											
S152/153	PANELS 145 THROUGH 153 WERE REMOVED											
S154/155	08/07/92	1838	73	CAW	PV	1240	700	689	179	DS-53	08/07/92	CAW
S154/156	08/07/92	1855	73	CAW	PV	1240	700	695	38		08/07/92	CAW
S154/183	08/15/92	1651	70	CAW	BJ	1319	700	690	15		08/19/92	SRS
S155/156	08/07/92	1845	73	CAW	BJ	1404	710	711	15		08/07/92	CAW

NOTES: filename"S_FUSWLD.WK1"

1) THE SEAM TEST DATE SHOWN REPRESENTS THE DATE WHEN THE SEAM NON-DESTRUCTIVE TESTING WAS COMPLETED, AND DOES NOT REPRESENT THE TESTING OF INDIVIDUAL SEAM SEGMENTS.

2) SEAMS S112/124 AND S208/209 WERE FAST LIESTERED AND SUBSEQUENTLY CAPPED DUE TO WEATHER. NO TRIAL SEAM WAS REQUIRED PRIOR TO LIESTERING THE PANELS.

GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S155/157	08/07/92	1855	73	CAW	BJ	1404	710	710	176	DS-54	08/07/92	CAW
S156/157	08/07/92	1918	73	CAW	BJ	1404	710	716	44		08/07/92	CAW
S156/183	08/15/92	1653	70	CAW	BJ	1319	700	696	15		08/19/92	SRS
S157/158	08/07/92	1915	73	CAW	PV	1240	700	699	216	DS-55	08/07/92	CAW
S157/183	08/15/92	1656	70	CAW	BJ	1319	700	697	15		08/19/92	SRS
S158/159	08/07/92	1930	73	CAW	BJ	1404	710	710	215	DS-56	08/07/92	CAW
S158/182	08/15/92	1627	70	CAW	BJ	1319	700	683	13		08/19/92	BIE
S159/181	08/12/92	1930	74	CAW	BJ	1404	700	700	45		08/14/92	CAW
S159/182	08/15/92	1625	70	CAW	BJ	1319	700	675	6		08/19/92	BIE
S160/161	08/12/92	1629	74	CAW	JS	1240	700	700	24		08/14/92	CAW
S160/162	08/12/92	1623	74	CAW	JS	1240	700	697	25		08/14/92	CAW
S160/163	08/12/92	1620	74	CAW	JS	1240	700	700	26		08/14/92	CAW
S160/164	08/12/92	1617	74	CAW	JS	1240	700	700	26		08/14/92	BIE
S160/165	08/12/92	1616	74	CAW	JS	1240	700	700	15		08/14/92	CAW
S160/166	08/12/92	1546	74	CAW	BJ	1404	700	689	133		08/12/92	CAW
S161/162	08/12/92	1527	74	CAW	BJ	1404	700	702	69		08/12/92	CAW
S162/163	08/12/92	1528	74	CAW	JS	1240	700	699	49		08/12/92	CAW
S163/164	08/12/92	1537	74	CAW	JS	1240	700	690	31		08/12/92	CAW
S164/165	08/12/92	1536	74	CAW	BJ	1404	700	699	11		08/12/92	CAW
S166/167	08/12/92	1606	74	CAW	BJ	1404	700	694	144	DS-57	08/12/92	CAW
S167/168	08/12/92	1658	74	CAW	BJ	1404	700	701	55		08/14/92	CAW
S167/169	08/12/92	1646	74	CAW	BJ	1404	700	690	127		08/14/92	CAW
S168/169	08/12/92	1639	74	CAW	BJ	1404	700	650	15		08/14/92	CAW
S168/170	08/12/92	1723	74	CAW	JS	1240	700	697	55		08/14/92	CAW
S169/170	08/12/92	1711	74	CAW	JS	1240	700	699	128		08/14/92	CAW
S170/171	08/12/92	1717	74	CAW	BJ	1404	700	698	211		08/12/92	CAW
S170/182	08/15/92	1615	70	CAW	BJ	1319	700	699	14		08/19/92	BIE
S171/172	08/12/92	1731	74	CAW	JS	1240	700	700	211	DS-58	08/12/92	CAW
S171/182	08/15/92	1618	70	CAW	BJ	1319	700	700	14		08/19/92	BIE
S172/173	08/12/92	1753	74	CAW	BJ	1404	700	701	211	DS-59	08/12/92	CAW

NOTES: filename"S_FUSWLD.WK1"

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2) SEAMS S112/124 AND S208/209 WERE FAST LIESTERED AND SUBSEQUENTLY CAPPED DUE TO WEATHER. NO TRIAL SEAM WAS REQUIRED PRIOR TO LIESTERING THE PANELS.

GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S172/182	08/15/92	1621	70	CAW	BJ	1319	700	700	14		08/19/92	BIE
S173/174	08/12/92	1850	74	CAW	BJ	1404	700	698	74		08/14/92	CAW
S173/180	08/12/92	1915	74	CAW	BJ	1404	700	700	43		08/14/92	CAW
S173/181	08/12/92	1942	74	CAW	BJ	1404	700	700	37		08/15/92	CAW
S173/182	08/15/92	1623	70	CAW	BJ	1319	700	696	15		08/19/92	BIE
S174/181	08/12/92	1936	74	CAW	BJ	1404	700	701	74		08/14/92	CAW
S176/177	08/12/92	1935	74	CAW	JS	1240	700	700	61		08/14/92	CAW
S176/182	08/15/92	1430	70	CAW	325	1240	700	700	56		08/15/92	CAW
S177/178	08/12/92	1923	74	CAW	JS	1240	700	698	63		08/14/92	CAW
S178/179	08/12/92	1915	74	CAW	JS	1240	700	697	41		08/12/92	CAW
S180/181	08/12/92	1950	74	CAW	BJ	1404	700	698	9		08/18/92	JAL
S182/183	08/15/92	1410	70	CAW	JS	1404	700	700	131	DS-60	08/15/92	CAW
S183/184	08/15/92	1450	70	CAW	JS	1404	700	700	56		08/15/92	CAW
S183/184	08/15/92	1435	70	CAW	JS	1404	700	700	138		08/15/92	CAW
S184/185	08/15/92	1455	70	CAW	325	1240	700	700	139	DS-61	08/15/92	CAW
S184/185	08/15/92	1505	70	CAW	JS	1404	700	699	66		08/15/92	CAW
S185/186	08/15/92	1521	70	CAW	JS	1404	700	699	90		08/15/92	CAW
S185/186	08/15/92	1520	70	CAW	325	1240	700	699	146		08/15/92	CAW
S186/187	08/15/92	1536	70	CAW	JS	1404	700	700	109	DS-62	08/15/92	CAW
S186/187	08/15/92	1535	70	CAW	325	1240	700	700	152		08/15/92	CAW
S187/188	08/15/92	1555	70	CAW	325	1240	700	700	153	DS-63	08/15/92	CAW
S187/188	08/15/92	1555	70	CAW	JS	1404	700	697	123		08/15/92	CAW
S188/189	08/16/92	1505	70	CAW	JS	1404	700	699	153		08/16/92	CAW
S188/189	08/16/92	1454	80	CAW	325	1240	700	700	142		08/16/92	CAW
S189/190	08/16/92	1510	74	CAW	208	1205	700	689	154	DS-66	08/16/92	BFM
S189/190	08/16/92	1520	80	CAW	325	1240	700	690	166		08/16/92	BFM
S190/191	08/16/92	1600	80	CAW	325	1240	700	698	163	DS-67	08/16/92	BFM
S190/192	08/16/92	1620	80	CAW	325	1240	700	699	30		08/16/92	BFM
S190/192	08/16/92	1525	70	CAW	JS	1404	700	700	153	DS-65	08/16/92	BFM
S191/192	08/16/92	1550	80	CAW	325	1240	700	700	15		08/16/92	BFM

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2) SEAMS S112/124 AND S208/209 WERE FAST LIESTERED AND SUBSEQUENTLY CAPPED DUE TO WEATHER. NO TRIAL SEAM WAS REQUIRED PRIOR TO LIESTERING THE PANELS.

GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S191/193	08/16/92	1630	78	CAW	325	1240	700	698	164		08/16/92	BFM
S192/193	08/16/92	1645	74	CAW	325	1240	700	698	30		08/19/92	SRS
S192/193	08/16/92	1535	74	CAW	208	1205	700	697	153		08/19/92	SRS
S193/194	08/16/92	1705	74	CAW	325	1240	700	699	150	DS-76P1	08/19/92	SRS
S193/194	08/16/92	1552	70	CAW	JS	1404	700	694	154	DS-70	08/19/92	SRS
S193/195	08/16/92	1700	74	CAW	325	1240	700	698	37		08/16/92	BFM
S194/195	08/16/92	1655	74	CAW	325	1240	700	690	15		08/16/92	BFM
S194/196	08/16/92	1618	74	CAW	208	1205	700	700	154		08/16/92	BFM
S194/239	08/17/92	2000	70	BIE	BJ	1319	700	690	100		08/21/92	CAW
S195/239	08/17/92	1745	74	BIE	BJ	1319	700	700	40		08/21/92	CAW
S196/197	08/16/92	1630	74	CAW	JS	1404	700	700	154		08/16/92	BFM
S196/197	08/16/92	1658	74	CAW	208	1205	700	687	54		08/16/92	BFM
S196/239	08/17/92	2010	70	BIE	BJ	1319	700	695	10	DS-82	08/21/92	CAW
S196/240	08/17/92	2012	74	BIE	BJ	1319	700	700	3		08/21/92	SRS
S197/198	08/16/92	1706	74	CAW	208	1205	700	697	54	DS-69	08/16/92	BFM
S197/198	08/16/92	1700	74	CAW	JS	1404	700	701	153	DS-68	08/16/92	BFM
S197/240	08/17/92	2013	74	BIE	BJ	1319	700	695	10		08/21/92	SRS
S197/241	08/17/92	2015	74	BIE	BJ	1319	700	690	3		08/21/92	SRS
S198/199	08/16/92	1730	74	CAW	JS	1404	700	698	153		08/16/92	BFM
S198/200	08/16/92	1717	74	CAW	208	1205	700	689	50		08/16/92	BFM
S198/241	08/17/92	2018	74	BIE	BJ	1319	700	700	10		08/21/92	SRS
S198/242	08/17/92	2019	74	BIE	BJ	1319	700	700	5		08/21/92	SRS
S199/200	08/16/92	1720	74	CAW	JS	1404	700	680	15		08/16/92	BFM
S199/201	08/16/92	1740	74	CAW	208	1205	700	696	153		08/16/92	BFM
S200/201	08/16/92	1805	73	CAW	208	1205	700	700	51		08/16/92	BFM
S200/242	08/17/92	2020	74	BIE	BJ	1319	700	695	5		08/21/92	SRS
S200/243	08/17/92	2022	74	BIE	BJ	1319	700	700	12		08/21/92	SRS
S201/202	08/16/92	1800	73	CAW	JS	1404	700	700	185		08/16/92	BFM
S201/207	08/16/92	1957	70	CAW	BJ	1319	700	690	10		08/17/92	CAW
S201/208	08/16/92	1953	70	CAW	BJ	1319	700	682	15		08/17/92	CAW

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2) SEAMS S112/124 AND S208/209 WERE FAST LIESTERED AND SUBSEQUENTLY CAPPED DUE TO WEATHER. NO TRIAL SEAM WAS REQUIRED PRIOR TO LIESTERING THE PANELS.

GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S201/209	08/16/92	1950	70	CAW	BJ	1319	700	682	5		08/17/92	CAW
S201/243	08/17/92	2023	74	BIE	BJ	1319	700	700	4		08/21/92	SRS
S201/246	08/17/92	2025	70	BIE	BJ	1319	700	702	11		08/21/92	SRS
S202/203	08/16/92	1835	73	CAW	JS	1404	700	698	137	DS-71	08/16/92	BFM
S202/205	08/16/92	2002	70	CAW	BJ	1319	700	695	7		08/17/92	CAW
S202/206	08/16/92	2000	70	CAW	BJ	1319	700	692	15		08/17/92	CAW
S202/207	08/16/92	1957	70	CAW	BJ	1319	700	690	15		08/17/92	CAW
S202/246	08/17/92	2026	70	BIE	BJ	1319	700	704	4		08/21/92	SRS
S202/247	08/17/92	2028	70	BIE	BJ	1319	700	695	10		08/21/92	SRS
S203/204	08/16/92	1850	73	CAW	208	1205	700	699	137		08/16/92	BFM
S203/205	08/16/92	2004	70	CAW	BJ	1319	700	698	15		08/17/92	CAW
S203/247	08/17/92	2024	70	BIE	BJ	1319	700	695	4		08/21/92	SRS
S203/248	08/17/92	2030	70	BIE	BJ	1319	700	700	12		08/21/92	SRS
S204/205	08/16/92	2006	70	CAW	BJ	1319	700	701	15		08/17/92	CAW
S204/222	08/17/92	1930	70	CAW	JS	1404	700	699	134		08/18/92	CAW
S204/248	08/17/92	2031	70	BIE	BJ	1319	700	700	4		08/21/92	SRS
S204/251	08/17/92	2020	74	BIE	BJ	1319	700	699	10		08/21/92	SRS
S205/206	08/16/92	1900	70	CAW	JS	1404	700	700	30		08/16/92	BFM
S205/222	08/17/92	1455	74	CAW	BJ	1319	700	677	15		08/19/92	CAW
S206/207	08/16/92	1940	70	CAW	325	1240	700	700	33		08/19/92	SRS
S206/222	08/17/92	1457	74	CAW	BJ	1319	700	678	15		08/19/92	CAW
S207/208	08/16/92	1920	70	CAW	208	1205	700	700	35		08/16/92	BFM
S207/222	08/17/92	1459	74	CAW	BJ	1319	700	680	15		08/19/92	CAW
S208/209	08/16/92	1945	70	CAW	325	1240	700	700	36	DS-76	08/16/92	BFM
S208/222	08/17/92	1501	74	CAW	BJ	1319	700	680	15		08/19/92	CAW
S209/210	08/17/92	1100	70	CAW	325	1240	700	700	66	DS-76N1	08/17/92	CAW
S209/222	08/17/92	1504	74	CAW	BJ	1319	700	680	15		08/19/92	CAW
S210/211	08/17/92	1035	70	CAW	325	1240	700	682	66		08/17/92	CAW
S210/222	08/17/92	1507	74	CAW	BJ	1319	700	685	15		08/19/92	CAW
S211/212	08/17/92	1050	70	CAW	325	1240	700	697	65		08/17/92	CAW

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2) SEAMS S112/124 AND S208/209 WERE FAST LIESTERED AND SUBSEQUENTLY CAPPED DUE TO WEATHER.

) TRIAL SEAM WAS REQUIRED PRIOR TO LIESTERING THE PANELS.

GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S211/222	08/17/92	1509	74	CAW	BJ	1319	700	697	15		08/19/92	CAW
S212/213	08/17/92	1100	70	CAW	JS	1404	700	700	66		08/17/92	CAW
S212/221	08/17/92	1538	74	CAW	BJ	1319	700	696	6		08/19/92	CAW
S212/222	08/17/92	1511	74	CAW	BJ	1319	700	690	15	DS-74	08/19/92	CAW
S213/214	08/17/92	1105	70	CAW	JS	1404	700	700	53		08/17/92	CAW
S213/220	08/17/92	1534	74	CAW	BJ	1319	700	686	13		08/19/92	CAW
S213/221	08/17/92	1536	74	CAW	BJ	1319	700	696	6		08/19/92	CAW
S214/215	08/17/92	1110	70	CAW	325	1240	700	698	38		08/17/92	CAW
S214/219	08/17/92	1532	74	CAW	BJ	1319	700	682	9		08/19/92	CAW
S214/220	08/17/92	1533	74	CAW	BJ	1319	700	682	10		08/19/92	CAW
S215/216	08/17/92	1115	70	CAW	JS	1404	700	700	25		08/17/92	CAW
S215/218	08/17/92	1529	74	CAW	BJ	1319	700	659	10		08/19/92	CAW
S215/219	08/17/92	1530	74	CAW	BJ	1319	700	676	10		08/19/92	CAW
S216/217	08/17/92	1117	70	CAW	JS	1404	700	700	14		08/17/92	CAW
S216/218	08/17/92	1526	74	CAW	BJ	1319	700	680	13		08/19/92	CAW
S217/218	08/17/92	1524	74	CAW	BJ	1319	700	680	5		08/19/92	CAW
S218/219	08/17/92	1122	70	CAW	JS	1404	700	700	29		08/17/92	CAW
S219/220	08/17/92	1128	70	CAW	JS	1404	700	693	44		08/17/92	CAW
S220/221	08/17/92	1135	74	CAW	JS	1404	700	701	61		08/17/92	CAW
S221/222	08/17/92	1440	74	CAW	JS	1404	700	696	70		08/18/92	CAW
S222/223	08/17/92	1350	74	CAW	325	1240	700	698	219	DS-72	08/18/92	CAW
S222/236	08/17/92	1718	74	BIE	BJ	1319	700	700	3		08/22/92	SRS
S222/237	08/17/92	1715	74	BIE	BJ	1319	700	700	25		08/22/92	SRS
S222/238	08/17/92	1710	74	BIE	BJ	1319	700	696	30		08/22/92	SRS
S222/251	08/17/92	2033	74	BIE	BJ	1319	700	700	3		08/21/92	SRS
S222/252	08/17/92	2034	70	BIE	BJ	1319	700	699	11		08/21/92	SRS
S223/224	08/17/92	1400	74	CAW	JS	1404	700	706	207	DS-73	08/17/92	CAW
S223/233	08/17/92	1725	74	BIE	BJ	1319	700	698	7		08/22/92	SRS
S223/236	08/17/92	1720	74	BIE	BJ	1319	700	695	12		08/22/92	SRS
S224/225	08/17/92	1735	74	BIE	BJ	1319	700	698	15		08/22/92	SRS

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2) SEAMS S112/124 AND S208/209 WERE FAST LIESTERED AND SUBSEQUENTLY CAPPED DUE TO WEATHER. NO TRIAL SEAM WAS REQUIRED PRIOR TO LIESTERING THE PANELS.

GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S224/226	08/17/92	1737	74	BIE	BJ	1319	700	700	15		08/22/92	SRS
S224/227	08/17/92	1734	74	BIE	BJ	1319	700	700	15		08/22/92	SRS
S224/228	08/17/92	1733	74	BIE	BJ	1319	700	700	15		08/22/92	SRS
S224/229	08/17/92	1732	74	BIE	BJ	1319	700	695	15		08/22/92	SRS
S224/231	08/17/92	1730	74	BIE	BJ	1319	700	695	13		08/22/92	SRS
S224/233	08/17/92	1727	74	BIE	BJ	1319	700	698	5		08/22/92	SRS
S224/234	08/17/92	1455	74	CAW	JS	1404	700	700	121		08/18/92	CAW
S225/226	08/17/92	1430	74	CAW	325	1240	700	698	30		08/17/92	CAW
S225/227	08/17/92	1437	74	CAW	325	1240	700	700	35		08/17/92	CAW
S225/235	08/18/92	1014	70	CAW	BJ	1319	700	691	6		08/20/92	SRS
S225/261	08/18/92	1015	70	CAW	BJ	1319	700	700	12		08/20/92	SRS
S226/234	08/18/92	1008	70	CAW	BJ	1319	700	700	15		08/20/92	SRS
S226/235	08/18/92	1011	70	CAW	BJ	1319	700	700	17		08/20/92	SRS
S227/228	08/17/92	1445	74	CAW	325	1240	700	682	42		08/17/92	CAW
S227/261	08/18/92	1018	70	CAW	BJ	1319	700	697	5		08/20/92	SRS
S227/263	08/18/92	1021	70	CAW	BJ	1319	700	662	10	DS-84N1	08/20/92	SRS
S228/229	08/17/92	1500	74	CAW	325	1240	700	696	42		08/17/92	CAW
S228/263	08/18/92	1023	70	CAW	BJ	1319	700	670	15		08/22/92	SRS
S229/230	08/17/92	1630	74	BIE	BJ	1319	700	695	25		08/24/92	BIE
S229/232	08/17/92	1635	74	BIE	BJ	1319	700	695	20		08/24/92	BIE
S229/263	08/18/92	1025	70	CAW	BJ	1319	700	700	15		08/22/92	SRS
S230/231	08/17/92	1515	74	CAW	325	1240	700	696	42		08/17/92	CAW
S230/232	08/17/92	1522	74	CAW	325	1240	700	--	31		08/17/92	CAW
S230/258	08/17/92	2103	70	BIE	BJ	1319	700	698	15		08/22/92	SRS
S231/233	08/17/92	1530	74	CAW	325	1240	700	700	42		08/17/92	CAW
S231/257	08/17/92	2101	70	BIE	BJ	1319	700	700	10		08/22/92	SRS
S231/258	08/17/92	2102	70	BIE	BJ	1319	700	699	2		08/22/92	SRS
S232/258	08/17/92	2104	70	BIE	BJ	1319	700	699	2		08/22/92	SRS
S232/263	08/18/92	1027	70	CAW	BJ	1319	700	699	15		08/22/92	SRS
S233/236	08/17/92	1540	74	CAW	325	1240	700	700	41		08/17/92	CAW

NOTES: filename"S_FUSWLD.WK1"

1) THE SEAM TEST DATE SHOWN REPRESENTS THE DATE WHEN THE SEAM NON-DESTRUCTIVE TESTING WAS COMPLETED, AND DOES NOT REPRESENT THE TESTING OF INDIVIDUAL SEAM SEGMENTS.

2) SEAMS S112/124 AND S208/209 WERE FAST LIESTERED AND SUBSEQUENTLY CAPPED DUE TO WEATHER. NO TRIAL SEAM WAS REQUIRED PRIOR TO LIESTERING THE PANELS.

GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S233/256	08/17/92	2059	70	BIE	BJ	1319	700	699	7		08/22/92	SRS
S233/257	08/17/92	2100	70	BIE	BJ	1319	700	702	7		08/22/92	SRS
S234/235	08/17/92	1525	74	CAW	JS	1404	700	702	122	DS-75	08/18/92	CAW
S235/261	08/17/92	2020	70	CAW	325	1240	700	--	140		08/17/92	CAW
S236/237	08/17/92	1555	74	CAW	325	1240	700	700	41		08/17/92	BIE
S236/254	08/17/92	2054	70	BIE	BJ	1319	700	700	3		08/22/92	SRS
S236/256	08/17/92	2057	70	BIE	BJ	1319	700	700	10		08/22/92	SRS
S237/238	08/17/92	1610	74	CAW	325	1240	700	696	24		08/17/92	CAW
S237/254	08/17/92	2053	70	BIE	BJ	1319	700	695	10		08/22/92	SRS
S238/253	08/17/92	2050	70	BIE	BJ	1319	700	700	14		08/22/92	SRS
S239/240	08/17/92	1620	74	CAW	JS	1404	700	699	131		08/17/92	CAW
S240/241	08/17/92	1630	74	CAW	325	1240	700	--	131	DS-77	08/17/92	CAW
S241/242	08/17/92	1710	74	CAW	JS	1404	700	694	132		08/17/92	CAW
S242/243	08/17/92	1705	74	CAW	325	1240	700	700	132		08/17/92	CAW
S243/244	08/17/92	1715	74	CAW	317	1203	700	689	86		08/17/92	CAW
S243/245	08/17/92	1635	74	CAW	317	1203	700	699	29		08/17/92	CAW
S243/246	08/17/92	1702	74	CAW	317	1203	700	696	13		08/17/92	CAW
S244/245	08/17/92	1647	74	CAW	317	1203	700	699	17		08/17/92	CAW
S244/247	08/17/92	1730	74	CAW	325	1240	700	--	100		08/17/92	CAW
S245/246	08/17/92	1657	74	CAW	317	1203	700	700	17		08/17/92	CAW
S246/247	08/17/92	1740	74	CAW	325	1240	700	696	32		08/17/92	CAW
S247/248	08/17/92	1745	74	CAW	JS	1404	700	700	129		08/17/92	CAW
S248/249	08/17/92	1806	74	CAW	325	1240	700	695	20		08/18/92	CAW
S248/249	08/17/92	1730	74	CAW	317	1203	700	698	75		08/18/92	CAW
S248/250	08/17/92	1805	74	CAW	325	1240	700	695	3		08/20/92	SRS
S248/251	08/17/92	1804	74	CAW	325	1240	700	689	29		08/17/92	CAW
S249/250	08/17/92	1748	74	CAW	325	1240	700	700	17		08/17/92	CAW
S249/252	08/17/92	1826	73	CAW	325	1240	700	703	81	DS-79	08/18/92	CAW
S250/251	08/17/92	1758	74	CAW	325	1240	700	700	18		08/17/92	CAW
S250/252	08/17/92	1823	73	CAW	325	1240	700	703	27		08/18/92	CAW

NOTES: filename"S_FUSWLD.WK1"

1) THE SEAM TEST DATE SHOWN REPRESENTS THE DATE WHEN THE SEAM NON-DESTRUCTIVE TESTING WAS COMPLETED, AND DOES NOT REPRESENT THE TESTING OF INDIVIDUAL SEAM SEGMENTS.

2) SEAMS S112/124 AND S208/209 WERE FAST LIESTERED AND SUBSEQUENTLY CAPPED DUE TO WEATHER. NO TRIAL SEAM WAS REQUIRED PRIOR TO LIESTERING THE PANELS.

GEOMEMBRANE SEAM SUMMARY
FUSION SEAMING METHOD
SECONDARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SEAM NUMBER	DATE	START TIME	AMBIENT TEMP.(F)	QA MONITOR	WELDER ID.		WELDING APPARATUS TEMPERATURES		APPROX. WELDED LENGTH	DESTR. TEST NUMBER	TEST COMPLETE	
					TECH	MACH	DIGITAL SET	INDICATOR			DATE (1)	QA MON
S251/252	08/17/92	1820	74	CAW	325	1240	700	700	15		08/17/92	CAW
S252/253	08/17/92	1745	74	CAW	317	1203	700	698	124		08/18/92	CAW
S253/254	08/17/92	1825	74	CAW	317	1203	700	701	47	DS-80	08/18/92	CAW
S253/255	08/17/92	1830	74	CAW	317	1203	700	694	124		08/18/92	CAW
S254/255	08/17/92	1815	74	CAW	317	1203	700	700	15		08/17/92	CAW
S254/256	08/17/92	1855	74	CAW	317	1203	700	696	61		08/17/92	CAW
S255/256	08/17/92	1900	74	CAW	317	1203	700	699	125		08/18/92	CAW
S256/257	08/17/92	1925	70	CAW	317	1203	700	691	195	DS-81	08/18/92	CAW
S257/258	08/17/92	1950	70	CAW	JS	1404	700	697	195	DS-83P1	08/18/92	CAW
S258/259	08/18/92	0920	65	CAW	JS	1404	700	700	66		08/18/92	CAW
S258/260	08/18/92	0930	65	CAW	JS	1404	700	700	65		08/18/92	CAW
S258/263	08/18/92	0910	65	CAW	JS	1404	700	697	85		08/18/92	CAW
S259/260	08/17/92	1901	73	CAW	325	1240	700	700	7		08/18/92	CAW
S259/263	08/18/92	0855	65	CAW	JS	1404	700	700	5		08/18/92	CAW
S261/262	08/17/92	1929	70	CAW	JS	1404	700	700	160	DS-83,N1	08/18/92	CAW
S261/263	08/18/92	0957	70	CAW	BJ	1319	700	700	6		08/20/92	SRS
S262/263	08/18/92	0959	70	CAW	BJ	1319	700	697	5		08/20/92	SRS

NOTES: filename"S_FUSWLD.WK1"

1) THE SEAM TEST DATE SHOWN REPRESENTS THE DATE WHEN THE SEAM NON-DESTRUCTIVE TESTING WAS COMPLETED, AND DOES NOT REPRESENT THE TESTING OF INDIVIDUAL SEAM SEGMENTS.

2) SEAMS S112/124 AND S208/209 WERE FAST LIESTERED AND SUBSEQUENTLY CAPPED DUE TO WEATHER. NO TRIAL SEAM WAS REQUIRED PRIOR TO LIESTERING THE PANELS.

N.2

EXTRUSION METHOD

JUNE 1993

917-1203

GEOMEMBRANE SEAMING SUMMARY
EXTRUSION SEAMING METHOD
SECONDARY GEOMEMBRANE – CELL 2
ALLEN PARK CLAY MINE
FORD MOTOR COMPANY

SEAM NUMBER	DATE	AMBIENT TEMP.	WELDER ID		MACHINE TEMP.		APPROX SEAM LENGTH	DEST. TEST NUMBER	QA MON	SEAM TESTING		
			TECH	MACHINE	DIGITAL SET	INDICATOR				DATE	QA MON	COMPLETE
S 35 / 35(1)	08/03/92	78	LEM	MX109	220	220	8		CAW	08/04/92	BJ	YES
S 36 / 36(1)	08/03/92	78	LEM	MX109	220	220	14		BJ	08/04/92	BJ	YES
S 37 / 37(1)	08/03/92	78	LEM	MX109	220	227	14		BJ	08/04/92	BJ	YES
S 39 / 39(1)	08/03/92	78	398	MX109	220	224	14		BJ	08/04/92	BJ	YES
S 40 / 40(1)	08/03/92	78	398	MX109	220	223	14		BJ	08/04/92	BJ	YES
S 42 / 42(1)	08/03/92	78	398	MX109	220	224	14		BJ	08/04/92	BJ	YES
S 43 / 43(1)	08/03/92	75	LEM	MX109	220	225	14		BJ	08/04/92	BJ	YES
S 44 / 44(1)	08/03/92	72	LEM	MX109	220	223	14		BJ	08/04/92	BJ	YES
S 46 / 46(1)	08/03/92	72	LEM	MX109	220	224	14		BJ	08/04/92	BJ	YES
S 47 / 47(1)	08/03/92	70	LEM	MX109	220	223	14		BJ	08/04/92	BJ	YES
S 48 / 48(1)	08/03/92	70	LEM	MX109	220	224	14		BJ	08/04/92	BJ	YES
S 91 / 260	08/17/92	75	398	MX111	225	225	7		BIE	08/24/92	BIE	YES
S 146 / 148	08/07/92	70	145	MX42	225	225	5		CAW	WELD REMOVED		
S 147 / 148	08/07/92	70	145	MX42	225	225	3		CAW	WELD REMOVED		
S 159 / 180	08/14/92	62	145	MX42	225	225	37	DSE-07	CAW	08/18/92	JAL	YES
S 159 / 181	08/14/92	65	398	MX111	225	225	66		SRS	08/18/92	JAL	YES

Filename"S_EXTWLD.WK1"

NOTE:

1) Seaming occurred during wrinkle repair

APPENDIX O

0.1

FUSION METHOD

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER (2)	SEAM NUMBER	SHEAR TEST			PEEL TEST							REMARKS
						INSIDE TRACK			OUTSIDE TRACK			
		SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	
DS-01 (1)	S 1/2	81.6	213.1	B	82.0	171.0	B	0.0	147.8	B	0.0	PASS
		81.7	210.0	T	82.0	168.5	B	0.0	175.0	T	0.0	
		81.9	213.1	T	81.8	165.9	T	0.0	157.6	T	0.0	
		81.7	213.3	T	81.5	154.2	B	0.0	150.6	B	0.0	
		81.9	219.9	T	81.6	151.9	B	0.0	134.1	B	0.0	
DS-02	S2/3	-	-	-	-	-	-	-	-	-	-	FAIL - SEE DS-02N1 NO SEAM IN "PREVIOUS" DIRECTION
DS-02N1	S2/3	-	-	-	-	-	-	-	-	-	-	RETEST OF DS-02 - FAIL SEE DS-02N2 PATH OF MX1320
DS-02N2	S4/5	-	-	-	-	-	-	-	-	-	-	RETEST OF DS-02N1 - FAIL SEAM CUT OUT AND RECONSTRUCTED PATH OF MX1320
DS-03	S6/7	-	-	-	-	-	-	-	-	-	-	FAIL - SEE DS-03N1 SEAM IN "PREVIOUS" DIRECTION TRACKED AND RECONSTRUCTED TO DS-02

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00.
The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

		SHEAR TEST			PEEL TEST							
						INSIDE TRACK			OUTSIDE TRACK			
SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	REMARKS
DS-03N1	S8/9	82.9	207	G	82.6	164	T	0.0	160	T	0.0	RETEST OF DS-03 – PASS
(DS#3A)		82.4	209	G	82.6	169	T	0.0	167	T	0.0	PATH OF MX1320
		83.1	206	G	82.9	146	B	0.0	173	T	0.0	
		83.0	209	G	82.4	160	T	0.0	160	B	0.0	
		81.5	207	G	83.8	159	B	0.0	167	B	0.0	
DS-04	S7/8	81.6	206	G	81.5	155	B	0.0	161	T	0.0	PASS
(DS#4)		81.6	205	G	81.5	137	B	0.0	149	T	0.0	
		81.6	207	G	81.5	146	B	0.0	139	T	0.0	
		81.4	204	G	81.8	154	B	0.0	165	T	0.0	
		81.8	206	G	81.3	140	B	0.0	154	T	0.0	
DS-05	S12/13	81.9	207	G	81.9	157	B	0.0	164	T	0.0	PASS
(DS#5)		83.6	210	G	83.6	171	B	0.0	167	T	0.0	
		83.8	209	G	83.8	168	B	0.0	162	T	0.0	
		83.5	209	G	83.5	161	B	0.0	173	T	0.0	
		82.5	207	G	82.5	164	B	0.0	164	T	0.0	
DS-06	S18/19	81.5	205	G	83.8	163	T	50	135	B	20	FAIL – SEE DS-06P1 AND DS-06N1
(DS#6)		81.4	207	G	81.9	134	PT	50	120	PT	0.0	
		81.8	205	G	81.6	157	B	0.0	138	B	20	
		82.9	205	G	81.6	146	T	0.0	163	B	20	
		82.1	205	G	82.1	157	B	0.0	157	B	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00. The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER (2)	SEAM NUMBER	SHEAR TEST			PEEL TEST							REMARKS
						INSIDE TRACK			OUTSIDE TRACK			
		SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	
DS-06P1	S17/18	82.1	210	G	82.0	174	B	0.0	133	B	0.0	RETEST OF DS-06 - PASS
(DS#6B)		82.1	210	G	82.1	167	T	0.0	130	B	0.0	PATH OF MX1203
		82.3	210	G	82.2	158	T	0.0	133	B	0.0	
		82.4	210	G	82.4	160	T	0.0	130	B	0.0	
		82.7	209	G	82.4	161	B	0.0	139	B	0.0	
DS-06N1	S18/19	—	206	G	81.9	162	B	0.0	133	T	0.0	RETEST OF DS-06 - PASS
(DS#6A)		—	211	G	82.0	148	B	0.0	153	T	0.0	PATH OF MX1203
		—	211	G	82.2	141	T	0.0	161	T	0.0	
		—	209	G	82.0	150	B	0.0	143	T	0.0	
		—	211	G	81.6	154	T	0.0	164	T	0.0	
DS-07	S25/26	81.5	205	G	81.8	121	T	0.0	126	B	0.0	PASS
(DS#7)		81.4	209	G	82.1	136	B	0.0	146	B	0.0	
		81.8	207	G	82.2	140	T	0.0	133	B	0.0	
		82.9	207	G	82.2	150	T	0.0	143	T	0.0	
		82.1	204	G	82.1	130	B	0.0	174	T	0.0	
DS-08	S2/3	-	-	-	-	-	-	-	-	-	-	FAIL - SEE DS-08P1
DS-08P1	S28/29	82.2	211	G	82.3	144	B	0.0	160	B	0.0	RETEST OF DS-08 - PASS
(DS#8B)		82.1	214	G	82.1	134	T	0.0	155	B	0.0	NO SEAMING PERFORMED IN "NEXT"
		81.4	208	G	82.3	166	T	0.0	159	B	0.0	DIRECTION
		81.0	212	G	82.3	162	B	0.0	150	B	0.0	PATH OF MX1203
		81.1	213	G	82.2	160	B	0.0	143	B	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00. The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

		SHEAR TEST			PEEL TEST							
						INSIDE TRACK			OUTSIDE TRACK			
SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	REMARKS
DS-09	S32/33	83.5	205	G	83.2	160	B	0.0	160	T	0.0	PASS
(DS#9)		83.2	208	G	83.1	161	B	0.0	156	T	0.0	
		82.5	210	G	82.8	160	B	0.0	167	T	0.0	
		83.3	209	G	82.8	163	T	0.0	165	B	0.0	
		83.4	214	G	83.5	167	B	0.0	154	T	0.0	
DS-10	S5/33	83.8	214	G	84.6	164	T	0.0	166	T	0.0	PASS
(DS#10)		84.9	215	G	84.5	151	B	0.0	174	T	0.0	
		84.6	214	G	84.5	170	T	0.0	173	T	0.0	
		84.5	211	G	84.5	164	T	0.0	173	T	0.0	
		84.1	210	G	84.4	171	B	0.0	158	T	0.0	
DS-11	S36/37	81.4	224.9	T	81.3	169.1	B	0.0	149.4	T	0.0	PASS
(1)		81.1	217.5	T	81.2	167.3	B	0.0	144.3	B	0.0	
		81.0	219.1	T	81.1	168.9	B	0.0	156.2	T	0.0	
		81.1	221.6	T	81.2	162.3	B	0.0	135.0	B	0.0	
		80.8	223.2	T	81.2	156.2	B	0.0	164.0	T	0.0	
DS-12	S40/41	81.4	211	G	81.9	160	B	0.0	172	T	0.0	PASS
(DS#12)		81.4	214	G	81.8	169	B	0.0	136	T	0.0	
		81.2	212	G	81.3	168	T	0.0	152	T	0.0	
		81.4	214	G	81.7	170	T	0.0	141	T	0.0	
		81.3	212	G	82.2	177	B	0.0	155	T	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00.
The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

		SHEAR TEST			PEEL TEST							
						INSIDE TRACK			OUTSIDE TRACK			
SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	REMARKS
DS-13	S33/35	82.1	209	G	81.8	154	T	0.0	148	B	0.0	PASS
(DS#13)		82.1	213	G	82.1	172	B	0.0	155	B	0.0	
		82.1	213	G	82.3	147	T	0.0	169	B	0.0	
		82.4	215	G	82.3	173	B	0.0	164	B	0.0	
		82.5	212	G	82.5	144	T	0.0	167	B	0.0	
DS-14	S35/36	81.4	211	G	82.5	171	B	0.0	154	B	0.0	PASS
(DS#14)		81.6	210	G	82.6	131	B	0.0	156	B	0.0	
		82.1	211	G	82.1	180	B	0.0	149	B	0.0	
		81.9	211	G	81.9	161	B	0.0	180	B	0.0	
		81.9	210	G	82.1	158	T	0.0	157	B	0.0	
DS-15	S37/39	81.5	207	G	81.7	154	B	0.0	148	B	0.0	PASS
(DS#15)		81.9	210	G	82.5	172	B	0.0	146	B	0.0	
		81.9	213	G	82.4	169	B	0.0	162	B	0.0	
		81.5	213	G	82.1	147	T	0.0	152	B	0.0	
		81.6	211	G	82.1	163	T	0.0	173	B	0.0	
DS-16	S42/43	81.1	208	G	81.7	172	T	0.0	138	B	0.0	PASS
(DS#16)		81.1	207	G	82.4	177	B	0.0	159	B	0.0	
		80.7	209	G	80.8	178	T	0.0	132	B	0.0	
		80.5	207	G	80.3	174	T	0.0	138	B	0.0	
		80.7	203	G	80.9	135	B	0.0	144	B	0.0	
DS-17	S44/46	-	-	-	-	-	-	-	-	-	-	FAIL - SEE DS-17P1 AND DS-17N1

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00.
The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

		SHEAR TEST			PEEL TEST							
						INSIDE TRACK			OUTSIDE TRACK			
SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	REMARKS
DS-17P1	S44/46	82.7	208	G	79.7	152	B	0.0	155	PB	10	RETEST OF DS-17 - PASS
(DS#17B)		82.4	213	G	79.9	147	B	0.0	163	B	0.0	PATH OF MX1320
		82.6	207	G	80.1	153	B	0.0	149	B	0.0	
		82.4	209	G	79.8	156	T	0.0	165	B	0.0	
		82.6	208	G	79.7	155	B	0.0	162	B	0.0	
DS-17N1	S44/46	81.7	207	G	81.9	148	T	0.0	167	B	0.0	RETEST OF DS-17 - PASS
(DS#17A)		81.7	209	G	81.9	168	T	0.0	159	B	0.0	PATH OF MX1320
		82.0	208	G	81.7	159	B	0.0	161	B	0.0	
		81.8	207	G	81.7	155	B	0.0	164	B	0.0	
		81.8	211	G	81.9	162	T	0.0	162	B	0.0	
DS-18	S46/47	81.5	213	G	82.3	159	B	0.0	184	B	0.0	PASS
(DS#18)		81.2	213	G	82.1	152	T	0.0	185	B	0.0	
		81.9	213	G	82.1	162	T	0.0	181	B	0.0	
		82.0	211	G	82.2	149	T	0.0	184	B	0.0	
		81.8	213	G	82.0	153	T	0.0	186	T	0.0	
DS-19	S52/53	-	-	-	-	-	-	-	-	-	-	FAIL - SEE DS-19P1 AND DS-19N1
DS-19P1	S50/51	81.9	212	G	81.9	169	T	0.0	142	B	0.0	RETEST OF DS-19 - PASS
(DS#19B)		81.1	209	G	82.3	166	B	0.0	175	T	0.0	PATH OF MX1240
		80.8	208	G	81.9	159	B	0.0	165	B	0.0	
		80.9	208	G	80.9	171	B	0.0	171	T	0.0	
		80.8	208	G	81.9	170	T	0.0	160	T	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00.
The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

		SHEAR TEST			PEEL TEST							
						INSIDE TRACK			OUTSIDE TRACK			
SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	REMARKS
DS-19N1	S52/53	81.3	211	G	81.8	151	T	0.0	146	B	0.0	RETEST OF DS-19 - PASS
(DS#19A)		82.2	211	G	81.5	142	B	0.0	171	B	0.0	PATH OF MX1240
		81.1	210	G	81.5	135	B	0.0	162	T	0.0	
		81.3	212	G	81.5	156	T	0.0	150	T	0.0	
		81.7	214	G	82.0	144	B	0.0	143	PB	10	
DS-20	S53/54	-	-	-	-	-	-	-	-	-	-	FAIL - SEE DS-20P1 AND DS-20N1
DS-20P1	S53/54	81.5	210	G	81.9	150	B	0.0	144	B	0.0	RETEST OF DS-20 - PASS
(DS#20B)		80.6	206	G	81.9	152	B	0.0	121	B	0.0	PATH OF MX1320
		80.5	207	G	82.0	154	B	0.0	144	B	0.0	
		82.4	210	G	82.2	164	B	0.0	163	T	0.0	
		80.6	208	G	82.1	153	B	0.0	171	T	0.0	
DS-20N1	S55/56	81.1	206	G	81.8	167	T	0.0	138	B	0.0	RETEST OF DS-20 - PASS
(DS#20A)		80.6	205	G	81.6	166	T	0.0	138	B	0.0	PATH OF MX1320
		81.0	207	G	81.2	166	B	0.0	135	B	0.0	
		80.4	206	G	81.3	158	B	0.0	166	T	0.0	
		80.4	207	G	81.4	155	B	0.0	172	T	0.0	
DS-21	S56/57	81.1	215.2	T	80.9	164.2	B	0.0	154.8	T	0.0	PASS
(1)		82.2	217.2	T	81.2	150.8	B	0.0	154.5	T	0.0	
		82.5	219.1	T	80.9	164.3	B	0.0	146.7	T	0.0	
		82.5	217.7	T	81.1	173.2	B	0.0	166.1	T	0.0	
		81.7	220.8	T	81.7	151.7	B	0.0	151.5	T	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00.
The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

		SHEAR TEST			PEEL TEST							
						INSIDE TRACK			OUTSIDE TRACK			
SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	REMARKS
DS-22	S62/63	80.9	206	G	81.5	142	T	0.0	166	B	0.0	PASS
(DS#22)		80.9	204	G	81.1	153	T	0.0	160	B	0.0	
		81.0	207	G	81.0	163	B	0.0	152	B	0.0	
		80.8	205	G	80.9	136	T	0.0	166	B	0.0	
		80.9	205	G	81.0	167	B	0.0	160	B	0.0	
DS-23	S67/68	81.6	211	G	80.6	176	T	0.0	180	B	0.0	PASS
(DS#23)		82.0	212	G	79.9	169	B	0.0	173	T	0.0	
		81.9	211	G	80.1	179	T	0.0	173	T	0.0	
		81.7	211	G	79.8	180	T	0.0	170	T	0.0	
		81.6	208	G	79.7	172	T	0.0	163	T	0.0	
DS-24	S64/79	82.1	212	G	82.4	161	T	0.0	143	B	0.0	PASS
(DS#24)		81.4	211	G	82.4	159	T	0.0	149	B	0.0	
		81.4	212	G	82.0	166	B	0.0	144	B	0.0	
		81.6	212	G	82.4	165	T	0.0	150	B	0.0	
		82.2	214	G	82.1	168	T	0.0	165	B	0.0	
DS-25	S80/81	81.6	211	G	81.9	165	T	0.0	152	B	0.0	PASS
(DS#25)		81.6	212	G	81.6	160	B	0.0	166	B	0.0	
		81.5	212	G	81.7	152	T	0.0	168	T	0.0	
		81.9	209	G	81.5	146	B	0.0	154	B	0.0	
		81.8	210	G	81.5	155	B	0.0	173	B	0.0	
DS-26	S80/81	-	-	-	-	-	-	-	-	-	-	FAIL - SEE DS- 26P1 AND DS-26N1

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00. The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER (2)	SEAM NUMBER	SHEAR TEST			PEEL TEST							REMARKS
						INSIDE TRACK			OUTSIDE TRACK			
		SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	
DS-26P1	S77/78	82.0	209	G	82.0	161	T	0.0	135	T	0.0	RETEST OF DS-26 - PASS
(DS#26B)		81.9	209	G	82.1	140	T	0.0	146	T	0.0	PATH OF MX1240
		82.0	210	G	81.9	166	T	0.0	146	T	0.0	
		82.1	211	G	82.1	162	B	0.0	167	B	0.0	
		81.9	211	G	81.9	158	B	0.0	171	T	0.0	
DS-26N1	S80/81	81.6	208	G	79.4	134	T	0.0	147	B	0.0	RETEST OF DS-26 - PASS
(DS#26A)		81.4	210	G	79.7	140	T	0.0	146	B	0.0	PATH OF MX1240
		81.7	208	G	79.9	155	T	0.0	150	B	0.0	
		81.7	208	G	79.8	140	T	0.0	165	B	0.0	
		81.9	207	G	79.9	154	T	0.0	156	B	0.0	
DS-27	S83/85	81.4	206	G	80.7	141	T	0.0	167	T	0.0	PASS
(DS#27)		80.6	203	G	80.2	178	T	0.0	176	T	0.0	
		80.6	207	G	80.5	175	T	0.0	163	T	0.0	
		80.8	208	G	80.9	168	T	0.0	170	B	0.0	
		80.3	193	G	80.1	181	B	0.0	164	B	0.0	
DS-28	S83/85	81.1	204	G	82.6	172	B	0.0	145	T	0.0	PASS
(DS#28)		81.0	207	G	82.5	160	T	0.0	148	B	0.0	
		81.2	202	G	82.2	150	B	0.0	152	T	0.0	
		80.9	201	G	81.9	171	B	0.0	150	T	0.0	
		81.1	204	G	81.9	172	B	0.0	145	T	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00.
The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER (2)	SEAM NUMBER	SHEAR TEST			PEEL TEST							REMARKS
						INSIDE TRACK			OUTSIDE TRACK			
		SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	
DS-29	S87/88	82.5	204	G	80.3	181	B	0.0	147	B	0.0	PASS
(DS#29)		82.5	205	G	80.6	166	B	0.0	134	B	0.0	
		82.4	204	G	81.1	177	T	0.0	140	B	0.0	
		82.3	206	G	80.8	178	B	0.0	164	T	0.0	
		82.1	204	G	81.3	177	T	0.0	165	T	0.0	
DS-30	S88/89	81.3	204	G	81.8	164	T	0.0	140	T	0.0	PASS
(DS#30)		81.5	204	G	81.8	166	T	0.0	149	B	0.0	
		81.1	203	G	81.7	174	B	0.0	158	B	0.0	
		81.3	202	G	81.9	152	T	0.0	156	T	0.0	
		80.5	204	G	81.7	153	B	0.0	141	B	0.0	
DS-31	S90/91	81.2	217.1	B	81.78	146.2	B	0.0	132.3	B	0.0	PASS
(1)		82.2	217.1	B	81.9	161.6	B	0.0	135.2	B	0.0	
		82.5	218.7	B	82.2	156.7	B	0.0	138.3	B	0.0	
		82.5	218.1	B	81.6	168.5	B	0.0	139.1	B	0.0	
		81.7	219.2	B	81.9	158.4	T	0.0	143.1	B	0.0	
DS-32	S92/93	81.1	203	G	81.4	172	T	0.0	171	B	0.0	PASS
(DS#32)		81.0	203	G	81.3	150	B	0.0	168	T	0.0	
		81.0	202	G	81.4	172	T	0.0	165	B	0.0	
		81.1	204	G	81.4	159	T	0.0	164	B	0.0	
		81.0	200	G	81.5	160	T	0.0	160	T	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00.
The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

		SHEAR TEST			PEEL TEST							
						INSIDE TRACK			OUTSIDE TRACK			
SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	REMARKS
DS-33	S96/97	81.9	208	G	81.9	154	T	0.0	143	B	0.0	PASS
(DS#33)		81.7	209	G	82.1	159	T	0.0	152	B	0.0	
		81.8	207	G	81.7	276	T	0.0	142	B	0.0	
		81.6	208	G	82.0	138	T	0.0	156	B	0.0	
		81.7	205	G	81.8	156	T	0.0	147	B	0.0	
DS-34	S101/102	81.7	207	G	81.9	171	T	0.0	147	B	0.0	PASS
(DS#34)		81.8	209	G	81.7	157	T	0.0	168	B	0.0	
		81.6	208	G	82.1	169	T	0.0	150	B	0.0	
		81.2	209	G	82.0	165	B	0.0	163	B	0.0	
		81.1	206	G	82.2	148	B	0.0	167	B	0.0	
DS-35	S80/103	81.1	199	G	81.8	155	T	0.0	148	B	0.0	PASS
(DS#35)		81.6	205	G	81.4	155	T	0.0	152	B	0.0	
		81.3	205	G	81.2	133	T	0.0	147	B	0.0	
		81.3	206	G	81.4	162	T	0.0	153	B	0.0	
		81.3	201	G	81.3	161	T	0.0	152	B	0.0	
DS-36	S50/103	84.8	206	G	81.7	142	T	0.0	153	B	0.0	PASS
(DS#36)		84.7	211	G	81.9	142	T	0.0	140	B	0.0	
		84.4	210	G	82.1	169	B	0.0	136	B	0.0	
		84.2	209	G	82.4	168	B	0.0	154	B	0.0	
		83.5	213	G	82.2	152	T	0.0	141	B	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00.
The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

		SHEAR TEST			PEEL TEST							
						INSIDE TRACK			OUTSIDE TRACK			
SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	REMARKS
DS-37	S106/107	82.2	208	G	82.3	169	B	0.0	171	T	0.0	PASS
(DS#37)		82.4	207	G	82.0	149	T	0.0	151	B	0.0	
		82.6	204	G	82.3	151	B	0.0	172	B	0.0	
		82.5	207	G	82.2	163	T	0.0	158	B	0.0	
		82.5	208	G	82.2	171	B	0.0	162	B	0.0	
DS-38	S102/104	82.1	210	G	82.1	163	T	0.0	133	T	0.0	PASS
(DS#38)		82.3	217	G	81.7	160	T	0.0	134	T	0.0	
		82.1	212	G	81.3	156	T	5	136	T	0.0	
		82.2	207	G	81.4	171	T	0.0	130	T	0.0	
		82.7	206	G	81.2	150	T	0.0	135	T	0.0	
DS-39	S108/110	82.4	211	G	82.5	175	T	0.0	168	T	0.0	PASS
(DS#39)		82.5	210	G	82.1	175	T	0.0	151	B	0.0	
		82.2	211	G	81.9	175	B	0.0	170	B	0.0	
		82.2	208	G	81.7	175	B	0.0	152	B	0.0	
		82.1	210	G	81.7	176	B	0.0	168	B	0.0	
DS-40	S113/114	82.4	213	G	82.2	158	B	0.0	143	T	0.0	PASS
(DS#40)		81.9	213	G	82.6	162	B	0.0	149	B	0.0	
		82.3	213	G	82.2	165	B	0.0	140	B	0.0	
		82.3	213	G	82.3	167	T	0.0	143	T	0.0	
		82.3	214	G	82.3	171	B	0.0	174	T	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00.
The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

		SHEAR TEST			PEEL TEST							
						INSIDE TRACK			OUTSIDE TRACK			
SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	REMARKS
DS-41	S115/116	83.2	215.5	B	82.4	172.4	B	0.0	140.5	B	0.0	PASS
(1)		83.1	216.5	B	82.9	173.1	B	0.0	144.8	B	0.0	
		83.2	217.0	B	82.7	177.1	B	0.0	151.2	T	0.0	
		82.9	217.0	B	83.0	156.5	T	0.0	163.1	B	0.0	
		83.0	217.0	B	82.6	166.0	T	0.0	155.2	T	0.0	
DS-42	S116/117	80.6	211	G	82.6	162	B	0.0	164	T	0.0	PASS
(DS#42)		80.4	211	G	82.5	167	B	0.0	167	B	0.0	
		80.4	211	G	82.5	143	B	0.0	168	T	0.0	
		80.4	208	G	82.2	143	B	0.0	149	T	0.0	
		80.4	208	G	82.4	154	B	0.0	136	T	0.0	
DS-43	S111/123	–	–	–	–	–	–	–	–	–	–	FAIL - SEE DS-43P1 AND DS-43N1
DS-43P1	S118/119	81.7	213	G	81.6	142	T	90	140	B	0.0	RETEST OF DS43 - PASS
(DS#43B)		81.3	213	G	81.5	163	B	0.0	172	B	0.0	PATH OF MX1404
		81.5	212	G	81.6	171	T	0.0	170	B	0.0	
		81.9	212	G	81.5	163	T	0.0	178	B	0.0	
		81.3	208	G	81.4	153	T	0.0	152	B	0.0	
DS-43N1	S124/126	81.7	215	G	82.7	177	T	0.0	163	T	0.0	RETEST OF DS43 - PASS
(DS#43A)		82.3	216	G	82.9	170	B	0.0	170	T	0.0	PATH OF MX1404
		81.2	217	G	82.8	168	B	0.0	138	B	0.0	
		83.0	219	G	82.6	134	T	0.0	135	T	40	
		81.3	216	G	82.9	160	B	0.0	136	B	0.0	

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The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

		SHEAR TEST			PEEL TEST							
						INSIDE TRACK			OUTSIDE TRACK			
SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	REMARKS
DS-44	S122/123	81.9	213	G	81.4	176	T	0.0	169	T	0.0	PASS
(DS#44)		82.0	211	G	80.9	170	T	0.0	143	B	0.0	
		82.0	212	G	80.9	169	T	0.0	169	T	0.0	
		81.9	204	G	80.9	172	T	0.0	162	B	0.0	
		82.1	212	G	81.0	164	T	0.0	158	T	0.0	
DS-45	S125/127	81.9	212	G	81.6	130	B	0.0	157	B	0.0	PASS
(DS#45)		81.9	211	G	81.7	162	T	0.0	159	T	0.0	
		82.3	211	G	82.2	133	T	0.0	154	B	0.0	
		82.5	211	G	82.7	140	B	0.0	159	T	0.0	
		81.8	212	G	82.6	162	B	0.0	147	B	0.0	
DS-46	S127/128	82.1	212	G	81.6	152	T	0.0	165	T	0.0	PASS
(DS#46)		81.6	210	G	81.8	157	T	0.0	138	T	0.0	
		82.1	211	G	81.6	146	T	0.0	145	T	0.0	
		81.5	210	G	81.7	157	T	0.0	152	B	0.0	
		82.3	212	G	82.1	160	B	0.0	144	T	0.0	
DS-47	S130/131	81.4	211	G	82.6	148	T	0.0	150	T	0.0	PASS
(DS#47)		81.6	210	G	82.7	174	B	0.0	164	T	0.0	
		82.3	210	G	82.5	143	B	0.0	151	P	100	
		82.5	214	G	82.9	170	B	0.0	159	T	10	
		82.3	210	G	82.5	170	B	0.0	151	T	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

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The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER (2)	SEAM NUMBER	SHEAR TEST			PEEL TEST							REMARKS
						INSIDE TRACK			OUTSIDE TRACK			
		SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	
DS-48	S134/135	82.1	210	G	80.7	138	T	0.0	162	T	0.0	PASS
(DS#48)		82.3	212	G	80.2	170	T	0.0	165	T	0.0	
		82.2	212	G	80.3	167	B	0.0	177	T	0.0	
		82.2	212	G	80.3	167	B	0.0	167	T	0.0	
		82.1	211	G	80.5	130	B	50	168	T	0.0	
DS-49	S135/136	81.9	211	G	81.1	141	T	0.0	168	B	0.0	PASS
(DS#49)		81.7	212	G	81.3	153	T	0.0	169	T	0.0	
		82.3	212	G	81.3	147	B	0.0	166	T	0.0	
		81.7	212	G	81.7	137	T	0.0	158	B	0.0	
		81.5	211	G	81.3	144	T	0.0	158	B	0.0	
DS-50	S141/142	83.1	213	G	81.5	173	T	0.0	175	T	0.0	PASS
(DS#50)		83.2	213	G	81.9	146	B	0.0	166	T	0.0	
		83.2	214	G	81.7	156	B	0.0	161	T	0.0	
		82.9	213	G	82.6	153	B	0.0	155	B	0.0	
		82.9	213	G	82.5	156	B	0.0	161	B	0.0	
DS-51	S140/141	82.0	216.0	B	82.7	141.7	B	0.0	149.4	B	0.0	PASS
(1)		82.3	215.8	B	82.7	132.5	B	0.0	153.5	B	0.0	
		82.5	216.6	B	82.4	136.1	B	0.0	150.9	B	0.0	
		82.9	216.5	B	82.5	124.4	T	0.0	167.5	B	0.0	
		82.8	216.1	B	82.4	134.3	T	0.0	160.3	T	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00.
The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

		SHEAR TEST			PEEL TEST							
						INSIDE TRACK			OUTSIDE TRACK			
SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	REMARKS
DS-52	S142/143	81.7	213	G	81.3	148	T	0.0	169	B	0.0	PASS
(DS#52)		81.6	215	G	81.2	144	T	0.0	157	T	0.0	
		81.7	211	G	81.2	148	T	0.0	160	T	0.0	
		81.2	210	G	81.1	142	B	0.0	148	T	0.0	
		81.3	208		81.2	165	B	0.0	165	T	0.0	
				G								
DS-53	S154/155	81.8	216	G	82.3	158	T	0.0	157	B	0.0	PASS
(DS#53)		81.8	216	G	81.6	154	T	0.0	167	B	0.0	
		81.5	213	G	81.9	168	T	0.0	168	B	0.0	
		81.5	214	G	81.4	152	T	0.0	166	T	0.0	
		81.3	214	G	81.4	168	T	0.0	150	B	0.0	
DS-54	S155/157	81.4	209	G	81.4	162	T	0.0	175	T	0.0	PASS
(DS#54)		81.5	208	G	81.2	163	T	0.0	181	T	0.0	
		81.3	211	G	81.3	172	T	0.0	159	T	0.0	
		80.9	211	G	80.9	160	T	0.0	161	B	0.0	
		80.8	211	G	80.9	151	T	0.0	150	T	0.0	
DS-55	S157/158	81.4	211	G	80.8	161	B	0.0	157	B	0.0	PASS
(DS#55)		81.3	212	G	80.8	170	T	0.0	156	T	0.0	
		81.4	212	G	81.2	167	T	0.0	153	T	0.0	
		81.3	213	G	81.3	162	B	0.0	172	T	0.0	
		81.6	213	G	81.7	166	T	0.0	163	B	0.0	
								0.0				

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

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The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER (2)	SEAM NUMBER	SHEAR TEST			PEEL TEST							REMARKS
						INSIDE TRACK			OUTSIDE TRACK			
		SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	
DS-56	S158/159	81.5	214	G	81.3	148	T	0.0	167	B	0.0	PASS
(DS#56)		81.3	213	G	81.6	148	T	0.0	165	T	0.0	
		81.7	216	G	81.3	163	T	0.0	137	T	0.0	
		81.4	216	G	81.8	153	T	0.0	182	B	0.0	
		81.4	215	G	81.3	142	T	10	178	T	0.0	
DS-57	S166/167	82.0	226	G	81.8	159	T	0.0	144	T	0.0	PASS
(DS#58)		82.7	224	G	81.8	148	T	0.0	158	B	0.0	
		81.7	224	G	82.1	135	T	0.0	166	T	0.0	
		82.3	223	G	81.6	156	T	0.0	172	T	0.0	
		82.5	221	G	82.1	136	T	0.0	167	B	0.0	
DS-58	S171/172	81.6	210	G	81.8	144	B	0.0	154	T	0.0	PASS
(DS#58)		82.7	210	G	81.7	144	B	0.0	171	T	0.0	
		81.9	211	G	81.5	146	B	0.0	167	T	0.0	
		81.6	210	G	83.1	135	B	0.0	174	B	0.0	
		81.6	211	G	81.5	160	B	0.0	152	B	0.0	
DS-59	S172/173	82.5	211	G	82.7	171	B	0.0	184	B	0.0	PASS
(DS#59)		8.23	209	G	82.7	173	T	0.0	184	T	0.0	
		82.3	210	G	82.6	166	B	0.0	156	B	0.0	
		82.7	211	G	82.5	175	B	0.0	173	B	0.0	
		82.2	212	G	82.8	175	T	0.0	152	B	0.0	

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The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

		SHEAR TEST			PEEL TEST							
						INSIDE TRACK			OUTSIDE TRACK			
SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	REMARKS
DS-60	S182/183	82.3	210	G	82.0	166	T	0.0	142	T	0.0	PASS
(DS#60)		82.1	211	G	82.3	141	B	0.0	133	T	0.0	
		82.5	212	G	82.3	150	B	0.0	156	T	0.0	
		82.4	214	G	82.7	146	B	0.0	143	T	0.0	
		82.6	216	G	82.4	137	B	0.0	140	T	0.0	
DS-61	S184/85	80.6	212.6	T	80.4	148.7	B	0.0	166.6	B	0.0	PASS
(1)		80.2	211.8	T	80.2	166.9	T	0.0	169.3	B	0.0	
		80.4	209.3	T	80.1	144.2	B	0.0	179.2	T	0.0	
		80.3	212.3	T	80.2	147.8	B	0.0	164.9	B	0.0	
		80.1	211.8	T	80.0	148.0	T	0.0	174.1	T	0.0	
DS-62	S186/187	83.1	212	G	83.1	154	T	0.0	166	T	0.0	PASS
(DS#62)		83.4	212	G	83.1	153	T	0.0	182	T	0.0	
		83.1	213	G	83.2	151	T	0.0	180	T	0.0	
		83.1	214	G	83.1	147	T	0.0	152	T	0.0	
		83.1	213	G	83.0	158	T	0.0	171	T	0.0	
DS-63	S187/188	83.0	211	G	83.0	150	PB	100	148	T	0.0	PASS
(DS#63)		83.0	212	G	82.8	167	T	0.0	155	T	0.0	
		82.8	209	G	83.2	167	B	0.0	149	T	0.0	
		81.7	212	G	83.8	160	T	0.0	267	T	0.0	
		82.0	211	G	83.9	170	B	0.0	161	B	0.0	

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The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER (2)	SEAM NUMBER	SHEAR TEST			PEEL TEST							REMARKS
						INSIDE TRACK			OUTSIDE TRACK			
		SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	
DS-64	S137/184	83.3	215	G	82.7	135	T	0.0	165	B	0.0	PASS
(DS#64)		83.3	217	G	83.4	157	T	0.0	162	T	0.0	
		81.2	218	G	83.3	162	T	0.0	158	B	0.0	
		82.8	213	G	82.9	169	T	0.0	159	B	0.0	
		82.3	214	G	83.1	140	T	0.0	145	B	0.0	
DS-65	S190/192	82.4	214	G	82.5	169	T	0.0	134	B	0.0	PASS
(DS#65)		82.3	215	G	82.4	174	B	0.0	170	T	0.0	
		82.3	213	G	82.1	173	B	0.0	118	B	0.0	
		82.3	214	G	82.1	168	T	0.0	163	B	0.0	
		82.2	210	G	82.3	163	T	0.0	144	B	0.0	
DS-66	S189/190	82.2	209	G	82.3	157	T	0.0	160	B	0.0	PASS
(DS#66)		82.4	208	G	81.9	125	T	0.0	259	B	0.0	
		82.0	208	G	82.1	165	T	0.0	159	B	0.0	
		83.0	211	G	82.0	158	T	0.0	165	B	0.0	
		82.3	212	G	82.2	168	B	0.0	152	B	0.0	
DS-67	S190/191	82.0	208	G	82.3	129	T	0.0	126	PB	100	PASS
(DS#67)		82.2	208	G	83.1	142	T	0.0	157	T	0.0	
		82.4	207	G	82.3	147	T	0.0	163	B	0.0	
		82.8	209	G	83.0	162	T	0.0	173	B	0.0	
		82.2	208	G	81.7	163	T	0.0	150	T	0.0	

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The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

		SHEAR TEST			PEEL TEST							
						INSIDE TRACK			OUTSIDE TRACK			
SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	REMARKS
DS-68	S197/198	81.3	210	G	82.3	112	PB	100	138	B	0.0	PASS
(DS#68)		81.7	208	G	83.3	148	T	10	169	B	0.0	
		81.9	209	G	82.6	163	T	0.0	171	B	0.0	
		82.1	209	G	82.8	168	T	0.0	162	T	0.0	
		81.9	209	G	82.2	151	B	0.0	174	T	0.0	
DS-69	S197/198	82.2	210	G	82.0	135	T	0.0	164	B	0.0	PASS
(DS#69)		82.7	211	G	82.4	127	T	0.0	162	B	0.0	
		82.1	211	G	82.0	136	T	0.0	136	B	0.0	
		82.0	212	G	82.9	128	T	0.0	159	T	0.0	
		82.7	210	G	83.0	135	T	0.0	156	B	0.0	
DS-70	S193/194	82.8	206	G	81.6	165	B	0.0	157	B	0.0	PASS
(DS#70)		81.5	207	G	81.3	140	T	0.0	177	B	0.0	
		83.0	208	G	81.7	158	T	0.0	164	B	0.0	
		81.6	205	G	82.0	146	T	0.0	151	B	0.0	
		83.4	208	G	81.5	154	T	0.0	151	B	0.0	
DS-71	S202/203	82.0	210	G	82.4	146	B	0.0	143	B	0.0	PASS
(1)		82.1	210	G	82.2	170	T	0.0	158	T	0.0	
		82.1	210	G	81.6	150	B	0.0	172	B	0.0	
		82.1	211	G	81.8	143	B	0.0	141	B	0.0	
		82.5	209	G	81.6	170	B	0.0	142	T	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00.

. The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER (2)	SEAM NUMBER	SHEAR TEST			PEEL TEST							REMARKS
						INSIDE TRACK			OUTSIDE TRACK			
		SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	
DS-72	S222/223	81.4	209	G	81.3	158	T	0.0	146	B	0.0	PASS
(DS#72)		81.7	208	G	81.6	140	T	0.0	156	B	0.0	
		81.6	206	G	81.6	161	T	0.0	144	B	0.0	
		82.0	206	G	81.8	167	T	0.0	162	B	0.0	
		82.0	205	G	82.0	135	T	0.0	164	B	0.0	
DS-73	S223/224	82.6	207	G	82.1	145	T	0.0	165	B	0.0	FAIL - SEE DS-73P1 AND DS-73N1
(DS#73)		82.2	206	G	82.1	118	T	0.0	165	B	0.0	
		82.2	207	G	82.7	122	T	0.0	152	B	0.0	
		82.2	205	G	82.3	133	T	0.0	149	B	0.0	
		82.1	204	G	82.1	132	T	0.0	148	B	0.0	
DS-73P1	S223/224	81.9	212	G	81.1	160	B	0.0	160	T	0.0	RETEST OF DS-73 - PASS
(DS#73P1)		81.7	211	G	81.4	164	T	0.0	158	T	0.0	PATH OF MX1404
		82.0	208	G	81.6	151	T	0.0	156	T	0.0	
		82.2	208	G	81.7	162	T	0.0	142	T	0.0	
		81.9	208	G	81.8	164	T	0.0	145	T	0.0	
DS-73N1	S223/224	82.0	210	G	81.1	173	B	0.0	170	T	0.0	RETEST OF DS-73 - PASS
(DS#73N)		81.8	211	G	81.0	175	T	0.0	173	B	0.0	PATH OF MX1404
		81.6	210	G	81.3	170	T	0.0	170	T	0.0	
		81.7	209	G	81.5	125	B	0.0	172	T	0.0	
		81.8	210	G	81.5	159	T	0.0	176	B	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00.
The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER (2)	SEAM NUMBER	SHEAR TEST			PEEL TEST							REMARKS
						INSIDE TRACK			OUTSIDE TRACK			
		SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	
DS-74	S212/222	81.1	213.3	B	81.1	169.7	B	0.0	176.2	T	0.0	PASS
		81.0	215.0	T	80.7	159.9	B	0.0	170.2	T	0.0	
		80.8	214.6	T	80.5	165.3	B	0.0	171.3	B	0.0	
		81.1	213.4	T	80.1	147.3	B	0.0	175.9	T	0.0	
		80.8	212.6	T	80.2	176.3	T	0.0	182.3	B	0.0	
DS-75 (DS#75)	S234/235	82.6	209	G	82.8	167	B	0.0	159	B	0.0	PASS
		82.9	208	G	82.7	169	T	0.0	143	PB	50	
		82.3	209	G	82.3	166	B	0.0	164	B	0.0	
		82.1	208	G	82.2	166	T	0.0	161	B	0.0	
		82.2	208	G	82.5	179	B	0.0	166	B	0.0	
DS-76	S208/209	-	-	-	-	-	-	-	-	-	-	FAIL - SEE DS-76P1 AND DS-76N1
DS-76P1 (DS#76P1)	S193/194	82.2	208	G	82.9	134	T	0.0	149	B	0.0	RETEST OF DS-76 - PASS PATH OF MX1240
		82.9	209	G	83.5	148	T	0.0	152	B	0.0	
		82.8	207	G	83.0	166	T	0.0	148	B	0.0	
		82.9	208	G	82.8	155	T	0.0	147	B	0.0	
		82.8	208	G	82.8	158	T	0.0	156	B	0.0	
DS-76N1 (DS#76N1)	S209/210	83.1	206	G	83.0	154	B	0.0	141	B	0.0	RETEST OF DS-76 - PASS PATH OF MX1240
		83.4	206	G	83.1	139	B	0.0	143	B	0.0	
		83.2	205	G	83.3	141	T	0.0	142	B	0.0	
		83.0	207	G	83.1	159	B	0.0	138	B	0.0	
		83.1	206	G	83.3	135	T	0.0	142	T	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00.
The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER (2)	SEAM NUMBER	SHEAR TEST			PEEL TEST							REMARKS
						INSIDE TRACK			OUTSIDE TRACK			
		SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	
DS-77	S240/241	81.8	209	G	81.7	149	B	0.0	147	B	0.0	PASS
(DS#77)		82.0	212	G	82.0	159	T	0.0	154	B	0.0	
		81.9	211	G	82.0	159	B	0.0	156	B	0.0	
		81.5	212	G	81.9	150	B	0.0	152	B	0.0	
		81.8	210	G	81.5	144	T	0.0	137	B	0.0	
DS-78	S222/30G	82.8	211	G	82.6	163	T	0.0	164	T	0.0	PASS
(DS#78)		83.1	212	G	82.9	163	T	0.0	154	B	0.0	
		83.0	211	G	83.0	130	T	0.0	134	B	0.0	
		83.0	210	G	83.0	140	T	0.0	163	B	0.0	
		82.7	211	G	83.2	133	T	0.0	167	B	0.0	
DS-79	S249/252	81.8	211	G	81.3	167	B	0.0	156	B	0.0	PASS
(DS#79)		83.2	211	G	82.1	167	B	0.0	162	B	0.0	
		81.4	209	G	82.0	167	T	0.0	164	B	0.0	
		81.3	210	G	82.2	163	T	0.0	151	B	0.0	
		81.5	208	G	82.5	139	B	0.0	154	B	0.0	
DS-80	S253/254	81.2	211	G	83.4	163	B	0.0	165	T	0.0	PASS
(DS#80)		82.2	209	G	81.5	165	B	0.0	172	T	0.0	
		81.1	208	G	81.1	139	T	0.0	169	T	0.0	
		82.0	208	G	81.2	157	B	0.0	169	T	0.0	
		81.4	207	G	81.1	172	B	0.0	174	T	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00.
The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

		SHEAR TEST			PEEL TEST							
						INSIDE TRACK			OUTSIDE TRACK			
SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	REMARKS
DS-81	S256/257	81.7	212.5	T	81.3	182.8	B	0.0	169.1	T	0.0	PASS
(1)		80.8	216.5	T	81.3	172.2	B	0.0	167.3	T	0.0	
		80.7	217.2	T	80.9	175.9	B	0.0	166.1	T	0.0	
		81.8	217.0	T	81.5	155.7	B	0.0	162.6	T	0.0	
		80.5	216.8	T	81.3	175.5	B	0.0	162.6	T	0.0	
DS-82	S196/239	81.5	205	G	82.5	166	B	0.0	168	B	0.0	PASS
(DS#82)		80.7	202	G	82.5	173	B	0.0	170	T	0.0	
		82.0	212	G	82.0	174	T	0.0	168	T	0.0	
		82.4	209	G	82.9	168	B	0.0	167	B	0.0	
		82.6	207	G	82.1	165	T	0.0	173	T	0.0	
DS-83	S261/262	82.5	209	G	82.1	162	B	0.0	164	B	0.0	FAIL - SEE DS-83P1 AND DS-83N1
(DS#83)		83.0	210	G	82.7	159	T	0.0	132	P	100	
		82.7	209	G	83.2	158	T	0.0	115	P	100	
		83.1	211	G	82.5	155	T	0.0	119	P	100	
		82.5	213	G	82.6	166	T	0.0	155	P	100	
DS-83P1	S257/258	83.2	205	G	83.6	156	T	0.0	147	B	0.0	RETEST OF DS-83 - PASS
(DS#83B)		83.3	204	G	83.2	149	T	0.0	158	B	0.0	PATH OF MX1404
		83.7	207	G	83.4	167	B	0.0	145	B	0.0	
		84.1	205	G	83.3	146	T	0.0	142	B	0.0	
		83.1	206	G	83.4	168	B	0.0	165	T	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00.
The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER (2)	SEAM NUMBER	SHEAR TEST			PEEL TEST							REMARKS
						INSIDE TRACK			OUTSIDE TRACK			
		SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	
DS-83N1	S261/262	81.9	207	G	82.2	156	B	0.0	168	T	0.0	RETEST OF DS-83 - PASS
(DS#83N1)		82.0	207	G	82.2	164	B	0.0	164	T	0.0	PATH OF MX1404
		82.0	208	G	82.3	150	B	0.0	162	T	0.0	
		82.5	209	G	83.8	141	T	0.0	153	PB	100	
		82.8	210	G	83.2	142	T	0.0	159	T	0.0	
DS-84	S106/241	83.0	212	G	81.0	110	P	100	149	B	0.0	FAIL - SEE DS-84P1 AND DS-84N1
(DS#84)		83.5	210	G	80.3	89	P	100	152	B	0.0	
		83.3	209	G	83.0	164	T	0.0	145	B	0.0	
		83.1	210	G	83.9	155	P	100	142	B	0.0	
		83.4	206	G	82.7	83	P	100	128	PB	50	
DS-84P1	S242/105	83.5	209	G	81.9	136	B	0.0	157	PB	30	RETEST OF DS-84
(DS#84P1)		83.7	210	G	81.8	137	B	0.0	120	PB	30	FAIL - SEE DS-84P2
		82.1	204	G	81.3	120	P	100	134	PB	90	PATH OF MX1319
		82.0	206	G	81.4	51	P	100	164	PB	90	
		80.9	205	G	81.5	153	T	0.0	153	PT	10	
DS-84P2	S95/256	81.7	215	G	81.9	134	PB	80	154	B	0.0	RETEST OF DS-84P1
(DS#84P2)		82.1	215	G	81.8	142	PB	20	164	T	0.0	FAIL - SEE DS-84P3
		81.4	213	G	81.2	161	T	0.0	162	T	0.0	PATH OF MX1319
		81.2	215	G	81.3	162	T	0.0	139	B	0.0	
		81.3	216	G	81.1	155	T	0.0	162	T	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00.
The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER (2)	SEAM NUMBER	SHEAR TEST			PEEL TEST							REMARKS
						INSIDE TRACK			OUTSIDE TRACK			
		SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	
DS-84P3	TF01	84.3	235.0	G	83.8	147.0	PT	5.0	174.0	T	0.0	RETEST OF DS-84P2-PASS
	8/18/92	84.6	231.0	G	84.7	168.0	B	0.0	168.0	B	0.0	PATH OF MX1319, ALL
		84.5	231.0	G	84.0	166.0	B	0.0	167.0	B	0.0	SEAMS IN PREVIOUS DIRECTION
		84.2	240.0	G	84.6	143.0	PB	25.0	113.0	PB	5.0	UP TO TF-01 ON 8/18/92
		84.1	236.0	G	84.8	165.0	B	0.0	145.0	B	0.0	WERE RECONSTRUCTED
DS-84N1	S228/263	82.6	212	G	82.4	150	T	0.0	150	T	0.0	RETEST OF DS-84 - PASS
(DS#84N1)		82.7	212	G	82.5	158	T	0.0	153	T	0.0	PATH OF MX1319
		82.8	212	G	82.5	144	B	0.0	143	T	0.0	
		82.4	213	G	83.0	159	B	0.0	144	PB	10	
		82.2	214	G	82.9	101	P	100	147	PB	10	
DS-85	S1/262	-	-	-	-	-	-	-	-	-	-	FAIL - SEE DS-85P1
												SEAM IN "NEXT" DIRECTION
												TRACKED AND CAPPED - PASS
												PATH OF MX1404
DS-85P1	S1/262	81.8	210	G	80.5	155	T	0.0	34	P	100	RETEST OF DS-85
(DS#85P1)		81.3	210	G	80.9	150	T	0.0	154	PT	30	FAIL - SEE DS-85P2
		81.4	209	G	80.8	151	T	0.0	150	T	0.0	PATH OF MX1404
		81.0	210	G	81.0	163	T	0.0	134	PB	40	
		80.6	209	G	81.1	143	T	0.0	150	T	0.0	

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The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMBRANE DESTRUCTIVE TEST RESULTS
FUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER (2)	SEAM NUMBER	SHEAR TEST			PEEL TEST							REMARKS
						INSIDE TRACK			OUTSIDE TRACK			
		SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	SHEET THICKNESS (mils)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	STRENGTH (lbs/inch)	FAILURE CODE	PERCENT PEEL (3) (%)	
DS-85P2	S1/262	81.8	208	G	81.4	143	T	10	147	T	0.0	RETEST OF DS-85P1 - PASS
(DS#85P2)		81.9	209	G	81.5	134	T	0.0	154	T	0.0	PATH OF MX1404
		82.2	211	G	82.5	149	T	0.0	156	T	0.0	
		81.7	210	G	81.7	136	T	30	150	T	0.0	
		81.7	210	G	81.9	149	T	0.0	154	B	0.0	
DS-86	S90/259	-	-	-	-	-	-	-	-	-	-	FAIL - SEE DS-86P1 AND DS-86N1
DS-86P1	S39/263	81.9	210	G	82.5	158	B	0.0	150	B	0.0	RETEST OF DS-86 - PASS
(DS#86P1)		82.4	209	G	81.9	140	B	0.0	155	B	0.0	PATH OF MX1319
		81.1	207	G	81.4	152	B	0.0	157	B	0.0	
		81.3	207	G	81.3	147	B	0.0	147	B	0.0	
		81.8	204	G	81.3	138	T	0.0	146	B	0.0	
DS-86N1	S90/260	81.7	207	G	81.0	151	T	0.0	156	B	0.0	RETEST OF DS-86 - PASS
(DS#86N1)		81.4	209	G	81.0	154	B	0.0	156	B	0.0	PATH OF MX1319
		81.1	210	G	81.1	142	B	0.0	148	B	0.0	
		81.2	210	G	80.9	150	B	0.0	157	B	0.0	
		81.7	206	G	81.3	155	T	0.0	153	B	0.0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DP-00P1 denotes the sample was in the weld path "PREVIOUS" to location DP-00. DP-00N1 denotes the sample was in the weld track "NEXT" from DP-00.
The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of the peel adhesion failure in the weld.

FILE=SF_DESTR.WK1

0.2

EXTRUSION METHOD

SUMMARY OF SECONDARY GEOMEMRANE DESTRUCTIVE TEST RESULTS
EXTRUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	SHEAR TEST STRENGTH (lbs/inch)	LOCATION CODE	PEEL TEST STRENGTH (lbs/inch)	LOCATION CODE	PERCENT PEEL (3) (%)	REMARKS
DSE-01	S7/5B	81.6	200.0	G	68.0	P	100	FAIL - SEE DSE-01P1 AND DSE-01N1
(DS#E1)		82.1	186.0	G	92.0	P	100	
		81.5	213.0	G	82.0	P	100	
		82.6	225.0	G	82.0	P	100	
		82.9	224.0	G	91.0	T	0	
DSE-01P1	S7/5B	81.3	234.0	G	152.0	B	0	RETEST OF DSE-01 - PASS
(DS#E1-B)		81.6	216.0	G	116.0	B	0	PATH OF MX42
		81.8	218.0	G	136.0	B	0	
		81.7	217.0	G	152.0	B	0	
		81.9	218.0	G	155.0	B	0	
DSE-01N1	S7/5B	80.7	218.0	G	139.0	B	0	RETEST OF DSE-01 - PASS
(DS#E1-A1)		81.7	217.0	G	152.0	B	0	PATH OF MX42
		82.0	218.0	G	140.0	B	0	
		81.9	219.0	G	176.0	B	0	
		82.2	215.0	G	142.0	B	0	
DSE-02	S2/3	83.5	214.0	G	152.0	B	0	PASS
(DS#E-02)		83.5	217.0	G	134.0	B	0	
		83.4	217.0	G	135.0	B	0	
		83.5	218.0	G	188.0	B	0	
		83.6	217.0	G	143.0	B	0	
DSE-03	S44/4R	82.6	218.0	G	137.0	B	0	PASS
(DS#E-03)		83.5	219.0	G	126.0	B	0	
		83.2	219.0	G	133.0	B	0	
		83.1	218.0	G	119.0	B	0	
		83.2	218.0	G	131.0	B	0	
DSE-04	S111/16D	-	-	-	-	-	-	FAIL - SEE DSE-04P1 AND DSE-04N1
(1)								

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.
(2) DSE-00P1 denotes the sample was in the weld path "PREVIOUS" to location DSE-00. DSE-00N1 denotes the sample was in the weld track "NEXT" from DSE-00.
The sample number in parentheses is NSC's sample number.
(3) Percent peel indicates the amount of peel adhesion failure in the weld.
FILE= SX_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMRANE DESTRUCTIVE TEST RESULTS
EXTRUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	SHEAR TEST STRENGTH (lbs/inch)	LOCATION CODE	PEEL TEST STRENGTH (lbs/inch)	LOCATION CODE	PERCENT PEEL (3) (%)	REMARKS
DSE-04P1	S52/16D	81.5	212.0	G	146.0	B	0	RETEST OF DS-04 - PASS
(DS#4B)		82.5	213.0	G	165.0	B	0	PATH OF MX111
		82.8	213.0	G	167.0	T	0	
		81.3	209.0	G	154.0	T	0	
		80.8	138.0	G	146.0	T	0	
DSE-04N1	S123/10F	82.1	208.0	G	137.0	B	0	RETEST OF DS-04 - PASS
(DS#4A)		81.6	210.0	G	124.0	B	0	PATH OF MX111
		81.6	207.0	G	130.0	T	0	
		81.2	208.0	G	113.0	B	0	
		81.1	208.0	G	142.0	B	0	
DSE-05	S112/21C	82.4	214.6	G	151.8	B	0	PASS
(1)		82.9	214.6	G	112.6	B	0	
		82.5	213.3	G	123.8	B	0	
		81.2	214.5	G	121.8	B	0	
		82.8	213.7	G	149.8	B	0	
DSE-06	S53/10A	80.8	212.0	G	165.0	T	0	PASS
(DS#E-06)		80.9	215.0	G	157.0	T	0	
		82.7	215.0	G	165.0	T	0	
		81.0	213.0	G	168.0	T	0	
		81.0	214.0	G	166.0	T	0	
DSE-07	S159/180	82.1	210.0	G	140.0	B	0	PASS
(DS#E07)		82.7	208.0	G	121.0	B	0	
		82.8	210.0	G	124.0	B	0	
		82.8	208.0	G	122.0	B	0	
		83.1	202.0	G	136.0	B	0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.
(2) DSE-00P1 denotes the sample was in the weld path "PREVIOUS" to location DSE-00. DSE-00N1 denotes the sample was in the weld track "NEXT" from DSE-00.
The sample number in parentheses is NSC's sample number.
(3) Percent peel indicates the amount of peel adhesion failure in the weld.
FILE= SX_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMRANE DESTRUCTIVE TEST RESULTS
EXTRUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	SHEAR TEST STRENGTH (lbs/inch)	LOCATION CODE	PEEL TEST STRENGTH (lbs/inch)	LOCATION CODE	PERCENT PEEL (3) (%)	REMARKS
DSE-08	S178/23E	82.7	212.0	G	140.0	B	0	PASS
(DS#E08)		83.2	212.0	G	128.0	B	0	
		82.6	211.0	G	125.0	B	0	
		82.3	213.0	G	135.0	B	0	
		82.6	212.0	G	127.0	B	0	
DSE-09	S208/30A	81.8	206.0	G	135.0	B	0	PASS
(DS#E09)		81.6	209.0	G	154.0	B	0	
		82.9	211.0	G	154.0	B	0	
		81.8	206.0	G	160.0	B	0	
		82.0	207.0	G	160.0	B	0	
DSE-10	S260/33B	82.1	208.0	G	135.0	PB	10	PASS
(DS#E10)		82.1	207.0	G	140.0	B	0	
		81.7	208.0	G	126.0	B	0	
		81.9	205.0	G	134.0	B	0	
		81.6	207.0	G	133.0	B	0	
DSE-11	S263/36C	82.1	211.5	G	126.0	B	0	PASS
(1)		81.2	210.5	G	134.5	B	0	
		83.0	214.2	G	137.8	B	0	
		82.7	212.1	G	113.9	B	0	
		81.1	211.5	G	130.7	B	0	
DSE-12	S225/37A	82.3	208.0	G	150.0	B	0	PASS
(DS#E12)		82.2	207.0	G	163.0	B	0	
		82.9	206.0	G	163.0	T	0	
		82.7	207.0	G	151.0	B	0	
		83.0	203.0	G	168.0	B	0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DSE-00P1 denotes the sample was in the weld path "PREVIOUS" to location DSE-00. DSE-00N1 denotes the sample was in the weld track "NEXT" from DSE-00. The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of peel adhesion failure in the weld.

FILE= SX_DESTR.WK1

SUMMARY OF SECONDARY GEOMEMRANE DESTRUCTIVE TEST RESULTS
EXTRUSION METHOD
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NUMBER (2)	SEAM NUMBER	SHEET THICKNESS (mils)	SHEAR TEST STRENGTH (lbs/inch)	LOCATION CODE	PEEL TEST STRENGTH (lbs/inch)	LOCATION CODE	PERCENT PEEL (3) (%)	REMARKS
DSE-13	S261/35K	82.3	206.0	G	130.0	B	0	PASS
(DS#E13)		82.2	205.0	G	138.0	B	0	
		82.9	205.0	G	131.0	B	0	
		82.7	206.0	G	137.0	B	0	
		83.0	206.0	G	134.0	B	0	
DSE-14	S256/34C	82.9	209.0	G	145.0	B	0	PASS
(DS#E14)		82.5	201.0	G	162.0	B	0	
		81.0	207.0	G	155.0	B	0	
		81.7	213.0	G	143.0	B	0	
		82.2	207.0	G	147.0	B	0	

(1) Seam destructive sample was tested by GCS. All unmarked tests were performed by NSC.

(2) DSE-00P1 denotes the sample was in the weld path "PREVIOUS" to location DSE-00. DSE-00N1 denotes the sample was in the weld track "NEXT" from DSE-00. The sample number in parentheses is NSC's sample number.

(3) Percent peel indicates the amount of peel adhesion failure in the weld.

FILE= SX_DESTR.WK1

APPENDIX P

ABBREVIATIONS USED IN GEOSYNTHETIC TABLES
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

AD	ANIMAL RELATED DAMAGE
AT	ANCHOR TRENCH
BO	FUSION WELDER BURNOUT
BS	BOOT/SKIRT FOR FML PENETRATION
C	CAP
CAP	CAP
CO	CHANGE OF OVERLAP
CR	CREASE
CS	CONFORMANCE SAMPLE
D	INSTALLATION DAMAGE
D	GENERAL FIELD DAMAGE
DIA	DIAMETER
DPE-01	PRIMARY EXTRUSION DESTRUCTIVE SAMPLE #1
DP-01	PRIMARY FUSION DESTRUCTIVE SAMPLE #1
DS	DESTRUCTIVE SAMPLE
DSE-01	SECONDARY EXTRUSION DESTRUCTIVE SAMPLE #1
DS-01	SECONDARY FUSION DESTRUCTIVE SAMPLE #1
E	EAST
EE	EARTHWORK EQUIPMENT DAMAGE
EEOP	EAST END OF PANEL
EEOS	EAST END OF SEAM
EOD	END OF DAY
EOP	END OF PANEL
EXT	EXTENSION
F1	FAILURE CONDITION #1
F2	FAILURE CONDITION #2
F3	FAILURE CONDITION #3
F4	FAILURE CONDITION #4
FS	FAILED SEAM LENGTH
FTS	FIELD TEST STRIP
GW	GRIND AND WELD
G&W	GRIND AND WELD
HT	HEAT TACK BURN
INT	INTERSECTION
IO	INSUFFICIENT OVERLAP
MD	MANUFACTURER'S DAMAGE
N	NORTH
NEOP	NORTH END OF PANEL
NEOS	NORTH END OF SEAM
N/A	NOT APPLICABLE
O	OF
P	PATCH
P1	PASS CONDITION #1
P2	PASS CONDITION #2
P3	PASS CONDITION #3
P5	PASS CONDITION #5
P6	PASS CONDITION #6
P7	PANEL 7
PT	PRESSURE TEST CUT
RS	RECONSTRUCTED SEAM
S	SOUTH
SEC	SECONDARY
SEOP	SOUTH END OF PANEL
SEOS	SOUTH END OF SEAM
SI	SOIL SURFACE IRREGULARITY
SOS	START OF SEAM
T	THREE PANEL INTERSECTION
TI	TIE IN
VL	VACUUM TEST LEAK
W	WEST
WEOP	WEST END OF PANEL
WEOS	WEST END OF SEAM
WR	WRINKLE
WS	WELDER RESTART
W/	WITH
@	AT

SECONDARY GEOMEMBRANE REPAIR SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

DEFECT CODE	SEAM, PANEL OR DEFECT NUMBER	APPROXIMATE LOCATION	DEFECT TYPE	REPAIR DATE	REPAIR TYPE	APPROX. SIZE	WELDER ID OPER.	WELDER ID MACH.	QA MON.	TEST DATE	TEST MON.
01A	S 007 / 008	8' N. OF S. EOS	FTS	07/22/92	P	1X1	145	42	LEL	07/25/92	AWJ
01B	S 008 / 009	8' N. OF S. EOS	FTS	07/22/92	P	1X1	145	42	LEL	07/25/92	AWJ
01C	S 037 / 038	@ INTERSECTION WITH S039	PT	07/24/92	P	2X2	LEM	70	JAL	07/27/92	AWJ
01D	S 039 / 040	8'E. OF W. EOS	PT	07/24/92	P	2X2	LEM	70	JAL	07/27/92	AWJ
01E	S 033 / 035	8'E. OF W. EOS	PT	07/24/92	P	2X3	LEM	70	JAL	07/27/92	AWJ
01F	S 034 / 035	@ INTERSECTION WITH S036	PT	07/24/92	P	2X2	138	111	LEL	07/25/92	LEL
01G	S 040 / 041	@ INTERSECTION WITH S042	PT	07/25/92	P	3X3	398	70	LEL	07/25/92	AWJ
01H	S 041 / 042	@ INTERSECTION WITH S043	PT	07/25/92	P	3X3	398	70	LEL	07/25/92	AWJ
01I	S 043 / 044	178'E. OF W. EOS	PT	07/25/92	P	2X3	LEM	70	CAW	07/25/92	AWJ
01J	S 033 / 034	@ INTERSECTION WITH S035	PT	07/24/92	P	2X2	138	111	AWJ	07/25/92	LEL
01K	S 033 / 035	4' FROM DEFECT 01J	PT	07/25/92	P	3X4	LEM	70	LEL	07/25/92	AWJ
01M	S 033 / 035	3' FROM E. EOS	PT	07/24/92	P	2X3	138	111	AWJ	07/25/92	AWJ
02A	S 001 / 002	73' N. OF S. EOS	DS-01	07/21/92	P	2.5X6	145	42	LEL	07/25/92	LEL
02B	S 002 /	91' N OF S EOS, 4' W S001/002	SI	07/21/92	GW	6"	145	42	LEL	07/25/92	LEL
02C	S 002 /	101' N OF S EOS, 4' W S001/002	SI	07/21/92	GW	6"	145	42	LEL	07/25/92	LEL
02D	S 002 / 003	112' N. OF S. EOS	DS-02	--	--	DAMAGED MATERIAL REMOVED				--	--
02E	S 006 / 007	62' N. OF S. EOS	FTS	--	--	DAMAGED MATERIAL REMOVED				--	--
02F	S 002 / 003	102' N. OF S. EOS	DS-02P1	--	--	DAMAGED MATERIAL REMOVED				--	--
02G	S 002 / 003	122' N. OF S. EOS	DS-02N1	--	--	DAMAGED MATERIAL REMOVED				--	--
02H	S 006 / 007	26' S. OF N. EOS	DS-03	--	--	DAMAGED MATERIAL REMOVED				--	--
02I	S 007 / 008	65' N. OF S. EOS	DS-04	07/22/92	P	2.5X6	145	42	LEL	07/25/92	AWJ
02J	S 002 / 003	102' TO 112' N. OF S. EOS	FS	--	--	DAMAGED MATERIAL REMOVED				--	--
02K	S 002 / 003	S. EOS TO 102' N.	FS	--	--	DAMAGED MATERIAL REMOVED				--	--
02M	S 012 / 013	27' N. OF S. EOS	DS-05	07/24/92	P	3X5	145	42	JAL	07/25/92	AWJ
02N	S 004 / 005	8' N. OF S. EOS	DS-02N2	--	--	DAMAGED MATERIAL REMOVED				--	--
02P	S 008 / 009	8' N. OF S. EOS	DS-03N1	07/24/92	P	2.5X8	145	42	JAL	07/25/92	AWJ
02Q	S 025 / 026	52' E. OF W. EOS	DS-07	07/24/92	P	3X6	LEM	70	JAL	07/27/92	LEL
02R	S 028 / 029	@ INTERSECTION WITH S030	PT	07/24/92	P	2X2	145	42	JAL	07/27/92	LEL
02S	S 002 / 003	90' N. OF S. EOS	DS-08	--	--	DAMAGED MATERIAL REMOVED				--	--
02T	S 032 / 033	30' E. OF W. EOS	DS09	07/24/92	P	3X6	LEM	70	JAL	07/27/92	AWJ
02W	S 007 / 05B	50' N. OF S. EOS	DSE-01	07/24/92	P	3X6	145	42	LEL	07/25/92	AWJ
02X	S 011 033	2' W. OF S010/011/033	FS	07/25/92	P	3X3	145	42	LEL	07/25/92	LEL
03A	S 030 /	65' E. OF W. EOS	D	--	--	DAMAGED MATERIAL REMOVED				--	--

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SECONDARY GEOMEMBRANE REPAIR SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

DEFECT CODE	SEAM, PANEL OR DEFECT NUMBER	APPROXIMATE LOCATION	DEFECT TYPE	REPAIR DATE	REPAIR TYPE	APPROX. SIZE	WELDER ID OPER.	WELDER ID MACH.	QA MON.	TEST DATE	TEST MON.
03B	S 030 /	65' E. OF W. EOS, 5' N. OF S028/030	D	07/25/92	P	1X1	398	70	LEL	07/27/92	LEL
03C	S 019 / 020	@ INTERSECTION WITH S024	PT	07/24/92	P	1X2	LEM	70	JAL	07/25/92	AWJ
03D	S 020 / 023	@ INTERSECTION WITH S024	PT	07/24/92	P	1X2	LEM	70	JAL	07/25/92	AWJ
03E	S 020 / 021	@ INTERSECTION WITH S023	T	07/25/92	P	1X2	LEM	70	LEL	07/25/92	AWJ
03F	S 021 / 022	@ INTERSECTION WITH S023	T	07/24/92	P	1X1.5	LEM	70	JAL	07/25/92	AWJ
03G	S 018 / 019	25' N. OF S. EOS	DS-06N1	07/24/92	P	2.5X6	LEM	70	JAL	07/25/92	AWJ
03H	S 018 / 019	12' TO 20' N. OF S. EOS	FS	07/24/92	RS	8'	LEM	70	JAL	07/25/92	AWJ
03I	S 018 / 019	4' TO 6' N. OF S. EOS	FS	07/24/92	RS	2'	LEM	70	JAL	07/25/92	AWJ
03J	S 018 / 025	@ INTERSECTION WITH S026	PT	07/24/92	P	2X2	LEM	70	JAL	07/25/92	AWJ
03K	S 017 / 018	@ INTERSECTION WITH S026	PT	07/24/92	P	1X2	LEM	70	JAL	07/25/92	AWJ
03M	S 017 / 018	N. EOS TO 25' S. OF N. EOS	PT	07/24/92	RS	25'	LEM	70	JAL	07/25/92	AWJ
03N	S 029 / 030	@ INTERSECTION WITH S031	FS	07/24/92	P	2X2	LEM	70	JAL	07/27/92	LEL
04A	S 033 / 035	33' E. OF W. EOS	PT	07/24/92	P	1X2	LEM	70	JAL	07/27/92	LEL
04B	S 036 / 037	@ INTERSECTION WITH S038	PT	07/24/92	P	2X2	LEM	70	JAL	07/27/92	AWJ
04C	S 040 / 041	7' E. OF W. EOS	DS-12	07/25/92	P	2X5	398	70	LEL	07/25/92	AWJ
04D	S 035 / 036	75' E. OF W. EOS	PT	07/24/92	P	1X2	LEM	70	JAL	07/27/92	AWJ
04E	S 044 / 046	146' E. OF W. EOS	DS-17	07/25/92	P	2X4	LEM	70	TAH	07/27/92	AWJ
04F	S 044 046	178' E. OF W. EOS	WS	07/25/92	P	2X2	LEM	70	LEL	07/27/92	AWJ
04G	S 046 / 047	51' W. OF E. EOS	WS	07/25/92	P	2X2	LEM	70	LEL	07/25/92	LEL
04H	S 046 / 047	6' W. OF E. EOS	DS-18	07/25/92	P	2X5	145	42	LEL	07/27/92	AWJ
04I	S 043 / 044	@ INTERSECTION WITH S045	T	07/25/92	P	2X4	LEM	70	LEL	07/25/92	AWJ
04J	S 052 / 053	7' E. OF W. EOS	DS-19	07/25/92	P	3X4	LEM	70	TAH	07/27/92	AWJ
04K	S 048 / 049	@ INTERSECTION WITH S050	PT	07/25/92	P	2X2	145	42	TAH	07/27/92	AWJ
04M	S 049 / 050	@ INTERSECTION WITH S051	PT	07/25/92	P	2X2	145	42	TAH	07/27/92	AWJ
04N	S 053 054	23' E. OF W. EOS	DS-20	--	--	CAPPED BY 10A		--	--	--	--
04P	S 056 / 057	104' E. OF W. EOS	DS-21	07/27/92	P	3X4	145	42	TAH	07/27/92	AWJ
04Q	S 056 / 057	144' E. OF W. EOS	FTS	07/27/92	P	2X2	145	42	TAH	07/29/92	BIE
04R	S 044 / 046	100' E. OF W. EOS	DS-17P1	--	--	CAPPED BY 04S		--	--	--	--
04S	S 044 / 046	100' TO 146' E. OF W. EOS	FS	07/25/92	C	2X48	145	42	TAH	07/27/92	AWJ
04T	S 044 / 046	146' E. AND 3' S. OF W. EOS	HT	07/25/92	P	2X3	145	42	LEL	07/27/92	AWJ
05A	S 004 / 005	100' N. OF S. EOS	FTS	07/24/92	P	1X2	145	42	LEL	07/25/92	AWJ
05B	S 006 / 007	FULL SEAM	FS	07/22/92	C	1X160	LEM	70	LEL	07/25/92	AWJ
05C	S 004 / 005	18' N. OF S. EOS	FTS	07/24/92	P	1X1	145	42	LEL	07/25/92	AWJ
05D	S 018 / 019	10' N. OF S. EOS	DS-06	07/22/92	P	2.5X6	145	42	LEL	07/25/92	AWJ

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SECONDARY GEOMEMBRANE REPAIR SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

DEFECT CODE	SEAM, PANEL OR DEFECT NUMBER	APPROXIMATE LOCATION	DEFECT TYPE	REPAIR DATE	REPAIR TYPE	APPROX. SIZE	WELDER ID OPER.	WELDER ID MACH.	QA MON.	TEST DATE	TEST MON.
05E	S 012 / 013	@ INTERSECTION WITH S031	T	07/25/92	P	2X3	145	42	LEL	07/25/92	AWJ
05F	S 028 / 029	6' W. OF E. EOS	DS-08P1	07/24/92	P	3X6	145	42	LEL	07/25/92	AWJ
05G	S 007 / 05B	S. EOS TO 65' N.	FS	07/24/92	C	1X160	145	42	LEL	07/25/92	AWJ
05H	S 033 / 035	237' E. OF W. EOS	WS	07/25/92	P	3X4	LEM	70	LEL	07/25/92	AWJ
05I	S 002 / 003	50' N. OF S. EOS	FTS	07/24/92	C	2X12	145	42	LEL	07/25/92	LEL
05J	S 002 / 003	ENTIRE SEAM	FTS	07/24/92	RS	160'	145	42	LEL	07/25/92	AWJ
05K	S 002 / 003	70' N. OF S. EOS	WS	07/24/92	RS	6'	145	42	LEL	07/25/92	LEL
05M	S 035 / 036	225' E. OF W. EOS	WS	07/25/92	P	1X2	LEM	70	LEL	07/25/92	LEL
05N	S 036 / 037	165' E. OF W. EOS	WS	07/25/92	P	2X3	398	70	LEL	07/25/92	AWJ
05P	S 035 / 036	243' E. OF W. EOS	WS	07/25/92	P	4X5	LEM	70	LEL	07/25/92	LEL
05Q	S 037 / 039	107' E. OF W. EOS	WS	07/25/92	P	2X3	398	70	LEL	07/25/92	AWJ
05R	S 039 / 040	162' E. OF W. EOS	WS	07/25/92	P	2X2	145	42	LEL	07/25/92	AWJ
05S	S 040 / 042	163' E. OF W. EOS	WS	07/25/92	P	1X3	LEM	70	CAW	07/25/92	AWJ
05T	S 018 / 019	@ INTERSECTION WITH S024	PT	07/24/92	P	2X3	LEM	70	JAL	07/25/92	AWJ
05W	S 042 / 043	165' E. OF W. EOS	WS	07/25/92	P	2X3.5	LEM	70	CAW	07/25/92	AWJ
05X	S 036 / 037	90' W. OF E. EOS	DS-11	07/25/92	P	3X5	LEM	70	LEL	07/25/92	LEL
06A	S 125 / 127	72' W. OF E. EOS	DS-45	08/05/92	P	2X5	145	42	CAW	08/07/92	AWJ
06B	S 125 / 127	66' W. OF E. EOS	FTS	08/05/92	P	2X2	145	42	CAW	08/07/92	AWJ
06C	S 124 / 125	65' W. OF E. EOS	FTS	08/05/92	P	2X2.5	145	42	CAW	08/07/92	AWJ
06D	S 127 / 128	119' W. OF E. EOS	DS-46	08/05/92	P	3X8	145	42	CAW	08/07/92	AWJ
06E	S 128 / 129	189' W. OF E. EOS	FTS	08/05/92	P	2X3	145	42	CAW	08/07/92	AWJ
06F	S 127 / 128	161' W. OF E. EOS	FTS	08/05/92	P	1X2	145	42	CAW	08/07/92	AWJ
06G	S 129 / 130	@ INTERSECTION WITH S132	FTS	08/05/92	P	1X2	145	42	CAW	08/07/92	AWJ
06H	S 124 / 125	@ INTERSECTION WITH S126	PT	08/05/92	P	3X3	145	42	CAW	08/07/92	AWJ
06I	S 125 / 126	@ INTERSECTION WITH S127	PT	08/05/92	P	3X3	145	42	CAW	08/07/92	AWJ
06J	S 130 / 131	162' W. OF E. EOS	DS-47	08/05/92	P	2X4.5	145	42	CAW	08/07/92	AWJ
06K	S 111 / 16D	115' S. OF N. EOS	DSE-04	--	--	CAPPED BY 10F		--	--	--	--
07A	S 062 / 063	71' E. OF W. EOS	DS-22	07/27/92	P	3X4	145	42	TAH	07/27/92	AWJ
07B	S 067 / 068	17' E. OF W. EOS	DS-23	07/27/92	P	2X4	145	42	TAH	07/27/92	AWJ
07C	S 064 / 079	3' W. OF E. EOS	DS-24	07/28/92	P	2X4	LEM	70	AWJ	07/29/92	AWJ
07D	S 044 / 046	186' E. OF W. EOS	DS-17N1	07/27/92	C	2X36	145	42	CAW	07/27/92	AWJ
07E	S 052 / 053	40' E. OF W. EOS	DS-19N1	07/27/92	P+RS	1X4+40'	LEM	70	CAW	07/27/92	AWJ
07F	S 055 / 056	13' E. OF W. EOS	DS-20N1	07/27/92	C	1X19	145	42	CAW	07/27/92	AWJ
07G	S 050 / 051	70' E. OF W. EOS	DS19-P1	07/27/92	P	2X6	145	42	CAW	07/27/92	AWJ

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SECONDARY GEOMEMBRANE REPAIR SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

DEFECT CODE	SEAM, PANEL OR DEFECT NUMBER	APPROXIMATE LOCATION	DEFECT TYPE	REPAIR DATE	REPAIR TYPE	APPROX. SIZE	WELDER ID OPER.	WELDER ID MACH.	QA MON.	TEST DATE	TEST MON.
07H	S 046 / 4R	100' E. OF W. EOS	DSE-03	07/27/92	P	2X3	145	42	BIE	07/29/92	CAW
07I	S 080 / 081	119' S. OF N. EOS	DS-25	07/29/92	P	2X3	145	42	AWJ	07/29/92	AWJ
07J	S 080 / 081	177' S. OF N. EOS	WS	07/28/92	P	1X2	145	42	BIE	07/29/92	AWJ
07K	S 081 / 082	180' S. OF N. EOS	WS	07/28/92	P	2X2	145	42	BIE	07/29/92	AWJ
07M	S 080 / 081	2' N. OF S. EOS	DS-26	07/28/92	P	2X4	145	42	BIE	07/29/92	AWJ
07N	S 082 / 083	180' S. OF N. EOS	WS	07/28/92	P	3X3	LEM	70	AWJ	07/29/92	AWJ
07P	S 083 / 085	48' S. OF N. EOS	DS-27	07/28/92	P	2X4	145	42	AWJ	07/29/92	AWJ
07Q	S 083 / 084	33' S. OF N. EOS	BO	07/28/92	P	2X4	145	42	AWJ	07/29/92	AWJ
07R	S 082 / 083	@ INTERSECTION WITH S084	FTS	07/28/92	P	2X3	145	42	AWJ	07/29/92	AWJ
07S	S 083 085	180' S. OF N. EOS	WS	07/28/92	P	2X4	145	42	AWJ	07/29/92	AWJ
07T	S 083 / 085	97' N. OF S. EOS	DS-28	07/28/92	P	2X4	145	42	AWJ	07/29/92	AWJ
07W	S 087 088	135' S. OF N. EOS	DS-29	07/28/92	P	2X4	LEM	70	AWJ	07/29/92	AWJ
07X	S 088 089	185' S. OF N. EOS	FTS	07/28/92	P	2X3	145	42	AWJ	07/29/92	AWJ
08A	S 005 / 033	6' W. OF E. EOS	DS-10	07/25/92	P	3X4	145	42	LEL	07/25/92	LEL
08B	S 033 / 035	28' E. OF W. EOS	DS-13	07/25/92	P	2X3	LEM	70	LEL	07/27/92	LEL
08C	S 035 / 036	235' E. OF W. EOS	DS-14	07/25/92	P	4X5	LEM	70	LEL	07/25/92	LEL
08D	S 037 / 039	99' E. OF W. EOS	DS-15	07/25/92	P	3X3	145	42	TAH	07/27/92	LEL
08E	S 042 / 043	143' E. OF W. EOS	DS-16	07/25/92	P	2X4	LEM	70	LEL	07/27/92	AWJ
08F	S 002 / 003	76' N. OF S. EOS	DSE-02	07/24/92	P	3X4	LEM	70	LEL	07/25/92	LEL
08G	S 033 / 033A	FULL SEAM	FS	07/24/92	RS	14'	138	111	AWJ	07/29/92	AWJ
08H	S 002 / 003	94' N. OF S. EOS	FTS	07/24/92	P	1X1	138	111	LEL	07/25/92	LEL
08I	S 002 / 003	70' N. OF S. EOS	FTS	07/24/92	P	1X1	138	111	LEL	07/25/92	LEL
08J	S 004 / 005	8' N. OF S. EOS	FTS	07/24/92	P	2X2	138	111	LEL	07/25/92	AWJ
08K	S 051 /	6' W. OF E. EOS	D	07/27/92	RS	3'	145	42	CAW	07/29/92	AWJ
08M	S 050 / 051	4' W. OF E. EOS	D	--	--	DAMAGED MATERIAL REMOVED				--	--
09A	S 069 / 070	@ N. EOS	PT	07/27/92	P	3X8	145	42	AWJ	07/27/92	AWJ
09B	S 070 / 071	@ N. EOS	PT	07/27/92	P	2X8	145	42	AWJ	07/27/92	AWJ
09C	S 053 / 054	137' E. OF W. EOS	DSE-06	07/27/92	P	2X6	145	42	CAW	07/29/92	CAW
10A	S 053 / 054	FULL SEAM	FS	07/27/92	C	3X180	LEM	70	TAH	07/27/92	AWJ
10B	S 057 / 058	@ INTERSECTION WITH S059	T	07/27/92	P	3X4	145	42	TAH	07/27/92	AWJ
10C	S 112 / 124	41' E. OF W. EOS	FTS	--	--	CAPPED BY 21C		--	--	--	--
10D	S 122 / 123	35' N. OF S. EOS	FS	08/06/92	P	2X30	145	42	BIE	08/07/92	AWJ
10E	S 107 /	35' N. OF S. EOS, 2' S107/109	FS	08/06/92	P	2X30	145	42	BIE	08/07/92	AWJ
10F	S 111 / 123	FULL SEAM	FS	08/06/92	P	3X160	145	42	BIE	08/07/92	AWJ

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SECONDARY GEOMEMBRANE REPAIR SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

DEFECT CODE	SEAM, PANEL OR DEFECT NUMBER	APPROXIMATE LOCATION	DEFECT TYPE	REPAIR DATE	REPAIR TYPE	APPROX. SIZE	WELDER ID OPER.	WELDER ID MACH.	QA MON.	TEST DATE	TEST MON.
10G	S 123 / 10F	105' S. OF N. EOS	DSE-04N1	08/06/92	P	2X4	145	42	BIE	08/07/92	AWJ
10H	S 134 / 135	60' W. OF E. EOS	DS-48	08/06/92	P	2X6	398	111	CAW	08/07/92	AWJ
10I	S 135 / 136	84' W. OF E. EOS	DS-49	08/06/92	P	3X6	398	111	AWJ	08/07/92	AWJ
10J	S 135 / 136	110' W. OF E. EOS	PT	08/06/92	P	2X2	398	111	AWJ	08/07/92	AWJ
10K	S 135 / 136	147' W. OF E. EOS	FTS	08/06/92	P	2X5	398	111	AWJ	08/10/92	AWJ
10M	S 133 / 134	57' W. OF E. EOS	FS	08/07/92	P	2X6	398	111	CAW	08/07/92	AWJ
10N	S 134 / 135	106' W. OF E. EOS	FTS	08/06/92	P	2X2	398	111	AWJ	08/07/92	AWJ
10P	S 134 / 135	3' W. OF E. EOS	PT	08/07/92	P	2X8	398	111	CAW	08/10/92	AWJ
10Q	S 136 / 137	@ INTERSECTION WITH S138	PT	08/07/92	P	2X2	398	111	BIE	08/07/92	AWJ
10R	S 141 / 142	21' W. OF E. EOS	DS-50	08/07/92	P	2X4.5	398	111	CAW	08/10/92	AWJ
10S	S 147 / 148	PANELS 145 THROUGH 154 WERE REMOVED		--	--	--	--	--	--	--	--
10T	S 139 / 141	98' W. OF E. EOS	FTS	08/07/92	P	2X2	398	111	CAW	08/10/92	AWJ
10W	S 140 / 141	3' W. OF S140/141/142	DS-51	08/07/92	P	2X5	398	111	CAW	08/10/92	AWJ
10X	S 142 / 143	57' W. OF E. EOS	DS-52	08/07/92	P	2X5	398	111	CAW	08/10/92	AWJ
11A	S 080 / 081	6' S. OF N. EOS	WS	07/28/92	P	2X3	145	42	AWJ	08/01/92	CAW
11B	S 080 / 081	6' S. OF N. EOS	FS	07/28/92	RS	6'	145	42	CAW	08/01/92	CAW
11C	S 081 / 082	@ INTERSECTION WITH S084	T	07/28/92	P	2X4	145	42	BIE	08/07/92	AWJ
11D	S 083 / 085	80' S. OF N. EOS	BO	07/28/92	P	1X2	145	42	CAW	08/07/92	AWJ
11E	S 087 / 088	180' S. OF N. EOS	PT	07/29/92	P	3X5	LEM	32	BIE	08/07/92	AWJ
11F	S 085 / 086	@ INTERSECTION WITH S087	T	07/28/92	P	2X4	145	42	AWJ	08/07/92	AWJ
11G	S 081 / 084	FULL SEAM	FS	07/28/92	RS	25'	145	42	BIE	08/07/92	AWJ
11H	S 083 084	FULL SEAM	FS	07/28/92	RS	20'	145	42	BIE	08/07/92	AWJ
11I	S 083 / 084	FULL SEAM	FS	07/28/92	RS	25'	145	42	BIE	08/07/92	AWJ
11J	S 085 / 087	140' S. OF N. EOS	BO	07/28/92	P	2X4	145	42	AWJ	08/07/92	AWJ
11K	S 096 / 097	80' S. OF N. EOS	PT	07/29/92	P	1X2	145	42	AWJ	08/07/92	AWJ
11M	S 093 / 094	@ INTERSECTION WITH S095	T	07/29/92	P	3X5	LEM	32	AWJ	07/29/92	AWJ
11N	S 092 / 093	@ INTERSECTION WITH S094	T	07/28/92	P	3X5	LEM	32	BIE	08/07/92	AWJ
12A	S 083 / 084	280' S. OF N. SLOPE	PT	07/28/92	P	2X3	145	42	AWJ	08/07/92	AWJ
12B	S 086 / 088	185' S. OF N. SLPOE	PT	07/28/92	P	2X4	145	42	AWJ	08/07/92	AWJ
12C	S 089 / 090	185' S. OF N. EOS	PT	07/28/92	P	3X3	145	42	AWJ	08/07/92	AWJ
12D	S 090 / 091	155' S. OF N. EOS	PT	07/29/92	P	1X2	145	42	AWJ	08/07/92	AWJ
12E	S 090 / 091	73' S. OF N. EOS	PT	07/28/92	P	2X13	145	42	AWJ	08/07/92	AWJ
12F	S 090 / 091	72' S. OF N. EOS	PT	07/28/92	P	2X13	145	42	AWJ	08/07/92	AWJ
12G	S 090 / 091	60' S. OF N. EOS	PT	07/28/92	P	2X13	145	42	AWJ	08/07/92	AWJ

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SECONDARY GEOMEMBRANE REPAIR SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

DEFECT CODE	SEAM, PANEL OR DEFECT NUMBER	APPROXIMATE LOCATION	DEFECT TYPE	REPAIR DATE	REPAIR TYPE	APPROX. SIZE	WELDER ID OPER.	WELDER ID MACH.	QA MON.	TEST DATE	TEST MON.
12H	S 091 / 092	88' S. OF N. EOS	PT	07/28/92	P	2X2	145	42	AWJ	08/07/92	AWJ
12I	S 082 /	188' S. OF N. EOS	BS	07/28/92	P	2X2	145	42	AWJ	07/29/92	AWJ
12J	S 083 / 085	70' S. OF N. EOS	PT	07/28/92	P	2X3	145	42	AWJ	07/29/92	AWJ
12K	S 096 / 097	70' S. OF N. SLOPE	PT	--	--	CAPPED BY 11K		--	--	--	--
12M	S 077 / 078	70' S. OF N. EOS	DS-26P1	07/29/92	P	3X5	LEM	32	AWJ	07/29/92	AWJ
12N	S 079 /	70' S. OF N. EOS	BS	07/29/92	P	2X2	LEM	32	AWJ	07/29/92	AWJ
12P	S 079 / 103	70' S. OF N. EOS	PT	07/29/92	P	2X3	LEM	32	AWJ	07/29/92	AWJ
12Q	S 079 / 103	70' S. OF N. EOS	PT	07/29/92	P	1X1	LEM	32	AWJ	07/29/92	AWJ
12R	S 079 / 103	70' S. OF N. EOS	PT	07/29/92	P	1X1	LEM	32	AWJ	07/29/92	AWJ
12S	S 080 / 081	190 S. OF N. SLOPE	FS	07/29/92	RS	10'	145	42	AWJ	08/07/92	AWJ
12T	S 080 / 081	190 E. OF W. EOS	PT	07/29/92	P	2X4	145	42	AWJ	08/07/92	AWJ
12W	S 053 / 054	@ INTERSECTION WITH S103	T	07/29/92	P	1X3	145	42	AWJ	07/29/92	AWJ
12X	S 064 / 079	@ INTERSECTION WITH S103	T	07/29/92	P	4X5	LEM	32	AWJ	07/29/92	AWJ
13A	S 089 / 090	130' S. OF N. EOS	BO	07/29/92	P	1X1	398	32	AWJ	07/30/92	AWJ
13B	S 089 / 090	179' S. OF N. EOS	WS	07/28/92	P	2X4	145	42	AWJ	08/07/92	AWJ
13C	S 088 / 089	11' N. OF S. EOS	DS-30	07/28/92	P	2X4	145	42	AWJ	07/29/92	AWJ
13D	S 090 / 091	37' S. OF N. EOS	DS-31	07/29/92	P	2X6	LEM	32	AWJ	07/30/92	AWJ
13E	S 092 / 094	70' S. OF N. EOS	FTS	07/29/92	P	4X5	LEM	32	AWJ	08/07/92	AWJ
13F	S 092 / 093	47' S. OF N. EOS	DS-32	07/28/92	P	2X5	LEM	32	BIE	08/07/92	AWJ
13G	S 096 / 097	121' S. OF N. EOS	DS-33	07/29/92	P	2X4	LEM	32	AWJ	08/07/92	AWJ
13H	S 098 / 099	@ INTERSECTION WITH S100	FTS	07/29/92	P	2X3	LEM	32	AWJ	08/07/92	AWJ
13I	S 101 / 102	10' S. OF N. EOS	DS-34	07/29/92	P	4X6	LEM	32	AWJ	07/29/92	AWJ
13J	S 101 / 102	105' S. OF N. EOS	BO	07/29/92	P	1X1	145	42	CAW	07/30/92	AWJ
13K	S 099 / 100	@ INTERSECTION WITH S101	FTS	07/29/92	P	2X3	LEM	32	AWJ	08/07/92	AWJ
13M	S 080 / 103	30' S. OF N. EOS	DS-35	07/29/92	P	2X4	145	42	AWJ	07/29/92	AWJ
13N	S 080 / 103	100' S. OF N. EOS	FTS	07/29/92	P	3X3	145	42	AWJ	07/29/92	AWJ
13P	S 080 / 103	111' S. OF N. EOS	WS	07/29/92	P	1X3	145	42	CAW	07/29/92	AWJ
13Q	S 044 / 046	@ INTERSECTION WITH S084	WS	07/29/92	P	3X6	145	42	CAW	08/07/92	AWJ
13R	S 047 / 081	@ INTERSECTION WITH S084	WS	07/29/92	P	3X4	145	42	CAW	08/07/92	AWJ
13S	S 050 / 103	4' N. OF S. EOS	DS-36	07/29/92	P	2X4	145	42	CAW	07/29/92	CAW
13T	S 050 / 051	@ INTERSECTION WITH S103	WS	07/29/92	P	2X4	145	42	CAW	08/07/92	AWJ
13W	S 054 / 055	@ E. EOS	WS	07/29/92	P	2X3	145	42	AWJ	07/30/92	CAW
13X	S 047 / 048	@ E. EOS	WS	07/29/92	P	2X5	145	42	CAW	08/07/92	AWJ
14A	S 104 / 105	76' S. OF N. EOS	FTS	07/29/92	P	3X3	145	42	AWJ	07/29/92	AWJ

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SECONDARY GEOMEMBRANE REPAIR SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

DEFECT CODE	SEAM, PANEL OR DEFECT NUMBER	APPROXIMATE LOCATION	DEFECT TYPE	REPAIR DATE	REPAIR TYPE	APPROX. SIZE	WELDER ID OPER.	WELDER ID MACH.	QA MON.	TEST DATE	TEST MON.
14B	S 105 / 106	60' S. OF N. EOS	WR	07/29/92	P	1X8	145	42	BIE	08/01/92	CAW
14C	S 105 / 106	114' S. OF N. EOS	FTS	07/29/92	P	1X3	LEM	32	BIE	08/07/92	AWJ
14D	S 106 / 107	102' S. OF N. EOS	DS-37	07/29/92	P	2X4	LEM	32	BIE	07/30/92	AWJ
14E	S 106 / 107	83' S. OF N. EOS	FTS	07/29/92	P	1X1	LEM	32	BIE	07/30/92	AWJ
14F	S 102 / 104	25' S. OF N. EOS	DS-38	07/30/92	P	2X5	145	42	CAW	07/30/92	AWJ
14G	S 102 / 104	76' S. OF N. EOS	WR	07/29/92	P	1X2	LEM	32	BIE	07/30/92	AWJ
14H	S 102 / 104	90' S. OF N. EOS	PT	07/29/92	P	3X5	145	42	AWJ	07/30/92	AWJ
14I	S 102 / 104	95' S. OF N. EOS	FTS	07/29/92	P	2X2	145	42	AWJ	07/30/92	BIE
14J	S 107 / 108	@ INTERSECTION WITH S109	T	07/30/92	P	2X3	145	42	CAW	07/30/92	AWJ
14K	S 107 / 108	88' S. OF N. EOS	PT	07/29/92	P	1X2	LEM	32	BIE	07/30/92	AWJ
14M	S 108 / 110	22 N. OF S. EOS	DS-39	07/30/92	P	2X7	145	42	CAW	07/30/92	AWJ
15A	S 079	80' E. OF W. SLOPE TOE	FS	07/29/92	RS	6'	LEM	32	AWJ	07/29/92	AWJ
15B	S 055 /	100' E. OF W. EOS	SI	07/29/92	C	2X10	145	42	AWJ	07/29/92	AWJ
15C	S 080 / 103	110' E. OF W. EOS	PT	07/29/92	P	2X4	145	42	AWJ	07/29/92	AWJ
15D	S 080 / 103	110' S. OF N. SLOPE	PT	07/29/92	RS	8'	145	42	AWJ	07/29/92	AWJ
15E	S 080 / 103	110' S. OF N. SLOPE	PT	07/29/92	P	2X2	145	42	AWJ	07/29/92	AWJ
15F	S 079 / 103	144' S. OF N. SLOPE	PT	07/29/92	P	2X3	145	42	AWJ	07/29/92	AWJ
15G	S 102 / 104	80' S. OF N. EOS	FS	07/29/92	RS	12'	145	42	AWJ	07/30/92	BIE
15H	S 102 /	80' S. OF N. EOS	WR	07/29/92	RS	5'	145	42	AWJ	07/30/92	AWJ
15I	S 102 / 104	100' S. OF N. EOS	FS	07/29/92	RS	4'	145	42	AWJ	07/30/92	AWJ
15J	S 105 /	145' S. OF N. SLOPE	FM	07/29/92	P	1X1	LEM	32	AWJ	07/30/92	AWJ
16A	S 050 - 055	@ S. EOS OF S050	WR	08/04/92	C	2X90	LEM	111	AWJ	08/04/92	AWJ
16B	S 053 / 054	@ W. EOS	EXT	08/04/92	C	2X78	LEM	111	AWJ	08/07/92	AWJ
16C	S 021 /	N. SLOPE ANCHOR TRENCH	EXT	--	--	CAPPED BY 18A		--	--	--	--
16D	S 111 / 123	FULL SEAM	FTS	08/05/92	C	2X164	LEM	111	AWJ	08/07/92	AWJ
17A	S 122 / 123	@ N. EOS	PT	08/05/92	P	2X5	145	42	AWJ	08/10/92	BIE
17B	S 122 / 123	@ S. EOS	PT	08/05/92	P	1X1	LEM	111	AWJ	08/10/92	BIE
17C	S 111 / 123	@ S. EOS	PT	--	--	CAPPED BY 16D		--	--	--	--
17D	S 118 / 119	@ W. EOS	DS-43P1	08/05/92	P	2X4	165	212	AWJ	08/07/92	AWJ
17E	S 111 / 123	FULL SEAM	PT	--	--	CAPPED BY 16D		--	--	--	--
17F	S 111 / 123	20' S. OF N. EOS	PT	08/05/92	P	2X2	LEM	111	AWJ	08/07/92	AWJ
17G	S 111 / 123	15' S. OF N. EOS	PT	08/05/92	P	4X6	LEM	111	AWJ	08/07/92	AWJ
17H	S 121 / 122	@ N. EOS	PT	08/05/92	C	12X30	145	42	AWJ	08/07/92	AWJ
17I	S 124 / 126	10' W. OF E. EOS	DS-43N1	08/05/92	P+RS	2X4+8'	145	42	CAW	08/10/92	AWJ

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SECONDARY GEOMEMBRANE REPAIR SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

DEFECT CODE	SEAM, PANEL OR DEFECT NUMBER		APPROXIMATE LOCATION	DEFECT TYPE	REPAIR DATE	REPAIR TYPE	APPROX. SIZE	WELDER ID		QA MON.	TEST DATE	TEST MON.
								OPER.	MACH.			
17J	S 112 /		108' W. OF E. EOS	D	08/05/92	P	3X3	145	42	AWJ	08/10/92	AWJ
17K	S 052 /	16A	E. SIDE OF DEFECT 16A	DSE-04P1	08/10/92	P	2X5	145	42	CAW	08/10/92	AWJ
18A	S 121 /		@ E. EOS	EXT	08/07/92	C	8X40	145	42	AWJ	08/10/92	AWJ
18B	S 121 /	122	FULL SEAM	FTS	08/10/92	C	2X12	145	42	BIE	08/10/92	AWJ
18C	S 123 /		30 N. OF S. EOS	SI	08/10/92	P	3X4	145	42	CAW	08/10/92	AWJ
18D	S 013 /	014	5' S. OF TOE	WR	08/11/92	C	3X60	145	42	CAW	08/12/92	CAW
19A	S 102 /	104	5' S. OF N. EOS	D	08/04/92	P	1X1.5	145	42	CAW	08/04/92	CAW
19B	S 027 -	033	WR CUT @ TOE OF 4:1 SLOPE	WR	08/03/92	C	2X78	145	42	CAW	08/03/92	CAW
19C	S 113 /	114	116' W. OF E. EOS	DS-40	08/04/92	P	2X3	LEM	111	BIE	08/07/92	CAW
19D	S 114 /		75' W. & 3' S OF S114/115	SI	08/05/92	P	1X1	145	42	BIE	08/07/92	AWJ
19E	S 116 /		111' W. & 7' S OF S116/117	SI	08/05/92	P	1X1	145	42	BIE	08/07/92	AWJ
19F	S 115 /	116	160' W. OF E. EOS	DS-41	08/04/92	P	3X5	145	42	AWJ	08/07/92	AWJ
19G	S 116 /	117	76' W. OF E. EOS	DS-42	08/04/92	P	3X4	145	42	AWJ	08/07/92	AWJ
19H	S 111 /	123	66' S. OF N. EOS	DS-43	--	--	CAPPED BY 16D		--	--	--	--
19I	S 122 /	123	21' S. OF N. EOS	DS-44	08/05/92	P	2X4	145	42	CAW	08/07/92	BIE
19J	S 111 /	123	141' S. OF N. EOS	WS	--	--	CAPPED BY 16D		--	--	--	--
19K	S 122 /	123	137' S. OF N. EOS	PT	08/05/92	P	3X4	LEM	111	CAW	08/07/92	BIE
20A	S 107 /		1' W. OF S109, 35' N. OF S. EOS	DS	08/04/92	C	2X30	LEM	111	BIE	08/07/92	AWJ
20B	S 105 /		1' W. OF S106, 35' N. OF S. EOS	DS	08/04/92	C	2X30	145	42	BIE	08/07/92	AWJ
20C	S 112 /	113	180' W. OF E. EOS	FTS	08/04/92	P	1X1	145	42	BIE	08/07/92	AWJ
20D	S 113 /	114	185' W. OF E. EOS	T	08/04/92	P	1X1	145	42	BIE	08/07/92	AWJ
20E	S 120 /	121	@ INTERSECTION WITH S122	T	08/05/92	P	2X2	145	42	BIE	08/10/92	BIE
20F	S 119 /	120	105' W. OF E. EOS	FTS	08/05/92	P	2X2	145	42	BIE	08/07/92	AWJ
20G	S 151 /	153	SUMP PIPE BOOT	BOOT	08/06/92	P	7X7	145	42	BIE	08/07/92	AWJ
21A	S 131 /	133	102' W. OF E. EOS	WS	08/07/92	P	2X10	398	111	CAW	08/10/92	AWJ
21B	S 131 /	133	50' W. OF E. EOS	FTS	08/07/92	P	2X2	398	111	CAW	08/10/92	AWJ
21C	S 112 /	124	E. EOS TO W. EOS	FS	08/07/92	C	2X225	145	42	CAW	08/10/92	AWJ
21D	S 112 /	21C	50' W. OF E. EOS	DSE-05	08/10/92	P	2X6	145	42	CAW	08/10/92	AWJ
21E	S 124 /		149' W OF E. EOS, 5' S124/21C	WR	08/06/92	P	1X1	145	42	CAW	08/10/92	AWJ
21F	S 131 /	133	139' W. OF E. EOS	BO	08/10/92	P	1X2	398	111	BIE	08/10/92	AWJ
21G	S 139 /	154	72' W. OF E. EOS	PT	08/10/92	P	1X1	398	111	CAW	08/10/92	AWJ
21H	S 154 /	155	70' W. OF E. EOS	DS-53	08/10/92	P	2X4	398	111	CAW	08/10/92	AWJ
21I	S 155 /	157	33' W. OF E. EOS	DS-54	08/10/92	P	2X4	398	111	CAW	08/10/92	AWJ
21J	S 154 /	155	@ INTERSECTION WITH S156	T	08/10/92	P	1X1.5	145	42	CAW	08/10/92	AWJ

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SECONDARY GEOMEMBRANE REPAIR SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

DEFECT CODE	SEAM, PANEL OR DEFECT NUMBER	APPROXIMATE LOCATION	DEFECT TYPE	REPAIR DATE	REPAIR TYPE	APPROX. SIZE	WELDER ID OPER.	WELDER ID MACH.	QA MON.	TEST DATE	TEST MON.
21K	S 155 / 156	@ INTERSECTION WITH S157	T	08/10/92	P	1X1.5	145	42	CAW	08/10/92	AWJ
21M	S 163 / 164	15' W. OF E. EOS	FTS	08/14/92	P	1.5X1.5	398	111	SRS	08/18/92	JAL
21N	S 160 / 161	@ INTERSECTION WITH S162	T	08/14/92	P	2X2	398	111	SRS	08/18/92	JAL
21P	S 160 / 162	20' W. OF E. EOS	IO	08/14/92	P	2.5X5	398	111	SRS	08/18/92	JAL
21Q	S 160 / 163	1' W. OF E. EOS	IO	08/14/92	P	3X8	398	111	SRS	08/18/92	JAL
21R	S 159 /	150' W. OF E. EOS, 4' S158	D	08/14/92	C	2X10	145	42	CAW	08/18/92	JAL
21S	S 155 /	150' W. OF E. EOS, 7' S154	D	08/14/92	C	2X12	398	111	CAW	08/18/92	JAL
22A	S 157 / 158	2' E. OF W. EOS	DS-55	08/16/92	P	2X4	398	111	BIE	08/19/92	BIE
22B	S 052 / 16A	@ TOE OF E. EOS	D	--	--	CAPPED BY 17K		--	--	--	--
22C	S 158 / 159	107' W. OF E. EOS	DS-56	08/14/92	P	2.5X4	398	111	SRS	08/18/92	JAL
22D	S 166 / 167	137' W. OF E. EOS	DS-57	08/14/92	P	3X5	398	111	SRS	08/18/92	BIE
22E	S 171 / 172	71' W. OF E. EOS	DS-58	08/14/92	P	2.5X4	145	42	CAW	08/18/92	JAL
22F	S 172 / 173	35' W. OF E. EOS	DS-59	08/14/92	P	2.5X4	398	111	SRS	08/18/92	JAL
22G	S 154 - 159	148' W. OF E. EOS	CAP	08/14/92	C	2X70	145	42	CAW	08/18/92	JAL
22H	S 174 / 181	74' W. OF E. EOS	WS	08/14/92	P	2.5X4	398	111	SRS	08/18/92	JAL
22I	S 250 / 252	@ CREST OF SUMP	D	08/20/92	C	2X25	398	111	CAW	08/20/92	SRS
22J	S 243 / 245	@ CREST OF SUMP	D	08/20/92	C	2X25	398	111	CAW	08/20/92	BIE
23A	S 159 / 181	@ CREST	BO	--	--	DAMAGED MATERIAL REMOVED				--	--
23B	S 159 / 181	@ CREST OF SUMP	PT	08/16/92	P	3X6	145	42	CAW	08/18/92	JAL
23C	S 165 / 166	@ INTERSECTION WITH S175	T	--	--	DAMAGED MATERIAL REMOVED				--	--
23D	S 176 / 177	FROM E. TOE TO S177	CO	08/14/92	C	3X70	145	42	CAW	08/18/92	JAL
23E	S 178 / 179	@ S. ANCHOR TRENCH	CO	08/15/92	C	3X60	398	111	SRS	08/18/92	JAL
23F	S 159 / 173	@ INTERSECTION WITH S182	T	08/16/92	P	1X2	398	111	BIE	08/18/92	JAL
23G	S 170 / 176	@ INTERSECTION WITH S182	T	08/16/92	P	2X5	398	111	BIE	08/18/92	JAL
24A	S 160 /	76' W. OF CREST	SI	08/14/92	P	1X1	398	111	SRS	08/18/92	JAL
24B	S 142 /	57' W. OF E. EOS	OTHER	08/15/92	C	1X14	145	42	SRS	08/19/92	BIE
24C	S 166 / 23E	8' N. OF S. EOS	FTS	08/14/92	P	1.5X2	398	111	SRS	08/19/92	JAL
24D	S 168 / 23E	8' N. OF S. EOS	FS	08/15/92	P	2X3	398	111	CAW	08/19/92	JAL
24E	S 182 / 183	3' S. OF N. EOS	FTS	08/16/92	P	1X1	398	111	BIE	08/19/92	BIE
24F	S 182 / 183	7' S. OF N. EOS	FTS	08/16/92	P	1X1	398	111	BIE	08/19/92	BIE
24G	S 112 / 124	@ INTERSECTION WITH S190	T	08/17/92	P	2X2	398	111	SRS	08/20/92	SRS
25A	S 159 / 181	47' W. OF E. EOS	PT	08/14/92	P	1.5X1.5	398	111	SRS	08/18/92	JAL
25B	S 168 / 169	@ INTERSECTION WITH S170	PT	08/14/92	P	1.5X1.5	398	111	SRS	08/18/92	JAL
25C	S 167 / 168	@ INTERSECTION WITH S169	PT	08/14/92	P	1.5X1.5	398	111	SRS	08/19/92	BIE

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SECONDARY GEOMEMBRANE REPAIR SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

DEFECT CODE	SEAM, PANEL OR DEFECT NUMBER	APPROXIMATE LOCATION	DEFECT TYPE	REPAIR DATE	REPAIR TYPE	APPROX. SIZE	WELDER ID OPER.	WELDER ID MACH.	QA MON.	TEST DATE	TEST MON.
25D	S 173 / 180	42' E. OF W. EOS	PT	08/14/92	P	1X1.5	145	42	CAW	08/19/92	BIE
25E	S 160 / 164	@ INTERSECTION WITH S165	PT	08/14/92	P	2.5X3	398	111	SRS	08/19/92	BIE
25F	S 163 / 164	@ W. EOS	PT	--	--	CAPPED BY 21Q		--	--	--	--
25G	S 160 / 163	6' W. OF E. EOS	PT	--	--	CAPPED BY 21Q		--	--	--	--
25H	S 160 / 162	@ INTERSECTION WITH S163	PT	08/14/92	P	2X3	398	111	SRS	08/18/92	JAL
25I	S 159 / 180	29' W. OF E. EOS	DSE-07	08/14/92	P	2X4	145	42	CAW	08/18/92	JAL
25J	S 159 / 173	FULL SEAM	D	08/14/92	C	2X50	145	42	CAW	08/18/92	JAL
25K	S 159 /	35' E. OF W. EOS, 10' N. S159/173	CR	08/14/92	P	2X4	145	42	CAW	08/18/92	JAL
25M	S 159 /	40' E. OF W. EOS, 10' N. S159/173	CO	08/14/92	P	2X3	145	42	CAW	08/18/92	JAL
25N	S 159 /	43' E. OF W. EOS, 10' N. S159/173	CR	08/14/92	P	2X3	145	42	CAW	08/18/92	JAL
25P	S 178 / 23E	3' E. OF S177/178	DSE-08	08/16/92	P	2X4	398	111	CAW	08/18/92	JAL
25Q	S 173 / 181	@ E. EOS	PT	08/16/92	P	1X1	145	42	CAW	08/18/92	JAL
25R	S 180 / 181	FULL SEAM	FS	08/16/92	RS	8'	145	42	CAW	08/18/92	JAL
25S	S 182 / 183	37' N. OF S. EOS	DS-60	08/15/92	P	2.5X4	398	111	SRS	08/19/92	BIE
25T	S 176 / 182	5' N. OF S. EOS	PT	08/16/92	P	1X1	398	111	CAW	08/19/92	JAL
25W	S 183 / 184	138' N. OF S. EOS	WS	08/15/92	P	2X2	398	111	SRS	08/19/92	SRS
25X	S 184 / 185	139' N. OF S. EOS	WS	08/15/92	P	3X3	398	111	SRS	08/19/92	SRS
26A	S 184 / 185	109' N. OF S. EOS	DS-61	08/15/92	P	2.5X4	398	111	SRS	08/19/92	SRS
26B	S 185 / 186	146' N. OF S. EOS	WS	08/15/92	P	2X3	398	111	SRS	08/19/92	SRS
26C	S 186 / 187	109' S. OF N. EOS	WS	08/15/92	P	2X3	398	111	SRS	08/19/92	CAW
26D	S 186 / 187	6' S. OF N. EOS	DS-62	08/16/92	P	2X4	398	111	BIE	08/19/92	BIE
26E	S 187 / 188	123' S. OF N. EOS	WS	08/15/92	P	2X3	398	111	SRS	08/19/92	SRS
26F	S 187 / 188	110' N. OF S. EOS	DS-63	08/15/92	P	2.5X4	398	111	SRS	08/19/92	SRS
26G	S 137 / 184	3' N. OF S137/183/184	DS-64	08/16/92	P	2X4	398	111	CAW	08/19/92	SRS
26H	S 133 / 185	@ INTERSECTION WITH S186	WS	08/16/92	P	1.5X2	398	111	CAW	08/19/92	SRS
26I	S 189 / 190	164' S. OF N. EOS	WS	08/16/92	P	2X2	398	111	BFM	08/19/92	SRS
26J	S 190 / 192	71' N. OF S. EOS	DS-65	08/17/92	P	1.5X3	145	42	CAW	08/19/92	SRS
26K	S 189 / 190	94' N. OF S. EOS	DS-66	08/16/92	P	2X3.5	145	42	CAW	08/19/92	SRS
26M	S 192 / 193	153' N. OF S. EOS	WS	08/16/92	P	2X2	398	111	BFM	08/19/92	SRS
26N	S 190 / 191	84' S. OF N. EOS	DS-67	08/16/92	P	2X4	398	111	BFM	08/19/92	SRS
26P	S 196 / 197	155' N. OF S. EOS	WS	08/16/92	P	2X2	145	42	BFM	08/19/92	SRS
26Q	S 197 / 198	70' N. OF S. EOS	DS-68	08/17/92	P	1.5X3	145	42	CAW	08/19/92	SRS
26R	S 197 / 198	29' S. OF N. EOS	DS-69	08/17/92	P	2X3	145	42	CAW	08/19/92	BIE
26S	S 193 / 194	95' S. OF N. EOS	DS-70	08/16/92	P	2X4	398	111	BFM	08/19/92	BIE

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SECONDARY GEOMEMBRANE REPAIR SUMMARY
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

DEFECT CODE	SEAM, PANEL OR DEFECT NUMBER	APPROXIMATE LOCATION	DEFECT TYPE	REPAIR DATE	REPAIR TYPE	APPROX. SIZE	WELDER ID OPER.	WELDER ID MACH.	QA MON.	TEST DATE	TEST MON.
26T	S 202 / 203	24' N. OF S. EOS	DS-71	08/17/92	P	1.5X3.5	145	42	CAW	08/19/92	SRS
27A	S 193 / 194	154' S. OF N. EOS	PT	08/16/92	P	1X2	398	111	BFM	08/19/92	SRS
27B	S 190 / 191	@ INTERSECTION WITH S192	PT	08/16/92	P	1X1	398	111	BFM	08/19/92	SRS
27C	S 194 / 196	55' S. OF N. EOS	WS	08/16/92	P	1X1	398	111	BFM	08/19/92	SRS
27D	S 191 / 192	@ INTERSECTION WITH S193	PT	08/16/92	P	2X4	398	111	BFM	08/19/92	SRS
27E	S 192 / 193	FROM S191/192	FS	08/16/92	RS	10'	398	111	BFM	08/19/92	SRS
27F	S 192 / 193	14' S. OF S191/192	PT	08/16/92	P	1X1	398	111	BFM	08/19/92	SRS
27G	S 197 / 198	54' S. OF N. EOS	PT	08/17/92	P	1X2.5	145	42	CAW	08/19/92	SRS
27H	S 198 / 199	50' S. OF N. EOS	PT	08/17/92	P	2X3	145	42	CAW	08/19/92	BIE
27I	S 196 / 197	60' S. OF N. EOS	PT	08/16/92	P	1X1	145	42	BFM	08/19/92	SRS
27J	S 196 / 197	66' S. OF N. EOS	PT	08/16/92	P	1X1	145	42	BFM	08/19/92	SRS
27K	S 196 / 197	52' S. OF N. EOS	FS	08/16/92	RS	7'	145	42	BFM	08/19/92	SRS
27M	S 193 / 194	@ INTERSECTION WITH S195	PT	08/16/92	P	2X2	398	111	BFM	08/19/92	BIE
27N	S 196 / 197	45' S. OF N. EOS	PT	08/16/92	P	1X1	145	42	BFM	08/19/92	SRS
27P	S 196 / 197	48' S. OF N. EOS	FS	08/16/92	RS	4'	145	42	BFM	08/19/92	SRS
27Q	S 199 / 200	@ INTERSECTION WITH S201	PT	08/17/92	P	2X2.5	145	42	CAW	08/19/92	BIE
27R	S 111 / 123	@ INTERSECTION WITH S193	T	08/16/92	P	1X3	398	111	BFM	08/20/92	SRS
28A	S 208 / 209	@ E. EOS	FTS	08/17/92	P	1X1	145	42	CAW	08/19/92	CAW
28B	S 112 / 190	3' S. OF N. EOS	FTS	08/17/92	P	2X4	398	111	CAW	08/20/92	SRS
28C	S 127 / 189	2' S. OF N. EOS	FTS	08/17/92	P	2X2	398	111	SRS	08/20/92	CAW
28D	S 203 / 204	@ INTERSECTION WITH S205	FTS	08/17/92	P	1X1	145	42	CAW	08/19/92	BIE
28E	S 223 / 224	25' N.OF S. EOS	DS-73	--	--	CAPPED BY 36K		--	--	--	--
28F	S 222 / 223	127' N.OF S. EOS	DS-72	08/19/92	P	2X4	145	109	CAW	08/19/92	CAW
28G	S 209 / 210	5' E. OF W. EOS	FTS	08/17/92	P	1X1	145	42	CAW	08/19/92	SRS
28H	S 209 / 210	@ INTERSECTION WITH S222	WS	08/17/92	P	1X1	145	42	BIE	08/19/92	SRS
28I	S 210 / 211	@ INTERSECTION WITH S222	WS	08/19/92	P	1.5X2	145	109	CAW	08/19/92	CAW
28J	S 212 / 222	3' S. OF N. EOS	DS-74	08/19/92	P	2X4	145	109	BIE	08/19/92	CAW
28K	S 212 / 222	9' S. OF N. EOS	WS	08/19/92	P	2X4	145	109	CAW	08/19/92	CAW
28M	S 221 / 222	5' S. OF N. EOS	FS	08/19/92	RS	3'	145	109	CAW	08/19/92	CAW
28N	S 217 / 218	4' N. OF S. EOS	BO	08/19/92	P	2X4	145	109	CAW	08/19/92	CAW
28P	S 216 / 217	@ INTERSECTION WITH S218	BO	08/19/92	P	1X1	145	109	CAW	08/19/92	CAW
28Q	S 215 / 216	@ INTERSECTION WITH S218	BO	08/19/92	P	1X1	145	109	CAW	08/19/92	CAW
28R	S 234 / 235	77' N. OF S. EOS	DS-75	08/19/92	P	2X3.5	145	109	CAW	08/19/92	CAW
28S	S 193 / 194	145' S. OF N. EOS	DS-76P1	08/17/92	P+RS	2X5+5'	398	111	CAW	08/19/92	SRS

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SECONDARY GEOMEMBRANE REPAIR SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

DEFECT CODE	SEAM, PANEL OR DEFECT NUMBER	APPROXIMATE LOCATION	DEFECT TYPE	REPAIR DATE	REPAIR TYPE	APPROX. SIZE	WELDER ID OPER.	WELDER ID MACH.	QA MON.	TEST DATE	TEST MON.
28T	S 209 / 210	10' E. OF W. EOS	DS-76N1	08/19/92	P+RS	2X3+8'	145	109	CAW	08/19/92	SRS
28W	S 240 / 241	28' S. OF N. EOS	DS-77	08/18/92	P	2.5X4	398	111	SRS	08/19/92	BIE
28X	S 239 / 240	5-10' N. OF S. EOS	BO	08/18/92	RS	4'	398	111	SRS	08/19/92	BIE
29A	S 156 / 157	@ TOE OF SLOPE	D	08/16/92	C	1X25	398	111	BIE	08/19/92	BIE
29B	S 138 / 139	@ INTERSECTION WITH S183	IO	08/16/92	P	1.5X5	398	111	CAW	08/19/92	SRS
29C	S 134 / 135	@ INTERSECTION WITH S185	IO	08/16/92	P	2X7	398	111	CAW	08/19/92	SRS
29D	S 134 /	@ W. TOE OF SLOPE	IO	08/16/92	P	1.5X12	398	111	CAW	08/19/92	SRS
29E	S 158 / 182	@ INTERSECTION WITH S183	T	08/17/92	C	2X21	398	111	BIE	08/19/92	BIE
29F	S 127 / 188	@ INTERSECTION WITH S189	T	08/17/92	P	4X4	398	111	SRS	08/19/92	SRS
29G	S 188 / 189	140' N. OF S. EOS	WS	08/16/92	P	2X3	398	111	BFM	08/19/92	SRS
29H	S 188 / 189	200' N. OF S. EOS	FS	08/16/92	P	1X1	398	111	BFM	08/19/92	SRS
29I	S 185 /	50' S. OF N. EOS	D	08/16/92	P	1X8	398	111	BIE	08/18/92	JAL
29J	S 190 / 191	150' N. OF S. EOS	PT	08/16/92	P	1X2	398	111	BFM	08/19/92	SRS
29K	S 122 / 123	@ INTERSECTION WITH S190	WR	08/17/92	P	3X6	398	111	CAW	08/20/92	SRS
30A	S 208 / 209	FULL SEAM	FS	08/17/92	C	2X70	145	42	BIE	08/19/92	CAW
30B	S 208 / 209	20' E. OF W. EOS	DS-76	--	--	CAPPED BY 30A		--	--	--	--
30C	S 206 / 207	FULL SEAM	FS	08/17/92	C	2X40	398	111	BIE	08/19/92	SRS
30D	S 204 / 205	@ INTERSECTION WITH S222	T	08/19/92	P	2X3	145	109	CAW	08/19/92	SRS
30E	S 229 / 230	@ INTERSECTION WITH S232	T	08/20/92	P	2X3	145	82	CAW	08/22/92	SRS
30F	S 206 /	15' W. OF E. EOS	FS	--	--	INCLUDED WITH REPAIR 30C					--
30G	S 222 / 253	FULL SEAM	IO	08/17/92	C	5X48	JS	1404	CAW	08/17/92	CAW
30H	S 208 / 30A	45' E. OF W. EOS	DSE-09	08/19/92	P	1X1	145	109	CAW	08/19/92	CAW
30I	S 245 /	SUMP BOOT	BS	08/17/92	P	7X7	145	42	BIE	08/18/92	SRS
30J	S 248 / 250	FULL SEAM	FS	08/18/92	RS	4'	398	111	CAW	08/18/92	SRS
30K	S 245 / 246	FROM SUMP BOOT	FS	08/17/92	P	1X8	145	42	BIE	08/18/92	SRS
30M	S 249 / 250	@ INTERSECTION WITH S252	BO	08/18/92	P	2X3	398	111	CAW	08/18/92	SRS
30N	S 250 / 251	@ INTERSECTION WITH S252	BO	08/18/92	P	2.5X2.5	145	42	CAW	08/18/92	SRS
30P	S 252 / 253	@ INTERSECTION WITH 30G	PT	08/18/92	P	2.5X5	145	42	CAW	08/18/92	CAW
30Q	S 222 / 30G	10' N. OF S. TOE	FS	08/18/92	P	2X3	145	85	SRS	08/19/92	BIE
30R	S 227 / 228	20' W. OF E. EOS	FS	08/19/92	P	1X1	145	109	CAW	08/20/92	CAW
30S	S 196 / 239	8' W. OF E. EOS	DS-82	08/18/92	P	2.5X4	398	111	SRS	08/19/92	BIE
31A	S 107 / 240	@ E. EOS	BO	08/18/92	P	2X5	398	111	SRS	08/22/92	BIE
31B	S 224 / 234	@ N. EOS	PT	08/19/92	P	2X2.5	145	109	CAW	08/20/92	SRS
31C	S 227 / 261	@ N. EOS	BO	08/18/92	P	2X3	398	111	SRS	08/20/92	SRS

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SECONDARY GEOMEMBRANE REPAIR SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

DEFECT CODE	SEAM, PANEL OR DEFECT NUMBER	APPROXIMATE LOCATION	DEFECT TYPE	REPAIR DATE	REPAIR TYPE	APPROX. SIZE	WELDER ID OPER.	WELDER ID MACH.	QA MON.	TEST DATE	TEST MON.
31D	S 232 / 263	@ N. EOS	WS	08/18/92	P	2X3	398	111	SRS	08/19/92	SRS
31E	S 236 / 237	@ N. EOS	IO	08/18/92	P	2X2	398	111	SRS	08/19/92	SRS
31F	S 239 / 240	42' N. OF S. EOS	BO	08/18/92	P	1.5X2	398	111	CAW	08/20/92	CAW
31G	S 001 / 262	53' N. OF S. EOS	WS	08/19/92	P	3X6	145	109	CAW	08/20/92	CAW
31H	S 001 / 262	117' N. OF S. EOS	DS-85	08/20/92	P	2X6	145	82	CAW	08/20/92	CAW
31I	S 001 / 262	@ N. EOS	BO	08/18/92	P	2X3	398	111	SRS	08/20/92	CAW
31J	S 090 / 259	20' S. OF N. EOS	BO	08/18/92	P	2X3	145	85	BIE	08/20/92	SRS
31K	S 090 / 259	10' N. OF S. EOS	DS-86	08/19/92	P	2X3.5	398	111	CAW	08/20/92	SRS
31M	S 090 / 260	11' N. OF S. EOS	BO	08/18/92	P	3X5	398	111	SRS	08/20/92	SRS
31N	S 095 / 096	4' N. OF S. EOS	PT	08/17/92	P	1X1	145	42	CAW	08/20/92	BIE
32A	S 243 / 245	@ INTERSECTION WITH S246	PT	08/17/92	P	2X3	398	111	BIE	08/18/92	SRS
32B	S 243 / 244	@ INTERSECTION WITH S245	WS	08/17/92	P	2X3	398	111	BIE	08/18/92	SRS
32C	S 243 / 245	2-5' N. OF S. EOS	FS	08/17/92	P	1X1	398	111	BIE	08/18/92	SRS
32D	S 248 / 249	75' S. OF N. EOS	WS	08/17/92	P	1X1	398	111	BIE	08/20/92	SRS
32E	S 222 / 30G	13' N. OF S. EOS	DS-78	08/18/92	P	2.5X4	145	85	SRS	08/19/92	BIE
32F	S 253 / 254	23' N. OF S. EOS	DS-80	08/18/92	P	2X3.5	145	42	CAW	08/19/92	SRS
32G	S 249 / 252	14' N. OF S. EOS	DS-79	08/18/92	P	2X3.5	398	111	CAW	08/20/92	SRS
32H	S 253 / 254	@ INTERSECTION WITH S255	T	08/18/92	P	1X2	398	111	CAW	08/19/92	SRS
32I	S 254 / 255	@ INTERSECTION WITH S256	T	08/18/92	P	1.5X2	398	111	CAW	08/19/92	SRS
32J	S 256 / 257	116' N. OF S. EOS	DS-81	08/18/92	P	1.5X3	145	85	CAW	08/19/92	SRS
32K	S 261 / 262	38' N. OF S. EOS	DS-83	08/18/92	P	3X4	145	109	CAW	08/19/92	CAW
32M	S 204 / 222	40' S. OF N. EOS	PT	08/18/92	C	1X28	145	85	SRS	08/19/92	BIE
32N	S 249 / 250	E. EOS TO 6' W.	FS	08/18/92	RS	5'	398	111	CAW	08/18/92	SRS
32P	S 257 / 258	@ N. EOS	BO	--	--	CAPPED BY 34E		--	--	--	--
32Q	S 105 / 242	2' W. OF E. EOS	BO	08/18/92	P	1X2	398	111	SRS	08/21/92	SRS
32R	S 195 / 239	@ N. EOS	IO	08/18/92	P	2.5X4	398	111	SRS	08/21/92	SRS
32S	S 106 / 241	6' E. OF W. EOS	DS-84	08/18/92	P	1.5X3	145	42	CAW	08/21/92	SRS
32T	S 258 / 259	50' N. OF S. EOS	IO	08/20/92	RS	1'	145	82	CAW	08/20/92	CAW
32W	S 258 / 260	@ N. EOS	WS	--	--	CAPPED BY 34E		--	--	--	--
32X	S 099 / 101	@ INTERSECTION WITH S248	BO	--	--	CAPPED BY 34C		--	--	--	--
33A	S 090 / 260	25' S. OF N. EOS	D	08/18/92	P	1X1	398	111	SRS	08/20/92	SRS
33B	S 090 / 260	N. EOS TO 18' S.	IO	08/18/92	C	2X20	398	111	CAW	08/20/92	SRS
33C	S 198 / 241	1' W. OF E. EOS	D	08/18/92	P	1X1	398	111	CAW	08/19/92	BIE
33D	S 251 / 252	2' N. OF S. EOS	D	08/18/92	P	1X1	145	42	SRS	08/21/92	SRS

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SECONDARY GEOMEMBRANE REPAIR SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

DEFECT CODE	SEAM, PANEL OR DEFECT NUMBER	APPROXIMATE LOCATION	DEFECT TYPE	REPAIR DATE	REPAIR TYPE	APPROX. SIZE	WELDER ID OPER.	WELDER ID MACH.	QA MON.	TEST DATE	TEST MON.
33E	S 259 / 260	@ E. EOS	D	08/18/92	P	2X4	145	85	BIE	08/20/92	SRS
33F	S 245 / 247	SUMP FLOOR	BS	--	--	CAPPED BY 30I		--	--	--	--
33G	S 258 / 259	@ INTERSECTION WITH S263	T	08/18/92	C	2X25	398	111	SRS	08/21/92	SRS
34A	S 095 / 256	2' E. OF S095/255/256	DS-84P2	08/22/92	P	2X4	398	111	BIE	08/24/92	BIE
34B	S 256 /	3' S. OF S095	SI	08/24/92	P	1X1	LEM	111	BIE	08/24/92	BIE
34C	S 095 / 256	TO DS-84P1	FS	08/22/92	C	2X280	398	111	BIE	08/24/92	BIE
34D	S 122 / 221	@ TOE ON S217/218	FS	08/24/92	C	2X50	145	42	BIE	08/24/92	BIE
34E	S 095 / 256	TO W. OF S091/258	FS	08/24/92	C	2X45	LEM	111	BIE	08/24/92	JAL
34F	S 259 / 34C	5' E. OF S259/260/34C	D	--	--	DAMAGED MATERIAL REMOVED				--	--
34G	S 256 / 34C	5' W. OF S255/256/34C	DSE-14	08/24/92	P	2X4	LEM	111	BIE	08/24/92	JAL
35A	S 190 / 192	9' N. OF S. EOS	D	08/16/92	P	1X1	145	42	SRS	08/19/92	SRS
35B	S 130 / 131	@ INTERSECTION WITH S186	T	08/16/92	P	2X3	398	111	SRS	08/19/92	SRS
35C	S 130 / 132	@ INTERSECTION WITH S187	VL	08/20/92	GW	6"	145	82	BIE	08/20/92	CAW
35D	S 128 / 132	@ INTERSECTION WITH S188	VL	08/20/92	GW	6"	145	82	BIE	08/20/92	CAW
35E	S 201 / 209	AT ANCHOR TRENCH	D	08/19/92	P	4X4	145	109	SRS	08/19/92	SRS
35F	S 001 / 262	28' N. OF S. EOS	DS-85P2	08/20/92	C	2X25	145	82	CAW	08/22/92	BIE
35G	S 194 / 195	@ INTERSECTION WITH S239	VL	08/21/92	RS	1'	145	82	SRS	08/21/92	SRS
35H	S 198 / 200	@ INTERSECTION WITH S242	VL	08/21/92	RS	1'	145	82	SRS	08/21/92	SRS
35I	S 261 / 262	FROM DEFECT 32K TO SEOS	FTS	08/21/92	C	2X36	398	111	SRS	08/22/92	SRS
35J	S 261 / 262	38' N. OF S. EOS	DS-83	--	--	CAPPED BY 32K		--	--	--	--
35K	S 261 / 262	FROM DEFECT 32K TO DS-83N1	FTS	08/21/92	C	2X50	398	111	SRS	08/22/92	BIE
35M	S 261 / 262	17' N. OF S. EOS	FTS	--	--	CAPPED BY 35I		--	--	--	--
35N	S 227 / 263	4' N. OF S. EOS	FTS	--	--	CAPPED BY 37B		--	--	--	--
36A	S 260 / 33B	10' S. OF N. EOS	DSE-10	08/19/92	P	2X4	398	111	CAW	08/20/92	SRS
36B	S 090 / 260	50' S. OF N. EOS	DS-86N1	08/19/92	P	2X8	398	111	CAW	08/20/92	SRS
36C	S 090 / 260	50' S. OF N. EOS	FS	08/19/92	C	2X170	398	111	CAW	08/20/92	SRS
36D	S 034 / 263	5' N. OF S. EOS	FTS	08/20/92	P	1X1	145	82	CAW	08/20/92	BIE
36E	S 039 / 263	4' N. OF S. EOS	DS-86P1	08/19/92	P	2X4	398	111	CAW	08/20/92	SRS
36F	S 001 / 262	N. EOS TO 50' S.	FS	08/20/92	C	2X45	145	82	CAW	08/20/92	BIE
36G	S 001 / 262	45' N. OF S. EOS	DS-85P1	08/19/92	P	2X4	145	109	CAW	08/19/92	CAW
36H	S 001 / 262	50' N. OF S. EOS	FS	08/20/92	C	2X75	145	82	CAW	08/20/92	CAW
36I	S 223 / 224	37' N. OF S. EOS	DS-73N1	08/19/92	P	2X4	145	109	CAW	08/19/92	CAW
36J	S 223 / 224	12' N. OF S. EOS	DS-73P1	08/19/92	P	2X13	145	109	CAW	08/19/92	BIE
36K	S 223 / 224	12-25' N. OF S. EOS	FS	08/19/92	P	2X13	145	109	CAW	08/22/92	SRS

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SECONDARY GEOMEMBRANE REPAIR SUMMARY
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

DEFECT CODE	SEAM, PANEL OR DEFECT NUMBER	APPROXIMATE LOCATION	DEFECT TYPE	REPAIR DATE	REPAIR TYPE	APPROX. SIZE	WELDER ID		QA MON.	TEST DATE	TEST MON.
							OPER.	MACH.			
36M	S 223 / 224	28-38' N. OF S. EOS	FS	08/19/92	RS	10'	145	109	CAW	08/19/92	CAW
36N	S 211 / 212	@ INTERSECTION WITH S222	VL	08/19/92	RS	1'	145	109	CAW	08/19/92	CAW
36p	S 263 / 36C	44' S. OF N. EOS	DSE-11	08/19/92	P	2X4	398	111	CAW	08/20/92	SRS
37A	S 226 / 234	FROM TI TO S262/263	FS	08/22/92	C	2X70	145	82	CAW	08/22/92	SRS
37B	S 277 / 263	FROM TI TO S228/263	FS	08/22/92	C	2X30	145	82	CAW	08/22/92	SRS
37C	S 105 / 242	3' N. OF S105/242/243	DS-84P1	08/21/92	P	3X6	145	82	SRS	08/21/92	SRS
37D	S 106 / 241	FROM TI TO S109/195/239	FS	08/21/92	C	2X28	145	82	SRS	08/21/92	SRS
37E	S 228 / 263	4' S. OF S228/229/263	DS-84N1	--	--	CAPPED BY 37B		--	--	--	--
37F	S 257 / 258	5' S. OF N. EOS	DS-83P1	08/22/92	P	2.5X4	LEM	111	SRS	08/22/92	SRS
37G	S 226 / 37A	3' S. OF N. EOS	DSE-12	08/21/92	P	2X4	145	82	CAW	08/21/92	CAW
37H	S 261 / 35K	58' N OF S. EOS	DSE-13	08/21/92	P	2.5X4	398	111	SRS	08/22/92	SRS

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APPENDIX Q

Q.1

MOISTURE/DENSITY TEST RESULTS

RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-1	08/04/92	3600	6860	1	125.1	11.0	13	132.1	9.1	94.7	-	PASS
P-2	08/04/92	3590	6820	2	129.0	10.7	13	132.1	9.1	97.7	2240	PASS
P-2D	08/04/92	3590	6820	2	127.2	10.9	13	132.1	9.1	96.3	-	PASS
P-3	08/05/92	3660	6830	1	128.1	10.5	13	132.1	9.1	96.9	-	PASS
P-4	08/05/92	3790	6830	1	126.3	10.7	13	132.1	9.1	95.6	-	PASS
P-5	08/05/92	3605	6890	1	126.7	11.3	13	132.1	9.1	95.9	-	PASS
P-6	08/05/92	3740	6880	1	125.3	11.1	13	132.1	9.1	94.8	-	PASS
P-7	08/05/92	3805	6825	2	128.7	10.1	13	132.1	9.1	97.5	-	PASS
P-8	08/05/92	3785	6910	2	128.3	10.0	13	132.1	9.1	97.1	-	PASS
P-9	08/05/92	3660	6840	2	127.7	10.1	13	132.1	9.1	96.7	-	PASS
P-10	08/05/92	3680	6910	2	127.9	10.4	13	132.1	9.1	96.8	-	PASS
P-11	08/07/92	3600	6900	2	128.4	11.0	13	132.1	9.1	97.2	-	PASS
P-12	08/07/92	3567	6857	2	127.5	9.9	13	132.1	9.1	96.5	-	PASS
P-13	08/07/92	3681	6908	2	124.6	11.3	13	132.1	9.1	94.3	-	PASS
P-14	08/07/92	3676	6857	2	125.9	11.4	13	132.1	9.1	95.3	-	PASS
P-15	08/07/92	3752	6851	2	124.7	10.4	13	132.1	9.1	94.4	-	PASS
P-16	08/07/92	3752	6908	2	124.1	11.1	13	132.1	9.1	93.9	-	PASS
P-17	08/07/92	3550	6740	2	125.8	11.5	13	132.1	9.1	95.2	-	PASS
P-18	08/07/92	3700	6753	2	127.3	11.0	13	132.1	9.1	96.4	-	PASS
P-19	08/07/92	3860	6770	2	119.8	12.4	13	132.1	9.1	90.7	2240	PASS
P-20	08/10/92	3900	6735	2	125.7	11.1	13	132.1	9.1	95.2	-	PASS
P-21	08/10/92	3781	6750	2	126.2	11.4	13	132.1	9.1	95.6	-	PASS
P-22	08/10/92	3577	6740	2	127.4	11.2	13	132.1	9.1	96.5	-	PASS
P-23	08/10/92	3800	6850	4	124.8	10.9	13	132.1	9.1	94.6	-	PASS
P-24	08/10/92	3800	6860	4	125.3	11.2	13	132.1	9.1	94.8	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

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RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-25	08/10/92	3700	6858	4	123.2	11.6	13	132.1	9.1	93.3	-	PASS
P-26	08/10/92	3590	6860	4	124.3	11.2	13	132.1	9.1	94.1	-	PASS
P-27	08/10/92	3780	6818	1	125.1	9.8	13	132.1	9.1	94.7	-	PASS
P-28	08/10/92	3785	6817	3	129.0	10.4	13	132.1	9.1	97.6	-	PASS
P-29	08/10/92	3781	6815	5	127.3	10.6	13	132.1	9.1	96.4	-	PASS
P-30	08/10/92	3500	6769	3	127.6	11.2	13	132.1	9.1	96.6	2240	PASS
P-31	08/10/92	3660	6765	3	126.4	11.1	13	132.1	9.1	95.7	-	PASS
P-32	08/10/92	3812	6742	3	126.7	10.8	13	132.1	9.1	95.9	-	PASS
P-32D	08/10/92	3812	6742	3	130.0	11.3	13	132.1	9.1	98.4	-	PASS
P-33	08/11/92	3885	6847	1	123.7	12.0	13	132.1	9.1	93.6	-	PASS
P-34	08/11/92	3880	6950	1	123.8	11.8	13	132.1	9.1	93.7	-	PASS
P-35	08/11/92	3935	7087	1	124.5	11.0	13	132.1	9.1	94.3	-	PASS
P-36	08/11/92	3925	7140	1	121.7	11.1	13	132.1	9.1	92.1	-	PASS
P-37	08/11/92	3544	6705	2	122.5	12.0	13	132.1	9.1	92.8	-	PASS
P-38	08/11/92	3844	6710	2	125.6	11.5	13	132.1	9.1	95.1	-	PASS
P-39	08/11/92	3571	6775	3	128.5	10.3	13	132.1	9.1	97.3	-	PASS
P-40	08/11/92	3696	6785	3	125.5	10.3	13	132.1	9.1	95.0	-	PASS
P-41	08/11/92	3855	6817	2	123.2	11.7	13	132.1	9.1	93.3	2240	PASS
P-42	08/11/92	3928	6917	2	126.4	11.3	13	132.1	9.1	95.7	-	PASS
P-43	08/11/92	3920	7097	2	125.4	11.2	13	132.1	9.1	95.0	-	PASS
P-44	08/11/92	3950	7144	2	126.0	10.6	13	132.1	9.1	95.4	-	PASS
P-45	08/11/92	3546	6770	4	129.5	9.9	13	132.1	9.1	98.1	-	PASS
P-46	08/11/92	3717	6729	4	128.1	10.3	13	132.1	9.1	97.0	-	PASS
P-47	08/11/92	3842	6770	4	125.5	11.2	13	132.1	9.1	95.0	-	PASS
P-48	08/11/92	3900	6850	3	126.7	11.1	13	132.1	9.1	95.9	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

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RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-49	08/11/92	3890	6915	3	125.7	11.3	16	132.5	8.5	94.9	-	PASS
P-49D	08/11/92	3890	6915	3	124.0	12.9	16	132.5	8.5	93.6	-	PASS
P-50	08/11/92	3937	7107	3	123.3	11.5	16	132.5	8.5	93.1	-	PASS
P-51	08/11/92	3920	7148	3	125.5	11.0	16	132.5	8.5	94.7	-	PASS
P-52	08/11/92	3546	6712	5	128.3	9.2	16	132.5	8.5	96.8	-	PASS
P-53	08/11/92	3650	6778	5	126.1	11.1	16	132.5	8.5	95.2	-	PASS
P-54	08/11/92	3872	6730	5	121.6	11.9	16	132.5	8.5	91.7	-	PASS
P-55	08/11/92	3888	6838	4	125.0	11.3	16	132.5	8.5	94.3	-	PASS
P-56	08/11/92	3890	6913	4	124.5	11.2	16	132.5	8.5	94.0	-	PASS
P-57	08/11/92	3935	7085	4	124.1	10.7	16	132.5	8.5	93.7	-	PASS
P-58	08/11/92	3940	7140	4	125.5	10.8	16	132.5	8.5	94.7	2240	PASS
P-59	08/11/92	3583	6720	6	126.8	10.6	16	132.5	8.5	95.7	-	PASS
P-60	08/11/92	3720	6750	6	128.6	10.7	16	132.5	8.5	97.1	-	PASS
P-61	08/11/92	3910	6720	6	126.2	11.2	16	132.5	8.5	95.2	-	PASS
P-62	08/11/92	3900	6825	5	126.0	11.0	16	132.5	8.5	95.1	-	PASS
P-63	08/11/92	3900	6960	5	128.7	10.0	16	132.5	8.5	97.1	-	PASS
P-64	08/12/92	3905	7010	5	127.6	10.9	16	132.5	8.5	96.3	-	PASS
P-65	08/12/92	3939	7100	5	127.0	10.3	16	132.5	8.5	95.8	-	PASS
P-66	08/12/92	3580	6758	7	131.1	10.3	16	132.5	8.5	98.9	-	PASS
P-67	08/12/92	3710	6775	7	127.7	11.2	16	132.5	8.5	96.4	-	PASS
P-68	08/12/92	3855	6725	7	127.5	11.8	16	132.5	8.5	96.2	-	PASS
P-69	08/12/92	3890	6815	6	125.7	11.0	16	132.5	8.5	94.8	-	PASS
P-70	08/12/92	3905	6910	6	125.2	10.3	16	132.5	8.5	94.5	2240	PASS
P-71	08/12/92	3897	6995	6	126.3	12.0	16	132.5	8.5	95.3	-	PASS
P-72	08/12/92	3943	7130	6	127.9	11.0	16	132.5	8.5	96.5	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

FILE:\FORD\SOIL\QUTRO\PIMSOIL\PRIMARY.WK1, disk 5

RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION		LIFT No.	IN-SITU VALUES		CURVE NUMBER	REF VALUES		PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
		NORTH	EAST		DRY DENSITY (pcf)	MOISTURE CONTENT (%)		MAX. DRY DENSITY	OPTIMUM MOISTURE			
P-72D	08/12/92	3943	7130	6	124.9	9.5	16	132.5	8.5	94.3	-	PASS
P-73	08/12/92	3895	6808	7	125.6	11.1	16	132.5	8.5	94.8	-	PASS
P-74	08/12/92	3930	6915	7	127.0	10.9	16	132.5	8.5	95.9	-	PASS
P-75	08/12/92	3940	7080	7	123.5	10.6	16	132.5	8.5	93.2	-	PASS
P-76	08/12/92	3900	7145	7	128.1	10.9	16	132.5	8.5	96.7	-	PASS
P-77	08/14/92	3500	6835	1	126.5	11.1	17	132.5	9.0	95.4	-	PASS
P-78	08/14/92	3485	6888	1	123.4	10.3	17	132.5	9.0	93.1	-	PASS
P-79	08/14/92	3480	6950	2	127.0	11.4	17	132.5	9.0	95.9	-	PASS
P-80	08/14/92	3538	6825	2	125.9	10.7	17	132.5	9.0	95.0	-	PASS
P-81	08/14/92	3570	6845	4	130.9	9.1	17	132.5	9.0	98.8	-	PASS
P-82	08/14/92	3720	6820	4	127.8	10.1	17	132.5	9.0	96.4	-	PASS
P-83	08/14/92	3883	6910	4	121.6	9.6	17	132.5	9.0	91.7	-	PASS
P-84	08/14/92	3480	6915	3	122.1	11.4	17	132.5	9.0	92.2	-	PASS
P-85	08/14/92	3535	6850	3	124.8	11.5	17	132.5	9.0	94.2	-	PASS
P-86	08/14/92	3535	6880	4	125.0	11.9	17	132.5	9.0	94.4	-	PASS
P-87	08/14/92	3500	6815	4	123.5	11.8	17	132.5	9.0	93.2	2240	PASS
P-88	08/14/92	3565	6890	5	124.3	11.2	17	132.5	9.0	93.8	-	PASS
P-89	08/14/92	3700	6820	5	121.6	9.8	17	132.5	9.0	91.7	-	PASS
P-90	08/14/92	3820	6900	5	128.0	9.1	17	132.5	9.0	96.6	-	PASS
P-91	08/14/92	3480	6930	5	123.5	11.8	17	132.5	9.0	93.2	-	PASS
P-91D	08/14/92	3480	6930	5	120.3	12.5	17	132.5	9.0	90.8	-	PASS
P-92	08/14/92	3530	6820	5	125.0	11.6	17	132.5	9.0	94.4	-	PASS
P-93	08/14/92	3825	6815	6	125.1	10.2	17	132.5	9.0	94.4	-	PASS
P-94	08/14/92	3690	6840	6	128.2	10.1	17	132.5	9.0	96.7	-	PASS
P-95	08/14/92	3570	6820	6	128.7	10.0	17	132.5	9.0	97.1	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

FILE:\FORD\SOIL\QUTRO\PIMSOIL\PRIMARY.WK1, disk 5

RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-96	08/17/92	3600	6875	4	129.6	9.7	17	132.5	9.0	97.8	-	PASS
P-97	08/17/92	3785	6880	4	127.4	10.5	17	132.5	9.0	96.2	-	PASS
P-98	08/17/92	3715	6715	4	128.2	9.8	17	132.5	9.0	96.8	-	PASS
P-99	08/17/92	3570	6570	5	125.9	9.7	17	132.5	9.0	95.0	-	PASS
P-100	08/17/92	3690	6890	5	131.8	9.6	17	132.5	9.0	99.5	-	PASS
P-101	08/17/92	3795	6900	5	125.1	9.4	17	132.5	9.0	94.4	-	PASS
P-102	08/17/92	3570	6895	6	126.6	9.6	17	132.5	9.0	95.5	-	PASS
P-103	08/17/92	3810	6875	6	124.5	9.2	17	132.5	9.0	93.9	-	PASS
P-104	08/17/92	3680	6883	6	127.5	10.2	17	132.5	9.0	96.2	-	PASS
P-105	08/17/92	3590	6895	7	127.2	10.2	17	132.5	9.0	96.0	-	PASS
P-106	08/17/92	3700	6870	7	128.1	9.8	17	132.5	9.0	96.7	-	PASS
P-107	08/17/92	3820	6910	7	128.0	10.3	17	132.5	9.0	96.6	-	PASS
P-108	08/17/92	3780	6820	7	126.8	10.1	17	132.5	9.0	95.7	-	PASS
P-109	08/17/92	3640	6815	7	127.5	9.5	17	132.5	9.0	96.2	-	PASS
P-110	08/17/92	3585	6850	4	130.0	9.4	17	132.5	9.0	98.1	-	PASS
P-111	08/17/92	3740	6840	4	126.2	10.0	17	132.5	9.0	95.2	-	PASS
P-112	08/17/92	3565	6829	5	127.3	10.0	17	132.5	9.0	96.1	-	PASS
P-113	08/17/92	3760	6837	5	124.3	10.1	17	132.5	9.0	93.8	2240	PASS
P-114	08/17/92	3610	6850	6	131.3	9.9	17	132.5	9.0	98.9	-	PASS
P-115	08/17/92	3785	6840	6	127.8	10.2	17	132.5	9.0	96.5	-	PASS
P-116	08/17/92	3600	6835	7	127.0	10.1	17	132.5	9.0	95.9	-	PASS
P-117	08/17/92	3785	6870	7	124.6	10.3	17	132.5	9.0	94.1	-	PASS
P-117D	08/17/92	3785	6870	7	125.1	10.3	17	132.5	9.0	94.3	-	PASS
P-118	08/18/92	3793	6804	1	125.1	10.9	18	134.0	8.5	93.4	2240	PASS
P-119	08/18/92	3723	6808	1	117.0	11.3	18	134.0	8.5	87.3		FAIL SEE P-119R1

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

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RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-119R1	08/18/92	3723	6808	1	125.1	11.5	18	134.0	8.5	93.4	-	PASS
P-120	08/18/92	3638	6804	1	127.0	11.1	18	134.0	8.5	94.8	-	PASS
P-121	08/18/92	3800	6802	2	122.5	12.0	18	134.0	8.5	91.4	-	PASS
P-122	08/18/92	3640	6804	2	124.6	12.4	18	134.0	8.5	93.0	-	PASS
P-123	08/18/92	3570	6802	2	122.7	11.3	18	134.0	8.5	91.6	-	PASS
P-124	08/18/92	3815	6803	3	123.5	11.4	18	134.0	8.5	92.2	-	PASS
P-125	08/18/92	3700	6801	3	127.3	10.7	18	134.0	8.5	95.0	-	PASS
P-126	08/18/92	3580	6804	3	123.8	10.6	18	134.0	8.5	92.4	-	PASS
P-127	08/18/92	3825	6801	4	121.9	11.6	18	134.0	8.5	91.0	-	PASS
P-128	08/18/92	3690	6800	4	124.0	10.7	18	134.0	8.5	93.1	-	PASS
P-129	08/18/92	3595	6807	4	125.5	11.2	18	134.0	8.5	93.7	-	PASS
P-130	08/18/92	3795	6799	5	125.1	10.1	18	134.0	8.5	93.4	-	PASS
P-131	08/18/92	3680	6800	5	126.9	11.2	18	134.0	8.5	94.7	-	PASS
P-132	08/18/92	3600	6804	5	121.4	10.8	18	134.0	8.5	90.6	-	PASS
P-133	08/18/92	3830	6795	6	126.0	11.0	18	134.0	8.5	94.1	-	PASS
P-134	08/18/92	3700	6800	6	126.6	11.3	18	134.0	8.5	94.5	-	PASS
P-135	08/18/92	3566	6790	6	126.4	11.1	18	134.0	8.5	94.3	-	PASS
P-136	08/18/92	3820	6798	7	120.4	10.2	18	134.0	8.5	89.8		FAIL SEE P-136R1
P-136R1	08/18/92	3820	6798	7	126.3	11.4	18	134.0	8.5	94.2	-	PASS
P-137	08/18/92	3683	6799	7	124.1	11.5	18	134.0	8.5	92.6	-	PASS
P-138	08/18/92	3555	6788	7	126.0	10.8	18	134.0	8.5	94.0	-	PASS
P-139	08/18/92	3800	6790	8	125.2	10.9	18	134.0	8.5	93.4	-	PASS
P-140	08/18/92	3718	6790	8	115.9	9.9	18	134.0	8.5	86.5		FAIL SEE P-140R1
P-140R1	08/18/92	3718	6790	8	126.2	11.3	18	134.0	8.5	94.2	-	PASS
P-141	08/18/92	3561	6789	8	123.5	10.9	18	134.0	8.5	92.2	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

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RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-142	08/18/92	3817	6790	9	126.7	10.8	18	134.0	8.5	94.5	-	PASS
P-143	08/18/92	3710	6793	9	127.4	10.9	18	134.0	8.5	95.1	2240	PASS
P-143D	08/18/92	3710	6793	9	124.1	11.1	18	134.0	8.5	92.6	-	PASS
P-144	08/19/92	3800	6791	10	126.9	10.8	18	134.0	8.5	94.7	-	PASS
P-145	08/19/92	3720	6790	10	126.2	9.8	18	134.0	8.5	94.1	-	PASS
P-146	08/19/92	3600	6787	10	128.5	10.8	18	134.0	8.5	95.9	-	PASS
P-147	08/19/92	3831	6900	1	118.8	12.0	18	134.0	8.5	88.7		FAIL SEE P-147R1
P-147R1	08/19/92	3831	6900	1	128.6	10.7	18	134.0	8.5	96.0	-	PASS
P-148	08/19/92	3835	6784	11	126.7	10.8	18	134.0	8.5	94.5	-	PASS
P-149	08/19/92	3598	6784	11	127.6	9.9	18	134.0	8.5	95.2	-	PASS
P-150	08/19/92	3830	6908	2	126.2	10.4	18	134.0	8.5	94.2	-	PASS
P-151	08/19/92	3785	6781	12	126.4	10.6	18	134.0	8.5	94.3	-	PASS
P-152	08/19/92	3600	6779	12	124.0	12.1	18	134.0	8.5	92.5	-	PASS
P-153	08/19/92	3828	6825	3	126.1	11.4	18	134.0	8.5	94.1	-	PASS
P-154	08/19/92	3815	6778	13	120.0	10.9	18	134.0	8.5	89.6		FAIL SEE P-154R1
P-154R1	08/19/92	3815	6778	13	125.1	10.9	18	134.0	8.5	93.4	-	PASS
P-155	08/19/92	3622	6780	13	126.6	11.7	18	134.0	8.5	94.5	-	PASS
P-156	08/19/92	3826	6883	4	128.5	10.3	18	134.0	8.5	95.9	-	PASS
P-157	08/19/92	3605	6781	14	124.3	10.4	18	134.0	8.5	92.8	-	PASS
P-158	08/19/92	3826	6840	5	125.8	10.2	18	134.0	8.5	93.9	-	PASS
P-159	08/19/92	3820	6785	14	125.6	11.0	18	134.0	8.5	93.7	-	PASS
P-160	08/19/92	3603	6880	15	126.4	11.0	18	134.0	8.5	94.3	-	PASS
P-161	08/19/92	3833	6900	6	124.0	11.5	18	134.0	8.5	92.6	-	PASS
P-162	08/19/92	3802	6781	15	127.0	11.0	18	134.0	8.5	94.8	-	PASS
P-163	08/19/92	3610	6770	16	125.9	10.5	18	134.0	8.5	93.8	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

FILE:\FORD\SOIL\QUTRO\PIMSOIL\PRIMARY.WK1, disk 5

RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-164	08/19/92	3826	6890	7	122.1	10.2	18	134.0	8.5	91.1	-	PASS
P-165	08/19/92	3830	6825	8	126.8	10.7	18	134.0	8.5	94.6	2240	PASS
P-166	08/19/92	3831	6771	16	126.0	10.8	18	134.0	8.5	94.0	-	PASS
P-167	08/19/92	3792	6785	16	126.6	10.1	18	134.0	8.5	94.5	-	PASS
P-168	08/19/92	3503	6879	6	122.0	11.9	18	134.0	8.5	91.1	-	PASS
P-169	08/19/92	3490	6901	6	128.1	9.9	18	134.0	8.5	95.6	-	PASS
P-170	08/19/92	3833	6809	9	127.0	10.6	18	134.0	8.5	94.8	-	PASS
P-171	08/19/92	3825	6875	10	127.4	10.5	18	134.0	8.5	95.1	-	PASS
P-172	08/19/92	3837	6915	11	125.1	11.1	18	134.0	8.5	93.3	-	PASS
P-173	08/19/92	3832	6835	12	126.1	10.8	18	134.0	8.5	94.1	-	PASS
P-174	08/19/92	3550	6850	1	129.9	9.6	18	134.0	8.5	97.0	-	PASS
P-175	08/19/92	3839	6903	13	124.0	10.2	18	134.0	8.5	92.6	-	PASS
P-176	08/19/92	3545	6832	2	126.2	10.8	18	134.0	8.5	94.2	-	PASS
P-177	08/19/92	3549	6890	3	127.0	10.7	18	134.0	8.5	94.7	-	PASS
P-178	08/19/92	3550	6870	4	126.4	11.0	18	134.0	8.5	94.4	-	PASS
P-179	08/19/92	3546	6860	5	122.9	10.7	18	134.0	8.5	91.7	-	PASS
P-180	08/19/92	3549	6843	6	127.7	10.9	18	134.0	8.5	95.3	-	PASS
P-181	08/19/92	3550	6800	7	126.3	10.7	18	134.0	8.5	94.3	2240	PASS
P-181D	08/19/92	3550	6800	7	123.8	11.0	18	134.0	8.5	92.4	-	PASS
P-182	08/20/92	3549	6827	8	128.3	10.2	19	133.5	9.0	96.1	-	PASS
P-183	08/20/92	3612	6714	1	123.8	10.8	19	133.5	9.0	92.7	-	PASS
P-184	08/20/92	3553	6839	9	125.8	10.5	19	133.5	9.0	94.2	-	PASS
P-185	08/20/92	3825	6713	1	125.4	11.0	19	133.5	9.0	93.9	-	PASS
P-186	08/20/92	3557	6860	10	122.8	10.5	19	133.5	9.0	92.0	-	PASS
P-187	08/20/92	3579	6709	2	126.9	11.4	19	133.5	9.0	95.1	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

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RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION		LIFT No.	IN-SITU VALUES		CURVE NUMBER	REF VALUES		PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
		NORTH	EAST		DRY DENSITY (pcf)	MOISTURE CONTENT (%)		MAX. DRY DENSITY	OPTIMUM MOISTURE			
P-188	08/20/92	3887	6710	2	124.2	11.3	19	133.5	9.0	93.0	-	PASS
P-189	08/20/92	3540	6902	11	127.3	11.2	19	133.5	9.0	95.4	-	PASS
P-190	08/20/92	3535	6710	3	122.8	11.3	19	133.5	9.0	92.0	-	PASS
P-190D	08/20/92	3535	6710	3	122.8	11.4	19	133.5	9.0	92.0	-	PASS
P-191	08/20/92	3556	6905	12	125.9	9.9	19	133.5	9.0	94.3	-	PASS
P-192	08/20/92	3800	6771	3	123.9	11.9	19	133.5	9.0	92.8	-	PASS
P-193	08/20/92	3544	6890	13	127.9	10.2	19	133.5	9.0	95.8	-	PASS
P-194	08/20/92	3546	6708	4	126.0	10.8	19	133.5	9.0	94.4	-	PASS
P-195	08/20/92	3900	6708	4	124.5	11.3	19	133.5	9.0	93.3	-	PASS
P-196	08/20/92	3607	6704	5	124.4	10.3	19	133.5	9.0	93.2	-	PASS
P-197	08/20/92	3540	6829	14	127.1	9.7	19	133.5	9.0	95.2	-	PASS
P-198	08/20/92	3885	6706	5	128.4	10.4	19	133.5	9.0	96.1	-	PASS
P-199	08/20/92	3583	6711	6	125.9	10.2	19	133.5	9.0	94.3	-	PASS
P-200	08/20/92	3751	6709	6	125.3	10.9	19	133.5	9.0	93.9	-	PASS
P-201	08/20/92	3441	6680	7	126.1	11.4	19	133.5	9.0	94.4	-	PASS
P-202	08/20/92	3800	6705	7	126.8	11.0	19	133.5	9.0	95.0	2240	PASS
P-203	08/20/92	3473	6803	1	120.7	12.3	19	133.5	9.0	90.4	-	PASS
P-204	08/20/92	3720	6716	8	124.4	11.1	19	133.5	9.0	93.2	-	PASS
P-205	08/20/92	3460	6875	2	123.0	12.5	19	133.5	9.0	92.1	-	PASS
P-206	08/20/92	3539	6687	9	125.0	11.8	19	133.5	9.0	93.6	-	PASS
P-207	08/20/92	3443	6908	7	127.9	10.7	19	133.5	9.0	95.8	-	PASS
P-208	08/20/92	3490	6733	3	124.6	10.6	19	133.5	9.0	93.3	-	PASS
P-209	08/21/92	3517	6671	10	123.5	11.3	19	133.5	9.0	92.5	-	PASS
P-210	08/21/92	3450	6687	4	124.7	11.1	19	133.5	9.0	93.4	-	PASS
P-211	08/21/92	3871	6679	10	124.4	11.5	19	133.5	9.0	93.2	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

FILE:\FORD\SOIL\QUTRO\PIMSOIL\PRIMARY.WK1, disk 5

RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-212	08/21/92	3448	6867	5	126.2	10.7	19	133.5	9.0	94.6	-	PASS
P-213	08/21/92	3460	6910	6	123.3	9.8	19	133.5	9.0	92.4	-	PASS
P-214	08/21/92	3435	6665	11	129.7	10.1	19	133.5	9.0	97.2	-	PASS
P-215	08/21/92	3471	6707	7	124.3	10.8	19	133.5	9.0	93.1	-	PASS
P-216	08/21/92	3726	6742	11	125.7	11.4	19	133.5	9.0	94.1	-	PASS
P-217	08/21/92	3520	6672	12	126.2	10.9	19	133.5	9.0	94.5	-	PASS
P-218	08/21/92	3465	6803	8	122.3	10.7	19	133.5	9.0	91.6	-	PASS
P-219	08/21/92	3900	6680	12	125.3	10.3	19	133.5	9.0	93.6	-	PASS
P-220	08/21/92	3459	6883	9	126.9	10.7	19	133.5	9.0	95.0	-	PASS
P-221	08/21/92	3537	6684	13	126.9	10.5	19	133.5	9.0	95.0	-	PASS
P-222	08/21/92	3829	6679	13	124.5	10.8	19	133.5	9.0	93.3	-	PASS
P-223	08/21/92	3469	6911	10	126.8	10.2	19	133.5	9.0	95.0	-	PASS
P-224	08/21/92	3554	6673	14	127.4	10.9	19	133.5	9.0	95.4	-	PASS
P-225	08/21/92	3431	6821	11	124.2	11.5	19	133.5	9.0	93.0	-	PASS
P-226	08/21/92	3953	6693	14	127.9	9.9	19	133.5	9.0	95.8	-	PASS
P-227	08/21/92	3600	6693	15	127.7	10.4	19	133.5	9.0	95.6	-	PASS
P-228	08/21/92	3783	6689	15	126.7	10.2	19	133.5	9.0	94.9	-	PASS
P-229	08/21/92	3450	6900	12	127.1	10.3	19	133.5	9.0	95.2	-	PASS
P-230	08/21/92	3510	6670	16	126.3	10.6	19	133.5	9.0	94.6	2240	PASS
P-231	08/21/92	3858	6690	16	123.5	10.5	19	133.5	9.0	92.5	-	PASS
P-232	08/21/92	3439	6837	13	125.7	10.3	19	133.5	9.0	94.2	-	PASS
P-233	08/21/92	3600	6673	17	130.6	10.4	19	133.5	9.0	97.8	-	PASS
P-234	08/21/92	3837	6669	17	124.1	10.4	19	133.5	9.0	93.0	-	PASS
P-235	08/21/92	3452	6817	14	126.7	10.2	19	133.5	9.0	94.9	-	PASS
P-236	08/21/92	3501	6671	18	128.1	10.1	19	133.5	9.0	96.0	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

FILE:\FORD\SOIL\QUTRO\PIMSOIL\PRIMARY.WK1, disk 5

RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-237	08/21/92	3793	6659	18	125.6	10.3	19	133.5	9.0	94.1	-	PASS
P-238	08/21/92	3638	6680	19	123.1	10.6	19	133.5	9.0	92.2	-	PASS
P-239	08/21/92	3900	6669	19	123.1	11.4	19	133.5	9.0	92.2	-	PASS
P-240	08/21/92	3440	6868	15	125.2	11.6	19	133.5	9.0	93.8	-	PASS
P-241	08/21/92	3483	6666	20	125.7	11.3	19	133.5	9.0	94.2	-	PASS
P-242	08/21/92	3873	6673	20	128.1	10.7	19	133.5	9.0	95.9	-	PASS
P-243	08/21/92	3424	6000	16	123.2	11.1	19	133.5	9.0	92.3	-	PASS
P-244	08/21/92	3497	6663	21	117.8	11.7	19	133.5	9.0	88.2		FAIL; SEE P-244R1
P-244R1	08/22/92	3497	6663	21	127.9	10.2	19	133.5	9.0	95.8	-	PASS
P-244D	08/22/92	3497	6663	21	116.3	10.6	19	133.5	9.0	87.1	-	FAIL; SEE P-244R1
P-245	08/22/92	3430	6897	17	128.2	11.1	19	133.5	9.0	96.1	2240	PASS
P-246	08/22/92	3429	6860	17	127.9	10.7	19	133.5	9.0	95.8	-	PASS
P-247	08/22/92	3857	6655	21	126.8	10.5	19	133.5	9.0	95.0	-	PASS
P-248	08/22/92	3940	6844	1	125.9	11.7	19	133.5	9.0	94.3	-	PASS
P-249	08/22/92	3490	6648	22	126.9	10.1	19	133.5	9.0	95.1	-	PASS
P-250	08/22/92	3741	6660	22	127.2	10.0	19	133.5	9.0	95.3	-	PASS
P-251	08/22/92	3878	6650	22	128.4	10.1	19	133.5	9.0	96.2	-	PASS
P-252	08/22/92	3938	6923	2	126.3	10.9	19	133.5	9.0	94.6	-	PASS
P-253	08/22/92	3520	6653	23	126.5	10.3	19	133.5	9.0	94.8	-	PASS
P-254	08/22/92	3843	6659	23	128.8	9.6	19	133.5	9.0	96.5	-	PASS
P-255	08/22/92	3943	6925	3	128.6	10.5	19	133.5	9.0	96.3	-	PASS
P-256	08/22/92	3590	6649	24	127.6	10.7	19	133.5	9.0	95.6	-	PASS
P-257	08/22/92	3439	6875	4	129.1	10.5	19	133.5	9.0	96.7	-	PASS
P-258	08/22/92	3930	6810	5	124.3	10.9	19	133.5	9.0	93.1	-	PASS
P-259	08/22/92	3931	6840	6	126.6	11.3	19	133.5	9.0	94.8	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

FILE:\FORD\SOIL\QUTRO\PIMSOIL\PRIMARY.WK1, disk 5

RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-260	08/22/92	3937	6870	7	128.2	10.1	19	133.5	9.0	96.0	-	PASS
P-261	08/22/92	3928	6791	8	126.7	10.1	19	133.5	9.0	94.9	-	PASS
P-261D	08/22/92	3928	6791	8	124.8	9.8	19	133.5	9.0	93.5	-	PASS
P-262	08/24/92	3965	6866	9	122.8	9.8	19	133.5	9.0	91.9	-	PASS
P-263	08/24/92	3969	6903	10	128.1	10.3	19	133.5	9.0	96.0	-	PASS
P-264	08/24/92	3968	6835	11	126.2	11.5	19	133.5	9.0	94.6	-	PASS
P-265	08/24/92	3978	6780	12	123.7	11.0	19	133.5	9.0	92.6	2240	PASS
P-266	08/24/92	3973	6839	13	127.6	10.4	19	133.5	9.0	95.6	-	PASS
P-267	08/24/92	3981	6900	14	129.5	10.3	19	133.5	9.0	97.0	-	PASS
P-268	08/24/92	3980	6805	15	128.5	10.4	19	133.5	9.0	96.6	-	PASS
P-269	08/24/92	3985	6825	16	125.5	10.9	19	133.5	9.0	94.0	-	PASS
P-270	08/24/92	3993	6873	17	128.2	11.1	19	133.5	9.0	96.1	-	PASS
P-271	08/24/92	3700	7163	1	127.3	10.9	19	133.5	9.0	95.3	-	PASS
P-272	08/24/92	3690	7197	1	126.9	10.8	19	133.5	9.0	95.1	-	PASS
P-273	08/24/92	3715	7217	1	127.7	10.9	19	133.5	9.0	95.6	-	PASS
P-274	08/24/92	3987	6880	18	127.4	10.4	19	133.5	9.0	95.4	-	PASS
P-275	08/24/92	4000	6720	18	125.6	10.3	19	133.5	9.0	94.1	-	PASS
P-276	08/24/92	3992	6792	19	130.1	10.1	19	133.5	9.0	97.4	-	PASS
P-277	08/24/92	3994	6887	19	128.8	9.8	19	133.5	9.0	95.5	-	PASS
P-277D	08/24/92	3994	6887	19	128.1	10.0	19	133.5	9.0	96.0	-	PASS
P-278	08/25/92	3780	7157	2	126.7	10.8	20	130.5	9.5	97.1	-	PASS
P-279	08/25/92	3688	7293	2	128.0	11.2	20	130.5	9.5	98.1	2240	PASS
P-280	08/25/92	3998	6874	20	127.7	10.0	20	130.5	9.5	97.9	-	PASS
P-281	08/25/92	4000	6729	20	128.6	10.1	20	130.5	9.5	98.5	-	PASS
P-282	08/25/92	3805	7100	1	129.2	10.8	20	130.5	9.5	99.0	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

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RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-283	08/25/92	3690	7091	2	125.2	10.8	20	130.5	9.5	96.0	-	PASS
P-284	08/25/92	3793	7176	2	126.7	10.7	20	130.5	9.5	97.1	-	PASS
P-285	08/25/92	3815	7211	2	129.7	10.5	20	130.5	9.5	99.4	-	PASS
P-286	08/25/92	3991	6800	21	128.0	10.9	20	130.5	9.5	98.1	-	PASS
P-287	08/25/92	4006	6913	21	128.4	10.2	20	130.5	9.5	98.4	-	PASS
P-287D	08/25/92	4006	6913	21	124.9	11.6	20	130.5	9.5	93.4	-	PASS
P-288	08/25/92	3786	7100	3	126.0	11.0	20	130.5	9.5	96.6	-	PASS
P-289	08/25/92	3830	7240	3	125.2	10.8	20	130.5	9.5	96.0	-	PASS
P-290	08/26/92	3780	7078	1	126.9	10.6	20	130.5	9.5	97.2	-	PASS
P-291	08/26/92	3822	6815	1	125.3	10.2	20	130.5	9.5	96.0	-	PASS
P-292	08/26/92	3830	7045	1	126.2	10.6	20	130.5	9.5	96.7	-	PASS
P-293	08/26/92	3809	6818	1	128.5	10.1	20	130.5	9.5	98.5	-	PASS
P-294	08/26/92	3814	7030	1	127.6	10.8	20	130.5	9.5	97.8	-	PASS
P-295	08/26/92	3776	7073	2	126.6	10.3	20	130.5	9.5	97.0	-	PASS
P-296	08/26/92	3767	7063	1	128.4	10.4	20	130.5	9.5	98.4	-	PASS
P-297	08/26/92	3600	6890	1	129.3	9.5	20	130.5	9.5	99.1	-	PASS
P-298	08/26/92	3758	7028	1	127.7	10.6	20	130.5	9.5	97.9	-	PASS
P-299	08/26/92	3696	6975	1	123.3	10.3	20	130.5	9.5	94.5	-	PASS
P-300	08/26/92	3750	7063	1	120.5	11.4	20	130.5	9.5	92.3	-	PASS
P-301	08/26/92	3752	7058	2	124.5	10.6	20	130.5	9.5	95.4	-	PASS
P-302	08/26/92	3747	7067	3	124.6	10.4	20	130.5	9.5	95.5	-	PASS
P-303	08/26/92	3571	6958	2	122.4	10.7	20	130.5	9.5	93.8	-	PASS
P-304	08/26/92	3753	7059	4	124.0	11.1	20	130.5	9.5	95.0	-	PASS
P-305	08/26/92	3700	6972	2	125.3	11.9	20	130.5	9.5	96.0	-	PASS
P-306	08/26/92	3709	7071	2	128.4	10.5	20	130.5	9.5	98.4	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

FILE:\FORD\SOIL\QUTRO\PIMSOIL\PRIMARY.WK1, disk 5

RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-307	08/26/92	3750	7061	5	123.8	9.7	20	130.5	9.5	94.9	-	PASS
P-308	08/26/92	3753	7028	2	126.2	11.0	20	130.5	9.5	96.7	-	PASS
P-309	08/26/92	3735	6931	2	128.8	10.3	20	130.5	9.5	98.7	-	PASS
P-310	08/26/92	3580	6890	3	123.3	11.3	20	130.5	9.5	94.5	-	PASS
P-311	08/26/92	3756	7058	6	127.9	10.7	20	130.5	9.5	98.0	-	PASS
P-312	08/26/92	3690	6990	3	128.9	10.2	20	130.5	9.5	98.9	-	PASS
P-313	08/26/92	3680	7080	3	124.7	11.5	20	130.5	9.5	95.6	-	PASS
P-314	08/26/92	3790	6918	3	123.7	11.0	20	130.5	9.5	94.8	2240	PASS
P-315	08/26/92	3821	7019	3	124.8	11.3	20	130.5	9.5	95.6	-	PASS
P-315D	08/26/92	3821	7019	3	126.1	10.9	20	130.5	9.5	96.7	-	PASS
P-316	08/31/92	3667	7280	3	126.9	10.1	21	132.0	9.5	96.1	-	PASS
P-317	08/31/92	3691	7133	3	126.8	10.6	21	132.0	9.5	96.1	-	PASS
P-318	08/31/92	3800	6937	4	128.9	10.6	21	132.0	9.5	97.6	-	PASS
P-319	08/31/92	3821	7041	4	126.8	10.1	21	132.0	9.5	96.1	-	PASS
P-320	08/31/92	3583	6948	4	127.2	10.6	21	132.0	9.5	96.4	-	PASS
P-321	08/31/92	3723	6979	4	124.8	11.9	21	132.0	9.5	94.6	-	PASS
P-322	08/31/92	3700	7150	4	126.8	9.4	21	132.0	9.5	96.1		FAIL; SEE P-322R1
P-322R1	08/31/92	3700	7150	4	128.0	9.5	21	132.0	9.5	96.9	-	PASS
P-323	08/31/92	3723	7281	4	111.5	10.6	21	132.0	9.5	84.5		FAIL; SEE P-323R1
P-323R1	08/31/92	3723	7281	4	121.0	10.8	21	132.0	9.5	91.6	-	PASS
P-324	08/31/92	3741	7273	4	121.7	10.2	21	132.0	9.5	92.2	-	PASS
P-325	08/31/92	3750	7087	4	123.7	9.9	21	132.0	9.5	93.7	-	PASS
P-326	08/31/92	3680	7250	4	120.3	11.9	21	132.0	9.5	91.1	-	PASS
P-327	08/31/92	3789	6944	5	123.3	12.7	21	132.0	9.5	93.4	-	PASS
P-328	08/31/92	3815	7097	5	122.1	11.4	21	132.0	9.5	92.5	2240	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

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RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-329	08/31/92	3753	7060	7	120.8	10.9	21	132.0	9.5	91.5	-	PASS
P-330	08/31/92	3674	7300	5	126.7	10.5	21	132.0	9.5	96.0	-	PASS
P-331	08/31/92	3688	7190	5	125.9	10.5	21	132.0	9.5	95.4	-	PASS
P-332	08/31/92	3800	7250	5	127.9	9.9	21	132.0	9.5	96.9	-	PASS
P-333	08/31/92	3760	7183	5	125.5	9.5	21	132.0	9.5	95.1	-	PASS
P-334	08/31/92	3815	6939	5	124.2	10.9	21	132.0	9.5	94.1	-	PASS
P-335	08/31/92	3785	7005	5	124.5	11.7	21	132.0	9.5	94.3	-	PASS
P-336	08/31/92	3570	6940	5	125.3	10.5	21	132.0	9.5	94.9	-	PASS
P-336D	08/31/92	3570	6940	5	122.8	10.2	21	132.0	9.5	93.0	-	PASS
P-337	09/02/92	3580	6940	6	122.8	10.9	21	132.0	9.5	93.0	-	PASS
P-338	09/02/92	3750	6920	6	129.3	10.6	21	132.0	9.5	98.0	2240	PASS
P-339	09/02/92	3700	7035	6	124.3	9.8	21	132.0	9.5	94.2	-	PASS
P-340	09/02/92	3685	7175	6	127.6	11.0	21	132.0	9.5	96.6	-	PASS
P-341	09/02/92	3690	7255	6	123.8	11.9	21	132.0	9.5	93.8	-	PASS
P-342	09/02/92	3870	7212	1	124.7	11.8	21	132.0	9.5	94.5	-	PASS
P-343	09/02/92	3868	7210	2	124.5	11.7	21	132.0	9.5	94.3	-	PASS
P-344	09/02/92	3760	7050	6	123.8	12.2	21	132.0	9.5	93.8	-	PASS
P-345	09/02/92	3740	7180	6	122.1	12.0	21	132.0	9.5	92.5	-	PASS
P-346	09/02/92	3780	7255	6	123.1	11.3	21	132.0	9.5	93.2	-	PASS
P-347	09/02/92	3855	7165	6	120.8	10.1	21	132.0	9.5	91.5	-	PASS
P-347D	09/02/92	3855	7165	6	120.7	10.1	21	132.0	9.5	91.5	-	PASS
P-348	09/02/92	3840	7020	6	110.3	9.2	21	132.0	9.5	83.6		FAIL; SEE P-348R1
P-348R1	09/02/92	3840	7020	6	118.8	9.7	21	132.0	9.5	90.0	-	PASS
P-349	09/02/92	3840	7221	3	124.7	12.0	21	132.0	9.5	94.5	-	PASS
P-350	09/02/92	3580	6960	7	123.5	11.4	21	132.0	9.5	93.6	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

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RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-351	09/02/92	3695	7081	7	123.2	11.5	21	132.0	9.5	93.3	-	PASS
P-352	09/02/92	3675	7170	7	125.1	10.7	21	132.0	9.5	94.8	-	PASS
P-353	09/02/92	3685	7285	7	124.5	11.7	21	132.0	9.5	94.3	-	PASS
P-354	09/02/92	3750	7210	7	123.8	11.3	21	132.0	9.5	93.8	-	PASS
P-355	09/02/92	3840	6940	6	120.1	9.8	21	132.0	9.5	91.0	-	PASS
P-356	09/02/92	3850	7205	4	123.8	11.7	21	132.0	9.5	93.8	-	PASS
P-357	09/02/92	3695	6965	7	125.3	11.6	21	132.0	9.5	94.9	-	PASS
P-358	09/02/92	3755	7030	7	128.2	10.7	21	132.0	9.5	97.1	-	PASS
P-359	09/02/92	3795	7135	7	128.0	10.5	21	132.0	9.5	97.0	-	PASS
P-360	09/09/92	3865	7200	5	123.7	10.6	18	134.0	8.5	92.3	-	PASS
P-361	09/09/92	3863	7205	6	125.1	11.1	18	134.0	8.5	93.3	-	PASS
P-362	09/09/92	3600	6960	8	122.4	10.8	18	134.0	8.5	91.3	-	PASS
P-363	09/09/92	3680	7100	8	128.8	10.3	18	134.0	8.5	96.1	-	PASS
P-364	09/09/92	3675	7200	8	125.8	10.7	18	134.0	8.5	93.9	-	PASS
P-365	09/09/92	3775	7265	8	124.2	11.8	18	134.0	8.5	92.7	-	PASS
P-366	09/09/92	3860	7209	7	126.0	11.1	18	134.0	8.5	94.0	-	PASS
P-367	09/09/92	3840	6950	7	123.8	12.0	18	134.0	8.5	92.4	-	PASS
P-368	09/09/92	3840	7075	7	126.0	11.2	18	134.0	8.5	94.0	-	PASS
P-369	09/09/92	3835	6950	7	123.5	11.9	18	134.0	8.5	92.2	-	PASS
P-370	09/09/92	3710	7010	8	126.2	9.8	18	134.0	8.5	94.2	-	PASS
P-371	09/09/92	3560	6940	9	122.1	11.7	18	134.0	8.5	91.1	-	PASS
P-371D	09/09/92	3560	6940	9	121.6	11.5	18	134.0	8.5	90.8	-	PASS
P-372	09/09/92	3680	7100	9	122.6	12.8	18	134.0	8.5	91.5	-	PASS
P-373	09/09/92	3670	7255	9	124.7	11.8	18	134.0	8.5	93.1	2240	PASS
P-374	09/12/92	3795	7260	8	122.4	12.5	18	134.0	8.5	91.4	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

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RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-375	09/12/92	3860	7180	8	121.9	10.9	18	134.0	8.5	91.0	-	PASS
P-376	09/12/92	3840	6915	8	124.6	11.3	18	134.0	8.5	93.0	-	PASS
P-377	09/12/92	3735	7295	9	124.0	10.7	18	134.0	8.5	92.5	-	PASS
P-378	09/12/92	3850	7073	10	122.8	11.4	18	134.0	8.5	91.7	-	PASS
P-378D	09/12/92	3835	6945	10	122.0	11.0	18	134.0	8.5	91.0	-	PASS
P-379	09/12/92	3835	6945	10	123.5	11.7	18	134.0	8.5	92.2	-	PASS
P-380	09/12/92	3860	7220	10	123.4	11.3	18	134.0	8.5	92.1	-	PASS
P-381	09/12/92	3865	7220	11	120.8	11.2	18	134.0	8.5	90.2	-	PASS
P-382	09/12/92	3850	6945	11	122.5	11.3	18	134.0	8.5	91.4	-	PASS
P-383	09/12/92	3670	7325	11	127.8	10.5	18	134.0	8.5	95.4	-	PASS
P-384	09/12/92	3865	7135	12	125.6	10.7	18	134.0	8.5	93.7	-	PASS
P-385	09/12/92	3865	7020	12	127.6	10.6	18	134.0	8.5	95.2	-	PASS
P-386	09/12/92	3850	7215	12	127.8	10.8	18	134.0	8.5	95.4	-	PASS
P-387	09/12/92	3870	7200	13	126.5	11.1	18	134.0	8.5	94.4	-	PASS
P-388	09/12/92	3850	7040	13	125.3	11.1	18	134.0	8.5	93.5	-	PASS
P-389	09/12/92	3765	7290	13	124.1	10.9	18	134.0	8.5	92.6	-	PASS
P-390	09/12/92	3850	7010	14	128.6	10.2	18	134.0	8.5	96.0	-	PASS
P-391	09/12/92	3850	7085	14	126.1	10.9	18	134.0	8.5	94.1	-	PASS
P-392	09/12/92	3815	7255	14	125.2	11.4	18	134.0	8.5	93.4	-	PASS
P-393	09/12/92	3875	7180	15	121.7	12.0	18	134.0	8.5	90.8	-	PASS
P-394	09/12/92	3870	7080	15	125.7	10.8	18	134.0	8.5	93.8	-	PASS
P-395	09/12/92	3787	7110	8	125.1	9.9	18	134.0	8.5	93.4	-	PASS
P-396	09/12/92	3800	7200	8	130.2	9.0	18	134.0	8.5	97.2	-	PASS
P-397	09/12/92	3920	7250	1	124.8	10.2	18	134.0	8.5	93.1	-	PASS
P-398	09/12/92	3610	7350	1	122.2	11.5	18	134.0	8.5	91.2	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

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RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-399	09/12/92	3720	7340	1	124.9	11.6	18	134.0	8.5	93.2	-	PASS
P-400	09/12/92	3835	7285	1	121.4	11.5	18	134.0	8.5	90.6	-	PASS
P-401	09/14/92	3595	7350	2	129.3	9.4	26	135.0	8.5	95.8	-	PASS
P-402	09/14/92	3935	7225	2	125.2	11.4	26	135.0	8.5	92.7	-	PASS
P-403	09/14/92	3825	7285	2	126.0	10.9	26	135.0	8.5	93.3	-	PASS
P-404	09/14/92	3710	7350	2	126.7	10.4	26	135.0	8.5	93.8	-	PASS
P-405	09/14/92	3905	7235	3	124.7	11.0	26	135.0	8.5	92.4	-	PASS
P-406	09/14/92	3780	7335	3	126.1	9.1	26	135.0	8.5	93.4	-	PASS
P-407	09/14/92	3678	7360	3	126.4	10.2	26	135.0	8.5	93.7	-	PASS
P-408	09/14/92	3615	7350	3	128.1	10.5	26	135.0	8.5	94.9	-	PASS
P-409	09/14/92	3870	6975	1	126.1	10.9	23	133.0	9.0	94.8	-	PASS
P-410	09/14/92	3885	7140	1	127.8	10.9	23	133.0	9.0	96.1	-	PASS
P-411	09/14/92	3925	7228	4	125.6	10.1	26	135.0	8.5	93.0	-	PASS
P-412	09/14/92	3865	7278	4	126.2	9.7	26	135.0	8.5	93.5	-	PASS
P-413	09/14/92	3870	7030	2	127.5	10.9	23	133.0	9.0	95.8	-	PASS
P-414	09/14/92	3880	7120	2	125.4	10.5	23	133.0	9.0	94.3	-	PASS
P-415	09/14/92	3690	7335	5	128.2	10.8	26	135.0	8.5	95.0	-	PASS
P-416	09/14/92	3795	7290	5	126.8	10.4	26	135.0	8.5	93.9	-	PASS
P-417	09/14/92	3950	7220	6	124.5	10.4	26	135.0	8.5	92.2	-	PASS
P-418	09/14/92	3875	7070	3	121.9	9.7	23	133.0	9.0	91.6	-	PASS
P-419	09/14/92	3870	6946	3	122.4	10.7	25	133.0	9.5	92.0	-	PASS
P-420	09/14/92	3860	7255	6	124.7	10.3	27	135.0	9.0	92.3	2240	PASS
P-421	09/14/92	3650	7350	6	125.7	10.3	27	135.0	9.0	93.1	-	PASS
P-422	09/14/92	3865	7015	4	126.4	10.8	25	133.0	9.5	95.0	-	PASS
P-423	09/14/92	3885	7175	4	122.3	11.4	25	133.0	9.5	92.0	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

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RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-424	09/14/92	3800	7320	7	126.8	9.8	27	135.0	9.0	93.9	-	PASS
P-425	09/14/92	3850	7275	7	120.5	8.5	27	135.0	9.0	89.3		FAIL; SEE P-425R1
P-425R1	09/15/92	3850	7275	7	127.4	10.1	27	135.0	9.0	94.3	-	PASS
P-426	09/14/92	3747	7363	7	124.9	11.5	27	135.0	9.0	92.5	-	PASS
P-427	09/15/92	3870	6965	5	127.1	10.5	25	133.0	9.5	95.6	-	PASS
P-428	09/15/92	3885	7125	5	128.3	10.3	25	133.0	9.5	96.5	-	PASS
P-429	09/15/92	3905	7250	7	122.7	12.0	27	135.0	9.0	90.9	2240	PASS
P-430	09/15/92	3950	7190	6	125.0	8.5	25	133.0	9.5	94.0		FAIL; SEE P-430R1
P-430R1	09/17/92	3950	7190	0	126.0	9.7	25	133.0	9.5	94.8	-	PASS
P-431	09/15/92	3850	6850	5	124.9	12.1	25	133.0	9.5	93.9	-	PASS
P-432	09/15/92	3890	7210	5	125.5	11.9	25	133.0	9.5	94.4	-	PASS
P-433	09/15/92	3880	7260	8	128.8	9.2	27	135.0	9.0	95.4	-	PASS
P-434	09/15/92	3800	7300	8	120.2	10.2	27	135.0	9.0	88.9		FAIL; SEE P-434R1
P-434R1	09/15/92	3800	7300	8	125.8	9.1	27	135.0	9.0	93.2	-	PASS
P-435	09/15/92	3680	7180	1	130.7	9.8	25	133.0	9.5	98.3	-	PASS
P-436	09/15/92	3680	7090	1	125.4	10.9	25	133.0	9.5	94.3	-	PASS
P-437	09/15/92	3575	6950	1	126.0	9.0	25	133.0	9.5	94.8	-	PASS
P-438	09/15/92	3670	7020	1	126.1	9.0	25	133.0	9.5	94.8	-	PASS
P-439	09/15/92	3665	7255	1	124.7	9.0	25	133.0	9.5	93.7	-	PASS
P-440	09/17/92	3548	6940	3	124.0	11.1	25	133.0	9.5	93.2	-	PASS
P-441	09/17/92	3669	7065	3	124.2	11.5	25	133.0	9.5	93.4	-	PASS
P-442	09/17/92	3650	7280	3	125.9	10.5	25	133.0	9.5	94.7	-	PASS
P-443	09/17/92	3553	6985	4	123.7	11.4	25	133.0	9.5	93.0	-	PASS
P-444	09/17/92	3650	7188	4	124.2	11.5	25	133.0	9.5	93.4	-	PASS
P-445	09/17/92	3645	7240	4	124.3	11.5	25	133.0	9.5	93.4	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

FILE:\FORD\SOIL\QUTRO\PIMSOIL\PRIMARY.WK1, disk 5

RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-446	09/17/92	3541	6960	5	120.4	11.1	25	133.0	9.5	90.5	-	PASS
P-447	09/17/92	3654	7103	5	122.3	11.2	25	133.0	9.5	92.0	-	PASS
P-448	09/17/92	3650	7200	5	125.2	11.8	25	133.0	9.5	94.1	-	PASS
P-449	09/17/92	3543	6979	6	125.2	11.9	25	133.0	9.5	94.2	-	PASS
P-450	09/17/92	3650	7110	6	123.5	11.9	25	133.0	9.5	92.9	-	PASS
P-451	09/17/92	3652	7240	6	127.6	10.9	25	133.0	9.5	96.0	-	PASS
P-452	09/17/92	3549	6985	7	125.8	11.6	25	133.0	9.5	94.6	-	PASS
P-453	09/17/92	3652	7090	7	126.2	10.7	25	133.0	9.5	94.9	-	PASS
P-454	09/17/92	3887	7270	8	123.5	11.4	25	133.0	9.5	92.8	-	PASS
P-455	09/17/92	3810	7330	8	126.2	10.8	25	133.0	9.5	94.9	-	PASS
P-456	09/17/92	3958	7180	1	123.7	11.6	25	133.0	9.5	93.0	-	PASS
P-457	09/17/92	3942	6986	1	122.4	12.1	25	133.0	9.5	92.0	-	PASS
P-458	09/17/92	3964	7223	9	121.3	10.7	25	133.0	9.5	91.2	-	PASS
P-459	09/17/92	3836	7315	9	121.6	12.6	25	133.0	9.5	91.4	-	PASS
P-460	09/17/92	3740	7383	9	122.0	12.6	25	133.0	9.5	91.8	-	PASS
P-461	09/17/92	3600	7371	9	125.6	10.8	25	133.0	9.5	94.4	-	PASS
P-462	09/17/92	3968	7130	2	124.7	11.7	25	133.0	9.5	93.8	-	PASS
P-463	09/17/92	3945	7000	2	125.2	12.2	25	133.0	9.5	94.1	-	PASS
P-464	09/17/92	3966	7227	10	124.9	11.2	25	133.0	9.5	93.9	-	PASS
P-465	09/17/92	3871	7290	10	121.2	12.6	25	133.0	9.5	91.1	-	PASS
P-466	09/17/92	3738	7388	10	116.0	13.1	25	133.0	9.5	87.2		FAIL; SEE P-466R1
P-466R1	09/17/92	3738	7388	10	125.5	11.6	25	133.0	9.5	94.3	-	PASS
P-467	09/17/92	3592	7373	10	125.0	11.1	25	133.0	9.5	94.0	-	PASS
P-468	09/17/92	3949	6995	3	124.8	11.5	25	133.0	9.5	93.8	-	PASS
P-469	09/17/92	3969	7200	3	125.0	11.0	25	133.0	9.5	94.0	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

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RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-470	09/17/92	3965	7240	11	123.3	11.7	25	133.0	9.5	92.7	-	PASS
P-471	09/17/92	3890	7277	11	123.4	11.6	25	133.0	9.5	92.8	-	PASS
P-471D	09/17/92	3890	7277	11	125.2	11.3	25	133.0	9.5	94.2	-	PASS
P-472	09/17/92	3750	7375	11	125.0	11.1	25	133.0	9.5	94.0	-	PASS
P-473	09/17/92	3615	7383	11	124.1	11.7	25	133.0	9.5	93.3	-	PASS
P-474	09/17/92	3957	6983	4	123.1	11.4	25	133.0	9.5	92.6	-	PASS
P-475	09/17/92	3971	7216	4	124.4	12.0	25	133.0	9.5	93.6	-	PASS
P-476	09/17/92	3980	7233	12	121.7	12.9	25	133.0	9.5	91.5	2240	PASS
P-477	09/17/92	3838	7321	12	122.4	12.6	25	133.0	9.5	92.0	-	PASS
P-478	09/17/92	3763	7383	12	122.6	11.9	25	133.0	9.5	92.2	-	PASS
P-479	09/17/92	3603	7385	12	120.6	11.2	25	133.0	9.5	90.7	-	PASS
P-480	09/17/92	3975	7011	5	123.1	12.1	25	133.0	9.5	92.6	-	PASS
P-481	09/17/92	3981	7206	5	123.9	10.7	25	133.0	9.5	93.2	-	PASS
P-482	09/17/92	3934	7255	13	122.2	12.5	25	133.0	9.5	91.9	-	PASS
P-483	09/17/92	3580	7387	13	121.9	10.9	25	133.0	9.5	91.6	-	PASS
P-484	09/17/92	3979	7009	6	123.9	11.4	25	133.0	9.5	93.2	-	PASS
P-485	09/17/92	3986	7200	6	121.2	11.9	25	133.0	9.5	91.2	-	PASS
P-486	09/18/92	3980	6947	7	125.8	11.2	25	133.0	9.5	94.6	-	PASS
P-487	09/18/92	3984	7150	7	122.2	12.2	25	133.0	9.5	91.9	-	PASS
P-488	09/18/92	3679	7389	14	124.1	11.7	25	133.0	9.5	93.3	2240	PASS
P-489	09/18/92	3981	6987	8	123.0	10.4	25	133.0	9.5	92.5	-	PASS
P-490	09/18/92	3985	7193	8	121.9	12.2	25	133.0	9.5	91.6	-	PASS
P-490	09/18/92	3985	7193	8	121.9	12.2	25	133.0	9.5	91.6	-	PASS
P-491	09/24/92	3970	7250	14	128.7	9.9	25	133.0	9.5	96.7	-	PASS
P-492	09/24/92	3623	7100	1	118.8	12.5	25	133.0	9.5	89.4		FAIL; SEE P-492R1

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

FILE:\FORD\SOIL\QUTRO\PIMSOIL\PRIMARY.WK1, disk 5

RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-492R1	09/24/92	3623	7100	1	123.0	11.8	25	133.0	9.5	92.5	-	PASS
P-493	09/24/92	3590	7280	1	126.3	10.9	25	133.0	9.5	94.9	-	PASS
P-494	09/24/92	3495	7007	1	124.6	10.6	25	133.0	9.5	93.7	-	PASS
P-495	09/24/92	4000	6940	9	125.1	9.6	25	133.0	9.5	94.0	-	PASS
P-496	09/24/92	3997	7118	10	122.6	11.1	25	133.0	9.5	92.2	-	PASS
P-497	09/24/92	3960	7257	15	118.3	127.0	25	133.0	9.5	89.0		FAIL; SEE P-497R1
P-497R1	09/24/92	3960	7257	15	121.8	12.5	25	133.0	9.5	91.5	-	PASS
P-498	09/24/92	3755	7390	15	122.7	11.4	25	133.0	9.5	92.3	-	PASS
P-499	09/24/92	3585	7398	15	126.7	9.7	25	133.0	9.5	95.3	-	PASS
P-500	09/24/92	3606	7293	2	122.6	10.2	25	133.0	9.5	92.2	-	PASS
P-501	09/24/92	4002	7033	11	124.6	11.3	25	133.0	9.5	93.6	-	PASS
P-502	09/24/92	4005	7174	12	124.9	11.2	25	133.0	9.5	93.9	-	PASS
P-503	09/24/92	3600	7065	2	119.8	11.4	25	133.0	9.5	90.0	-	PASS
P-504	09/24/92	3885	7315	16	125.0	11.2	25	133.0	9.5	94.0	-	PASS
P-505	09/24/92	3742	7400	16	123.7	11.3	25	133.0	9.5	93.0	-	PASS
P-506	09/24/92	3670	7397	16	124.2	11.8	25	133.0	9.5	93.4	-	PASS
P-507	09/24/92	3612	7193	3	124.7	11.5	25	133.0	9.5	93.8	-	PASS
P-508	09/24/92	4008	7045	13	123.6	11.3	25	133.0	9.5	92.9	2240	PASS
P-509	09/24/92	4011	7198	14	115.5	13.0	25	133.0	9.5	86.8		FAIL; SEE P-509R1
P-509R1	09/24/92	4011	7198	14	119.9	11.4	25	133.0	9.5	90.1	-	PASS
P-510	09/24/92	3596	7045	3	119.9	11.4	25	133.0	9.5	90.2	-	PASS
P-511	09/24/92	3983	7248	17	124.2	11.7	25	133.0	9.5	93.4	-	PASS
P-512	09/24/92	3850	7330	17	121.8	11.3	25	133.0	9.5	91.6	-	PASS
P-513	09/24/92	3733	7400	17	124.8	11.2	25	133.0	9.5	93.8	-	PASS
P-514	09/24/92	3527	7396	17	126.9	10.9	25	133.0	9.5	95.4	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

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RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-515	09/24/92	3545	7032	3	121.8	10.9	25	133.0	9.5	91.6	-	PASS
P-516	09/24/92	3640	7220	4	124.8	11.5	25	133.0	9.5	93.8	-	PASS
P-517	09/24/92	3610	7100	4	124.3	10.4	25	133.0	9.5	93.4	-	PASS
P-518	09/24/92	3965	7260	18	127.2	11.2	25	133.0	9.5	95.6	-	PASS
P-519	09/24/92	3880	7310	18	125.4	11.5	25	133.0	9.5	94.3	-	PASS
P-520	09/24/92	3740	7400	18	126.3	11.1	25	133.0	9.5	95.0	-	PASS
P-521	09/24/92	3506	7009	4	124.2	10.9	25	133.0	9.5	93.4	-	PASS
P-522	09/24/92	3583	7395	18	125.9	11.6	25	133.0	9.5	94.7	2240	PASS
P-523	09/24/92	3610	7027	4	123.2	11.4	25	133.0	9.5	92.7	-	PASS
P-524	09/24/92	3970	7250	19	124.3	11.6	25	133.0	9.5	93.5	-	PASS
P-525	09/24/92	3809	7360	19	124.9	11.4	25	133.0	9.5	93.9	-	PASS
P-526	09/24/92	3700	7402	19	123.9	11.9	25	133.0	9.5	93.2	-	PASS
P-527	09/24/92	3615	7398	19	120.8	12.2	25	133.0	9.5	90.8	-	PASS
P-528	09/24/92	3640	7280	5	125.2	11.0	25	133.0	9.5	94.1	-	PASS
P-528D	09/24/92	3640	7280	5	125.8	11.2	25	133.0	9.5	94.6	-	PASS
P-529	09/24/92	3588	7063	5	121.7	11.9	25	133.0	9.5	91.5	-	PASS
P-530	09/24/92	4002	7045	15	128.1	10.7	25	133.0	9.5	96.3	-	PASS
P-531	09/24/92	4000	6978	16	123.6	10.0	25	133.0	9.5	93.0	-	PASS
P-532	09/24/92	4005	7005	17	128.6	10.1	25	133.0	9.5	96.7	-	PASS
P-533	09/24/92	4005	7085	18	126.5	11.0	25	133.0	9.5	95.1	-	PASS
P-534	09/25/92	3520	6978	5	122.3	10.9	28	131.5	9.0	93.0	-	PASS
P-535	09/25/92	3588	7050	5	124.2	10.4	28	131.5	9.0	94.5	2240	PASS
P-536	09/25/92	4000	7239	20	124.0	12.0	28	131.5	9.0	94.3	-	PASS
P-537	09/25/92	3875	7337	20	123.2	12.2	28	131.5	9.0	93.7	2240	PASS
P-538	09/25/92	3728	7413	20	125.5	11.1	28	131.5	9.0	95.4	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

FILE:\FORD\SOIL\QUTRO\PIMSOIL\PRIMARY.WK1, disk 5

RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-539	09/25/92	3596	7404	20	124.2	11.7	28	131.5	9.0	94.4	-	PASS
P-540	09/25/92	3505	7048	6	126.5	10.3	28	131.5	9.0	96.2	-	PASS
P-541	09/25/92	3640	7312	6	127.7	10.3	28	131.5	9.0	97.1	-	PASS
P-542	09/25/92	3620	7018	6	125.6	11.2	28	131.5	9.0	95.5	-	PASS
P-543	09/25/92	3971	7250	21	120.5	12.7	28	131.5	9.0	91.7	-	PASS
P-544	09/25/92	3790	7365	21	125.5	11.5	28	131.5	9.0	95.4	-	PASS
P-545	09/25/92	3731	7409	21	123.9	10.4	28	131.5	9.0	94.2	-	PASS
P-546	09/25/92	3522	7400	21	126.1	11.7	28	131.5	9.0	95.9	-	PASS
P-546D	09/25/92	3522	7400	21	125.0	11.2	28	131.5	9.0	95.0	-	PASS
P-547	09/25/92	3510	7010	7	123.8	11.5	28	131.5	9.0	94.1	-	PASS
P-548	09/26/92	3623	7101	7	127.3	11.1	28	131.5	9.0	96.8	-	PASS
P-549	09/26/92	3594	7297	7	126.4	11.2	28	131.5	9.0	96.1	-	PASS
P-550	09/26/92	4004	7258	22	123.6	11.2	28	131.5	9.0	94.0	2240	PASS
P-551	09/26/92	3872	7335	22	123.0	11.7	28	131.5	9.0	93.5	-	PASS
P-552	09/26/92	3719	7415	22	122.1	12.2	28	131.5	9.0	92.9	-	PASS
P-553	09/26/92	3532	7410	22	126.0	10.5	28	131.5	9.0	95.8	-	PASS
P-554	09/26/92	3981	7263	23	119.3	14.1	28	131.5	9.0	90.7		FAIL; SEE P-554R1
P-554R1	09/26/92	3981	7263	23	119.7	12.0	28	131.5	9.0	91.1	-	PASS
P-555	09/26/92	3884	7327	23	123.3	12.1	28	131.5	9.0	93.8	-	PASS
P-556	09/26/92	3729	7419	23	122.9	11.5	28	131.5	9.0	93.5	-	PASS
P-557	09/26/92	3518	7411	23	121.7	12.2	28	131.5	9.0	92.6	-	PASS
P-558	09/26/92	3978	7258	24	123.3	12.8	28	131.5	9.0	93.4	-	PASS
P-559	09/26/92	3866	7327	24	125.3	11.4	28	131.5	9.0	94.9	-	PASS
P-560	09/26/92	3737	7415	24	127.1	10.4	28	131.5	9.0	96.3	-	PASS
P-560D	09/26/92	3737	7415	24	124.2	11.3	28	131.5	9.0	94.8	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

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RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-561	09/26/92	3518	7422	1	124.2	11.3	28	131.5	9.0	94.1	-	PASS
P-562	09/28/92	3578	7334	1	125.0	10.5	29	132.0	10.0	94.7	-	PASS
P-563	09/28/92	3583	7122	1	123.7	12.1	29	132.0	10.0	93.7	-	PASS
P-564	09/28/92	3473	6961	1	121.6	13.2	29	132.0	10.0	92.1	-	PASS
P-565	09/28/92	3570	7358	2	122.2	11.9	29	132.0	10.0	92.6	-	PASS
P-566	09/28/92	3571	7089	2	123.8	11.2	29	132.0	10.0	93.8	-	PASS
P-567	09/28/92	3469	7025	2	126.5	11.5	29	132.0	10.0	95.8	-	PASS
P-568	09/28/92	3567	7220	3	121.2	12.5	29	132.0	10.0	91.8	2240	PASS
P-569	09/28/92	3573	7058	3	120.8	13.0	29	132.0	10.0	91.5	-	PASS
P-570	09/28/92	3471	6945	3	121.1	12.3	29	132.0	10.0	91.7	-	PASS
P-571	09/28/92	3566	7356	4	121.1	12.5	29	132.0	10.0	91.7	-	PASS
P-572	09/28/92	3568	7133	4	123.0	12.5	29	132.0	10.0	93.2	-	PASS
P-573	09/28/92	3464	7032	4	123.0	12.2	29	132.0	10.0	93.2	2240	PASS
P-574	09/28/92	3582	7428	25	126.7	11.0	29	132.0	10.0	96.0	-	PASS
P-575	09/28/92	3855	7355	25	126.8	10.9	29	132.0	10.0	96.0	-	PASS
P-575D	09/28/92	3855	7355	25	127.8	11.3	29	132.0	10.0	96.8	-	PASS
P-576	09/28/92	3563	7272	5	124.3	11.1	29	132.0	10.0	94.2	-	PASS
P-577	09/28/92	3550	7061	5	122.1	12.4	29	132.0	10.0	92.5	-	PASS
P-578	09/28/92	3988	7271	25	123.1	12.3	29	132.0	10.0	93.3	-	PASS
P-579	09/28/92	3468	6948	5	122.4	13.1	29	132.0	10.0	92.7	-	PASS
P-580	09/28/92	3564	7345	6	124.4	11.1	29	132.0	10.0	94.2	-	PASS
P-581	09/28/92	3568	7109	6	122.1	12.7	29	132.0	10.0	92.5	-	PASS
P-582	09/28/92	3570	7428	26	124.8	11.0	29	132.0	10.0	94.6	-	PASS
P-583	09/29/92	3513	7062	6	123.3	11.3	29	132.0	10.0	93.4	-	PASS
P-584	09/29/92	3556	7340	7	121.6	12.0	29	132.0	10.0	92.1	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

FILE:\FORD\SOIL\QUTRO\PIMSOIL\PRIMARY.WK1, disk 5

RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-585	09/29/92	3560	7106	7	126.9	11.0	29	132.0	10.0	96.1	-	PASS
P-586	09/29/92	3788	7393	26	126.6	11.5	29	132.0	10.0	95.9	2240	PASS
P-587	TEST NUMBER NOT USED			-	--	--	--	--	--	--	--	--
P-588	TEST NUMBER NOT USED			-	--	--	--	--	--	--	--	--
P-589	09/29/92	3489	7061	7	122.7	12.6	29	132.0	10.0	93.0	-	PASS
P-590	09/29/92	3978	7283	26	125.4	10.4	29	132.0	10.0	95.0	-	PASS
P-591	09/29/92	3545	7325	8	123.6	11.6	29	132.0	10.0	93.7	-	PASS
P-592	09/29/92	3550	7100	8	121.3	11.7	29	132.0	10.0	91.9	-	PASS
P-593	09/29/92	3460	6982	8	123.1	11.9	29	132.0	10.0	93.3	-	PASS
P-594	09/29/92	3591	7432	27	121.0	8.9	29	132.0	10.0	91.6		FAIL; SEE P-594R1
P-594R1	09/29/92	3591	7432	27	125.8	10.9	29	132.0	10.0	95.3	-	PASS
P-595	09/29/92	3724	7435	27	132.2	8.6	29	132.0	10.0	100.1		FAIL SEE P-595R1
P-595R1	09/29/92	3724	7435	27	124.8	10.8	29	132.0	10.0	94.5	-	PASS
P-596	09/29/92	3549	7350	9	123.0	11.3	29	132.0	10.0	93.2	-	PASS
P-597	09/29/92	3559	7082	9	126.7	10.3	29	132.0	10.0	96.0	-	PASS
P-598	09/29/92	3500	7068	9	127.0	11.0	29	132.0	10.0	96.2	-	PASS
P-599	09/29/92	4010	7287	27	126.3	11.0	29	132.0	10.0	95.7	-	PASS
P-600	09/29/92	3865	7375	27	126.1	10.9	29	132.0	10.0	95.5	-	PASS
P-601	09/29/92	3518	7430	27	120.0	10.8	29	132.0	10.0	90.9	-	PASS
P-602	09/29/92	3547	7279	10	125.5	10.4	29	132.0	10.0	95.1	-	PASS
P-603	09/29/92	3550	7083	10	125.5	9.4	29	132.0	10.0	95.1		FAIL SEE P-603R1
P-603R1	09/29/92	3550	7083	10	124.9	10.8	29	132.0	10.0	94.7	-	PASS
P-604	09/29/92	3452	7044	10	121.9	12.0	29	132.0	10.0	92.4	-	PASS
P-605	09/29/92	3839	7371	28	127.6	10.5	29	132.0	10.0	96.7	-	PASS
P-606	09/29/92	3996	7281	28	126.0	10.7	29	132.0	10.0	95.4	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

FILE:\FORD\SOIL\QUTRO\PIMSOIL\PRIMARY.WK1, disk 5

RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-607	09/29/92	3545	7282	11	125.0	11.6	29	132.0	10.0	94.7	-	PASS
P-608	09/29/92	3482	7075	11	124.7	11.0	29	132.0	10.0	94.4	-	PASS
P-608D	09/29/92	3482	7075	11	125.9	11.4	29	132.0	10.0	95.4	-	PASS
P-609	09/29/92	3540	7310	12	123.4	12.0	29	132.0	10.0	93.5	-	PASS
P-610	09/29/92	3542	7100	12	124.7	10.9	29	132.0	10.0	94.5	-	PASS
P-611	09/29/92	3503	7427	28	127.5	10.3	29	132.0	10.0	96.6	-	PASS
P-612	09/29/92	3700	7433	28	128.6	9.7	29	132.0	10.0	97.4		FAIL SEE P-612R1
P-612R1	09/29/92	3700	7433	28	127.3	10.9	29	132.0	10.0	96.4	-	PASS
P-613	09/29/92	3445	7000	13	121.6	11.9	29	132.0	10.0	92.1	-	PASS
P-614	09/29/92	3550	7077	13	121.0	13.4	29	132.0	10.0	91.6	-	PASS
P-615	09/29/92	3541	7330	13	125.9	11.2	29	132.0	10.0	95.4	-	PASS
P-616	09/30/92	3631	7435	28	129.9	10.2	29	132.0	10.0	98.4	-	PASS
P-617	09/30/92	3769	7405	28	131.0	10.1	29	132.0	10.0	99.3	2240	PASS
P-618	09/30/92	3537	7121	14	123.2	12.3	29	132.0	10.0	93.3	-	PASS
P-619	09/30/92	3532	7265	14	126.9	10.4	29	132.0	10.0	96.1	-	PASS
P-620	09/30/92	3481	7079	14	123.1	11.9	29	132.0	10.0	93.2	-	PASS
P-621	09/30/92	3526	7303	15	121.6	12.1	29	132.0	10.0	92.1	-	PASS
P-622	09/30/92	3533	7091	15	121.6	12.5	30	130.5	10.5	93.2	-	PASS
P-623	09/30/92	3519	7438	29	126.8	10.6	23	133.0	9.0	95.3	-	PASS
P-624	09/30/92	3712	7442	29	127.7	10.4	23	133.0	9.0	96.0	-	PASS
P-624D	09/30/92	3712	7442	29	124.5	10.6	23	133.0	9.0	94.3	-	PASS
P-625	09/30/92	3434	7068	15	123.7	11.5	30	130.5	10.5	94.8	-	PASS
P-626	09/30/92	3819	7391	29	129.4	10.2	23	133.0	9.0	97.3	-	PASS
P-627	09/30/92	4000	7296	29	125.6	10.9	23	133.0	9.0	94.4	-	PASS
P-628	09/30/92	3523	7361	16	125.1	11.3	30	130.5	10.5	95.9	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

FILE:\FORD\SOIL\QUTRO\PIMSOIL\PRIMARY.WK1, disk 5

RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-629	09/30/92	3531	7129	16	124.6	10.3	30	130.5	10.5	95.5	-	PASS
P-630	09/30/92	3520	7445	30	126.6	10.4	23	133.0	9.0	95.2	-	PASS
P-631	09/30/92	3687	7441	30	127.0	10.7	23	133.0	9.0	95.5	-	PASS
P-632	09/30/92	3428	7015	16	124.1	11.4	30	130.5	10.5	95.1	-	PASS
P-633	09/30/92	3859	7409	30	128.9	9.8	23	133.0	9.0	96.9	-	PASS
P-634	09/30/92	3967	7321	30	125.8	10.3	23	133.0	9.0	94.6	-	PASS
P-635	09/30/92	3430	6978	17	124.0	12.0	30	130.5	10.5	93.2	-	PASS
P-636	09/30/92	3615	7463	31	122.5	11.6	23	133.0	9.0	92.1	-	PASS
P-637	10/01/92	3738	7469	31	126.7	10.3	29	132.0	10.0	95.6	-	PASS
P-638	10/01/92	3862	7423	31	120.5	10.2	31	132.0	9.5	91.3	-	PASS
P-639	10/01/92	3965	7350	31	122.7	12.1	31	132.0	9.5	92.9	-	PASS
P-640	10/01/92	3428	6973	18	124.7	12.7	31	132.0	9.5	94.5	-	PASS
P-641	10/01/92	3610	7443	1	126.6	11.2	31	132.0	9.5	95.9	-	PASS
P-642	10/01/92	3645	7448	2	124.9	11.3	31	132.0	9.5	94.6	-	PASS
P-643	10/01/92	3688	7455	3	126.2	10.8	31	132.0	9.5	95.6	-	PASS
P-644	10/01/92	3585	7450	4	126.5	11.5	31	132.0	9.5	95.8	2240	PASS
P-645	10/01/92	3625	7456	5	125.5	10.0	31	132.0	9.5	95.1	-	PASS
P-646	10/01/92	3645	7459	6	126.2	11.0	31	132.0	9.5	95.6	-	PASS
P-647	10/01/92	3623	7470	7	123.7	10.6	31	132.0	9.5	93.7	-	PASS
P-648	10/01/92	3680	7478	8	125.5	10.2	31	132.0	9.5	95.1	-	PASS
P-649	10/01/92	3655	7485	32	123.1	12.3	31	132.0	9.5	93.3	-	PASS
P-650	10/01/92	3800	7465	32	122.5	13.1	31	132.0	9.5	92.8	-	PASS
P-651	10/01/92	3950	7370	32	121.7	11.8	31	132.0	9.5	92.2	-	PASS
P-652	10/01/92	3608	7470	9	126.0	11.8	31	132.0	9.5	95.5	-	PASS
P-653	10/02/92	3583	7484	33	126.2	11.0	31	132.0	9.5	95.6	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

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RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-654	10/02/92	3678	7479	10	120.7	12.8	31	132.0	9.5	91.4	-	PASS
P-655	10/02/92	3735	7480	33	123.6	10.8	31	132.0	9.5	93.6	-	PASS
P-656	10/02/92	3845	7448	33	119.9	10.7	31	132.0	9.5	90.8	-	PASS
P-657	10/02/92	3977	7355	33	121.5	11.3	31	132.0	9.5	92.0	-	PASS
P-658	10/02/92	3600	7500	34	125.7	10.6	31	132.0	9.5	95.2	-	PASS
P-658D	10/02/92	3600	7500	34	123.8	10.4	31	132.0	9.5	93.8	-	PASS
P-659	10/02/92	3743	7495	34	124.2	10.9	31	132.0	9.5	94.1	2240	PASS
P-660	10/02/92	3879	7432	34	124.8	10.4	31	132.0	9.5	94.5	-	PASS
P-661	10/02/92	3982	7373	34	124.0	10.6	31	132.0	9.5	93.9	-	PASS
P-662	10/03/92	3724	7498	35	129.4	10.5	32	133.5	9.5	96.9	-	PASS
P-663	10/03/92	3859	7450	35	127.9	10.6	32	133.5	9.5	95.8	2240	PASS
P-664	10/03/92	4000	7352	35	126.8	10.7	32	133.5	9.5	95.0	-	PASS
P-665	10/03/92	3771	7490	36	125.1	10.8	32	133.5	9.5	93.7	-	PASS
P-666	10/03/92	3910	7412	36	123.3	11.8	32	133.5	9.5	92.4	-	PASS
P-667	10/05/92	3950	7390	37	127.5	10.4	32	133.5	9.5	95.5	-	PASS
P-668	10/05/92	3650	7515	37	126.7	11.5	32	133.5	9.5	94.9	-	PASS
P-669	10/05/92	3880	7435	38	126.1	11.1	32	133.5	9.5	94.5	-	PASS
P-669D	10/05/92	3880	7435	38	126.8	11.8	32	133.5	9.5	95.0	-	PASS
P-670	10/05/92	3575	7495	38	127.8	10.7	32	133.5	9.5	95.7	2240	PASS
P-671	10/08/92	3915	7410	40	123.2	12.1	32	133.5	9.5	92.3	2240	PASS
P-672	10/08/92	3630	7510	40	123.4	11.5	32	133.5	9.5	92.4	-	PASS
P-673	10/10/92	3605	7505	41	122.9	9.8	32	133.5	9.5	92.1	-	PASS
P-674	10/10/92	3893	7430	41	123.9	11.7	32	133.5	9.5	92.8	-	PASS
P-675	10/10/92	3750	7505	42	124.2	11.7	32	133.5	9.5	93.0	-	PASS
P-676	10/10/92	3980	7360	42	124.0	11.8	32	133.5	9.5	92.4	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

FILE:\FORD\SOIL\QUTRO\PIMSOIL\PRIMARY.WK1, disk 5

RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-677	10/10/92	3975	7385	43	127.0	11.4	32	133.5	9.5	95.1	-	PASS
P-678	10/10/92	3785	7490	43	125.4	11.5	32	133.5	9.5	93.9	-	PASS
P-679	10/10/92	3952	7390	44	123.4	11.6	32	133.5	9.5	92.4	-	PASS
P-680	10/10/92	3690	7522	44	124.8	11.1	32	133.5	9.5	93.5	2240	PASS
P-681	10/12/92	3815	7476	45	125.5	11.0	32	133.5	9.5	94.0	-	PASS
P-682	10/12/92	3970	7380	45	127.9	9.5	32	133.5	9.5	95.8	-	PASS
P-683	10/12/92	3895	7436	46	129.1	9.6	32	133.5	9.5	96.7	-	PASS
P-684	10/12/92	4000	7350	46	121.8	10.3	32	133.5	9.5	91.2	-	PASS
P-685	10/12/92	3600	7510	47	123.4	11.7	32	133.5	9.5	92.4	-	PASS
P-686	10/12/92	3760	7505	47	123.2	11.6	32	133.5	9.5	92.3	-	PASS
P-687	10/12/92	3870	7450	48	124.5	10.9	32	133.5	9.5	93.3	-	PASS
P-688	10/12/92	3920	7420	48	120.4	10.1	32	133.5	9.5	90.2	-	PASS
P-689	10/12/92	3795	7490	49	126.4	9.6	32	133.5	9.5	94.7	-	PASS
P-690	10/12/92	3925	7350	49	127.3	10.2	32	133.5	9.5	95.4	-	PASS
P-691	10/12/92	3965	7390	50	125.3	10.6	32	133.5	9.5	93.0	-	PASS
P-692	10/12/92	3760	7505	50	123.6	10.7	32	133.5	9.5	92.6	-	PASS
P-693	10/12/92	4005	7350	51	128.6	10.1	32	133.5	9.5	96.3	-	PASS
P-694	10/12/92	3675	7528	51	125.6	9.9	32	133.5	9.5	94.1	-	PASS
P-695	10/12/92	3925	7410	52	125.9	11.3	33	132.5	9.0	95.1	-	PASS
P-696	10/12/92	3830	7470	52	124.3	10.6	33	132.5	9.0	93.8	-	PASS
P-696D	10/12/92	3830	7470	52	125.1	10.9	33	132.5	9.0	94.5	-	PASS
P-697	10/20/92	3510	7417	1	120.8	12.7	15	132.8	9.0	90.9	-	PASS
P-698	10/20/92	3508	7410	2	125.2	11.7	15	132.8	9.0	94.3	-	PASS
P-699	10/20/92	3512	7423	3	123.4	11.5	15	132.8	9.0	92.9	2240	PASS
P-700	10/20/92	3511	7416	4	120.2	12.9	15	132.8	9.0	90.5	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

FILE:\F~~RD\SOIL\QUTRO\PIMSOIL\PRIMARY.WK1, disk 5

RECOMPACTED CLAY LAYER MOISTURE/DENSITY TEST SUMMARY
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

TEST NUMBER	DATE	LOCATION NORTH	LOCATION EAST	LIFT No.	IN-SITU VALUES DRY DENSITY (pcf)	IN-SITU VALUES MOISTURE CONTENT (%)	CURVE NUMBER	REF VALUES MAX. DRY DENSITY	REF VALUES OPTIMUM MOISTURE	PERCENT OMPACTIO (%)	SHEAR STRESS (psf)	REMARKS
P-701	10/20/92	3507	7420	5	122.2	12.7	15	132.8	9.0	92.0	-	PASS
P-702	10/20/92	3508	7408	6	124.9	11.6	15	132.8	9.0	94.1	-	PASS
P-703	10/26/92	4040	7268	1	124.2	11.2	15	132.8	9.0	93.5	-	PASS
P-704	10/26/92	4038	7270	2	124.8	10.8	15	132.8	9.0	93.9	-	PASS
P-705	10/26/92	4041	7279	3	119.6	10.3	15	132.8	9.0	90.0	2240	PASS
P-706	10/26/92	4036	7269	4	124.3	10.5	15	132.8	9.0	93.6	-	PASS
P-707	10/26/92	4041	7267	5	127.1	10.3	15	132.8	9.0	95.7	-	PASS
P-707D	10/26/92	4041	7267	5	127.7	10.1	15	132.8	9.0	96.1	-	PASS
P-708	10/26/92	4035	7270	6	127.1	9.6	15	132.8	9.0	95.7	-	PASS
P-709	10/26/92	3565	7410	53	123.6	9.5	34	131.5	9.0	94.0	-	PASS

NOTE:

1) A test number containing "R" indicates a retest of a failing test.
A test number containing "D" indicates a drive cylinder

2) Unless noted otherwise, all moisture density tests were performed using the nuclear densometer.

FILE:\FORD\SOIL\QUTRO\PIMSOIL\PRIMARY.WK1, disk 5

Q.2

HYDRAULIC CONDUCTIVITY TESTING SUMMARY

SUMMARY OF PERMEABILITY RESULTS
FOR RECOMPACTED CLAY LINER
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

SAMPLE NAME	PERMEABILITY (cm/s)
PST-1	6.0E-08
PST-2	5.0E-08
PST-3	3.0E-08
PST-4	9.0E-08
PST-5	4.0E-08
PST-6	3.0E-08
PST-7	3.0E-08
PST-8	2.0E-08
PST-9	3.0E-08
PST-10	1.0E-08
PST-11	(1)
PST-11A	8.0E-08

(1) SAMPLE DAMAGED DURING TRANSPORT
TO TEST LAB. SEE PST-11A

APPENDIX R

PRIMARY

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD CELL II MI

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO.

LOCATION: ALLEN PARK, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: E7444 SOUTHEAST CORNER to E7300, FROM ANCHOR TRENCH to 5' WEST OF EAST 2:1 TOE OF SLOPE

NATIONAL SEAL REPRESENTATIVE:

Date: 10-27-92

Signature: James Scott Smith 1020 hrs

Name: JAMES SCOTT SMITH

Title: SUPT.

OWNERS REPRESENTATIVE:

Date: 10-27-92 1020 hrs

Signature: James Loftus

Name: JAMES LOFTUS

Title: CQA

Company: GCS

PRIMARY

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD CELL II M1

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO.

LOCATION: ALLEN PARK, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

~~Area~~ Being Accepted: FROM N3980 to N 4054 EAST 4:1 SLOPE. FROM E7300 to E7128 ~~[illegible]~~, FROM NORTH ANCHOR TRENCH to. TIE IN 5' NORTH OF SOUTH 2:1 TOE OF SLOPE

NATIONAL SEAL REPRESENTATIVE:

Date: 10-31-92

Signature: [signature] 1:35 PM

Name: JAMES SCOTT SMITH

Title: SUPT.

OWNERS REPRESENTATIVE:

Date: 10-31-92

Signature: [signature] 1:35 PM

Name: JAMES LOFTUS

Title: CQA

Company: GCS

ORIGINAL

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD LELLI MI

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR

LOCATION: ALLEN PARK, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: FROM E7128 to E7000, FROM NORTH ANCHOR TRENCH to 5' NORTH OF SOUTH 2:1 TOE OF SLOPE

NATIONAL SEAL REPRESENTATIVE:

Date: 11-1-92

Signature: James Scott Smith 0713 hrs

Name: JAMES SCOTT SMITH

Title: SUPT.

OWNERS REPRESENTATIVE:

Date: 11-1-92

Signature: James Loftus 0713 hrs

Name: JAMES LOFTUS

Title: CQA

Company: GCS

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD CELL M1

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO.

LOCATION: ALLEN PARK, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: 3900N to 3980N, FROM EAST ANCHOR TRENCH to 5' WEST OF EAST 2:1 TOE OF SLOPE. CELL FLOOR FROM 5' WEST OF EAST 2:1 TOE ~~to~~ WEST to E 7220.

NATIONAL SEAL REPRESENTATIVE:

Date: 10-30-92

Signature: James Scott Smith

Name: JAMES SCOTT SMITH 0751 hrs

Title: SUPT.

OWNERS REPRESENTATIVE:

Date: 10-30-92

Signature: James Loftus 0751 hrs

Name: JAMES LOFTUS

Title: CQA

Company: GCS

NSC

PRIMARY

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD CELL II M1

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO.

LOCATION: ALLEN PARK, M1

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: ℄ N3700 to N3900 (EAST SLOPE), FROM EAST ANCHOR TRENCH to 5' WEST OF EAST 2:1 toe OF SLOPE

NATIONAL SEAL REPRESENTATIVE:

Date: 10-28-92

Signature: James Scott Smith 0730 hrs

Name: JAMES SCOTT SMITH

Title: SUPT

OWNERS REPRESENTATIVE:

Date: 10-28-92

Signature: James Loftus

Name: JAMES LOFTUS

Title: CQA

Company: GCS

PRIMARY

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD CELLI M1

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO.

LOCATION: ALLEN PARK, M1

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: E7444 SOUTHEAST CORNER to ~~E3700~~ E7300 (TKH 6/9/93),

FROM ANCHOR TRENCH to 5' WEST OF EAST 2:1 TOE OF SLOPE

NATIONAL SEAL REPRESENTATIVE:

Date: 10-27-92

Signature: James Scott Smith 1020 hrs

Name: JAMES SCOTT SMITH

Title: SUPT.

OWNERS REPRESENTATIVE:

Date: 10-27-92 1020 hrs

Signature: James Loftus

Name: JAMES LOFTUS

Title: CQA

Company: GCS

PRIMARY

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD CELL II M1

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO.

LOCATION: ALLEN PARK, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company; and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: E7200 to E7400 FROM SOUTH ANCHOR TRENCH to 5' NORTH OF SOUTH 2:1 toe OF SLOPE

NATIONAL SEAL REPRESENTATIVE:

Date: 10-25-92

Signature: [signature]

Name: JAMES SCOTT SMITH 0812 hrs

Title: SUPT

OWNERS REPRESENTATIVE:

Date: 10-25-92

Signature: [signature] 0812 hrs

Name: JAMES LOFTUS

Title: CQC

Company: GCS

PRIMARY

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD CELL II M1

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO.

LOCATION: ALLEN PARK, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: E 7100 to E 7200 FROM SOUTH ANCHOR TRENCH to 5' NORTH OF SOUTH 2:1 toe of SLOPE.

NATIONAL SEAL REPRESENTATIVE:

Date: 10-24-92

Signature: James Scott Smith

Name: JAMES SCOTT SMITH 11:00 AM

Title: Supt.

OWNERS REPRESENTATIVE:

Date: 10-24-92

Signature: James A. Loftus 1100 AM

Name: JAMES A. LOFTUS

Title: CQA

Company: GCS

NSC

PRIMARY CLAY

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: Ford Cell II MI

PROJECT NUMBER: 912-1203

OWNER: Ford Motor Co.

LOCATION: Allen Park, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being ~~Accepted~~: Accepted From ~~7100E~~ 6930E to ~~36.00~~ 7100E N, FROM ANCHOR TRENCH to 5' NORTH OF SOUTH 2:1 TOE OF SLOPE

NATIONAL SEAL REPRESENTATIVE:

Date: 10/23/92

Signature: James Scott Smith 1000 hrs

Name: James Scott Smith

Title: Supt

OWNERS REPRESENTATIVE:

Date: 10/23/92

Signature: James Loftus 1000 hrs

Name: ~~Danny Essed~~ JAMES LOFTUS

Title: CQA ~~Rep~~ monitor

Company: GCS

NSC

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD CELL II M1

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO

LOCATION: ALLEN PARK, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

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Area Being ~~Accepted~~ Reaccepted: N3600 ON WEST SLOPE to E 6930 ON SOUTH SLOPE FROM ANCHOR TRENCH to 5' OUT ONTO FLOOR FROM WEST AND SOUTH 2:1 SLOPE

NATIONAL SEAL REPRESENTATIVE:

Date: 10-13-92

Signature: James Smith 1315 hrs

Name: JAMES S. SMITH

Title: SUPT.

OWNERS REPRESENTATIVE:

Date: 10-13-92 1315 hrs

Signature: James A. Loftus

Name: JAMES LOFTUS

Title: CQA

Company: GCS

NSC

PRIMARY CLAY

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD CELL II M1

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO.

LOCATION: ALLEN PARK, MICH

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

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Area Being Accepted: SOUTH SLOPE FROM E6647 to E~~7000~~ 6970 FROM ANCHOR TRENCH to SOUTH 2:1

NATIONAL SEAL REPRESENTATIVE:

Date: 10-8-92

Signature: James S. Scott 8:40 AM

Name: JAMES S. SCOTT

Title: SUPT

OWNERS REPRESENTATIVE:

Date: 10-8-92

Signature: James A. Loftus 8:40 AM

Name: JAMES A. LOFTUS

Title: CQA

Company: GCS

NSC

PRIMARY CLAY

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD CELL II M1

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO.

LOCATION: ALLEN PARK, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: WEST SLOPE N3700 to N3420 FROM ANCHOR TRENCH to toe of 2:1 SLOPE, WEST 2:1 SLOPE to E7000 COORDINATE LINE.

NATIONAL SEAL REPRESENTATIVE:

Date: 10-7-92

Signature: James Scott Smith 8:04 AM

Name: JAMES SCOTT SMITH

Title: SUPT.

OWNERS REPRESENTATIVE:

Date: 10-7-92

Signature: James A. Loftus 8:04 AM

Name: JAMES A. LOFTUS

Title: CQA

Company: GCS

4a

Primary

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD CELL II M1

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO

LOCATION: ALLEN PARK, M1

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

This certification is based on observations of the the surface of the subgrade only. No subterranean inspections or tests have been performed by National Seal Company, and NSC makes no representations or warranties regarding conditions which may exist below the surface of the subgrade. National Seal Company accepts no responsibility for conformance of the subgrade to this project's specifications.

Area Being Accepted: E7000 to NORTHWEST CORNOR E66 FROM ANCHOR TRENCH to 5' SOUTH OF NORTH toe OF SLOPE

NATIONAL SEAL REPRESENTATIVE:

Date: OCT 5 1992

Signature: James S. Smith

Name: JAMES S. SMITH

Title: Supt

OWNERS REPRESENTATIVE:

Date: OCT 5 1992

Signature: James A. Loftus

Name: JAMES A. LOFTUS

Title: —

Company: GCS

Primary

NATIONAL SEAL COMPANY
CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE SURFACE

PROJECT NAME: FORD CELL II MI

PROJECT NUMBER: 917-1203

OWNER: FORD MOTOR CO.

LOCATION: ALLEN PARK, MI

I, the undersigned, a duly appointed representative of National Seal Company (NSC), have visually observed the soil subgrade surface described below, and found it to be an acceptable surface on which to install geomembrane.

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Area Being Accepted: WEST SLOPE FROM NORTH 4027 to NORTH 3700

FROM ANCHOR TRENCH to E7000 COORDINATE LINE

NATIONAL SEAL REPRESENTATIVE:

Date: 10-6-92

Signature: James Smith 8:05 am

Name: JAMES S SMITH

Title: SUPT.

OWNERS REPRESENTATIVE:

Date: 10-5-92

Signature: James A. Loftus 8:06 am

Name: JAMES LOFTUS

Title: CQA

Company: GCS

APPENDIX S

JUNE 1993

917-1203

GEOMEMBRANE PANEL DEPLOYMENT SUMMARY
PRIMARY GEOMEMBRANE
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

PANEL NUMBER	ROLL NUMBER	BATCH NUMBER	DATE DEPLOYED	VISUAL PANEL INSPECTION	TYPICAL OVERLAP (in.)	APPROX. DEPLOYED LENGTH	AVERAGE PANEL THICKNESS	
							LEAD	TRAIL
P-001	2F2909	5083	10/05/92	OK	6	170	80.2	81.0
P-002	2F2909	5083	10/05/92	OK	6	172	81.0	80.8
P-003	2F2909	5083	10/05/92	OK	6	172	80.8	80.2
P-004	2F2909	5083	10/05/92	OK	6	173	80.2	80.2
P-005	2F2909	5083	10/05/92	OK	6	96	80.2	80.8
P-006	2F2911	5083	10/05/92	OK	6	80	80.8	80.4
P-007	2F2911	5083	10/05/92	OK	6	174	80.4	81.7
P-008	2F2911	5083	10/05/92	OK	6	174	81.7	81.1
P-009	2F2911	5083	10/05/92	OK	6	173	81.1	81.1
P-010	2F2911	5083	10/05/92	OK	6	176	80.9	80.9
P-011	2F2911	5083	10/05/92	OK	6	173	80.9	81.6
P-012	2F2808	5087	10/05/92	OK	6	172	81.6	80.9
P-013	2F2808	5087	10/05/92	OK	6	173	80.9	81.1
P-014	2F2808	5087	10/05/92	OK	6	175	81.1	80.4
P-015	2F2808	5087	10/05/92	OK	6	75	80.4	80.4
P-016	2F2808	5087	10/05/92	OK	6	67	80.4	79.8
P-017	2F2811	5087	10/05/92	OK	6	69	80.8	80.5
P-018	2F2811	5087	10/05/92	OK	6	67	80.5	80.3
P-019	2F2811	5087	10/05/92	OK	6	68	80.3	81.4
P-020	2F2811	5087	10/05/92	OK	6	68	81.4	80.8
P-021	2F2811	5087	10/05/92	OK	6	69	80.8	81.1
P-022	2F2811	5087	10/05/92	OK	6	60	81.1	81.3
P-023	2F2811	5087	10/05/92	OK	6	40	81.3	80.4
P-024	2F2811	5087	10/05/92	OK	6	26	80.4	80.0
P-025	2F2811	5087	10/05/92	OK	6	15	80.0	80.6
P-026	2F2811	5087	10/06/92	OK	6	164	80.1	81.3
P-027	2F2811	5087	10/06/92	OK	6	62	81.3	80.6
P-028	2F2811	5087	10/06/92	OK	6	48	80.6	80.8
P-029	2F2811	5087	10/06/92	OK	6	37	80.8	80.8
P-030	2F2808	5087	10/06/92	OK	6	10	80.6	80.0
P-031	2F2912	5083	10/06/92	OK	6	163	80.8	81.0
P-032	2F2912	5083	10/06/92	OK	6	162	81.1	81.4
P-033	2F2912	5083	10/06/92	OK	6	162	81.4	80.6
P-034	2F2912	5083	10/06/92	OK	6	162	80.6	80.9
P-035	2F2912	5083	10/06/92	OK	6	163	80.9	81.0
P-036	2F2608	5087	10/06/92	OK	6	161	80.9	81.0
P-037	2F2608	5087	10/06/92	OK	6	351	81.0	80.3
P-038	2F2608	5087	10/06/92	OK	6	318	80.3	80.7
P-039	2F2701	5087	10/06/92	OK	6	355	80.2	80.7
P-040	2F2701	5087	10/06/92	OK	6	36	80.7	80.5
P-041	2F2701	5087	10/06/92	OK	6	356	80.5	80.5
P-042	2F2701	5087	10/06/92	OK	6	76	80.5	80.7

GEOMEMBRANE PANEL DEPLOYMENT SUMMARY
PRIMARY GEOMEMBRANE
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

PANEL NUMBER	ROLL NUMBER	BATCH NUMBER	DATE DEPLOYED	VISUAL PANEL INSPECTION	TYPICAL OVERLAP (in.)	APPROX. DEPLOYED LENGTH	AVERAGE PANEL THICKNESS	
							LEAD	TRAIL
P-043	2F2616	5087	10/06/92	OK	6	284	80.4	81.0
P-044	2F2616	5087	10/06/92	OK	6	360	81.0	80.5
P-045	2F2616	5087	10/06/92	OK	6	360	80.5	80.8
P-046	2F2709	5087	10/06/92	OK	6	187	80.1	81.0
P-047	2F2709	5087	10/06/92	OK	6	367	81.0	80.8
P-048	2F2709	5087	10/07/92	OK	6	265	80.4	80.2
P-049	2F2503	5086	10/07/92	OK	6	101	80.6	80.2
P-050	2F2503	5086	10/07/92	OK	6	369	80.2	80.6
P-051	2F2503	5086	10/07/92	OK	6	351	80.6	80.7
P-052	2F2504	5086	10/07/92	OK	6	21	80.4	80.3
P-053	2F2504	5086	10/07/92	OK	6	369	80.3	80.8
P-054	2F2504	5086	10/07/92	OK	6	370	80.8	80.4
P-055	2F2504	5086	10/07/92	OK	6	72	80.6	80.9
P-056	2F2807	5087	10/07/92	OK	6	294	80.4	80.3
P-057	2F2807	5087	10/07/92	OK	6	335	80.3	80.5
P-058	2F2807	5087	10/07/92	OK	6	157	80.5	80.6
P-059	2F2714	5087	10/07/92	OK	6	171	80.8	81.0
P-060	2F2714	5087	10/08/92	OK	6	314	80.6	80.2
P-061	2F2714	5087	10/08/92	OK	6	321	80.2	80.7
P-062	2F2804	5087	10/08/92	OK	6	166	80.2	80.2
P-063	2F2804	5087	10/08/92	OK	6	158	80.2	80.6
P-064	2F2804	5087	10/08/92	OK	6	138	80.6	80.1
P-065	2F2804	5087	10/08/92	OK	6	141	80.0	80.9
P-066	2F2716	5087	10/13/92	OK	6	134	80.1	81.8
P-067	2F2716	5087	10/13/92	OK	6	138	81.8	81.7
P-068	2F2716	5087	10/13/92	OK	6	70	81.7	81.5
P-069	2F2716	5087	10/13/92	OK	6	51	82.5	81.5
P-070	2F2716	5087	10/13/92	OK	6	38	81.2	81.5
P-071	2F2716	5087	10/13/92	OK	6	20	81.5	81.5
P-072	2F2716	5087	10/13/92	OK	6	35	81.5	81.6
P-073	2F2716	5087	10/13/92	OK	6	50	81.6	83.0
P-074	2F2716	5087	10/13/92	OK	6	60	83.0	82.3
P-075	2F2716	5087	10/13/92	OK	6	66	82.3	82.8
P-076	2F2716	5087	10/13/92	OK	6	66	82.8	82.4
P-077	2F2716	5087	10/13/92	OK	6	66	82.4	82.2
P-078	2D0814	4573	10/13/92	OK	6	58	82.2	82.5
P-079	2D0814	4573	10/13/92	OK	6	63	82.5	81.3
P-080	2D0814	4573	10/13/92	OK	6	130	81.3	81.0
P-081	2D0814	4573	10/13/92	OK	6	144	81.0	81.1
P-082	2D0814	4573	10/13/92	OK	6	154	81.1	80.8
P-083	2D0814	4573	10/13/92	OK	6	153	80.8	81.3
P-084	2F2403	5085	10/23/92	OK	6	159	81.3	80.7

GEOMEMBRANE PANEL DEPLOYMENT SUMMARY
PRIMARY GEOMEMBRANE
ALLEN PARK CLAY MINE - CELL 2
FORD MOTOR COMPANY

PANEL NUMBER	ROLL NUMBER	BATCH NUMBER	DATE DEPLOYED	VISUAL PANEL INSPECTION	TYPICAL OVERLAP (in.)	APPROX. DEPLOYED LENGTH	AVERAGE PANEL THICKNESS	
							LEAD	TRAIL
P-085	2F2403	5085	10/23/92	OK	6	161	80.7	81.2
P-086	2F2403	5085	10/23/92	OK	6	161	81.2	80.2
P-087	2F2403	5085	10/23/92	OK	6	160	80.2	80.3
P-088	2F2403	5085	10/23/92	OK	6	160	80.3	80.8
P-089	2F2604	5086	10/23/92	OK	6	161	80.1	80.6
P-090	2F2604	5086	10/23/92	OK	6	166	80.6	80.7
P-091	2F2604	5086	10/23/92	OK	6	165	80.7	80.4
P-092	2F2604	5086	10/23/92	OK	6	161	80.4	80.4
P-093	2F2604	5086	10/23/92	OK	6	141	80.4	80.7
P-094	2F2707	5087	10/23/92	OK	6	128	80.9	80.8
P-095	2F2707	5087	10/23/92	OK	6	126	80.8	80.4
P-096	2F2707	5087	10/23/92	OK	6	126	80.4	80.4
P-097	2F2707	5087	10/23/92	OK	6	125	80.4	80.5
P-098	2F2707	5087	10/23/92	OK	6	60	80.5	80.4
P-099	2F2707	5087	10/23/92	OK	6	48	80.4	80.7
P-100	2F2707	5087	10/23/92	OK	6	29	80.7	80.4
P-101	2F2604	5086	10/23/92	OK	6	20	80.7	80.4
P-102	2F2707	5087	10/23/92	OK	6	33	80.4	80.4
P-103	2F2707	5087	10/23/92	OK	6	49	80.4	80.4
P-104	2F2707	5087	10/23/92	OK	6	58	80.4	80.2
P-105	2F2511	5086	10/23/92	OK	6	58	80.2	80.6
P-106	2F2511	5086	10/23/92	OK	6	60	80.6	80.4
P-107	2F2511	5086	10/23/92	OK	6	58	80.3	80.6
P-108	2F2511	5086	10/23/92	OK	6	58	80.6	80.8
P-109	2F2511	5086	10/24/92	OK	6	78	81.4	81.4
P-110	2F2511	5086	10/24/92	OK	6	86	81.4	81.3
P-111	2F2511	5086	10/24/92	OK	6	101	81.3	82.3
P-112	2F2511	5086	10/24/92	OK	6	150	82.3	82.1
P-113	2F2511	5086	10/24/92	OK	6	33	82.1	81.8
P-114	2F2511	5086	10/24/92	OK	6	35	81.8	81.7
P-115	2F2511	5086	10/24/92	OK	6	34	81.7	81.3
P-116	2F2511	5086	10/24/92	OK	6	34	81.3	82.2
P-117	2F2511	5086	10/24/92	OK	6	48	82.2	82.6
P-118	2F2915	5083	10/24/92	OK	6	43	82.6	81.9
P-119	2F2915	5083	10/24/92	OK	6	38	81.9	81.5
P-120	2F2915	5083	10/24/92	OK	6	42	81.5	82.4
P-121	2F2915	5083	10/24/92	OK	6	45	82.4	82.3
P-122	2F2915	5083	10/24/92	OK	6	30	82.4	82.9
P-123	2F2915	5083	10/24/92	OK	6	30	82.9	81.6
P-124	2F2915	5083	10/24/92	OK	6	114	81.6	82.5
P-125	2F2915	5083	10/24/92	OK	6	90	82.5	81.4
P-126	2F2915	5083	10/24/92	OK	6	150	81.4	82.4

GEOMEMBRANE PANEL DEPLOYMENT SUMMARY
PRIMARY GEOMEMBRANE
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

PANEL NUMBER	ROLL NUMBER	BATCH NUMBER	DATE DEPLOYED	VISUAL PANEL INSPECTION	TYPICAL OVERLAP (in.)	APPROX. DEPLOYED LENGTH	AVERAGE PANEL THICKNESS	
							LEAD	TRAIL
P-127	2F2915	5083	10/24/92	OK	6	155	82.4	82.7
P-128	2F2509	5086	10/24/92	OK	6	52	82.4	82.3
P-129	2F2509	5086	10/24/92	OK	6	33	82.3	82.3
P-130	2F2509	5086	10/24/92	OK	6	41	82.3	81.3
P-131	2F2509	5086	10/24/92	OK	6	36	81.3	81.4
P-132	2F2509	5086	10/24/92	OK	6	36	80.7	80.8
P-133	2F2509	5086	10/25/92	OK	6	155	80.8	80.3
P-134	2F2509	5086	10/25/92	OK	6	158	80.3	80.6
P-135	2F2509	5086	10/25/92	OK	6	155	80.6	80.6
P-136	2F2908	5086	10/25/92	OK	6	157	80.1	80.6
P-137	2F2908	5086	10/25/92	OK	6	155	80.6	80.6
P-138	2F2509	5086	10/25/92	OK	6	156	80.6	81.2
P-139	2F2908	5086	10/25/92	OK	6	160	81.2	80.7
P-140	2F2908	5086	10/25/92	OK	6	160	80.7	80.8
P-141	2F2505	5086	10/25/92	OK	6	151	80.3	80.9
P-142	2F2505	5086	10/25/92	OK	6	149	80.9	80.6
P-143	2F2505	5086	10/25/92	OK	6	149	80.6	80.4
P-144	2F2505	5086	10/25/92	OK	6	149	80.4	80.2
P-145	2F2505	5086	10/25/92	OK	6	147	80.2	80.3
P-146	2F2505	5086	10/25/92	OK	6	81	80.3	80.6
P-147	2F2310	5085	10/25/92	OK	6	64	80.6	80.7
P-148	2F2310	5085	10/25/92	OK	6	131	80.7	80.6
P-149	2F2310	5085	10/25/92	OK	6	113	80.6	80.9
P-150	2F2310	5085	10/27/92	OK	6	55	81.6	81.1
P-151	2F2310	5085	10/27/92	OK	6	53	81.1	82.2
P-152	2F2910	5083	10/27/92	OK	6	55	82.4	82.0
P-153	2F2910	5083	10/27/92	OK	6	161	82.0	82.4
P-154	2F2910	5083	10/27/92	OK	6	185	82.4	82.8
P-155	2F2910	5083	10/27/92	OK	6	167	82.8	83.0
P-156	2F2305	5085	10/27/92	OK	6	151	81.9	82.4
P-157	2F2305	5085	10/27/92	OK	6	120	82.4	81.9
P-158	2F2305	5085	10/27/92	OK	6	85	81.9	81.8
P-159	2F2305	5085	10/27/92	OK	6	56	81.8	82.3
P-160	2F2305	5085	10/27/92	OK	6	184	82.3	82.4
P-161	2F2305	5085	10/27/92	OK	6	188	82.4	81.2
P-162	2F2317	5085	10/27/92	OK	6	231	82.0	81.0
P-163	2F2317	5085	10/27/92	OK	6	234	81.0	81.2
P-164	2F2317	5085	10/27/92	OK	6	236	81.2	81.9
P-165	2F2903	5087	10/27/92	OK	6	235	81.2	81.8
P-166	2F2903	5087	10/27/92	OK	6	235	81.8	82.0
P-167	2F2903	5087	10/27/92	OK	6	239	82.0	81.2
P-168	2F2603	5086	10/28/92	OK	6	204	80.3	80.4

GEOMEMBRANE PANEL DEPLOYMENT SUMMARY
PRIMARY GEOMEMBRANE
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

PANEL NUMBER	ROLL NUMBER	BATCH NUMBER	DATE DEPLOYED	VISUAL PANEL INSPECTION	TYPICAL OVERLAP (in.)	APPROX. DEPLOYED LENGTH	AVERAGE PANEL THICKNESS	
							LEAD	TRAIL
P-169	2F2603	5086	10/28/92	OK	6	165	80.4	80.4
P-170	2F2603	5086	10/28/92	OK	6	130	80.4	80.2
P-171	2F2603	5086	10/28/92	OK	6	100	80.2	80.5
P-172	2F2603	5086	10/28/92	OK	6	54	80.5	80.3
P-173	2F2603	5086	10/28/92	OK	6	37	80.3	80.3
P-174	2F2809	5087	10/28/92	OK	6	225	80.4	80.1
P-175	2F2809	5087	10/28/92	OK	6	174	80.1	80.6
P-176	2F2809	5087	10/28/92	OK	6	222	80.6	80.6
P-177	2F2809	5087	10/28/92	OK	6	208	80.6	80.5
P-178	2F2603	5086	10/28/92	OK	6	24	80.3	80.6
P-179	2F2603	5086	10/28/92	OK	6	70	80.6	80.7
P-180	2F2805	5087	10/28/92	OK	6	239	80.6	80.5
P-181	2F2805	5087	10/28/92	OK	6	239	80.5	80.5
P-182	2F2805	5087	10/28/92	OK	6	237	80.5	80.4
P-183	2F2805	5087	10/28/92	OK	6	120	80.4	80.7
P-184	2F2317	5085	10/28/92	OK	6	132	80.7	80.5
P-185	2F2715	5087	10/28/92	OK	6	243	80.7	80.7
P-186	2F2715	5087	10/28/92	OK	6	237	80.7	80.5
P-187	2F2715	5087	10/28/92	OK	6	237	80.5	80.4
P-188	2F2806	5087	10/28/92	OK	6	239	80.6	80.8
P-189	2F2806	5087	10/28/92	OK	6	235	80.8	80.3
P-190	2F2806	5087	10/30/92	OK	6	235	80.9	82.6
P-191	2F2806	5087	10/30/92	OK	6	101	82.6	81.9
P-192	2F2310	5085	10/30/92	OK	6	126	81.5	81.8
P-193	2F2914	5083	10/30/92	OK	6	211	82.0	81.7
P-194	2F2914	5083	10/30/92	OK	6	204	81.7	81.5
P-195	2F2914	5083	10/30/92	OK	6	197	81.5	80.9
P-196	2F2310	5085	10/30/92	OK	6	59	81.8	81.1
P-197	2F2310	5085	10/30/92	OK	6	65	81.1	81.7
P-198	2F2614	5087	10/30/92	OK	6	17	81.9	80.7
P-199	2F2614	5087	10/30/92	OK	6	40	80.7	82.6
P-200	2F2614	5087	10/30/92	OK	6	113	82.6	81.3
P-201	2F2614	5087	10/30/92	OK	6	138	81.3	81.8
P-202	2F2614	5087	10/30/92	OK	6	148	81.8	81.6
P-203	2F2614	5087	10/30/92	OK	6	190	81.6	81.8
P-204	2F2614	5087	10/30/92	OK	6	16	81.8	81.5
P-205	2F2914	5083	10/31/92	OK	6	164	80.4	80.3
P-206	2G0513	5089	10/31/92	OK	6	165	80.4	80.2
P-207	2G0513	5089	10/31/92	OK	6	187	80.2	80.2
P-208	2G0513	5089	10/31/92	OK	6	180	80.2	80.3
P-209	2G0513	5089	10/31/92	OK	6	166	80.3	80.0
P-210	2G0513	5089	10/31/92	OK	6	66	80.0	80.3

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GEOMEMBRANE PANEL DEPLOYMENT SUMMARY
PRIMARY GEOMEMBRANE
ALLEN PARK CLAY MINE – CELL 2
FORD MOTOR COMPANY

PANEL NUMBER	ROLL NUMBER	BATCH NUMBER	DATE DEPLOYED	VISUAL PANEL INSPECTION	TYPICAL OVERLAP (in.)	APPROX. DEPLOYED LENGTH	AVERAGE PANEL THICKNESS	
							LEAD	TRAIL
P-211	2G0513	5089	10/31/92	OK	6	169	80.3	80.4
P-212	2F2706	5087	10/31/92	OK	6	187	80.4	80.4
P-213	2F2706	5087	10/31/92	OK	6	351	80.4	80.2
P-214	2F2706	5087	10/31/92	OK	6	275	80.4	80.6
P-215	2G0514	5089	10/31/92	OK	6	83	80.2	80.2
P-216	2G0514	5089	10/31/92	OK	6	83	80.2	80.2
P-216	2G0514	5089	10/31/92	OK	6	344	80.2	81.0
P-217	2G0514	5089	10/31/92	OK	6	344	81.0	80.5
P-218	2F2610	5087	10/31/92	OK	6	334	80.2	80.7
P-219	2F2610	5087	10/31/92	OK	6	339	80.7	80.2
P-220	2F2610	5087	10/31/92	OK	6	6	80.2	80.6
P-221	2I0609	5456	11/01/92	OK	6	344	80.2	80.2
P-222	2I0609	5456	11/01/92	OK	6	340	80.2	80.2
P-223	2I0609	5456	11/01/92	OK	6	147	80.2	80.2
P-224	2I0710	5456	11/01/92	OK	6	197	80.4	80.6
P-225	2I0710	5456	11/01/92	OK	6	342	80.6	80.4
P-226	2I0710	5456	11/01/92	OK	6	261	80.4	80.2
P-227	2I0610	5456	11/01/92	OK	6	78	80.5	80.5
P-228	2I0610	5456	11/01/92	OK	6	341	80.5	80.8
P-229	2I0610	5456	11/01/92	OK	6	347	80.8	80.2
P-230	2I0610	5456	11/01/92	OK	6	64	80.2	80.5
P-231	2I0709	5456	11/01/92	OK	6	287	80.5	80.2
P-232	2I0709	5456	11/01/92	OK	6	291	80.2	80.2